#### 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 transmountain 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.

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 of water annually (310,000 acre-feet 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 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 Division of the Pick-Sloan Missouri Basin Program markets the electric power produced at the six powerplants.

The western slope collection system captures runoff from the high mountains and stores, regulates, and conveys the water to Adams Tunnel for diversion to the east slope under the Continental Divide.

To ensure irrigation and power generation under prior rights on the Colorado River, Green Mountain Reservoir was constructed on the Blue River. Spring runoff is stored in this reservoir and later released to meet the requirements of the senior water rights holders downstream along the Colorado River and to allow east slope diversion of water by the C-BT throughout the year.

Pursuant to authorities in Senate Document 80, (which authorized the C-BT), and the 1984 Green Mountain Operating Policy and the agreements in the September 1996 Stipulation and Agreement of the Orchard Mesa Check Case settlement (Case No. 91 CW247, Colorado Water Div. 5), the content of the Historic Users Pool (HUP) in Green Mountain Reservoir is evaluated during the summer to determine the availability of water surplus to historic beneficiaries needs. 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 Colorado River as a live fishing stream.

The C-BTs principal storage facilities on the west slope are Lake Granby, Grand Lake, and Shadow Mountain Reservoir located on the Colorado River near Granby, and Willow Creek Reservoir located on Willow Creek, a tributary to the Colorado River below Lake Granby. Willow Creek Pumping Plant lifts the water 175 feet. It then flows by gravity via the Willow Creek Feeder Canal

down to Lake Granby.

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 North Fork flows of the Colorado River. Shadow Mountain Lake connects with Grand Lake to make a single body of water from which diversions flow to Adams Tunnel to begin the journey to the eastern slope.

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 Marys Lake Powerplant. This powerplant is located on the west shore of Marys Lake, which provides afterbay and forebay capacity for re-regulating the flow. The water is conveyed between Marys Lake and Estes PowerPlant, on the shore of Lake Estes, through Prospect Mountain Conduit and Prospect Mountain Tunnel.

Lake Estes, which serves as an afterbay for the Estes Powerplant, is formed by Olympus Dam. The storage in Lake Estes and the forebay storage in Marys Lake enable the Estes Powerplant to meet daily variations in energy demand.

Water from Lake Estes and the Big Thompson River flows are 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, and 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 meet daily power loads.

Southward, the Flatiron reversible pump/turbine lifts water from Flatiron Reservoir, a maximum of 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 electrical energy.

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.

Northward, the Charles Hansen Feeder Canal 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 highway. Water from the Big Thompson River can be diverted into the canal by Dille Diversion Dam and utilized for power generation at Big Thompson PowerPlant.

C-BT water deliveries and Big Thompson River water to be returned to the river 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 electrical energy.

Horsetooth Reservoir is located west of Fort Collins between two hogback ridges, where Horsetooth Dam closes the gap at one end. Soldier, Dixon, and Spring Canyon Dams and Satanka Dike close the remaining gaps. An outlet at Soldier Canyon Dam supplies water to the City of Fort Collins, three rural domestic water districts, Colorado State University, and the Dixon Feeder Canal for the irrigated area cut off from its original water supply by the reservoir. 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 is delivered to the river to replace, by exchange, water diverted upstream to the North Poudre Supply Canal, which conveys it to the North Poudre Irrigation Company System.

#### SUMMARY OF OPERATIONS DURING WATER YEAR 2007

The winter season during water year 2007 was extremely wet in some parts of the Upper Colorado River Basin, especially over the Blue River, the Eagle River and the Fryingpan River watersheds. Significant snow fell over that section of the state between the months of November and January. The east slope also experienced significant precipitation during winter, with back to back blizzards during the Christmas season. The cold temperatures and deep snow kept the ground blanketed through most of the winter and into the early spring. Area temperatures in general were relatively close to the winter averages for both the east and west slopes.

Snowpack totals during water year 2007 were mostly near average to above-average, with most of the precipitation concentrated over a period December to January. Precipitation after February was scarce. Over the North Central Colorado Region the Blue River watershed saw the highest percentage of precipitation during the winter and spring. Other watersheds saw significantly less precipitation. The Upper Colorado River above Granby and the Big Thompson and Poudre rivers experienced less-than-average precipitation. Summer temperatures were relatively mild during May and June, and hot during July and August. Routine shower during late spring and summer kept water demands low early in the water season. As summer temperatures climbed in July and August, so did the water demands. Diversions from the west slope continued through the summer to meet the high demands for C-BT water.

The snowpack over the Blue River basin during the winter months produced significant runoff volumes which pushed Dillon Reservoir, located upstream of Green Mountain Reservoir, up to its maximum capacity. The releases from Dillon Reservoir kept Green Mountain Reservoir near maximum storage capacity for most of the summer. Since the outlet works gate and turbine rehabilitation project was completed in 2006, all releases from Green Mountain in 2007 were made using its two turbines. Given the deep snowpack across the watershed and the low demands for water from the east slope during the spring and summer, inflow at Green Mountain during 2007 was very high. Unfortunately there was not a Coordinated Reservoir Operations in 2007.

The highest daily average inflow for Green Mountain Reservoir was observed on Junel 8 th; a flow of 2,540 ft<sup>3</sup>/s. Depletions from the Blue River were low for most of the summer, which kept Green Mountain's inflow and water surface level high for a several weeks. Its highest reservoir content was 152,941 acre-feet recorded on June 24th. Green Mountain stayed almost completely full from the middle of June until early August. Its peak release during 2007 was a 24-hour average of 2,340 ft<sup>3</sup>/s, recorded on June 19th. That reservoir release was its highest since 1997.

Granby Reservoir did not experience inflow rates comparable to the ones seen at Green Mountain Reservoir. The Upper Colorado above Granby never received as much precipitation as the Blue River watershed. Granby's water surface level never approached its maximum storage capacity during water year 2007. Diversions through Adams Tunnel continued throughout most of the summer with only short interruptions. The low snowpack combined with the diversions through Adams Tunnel contributed to keep Granby's level below its maximum capacity. Granby Reservoir reached its highest level on July 10 th. Its storage content at the end of the day was 437,457 acre-feet, higher than the previous water year. The reservoir elevation that day was 8265.25 feet. The highest

daily native computed inflow was observed on June 11, 2006, a 24-hour average of 655 ft<sup>3</sup>/s.

Granby Reservoir began the water year with a steady water surface elevation on a downward trend which continued throughout the winter and early spring. Transmountain diversions began on December 9<sup>th</sup> and continued until May, 2007, with only a few interruptions. Between the middle of December 9<sup>th</sup> and the end of April 2007, water from the west slope collection system was diverted at an average rate of 465 ft<sup>3</sup>/s. Lake Granby's lowest elevation for the year was reached on April 22<sup>nd</sup>, a water surface level for the year at 8239.60 feet. The transmountain diversions were interrupted in May before resuming once again in July. C-BT water diversions continued flowing through Adams Tunnel until the fall.

The total computed inflow for Willow Creek Reservoir during water year 2007 was 44,751 acrefeet, from which 38,174 acre-feet were diverted to Granby Reservoir. A total volume of 5,493 acre-feet were released into Willow Creek below the dam during the water year. From that only 721 acre-feet of that total volume were surcharged during the runoff season. The highest 24-hour average inflow for the year was 444 ft<sup>3</sup>/s, recorded on May 15<sup>th</sup>. Meanwhile, Windy Gap pumped a total of 24,994 acre-feet back to Granby Reservoir during water year 2007.

Natural inflow to Grand Lake/Shadow Mountain Reservoir was estimated at 125,930 acre-feet for the entire water year 2007. This volume does not include water pumped from Granby Reservoir. By comparison, inflow for the previous year was estimated at 132,000 acre-feet. Most of the inflow during water year 2007 was observed between late April and early July. Most of the natural inflow during May and June was bypassed and sent to Granby Reservoir, as transmountain diversion reached a low point for the year during skim operations at Olympus Dam. In addition to the natural inflow to Grand Lake/Shadow Mountain Reservoir in 2007, a total of 220,600 acre-feet were pumped from Granby through the Farr Pumping Plant, mainly between the months of December and April, and once again after July, when inflows were low and depletions high. Transmountain diversions for the year totaled 233,480 acre-feet, 40,000 acre-feet less than the previous year.

The water surface level at Shadow Mountain was dropped significantly for several weeks during the fall of 2006 as part of an operation to control aquatic weeds growth in the reservoir. The operation was conducted in coordination with numerous agencies and local groups. The drawdown began in late October. Stop logs were installed between Grand Lake and Shadow Mountain to keep Grand Lake's level steady during the Shadow Mountain drawdown. By early December the pumps at the Farr Plant began filling up Shadow Mountain once again.

Over the east slope, runoff once again began early this year. But with mild temperatures and frequent rain showers, the seasonal runoff lasted longer than normal although without the normal high peaks typical of late May and early June. The highest 24-hour average inflow computed for Lake Estes during water year 2007 was 515 ft<sup>3</sup>/s on June 18<sup>th</sup>.

After a very wet winter, many reservoirs on the east slope were left with near-capacity pools by April. A relatively wet spring followed, with demands for water below the normal trend. In despite of the wet conditions of winter and spring and the full reservoirs on the east slope, the C-BT never reached priority to capture east slope water. Demands for east slope decreed water

were high, mainly for agricultural purposes.

Demands for C-BT water finally began in late May, significantly later than the year before. Once deliveries of C-BT water began, they continued uninterrupted until September. Water deliveries from Horsetooth Reservoir began late in May while deliveries Carter Lake began after the middle of June. Tunnel No. 1 and the Big Thompson Diversion Structure (Dille Tunnel) were used to divert water from the Big Thompson River between late July and September. Most of the hydropower skimmed water between May and June was moved through Olympus Tunnel and the foothill's power system. Dille's contribution to the power skim was minimal this year. The Dille Tunnel diverted only 4,774 acre-feet during the entire water year.

The Big Thompson and Poudre rivers experienced a low runoff season during water year 2007. As expected, flows were slightly high during late May but moderate thereafter. With the high temperatures and dry conditions of the spring and summer, water demands were very high since early in the water season. Horsetooth Reservoir's elevation reached 5416.66 on May 15 th, almost V2 foot lower than the previous year. The storage content recorded that day was 125,348 acrefeet. Water delivery releases were high throughout the summer keeping the water surface level lower than previously anticipated. The reservoir level dropped sharply during the summer months, especially in June and July. By September the water deliveries had subsided, and the reservoir water surface level had finally stabilized.

Carter Lake began the water year with a water surface significantly lower than the average. Before pumping began in January, the reservoir storage content had dropped to 22,457 acre- feet. Pumping to Carter began on January 18<sup>th</sup>, 2007 and continued through May 4<sup>th</sup>, with only one interruption in February to accommodate some equipment installation in February. Carter Lake Reservoir finally reached its highest level for the year on May 4<sup>th</sup>. The reservoir elevation that day was 5733.85 feet, with a storage content of 84,767 acre-feet.

Construction work of the new outlet work structure at Carter Lake was scheduled to begin on October 1 st, 2007. However, drilling of the tunnel began during the summer. A number of reservoir elevation targets were agreed on in order to allow drilling to begin. Those water surface elevation targets were selected following contract specifications and Environmental Impact Statement provisions. The plan was to meet those targets by specific dates while still allowing recreation and water deliveries to continue with as little inconvenience as possible. The reservoir's water surface level continued dropping until it reached a content of 20,100 acre-feet on October 1 st.

The dry and warm summer weather over the region fueled high demands for C-BT water from July on. As a consequence, the Carter Reservoir level began to drop immediately after pumping ended in May. Pumping to Carter resumed once again in July, twice in August, and once in late September in order to meet the established elevation targets. Water deliveries continued into the fall months. Flatiron Powerplant Unit No. 3 did not generate any power during water year 2007. The pumping flowrate was estimated to be as high as 450 ft <sup>3</sup>/s as Carter Lake approached its lowest level for the water year.

The initial quota declared by the Northern Colorado Water Conservancy District (NCWCD) in November, 2006 was 60% or 186,000 acre-feet. The quota was increased in April, 2007 to 80 %

or 248,000 acre-feet, to be used for the allocation of C-BT water to allotment contract holders. Potential carryover C-BT water for 2007 was 51,392 acre-feet. Alloties paid for 47,062.5 acrefeet of that volume. Final deliveries of carryover water in water year 2007 totaled 45,263.4 acrefeet.

Water diversions through Adams Tunnel totaled 233,480 acre-feet for the water year. The water deliveries through the C-BT between October, 2006 and September, 2007 totaled 202,066 acre-feet. That includes water delivered from Horsetooth Reservoir and Carter Lake Reservoir, Olympus Dam, the Trifurcation at the Charles Hansen Feeder Canal, and from some of the water conveyance facilities. The total C-BT deliveries do not include Big Thompson River decreed water diverted through the C-BT system for the cities of Loveland and Berthoud, or any Windy Gap project water deliveries.

Total C-BT generation for the water year 2007 was above average with 632.8 giga-watt-hours produced (GWh), which is 106 % of average. This includes power generated at Green Mountain, Marys, Estes, Pole Hill, Flatiron, and the Big Thompson powerplants.

## WATER YEAR 2007 OPERATIONS

#### **Green Mountain Reservoir**

Green Mountain Reservoir and Powerplant, completed in 1943, are located south of the town of Kremmling, a few miles upstream of the confluence of the Blue River and the Colorado River in North Central Colorado. The reservoir, with a total capacity of 153,639 acre-feet, provides storage water releases for power production, replacement of out-of-priority depletions, and contract water deliveries. The powerplant has two units with a total installed capacity of 26 megawatts. The spillway, located on the left abutment, is controlled by three 25 x 22 foot radial gates and is capable of discharging 25,000 ft <sup>3</sup>/s.

Green Mountain Reservoir began the water year 2007 with a storage content of 112,341 acre-feet which is 90% of average. Meanwhile Dillon Reservoir, operated by the City of Denver just upstream from Green Mountain began the water year with 250,164 acre-feet in storage, slightly above average. The Green Mountain Reservoir's level was dropped 68,184 acre-feet. The reservoir reached that low point on April 23 <sup>td</sup>, 2007.

Winter precipitation in the Blue River watershed was significant during the winter of water year 2007. Precipitation recorded at the Green Mountain Powerplant was 115% of average between October of 2006 and May of 2007. The substantial precipitation and snowpack kept the inflow above average through the winter and spring, and into the summer. Releases from Dillon Reservoir were high, especially during the runoff season, as most the City of Denver reservoirs on the east slope continued running at near full capacities. As expected, Green Mountain's inflow also remained above average during most of the water year. By the end of September the total undepleted inflow for the water year had reached 401,756 acre-feet or 101% of average. The 30-year average undepleted inflow for Green Mountain is 395,600 acre-feet. The highest daily average inflow recorded during the summer was 2,540 ft 3/s, recorded on June 18 th.

Start of fill for 2007 was declared as April 27, with the reservoir holding 69,485 acre-feet in storage, somewhat above its historic 65,000 acre-foot start of fill target. Pursuant to the State Engineers Office's interim policy, "Administration of Green Mountain Reservoir for 2007" of May 31, 2007, Green Mountain Reservoir achieved a "paper fill" on May 28, 2007. On that date, Denver Water and Colorado Springs Utilities (Cities) owed Green Mountain Reservoir 11,343 acre-feet of water for their out-of priority diversions. A provision of the interim policy allowed Green Mountain Reservoir to continuing storing its inflow under a 1955 water right after "paper filling" to reduce the amount of water owed by the Cities. Under this provision, Green Mountain Reservoir was able to store sufficient water by June 5 to entirely eliminate the amount owed by the Cities.

By taking advantage of its junior and senior refill rights, Green Mountain Reservoir was able to continue storing some of its inflow after June 5, attaining a maximum physical content for the year of 152,941 acre-feet on June 18, and again on June 24. With the reservoir achieving a "paper fill" this year, the 52,000 acre-foot Colorado-Big Thompson Project replacement pool, the 5,000 acre-foot Silt Project reservation, the 66,000 acre-foot HUP allocation, and the 20,000 acre-feet set aside for contracts were all fully available this year.

The maximum drawdown rate limitations initially put in place in 2003 due to landslide concerns were continued in 2007. These drawdown rate limitations were to be initiated when the reservoir's water surface elevation dropped below 7880.0 feet. With the reservoir achieving both a "paper fill" and a physical fill in 2007, the water surface elevation remained above 7915.0 feet during the irrigation season, and therefore, the drawdown rate limitations were never triggered.

Pursuant to the interim policy, the HUP releases were charged to those HUP beneficiaries above Green Mountain Reservoir during the time the reservoir was "paper filling" and then during the operation of the 1955 water right and subsequent refill rights. This resulted in a total debit to the HUP account of 148 acre-feet between April 27 and June 20. Releases to augment the water rights of HUP beneficiaries downstream of Green Mountain began on August 13, with a total of 5,266 acre-feet being released for that purpose between August 13 and October 31. Therefore, the total volume of water debited from the HUP account for HUP beneficiaries this year was 5,413 acre-feet. With the Shoshone Power Plant being offline for the entire irrigation season, an additional 722 acre-feet of HUP releases had to be made directly to the Grand Valley to support the Cameo call. However, with the additional support of releases under the informal agreement to offset the Shoshone Power Plant outage, the remaining HUP allocation was well above the upper band of the drawdown curves and the Managing Entities declared that HUP surplus was available on August 29.

HUP surplus releases began on August 31 at an initial rate of 309 ft ³/sec. As has been the historic practice, HUP surplus releases were allowed to vary throughout the flow augmentation period in such a manner as to maintain Green Mountain Reservoir's river account at zero. Therefore, with the exception of a few very wet and very dry periods, HUP surplus releases generally varied between about 200 ft³/sec and 400 ft³/sec, depending upon the native flow of the basin and the decisions of the managing entities in their attempts to support the endangered fish flow targets in the 15-Mile Reach. The HUP surplus releases were terminated for the remainder of the year on October 28 at the end of the irrigation season. HUP surplus releases totaled 32,745 acre-feet in 2007, with 2,428 acre-feet being released under the agreement for the Grand Valley Power Plant and 30,318 acre-feet being attributable to the Municipal/Recreation Contract. Together, the releases for HUP beneficiaries above and below Green Mountain Reservoir and the HUP surplus releases totaled 38,881 acre-feet in 2007. This resulted in an HUP balance of 27,119 acre-feet on October 31.

Green Mountain is one of the participating reservoirs in the Coordinated Reservoir Operations (CRO) effort which benefit the Upper Colorado River Endangered Fish Recovery Program (RIP). The effort is directed at augmenting the peak flow during the runoff season to a minimum of 12,000 ft<sup>3</sup>/sec along the 15-Mile Reach of the Colorado River. The purpose of this effort is to benefit habitat improvement and spawning for two of the endangered Colorado River fish species. The 15-Mile Reach is the 15-mile stretch of the Colorado River above the confluence with the Gunnison River in the Grand Valley. Unfortunately, the CRO for 2007 was cancelled by the middle of the spring. The determination was reached after looking at the river basin conditions, the levels at the different reservoirs and their expected inflows at the time, and after taking a close look at the river flow forecasts available from the Colorado Basin River Forecast Center in Salt Lake City. After careful consideration it was determined that such a flow could

not be reached and sustained for any reasonable period of time.

Operations at Blue River, Dillon, and Green Mountain reservoirs during water year 2007 are summarized in Table 2. Gross generation at the Green Mountain Powerplant totaled 60,700,000 kilowatt-hours during water year 2007. That total is 117% of the 30 year average.

## Willow Creek Reservoir

Completed in 1953, Willow Creek Reservoir has a total storage capacity of 10,600 acre-feet. The uncontrolled spillway, located at the left abutment, has a maximum flow capacity of 3,200 ft<sup>3</sup>/s. The Willow Creek Feeder Canal also begins at the left abutment and it has a capacity of 400 ft <sup>3</sup>/s. The canal is used to transfer water to Granby Reservoir. Excess inflow into the reservoir is moved by way of the Willow Creek Feeder Canal and pumped to Lake Granby for storage.

The reservoir carryover content coming into water year 2007 was 8,831 acre-feet. By November that content had climbed up to more than 9,600 acre-feet. There was a pumping session between November 13 and November 16, 2006 to evacuate some of that water and position Willow Creek Reservoir for winter operations. The Willow Creek Canal was winterized after that. The winter months during water year 2007 saw significant snow over the region. The February 1, 2007 snow-water content for the Willow Creek Reservoir watershed was 7 inches, or 109% of average. The high snow-water content resulted in an April-July most-probable runoff forecast of 46,000 acre-feet. But the wet weather pattern subsided early in the spring. By the middle of April a dryer weather pattern had developed. The dryer weather over the region began to reduce the snowpack. By May 1 st, the snow-water content was 6.9 inches, with a most probable runoff forecast of 27,000 acre-feet for the period May through July. That is only 70% of average.

Inflow to Willow Creek Reservoir was low the entire water year. By the end September, 2007, a total of 44,800 acre-feet had been captured by the reservoir, which is 80% of the 30-year average.

A large portion of the inflow to Willow Creek Reservoir was diverted to Granby Reservoir. A total of 38,174 acre-feet was pumped from the reservoir and sent to Granby Reservoir using the Willow Creek Canal. Most of the pumping took place between late April and June. Meanwhile, 5,493 acre-feet was released into Willow Creek below the dam, most of it to satisfy the flow requirements below the dam. With no significant releases out of the reservoir there was no peak flow. The highest reservoir release recorded for the water year was 20 ft <sup>3</sup>/s on May 16<sup>th</sup> and 17<sup>th</sup>.

# **Granby Reservoir**

Completed in 1950, Granby Reservoir on the upper Colorado River collects and stores most of the water supply for the C-BT. The reservoir stores the flow of the Colorado River as well as water pumped from Willow Creek Reservoir. The reservoir has a total storage capacity of

539,800 acre-feet. The spillway is located on the left abutment. Flows over the spillway are controlled by two radial gates, with a total release capacity of 11,500 ft<sup>3</sup>/s. The Granby Pumping Plant has three units with a combined installed capacity of 600 ft<sup>3</sup>/s.

Granby Reservoir carryover content into water year 2007 was 381,772 acre-feet, or 87 % of the 30-year average. The water year began with above average precipitation during the winter month. A series of weather systems continued to impact the west slope between the months of November and January. By the end of January the snow-pack reports were promising. But as dry weather moved in during the early spring, that promise of high a runoff season never materialized. By April the snow-water content in the Granby Reservoir watershed was 8.7 inches or 112% of average. The snowpack water content on April 1 st was only 12.0 inches or 99% of average. As drier and warmer weather settled over the region in the spring, that snowpack continued to dissipate. The most probable runoff forecast for April 1 st predicted 175,000 acrefeet for Granby watershed between April and July. The total native inflow for Granby, Shadow Mountain and Grand Lake for those months was 150,850 acre-feet.

Total precipitation for the water year in the Granby Reservoir watershed was 14.41 inches or 83% of average. The 30-year average precipitation for the watershed is 17.35 inches. The total cumulative inflow for the entire water year was 199,950 acre-feet, lower than the 30-year average of 252,930 acre-feet. The highest daily average native inflow was 1,529 ft<sup>3</sup>/s recorded on June 18<sup>th</sup>.

The summer months were relatively dry and warm over Northern Colorado, which increased demands for C-BT water over the east slope. The high demands for C-BT water in combination with a low runoff in the Granby watershed kept the reservoir content relatively low. The maximum storage content for the water year at Granby Reservoir was 437,455 acre-feet recorded on July 10

Granby Reservoir never reached its maximum capacity during water year 2007. The reservoir finished the water year with 376,346 acre-feet in storage, which represents 86% of the 30-year average. That volume was also 6,000 acre-feet lower than the volume recorded the previous year on September 30 the storage of the storag

## **Grand Lake/Shadow Mountain Reservoir**

During the fall of 2006, Shadow Mountain's water surface level was dropped 10 feet in an attempt to control aquatic weed growth in the reservoir. The drawdown operation involved numerous government agencies and local groups, and required closed coordination between the different parties. In order to reach the drawdown goals, flow from Grand Lake into Shadow Mountain was cut off by installing stop logs between the two bodies of water. The Grand Lake's water surface elevation was kept at normal levels while Shadow Mountain sat nearly empty for several weeks in cold weather.

The drawdown operation began on October 15<sup>th</sup>, 2006 and continued until December 1<sup>st</sup>. During that time Olympus Tunnel was also completely unavailable while Adams Tunnel was intermittently unavailable. All those outages made the Shadow Mountain drawdown operation more complicated.

To accommodate the outages while the drawdown was taking place, the reservoir levels for Marys Lake and Lake Estes were kept low, allowing any inflow into Grand Lake to be moved to the east slope as needed, normally once a week for a day. Meanwhile, the east slope demands for C-BT water were served using the stage content from Pinewood and Flatiron reservoirs.

Once the drawdown period ended, it took approximately 8 days to bring the Shadow Mountain level back to normal. On December 9<sup>th</sup>, 2006, once the reservoir levels at Grand Lake and Shadow Mountain were balanced, the stop logs were removed from the Grand Lake outlet structure and flow through Adams Tunnel resumed.

Initial results indicate that the drawdown operation was beneficial. There was a significant reduction in aquatic weeds within Shadow Mountain Reservoir. However, the operation failed to completely control weed growth within the reservoir. Aquatic weeds will continue to be a continual issue especially if consistent management strategies are not employed periodically.

## **Adams Tunnel**

Total diversions through the Adams Tunnel during water year 2007 were 40,000 acre-feet lower than the previous year. The total volume diverted through the tunnel was 233,480 acre-feet. Most of the water was diverted between the middle of December, 2006 and September, 2007, with a two month pause between the middle of May and the middle of July. Demands for water out of Horsetooth and Carter Lake reservoirs began in late May and continued through the summer and into the fall months.

## **Lake Estes**

Completed in 1949, Lake Estes on the Big Thompson River provides regulating capacity for power generation purposes. The reservoir has a total capacity of 3,100 acre-feet. It captures the discharge of Estes Powerplant and inflow coming from the Big Thompson River, regulates river flow below the dam, and releases of water to the Foothills Power System via Olympus Tunnel (550 ft³/s capacity). The Estes Powerplant has three hydroelectric units with a total installed capacity of 45 megawatts. The combined flow capacity for the three units is 1,300 ft ³/s. The spillway, located on the right abutment, has five radial gates with a total discharge capacity of 21,200 ft³/s. The center gate has been automated, and is operated remotely from the Loveland Control Center (LCC). During the winter months, C-BT water is diverted through Adams and Olympus tunnels and routed through the Foothills Power System on its journey to terminal storage at Carter and Horsetooth reservoirs. This complete operation is controlled remotely from the LCC.

The winter season of water year 2007 brought needed precipitation to the Big Thompson River watershed. The March 1 st snow-water content was 9.8 inches or 108% of average, but after that dry weather settled over the region. The snowpack totals for the Big Thompson river watershed began to drop. Runoff began by the middle of May. The April most-probable runoff forecast for the period April-July predicted 64,000 acre-feet of inflow for Lake Estes. Only 59,250 acre-feet of inflow were observed in water year 2007.

The C-BT did not enter priority to capture east slope water from the Big Thompson River during water year 2007. The demands for C-BT water were high during the summer months, fueled by warm weather, dry conditions and an 80% quota for C-BT alloties. Monsoonal storms in July and August helped to alleviate the dry conditions over the region, but the farming community and east slope municipalities continued their high demands for C-BT water. That kept the Adams Tunnel transmountain diversions flowing high until September. Power generation at Estes Powerplant benefited from the continuous flows from the west slope and produced 103.2 GWh of electric power during the water year. Average generation for the plant is 100.3 GWh.

The highest daily average inflow for Lake Estes this past water year was 515 ft³/sec. This peak inflow value was computed on June 18<sup>th</sup>, significantly later than the previous year. The total cumulative inflow for the water year was 82,182 acre-feet, representing 90% of the 30-year average. Despite the high demands for C-BT water during the summer of 2007, Olympus Tunnel was available to run skim operation between May and July. The total volume skimmed through the Olympus Tunnel during water year 2007 was 33,200 acre-feet or 97% of average.

# **Foothill's System**

Some of the Big Thompson River natural inflow into Lake Estes in excess of the minimum outflow required by the State of Colorado below Olympus Dam was diverted as skim water through Olympus Tunnel, mainly between the months of May and July. Skim operations began on April 26th. Diversions through the Adams Tunnel were high during most of the year, with the exception of May, June and July. Between the middle of May and the middle of July a large portion of the Big Thompson River water was diverted as skim water. The skimmed water occupied most of the capacity of Olympus Tunnel during the operation. Only a small amount of C-BT water was diverted from the west slope during that time. Water diverted through Olympus Tunnel was used for power generation at Pole Hill, Flatiron and the Big Thompson powerplants. Most of the water was eventually returned to the Big Thompson River at the Big Thompson Canyon Mouth. Any decreed water belonging to the cities of Berthoud and Loveland remained in the system and was sent north via the Charles Hansen Feeder Canal. All the water belonging to the Big Thompson River was returned to the river using the Big Thompson Powerplant or the Charles Hansen Feeder Canal Wasteway. The total volume skimmed through the Olympus Tunnel during water year 2007 was 33,200 acre-feet, compared to 18,600 acre-feet in water year 2006.

Olympus Dam began bypassing potential skim water after the middle of July in order to transport C-BT water. However, Dille Tunnel was able to capture part of the extra flow from the Big Thompson River and skim it. The Dille Tunnel operations diverted a total of 4,774 acre-feet during the entire water year. The total was lower than the 30-year average of 24,100 acre-feet. Most of the water captured at the Dille Tunnel during the spring and summer was returned to the river after generating hydroelectric power at the Big Thompson Powerplant. Occasionally a small portion of the diversions was kept and stored at Horsetooth Reservoir as part of the contract with the cities of Loveland and Berthoud to capture their decree water. Water diverted through Dille Tunnel serves four purposes; 1) it can supply the City of Loveland and other users with their Big Thompson River decreed water; 2) it can be used as skim water and passed through the Big Thompson Powerplant to generate electricity; 3) it is used in an exchange to

supply the Town of Berthoud their Big Thompson River decreed water; 4) when the C-BT is declared by the State of Colorado to be in priority to catch Big Thompson River water, it can catch runoff which can be stored at Horsetooth Reservoir.

The Big Thompson River native flow skimmed through Olympus and Dille tunnels reduces the flows measured at the mouth of the Big Thompson Canyon, as the water is returned to the river below the canyon mouth stream gage. The Big Thompson River stream gage at the canyon mouth measured a total of 66,591 acre-feet of water during the water year which represents 50% of the 30-year average. The flow at the mouth of the canyon includes water releases from Olympus Dam, native flow from the North Fork of the Big Thompson River and local runoff. The bulk of the flow at the Canyon Mouth gage normally occurs between May and August.

A significant portion of the power generated in 2007 by the powerplants in the Foothill's System came from the skim operations. However, most of the power generated by the C-BT during the entire year was produced thanks to the high demands for water over the east slope. C-BT water diversions from the west slope kept all the powerplant generating almost the entire year. The five powerplants in the Foothill's System produced a total of 572.1 GWh of power during the water year 2007, which represents over 105% of the 30-year average.

## Carter Lake Reservoir

Completed in 1952 with three dams, Carter Lake Reservoir has a total storage capacity of 112,200 acre-feet. Inflow of C-BT water to Carter Lake Reservoir is from the Flatiron Pumping Plant with a capacity of up to  $450 \, \mathrm{ft^3/s}$ .

The Carter Lake Reservoir storage content at the beginning of water year 2007 was 35,391 acrefeet. That content continued to drop until pumping began in January, 2007. By January 17 th, the storage content at Carter had dropped to 22,457 acre-feet. Once pumping began the reservoir level bounced back and reached a maximum content for the water year of 84,762 acre-feet on May 4th

During any normal year the pumping to Carter Lake would have continued until reaching a higher level later in the spring. But this year marked the beginning of construction for the new outlet works structure and water delivery tunnel at Dam #1. ECAO, in close coordination with the Northern Colorado Water Conservancy District, the Bureau of Reclamation's Technical Center in Denver, Colorado, and private contractors in charge of construction developed a drawdown plan to drop the reservoir water surface level during the summer and fall months. The lower reservoir level allowed construction work to begin and normal water deliveries to continue while minimizing the impact on recreation. The reservoir content target for Carter Lake was 20,100 acre-feet on October 1 st. That October 1 st target, along with several other reservoir level targets chased during the summer were all met on time. Impact on recreation was minimal and all water demands were met in a timely fashion.

Pumping from Flatiron Reservoir to Carter Lake Reservoir began by the middle of January, and continued uninterrupted until late in February. Pumping was interrupted for several days to allow work on a CO<sub>2</sub> fire response system. Once the work was completed on February 28 the continued uninterrupted to the continued uninterrupted until late in February.

pumping operations resumed. Pumping continued until early May, when Carter Lake reached the desired level based on the drawdown plan for the summer and fall months. Pumping was resumed a few times for brief periods during the summer and fall in order to meet specific targets of the drawdown plan.

Carter Reservoir reached its highest level for the water year on May 4 th. The elevation that day was measured at 5733.85 feet with a storage content of 84,767 acre-feet. A total of 82,500 acre-feet of water was pumped into Carter Lake Reservoir during the water year 2007. The 30-year average total is 79,500 acre-feet. The pumping operation required a total of 24,000,000 kilowatthours of energy, 89.5% of the 30-year average. Water deliveries to the Saint Vrain Supply Canal for water year 2007 totaled 83,900 acre-feet. The 30-year annual average water delivery total is 70,150 acre-feet. The month of July had the highest volume delivered, a total of 22,500 acre-feet. Carter Lake Reservoir ended the water year at elevation 5657.23 feet and a storage content of 20,226 acre-feet. The elevation target of 5657.02 feet for October 1 st was met.

## Horsetooth Reservoir

Completed in 1949, with four dams, Horsetooth Reservoir has a total constructed capacity of 156,700 acre-feet. Inflow to Horsetooth comes via the Charles Hansen Feeder Canal, primarily from Flatiron Reservoir.

Operations at Horsetooth Reservoir during water year 2007 were relatively normal. Horsetooth began the year at elevation 5378.63 feet, with 70,127 acre-feet of water in storage. With Flatiron's Unit #3 unavailable to pump to Carter Lake in December, 2006 and part of January, 2007, C-BT water began flowing towards Horsetooth Reservoir earlier than usual. Full flows through the Charles Hansen Feeder Canal continued from early December through late January. Once Unit #3 was made available pumping to Carter Lake began and the flows to Horsetooth were reduced significantly. However, flows through the Charles Hansen Feeder Canal were continued at a lower rate throughout the entire year. The cumulative total inflow to Horsetooth for the water year 2007 was 119% of the 30-year average. A total of 127,900 acre-feet entered the reservoir in water year 2007.

Horsetooth Reservoir reached its highest level of 5413.66 feet on May 15 th. The storage content at that level was 125,346 acre-feet. High water demands began in June. The reservoir level began to drop sharply later that month. Water deliveries from Horsetooth through the Charles Hansen Supply Canal totaled 101,000 acre-feet during the water year 2007, which is 3,250 acrefeet more than the 30-year average. The highest monthly total delivery was observed in August, a total of 28,900 acre-feet. The highest daily average flow through the Charles Hansen Supply Canal was 646 ft<sup>3</sup>/s observed on August 28 th. Horsetooth ended the water year at a water surface elevation of 5386.14 feet, with a storage content of 80,626 acre-feet. That elevation is eight feet higher than the previous year. That storage content represented 97% of the 30-year average for October 1st.

## **FLOOD BENEFITS**

Precipitation over the Colorado River Basin was not evenly distributed during the water year 2007. Most of the precipitation took place during the winter months. The rest of the year precipitation was near average, except for the Blue River watershed which continued receiving precipitation well into the spring. The upper Colorado had a wet month of October, followed be lower precipitation totals in November and December. By January 1 st the snowpack was at 102% of average. That total dropped to 81% of average by April 1 st. By the contrary, the Blue River watershed had above average snowpack totals the entire season.

The east slope experienced tremendous amounts of snow in December and January. But after January precipitation totals dropped significantly while cold weather settled in. By May the snowpack was below average for the east slope and the possibilities of a high runoff year had dissipated. As usual, the highest reservoir inflows for Lake Estes were observed during late May and June. Monsoonal storms moved into the area by July and kept stream flows relatively healthy the rest of the season.

Based on the data collected from the Colorado River Basin, and according to figures provided by the U.S. Army Corps of Engineers, C-BT reservoirs over the west slope prevented flood damages during water year 2007. According to the Corps of Engineers report, Green Mountain Reservoir prevented a total \$6,000 in possible flood damages during water year 2007. Willow Creek and Granby/Shadow Mountain/Grand Lake did not prevent any damages.

Runoff across the Big Thompson River watershed was also evenly distributed from late spring and throughout the summer months. The C-BT reservoirs over the east slope did not face any significant flooding conditions during water year 2007. Therefore, there were no flood protection benefits attributed those reservoirs for the water year. However, every spring the diversions through the C-BT Foothill's System help promote recreational activities and allow tourism to prosper along the Big Thompson River Canyon by diverting high flows during the runoff season, keeping steady and more manageable flow rates through the canyon.

Since construction, the C-BT has prevented flood damages totaling \$393,300.

#### C-BT PLANNING AND CONTROL

The C-BT is operated to provide supplemental municipal and industrial water supply, irrigation water supplies, hydroelectric power production, flood control, recreation, fish and wildlife preservation, and other purposes. The C-BT is operated for the purposes for which it was authorized and constructed.

The integrated operation of the C-BT is planned and coordinated by the Bureau of Reclamation, Water Scheduling and Control Group, Eastern Colorado Area Office in Loveland, Colorado. Staff at this office collects and analyzes information daily and makes the decisions necessary for successful operation of the C-BT. This continuous water management function involves coordination between the Department of Water Resources of the State of Colorado, the Northern Colorado Water Conservancy District, Upper Colorado and Great Plains Regions of Reclamation, the Department of Energy, and many other local, state, and Federal agencies.

Experience has proven that proper utilization of the available water resource in a multi-purpose project such as this can be achieved only through careful budgeting and management of the anticipated water supply. One end product of this budgeting and management process is an Annual Operating Plan (AOP).

The C-BT is operated on a water year basis (October 1 through September 30). The AOP is prepared in January of each year, following the plan's review and necessary public meetings. AOPs are prepared for reasonable maximum and reasonable minimum conditions of water supply and requirements as well as for the most probable runoff conditions. The C-BT is operated to optimize the most probable water supply without jeopardizing operational position should either the reasonable maximum or the reasonable minimum water supply conditions occur. The plan is reviewed and revised as necessary during the year as new information or changing conditions occur. Flexibility is a keynote and a necessity of the plan. Computer programs and models are used by Reclamation to develop the AOP and water supply forecasts.

#### ANNUAL OPERATING PLAN FOR WATER YEAR 2008

Three operation studies or model runs were developed for the C-BT on October, 2007 to establish the Annual Operating Plan (AOP) for water year 2008 based on different inflow conditions. Each of the studies conformed to the established operating criteria but used differing inflow conditions and water demands. With up-to-date data and information those AOP model runs were revised in January, 2008. The January versions of the AOP model runs are presented in this report.

The possibilities of all three inflow conditions were determined from a probability analysis of historic monthly inflows, and were labeled reasonable minimum, reasonable maximum, and most probable. Reservoir inflow during water year 2008 has a one-in-twenty chance of being less than the and a one-in-twenty chance of being greater than the reasonable maximum. Statistically, inflows in 2008 will have a nine-in-ten chance of falling between the two extremes. The most probable inflow is based on long-term averages and approximates a 50% chance of occurrence. The three studies for water year 2008 are summarized numerically in Appendix B, tables 5A, 5B, and 5C, and displayed graphically in Appendix C, exhibits 3 through 7.

This report is intended only as a guide for upcoming spring and summer operations. Forecasts of the April-July reservoir inflows will be made at the beginning of each month from February through June. The majority of snowmelt runoff occurs in the April-July period. Projected operating schedules will be adjusted, as required throughout the water year, as changes occur to the forecasted inflows, irrigation demands, maintenance schedules, and power loads. Any of the reservoir levels, canal and tunnel flows, pumping and power operations presented in this report are preliminary and subject to changes as conditions mandate.

## OCTOBER-JANUARY PERIOD

The three studies for the October-January period of water year 2008 are similar because winter inflows are nearly the same under the three conditions of inflow. The most probable inflow condition for the water year 2008 October-January C-BT operations is summarized in the following paragraphs. Operations for this period reflect scheduled maintenance on several powerplants.

## **Green Mountain Reservoir**

Green Mountain Reservoir began the water year 2007 with 108,880 acre-feet in storage, almost 13,000 acre-feet below the 30-year average. Releases for bypass of inflow and CBT replacement continued from water year 2007 into water year 2008. Total releases from Green Mountain Reservoir for replacement, bypass of inflow, power generation and other reservoir operations totaled 65543 acre-feet during the October-December period. Those releases reduced the storage to

approximately 88,303 acre-feet by December 31 st.

Releases for replacement, bypass of inflow, power, and reservoir regulation averaged 359 ft ³/sec during the first three months of water year 2008, with flows ranging from 202 ft ³/s on November 30<sup>th</sup> to 798 ft ³/s on October 14<sup>th</sup>. Releases for the month of January continued the December pattern, with average flows of approximately 200 ft ³/s. All reservoir releases were made through the Green Mountain Powerplant turbines.

# Willow Creek Reservoir

For the period October 1 st to December 31 st, the inflow into Willow Creek Reservoir averaged 27 ft<sup>3</sup>/s, higher than the 30-year average. The average release for the same period was 7 ft <sup>3</sup>/s. A total of 3700 acre-feet were pumped to Granby Reservoir between October and the middle of November, 2007, just before the system was winterized. Once the pumping operations ended the reservoir level slowly began to rise, ending the calendar year 2007 at elevation 8122.49 feet, with 8,490 acre-feet in storage.

# Granby Reservoir-East Slope Terminal Storage

The storage in Granby Reservoir at the beginning of the water year 2007 was 376,356 acre-feet, almost 6,000 acre-feet lower than the previous year and only 62,000 acre-feet below the 30-year average. Between October and December the native inflow averaged 41 ft<sup>3</sup>/s while the releases to the Colorado River averaged 23 ft<sup>3</sup>/s.

C-BT diversions from the west slope through Adams Tunnel began in late October, earlier this water year than normal. The water for the most was sent to Horsetooth Reservoir, while construction of the new Carter Lake outlet works continued. Given the early start in water year 2008, the total volume of water diverted from the west slope have been higher than normal. Approximately 61,100 acre-feet of water was diverted to the east slope between October and December of water year 2008, most of that during November and December. The trend continued into January and February.

Pumping from Granby Reservoir to Shadow Mountain Reservoir totaled 68,100 acre-feet for the October through December period, to match the flow through Adams Tunnel.

## FEBRUARY THROUGH SEPTEMBER

## **Most Probable Inflow Forecast**

## **Green Mountain Reservoir**

If the most probable runoff conditions develop, releases from Green Mountain Reservoir are expected to reach approximately 241 ft<sup>3</sup>/s between January and March, dropping to 67 ft<sup>3</sup>/s by April in time for the start-of-fill. The target end-of-the-month storage at Green Mountain for March is 65,000 acre-feet. This target elevation will prepare the reservoir for the spring runoff season. It is expected that the reservoir will reach that level by the end of March, 2008. As the reservoir fills between April and July period, releases will be adjusted to achieve a fill without spilling. The fill is expected to be achieved by late June.

The snowpack levels for the Blue River Basin by the end of December, 2007 were determined to be above average. Given the current conditions and the current snow-water content measured within the Blue River watershed, and according to the most probable inflow forecast, it appears at this time that Green Mountain Reservoir may be able to participate in the Coordinated Reservoir Operations this coming spring. A decision will be made later in the spring. The Coordinated Reservoir Operations is an interagency program developed to enhance the spring peak flows along the 15 Mile Reach in an attempt to benefit the endangered fish species. The idea behind the plan is to reduce the releases from traditional levels before and after the peak flow enhancement. During the peak flow enhancement period, all inflows are passed through the reservoir for an approximate ten-day period. With normal inflow and near-average releases for downstream water users during August and September, storage is projected to be approximately 101,600 acre-feet by the end of September.

With most probable runoff conditions, Denver and Colorado Springs' Blue River depletions are projected to be approximately 40,700 acre-feet during the water year 2008.

Concrete repair work on the spillway at Green Mountain will continue for the foreseeable future. However, the spillway will be available if needed during the peak of the runoff season.

## Willow Creek Reservoir

Under the most probable runoff conditions, Willow Creek Reservoir will reach 9,800 acre-feet of storage content by the end of March. As pumping to Granby resumes in April, the reservoir level is expected to drop rapidly before it begins to rise once again in May, reaching 10,000 acre-feet by late June. Releases to the river averaging 7 ft <sup>3</sup>/s between February and April, followed by 24 ft <sup>3</sup>/s during May, 44 ft <sup>3</sup>/s during June, and 36 ft <sup>3</sup>/s in July are expected. A bypass of inflow through the outlet works of excess water between April and July will be initiated if Granby Reservoir approaches maximum capacity. Willow Creek storage should be approximately 9,000 acre-feet by the end of the water year, as long as the most probable runoff conditions prevail.

# **Granby Reservoir**

If most probable inflow conditions prevail, the Granby Reservoir storage content should be approaching a low point of 262,400 acre-feet by the end of April. Assuming such runoff conditions along with the end-of-April storage content target, Granby's is expected to reach 400,000 acre-feet by the end of July, with a water surface elevation of approximately 8259.52 feet. That elevation would be 20 feet below Granby's maximum operating elevation of 8279.50 feet so bypass releases or spills are not anticipated for this water year. With the reservoir level short of any possible spills, Granby Reservoir will not be able to participate in the Coordinated Reservoir Operations for the spring of 2008. Its reservoir content is expected to reach 359,100 acre-feet by the end of water year 2008, representing 82 % of the 30-year average.

# **East Slope - Colorado-Big Thompson Project**

If climatic conditions produce a most probable runoff event during water year 2008, irrigation, municipal and industrial demands on C-BT water totaling 208,600 acre-feet are expected during water year 2008.

Flow to Horsetooth Reservoir began in late October, earlier than normal. The flow north is expected to continue until late February. The target storage capacity for Horsetooth is 126,700 acre-feet by the end of February. Once the construction work at the new outlet works structure for Carter Lake is completed in late February, the Flatiron's unit #3 pump will be turned on and pumping to Carter Lake will begin. Pumping to Carter is expected to continue uninterrupted until late June or early July. At that point any flow to Horsetooth will be reduced. The Charles Hansen Feeder Canal 930 Section should be entering its maintenance period in early April. As the Charles Hansen Feeder Canal 930 Section enters its annual maintenance, any deliveries to Horsetooth will be discontinued while pumping to Carter will carry on. The annual maintenance on the canal will last at least two weeks. Maintenance on the Charles Hansen Feeder Canal 550 Section will not begin until September. The maintenance on that section of the canal will also last two weeks.

The winter precipitation during water year 2008 has been below average along the Front Range and eastern plains. Under the most probable runoff conditions it is unlikely that the C-BT will be in a position to capture any Big Thompson River decree water in 2008. However, in preparation for such eventuality some storage capacity will be reserved at both Horsetooth Reservoir and Carter Lake.

Construction of the new Carter Lake outlet works structure began on October 1 st, 2007 and should continue until March 31 st, 2008. Due to restrictions during the construction period the reservoir's water surface level has been limited to elevation 5657.02 feet or lower. The restrictions were imposed after October 1 st, 2007. The storage content at that level is 20,100 acre-feet. Due also to the construction work and the water surface level restriction, pumping will begin later than normal in 2008. For that reason the highest water surface level at Carter Lake for the year is expected to only reach 5727.76 feet in late June. By July, as water demands increase, the reservoir level will begin to drop sharply until reaching a low point of 5696.30 feet by the end

of September. The storage content at that level will be 49,000 acre-feet

Carryover C-BT water from water year 2007 totaled 56,870 acre-feet. From that volume, potentially as much as 48,000 acre-feet could be sold and delivered during water year 2008 (according to NCWCD figures). It is expected that targeted reservoir levels for Horsetooth and Carter will be reached in time for both the water season and the recreation season.

Adams Tunnel diversions will be high the entire water year, as water is transported to both Carter Lake Reservoir and Horsetooth Reservoir. With pumping to Carter continuing until late June, skim operations are expected to be limited, especially for the Olympus Tunnel which will be carrying mostly C-BT water. That will limit the tunnels capacity to carry skim water for power generation. By the summer, as water demands increase, C-BT water will be need for deliveries out of the Trifurcation at the Canyon Mouth of the Big Thompson River as well as from other sections of the water conveyance system. Water will likely be needed also at Horsetooth Reservoir. Some additional pumping to Carter Lake could also take place in the summer if water demands are higher than expected. In summary, the Adams Tunnel is expected to run substantial volumes of water the entire water year.

During any typical year, Adams Tunnel diversions would be scheduled to minimize any Granby Reservoir spills, maximize east slope terminal storage, and to take advantage of operation "skim" and east slope priority water to the fullest extent possible. This water year Granby Reservoir is not expected to fill under the most probable conditions, therefore a possible Granby spill will not be a determining factor. Under the most probable runoff conditions 45,200 acre-feet of water should be available this year for "skim" operations at Olympus Dam, diverting through the Foothills Power System (Pole Hill, Flatiron and Big Thompson powerplants) from April through September. Another 27,700 acre-feet could be available for diversion from the Big Thompson River through Dille Tunnel. The largest portion of water of the "skim" operation is expected to be diverted between late May and early July. Space has been allocated at both Horsetooth and Carter reservoirs to accommodate any potential priority water captured at Olympus Dam and at the Dille diversion structure.

A quota of 60% for water year 2008 was announced by the Northern Colorado Water Conservancy District on October, 20076. Based on that quota, under the most probable plan, Horsetooth Reservoir is expected to reach a storage content of 126,700 acre-feet by late February. The reservoir level is expected to stay high until May when irrigation and municipal demands begin. The reservoir storage content should then drop slowly until reaching approximately 79,000 acre-feet by late September. Under the most probable plan demands for C-BT water out of Horsetooth Reservoir are projected to be approximately 103,600 acre-feet in water year 2008, with another 7,100 acre-feet in Windy Gap water. Irrigation, municipal and industrial demands for C-BT water out of Carter are also projected to reach 74,900 acre-feet, with another 14,100 acre-feet in Windy Gap water. The combined east slope terminal reservoirs storage (Carter and Horsetooth) at the end of water year 2008 is predicted to be 128,000 acre-feet.

# **Reasonable Minimum Inflow Forecast**

## **Green Mountain Reservoir**

If reasonable minimum plan is forecasted on February 1 st, releases from the reservoir for bypass of inflow, power, replacement, and reservoir regulation will be scheduled in order to bring Green Mountain's storage content down to approximately 70,000 acre-feet by March 31 st. Beginning at the start-of-fill in April or May, releases will be held at or near 60 ft 3/s. That minimum flow should continue the end of June. A minimum release of 60 ft 3/s is required in order to satisfy downstream water rights on the Blue River.

Green Mountain Reservoir will not reach its maximum operational capacity this year if a minimum runoff forecast prevails. Under minimum runoff conditions, the maximum reservoir content for the year will fall short of the maximum capacity by 24,000 acre-feet. Under those conditions Green Mountain will not be able to participate in the Coordinated Reservoir Operations the spring of 2008. But given the higher-than-average snowpack this winter, if wet conditions continue to dominate the weather during the spring the reasonable minimum plan occurrence seems unlikely at this point. Any reservoir releases in July, August, and September will be made in order to bypass inflow, to replace C-BT depletions, and to meet any HUP demands.

Under the reasonable minimum plan, it is estimated that the cities of Colorado Springs and Denver could be depleting the Blue River by approximately 55,300 acre-feet during water year 2008. Based on this prediction, the depletions could cause approximately 11.6 GWh (55,300 acre-feet \* 0.21 GWh/acre-feet) in power interference to Green Mountain Powerplant. However the projected Blue River depletions reflect forecasted upstream operations for the water year 2008 which will likely change as the spring and summer seasons progress.

## Willow Creek Reservoir

If reasonable minimum runoff develops, Willow Creek Reservoir will reach the storage content of 9,800 acre-feet by the end of March. All water in excess of downstream requirements will be pumped to Granby Reservoir, totaling 19,100 acre-feet during April-September. With only minimum required releases, the reservoir will end the water year wit a storage content of 9,000 acre-feet.

# **Granby Reservoir**

Under the reasonable minimum runoff condition, water content in Granby Reservoir should be down to 257,500 acre-feet by the end of April. If dry conditions prevail during the spring and summer, low inflows should be expected along with high demands for C-BT water over the east slope. Under those conditions Granby Reservoir should reach a storage content of only 286,800 acre-feet by the end of June. The C-BT quota announced by the NCWCD last fall was 60%. Under a reasonable minimum plan it would be safe to assume that the quota could be increased

in the spring due to possible low snowpack. Diversions through Adams Tunnel for the water year would be expected to be high the entire water year. The low inflows expected under the minimum runoff conditions, combined with the high diversions should keep Lake Granby from reaching a high water surface level this summer. The volume of 286,800 acre-feet would be 168,600 acre-feet below the 30-year average for the month of June. Adams Tunnel diversions through August and September could reach over 50,000 acre-feet. By September 30 the carryover storage of 227,200 acre-feet could be expected, which would be over 210,000 acre-feet below the 30-year average.

# **East Slope - Colorado-Big Thompson Project**

If climatic conditions produce the reasonable minimum runoff event, irrigation, municipal and industrial demands for C-BT water totaling 208,600 acre-feet are expected during water year 2008.

Flow to Horsetooth Reservoir began in late October, 2007 and will continue until late February. Meanwhile, pumping to Carter Lake Reservoir has been moved to March, 2008 due to the construction of the new outlet works structure. Once it begins, the pumping operation will continue without interruptions until late June or early July. That allowed Flatiron Powerplant personnel to complete the annual maintenance on unit #3 in preparation for months of pumping. The Flatiron Powerplant's unit #3 pump is expected to be down for maintenance until the middle of February. Once the maintenance work on unit #3 is finished and the construction work at the new Carter Lake outlet works structure is completed in late February, pumping to Carter will begin. While all the work at Carter has been taking place, all the C-BT diversions have been stored at Horsetooth Reservoir. By late February Horsetooth should reach the targeted storage content of 126,700 acre-feet.

Construction of the new Carter Lake outlet works structure began on October 1 st, 2007. The work is expected to wrap up by February 29th, 2008. Due to the construction work the reservoir's maximum water surface elevation has been restricted to 5657.00 feet or lower. That restriction will be in place until the work ends on February 29th. Once pumping begins in March the water surface level will rise rapid. Carter Lake is expected to only reach 5727.76 feet by late June, with a storage content of approximately 78,500 acre-feet. That should be Carter's highest water surface level for the water year 2008. It is expected that even under reasonable minimum runoff conditions, targeted reservoir levels for Horsetooth and Carter will be reached in time for the water and recreation seasons.

The Charles Hansen Feeder Canal 930 Section will enter its maintenance period in early April. As the Charles Hansen Feeder Canal 930 Section enters its annual maintenance any deliveries to Horsetooth will be discontinued. During that same time, pumping to Carter Lake will continue uninterrupted. The annual maintenance on the canal will last at least two weeks. Maintenance on the Charles Hansen Feeder Canal 550 Section will not begin until September.

The winter of water year 2008 has been below average along the Front Range and eastern plains. If dry weather continues to dominate over the region, the east slope could see a reasonable minimum runoff season this spring and summer. Such conditions will limit the possibilities for

the C-BT of entering priority to capture Big Thompson River decree water this summer. Carryover C-BT water from water year 2007 totaled 56,870 acre-feet. From that volume, potentially as much as 48,000 acre-feet could be sold and delivered during water year 2008.

Under the reasonable minimum plan the Adams Tunnel diversions are expected to be high during the entire year. C-BT water is normally delivered to Carter Lake and Horsetooth reservoirs during the winter and spring months, which keeps the Adams Tunnel flowing at maximum capacity during those months. That allows skim operations to begin in May. This year, due to the construction work at Carter Lake and the late pumping operation, the skim operation will be limited for the Olympus Tunnel. The volume of skim water flowing through Olympus Tunnel this spring/summer will depend on the capacity available through the tunnel. Normally the flow rates through the tunnel is dependent on snowpack levels, the reservoir level at Granby, expected east slope "skim" operations and the possibility of east slope decree water availability, and the expected C-BT water delivery requirements. Adams Tunnel diversions are normally scheduled to minimize any Granby Reservoir spills, maximize east slope terminal storage, and to take advantage of operation "skim" and east slope decree water to the fullest extent possible. This year it will be a matter of capacity through the system.

Under reasonable minimum runoff conditions 16,600 acre-feet of water should be available this year for "skim" operations at Olympus Dam, diverting through the Foothills Power System (Pole Hill, Flatiron and Big Thompson powerplants) from April through September. Another 15,700 acre-feet could be available for diversion from the Big Thompson River through Dille Tunnel. The largest portion of the "skim" water is expected to be diverted between late May and early July. Space has been allocated at both Horsetooth and Carter reservoirs to accommodate any potential priority water captured at Olympus Dam and at the Dille diversion structure.

A quota of 60% for water year 2008 was announced by the Northern Colorado Water Conservancy District on October of 2007. Horsetooth Reservoir is expected to reach a storage content of 126,700 acre-feet by late February. Irrigation and municipal demands will draft reservoir storage down to approximately 79,000 acre-feet by the end of September. Under the reasonable minimum runoff conditions demands, for C-BT water from Horsetooth Reservoir are projected to be approximately 94,600 acre-feet for the entire water year 2008. Irrigation, municipal and industrial demands for C-BT water from Carter Lake for the water year are forecasted to reach 74,900 acre-feet under the reasonable minimum runoff conditions. The combined east slope terminal reservoirs storage (Carter and Horsetooth) at the end of water year 2008 under this plan is predicted to be 128,000 acre-feet.

## **Reasonable Maximum Inflow Forecast**

## **Green Mountain Reservoir**

If the reasonable maximum inflow forecast materializes, releases from Green Mountain Reservoir to bypass inflow, and for replacement, power generation, and river and reservoir regulation should average 364 ft<sup>3</sup>/s in March and up to 1733 ft<sup>3</sup>/s by June. If maximum inflow

forecast conditions prevail during the runoff season, Green Mountain could be forced to release surplus water through power generation. Some spill maybe necessary also. Under such conditions the average daily release for the month of July could reach 1,800 ft<sup>3</sup>/s. Maximum storage capacity would be reached by late June. The reservoir level could stay near maximum capacity through August and into September. Under a reasonable maximum inflow forecast event the total storage volume should be approximately 131,100 acre-feet by the end of September.

Green Mountain's participation in the Coordinated Reservoir Operations will be dependent on the snowpack conditions in the spring. The winter months of water year 2008 brought significant snow accumulation to the high country west of the Continental Divide. If precipitation continues to be high during March and April, there is a strong possibility that Green Mountain would be able to participate in the combined operation.

## **Willow Creek Reservoir**

If the reasonable maximum inflow forecast materializes, Willow Creek Reservoir should be near maximum reservoir capacity of 10,200 acre-feet by the end of May and will likely remain there through the month of June. Pumping to Granby Reservoir would be expected to be high in May and June; as high as 27,000 acre-feet each month. However, the pumping operation would be dependant on the natural inflow into Granby Reservoir and its reservoir level in July. The Granby Reservoir reasonable maximum inflow forecast shows that the reservoir could potentially approach the maximum operational capacity, meaning that under those circumstances pumping to Granby may have to be reduced. In addition to the pumping operation, a total of 11,500 acre-feet could possibly end up being bypassed through the outlet works into the Willow Creek between May and July. By the end of the water year, the reservoir level should be dropped down to 9,000 acre-feet.

# **Granby Reservoir**

Under the reasonable maximum plan the storage content at Granby Reservoir will drop to a minimum of 261,200 acre-feet by the end of April before climbing up to near the crest of the spillway by the summer. Winter and spring months are used to refill Carter Lake Reservoir and Horsetooth Reservoir which should bring Granby's level down sharply. However, the snow pack is well above average as of January. If wet conditions continue during the spring and early summer, the reasonable maximum plan condition for Granby Reservoir could materialize. In addition, a wet spring and early summer could mean lower demands for C-BT water over the east slope. Under those conditions Granby Reservoir could reach its maximum capacity by July, even if Adams Tunnel continues running high flows the entire water year.

The C-BT quota announced by the Northern Colorado Water Conservancy District last fall was 60%. Under a reasonable maximum plan it is conceivable that the 60 % quota will continue for the rest of the water year. Depletions of C-BT water through Adams Tunnel for the water year 2008 could be dependent on those conditions. The high inflows expected under the maximum

runoff conditions, combined with the lower demands for C-BT water over the east slope could push Lake Granby up to his maximum capacity by July. The volume of 536,100 acre-feet (elevation 8279.50 feet) at Granby is the maximum possible before triggering a spill. Under the reasonable maximum plan Granby could reach 8279.02 feet by the end of July, shy of its maximum level.

By late summer the reservoir level should begin to drop. Under the reasonable maximum plan, by September 30<sup>th</sup> a carryover storage of 533,700 acre-feet could be expected.

# East Slope - Colorado-Big Thompson Project

If climatic conditions produce the reasonable maximum runoff event, irrigation, municipal and industrial demands for C-BT water totaling 183,100 acre-feet are expected during water year 2008.

Flow to Horsetooth Reservoir began in late October, 2007 and will continue until late February. Meanwhile, pumping to Carter Lake Reservoir has been moved to March, 2008 due to the construction of the new outlet works structure. Once it begins, the pumping operation will continue without interruptions until late June or early July. That allowed Flatiron Powerplant personnel to complete the annual maintenance on unit #3 in preparation for months of pumping. The Flatiron Powerplant's unit #3 pump is expected to be down for maintenance until the middle of February. Once the maintenance work on unit #3 is finished and the construction work at the new Carter Lake outlet works structure is completed in late February, pumping to Carter will begin. While all the work at Carter has been taking place, all the C-BT diversions have been stored at Horsetooth Reservoir. By late February Horsetooth should reach the targeted storage content of 126,700 acre-feet.

Construction of the new Carter Lake outlet works structure began on October 1 st, 2007. The work is expected to wrap up by February 29th, 2008. Due to the construction work the reservoir's maximum water surface elevation has been restricted to 5657.00 feet or lower. That restriction will be in place until the work ends on February 29th. Once pumping begins in March the water surface level will rise rapid. Carter Lake is expected to only reach 5727.76 feet by late June, with a storage content of approximately 78,500 acre-feet. That should be Carter's highest water surface level for the water year 2008. It is expected that under reasonable maximum runoff conditions, targeted reservoir levels for Horsetooth and Carter will be reached in time for the water and recreation seasons.

The winter of water year 2008 has been below average along the Front Range and eastern plains. However, February through April traditionally bring significant moisture to the Front Range. If a wet spring materializes, the east slope could experience a reasonable maximum runoff season this spring and summer. Such conditions will increase the possibilities for the C-BT of entering priority to capture Big Thompson River decree water this summer. Carryover C-BT water from water year 2007 totaled 56,870 acre-feet. From that volume, potentially as much as 48,000 acre-feet could be sold and delivered during water year 2008.

Even under the reasonable maximum plan the Adams Tunnel diversions are expected to be high during the entire year. C-BT water is normally delivered to Carter Lake and Horsetooth reservoirs during the winter and spring months, which keeps the Adams Tunnel flowing at maximum capacity during those months. That allows skim operations to begin in May. This year, due to the construction work at Carter Lake and the late pumping operation, the skim operation will be limited for the Olympus Tunnel. The volume of skim water flowing through Olympus Tunnel this spring/summer will depend on the capacity available through the tunnel. Normally the flow rates through the tunnel is dependent on snowpack levels, the reservoir level at Granby, expected east slope "skim" operations and the possibility of east slope decree water availability, and the expected C-BT water delivery requirements. Adams Tunnel diversions are normally scheduled to minimize any Granby Reservoir spills, maximize east slope terminal storage, and to take advantage of operation "skim" and east slope decree water to the fullest extent possible. This year it will be a matter of capacity through the system.

The Adams Tunnel diversions began in late October, 2007 and should continue to be relatively high through the entire year in order to fill Horsetooth and Carter Lake reservoirs and to deliver C-BT and Windy Gap water as needed. Under reasonable maximum runoff conditions, Adams Tunnel is expected to move 255,100 acre feet during water year 2008.

Under reasonable maximum runoff conditions 93,500 acre-feet of water could be available this year for "skim" operations at Olympus Dam, diverting through the Foothills Power System (Pole Hill, Flatiron and Big Thompson powerplants) from April through September. Another 37,900 acre-feet could be available for diversion from the Big Thompson River through Dille Tunnel. The largest portion of the "skim" water is expected to be diverted between late May and early July. Space has been allocated at both Horsetooth and Carter reservoirs to accommodate any potential priority water captured at Olympus Dams and at the Dille diversion structure.

A quota of 60% for water year 2008 was announced by the Northern Colorado Water Conservancy District on October of 2007. Horsetooth Reservoir is expected to reach a storage content of 126,700 acre-feet by late February. Irrigation and municipal demands will draft reservoir storage down to approximately 79,000 acre-feet by the end of September. Under the reasonable minimum runoff conditions, demands for C-BT water from Horsetooth Reservoir are projected to be approximately 90,400 acre-feet for the entire water year 2008. Irrigation, municipal and industrial demands for C-BT water from Carter Lake for the water year are forecasted to reach 66,400 acre-feet under the reasonable maximum runoff conditions. The combined east slope terminal reservoirs storage (Carter and Horsetooth) at the end of water year 2008 under this plan is predicted to be 137,300 acre-feet.

# IRRIGATION REQUIREMENTS

The amount of water to be made available to the C-BT for irrigation will be determined by Northern Colorado Water Conservancy District. This determination will be subject to change by agreement throughout the remainder of the irrigation season. Changes may occur due to substantial changes in the prevailing conditions. Estimation of the irrigation requirements for the three inflow conditions was determined by analyzing actual use in similar runoff years.

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."

# MINIMUM REQUIRED RESERVOIR RELEASES

On January 19, 1961, the Secretary of the Interior established specific guidelines for water releases out of Lake Granby, which satisfy fish requirements. A release from Lake Granby of 20 ft <sup>3</sup>/s is required from October through 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.

Except in years of subnormal inflow, a flow of 75 ft<sup>3</sup>/s during the May-July period, 40 ft<sup>3</sup>/s during August, and 20 ft<sup>3</sup>/s during September is required at this location, downstream of Lake Granby. The flow during the May-September period can be reduced if forecasts indicate that the inflow during the water year 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, are 230,000 acre-feet 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 the Bureau of Reclamation during the last week in April, using information from all available sources.

Forecast Inflow Percentage Reduction	
in Acre-Feet	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, June, and July. A copy of the document is included in the Standard Operating Procedures for Granby Dams and Reservoir, Appendix A, Exhibit 4.

Also according to the same guidelines, Willow Creek below Willow Creek Reservoir is not considered a fishery resource since an irrigation ditch a short distance below the dam generally uses the entire flow in the late summer months. In the Secretarial determination, no releases were provided to maintain Willow Creek as a live stream. However, a release of 7 ft <sup>3</sup>/s or inflow (whichever is the lesser) from Willow Creek Reservoir is required between October 1 <sup>5t</sup> and April 30 <sup>th</sup> to augment fishery flows in the Colorado River.

In accordance with the Standard Operating Procedures for Shadow Mountain Reservoir, Chapter 4, Section D, minimum releases from Shadow Mountain Lake of 35 ft<sup>3</sup>/s during September and October, 45 ft<sup>3</sup>/s during November and December, 20 ft<sup>3</sup>/s from January through May, 50 ft<sup>3</sup>/s in June and July, and 40 ft<sup>3</sup>/s in August or inflow (whichever is the lesser) must be maintained in order to protect fish and wildlife in the Colorado River above Lake Granby

The minimum release required out of Green Mountain Reservoir is controlled by senior adjudicated water rights downstream from the reservoir. Inflow to Green Mountain Reservoir is released, as required, to meet these downstream rights. Releases at all times are adequate for fish preservation.

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

## Minimum Releases

$(\underline{ft}^2/\underline{s})$	<u>Period</u>
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 Lake Estes for power production is generally restricted to the May 15-September 15 period, since runoff during the remaining period 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 Nos. 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. The plans addressing this requirement are included as a part of this report.

Provisions guiding the operations of Green Mountain Reservoir are contained in the following documents:

Manner of Operation of Project Facilities and Auxiliary Features, Senate Document No. 80, 75th Congress, 1st Session

Consolidated Cases Nos. 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 <u>Federal Register</u>, Vol. 48, No. 247, December 22, 1983,

September 4, 1996, Stipulation and Agreement in Colorado Water Div. 5, Case No. 91CW247 (Orchard Mesa Check Case), and attached HUP Operating Criteria.

Operations will be consistent with the applicable provisions in these documents.

## 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:
    - (1) Adequate storage to meet the anticipated needs under the guiding documents.
    - (2) 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 ten-day period.
  - f. Fill without spilling to maximize power generation by utilizing 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 Historic Users Pool (HUP).
    - Confer with Managing Entities on a regular basis through the irrigation season to assess availability of surplus water in the Historic Users Pool (HUP).
    - If a surplus condition is declared, make releases up to the amount of surplus, under agreements, to:
      - the Grand Valley Powerplant up to its need or capacity; then to
      - 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.
- 3. Operation after snowmelt period (August-October)
  - a. Bypass inflow to supply downstream vested senior rights.
- 1 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

- 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.
- g. Confer with Managing Entities on a regular basis through the irrigation season to assess availability of surplus water in the Historic Users Pool (HUP).
  - If a surplus condition is declared, make releases up to the amount of surplus, under agreements, to:
    - the Grand Valley Powerplant up to its need or capacity; then to
    - 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.

<sup>&</sup>lt;sup>1</sup> 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.

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 operation of the Check provides the ability to raise the water level in the common afterbay to a level, which causes water to flow through the bypass channel 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 supply of water available to Grand Valley irrigation systems; to the Grand Valley PowerPlant for power production; Green Mountain Reservoir releases; and the flow in 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 (GVWUA), and OMID (Co-applicants). 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 Co-applicants were concerned that a water right awarded for this development would have the ability to interfere with the exchange of water. In response to this potential threat to the continued operation of the exchange, the Co-applicants filed an application in State Water Court on December 30, 1991, for approval of an exchange of water. This case (Water Division 5, Case No. 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 No. 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 Historic Users Pool (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 Co-applicants 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 acre-feet 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 water year. Water declared surplus might be delivered through agreements to 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. These entities are collectively known as the '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 be 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, however, 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 of the level of "checking" required to preserve water in the HUP, as well as any determination of water surplus to HUP beneficiaries needs are made.

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 on an as needed basis to reexamine HUP storage conditions, runoff forecasts, climatological conditions, irrigation demands, 15-Mile Reach flow needs, and other operational conditions. Based upon this information, the Managing Entities adjust the checking. They also determine the water surplus for HUP beneficiary needs, as well as the release of such water. During periods of below average river flows, review meetings or conference calls may be held 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 requirements, as recommended by the State of Colorado Division of Wildlife and the United States Fish and Wildlife Service, is diverted at Olympus Dam into 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 sections of the system, 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 indirectly benefits the tourist and fishing industries along the Big Thompson Canyon by attenuating and diverting 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 Scheduling staff.

During water year 2007, a total of 33,211 acre-feet of water was diverted through Olympus Tunnel for "skim" operations. Skim operations through Olympus Tunnel took place between May and September. Dille Tunnel diversions totaled only 1,979 acre-feet for water year 2007. The reason for Dille's low total was the Big Thompson Powerplant, which became available in late July. By then the peak of the run-off was over.

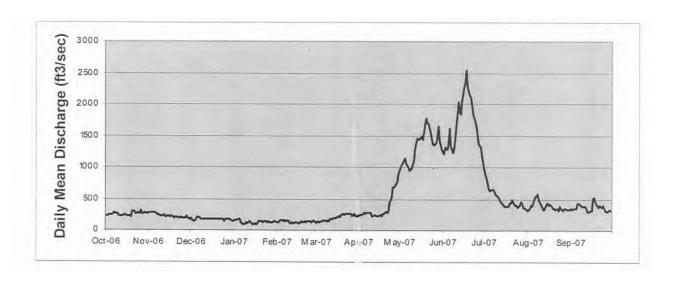
Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, cn Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River.

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-2006 to 30-Sep-2007. Records are complete and reliable. 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	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	233	272	<u>188</u>	<u>153</u>	128	118	235	<u>953</u>	1239	<u>961</u>	317	<u>355</u>
2	233	<u>275</u>	<u>161</u>	<u>161</u>	119	118	247	<u>992</u>	1206	<u>830</u>	<u>354</u>	325
3	252	274	<u>146</u>	<u>161</u>	132	<u>134</u>	253	1063	1323	<u>753</u>	402	<u>356</u>
4	243	282	<u>157</u>	<u>170</u>	<u>152</u>	<u>119</u>	252	1112	1 287	669	390	344
<u>5</u>	239	272	<u>199</u>	183	<u>150</u>	137	287	1135	1376	635	431	359
6	<u>261</u>	269	207	<u>115</u>	142	148	262	<u>1054</u>	<u>1611</u>	<u>651</u>	<u>549</u>	444
7	279	<u>254</u>	<u>196</u>	99	<u>150</u>	<u>152</u>	274	1007	1335	642	<u>542</u>	413
8	<u> 267</u>	<u>246</u>	<u>180</u>	<u>94</u>	<u>144</u>	<u>150</u>	272	<u>944</u>	<u> 1 230</u>	<u>636</u>	<u>571</u>	400
9	260	236	<u>172</u>	103	<u>156</u>	<u>143</u>	<u>279</u>	<u>961</u>	1274	<u>586</u>	483	391
10	235	227	<u>174</u>	<u>115</u>	<u>119</u>	<u>156</u>	275	<u>984</u>	1452	<u>545</u>	425	392
11	235	228	<u>184</u>	<u>113</u>	<u>114</u>	<u>148</u>	232	1099	1663	<u>528</u>	386	383
12	220	246	<u>179</u>	1 40	1 26	<u>167</u>	231	1 290	2039	<u>499</u>	328	354
13	224	209	<u>170</u>	<u>116</u>	111	<u>178</u>	239	1390	<u>1874</u>	<u>454</u>	339	303
14	241	228	<u>177</u>	110	124	<u>186</u>	225	<u>1451</u>	1845	413	417	298
<u>15</u>	244	220	<u>177</u>	<u>87</u>	123	<u>193</u>	233	1437	2056	<u>390</u>	446	312
16	226	207	<u>177</u>	<u>105</u>	<u>121</u>	<u>199</u>	236	1 468	2277	388	410	314
<u>1 7</u>	220	226	183	91	105	205	249	1488	2348	<u>386</u>	<u>414</u>	515
18	221	208	182	<u>105</u>	120	224	232	<u>l</u> 443	<u>2540</u>	<u>386</u>	381	528
<u>19</u>	211	200	<u>167</u>	<u>141</u>	132	218	259	1680	2260	434	354	419
20	298	205	<u>184</u>	<u>141</u>	<u>118</u>	238	<u>257</u>	1 779	2149	<u>447</u>	356	396
21	<u> 296</u>	202	<u>167</u>	136	132	<u> 260</u>	293	<u> 1695</u>	2099	<u>492</u>	325	367
22	270	<u>195</u>	<u>169</u>	130	128	249	280	<u>1691</u>	<u>1984</u>	<u>414</u>	<u>348</u>	395
23	268	<u>189</u>	<u>169</u>	<u>132</u>	<u>136</u>	263	299	<u>1536</u>	1847	411	316	369
24	276	202	169	<u>141</u>	132	269	<u>436</u>	<u>1445</u>	<u>1724</u>	<u>400</u>	392	402
<u>25</u>	<u> 266</u>	<u>192</u>	<u>147</u>	<u>124</u>	135	<u>258</u>	<u>533</u>	1365	<u>1648</u>	<u>373</u>	355	367
<u> 26</u>	309	<u>191</u>	<u>172</u>	1 32	129	257	<u>680</u>	1352	1485	409	316	315
27	<u>256</u>	<u>195</u>	<u>171</u>	125	142	263	681	1386	1363	<u>462</u>	345	303
28	260	220	<u>174</u>	131	<u>150</u>	235	705	<u>1476</u>	1315	446	343	313
29	288	<u>187</u>	168	<u>131</u>		259	773	1649	1167	372	334	337
<u>30</u>	270	<u>169</u>	<u> 1</u> <u>57</u>	<u>133</u>		233	889	1415	1069	348	327	308
<u>31</u>	270		<u>143</u>	<u>135</u>		233		1272		331	330	
Min	211	169	143	87	<u>105</u>	118	225	944	1069	331	316	298
Max	309	282	207	183	156	269	889	1779	2540	961	571	528
Mean	254	224	173	128	131	197	353	1323	1670	506	388	369
ac-ft	15585	<u>13317</u>	10625	<u>7827</u>	7267	12098	20984	81204	99168	31068	23811	21932



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

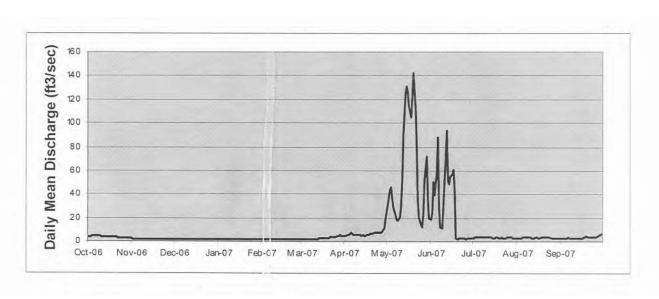
 $Location. --Lat\ 39^{\circ}52'25", long\ 106'19'49", Summit\ County,\ Hydrologic\ Unit\ 14010002\ ,\ m\ left\ bank\ at\ concrete\ flume\ structure,\ and\ 1.1\ mi\ west\ of\ Heeney.$ 

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 operated 01-October-2005 through 31-October-2004 and 30-March-2005 through 30-September-2006. Maximum Discharge 200 (Estimated) cfs, 22-May-2005. Records are 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	Jun	<u>Jul</u>	Aug	Sep
1	4	2	2	2	2	2	<u>5</u>	<u>25</u>	<u>19</u>	<u>3</u>	<u>3</u>	3
2	4	2	2	2	2	2	<u>5</u>	<u>31</u>	25	3	3	3
3	4	2	2	2	2	2	<u>5</u>	<u>44</u>	<u>50</u>	4	3	3
4	<u>5</u>	2	2	2	2	2	<u>5</u>	<u>46</u>	<u>40</u>	4	3	3
5	5	2	2	2	2	2	6	36	<u>59</u>	4	3	3
6	<u>5</u>	2	2	2	2	2	7	29	88	4	4	3
7	5	2	2	2	2	2	<u>5</u>	22	30	4	4	3
8	<u>5</u>	2	2	2	2	2	<u>5</u>	19	12	4	<u>4</u>	3
9	5	2	2	2	2	2	6	18	11	4	3	3
10	4	2	2	2	2	2	6	20	32	3	3	3
11	4	2	2	2	2	2	6	30	52	3	3	3
12	4	2	2	2	2	2	<u>6</u>	52	94	3	3	3
13	4	2	2	2	2	2	5	90	51	3	3	3
14	4	2	2	2	2	3	5	125	<u>–</u> 49	3	3	3
15	4	2	2	2	2	3	5	131	55	3	3	3
16	4	2	2	2	2	3	5	126	57	3	3	3
17	4	2	2	2	2	3	5	113	61	3	3	4
18	4	2	2	2	2	3	6	105	44	3	3	4
19	4	2	2	2	2	3	6	1 21	3	3	4	4
20	4	2	2	2	2	3	6	1 42	2	3	4	4
21	4	2	2	2	2	3	7	112	3	3	4	4
22	3	2	2	2	2	4	7	79	3	3	3	4
23	3	2	2	2	2	4	7	35	2	3	3	3
24	3	2	2	2	2	4	8	21	2	3	3	4
25	3	2	2	2	2	4	8	14	2	3	3	4
26	3	2	2	2	2	4	8	12	2	3	3	4
27	3	2	2	2	2	5	8	24	2	3	3	4
28	3	2	2	2	2	5	8	52	<del>_</del> 3	3	3	5
29	3	2	2	2	_	6	12	72	3	3	3	6
30	3	2	2	2		5	19	36	3	3	3	7
31	3	-	2	2		5		19	-	3	3	
						_	_					
<u>Min</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>	2	2	<u>5</u>	12	<u>2</u>	3	3	3
Max	<u>5</u>	<u>2</u>	<u>2</u>	2	2	6	<u>19</u>	1 42	94	4	4	7
Mean	4	2	<u>2</u>	2	2	<u>3</u>	<u>7</u>	<u>58</u>	29	<u>3</u>	<u>3</u>	4
ac-ft	238	<u>119</u>	1 23	123	<u>111</u>	<u>190</u>	<u>402</u>	3561	<u>1699</u>	208	<u>203</u>	216



### Appendix A (Table 3 of 38) Green Mountain Reservoir, CO

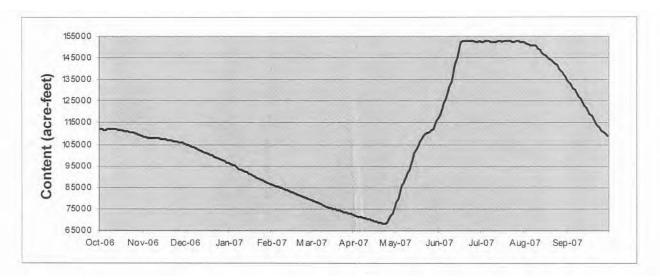
Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, cn Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River..

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 for replacement water for the Colorado-Big Thompson Project. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. Maximum capacity is 153,639 acre-feet at elevation 7950.00 ft, with 146,779 acre-feet of active capacity. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	112,341	108,510	105,147	96,255	<u>86,377</u>	<u>79,377</u>	72,134	76,202	<u>117,608</u>	152,497	<u>152,243</u>	<u>134.761</u>
2	112,099	108,325	104,884	95,952	86,097	79,086	71,924	77,942	<u>118,880</u>	<u>152,412</u>	<u>151,841</u>	133,807
3	111,892	108,190	104,591	95,648	<u>85,846</u>	78,822	71.727	<u>79,814</u>	120,378	<u>152,518</u>	<u>151,524</u>	<u>132.916</u>
4	<u>111.806</u>	108,123	104,315	95,360	<u>85,636</u>	<u>78,531</u>	<u>71,531</u>	<u>81,787</u>	1 21,963	<u>152,687</u>	<u>151,126</u>	132,010
5	111,806	108,039	104,056	95,104	<u>85,426</u>	78,255	<u>71,408</u>	83,805	123,913	<u>152,772</u>	<u>150,895</u>	131,087
6	111.910	108,005	103,814	94,714	85,202	<u>77,955</u>	<u>71,236</u>	<u>85,678</u>	126.371	<u>1 52,730</u>	<u>150,874</u>	130,208
7	112,048	107,988	103,555	94,294	84,994	77,642	<u>71,089</u>	87,380	128,308	<u>152,687</u>	<u>150,853</u>	129,274
8	<u>112,168</u>	107,955	103.263	93,859	84,773	77,328	70,941	88,847	130,017	<u>152,645</u>	<u>150,895</u>	128,308
9	112,255	107,905	102,957	93,443	84,579	77,003	<u>70,806</u>	90,332	131,798	152,476	150,644	127,345
10	112,220	107,839	102,654	93,117	<u>84,316</u>	<u>76,706</u>	70,673	91,790	133,963	152,328	<u>150,078</u>	126,352
11	112,134	107,772	102,366	92,821	84,040	76,409	70,454	93,340	136,563	<u>152,476</u>	149,428	125,324
12	111.996	107,739	102,079	92,584	83,791	<u>76,138</u>	70,236	<u>95,149</u>	139,834	<u>152,645</u>	148,660	124,303
<u>13</u>	111,892	107,640	101,775	92,302	<u>83,517</u>	75,892	70,030	<u>97,155</u>	142,609	<u>152,730</u>	147,933	123,250
<u>14</u>	111,823	107,573	101,488	92,010	83,257	<u>75,662</u>	69,799	<u>99,101</u>	1 45,110	152,730	147,330	122.146
<u>15</u>	111,754	107,473	101,204	91,673	82,984	<u>75,445</u>	<u>69,581</u>	100.873	147,538	152,708	146,713	120,997
<u>16</u>	111,651	107,341	100,920	91,365	82,710	<u>75,241</u>	<u>69,366</u>	102.494	1 50,036	1 52,645	146,076	<u>119,853</u>
<u>17</u>	111,478	107,241	100,652	90,985	82,409	75,049	<u>69,174</u>	103,895	52,137	152,666	<u>145,582</u>	<u>118,988</u>
<u>18</u>	<u>111,256</u>	107,108	100,384	90,578	82,139	74,896	68,935	104,934	<u>152,941</u>	152,708	<u>145,110</u>	118,322
<u>19</u>	111,017	106.975	100,084	90,245	<u>81,895</u>	74,730	<u>68.744</u>	106,229	<u>152,730</u>	<u>152,814</u>	<u> 1 44,601</u>	<u>117,430</u>
20	110,949	106,842	<u>99,818</u>	89,912	<u>81,625</u>	74,539	68,552	<u>107,656</u>	<u>152,835</u>	<u>152,856</u>	<u>1</u> 44,071	<u>116,415</u>
21	110,881	106,709	99,506	89,564	81,381	74.362	68,433	108,746	<u>152,941</u>	<u>152,899</u>	<u>143,479</u>	115,339
22	110,779	106,560	99,226	89,205	<u>81,125</u>	<u>74,161</u>	68,291	109,621	<u>152,878</u>	152,730	42,932	<u>114,286</u>
23	<u>110.676</u>	106,410	98,946	88,890	80,897	73,985	<u>68,184</u>	<u>110.182</u>	<u>152,899</u>	152,582	142,346	<u>113,152</u>
<u>24</u>	<u>110,540</u>	106,295	98,665	88,647	80,656	73,821	68,350	<u>110,540</u>	<u>152,941</u>	152,560	141,760	112,358
<u>25</u>	110,336	106,164	98,339	88,360	80,402	73,632	68,708	110,762	<u>152,814</u>	<u>152,603</u>	140,935	<u>111,703</u>
<u> 26</u>	<u>110,216</u>	106,032	98,062	88,060	80,134	73,443	69,485	110,966	<u>152,708</u>	<u>152.687</u>	140,034	<u>111,119</u>
<u>27</u>	109,944	105,901	97,785	87,748	79,894	73,267	70,527	<u>111,478</u>	<u>152,412</u>	<u>152,856</u>	139,193	110,523
<u>28</u>	109,621	<u>105,819</u>	97,509	87,450	79.667	73,030	<u>71,690</u>	112,323	152,476	<u>152,708</u>	138,341	109,944
<u>29</u>	109,335	105,606	97,217	<u>87,167</u>		72,844	72,993	113,693	<u>152,645</u>	<u>152,539</u>	<u>137,469</u>	<u>109,419</u>
<u>30</u>	109,032	105,360	96,909	86,899		72,607	74,539	114,986	<u>152,666</u>	<u>152,476</u>	136,563	108,880
<u>31</u>	<u>108,746</u>		96,574	86,644		72,371		<u>116.274</u>		152,433	135,640	
<u>Min</u>	108,746	105,360	<u>96,574</u>	86,644	<u>79,667</u>	72,371	<u>68.184</u>	<u>76.202</u>	<u>117,608</u>	152,328	135,640	108.880
Max	112,341	<u>108,510</u>	105,147	96,255	86,377	79,377	74.539	<u>116,274</u>	1 52,941	<u>152,899</u>	152,243	<u>134.761</u>
EOM	108,746	105,360	96,574	86,644	79,667	72,371	74.539	<u>116,274</u>	<u>152,666</u>	<u>152,433</u>	<u>135,640</u>	108,880



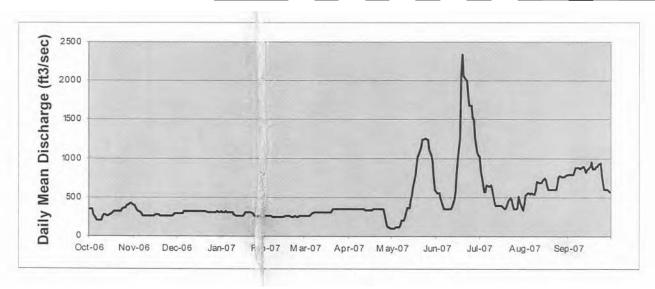
Location. --Lat 39°52'49", long 106°20'00", Summit County, Hydrologic Unit 14010002, cn left bank 0.3 miles upstream from Elliot Creek, 0.3 miles downstream from Green Mountain Reservoir and 13 miles southeast of Kremmling.

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 mi² including 15.3 mi² 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 upstream from station. Transmountain diversions upstream from station. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes. Official revised data is published by the United States Geological Survey.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	Mar	Apr	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	348	<u>390</u>	<u>295</u>	314	262	<u>264</u>	<u>352</u>	107	<u>556</u>	1022	<u>405</u>	790
2	<u>349</u>	<u>367</u>	<u>294</u>	<u>314</u>	260	<u>264</u>	<u>350</u>	107	<u>554</u>	<u>853</u>	<u>532</u>	796
3	<u>350</u>	342	<u>294</u>	<u>314</u>	<u>258</u>	<u>266</u>	<u>349</u>	<u>1</u> 09	<u>559</u>	672	<u>551</u>	<u>796</u>
4	280	<u>315</u>	<u>296</u>	<u>315</u>	258	<u> 265</u>	<u>348</u>	110	477	<u>565</u>	<u>550</u>	793
<u>5</u>	233	313	299	312	<u>256</u>	<u>276</u>	<u>346</u>	<u>110</u>	<u>387</u>	<u>575</u>	<u>547</u>	826
6	202	285	328	312	<u>255</u>	<u>299</u>	<u>346</u>	110	<u>358</u>	<u>658</u>	<u>549</u>	879
7	203	<u>261</u>	<u>326</u>	311	<u>255</u>	<u>309</u>	<u>345</u>	<u>144</u>	<u>354</u>	<u>639</u>	<u>542</u>	875
8	200	<u>261</u>	327	313	<u>255</u>	308	<u>344</u>	201	<u>346</u>	<u>638</u>	<u>545</u>	874
9	210	260	<u>326</u>	<u>307</u>	<u>254</u>	305	<u>344</u>	203	<u>350</u>	<u>664</u>	<u>599</u>	861
10	247	<u>259</u>	327	280	252	305	<u>346</u>	246	<u>350</u>	<u>601</u>	<u>696</u>	878
11	272	261	<u>329</u>	262	<u>253</u>	<u>305</u>	<u>347</u>	307	<u>352</u>	433	<u>692</u>	888
12	284	261	<u>324</u>	<u>259</u>	<u>251</u>	303	<u>341</u>	<u>363</u>	<u>379</u>	398	<u>691</u>	861
13	270	<u>258</u>	323	258	249	302	<u>340</u>	372	<u>462</u>	<u>399</u>	<u>688</u>	822
14	270	261	322	<u>257</u>	<u>255</u>	<u>301</u>	<u>339</u>	<u>464</u>	570	401	721	<u>847</u>
<u>15</u>	272	<u> 269</u>	320	<u>257</u>	260	302	<u>340</u>	532	<u>815</u>	401	748	881
<u>16</u>	272	272	320	<u>260</u>	<u>259</u>	301	342	642	<u>995</u>	400	<u>718</u>	891
17	301	276	<u>318</u>	<u>283</u>	<u>257</u>	300	343	<u>770</u>	1274	<u>375</u>	646	943
18	327	274	317	310	<u>256</u>	301	<u>350</u>	913	2099	<u>348</u>	605	858
<u>19</u>	325	<u>266</u>	318	<u>309</u>	<u>255</u>	301	<u>353</u>	1018	<u>2335</u>	<u>367</u>	<u>600</u>	861
20	<u>326</u>	270	318	<u>309</u>	<u>254</u>	334	351	1049	2068	414	<u>605</u>	898
21	324	268	<u>324</u>	<u>311</u>	<u>255</u>	349	<u>350</u>	<u>1143</u>	2022	<u>453</u>	<u>604</u>	897
22	324	269	310	311	257	350	349	1236	1998	<u>499</u>	603	915
23	324	263	310	291	251	<u>351</u>	<u>350</u>	1246	<u>1819</u>	<u>463</u>	<u>598</u>	941
24	<u>348</u>	259	311	<u>263</u>	<u>253</u>	<u>351</u>	<u>350</u>	1257	<u>1680</u>	401	<u>673</u>	<u>795</u>
25	372	257	311	<u>268</u>	263	353	<u>350</u>	1243	1676	347	<u>755</u>	689
26	373	256	312	270	263	352	<u>285</u>	1241	<u>1519</u>	347	<u>768</u>	598
27	390	260	311	269	263	351	<u>153</u>	1118	1504	363	<u>765</u>	598
28	416	267	313	268	263	354	<u>116</u>	1045	<u>1261</u>	<u>511</u>	<u>763</u>	<u>597</u>
29	421	293	315	271		352	113	949	1066	457	761	582
30	417	292	312	<u>268</u>		<u>352</u>	<u>107</u>	752	1040	361	<u>776</u>	571
31	407		312	<u>263</u>		<u>352</u>		<u>604</u>		<u>341</u>	785	
Min	200	256	294	257	249	264	<u>107</u>	107	346	341	<u>405</u>	571
Max	421	390	329	<u>315</u>	I <u>263</u>	354	<u>353</u>	1257	2335	1022	<u>785</u>	943
<u>Mean</u>	311	280	<u>315</u>	287	257	316	315	<u>636</u>	<u>1041</u>	<u>496</u>	648	810
ac-ft	<u>19116</u>	<u>16646</u>	19332	17640	14225	<u>19366</u>	<u>18687</u>	39028	61826	30428	39762	48114



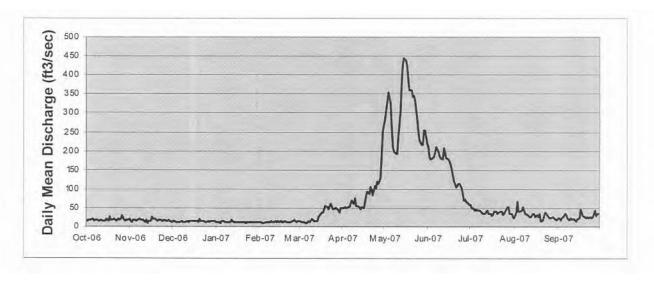
Location. — Lat 40°08'52", long 105°56'28", Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.

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, and on the 24-hour average releases through the Willow Creek Pump Canal and the reservoir outlet works. Recorders were operated from 01-Oct-2006 to 30-Sep-2007. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	<u>Sep</u>
1	32	30	31	23	<u>21</u>	<u>31</u>	<u>102</u>	<u>565</u>	<u>419</u>	<u>116</u>	<u>47</u>	<u>46</u>
2	33	25	32	23	22	29	<u>102</u>	608	<u>367</u>	<u>101</u>	<u>77</u>	<u>45</u>
3	36	38	26	24	<u>19</u>	23	104	648	<u>355</u>	98	<u>135</u>	38
4	<u>37</u>	<u>36</u>	23	16	20	<u>21</u>	97	704	358	89	84	44
5	39	31	25	28	22	24	107	648	<u>365</u>	91	<u>79</u>	<u>57</u>
6	30	<u></u>	23	28	21	20	103	526	388	88	85	71
7	36	39	30	21	21	21	122	422	419	87	107	63
8	36	38	25	26	22	29	138	397	<u>395</u>	81	90	45
9	32	38	23	24	<u>28</u>	26	119	383	<u>371</u>	<u>-</u> 77	<u>72</u>	36
10	31	34	23	<u>25</u>	<u>25</u>	39	149	380	357	72	64	43
11	33	22	28	24	<u>26</u>	32	112	472	353	68	<u>57</u>	42
12	<u>29</u>	33	25	33	28	28	110	602	410	82	<u>53</u>	39
13	<u></u>	18	30	26	<u>26</u>	32	104	748	388	86	54	35
14	32	31	28	26	<u>28</u>	28	<u>96</u>	844	358	<u>70</u>	<u>70</u>	32
15	39	32	30	25	26	52	104	880	352	70	69	40
16	28	<u>49</u>	<u>30</u>	24	<u></u> <u>31</u>	<u>59</u>	97	868	341	60	53	45
17	<u></u>	39	30	21	26	67	129	840	324	66	61	94
18	36	40	32	24	23	<u>76</u>	163	763	299	83	<u>51</u>	77
19	36	34	26	26	28	96	189	717	238	79	69	55
20	41	31	<u>40</u>	23	26	111	177	715	228	70	31	50
21	34	<u></u> 36	29	24	23	106	207	679	211	75	36	48
22	31	33	<u>28</u>	<u>—</u> 18	<u>26</u>	92	199	684	225	81	<u>57</u>	50
23	39	32	30	22	<u></u>	113	167	659	228	82	74	47
24	33	32	24	21	<u>29</u>	1 23	213	<u>564</u>	214	<u>65</u>	<u>71</u>	50
<u>25</u>	39	36	25	21	28	96	200	497	201	67	49	48
26	<u>56</u>	<u>29</u>	<u></u>	<u>21</u>	<u>36</u>	<u>91</u>	237	<u>452</u>	138	<u>92</u>	<u>48</u>	50
27	34	30	26	24	26	99	227	430	143	104	45	87
28	31	36	28	21	28	98	<u>258</u>	427	134	107	50	58
29	<u>40</u>	30	28	21		88	371	506	125	68	<u>46</u>	72
30	37	23	28	23		73	<u>497</u>	<u>501</u>	117	72	41	69
<u>31</u>	42		28	24		102		437		49	38	
<u>Min</u>	28	18	<u>23</u>	<u>16</u>	<u>19</u>	20	<u>96</u>	380	117	49	31	32
Max	<u>56</u>	49	40	33	36	1 23	497	880	419	116	135	94
Mean	36	33	28	24	25	62	167	599	294	81	63	53
ac-ft	<u>2198</u>	<u>1962</u>	<u>1707</u>	1445	1 408	3812	9900	36761	17466	4942	3887	3120



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.

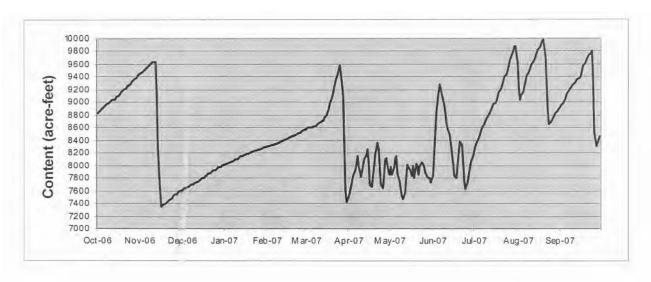
Gage.- Water level recorder with satellite telemetry. Elevation of gage is 8130 from topographic map.

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. Recorder was operated from 01-Oct 2006 to 30-Sep-2007. Record is complete and fair. 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. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	8,831	9,462	7,610	8,018	8,300	<u>8,577</u>	<u>7,499</u>	<u>7,860</u>	<u>7,829</u>	8,230	9,617	8,927
2	8,849	9,473	7.628	8,027	8,308	8.590	7,584	<u>7,978</u>	<u>8,168</u>	<u>8,303</u>	9,208	<u>8,958</u>
3	8,870	9,495	7,640	8,037	8,313	8,597	<u>7,671</u>	7,853	<u>8,495</u>	<u>8,369</u>	9,034	<u>8.984</u>
4	8,890	9,517	7,649	8,039	<u>8,317</u>	<u>8,602</u>	7,753	<u>7,962</u>	8,826	<u>8,430</u>	<u>9,105</u>	9.018
5	8,914	9,534	7,660	<u>8,051</u>	<u>8,325</u>	<u>8.610</u>	7,843	<u>8,120</u>	<u>9,163</u>	<u>8,490</u>	9,171	9,065
6	8,929	9,556	7,667	8,065	8,332	<u>8,612</u>	7,929	<u>8,156</u>	9,286	<u>8,549</u>	9,246	9,126
7	8.950	9,581	7,683	8,072	8,339	8,617	8,032	7,880	9,208	8,607	9,343	9.177
8	8,971	9,603	7,694	8,084	<u>8,347</u>	8,630	<u>8,153</u>	<u>7,744</u>	<u>9,105</u>	<u>8,658</u>	9,424	<u>9,211</u>
9	8,986	9,611	7,703	8,094	8,357	<u>8,640</u>	7,995	<u>7,624</u>	<u>8,973</u>	<u>8,706</u>	<u>9,484</u>	9.235
10	9,002	9,631	7,712	8,103	8.366	<u>8,663</u>	7,820	<u>7.506</u>	8,828	<u>8,746</u>	9,537	9,267
11	9,020	9,639	7,724	8,113	8,376	8,678	<u>7,913</u>	<u>7,477</u>	8,680	<u>8,782</u>	9,581	9,297
<u></u>	9,034	9,636	7,735	8,132	8,388	8,690	<u>8,004</u>	<u>7,577</u>	<u>8,592</u>	<u>8,831</u>	9,620	9,324
13	9,047	9,105	7,751	8,144	8,398	8,706	<u>8,091</u>	7,827	<u>8,480</u>	<u>8,885</u>	9,662	9,348
14	9,062	8,257	7.765	8,156	8,408	<u>8,718</u>	<u>8,170</u>	<u>8,006</u>	<u>8,337</u>	<u>8,927</u>	<u>9,718</u>	9,370
15	9,086	7,593	7,781	8,165	<u>8,418</u>	<u>8,754</u>	8,257	7,973	<u>8,187</u>	<u>8,963</u>	9,777	9,397
16	9,099	7,342	7,795	<u>8,175</u>	8,433	<u>8.795</u>	8.065	7,913	8,025	8,989	<u>9,819</u>	9,430
17	9,134	7,365	<u>7,811</u>	8,182	8,443	<u>8,846</u>	<u>7,705</u>	7,832	<u>7,843</u>	9,028	9,868	9,512
18	9,155	7,389	7,829	8,192	8.450	8,906	<u>7,671</u>	<u>7,987</u>	<u>7,802</u>	9,091	9,908	9,578
19	9,174	7,407	7,841	8,204	8,460	8,986	<u>7.841</u>	<u>7,811</u>	8,009	<u>9,155</u>	<u>9,965</u>	9,623
20	9,200	7,422	7,867	<u>8,211</u>	<u>8,470</u>	9,081	<u>7,999</u>	8,037	<u>8,206</u>	9,211	9,982	9,662
21	9.219	7,442	7,880	8,221	8,477	<u>9.171</u>	<u>8,187</u>	7.999	8,386	9,270	9,729	9,698
22	9,235	<u>7,461</u>	<u>7,894</u>	8,225	<u>8,487</u>	9.243	<u>8,369</u>	7,846	8,330	9,337	9,299	9,735
23	9,259	<u>7,479</u>	<u>7,910</u>	8,233	8,497	9,332	<u>8,281</u>	7,990	<u>8,049</u>	9,400	<u>8,882</u>	9,774
24	9,275	7,497	7,920	8,240	<u>8,510</u>	<u>9,441</u>	7.995	8,039	<u>7,753</u>	9,449	8,665	9,802
<u>25</u>	9,299	<u>7,519</u>	7,931	8,245	8,522	9,523	7,696	<u>8,025</u>	<u>7,631</u>	<u>9,504</u>	<u>8,698</u>	9.353
26	9,340	7,532	<u>7,943</u>	8,252	8,542	9,584	<u>7,642</u>	<u>7,971</u>	<u>7,740</u>	9,581	8,729	<u>8,537</u>
27	9,359	7,548	7,955	8,262	8,552	9,435	<u>7,850</u>	7,894	<u>7,855</u>	9,670	8,762	8,308
28	9.375	7,570	7,969	8,269	8,564	9,089	8,091	<u>7,813</u>	<u>7,959</u>	9,763	8,800	8,354
29	9.397	7,586	7,983	8,276		8.269	8,122	<u>7,811</u>	<u>8,058</u>	<u>9,816</u>	8,836	<u>8,413</u>
30	9,419	7,595	7,997	8,283		7,608	<u>7,890</u>	7,804	<u>8,146</u>	<u>9.871</u>	<u>8,867</u>	8,472
31	9,446		8,009	8,293		<u>7,418</u>		7,731		<u>9,879</u>	8,893	
Min	<u>8,831</u>	7,342	<u>7,610</u>	<u>8,018</u>	8,300	<u>7,418</u>	<u>7,499</u>	<u>7,477</u>	<u>7,631</u>	<u>8,230</u>	<u>8,665</u>	8,308
Max	9,446	9,639	8.009	8,293	<u>8,564</u>	<u>9,584</u>	8,369	<u>8.156</u>	<u>9,286</u>	<u>9.879</u>	9,982	9,802
EOM	<u>9,446</u>	<u>7,595</u>	8,009	<u>8,293</u>	<u>8,564</u>	<u>7,418</u>	<u>7,890</u>	<u>7,731</u>	<u>8,146</u>	<u>9,879</u>	8,893	8,472



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

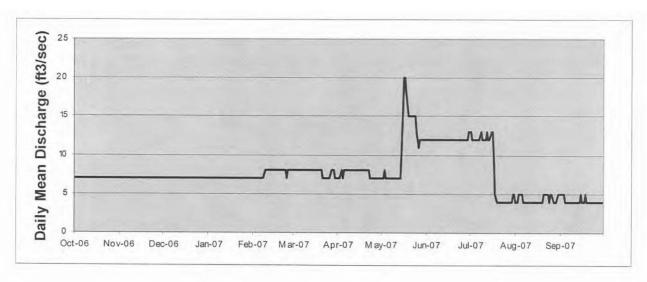
Location.--Lat 40°08'50", long 105°56'16", Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.

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-2006 to 30-Sep-2007. 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	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	<u>7</u>	8	7	7	<u>12</u>	<u>13</u>	4	5
2	<u>7</u>	7	<u>7</u>	<u>7</u>	<u>7</u>	8	<u>7</u>	<u>7</u>	<u>12</u>	<u>12</u>	<u>4</u>	5
3	7	7	7	7	7	8	8	8	<u>12</u>	12	5	5
4	7	7	7	7	7	8	7	7	12	12	5	4
<u>5</u>	7	7	7	7	7	8	8	7	12	12	5	4
6	7	<u>7</u>	7	7	7	8	8	7	1 2	12	4	4
7	7	Z	7	7	7	8	8	7	12	12	4	4
8	7	7	7	_ <u>7</u>	7	8	8	7	12	13	4	4
9	7	7	7	7	8	8	8	7	12	12	4	4
10	7	7	<u>-</u> 7		8	8	<u>-</u> <u>8</u>	7	1 2	12	4	4
11	7	7		7	8	8	8	7	12	12	4	4
12	7	7	7	7	8	8	8	7	12	13	4	4
13	7	7	7	7	8	8	8	7	12	12	4	4
14	7	7	7	7	8	8	8	7	12	12	4	4
15	7	7	7	7	8	8	8	11	12	13	4	5
16	7	7	7	7	8	8	8	20	12	13	4	4
17	<del>_</del>	<del>_</del>	<del>_</del>	<del>_</del>	8	8	8	20	12	10	4	4
18	<del>-</del> 7	<del>_</del>	7	<del></del>	8	8	8	18	12	5	4	5
19	7	7	7	7	8	8	8	15	12	4	4	4
20	7	7	7	7	8	8	8	15	12	4	5	4
21	7	<del>_</del>	7	7	8	7	8	15	12	4	5	4
22	7	7	7	7	8	7	8	15	12	4	5	4
23	7	<del>_</del>	7	7	8	7	<del></del>	15	12	4	5	4
24	7	<del>-</del> 7	<del>/</del>	<del></del>	<u>=</u>	<del></del>		15	12	4	<u>~</u> 4	4
25	<del>-</del> 7	<u>-</u> 7	7		<u>-</u> 8	<del>_</del>	<u>-</u> 7	13	12	4	<u>-</u> 5	4
26	<del>_</del>	7	7	7	8	<del>-</del> 7	<del>-</del> 7	11	12	4	5	4
27	7	7			8	8	7	12	12	<del></del> 4	4	4
28	7	7	<del>_</del>	7	8	8	7	12	12	4	<del>_</del> 4	4
29	7	7	<del></del>	7	<u> </u>	<u> </u>	7	12	12	4	—— <del>=</del> 4	4
30	7	7	7	7		<u>0</u>	<del></del>	12	13	<del></del>	5	4
31	<del>_</del> 7	-	7			<u>-</u> 7	<u>-</u>	12	10	<del></del>	<u>=</u>	
	<del>-</del>		<del>-</del>	<del>-</del>		<u>-</u>		<u>12</u>		<u> </u>	<u> </u>	
Min	7	7	7	7	7	7	7	7	<u>12</u>	4	4	4
Max	<del>-</del> 7	<del></del>	<del></del>	<del></del>	8	<u>-</u> 8	<u>/</u>	20	13	<del></del> <u>13</u>	<del></del> 5	5
Mean	7			<u>-</u>	<u>e</u> 8	<u>e</u> 8	<u>e</u> 8	11	12	9	4	<u> </u>
ac-ft	430	416	430	430	426	<u>475</u>	453	677	715	527	267	248
uc II	100	110	100	100	740	713	<u> </u>	011	110	341	401	<u> 240 </u>



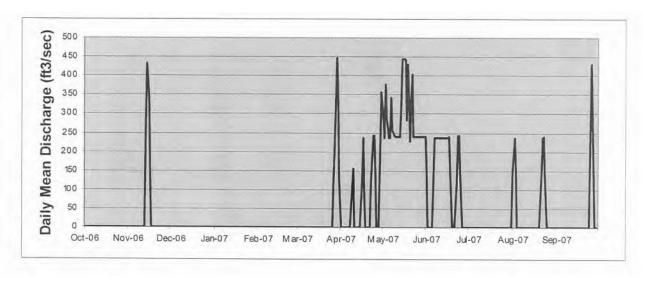
# Appendix A (Table 8 of 38) Willow Creek Pump Canal, CO

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, maximum capacity is 400 ft³/sec. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. Records are complete and reliable but it contains operational data which could be subject to further revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	0	<u>0</u>	<u>0</u>	0	0	0	0	<u>290</u>	<u>147</u>	0	<u>148</u>	0
2	0	<u>0</u>	0	0	0	<u>0</u>	0	237	<u>0</u>	0	237	0
3	0	0	0	0	<u>0</u>	0	0	<u>378</u>	0	0	149	0
4	0	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>	289	<u>0</u>	0	0	0
<u>5</u>	0	<u>0</u>	0	0	<u>0</u>	<u>0</u>	0	237	<u>0</u>	<u>0</u>	0	0
6	0	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	237	<u>109</u>	<u>0</u>	<u>0</u>	0
7	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	342	237	<u>0</u>	<u>0</u>	0
8	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>258</u>	237	0	0	0
9	0	<u>0</u>	0	0	0	<u>0</u>	<u>109</u>	242	237	0	0	0
<u>10</u>	0	<u>0</u>	<u>0</u>	0	0	0	<u>154</u>	<u>241</u>	237	0	0	0
<u>11</u>	<u>0</u>	0	0	0	0	<u>0</u>	0	241	237	0	0	0
12	<u>0</u>	<u>0</u>	0	0	0	<u>0</u>	0	241	237	0	0	0
<u>13</u>	<u>0</u>	<u>256</u>	<u>0</u>	0	0	0	<u>0</u>	<u>241</u>	237	0	0	0
<u>14</u>	<u>0</u>	<u>434</u>	<u>0</u>	0	0	0	<u>0</u>	<u>326</u>	237	0	0	0
<u>15</u>	0	<u>341</u>	<u>0</u>	0	0	0	<u>0</u>	<u>445</u>	237	0	0	0
<u>16</u>	0	<u>142</u>	0	0	0	0	123	444	237	0	0	0
<u>17</u>	0	0	0	0	0	0	237	441	239	0	0	0
18	0	<u>0</u>	0	0	0	0	89	285	<u>154</u>	0	0	0
<u>19</u>	0	0	0	0	0	0	0	431	0	0	0	0
20	0	0	0	0	0	0	0	228	0	0	0	0
21	0	0	0	0	0	0	0	342	0	0	138	0
22	0	0	0	0	0	0	0	403	<u>118</u>	0	237	0
23	0	0	0	0	0	0	121	241	242	0	239	0
<u>24</u>	0	<u>0</u>	0	0	0	0	242	241	242	0	139	0
<u>25</u>	<u>0</u>	<u>0</u>	0	0	0	0	242	241	146	0	0	236
<u> 26</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0	136	241	0	0	0	430
<u>27</u>	<u>0</u>	0	0	0	0	113	0	241	0	0	<u> </u>	152
28	0	0	0	0	0	215	0	241	<u>0</u>	0	0	0
<u>29</u>	0	<u>0</u>	0	0		448	163	241	0	0	0	0
30	0	0	0	0		360	358	241	0	0	0	0
<u>31</u>	<u>0</u>		0	0		137		241	<del>-</del>	0	0	
<u>Min</u>	<u>0</u>	0	0	0	0	0	0	228	0	<u>0</u>	0	0
<u>Max</u>	0	434	0	0	0	<u>448</u>	<u>358</u>	445	242	0	239	430
Mean	0	39	0	0	0	41	66	290	126	0	42	27
ac-ft	0	2323	0	0	0	2521	3909	17796	7459	0	2548	1620

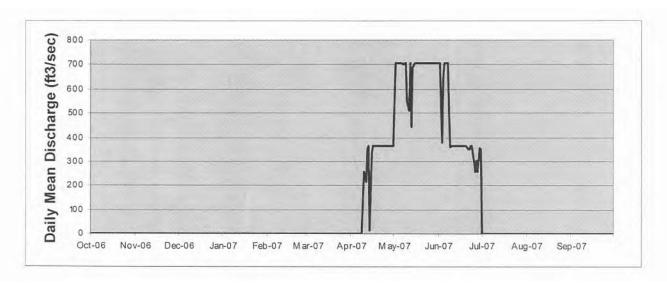


Location. --Lat 40°0624", long 105°58'48", Grand County, Hydrologic Unit 14010001, 5.5 miles northeast of Granby, Colorado, on the Colorado River. Gage.-- Reading taken directly from the pumps. Elevation of the pumping plant is 7823 from topographic map.

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 Fan Pumping Plant operators each morning. Data was collected from 01-Oct-2006 to 30-Sep-2007. Records are complete and fair. This record contains operational data which could be subject to future revisions and changes.

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

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	0	0	0	0	0	0	0	<u>543</u>	<u>708</u>	0	0	0
2	0	0	0	0	0	0	0	<u>708</u>	<u>708</u>	0	0	0
3	0	0	<u>0</u>	0	0	0	0	<u>708</u>	<u>381</u>	0	0	0
4	0	0	<u>_</u> <u>0</u>	0	0	0	0	708	<u>651</u>	0	0	0
<del>_</del> 5	0	0	0	0	0	<u>0</u>	0	708	708	0	0	0
6	0	0	0	0	0	0	0	708	708	0	0	0
7	0	0	0	0	0	0	0	702	708	0	0	0
<del>_</del> 8	0	0	0	<u>0</u>	0	0	0	708	<u>518</u>	0	0	0
<u>-</u> 9	0	0	0	<u>_</u>	0	<u>0</u>	129	708	361	<u>0</u>	0	0
10	0	0	0	0	<u>_</u> 0	<u>0</u>	258	549	<u>365</u>	0	0	0
11	<u>0</u>	0	0	0	0	0	214	<u>508</u>	<u>365</u>	0	0	0
12	<u>_</u>	0	0	0	0	0	349	708	365	0	0	0
13	0	0	0	0	<u>_</u>	<u>0</u>	363	446	363	0	0	0
14	0	0	0	0	0	0	16	688	365	0	0	0
15	0	0	0	0	0	0	335	708	365	0	<u> </u>	0
16	0	0	0	0	0	0	365	708	365	0	0	0
17	0	0	0	0	0	0	365	708	365	<u>0</u>	0	0
18	0	0	0	0	0	0	365	708	365	0	0	0
19	0	0	0	0	0	0	365	708	365	0	0	0
20	0	0	0	0	0	0	365	708	365	0	0	0
21	0	0	0	0	0	0	365	708	349	0	0	0
22	0	0	0	0	0	0	365	708	349	0	0	0
23	0	0	0	0	0	0	365	708	365	0	<u> </u>	0
24	0	0	0	0	0	0	365	708	365	0	0	0
<u> 25</u>	0	0	0	0	0	0	365	708	298	0	0	0
26	0	0	0	0	0	0	365	708	258	<u>0</u>	0	0
27	0	0	0	0	0	0	365	708	303	0	0	0
28	0	0	0	0	0	0	365	708	258	0	0	0
29	0	0	0	0	_	0	365	708	357	0	0	0
30	0	0	0	0		0	365	708	349	0	0	0
31	<u>0</u>	_	<u>0</u>	<u> </u>		<u> </u>		708		<u>0</u>	0	
			_	_		-				_		
<u>/lin</u>	0	0	0	0	0	0	0	<u>446</u>	<u>258</u>	0	0	0
<u>lax</u>	<u>0</u>	0	0	<u> </u>	<u>0</u>	<u>0</u>	<u>365</u>	708	708	0	0	0
ean	0	0	0	0	0	0	238	682	424	0	0	0
c-ft	0	0	0	0	0	0	14135	41849	25176	0	0	0



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

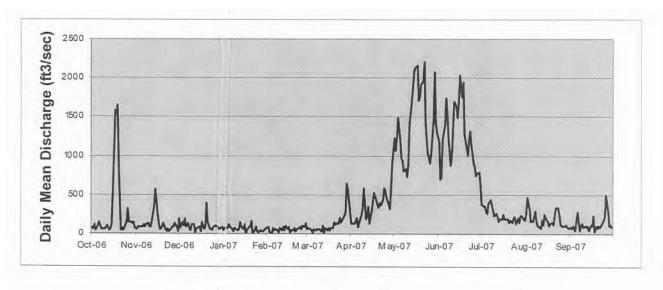
Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, m Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.

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. Recorders were operated from 01-Oct-2006 to 30-Sep-2007. Records are complete and reliable. 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	<u>Jul</u>	Aug	Sep
1	72	<u>62</u>	<u>185</u>	44	68	<u>54</u>	<u>126</u>	1231	1183	378	<u>257</u>	82
2	<u>64</u>	<u>95</u>	<u>79</u>	<u>68</u>	88	<u>69</u>	<u>137</u>	<u>1071</u>	<u>697</u>	<u>362</u>	472	<u>74</u>
3	113	94	142	<u>66</u>	21	<u>55</u>	130	1224	733	<u>347</u>	317	102
4	<u>43</u>	93	<u>96</u>	<u>75</u>	5	<u>44</u>	<u>163</u>	<u>l</u> 490	<u>1214</u>	286	<u>161</u>	48
5	109	92	190	122	<u>67</u>	<u>19</u>	203	1193	1382	260	<u>166</u>	<u>175</u>
6	142	124	<u>83</u>	81	42	<u>61</u>	<u>95</u>	<u>972</u>	1 735	402	<u>166</u>	271
7	107	<u>93</u>	128	61	<u>57</u>	<u>45</u>	<u>193</u>	<u>934</u>	<u>1558</u>	<u>433</u>	288	44
8	<u>55</u>	124	<u>62</u>	28	<u>47</u>	<u>64</u>	239	<u>804</u>	<u>l</u> 243	<u>369</u>	<u>156</u>	103
9	61	<u>125</u>	44	71	12	<u>60</u>	325	<u>835</u>	<u>875</u>	306	108	133
10	<u>65</u>	<u>95</u>	120	<u>64</u>	<u>66</u>	<u>59</u>	<u>582</u>	<u>735</u>	<u>986</u>	239	106	86
11	<u>73</u>	94	123	<u>46</u>	<u>50</u>	<u>30</u>	<u>187</u>	<u>878</u>	<u>1358</u>	263	<u>71</u>	101
12	99	<u>155</u>	<u>10</u>	<u>53</u>	<u>95</u>	104	230	<u>1 400</u>	<u>1690</u>	223	1 74	90
13	<u>48</u>	343	<u>55</u>	140	<u>51</u>	20	<u>355</u>	<u>1697</u>	<u>1637</u>	<u>161</u>	118	105
<u>14</u>	<u>63</u>	<u>563</u>	80	<u>84</u>	100	<u>67</u>	1 38	1884	1 487	<u>191</u>	<u>253</u>	45
<u>15</u>	133	438	<u>95</u>	<u>53</u>	61	44	294	2093	<u>1698</u>	<u>195</u>	<u>174</u>	119
<u>16</u>	527	250	34	<u>114</u>	94	<u>71</u>	409	2128	2039	247	<u>158</u>	102
<u>17</u>	<u>1584</u>	62	139	6	21	40	<u>530</u>	2170	<u>1753</u>	<u>191</u>	105	239
18	<u>1530</u>	62	<u>55</u>	<u>45</u>	45	77	478	<u>1714</u>	<u>1941</u>	193	<u>137</u>	34
19	1659	93	81	95	49	<u>74</u>	384	1751	1276	<u>193</u>	<u>149</u>	99
20	918	1 25	389	89	<u>76</u>	<u>149</u>	<u>343</u>	1922	1178	147	120	80
21	<u>47</u>	62	<u>139</u>	<u>155</u>	<u>35</u>	<u>115</u>	401	1952	<u>1016</u>	<u>179</u>	248	108
22	<u>78</u>	<u>31</u>	<u>54</u>	2	<u>57</u>	132	<u>366</u>	2212	1220	<u>144</u>	<u>336</u>	<u>95</u>
23	<u>47</u>	<u>65</u>	62	<u>46</u>	72	<u>130</u>	<u>439</u>	1439	<u>1313</u>	205	337	147
24	79	<u>31</u>	<u>51</u>	<u>81</u>	86	207	581	1029	1138	222	244	177
<u>25</u>	<u>141</u>	<u>62</u>	<u>92</u>	<u>34</u>	<u>53</u>	<u>153</u>	<u>558</u>	<u>976</u>	<u>908</u>	138	127	215
26	328	93	108	13	96	1 78	<u>461</u>	904	867	205	99	492
27	141	94	84	<u>49</u>	88	234	373	1031	748	150	102	290
28	141	126	92	36	125	282	325	1443	<u>770</u>	238	102	80
29	136	93	<u>59</u>	<u> 26</u>		647	581	2073	<u>788</u>	230	<u>113</u>	1 22
30	141	<u>30</u>	75	44		<u>575</u>	911	1 421	<u>638</u>	<u> 196</u>	83	89
31	<u>78</u>		94	<u>70</u>		284		1298		173	80	
Min	43	30	10	2	<u>5</u>	<u>19</u>	<u>95</u>	735	638	138	71	34
Max	1659	563	389	155	125	647	911	2212	2039	433	472	492
Mean	285	129	100	f;:1	62	134	351	1416	1236	241	178	132
ac-ft	17468	7661	6138	3383	3419	8203	20863	86930	73397	14783	10943	7815



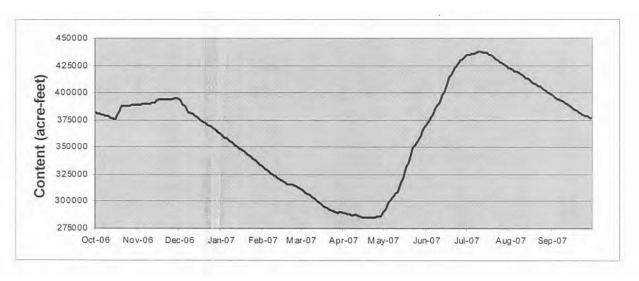
Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, cn Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River,

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. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. 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 fact. 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	<u>Jan</u>	Feb	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	381.722	389,173	394,388	361,697	332,388	311,840	289.700	<u>290.558</u>	371,069	434,316	422,256	397,820
2	381,293	389,297	393,019	360,802	331,358	310,949	289,218	<u>292,494</u>	372,218	434,708	421,934	396,758
3	381,048	389,421	391,342	359,848	330,329	310,004	289,110	294,708	<u>373,430</u>	435,034	421,419	395,821
4	380,558	389,545	389,359	358,836	329,187	309,004	288,629	<u>297.473</u>	<u>375,616</u>	435,296	420,776	395,073
5	380,191	389,668	387,566	358,123	328,275	308,007	288,361	299.652	378,114	435,492	419,941	394,388
6	379.885	389,854	385.593	357,173	327,251	307,011	287,880	301,401	381,293	436,015	419,170	394,076
7	379,518	389,978	383,685	356,224	326,285	306,072	287.453	303,100	384,177	436,538	418,785	393,392
8	379,090	390,164	382,273	355,217	325,252	305.135	287,400	304,529	386,394	436,997	418,208	392,522
9	378,724	390,350	381,783	354,153	324,170	304,144	287,293	305,962	387,813	437,324	417,312	391,838
10	378,358	390,474	381,170	353,149	323.375	303,210	287,773	307,232	<u>389,483</u>	437,455	416,480	391.156
11	377,565	390,598	380,436	352,265	322,410	302,167	287,346	308.727	391,900	437,390	415,585	390,412
12	377,138	390,846	379,396	351,381	321,559	301,291	286,919	311,227	395,073	437,259	414,818	389,668
13	376,468	391,466	378,480	350,498	320,654	300,252	286,600	314,353	398,071	437,062	413,798	388,555
14	375,981	392,522	<u>377,565</u>	349,617	320,032	299,270	285,747	317,889	400,765	436,931	413,224	387,443
<u>15</u>	375,738	393,330	376,773	348,620	319,298	298,235	285,375	321,786	403,847	436,538	412,332	386,455
16	376.529	393,765	375,677	347,858	318,565	297,310	285,428	325.765	407,572	435,884	411,505	385,716
17	379,579	393,827	374,887	346,862	317,720	296,441	285,535	329,872	410,743	435,100	410,552	385,162
18	382,519	393,890	<u>373.915</u>	345,927	316,933	295,574	285,588	333.076	414,180	<u>434,316</u>	409,663	384,116
19	385.716	394,014	373,127	345,051	316,203	294,654	<u>285,481</u>	336.353	416,352	433,467	408,776	383,501
20	387,443	394,201	372,885	344,177	316,203	293,951	285,322	339,993	418,337	432,685	407,825	382,764
21	387,443	394,263	372,037	343,419	316,090	293,249	285,322	343,652	420,005	431,969	407,066	381,783
22	387,504	394,263	371,069	342,372	315,754	292,602	285,109	347,858	422,127	430,797	406,434	380,680
23	<u>387,504</u>	394,326	370,042	341,327	315,529	291,902	285,162	350,557	424,448	429,822	405,865	380.068
24	387,566	394,326	369,137	340,341	315,137	<u>291,579</u>	285,322	352,441	426,387	428,849	405,171	379,457
25	387,751	394,388	368,233	339,298	314,185	290,827	285,588	<u>354,153</u>	427,811	427,941	404,099	378,785
<u> 26</u>	388,308	394,512	367,270	338,257	313,458	290,236	285,960	355,750	429,238	427,163	402,902	378,907
27	388,493	394,637	366,368	337,333	312,955	289,807	285,960	357,589	430,472	426,257	402,022	378,663
28	388,678	394,824	365.527	336,296	312,732	289,539	<u>285,907</u>	360,206	431,708	425,804	401,016	377,809
29	388,864	<u>394,948</u>	364,508	335,259		290,397	286,600	364,089	432,946	424,835	400,200	377,138
30	389,050	394,948	363,610	334,282		290,558	288,308	366,669	433,924	424,060	399,762	376,346
31	389,111		362,652	333,363		290,397		<u>368,956</u>		423,029	398,822	
Min	375,738	389,173	362,652	333,363	312,732	289.539	285,109	290,558	371,069	423,029	398,822	376,346
Max	389,111	<u>394,948</u>	394,388	361,697	332,388	311,840	289,700	<u>368,956</u>	433,924	437,455	422,256	397,820
<u>EOM</u>	389,111	394,948	362.652	333,363	312,732	290,397	288,308	368,956	433,924	423,029	398,822	376,346



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

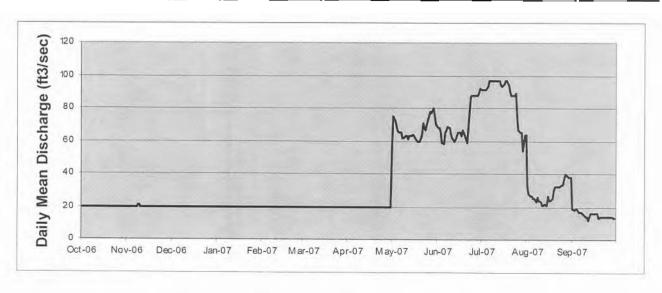
 $Location. --Lat\ 40^{\circ}08'54", long\ 105^{\circ}51'48", Grand\ County,\ Hydrologic\ Unit\ 14010001,\ m\ Granby\ Dam,\ 5.5\ miles\ northeast\ of\ Granby,\ Colorado,\ on\ the\ Colorado\ River.$ 

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. 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-2006 to 30-Sep-2007. Records are complete and fair. This record contains operational data which could be i 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	20	20	20	20	20	20	20	<u>55</u>	68	91	33	19
2	20	20	20	20	20	20	<u>20</u>	75	68	91	28	18
3	20	20	20	20	20	20	20	72	66	91	27	19
4	20	20	20	20	20	20	20	69	59	91	27	19
<u>5</u>	20	20	20	20	20	20	20	66	<u>58</u>	93	25	17
6	20	20	20	20	20	20	20	<u>65</u>	65	97	25	17
7	<u>20</u>	20	20	20	20	20	20	<u>65</u>	67	97	23	17
8	20	21	20	20	20	20	20	62	69	97	26	16
9	20	21	20	20	20	20	20	62	68	97	24	15
10	<u>20</u>	20	20	20	20	20	20	63	64	97	23	14
<u>11</u>	<u>20</u>	20	20	20	20	20	20	63	62	97	21	14
12	20	20	20	20	20	20	20	61	60	97	21	12
<u>13</u>	20	20	20	20	20	20	20	63	61	97	22	16
14	20	20	20	20	20	20	20	63	63	94	21	16
<u>15</u>	20	20	20	20	20	20	20	64	65	93	27	16
<u>16</u>	<u>20</u>	20	20	20	20	20	20	63	65	95	24	16
<u>17</u>	20	20	20	20	20	20	20	62	63	97	24	16
18	20	20	20	20	20	20	20	60	67	97	25	16
<u>19</u>	20	20	20	20	20	20	20	60	65	94	30	13
20	<u>20</u>	20	20	20	20	20	20	60	61	90	32	14
21	20	20	20	20	20	20	20	64	59	88	32	14
22	20	20	<u>20</u>	20	20	20	20	71	69	88	32	14
23	20	20	20	20	20	<u>20</u>	20	<u>68</u>	<u>87</u>	88	32	14
24	20	20	20	20	20	<u>20</u>	20	<u>67</u>	88	89	33	14
<u>25</u>	20	20	20	<u>20</u>	20	20	20	73	88	76	34	14
<u> 26</u>	20	20	20	20	20	<u>20</u>	20	75	88	67	37	14
27	20	20	20	20	<u>20</u>	20	20	<u>78</u>	88	65	40	14
28	20	20	20	20	20	20	20	77	88	65	39	14
<u>29</u>	20	20	20	20		20	20	80	89	<u>54</u>	38	13
30	20	20	<u>20</u>	20		20	20	75	92	64	38	13
<u>31</u>	<u>20</u>		<u>20</u>	<u>20</u>		<u>20</u>		70		64	38	
Min	20	20	20	<u>20</u>	<u>20</u>	<u>20</u>	20	<u>55</u>	58	<u>54</u>	21	12
Max	20	<u>21</u>	20	<u>20</u>	<u>20</u>	20	20	80	92	97	<u>40</u>	19
Mean	20	20	<u>20</u>	<u>20</u>	20	20	20	<u>67</u>	71	87	<u>29</u>	15
ac-ft	1228	1192	1 228	1 228	1109	1 228	1188	4101	4198	5348	1 784	907



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

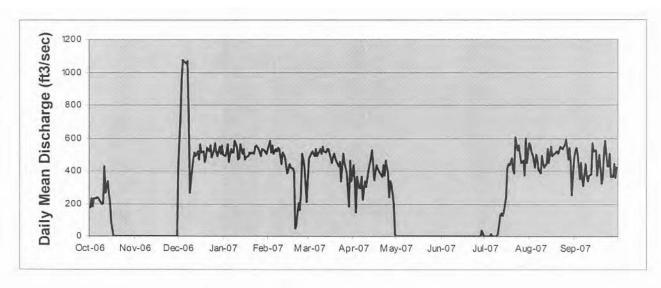
Location. --Lat 40°11'30", long 105°52'52", Grand County, Hydrologic Unit 14010001, at Farr Pumping Plant on the north end of Granby Reservoir, 8 miles northeast of Granby, Colorado, on the Colorado River.

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 are taking place via Adams Tunnel. Data was provided by Fan Plant operators each morning. Data was collected from 01-Oct-2006 to 30-Sep-2007. Daily data provided by the Northern Colorado Water Conservancy District. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	175	0	442	501	<u>534</u>	<u>475</u>	438	0	<u>0</u>	<u>0</u>	<u>554</u>	<u>517</u>
2	233	0	744	494	582	<u>489</u>	340	0	0	<u>0</u>	<u>514</u>	542
3	184	0	962	522	515	503	145	0	0	0	<u>497</u>	502
4	233	0	1071	560	556	520	368	0	0	0	<u>421</u>	350
5	233	0	1069	456	502	493	297	0	0	<u>17</u>	<u>495</u>	<u>447</u>
6	240	0	1053	535	532	534	297	0	0	0	<u>478</u>	353
7	234	0	1065	514	<u>518</u>	<u>490</u>	368	0	0	0	<u>407</u>	311
8	219	0	749	<u>511</u>	542	508	225	0	<u>0</u>	0	<u>389</u>	443
9	199	0	266	582	531	531	338	0	0	0	<u>488</u>	370
10	202	0	404	545	441	502	299	0	0	19	<u>447</u>	336
11	425	0	468	467	512	550	361	0	0	129	420	374
12	268	0	509	474	499	517	405	0	0	137	442	382
13	337	0	492	560	481	514	476	0	0	123	<u>536</u>	568
14	260	0	516	503	388	532	<u>528</u>	<u></u>	0	145	<u>452</u>	520
15	207	0	i 469	531	406	536	442	0	0	241	<u>547</u>	528
16	81	0	562	472	439	508	342	0	0	417	490	375
17	0	0	512	482	422	449	436	0	0	445	497	434
18	0	0	520	492	417	484	414	<u>0</u>	<u>0</u>	437	506	496
19	0	0	453	512	392	508	401	0	0	478	520	326
20	0	0	486	505	51	474	386	0	0	404	502	357
21	0	0	541	512	67	440	364	0	0	388	528	522
22	0	0	517	505	202	429	436	0	0	602	547	583
23	0	0	555	548	160	453	375	0	0	525	536	429
24	0	0	482	553	259	340	463	0	0	557	<u>544</u>	429
25	0	0	523	535	508	503	387	0	0	495	563	505
26	0	0	569	513	438	447	236	0	0	450	587	367
27	0	0	514	490	317	421	336	0	0	462	472	367
28	0	<u>0</u>	491	534	212	389	315	0	0	370	539	442
29	0	0	548	524		185	195	<u> </u>	<u>37</u>	599	<u>451</u>	355
30	0	0	503	511		465	12	0	0	448	256	422
31	0	_	552	508		337	_	<u>_</u> 0		571	480	
_	_					-		_				
Min	0	0	266	456	51	185	12	0	0	0	<u>256</u>	311
Max	425	0	1071	582		550	528	0	37	602	587	583
Mean	120	0	600	515	408	469	348	0	1	273	487	432
ac-ft	7385	0	36842	31583	22618	28761	20642	0	73	<u>16749</u>	29908	25645



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

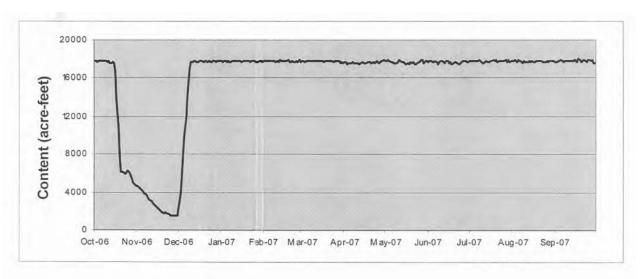
Location. --Lat 40°1226", long 105°50'28", Grand County, Hydrologic Unit 14010001, at the Colorado River below the confluence with Grand Lake outlet, 10 miles northeast of Granby, Colorado.

Gage.--Water-stage recorder with satellite telemetry. Elevation of gage is 8375 feet from topographic map.

Remarks.--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-2006 to 30-Sep-2007. 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	<u>Mar</u>	Apr	May	Jun	Jul	Aug	Sep
1	17.738	4,641	2,311	17,787	17,780	17,793	17,706	<u>17,818</u>	17,705	<u>17,815</u>	17,811	17,729
2	17,802	4,520	3,827	17,732	17,793	17,742	17,697	17,823	17,820	17,805	17,840	17,719
3	17,710	4.350	5,736	17,746	17,769	17,719	17,398	<u>17,949</u>	17,813	17,787	17,892	17,790
4	17,752	4,178	7.762	17,843	17,833	17,774	17.550	<u>17,805</u>	17.712	1 7.836	17,716	17,753
<u>5</u>	17,752	4,068	9,797	17,732	17,764	17,772	17,559	17,700	<u>17,714</u>	17,792	17,929	17.939
6	17,783	3,882	11,896	17,737	17,769	<u>17,800</u>	17,572	17,634	17,845	<u>17,815</u>	17,790	17,792
7	17.802	3,717	14,024	17,732	17,746	17,814	17,687	<u>17,576</u>	17,694	<u>17,826</u>	<u>17,756</u>	17,727
8	17,802	3.545	15.594	17,638	17.803	17,795	17,559	17,571	17,434	17,884	<u>17,611</u>	17.807
9	17,788	3,251	16.826	17,772	17,838	17,772	17,583	<u>17,576</u>	17,687	17,742	17,753	17,810
10	17,697	3,125	17,691	17,833	17,714	17,767	17,509	17,689	17,807	17,548	17,661	17,760
<u>11</u>	17,765	3,014	17,674	17,746	17,769	17,795	17,559	17,911	17,796	17,603	17,702	17,797
12	17,608	2,788	17,806	17,741	17,732	17,785	17,494	<u>17,805</u>	<u>17,714</u>	17.654	1 7,702	17,758
13	<u>17,548</u>	2,678	17,767	17,843	17,858	<u>17.751</u>	17,544	17,652	17,594	17,805	17,761	17,787
<u>14</u>	17,674	2,582	17,718	17,769	17,747	17,772	17,654	17,665	17,778	17,700	<u> 1 7,714</u>	17,800
<u>15</u>	17.550	2,467	17,732	17,769	17,751	<u>17.777</u>	17,588	<u>17.546</u>	17,764	17,700	17,740	17,892
<u>16</u>	16.694	2,178	17.793	17,701	<u> 17,811</u>	17,795	17,542	17,492	<u>17,514</u>	<u>17.831</u>	17,697	17,772
<u>17</u>	13.826	2,063	17.780	17,793	17,820	17,732	17,572	<u>17.540</u>	17,629	<u>17.767</u>	17,701	17,639
18	10,870	<u>1,952</u>	17,764	17,790	17,780	<u>17,751</u>	17,651	<u>17,424</u>	<u>17,417</u>	<u>17,899</u>	<u>17,767</u>	<u> 17.975</u>
<u>19</u>	7,762	1,836	17,651	17,793	17,884	17,742	17,681	17,725	17,502	17,772	17,767	17,904
20	6,168	1,791	17.747	17,774	17,713	17,774	17,687	17,612	1 7,626	<u>17,860</u>	17,753	17,694
21	6,128	1,806	17,774	<u>17,769</u>	<u>17,641</u>	17,806	17,564	17,690	17.652	17,684	17,753	17,758
22	6,097	1,762	17,716	17,704	17,734	1 7,746	17,701	<u>17,483</u>	17,586	17,808	1 7,767	17,937
23	<u>5,960</u>	1,706	17,761	<u>17,747</u>	17,697	<u>17,774</u>	17,559	<u>17,447</u>	17,463	17,780	17,706	17,740
24	<u>5.996</u>	1,598	<u>17,711</u>	17,751	17,721	17,722	17,724	<u> 1</u> <u>7,595</u>	17,541	17,821	17,676	17,658
<u>25</u>	6.283	<u>1,549</u>	17,714	17,772	17,811	17,798	17,747	<u>17.636</u>	17,725	17,838	17,658	<u>17.934</u>
26	6,012	1,508	17,774	17.724	<u>17,711</u>	17,793	17,603	17.839	17,780	<u>17,751</u>	<u>17,747</u>	17,857
27	5,720	<u>1,454</u>	17,825	17,692	<u>17,911</u>	17,769	17,638	<u>17,881</u>	<u>17,810</u>	17,889	<u>17,666</u>	17,797
28	<u>5,490</u>	<u>1.544</u>	1 7,732	17,701	17,674	<u>17,806</u>	17,753	17,909	17,733	17,706	17,753	17.860
<u>29</u>	<u>5,054</u>	<u>1,494</u>	17,793	17,746		17.525	17,790	<u>17,581</u>	<u>17,618</u>	<u>17,871</u>	17,831	17,559
30	<u>4,797</u>	<u>1,505</u>	17,764	17,756		<u>1</u> 7.687	17,929	17,738	<u>17,715</u>	17,721	17,782	17,613
31	<u>4,687</u>		17,793	<u>17,714</u>		<u>17.577</u>		<u>17,786</u>		17,753	17,767	
Min	4,687	1,454	2.311	17,638	17,641	17,525	17,398	17.424	<u>17,417</u>	17,548	<u>17,611</u>	17.559
Max	17,802	4,641	17,825	17.843	17,911	17,814	17.929	<u>17,949</u>	17.845	<u>17,899</u>	17,929	17,975
EOM	4,687	1,505	<u>17,793</u>	<u>17,714</u>	<u>17,674</u>	<u>17,577</u>	<u>17,929</u>	<u>17,786</u>	<u>17,715</u>	17,753	17,767	17,613



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

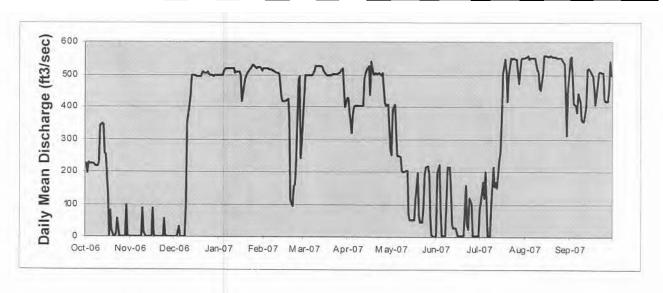
Location. --Lat 40°19'40", long 105°34'39", Larimer County, Hydrologic Unit 10190006, 4.5 miles southwest of Estes Park, Colorado.

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, between Grand Lake and Estes Park. Maximum capacity is 550 cubic feet per second. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. 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	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
. 1	<u>226</u>	<u>0</u>	<u>0</u>	<u>499</u>	<u>518</u>	<u>428</u>	<u>429</u>	<u>253</u>	<u>2</u>	<u>89</u>	<u>551</u>	<u>551</u>
2	<u>198</u>	<u>0</u>	0	<u>499</u>	<u>519</u>	<u>499</u>	<u>382</u>	<u>394</u>	<u>195</u>	109	<u>555</u>	<u>556</u>
3	228	<u>0</u>	0	<u>499</u>	<u>520</u>	<u>499</u>	<u>320</u>	<u>407</u>	222	<u>170</u>	<u>558</u>	<u>491</u>
4	226	<u>0</u>	<u>33</u>	<u>508</u>	<u>519</u>	<u>499</u>	380	<u>323</u>	<u>85</u>	1 21	<u>549</u>	410
<u>5</u>	<u>226</u>	<u>0</u>	0	<u>515</u>	<u>516</u>	<u>499</u>	<u>400</u>	<u>250</u>	3	<u>199</u>	<u>551</u>	402
6	<u>226</u>	<u>0</u>	<u>0</u>	<u>520</u>	<u>515</u>	<u>498</u>	<u>402</u>	<u>248</u>	<u>4</u>	0	<u>552</u>	384
<u>7</u>	222	<u>0</u>	<u>0</u>	<u>521</u>	<u>513</u>	<u>498</u>	<u>405</u>	<u>247</u>	<u>4</u>	<u>0</u>	<u>552</u>	442
8	<u>218</u>	<u>0</u>	0	<u>519</u>	<u>514</u>	<u>512</u>	<u>404</u>	<u>205</u>	<u>110</u>	0	<u>550</u>	417
9	<u>218</u>	<u>88</u>	93	<u>518</u>	<u>509</u>	<u>525</u>	<u>404</u>	200	213	100	<u>515</u>	360
<u>10</u>	227	<u>14</u>	<u>352</u>	<u>521</u>	<u>504</u>	<u>525</u>	<u>404</u>	200	<u>214</u>	214	<u>508</u>	353
<u>11</u>	340	<u>0</u>	<u>405</u>	<u>520</u>	<u>505</u>	<u>526</u>	<u>404</u>	<u>203</u>	<u>132</u>	<u>156</u>	<u>461</u>	<u>355</u>
<u>12</u>	<u>347</u>	0	<u>437</u>	<u>506</u>	<u>501</u>	<u>526</u>	<u>486</u>	203	<u>37</u>	<u>168</u>	<u>454</u>	400
13	<u>345</u>	<u>0</u>	<u>497</u>	<u>509</u>	<u>427</u>	<u>526</u>	<u>504</u>	<u>71</u>	<u>29</u>	<u>152</u>	<u>507</u>	<u>515</u>
<u>14</u>	<u>255</u>	<u>0</u>	<u>497</u>	<u>509</u>	418	<u>524</u>	<u>516</u>	<u>53</u>	<u>29</u>	235	<u>557</u>	<u>518</u>
<u>15</u>	252	0	<u>497</u>	<u>510</u>	<u>419</u>	<u>511</u>	<u>528</u>	<u>53</u>	<u>18</u>	<u>259</u>	<u>557</u>	<u>516</u>
<u>16</u>	<u>130</u>	<u>86</u>	<u>496</u>	<u>498</u>	<u>418</u>	<u>501</u>	437	<u>53</u>	2	<u>354</u>	<u>557</u>	502
<u>17</u>	<u>2</u>	<u>6</u>	<u>496</u>	<u>418</u>	422	<u>500</u>	<u>540</u>	<u>53</u>	2	<u>504</u>	<u>556</u>	495
<u>18</u>	80	0	<u>495</u>	<u>467</u>	423	<u>499</u>	<u>502</u>	<u>118</u>	<u>2</u>	<u>547</u>	<u>558</u>	<u>461</u>
<u>19</u>	<u>21</u>	<u>0</u>	<u>495</u>	<u>489</u>	360	<u>500</u>	<u>503</u>	<u>198</u>	3	<u>512</u>	<u>558</u>	407
20	<u>0</u>	<u>0</u>	506	<u>498</u>	<u>112</u>	500	<u>504</u>	<u>65</u>	3	<u>419</u>	<u>555</u>	467
<u>21</u>	<u>0</u>	0	<u>508</u>	<u>506</u>	<u>95</u>	<u>501</u>	<u>502</u>	<u>47</u>	<u>158</u>	<u>498</u>	<u>554</u>	507
22	12	0	<u>507</u>	<u>515</u>	<u>153</u>	<u>501</u>	<u>504</u>	<u>47</u>	37	<u>550</u>	<u>553</u>	509
23	<u>56</u>	0	<u>507</u>	<u>519</u>	<u>161</u>	<u>501</u>	<u>501</u>	93	<u>25</u>	<u>549</u>	<u>552</u>	506
<u>24</u>	0	<u>57</u>	509	<u>528</u>	225	<u>502</u>	<u>499</u>	<u>194</u>	1 20	<u>551</u>	<u>551</u>	506
<u>25</u>	0	<u>2</u>	<u>502</u>	<u>529</u>	<u>483</u>	<u>505</u>	<u>507</u>	214	<u>101</u>	<u>549</u>	<u>551</u>	424
<u>26</u>	0	<u>0</u>	499	<u>522</u>	<u>494</u>	<u>505</u>	413	<u>219</u>	3	<u>546</u>	<u>551</u>	417
27	0	0	<u>499</u>	<u>520</u>	243	<u>517</u>	402	<u>193</u>	2	<u>504</u>	<u>544</u>	416
28	0	<u>0</u>	<u>496</u>	<u>522</u>	289	<u>518</u>	406	<u>63</u>	2	<u>473</u>	533	<u>451</u>
<u>29</u>	98	<u>0</u>	<u>497</u>	<u>523</u>		<u>456</u>	<u>406</u>	6	2	<u>549</u>	<u>426</u>	<u>542</u>
<u>30</u>	<u>3</u>	0	<u>499</u>	<u>519</u>		<u>401</u>	<u>268</u>	1	2	<u>550</u>	<u>314</u>	500
<u>31</u>	0		<u>499</u>	<u>514</u>		<u>428</u>		11		<u>550</u>	459	
Min	<u>0</u>	<u>0</u>	0	<u>418</u>	<u>95</u>	401	268	1	2	<u>0</u>	<u>314</u>	353
<u>Max</u>	<u>347</u>	<u>88</u>	509	529	520	<u>526</u>	<u>540</u>	407	<u>222</u>	<u>551</u>	558	556
Mean	<u>134</u>	8	349	508	403	498	442	<u>157</u>	<u>59</u>	328	527	459
ac-ft	<u>8229</u>	<u>501</u>	21426	31205	22364	30551	26259	9653	<u>3487</u>	20150	32371	27284



### Appendix A (Tal)IMO of 38) Marys Lake, CO

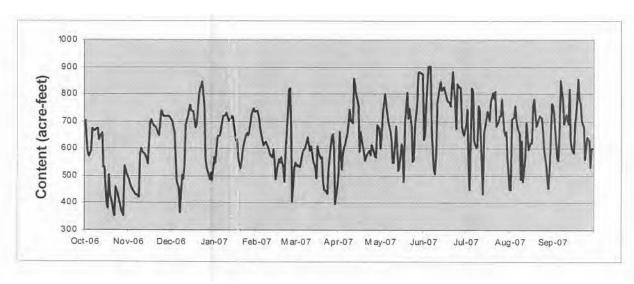
Location. --Lat 40°22'40", long 105°31'50", Larimer County, Hydrologic Unit 10190006, 2 miles southwest of Estes Park, Colorado.

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 acrefeet. 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-2006 to 30-Sep-2007. Record is not complete. Reservoir was partially drained between 22-Nov-2006 and 5-Dec-2007. The gage does not record water surface levels below elevation 8,022.62 feet, content of 318 acre-feet. Record is reliable except for estimated values while the reservoir was drained. These are operational data which could be subject to further revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	701	488	<u>709</u>	<u>567</u>	<u>740</u>	<u>550</u>	<u>504</u>	602	<u>632</u>	<u>689</u>	449	<u>761</u>
2	631	470	<u>697</u>	<u>547</u>	<u>729</u>	<u>537</u>	<u>664</u>	<u>651</u>	649	743	<u>450</u>	727
3	<u>584</u>	<u>460</u>	<u>680</u>	601	709	539	525	727	<u>761</u>	<u>549</u>	<u>706</u>	668
4	572	<u>450</u>	663	644	672	<u>533</u>	<u>580</u>	799	900	449	<u>716</u>	559
5	<u>593</u>	439	482	648	631	<u>551</u>	604	<u>765</u>	903	<u>819</u>	<u>754</u>	557
6	<u>674</u>	432	<u>468</u>	<u>669</u>	614	<u>577</u>	616	<u>728</u>	902	810	<u>704</u>	688
7	669	432	<u>454</u>	698	623	592	659	<u>698</u>	667	628	679	<u>849</u>
8	666	422	<u>365</u>	718	<u>625</u>	<u>604</u>	<u>693</u>	<u>664</u>	<u>523</u>	<u>607</u>	<u>655</u>	782
9	<u>676</u>	582	<u>505</u>	723	606	625	743	624	<u>508</u>	610	<u>486</u>	692
10	674	600	489	<u>730</u>	592	641	702	<u>548</u>	<u>570</u>	<u>757</u>	<u>628</u>	706
<u>11</u>	635	<u>590</u>	<u>537</u>	715	<u>577</u>	<u>591</u>	<u>693</u>	<u>547</u>	<u>767</u>	744	481	723
12	<u>646</u>	<u>580</u>	<u>686</u>	704	<u>570</u>	610	<u>856</u>	684	822	<u>541</u>	<u>561</u>	689
13	<u>657</u>	<u>571</u>	721	713	<u>596</u>	<u>589</u>	828	607	845	436	<u>693</u>	816
14	<u>533</u>	<u>560</u>	<u>743</u>	720	<u>556</u>	<u>558</u>	<u>797</u>	<u>518</u>	813	662	<u>654</u>	628
<u>15</u>	532	<u>545</u>	<u>761</u>	716	487	<u>528</u>	<u>759</u>	<u>533</u>	825	<u>684</u>	<u>597</u>	600
16	<u>397</u>	700	<u>741</u>	682	<u>540</u>	<u>493</u>	<u>590</u>	617	809	<u>736</u>	622	586
<u>17</u>	383	705	734	629	<u>560</u>	611	661	582	792	725	620	696
18	504	<u>695</u>	702	635	<u>549</u>	<u>585</u>	<u>634</u>	<u>478</u>	<u>778</u>	703	<u>759</u>	729
<u>19</u>	435	685	677	<u>564</u>	<u>570</u>	<u>566</u>	590	697	<u>767</u>	773	781	854
20	399	677	692	527	526	<u>568</u>	<u>558</u>	804	<u>756</u>	803	681	777
21	<u>369</u>	<u>670</u>	<u>792</u>	548	481	<u>484</u>	<u>570</u>	712	829	<u>786</u>	<u>692</u>	769
22	352	660	821	<u>595</u>	<u>595</u>	<u>452</u>	582	748	880	808	<u>709</u>	704
23	<u>459</u>	649	831	617	<u>657</u>	442	591	681	755	683	<u>719</u>	678
24	<u>435</u>	740	<u>844</u>	650	815	434	576	552	676	698	713	559
<u> 25</u>	414	732	<u>752</u>	<u>657</u>	<u>819</u>	524	613	561	<u>838</u>	718	663	598
26	396	721	<u>567</u>	<u>650</u>	671	572	589	685	830	<u>721</u>	<u>597</u>	643
27	<u>375</u>	718	<u>531</u>	668	407	644	<u>574</u>	<u>767</u>	820	782	<u>541</u>	628
28	<u>353</u>	719	504	726	<u>530</u>	655	569	<u>878</u>	682	667	486	532
29	536	719	488	738		<u>594</u>	686	882	<u>664</u>	652	454	602
30	<u>525</u>	719	<u>511</u>	748		398	676	878	648	<u>663</u>	514	603
31	<u>508</u>		<u>485</u>	736		456		874		564	762	
Min	352	422	365	<u>527</u>	407	398	504	478	508	436	449	532
Max	<u>701</u>	<u>740</u>	844	748	819	655	856	882	903	819	781	854
EOM	<u>508</u>	719	485	736	530	<u>456</u>	676	874	648	564	<u>762</u>	603



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

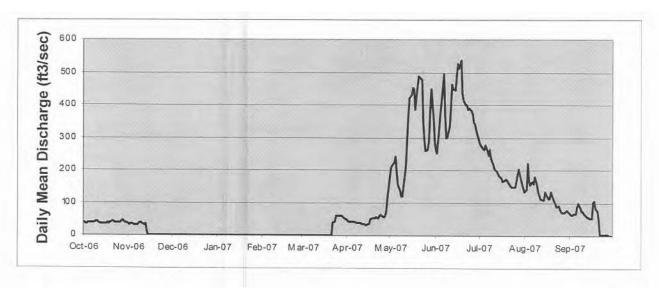
Location. --Lat 40°22'42", long 105°30'48", Larimer County, Hydrologic Unit 10190006, 600 feet downstream from bridge on state highways 7 and 36 in Estes Park, Colorado, downstream from Black Canyon Creek, and 0.3 miles northwest of Estes Powerplant.

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<sup>1</sup>. Station consists of data collection platform as primary record with graphic chart recorder as backup. Recorder was operated from 01-Oct-2006 to 13-Nov-2006 and from 22-Mar-2007 to 21-Sep-2007. The station is shutdown during winter, however the available data is reliable. This record contains operational data which could be subject to future revisions and changes. The official record for this station is published by the State of Colorado, Department of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	Mar	Apr	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	38	31	0	0	0	0	44	207	262	<u>284</u>	132	68
2	<u>36</u>	34	0	0	0	0	43	213	253	278	<u>141</u>	64
3	36	34	0	0	0	0	41	226	332	267	221	65
4	39	33	0	0	0	0	41	244	380	263	168	67
5	38	32	0	0	0	0	<u>41</u>	192	413	278	<u>154</u>	67
6	38	31	0	0	0	0	<u>41</u>	<u>156</u>	<u>494</u>	261	<u>166</u>	87
7	38	33	0	0	0	0	38	136	369	244	160	97_
8	38	38	0	0	0	0	<u>38</u>	120	299	262	180	82
9	41	37	0	0	0	0	39	121	301	234	<u>154</u>	74
10	42	34	0	0	0	0	<u>40</u>	151	333	218	134	73
11	39	30	0	0	0	0	34	211	391	205	121	66
12	36	34	0	0	0	0	34	291	463	<u>199</u>	114	59
13	<u>36</u>	15	0	0	0	0	35	366	450	196	108	57
14	36	0	0	0	0	0	32	422	445	182	108	55
<u>15</u>	36	0	0	0	0	0	34	432	488	179	134	54
16	35	0	0	<u>0</u>	0	0	37	452	528	175	1 26	54
17	37	0	0	0	0	0	50	448	514	167	112	101
18	34	0	0	0	0	0	<u>51</u>	387	536	169	113	104
19	39	0	0	0	0	<u>_</u>	<u></u>	455	435	172	133	84
20	43	0	0	0	0	0	51	488	413	168	1 21	73
21	42	0	0	0	0	0	55	484	399	160	107	45
22	38	0	0	0	0	37	54	479	400	152	97	0
23	38	0	0	0	0	41	61	347	386	148	87	0
24	<u>40</u>	0	0	0	0	61	64	296	389	147	90	0
25	38	0	0	0	0	<u>59</u>	59	259	383	146	82	0
26	39	0	0	<u>0</u>	0	60	57	261	373	1 66	<u>75</u>	0
27	46	0	0	0	0	59	60	291	346	186	72	0
28	42	0	0	0	0	59	75	383	339	202	71	0
29	40	0	0	0	_	56	116	448	310	172	73	0
30	39	0	0	0		51	176	360	298	1 56	78	0
31	36		0	0		<u>47</u>		290		143	73	
Min	34	0	0	0	0	0	32	120	253	143	71	0
Max	<u>46</u>	38	0	0	0	<u>61</u>	176	488	536	284	221	104
Mean	<u>38</u>	14	0	0	0	17	53	310	391	199	120	50
ac-ft	2356	822	0	0	0	1052	3161	19040	23210	1 2228	7336	2957



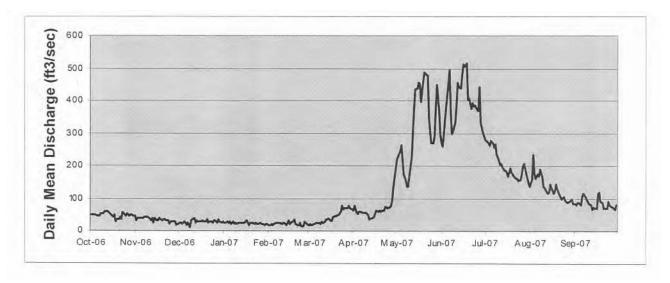
 $Location. \ \hbox{$\ --$Lat $40^\circ 22'31''$, long $105^\circ 29'15''$, Larimer County, Hydrologic Unit $10190006, 1.5$ miles east of Estes Park, Colorado, on the Big Thompson River.}$ 

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 os 7475.0 feet is 3,070 acre-feet. Recorders were operated from 0l-Oct-2006 to 30-Sep-2007. Records are complete and reliable, but have 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	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	<u>48</u>	33	23	25	<u>17</u>	<u>17</u>	<u>64</u>	217	271	<u>279</u>	137	83
2	<u>49</u>	37	26	26	<u>19</u>	20	<u>78</u>	228	<u>258</u>	276	<u>158</u>	79
3	<u>50</u>	40	22	27	20	<u>19</u>	<u>57</u>	247	<u>342</u>	271	<u>235</u>	87
4	49	40	29	24	<u>17</u>	20	51	<u> 264</u>	<u>382</u>	<u> 264</u>	<u> 1 78</u>	89
<u>5</u>	<u>47</u>	37	26	28	22	21	<u>58</u>	217	418	276	<u>163</u>	80
6	<u>47</u>	38	<u>19</u>	22	23	<u>23</u>	<u>58</u>	<u> 176</u>	<u>496</u>	<u>269</u>	<u> 1 75</u>	104
7	<u>46</u>	41	24	27	24	24	<u>55</u>	<u>154</u>	<u>364</u>	255	<u>169</u>	117
8	<u>51</u>	42	9	20	<u>25</u>	<u>25</u>	<u>56</u>	136	<u> 297</u>	<u> 265</u>	190	107
9	<u>53</u>	<u>42</u>	<u>33</u>	<u> 26</u>	24	22	<u>57</u>	<u>137</u>	304	<u>235</u>	<u>166</u>	98
10	<u>56</u>	39	<u>36</u>	22	22	28	<u>57</u>	<u>168</u>	<u>334</u>	219	<u>137</u>	92
11	<u>59</u>	<u>32</u>	<u>40</u>	24	<u>26</u>	<u>26</u>	48	226	382	<u>205</u>	133	85
12	<u>59</u>	<u>40</u>	<u>25</u>	<u>24</u>	<u> 26</u>	<u>28</u>	<u>36</u>	<u>301</u>	<u>455</u>	207	1 27	80
<u>13</u>	<u>57</u>	26	<u>30</u>	24	<u>19</u>	<u>35</u>	40	<u>375</u>	442	<u>198</u>	<u>116</u>	67
<u>14</u>	<u>53</u>	38	28	<u>25</u>	25	<u>36</u>	<u>39</u>	<u>435</u>	438	<u>186</u>	118	73
<u>15</u>	<u>48</u>	31	28	24	32	39	41	437	480	<u>185</u>	<u>1 44</u>	69
<u>16</u>	42	<u>33</u>	29	28	22	<u>31</u>	<u>52</u>	<u>456</u>	<u>513</u>	<u>179</u>	<u> 1</u> 33	69
<u>17</u>	48	<u>39</u>	32	30	29	33	<u>64</u>	452	<u>504</u>	<u>167</u>	<u>117</u>	117
<u>18</u>	27	<u>35</u>	<u>29</u>	<u>19</u>	<u>29</u>	<u>41</u>	<u>60</u>	<u>396</u>	<u>515</u>	<u>193</u>	1 23	118
<u>19</u>	<u>36</u>	31	<u>29</u>	23	<u>35</u>	44	<u>63</u>	<u>458</u>	404	180	<u>143</u>	90
<u>20</u>	<u>36</u>	<u>35</u>	<u>36</u>	24	22	<u>46</u>	61	488	<u>406</u>	<u>174</u>	<u>131</u>	88
21	42	<u>34</u>	24	23	<u>17</u>	<u>50</u>	<u>63</u>	<u>485</u>	<u>374</u>	170	<u>111</u>	71
22	<u>36</u>	<u>30</u>	<u>27</u>	<u>21</u>	<u>18</u>	<u>48</u>	<u>64</u>	<u>477</u>	<u>392</u>	<u>161</u>	<u>104</u>	69
23	<u>56</u>	30	29	24	23	<u>60</u>	<u>74</u>	352	<u>383</u>	<u>162</u>	99	70
24	48	21	<u>25</u>	21	<u>13</u>	<u>77</u>	<u>75</u>	<u>307</u>	<u>385</u>	<u>156</u>	<u>104</u>	91
<u> 25</u>	44	28	<u>30</u>	22	<u>15</u>	<u>68</u>	<u>71</u>	269	<u>371</u>	<u>158</u>	<u>95</u>	81
<u> 26</u>	<u>53</u>	27	32	23	27	71	<u>74</u>	271	<u>367</u>	<u>176</u>	90	77
27	<u>46</u>	28	<u>26</u>	21	25	<u>69</u>	77	296	441	199	<u>87</u>	72
28	<u>49</u>	28	<u>36</u>	20	21	<u>71</u>	91	<u>383</u>	<u>335</u>	208	<u>91</u>	<u>70</u>
<u>29</u>	50	<u>19</u>	<u>27</u>	19		<u>76</u>	<u>132</u>	<u>449</u>	303	<u>177</u>	<u>96</u>	66
30	<u>45</u>	20	<u> 26</u>	21		70	188	<u>363</u>	292	<u>160</u>	<u>97</u>	81
31	44		28	21		<u>68</u>		294		<u>148</u>	83	
Min	<u>27</u>	<u>19</u>	9	19	13	<u>17</u>	36	136	<u>258</u>	148	<u>83</u>	66
Max	<u>59</u>	42	40	30	35	77	<u>188</u>	488	515	279	<u>235</u>	118
Mean	48	33	28	23	23	42	67	320	388	205	131	85
ac-ft	2919	1968	<u>1709</u>	1441	<u>1 261</u>	<u>2586</u>	<u>3968</u>	19630	23063	12589	8019	5029



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

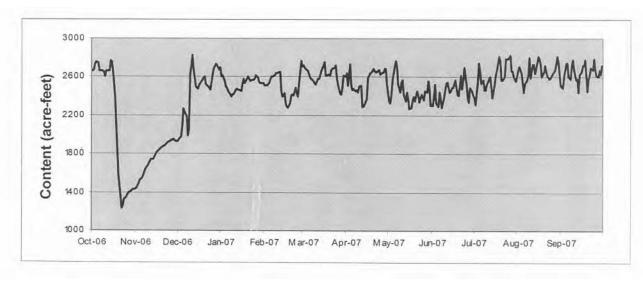
Location. --Lat 40°22'31", long 105°29'19", Larimer County, Hydrologic Unit 10190006, 1.5 miles east of Estes Park, Colorado, on the Big Thompson River.

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-2006 to 30-Sep-2007. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

Content, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	<u>Sep</u>
1	2,658	<u>1,443</u>	1,936	2,609	<u>2,511</u>	<u>2,716</u>	2,634	2,352	2,303	2,386	2,677	<u>2,496</u>
2	2,680	<u>1,462</u>	<u>1,958</u>	<u>2,619</u>	2,509	<u>2,697</u>	<u>2,506</u>	2,320	2,398	2,309	2,704	2,494
3	2,737	<u>1,491</u>	<u>1,977</u>	2,561	2,516	2,675	2.732	2,402	<u>2,519</u>	2,541	2,645	2,606
4	2,758	<u>1,521</u>	2,077	2,501	2,537	2,660	2.506	2,564	2,322	<u>2,744</u>	2.547	2,745
5	2,742	<u>1,549</u>	2,265	<u>2,485</u>	2,572	<u>2,629</u>	<u>2,468</u>	2,709	2,296	2,658	2,447	2,740
<u>6</u>	2,662	<u>1,575</u>	2,235	2,449	2,602	2,596	2,478	2,768	2,439	2,539	2,539	2,602
7	2.660	<u>1,600</u>	2,188	2,416	2,607	2,574	2,455	2.704	2,379	2,571	2,571	2,587
8	2.667	<u>1,635</u>	<u>1.989</u>	2.392	2,619	2,562	2,460	2.529	2,284	2,463	2.631	2.732
9	2,656	<u>1,674</u>	2,049	2,416	2,640	2,532	2,447	2,444	2,382	2,467	2,806	2,778
10	2,602	<u>1,703</u>	2,623	2,421	2,643	2,527	2,499	2,546	2,460	2,522	2,596	2.670
<u>11</u>	2,667	<u>1,716</u>	2,820	<u>2,463</u>	2,656	2,587	<u>2,514</u>	2,567	2,536	2,584	2,732	2.567
12	<u>2,662</u>	<u>1,745</u>	2.680	2,473	2,651	2.576	2,289	2,413	2,544	2,602	2,735	2,576
<u>13</u>	2.658	<u>1,745</u>	2,596	2,465	2,452	2.619	2,292	2,346	2,444	2,499	2,634	2,439
<u>14</u>	2,763	<u>1,773</u>	2,501	2,460	2,390	2,663	2,312	2,441	2,458	2,381	2,685	2,629
<u>15</u>	2,761	1,788	2,476	2,450	2,432	2,725	2,368	2,379	2,486	2,527	2,810	2,667
<u>16</u>	2.667	<u>1,810</u>	2,508	2,519	2,330	2,761	2.592	2,270	2,494	2,626	2,792	2,716
<u>17</u>	2,384	1,833	2,537	2,587	2,296	2,616	2,618	2,279	2,574	2,677	2,737	2.720
18	2,093	<u>1,851</u>	<u>2,574</u>	2,539	2,281	2,618	2,638	2.358	2,490	2.811	2,607	2,780
<u>19</u>	<u>1,855</u>	<u>1,861</u>	2,589	2,576	2,323	2,623	2,663	2,395	2,418	2,764	2,646	2,455
20	<u>1,579</u>	<u>1,875</u>	2.602	2,609	2,403	2,611	2,685	2.350	2,402	2,569	2,723	2,581
21	<u>1,362</u>	1.886	2,519	2,586	2,415	2.675	2,668	2.457	2,614	2,566	2,660	2,619
22	<u>1,230</u>	<u>1,897</u>	2,498	2,561	2,405	2,687	2,653	2,418	2,478	2,602	2,613	2,701
23	1.260	<u>1,912</u>	2,483	2,569	2,483	2,701	2,660	2,342	2,567	2,787	2,579	2,677
<u>24</u>	<u>1,323</u>	1,922	2,460	2,564	2,432	2,726	2,675	2,421	2,696	2,794	2.594	2,787
<u>25</u>	1,349	1,933	2,531	2,586	2,390	2,591	2,626	2,390	2,526	2,796	2,616	2.684
<u> 26</u>	<u>1,376</u>	<u>1,941</u>	2.684	2,613	2,534	2,518	2.641	2,355	2,394	2,825	2,645	2,621
<u>27</u>	1,390	<u>1,942</u>	2,704	2,596	2,771	2,426	2,653	2,452	2,341	2,662	2,677	2,609
<u>28</u>	<u>1,412</u>	<u>1,948</u>	2,728	2,546	2,706	2,413	2,687	2,442	2,494	2,658	2,745	2,679
<u>29</u>	<u>1,422</u>	<u>1,936</u>	2,720	2,532		2.485	2,687	2,554	2,458	2.601	2,813	2,628
<u>30</u>	<u>1,426</u>	<u>1,927</u>	2.679	2,531		2,614	2,521	2,494	2,403	2,561	2,761	2,721
<u>31</u>	1.434		2,697	2,532		2,601		2.300		2,611	2,511	
<u>Min</u>	1,230	<u>1,443</u>	<u>1,936</u>	2,392	2,281	2,413	2.289	2,270	2,284	2,309	2.447	2.439
Max	2,763	1,948	2.820	2,619	2,771	2,761	2,732	2,768	2,696	2,825	2,813	2,787
EOM	1,434	1,927	2,697	2,532	2,706	2,601	2,521	2,300	2,403	2,611	2,511	2,721



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

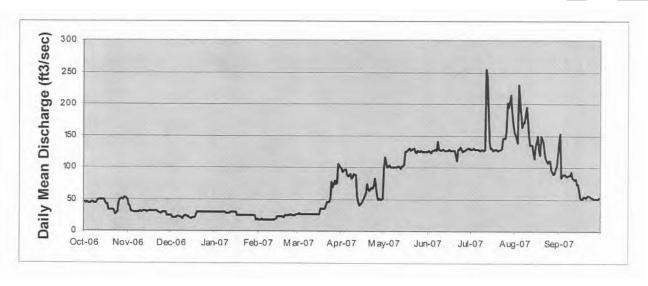
Location. —Lat 40°22'35", long 105°2906", Larimer County, Hydrologic Unit 10190006, 600 feet downstream from Olympus Dam and 100 feet upstream of Dry Gulch, 2.0 miles east in Estes Park.

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 7492.50 feet.

Remarks.— Drainage area is 155 me. Area at site used between 29-Jan-1934 and 21-Mar-I951 was 162 me. Station consists of data collection platform as primary record with graphic chart recorder as backup. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes. The official record for this station is published by the State of Colorado, Department of Water Resources.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	<u>46</u>	<u>40</u>	24	30	<u>18</u>	27	99	98	125	<u>128</u>	<u>156</u>	140
2	44	<u>38</u>	21	30	<u>18</u>	28	93	116	127	1 28	1 46	152
3	<u>45</u>	31	21	29	<u>19</u>	27	97	100	123	<u>129</u>	139	85
4	44	30	<u>21</u>	<u>29</u>	<u>18</u>	<u>27</u>	<u>96</u>	<u>101</u>	<u>126</u>	1 28	230	88
<u>5</u>	<u>44</u>	<u>29</u>	23	29	<u>18</u>	<u>26</u>	88	<u>103</u>	<u>126</u>	128	206	89
<u>6</u>	<u>45</u>	<u>29</u>	22	29	<u>18</u>	<u>26</u>	<u>86</u>	100	<u>128</u>	128	<u>164</u>	88
<u>7</u>	<u>45</u>	<u>29</u>	22	<u>30</u>	<u>18</u>	<u>26</u>	<u>90</u>	100	<u>127</u>	127	<u>170</u>	86
8	43	<u>30</u>	<u>21</u>	29	<u>18</u>	<u>26</u>	82	<u>100</u>	<u>141</u>	<u>127</u>	1 71	87
9	44	31	20	28	<u>18</u>	<u>26</u>	<u>85</u>	<u>100</u>	<u>128</u>	128	<u>195</u>	88
10	48	<u>30</u>	<u>22</u>	<u>28</u>	<u>18</u>	<u>26</u>	89	100	<u>127</u>	127	1 76	93
<u>11</u>	<u>49</u>	<u>31</u>	24	28	<u>18</u>	26	<u>87</u>	<u>101</u>	<u>128</u>	<u>128</u>	<u>149</u>	84
12	<u>50</u>	<u>31</u>	<u>23</u>	30	<u>18</u>	<u> 26</u>	<u>55</u>	100	128	<u>255</u>	<u>135</u>	81
<u>13</u>	<u>49</u>	<u>31</u>	22	<u>30</u>	20	<u>26</u>	<u>45</u>	99	<u>127</u>	242	<u>135</u>	83
14	50	<u>30</u>	<u>21</u>	30	23	<u>26</u>	<u>41</u>	102	<u>127</u>	1 38	122	73
<u>15</u>	<u>49</u>	<u>31</u>	20	30	22	<u>27</u>	44	<u>104</u>	<u>127</u>	<u>130</u>	<u>114</u>	73
<u>16</u>	<u>42</u>	31	21	30	23	<u>27</u>	<u>47</u>	1 24	128	1 29	<u>133</u>	52
<u>17</u>	<u>42</u>	<u>31</u>	21	<u>25</u>	22	<u>35</u>	<u>51</u>	<u>124</u>	127	<u>127</u>	<u>149</u>	51
<u>18</u>	<u>34</u>	<u>31</u>	<u>21</u>	<u>25</u>	22	<u>35</u>	<u>60</u>	1 26	<u>1 26</u>	1 28	<u>125</u>	51
<u>19</u>	<u>34</u>	<u>31</u>	30	<u>25</u>	21	<u>35</u>	<u>74</u>	1 29	<u>1 26</u>	<u>128</u>	<u>119</u>	54
20	<u>34</u>	<u>32</u>	<u>30</u>	<u>25</u>	<u>24</u>	<u>35</u>	<u>67</u>	1 26	<u>1 26</u>	<u>126</u>	<u>150</u>	52
<u>21</u>	33	<u>32</u>	<u>29</u>	<u>25</u>	<u>25</u>	<u>40</u>	64	<u>128</u>	<u>111</u>	<u>126</u>	<u>141</u>	55
22	<u>31</u>	<u>30</u>	<u>29</u>	<u>25</u>	<u>25</u>	<u>45</u>	<u>68</u>	<u>129</u>	1 28	128	122	57
23	<u>27</u>	28	<u>29</u>	<u>25</u>	<u>25</u>	<u>45</u>	<u>67</u>	<u>124</u>	<u>128</u>	<u>129</u>	<u>114</u>	<u>55</u>
<u>24</u>	<u>30</u>	<u>28</u>	<u>29</u>	<u>25</u>	<u>26</u>	<u>51</u>	<u>72</u>	<u>123</u>	<u>131</u>	<u>1 46</u>	<u>107</u>	53
<u>25</u>	<u>43</u>	<u>29</u>	<u>29</u>	<u>25</u>	<u>25</u>	<u>78</u>	82	126	<u>124</u>	<u>145</u>	<u>111</u>	52
<u>26</u>	<u>50</u>	<u>29</u>	<u>30</u>	<u>25</u>	<u>25</u>	<u>68</u>	<u>54</u>	1 25	<u> 1 27</u>	<u> 1 58</u>	<u>110</u>	51
<u>27</u>	<u>51</u>	<u>29</u>	30	<u>25</u>	<u>25</u>	<u>79</u>	<u>50</u>	1 27	<u>126</u>	202	<u>96</u>	51
<u>28</u>	<u>50</u>	<u>25</u>	30	<u>25</u>	<u>27</u>	<u>74</u>	<u>51</u>	1 25	1 28	<u>195</u>	<u>89</u>	51
29	<u>53</u>	<u>25</u>	<u>30</u>	24		<u>76</u>	<u>49</u>	1 25	1 30	<u>214</u>	<u>91</u>	51
30	<u>53</u>	<u>25</u>	30	<u>18</u>		<u>105</u>	<u>51</u>	<u>1</u> 25	1 29	<u>186</u>	<u>99</u>	52
<u>31</u>	<u>50</u>		30	<u>19</u>		100		125		<u>171</u>	102	
Min	27	<u>25</u>	20	<u>18</u>	<u>18</u>	<u> 26</u>	<u>41</u>	<u>98</u>	<u>111</u>	<u>126</u>	<u>89</u>	51
Max	<u>53</u>	<u>40</u>	<u>30</u>	<u>30</u>	<u>27</u>	<u>105</u>	99	<u>129</u>	<u>1 41</u>	<u>255</u>	230	1 52
Mean	<u>44</u>	30	<u>25</u>	<u>27</u>	<u>21</u>	<u>43</u>	<u>69</u>	<u>114</u>	<u>127</u>	<u>149</u>	<u>138</u>	73
ac-ft	<u>2677</u>	<u>1796</u>	<u>1535</u>	<u>1643</u>	<u>1182</u>	2622	<u>4126</u>	6999	<u>7544</u>	9126	8447	4312



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

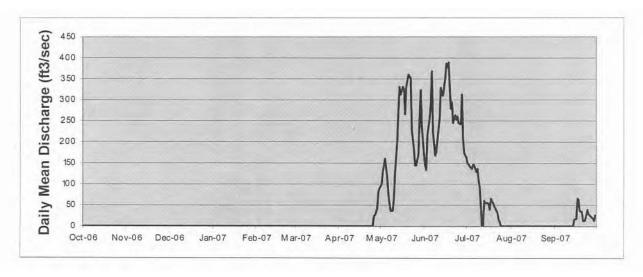
Location. —Lat 40°2224", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado.

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, before returning it to the Big Thompson River near the canyon mouth. The Skim daily value is determined based on the data from the gage in the system. Period of record includes from 01-Oct-2006 through 30-Sep-2007. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
<u>1.</u>	0	0	<u>0</u>	0	0	<u>0</u>	0	<u>101</u>	<u>144</u>	<u>151</u>	0	0
2	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>128</u>	<u>135</u>	1 47	<u>0</u>	0
3	0	0	0	0	0	0	0	<u>146</u>	216	<u>143</u>	<u>0</u>	0
4	0	0	<u>0</u>	0	0	0	0	<u>161</u>	<u>256</u>	<u>1</u> 36	<u>0</u>	0
<u>5</u>	0	0	0	0	0	0	0	<u>117</u>	290	<u>148</u>	0	0
6	0	0	0	0	0	0	0	<u>76</u>	<u>369</u>	1 44	<u>0</u>	0
7	0	0	0	0	0	0	0	<u>54</u>	223	<u>129</u>	0	0
8	0	0	0	0	0	0	0	<u>36</u>	<u>1 69</u>	<u>138</u>	0	0
9	0	0	0	0	0	0	0	37	<u>177</u>	<u>108</u>	0	0
10	0	0	0	0	0	0	0	<u>67</u>	206	91	0	0
11	<u>_</u> 0	0	0	0	0	<u>0</u>	0	126	254	0	0	0
12	0	<u>-</u> 0	<u>-</u> 0	0	<u>_</u> 0	0	0	202	328	0	0	0
13	0	0	0	0	0	0	0	273	<u>315</u>	<u>60</u>	0	0
14	0	0	0	0	0	0	0	331	311	<u>56</u>	0	0
<u>15</u>	0	<u> </u>	0	0	0	0	0	313	352	<u>56</u>	0	17
16	0	<u>_</u> 0	<u>_</u> <u>0</u>	0	0	0	<u>0</u>	332	386	<u>52</u>	0	18
17	<u>-</u> 0	<u>_</u> <u>0</u>	<u>-</u> 0	0	0	<u>-</u> 0	<u>_</u>	326	378	<u>39</u>	0	66
18	0	0	0	0	0	0	0	267	389	<u>65</u>	0	64
19	0	0	0	0	0	0	0	332	278	<u>54</u>	0	38
20	0	0	0	0	0	0	0	360	295	<u>48</u>	0	33
21	0	0	0	0	0	0	0	<u>356</u>	<u>246</u>	42	0	14
22	0	0	0	0	0	0	0	353	<u> 264</u>	32	0	14
23	0	0	0	0	0	0	0	229	252	16	0	17
24	<u>-</u> 0	0	0	0	0	0	<u>0</u>	181	261	<u>11</u>	0	39
25	0	0	0	0	0	0	0	144	<u>244</u>	<u>0</u>	0	30
26	0	0	0	0	0	0	<u>24</u>	144	241	0	0	26
27	0	0	0	<u> </u>	<u>_</u>	<u>0</u>	<u></u>	171	313	0	0	21
28	0	<u>0</u>	0	0	0	<u>_</u> <u>0</u>	42	258	205	0	0	19
29	<u>-</u> 0	0	0	0	_	<u>_</u> <u>0</u>	<u>81</u>	324	174	<u>0</u>	<u>0</u>	14
30	0	<u>0</u>	0	0		0	90	238	<u>164</u>	<u>0</u>	0	27
31	0	_	0	0		0		169		0	0	
<u>Min</u>	0	<u>0</u>	0	0	0	0	0	<u>36</u>	<u>135</u>	0	0	0
Max	0	0	0	0	0	0	90	360	389	<u>151</u>	0	66
Mean	0	0	0	0	0	0	9	205	261	60	<u>0</u>	15
ac-ft	0	0	0	0	0	0	<u>521</u>	12577	<u>15513</u>	<u>3695</u>	0	905



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

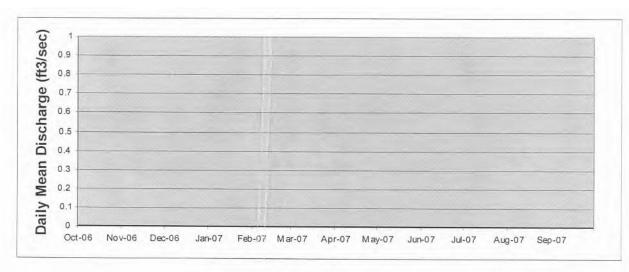
 $Location. -- Lat \ 40^{\circ} 2224^{\circ}, long \ 105^{\circ} 2900^{\circ}, Larimer \ County, \ Hydrologic \ Unit \ 10190006, southeast \ of \ Estes \ Park, \ Colorado.$ 

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 State of Colorado. Period of record from 01-Oct-2006 through 30-Sep-2007. Record is complete and reliable.

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

	Oct	Nov	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	<u>0</u>	0	0
3	<u>0</u>	0	<u>0</u>	0								
4	0	0	0	<u>0</u>	0							
<u>5</u>	<u>0</u>	0	0	0	0	0	0	0	0	0	0	0
6	<u>0</u>	0	0	<u>0</u>	<u>0</u>	0	0	0	<u>0</u>	0	<u>0</u>	0
<u>7</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	0	0	0
8	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0
9	<u>0</u>	0	<u>0</u>	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
<u>1</u> <u>2</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0
<u>13</u>	0	0	0	0	0	0	0	0	0	0	0	0
<u>14</u>	0	0	0	0	0	0	0	0	<u>0</u>	0	0	0
<u>15</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	0	0	0	0	0	0
<u>16</u>	0	0	<u>0</u>	0	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0
<u>17</u>	0	0	0	0	0	0	0	0	0	0	0	0
<u>18</u>	<u>0</u>	0	0	0	0	0	0	0	0	<u>0</u>	0	0
<u>19</u>	0	0	0	0	0	0	0	0	<u>0</u>	00	<u>0</u>	0
20	0	0	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	0	<u>0</u>	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	<u>0</u>	0	<u>0</u>	<u>0</u>	0	0	0	0	<u>0</u>	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	<u>0</u>	<u>0</u>	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	<u>0</u>	0	0		0	0	0	0	0	0	0
<u>31</u>	0		0	<u>0</u>		0		0		0	0	
3.61		_										
Min	0	0	0	0	0		0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	<u>0</u>	0	0
Mean	<u>0</u>	<u>0</u>	0	0	0	0	0	0	<u>0</u>	<u>0</u>	0	0
ac-ft	0	0	0	0	0	0	0	0	0	<u>0</u>	0	0



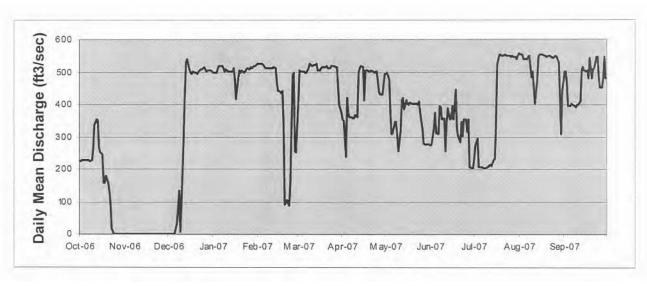
### Appendix A (Table 23 of 38) Olympus Tunnel, CO

Location. --Lat 40°2224", long 105°2900", 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-2006 to 30-Sep-2007. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	Aug	<u>Sep</u>
1	224	0	<u>0</u>	<u>497</u>	<u>526</u>	<u>403</u>	<u>354</u>	<u>494</u>	<u>274</u>	231	<u>557</u>	<u>502</u>
2	228	0	<u>0</u>	<u>500</u>	<u>527</u>	<u>507</u>	<u>351</u>	<u>498</u>	<u>277</u>	272	<u>553</u>	<u>501</u>
3	229	0	0	<u>499</u>	<u>528</u>	<u>501</u>	<u>237</u>	<u>477</u>	<u>331</u>	<u>295</u>	<u>556</u>	<u>467</u>
4	228	0	0	<u>512</u>	<u>526</u>	<u>503</u>	<u>421</u>	<u>371</u>	<u>377</u>	208	<u>541</u>	<u>396</u>
5	228	0	0	520	<u>523</u>	<u>501</u>	377	<u>310</u>	<u>314</u>	<u>207</u>	<u>539</u>	397
6	229	0	<u>19</u>	<u>521</u>	<u>514</u>	<u>499</u>	<u>363</u>	<u>314</u>	308	<u>207</u>	<u>542</u>	404
7	228	0	33	520	<u>512</u>	<u>500</u>	<u>360</u>	<u>349</u>	396	<u>204</u>	<u>548</u>	400
8	225	0	<u>132</u>	<u>512</u>	<u>514</u>	<u>511</u>	<u>359</u>	<u>347</u>	393	<u>204</u>	<u>551</u>	398
9	229	0	6	502	<u>514</u>	<u>526</u>	<u>358</u>	<u>301</u>	<u>355</u>	<u>205</u>	<u>483</u>	392
<u>10</u>	264	0	<u>87</u>	509	<u>514</u>	522	<u>367</u>	<u>256</u>	<u>358</u>	<u>206</u>	<u>503</u>	399
<u>11</u>	338	0	299	503	<u>514</u>	<u>521</u>	<u>362</u>	<u>319</u>	<u>257</u>	<u>210</u>	<u>451</u>	399
12	<u>354</u>	0	<u>435</u>	<u>501</u>	<u>515</u>	<u>524</u>	<u>498</u>	<u>414</u>	<u>340</u>	<u>214</u>	<u>405</u>	412
13	<u>351</u>	0	530	503	<u>513</u>	<u>524</u>	<u>512</u>	<u>421</u>	389	212	<u>473</u>	<u>504</u>
14	268	0	541	503	<u>471</u>	<u>528</u>	520	<u>386</u>	<u>355</u>	229	<u>547</u>	<u>517</u>
<u>15</u>	253	<u>0</u>	509	<u>511</u>	443	507	<u>516</u>	<u>414</u>	<u>357</u>	230	<u>553</u>	507
16	245	0	498	479	442	505	415	<u>403</u>	397	<u>329</u>	<u>554</u>	502
17	158	0	496	416	436	<u>512</u>	505	399	<u>354</u>	<u>524</u>	<u>553</u>	504
18	158	0	501	482	443	<u>517</u>	<u>506</u>	<u>406</u>	<u>446</u>	<u>556</u>	<u>552</u>	482
<u>19</u>	178	0	499	504	<u>343</u>	<u>516</u>	<u>502</u>	<u>404</u>	328	<u>553</u>	<u>552</u>	543
20	<u>159</u>	0	498	499	92	<u>516</u>	<u>503</u>	<u>402</u>	<u>302</u>	<u>550</u>	<u>548</u>	479
21	<u>134</u>	0	<u>495</u>	<u>505</u>	<u>104</u>	<u>521</u>	<u>504</u>	403	<u>284</u>	<u>552</u>	<u>550</u>	508
22	<u>93</u>	0	<u>501</u>	<u>500</u>	94	<u>514</u>	<u>502</u>	<u>403</u>	<u>349</u>	<u>554</u>	<u>550</u>	<u>513</u>
23	<u>18</u>	0	<u>510</u>	<u>503</u>	89	<u>514</u>	<u>500</u>	399	303	<u>552</u>	<u>549</u>	546
24	0	0	<u>510</u>	<u>510</u>	<u>159</u>	<u>520</u>	<u>502</u>	<u>409</u>	<u>354</u>	<u>550</u>	<u>544</u>	549
<u>25</u>	0	0	<u>514</u>	512	<u>492</u>	<u>518</u>	<u>502</u>	374	<u>356</u>	<u>551</u>	<u>549</u>	485
26	0	0	<u>517</u>	<u>510</u>	<u>498</u>	<u>521</u>	<u>438</u>	<u>327</u>	<u>317</u>	<u>548</u>	<u>550</u>	<u>452</u>
27	0	0	503	<u>516</u>	<u>257</u>	<u>517</u>	<u>431</u>	279	<u>353</u>	<u>552</u>	<u>547</u>	<u>451</u>
28	0	0	504	<u>513</u>	254	<u>516</u>	432	277	206	<u>546</u>	<u>529</u>	483
29	0	0	506	519		<u>451</u>	431	278	205	<u>548</u>	413	548
30	0	0	504	518		400	493	278	204	<u>539</u>	308	482
31	0		<u>501</u>	522		<u>374</u>		276		<u>552</u>	441	
Min	<u>0</u>	<u>0</u>	0	<u>416</u>	<u>89</u>	<u>374</u>	237	<u>256</u>	204	204	308	392
Max	<u>354</u>	0	<u>541</u>	522	528	528	520	498	446	556	<u>557</u>	549
Mean	162	0	343	504	406	500	437	367	328	384	519	471
ac-ft	9938	0	21083	30930	22487	30708	25980	22548	19481	23542	31860	27962



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

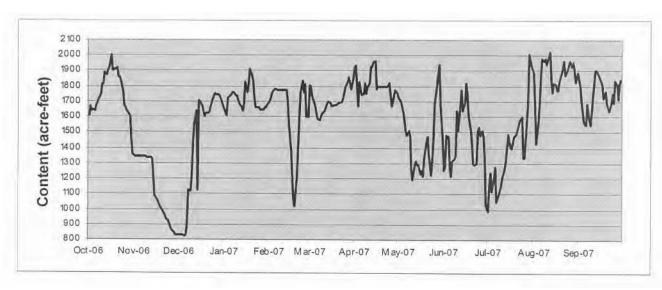
 $Location. \hbox{ --Lat } 40^{\circ}22', long 105^{\circ}17.9', Larimer County, Hydrologic Unit 10190006, 10 miles southwest of Loveland, Colorado.$ 

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-2006 to 30-Sep-2007. Record is complete and fair, except for periods when reservoir level was dropped below the reach of the reservoir level gage, when record is estimated. Reservoir was below that level between 28-Nov-2005 and 06-Dec-2005. The gage stops measuring the water surface elevation below 6556.30, a content of 629 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	<u>Jan</u>	Feb	Mar	Apr	May	<u>Jun</u>	Jul	Aug	Sep
1	1,609	1,343	<u>829</u>	1,650	1,700	1,802	1,927	1,725	<u>1,256</u>	<u>992</u>	<u>1,891</u>	1,846
2	<u>1,666</u>	1.343	<u>829</u>	1,625	<u>1,717</u>	<u>1,794</u>	1,936	1.717	1,276	1,168	1,675	1.802
3	1,642	1,343	829	1.609	1,742	1,734	1,666	1,700	1,478	1,237	1,427	1,708
4	1.650	1,343	<u>829</u>	1.725	1,768	1,691	1,829	1,634	1,470	1,120	1,562	1,570
<u>5</u>	1,642	1,343	<u>825</u>	1,734	<u>1,785</u>	<u>1,658</u>	1,785	1,578	1,276	1.199	1,691	1.554
6	1,675	1,343	834	1.742	1,785	1,617	1,742	1.508	1,218	1,276	1,855	1,546
7	<u>1,691</u>	1,343	<u>888</u>	1,759	<u>1,776</u>	<u>1,585</u>	1,751	<u>1,478</u>	1,316	1,052	1,982	1,683
8	<u>1,717</u>	1,343	1,126	<u>1,759</u>	<u>1,776</u>	<u>1,578</u>	1,820	1,508	1,329	1,091	1,963	1,570
9	1,742	1,336	<u>1,115</u>	1,734	1,776	1,609	1,751	1,470	1,349	1,126	1,982	1,546
<u>10</u>	1,811	1,336	<u>1,218</u>	1,734	1,776	1,625	1,794	1,250	1,642	1,156	1,945	1.642
<u>11</u>	1,811	1,336	1.434	1,708	1,776	1,642	1,820	1,193	1,508	1.205	1,972	1,734
12	<u>1,891</u>	1,336	<u>1,554</u>	1,683	1,776	<u>1,658</u>	1,927	1,289	1,675	1,263	2,028	1,900
<u>13</u>	1,873	1,322	1.642	1,658	1,776	1,683	1,927	1,316	1,776	1,316	1,846	1,900
14	1.900	1,205	1,126	1,642	1,700	1,700	1,954	1,289	1,642	1,398	1,759	1.891
<u>15</u>	<u>1,918</u>	1,086	<u>1,708</u>	1,683	1,546	1,691	1,963	1,289	1,691	1,485	1.820	1,873
<u>16</u>	2,000	1,068	<u>1,700</u>	1,829	1,384	1,666	1,785	1,231	1,820	1,405	1,811	1.838
<u>17</u>	1,900	1,052	1,666	1.759	1,218	1,666	1,794	1,256	1,751	1,398	1,776	1,811
18	1,900	1,030	1,634	1,802	1,068	1,675	1,794	1,218	1,609	1,434	1,776	1,725
19	1,909	1,013	1.601	1,909	1,019	1,675	1,794	1,329	1,515	1,470	1,838	1,768
20	<u>1,918</u>	992	<u>1,625</u>	1,873	<u>1,199</u>	<u>1,683</u>	1,794	<u>1,441</u>	1,427	1,485	1,891	1,683
21	1,855	<u>976</u>	1,625	1,829	1,405	1,691	1,794	1,470	1,296	1,515	1,927	1,658
22	1,855	<u>955</u>	1,634	1.725	<u>1,585</u>	1.691	1,794	1,356	1,289	1,546	1,963	1,642
23	1,838	<u>939</u>	1,658	1,658	1,759	1,700	1,794	1,224	1.302	1,578	1,873	1,691
24	1,759	<u>918</u>	<u>1,691</u>	1,658	1,838	1,725	1,802	<u>1,316</u>	1,508	1,601	1,900	1,751
25	1,666	<u>898</u>	1,734	1,658	1,759	1,759	1,820	1,463	1,531	1,336	1,936	1,691
26	<u>1,658</u>	<u>878</u>	1,751	1,650	1,811	1,794	<u>1,666</u>	1,691	1,478	1,336	1,963	1,838
27	<u>1,642</u>	<u>858</u>	1,742	1,650	1,601	1,829	1,700	1,802	1,508	<u>1,441</u>	1,927	1,811
28	<u>1,617</u>	844	1,742	1,650	1,601	1,855	1,742	1.882	1,463	1,691	1,954	1,717
29	1,601	829	1.734	1,658		1,820	1,776	<u>1,945</u>	<u>1,316</u>	2,009	1,900	1,820
30	<u>1,448</u>	<u>829</u>	1,717	1,658		1.785	1,751	1.675	1,024	1.972	1,829	1,846
<u>31</u>	1,356		<u>1,691</u>	1,675		1,855		<u>1,441</u>		1.936	1,891	
Min	1,356	829	825	1.609	1.019	1,578	1,666	1,193	1.024	992	1,427	1,546
Max	2,000	1,343	1,751	1,909	1,838	1,855	1,963	1.945	1,820	2,009	2,028	1.900
EOM	1,356	829	1,691	1.675	1,601	1,855	1,751	1,441	1,024	1.936	1,891	1,846



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

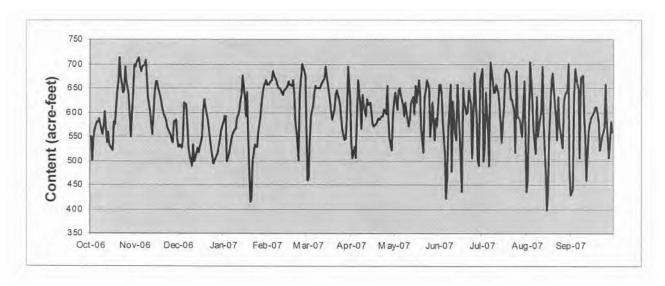
Location. --Lat 40°22.1', long 105°13.3', Larimer County, Hydrologic Unit 10190006, 8 miles southwest of Loveland, Colorado.

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-2006 to 30-Sep-2007. Record is complete and fair, except for period November 13 through November 16, when the reservoir level was too low to be measured with current equipment. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	<u>551</u>	694	530	<u>580</u>	<u>658</u>	<u>459</u>	<u>538</u>	<u>623</u>	<u>658</u>	<u>690</u>	436	429
2	502	703	<u>534</u>	<u>593</u>	<u>658</u>	<u>467</u>	<u>506</u>	<u>640</u>	<u>658</u>	<u>498</u>	<u>459</u>	440
3	<u>546</u>	<u>712</u>	<u>526</u>	<u>593</u>	663	<u>546</u>	530	606	<u>640</u>	526	703	636
4	<u>563</u>	<u>694</u>	<u>542</u>	498	<u>667</u>	593	506	645	<u>584</u>	640	<u>663</u>	690
5	580	<u>685</u>	<u>619</u>	<u>514</u>	<u>685</u>	<u>614</u>	593	649	<u>514</u>	<u>563</u>	<u>627</u>	<u>658</u>
6	<u>580</u>	<u>694</u>	<u>614</u>	530	<u>676</u>	640	<u>667</u>	<u>636</u>	421	<u>490</u>	<u>563</u>	645
7	<u>588</u>	<u>699</u>	<u>572</u>	542	<u>667</u>	<u>654</u>	<u>614</u>	<u>614</u>	<u>463</u>	703	<u>514</u>	506
8	<u>563</u>	708	<u>526</u>	<u>555</u>	<u>658</u>	649	<u>567</u>	<u>593</u>	<u>567</u>	<u>667</u>	<u>632</u>	<u>672</u>
9	<u>555</u>	<u>676</u>	<u>510</u>	<u>563</u>	649	649	<u>636</u>	<u>619</u>	<u>658</u>	<u>640</u>	<u>551</u>	<u>676</u>
10	<u>572</u>	<u>632</u>	490	<u>567</u>	649	649	<u>614</u>	<u>584</u>	<u>478</u>	<u>640</u>	588	593
11	<u>601</u>	<u>601</u>	534	<u>588</u>	640	<u>658</u>	<u>593</u>	<u>572</u>	623	<u>658</u>	<u>606</u>	551
12	538	<u>576</u>	498	<u>601</u>	<u>636</u>	<u>667</u>	<u>627</u>	<u>584</u>	<u>555</u>	640	<u>694</u>	459
13	<u>559</u>	<u>555</u>	<u>506</u>	<u>623</u>	<u>645</u>	<u>672</u>	<u>614</u>	<u>619</u>	542	<u>614</u>	580	559
<u>14</u>	<u>534</u>	<u>640</u>	<u>526</u>	<u>636</u>	649	<u>694</u>	<u>619</u>	632	<u>658</u>	<u>580</u>	<u>474</u>	576
<u>15</u>	530	<u>663</u>	<u>518</u>	<u>676</u>	<u>654</u>	<u>676</u>	<u>597</u>	<u>597</u>	<u>610</u>	<u>538</u>	400	588
<u>16</u>	<u>522</u>	<u>663</u>	530	<u>632</u>	663	640	<u>576</u>	654	498	<u>610</u>	436	597
<u>17</u>	<u>580</u>	649	<u>551</u>	593	<u>658</u>	<u>623</u>	572	<u>619</u>	436	<u>681</u>	<u>555</u>	601
<u>18</u>	<u>576</u>	<u>632</u>	<u>606</u>	640	<u>654</u>	<u>601</u>	<u>576</u>	<u>667</u>	649	690	<u>667</u>	610
19	<u>645</u>	<u>619</u>	627	555	667	584	580	640	<u>619</u>	<u>681</u>	<u>681</u>	<u>610</u>
20	663	606	<u>610</u>	<u>414</u>	640	<u>606</u>	<u>588</u>	<u>567</u>	597	<u>667</u>	<u>645</u>	580
21	<u>712</u>	<u>597</u>	584	421	<u>584</u>	<u>636</u>	<u>584</u>	<u>518</u>	<u>601</u>	627	588	522
22	<u>676</u>	<u>584</u>	<u>567</u>	<u>498</u>	538	<u>645</u>	<u>593</u>	632	645	<u>627</u>	<u>542</u>	534
23	640	<u>572</u>	<u>546</u>	534	502	<u>627</u>	<u>593</u>	<u>645</u>	<u>614</u>	601	<u>632</u>	551
24	<u>645</u>	<u>563</u>	<u>526</u>	530	640	<u>614</u>	606	<u>667</u>	506	<u>518</u>	<u>576</u>	567
25	<u>694</u>	<u>555</u>	494	530	<u>699</u>	588	<u>597</u>	649	584	<u>685</u>	542	658
26	<u>663</u>	542	<u>498</u>	<u>559</u>	<u>694</u>	<u>563</u>	<u>654</u>	<u>551</u>	<u>681</u>	<u>593</u>	<u>526</u>	588
27	<u>636</u>	538	506	593	<u>685</u>	542	588	580	584	584	<u>619</u>	506
28	597	580	<u>518</u>	<u>619</u>	<u>676</u>	546	<u>546</u>	<u>619</u>	502	<u>563</u>	636	538
29	<u>551</u>	584	<u>534</u>	640		588	522	542	490	<u>551</u>	<u>645</u>	580
30	640	<u>546</u>	<u>546</u>	<u>654</u>		<u>694</u>	593	588	<u>667</u>	<u>663</u>	<u>699</u>	559
31	<u>699</u>		563	<u>667</u>		627		572		559	482	
<u>Min</u>	502	<u>538</u>	<u>490</u>	<u>414</u>	<u>502</u>	<u>459</u>	<u>506</u>	<u>518</u>	421	<u>490</u>	<u>400</u>	429
Max	<u>712</u>	<u>712</u>	<u>627</u>	<u>676</u>	<u>699</u>	<u>694</u>	<u>667</u>	<u>667</u>	<u>681</u>	703	<u>703</u>	690
<u>EOM</u>	<u>699</u>	<u>546</u>	563	667	<u>676</u>	<u>627</u>	593	572	667	559	482	<u>559</u>

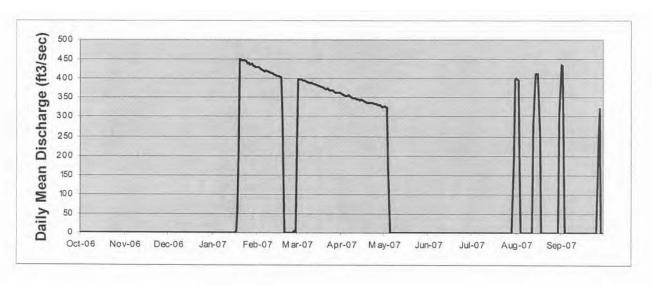


#### Appendix A (Table 26 of 38) Flatiron Powerplant Unit #3 Pump, CO

Location. --Lat 40°21′53", long 105°14′09", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado Gage.-- There is no flow meter or gage in place. Flow is estimated by converting Megawatt-hours to cubic feet per second from calibrated tables. 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. The maximum capacity is approximately 425 cubic feet per second, but the efficiency varies according to the water surface levels at Carter Lake and Flatiron Reservoir. Discharges are obtained by converting the electric energy needed to pump into flow using rating tables. Record is complete and fair but has not been revised. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	0	0	0	0	429	228	<u>359</u>	<u>326</u>	0	0	400	434
2	0	0	0	0	<u>429</u>	<u>398</u>	<u>358</u>	326	0	<u>0</u>	<u>396</u>	432
3	0	0	0	0	<u>428</u>	399	<u>356</u>	<u>325</u>	0	0	<u>151</u>	184
4	0	0	0	0	<u>425</u>	398	<u>355</u>	<u>175</u>	0	0	0	0
5	0	0	0	0	421	<u>395</u>	<u>354</u>	0	0	0	0	0
6	0	0	0	0	<u>418</u>	<u>394</u>	<u>356</u>	0	0	0	0	0
7	0	0	0	0	420	393	<u>353</u>	0	0	0	0	0
8	0	0	0	0	417	393	<u>351</u>	0	0	0	0	0
9	0	0	0	0	417	390	349	0	0	0	0	0
10	0	0	0	0	414	389	348	0	0	0	0	0
11	0	0	0	<u>_</u> 0	415	389	349	0	0	0	0	0
12	0	0	<u>0</u>	<u>_</u> 0	411	385	346	0	0	0	0	0
13	0	0	0	0	410	386	346	0	0	0	<u>280</u>	0
14	0	. 0	0	0	409	383	343	0	0	0	411	0
15	0	0	0	0	405	382	344	0	0	0	412	0
16	0	0	0	0	406	379	342	0	0	0	412	0
17	0	0	0	2	403	380	339	0	0	0	258	0
18	0	0	0	<u>-</u> 58	403	377	340	<u>-</u> 0	<u>0</u>	0	0	0
19	0	0	0	216	301	376	338	0	0	0	0	0
20	0	0	0	450	0	375	337	0	0	0	0	0
21	<u>0</u>	<u>0</u>	0	447	0	373	337	<u>0</u>	<u>0</u>	<u> </u>	0	0
22	0	0	0	447	0	373	336	0	0	0	0	0
23	0	0	0	447	0	371	335	0	0	0	0	0
24	0	0	0	444	<u>_</u> 0	370	333	0	<u>0</u>	0	0	0
<u>25</u>	0	0	0	440	0	369	332	0	0	0	0	0
26	0	0	0	440	0	368	333	0	0	<u>-</u>	0	0
27	0	0	0	437	7	365	329	0	0	0	0	251
28	0	0	0	437	0	363	330	0	0	0	0	322
<u>29</u>	0	0	0	434	_	363	328	0	0	0	0	0
30	0	0	<u>0</u>	434		364	324	0	0	197	0	0
31	0	-	0	431		361		0	-	398	308	
Min	<u>0</u>	<u>0</u>	0	0	0	228	324	0	0	0	0	0
Max	0	0	0	<u>450</u>	429	399	359	<u>326</u>	0	398	<u>412</u>	434
<u>Mean</u>	0	0	0	179	278	375	343	37	0	19	98	54
ac-ft	0	0	0	11014	15420	23024	20347	2282	0	1179	5995	3214



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

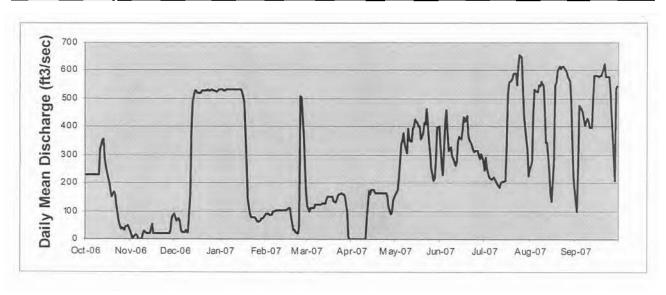
Location. --Lat 40°2226", long 105°13'52", Larimer County, Hydrologic Unit 10190006, 8 miles southwest of Loveland, Colorado.

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-2006 to 30-Sep-2007. Record is complete and reliable. 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	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	Jun	<u>Jul</u>	<u>Aug</u>	Sep
1	231	<u>16</u>	80	532	<u>90</u>	<u>168</u>	0	<u>159</u>	<u>326</u>	247	251	<u>131</u>
2	231	2	67	<u>531</u>	88	118	0	<u>169</u>	<u> 265</u>	291	276	97
3	230	9	74	530	89	<u>98</u>	0	<u>175</u>	229	<u>255</u>	443	267
4	228	<u>17</u>	<u>59</u>	<u>526</u>	<u>86</u>	<u>110</u>	0	221	413	220	<u>534</u>	474
5	228	12	32	<u>534</u>	<u>85</u>	<u>112</u>	0	339	<u>457</u>	216	530	461
6	228	1	26	<u>533</u>	<u>98</u>	112	0	<u>352</u>	380	215	<u>524</u>	451
7	228	1	25	<u>533</u>	<u>98</u>	121	0	<u>375</u>	316	220	<u>548</u>	427
8	228	1	<u>31</u>	532	103	<u>124</u>	0	<u>337</u>	328	211	<u>543</u>	405
9	228	20	23	<u>534</u>	103	124	0	309	293	206	<u>559</u>	429
<u>1</u> <u>0</u>	228	<u>29</u>	23	<u>534</u>	<u>103</u>	125	0	<u>395</u>	287	<u>198</u>	<u>543</u>	422
<u>11</u>	321	20	<u>157</u>	<u>532</u>	102	<u>125</u>	0	<u>350</u>	<u>261</u>	182	<u>457</u>	<u>395</u>
12	352	<u>19</u>	<u>379</u>	<u>534</u>	102	<u>126</u>	<u>72</u>	<u>349</u>	<u>275</u>	200	342	397
13	<u>354</u>	<u>1</u> 9	<u>487</u>	<u>532</u>	<u>103</u>	<u>127</u>	<u>172</u>	<u>392</u>	<u>345</u>	205	<u>345</u>	505
14	<u>285</u>	22	<u>528</u>	<u>533</u>	103	128	<u>161</u>	400	<u>363</u>	206	241	581
<u>15</u>	256	<u>55</u>	<u>528</u>	<u>530</u>	<u>104</u>	<u>143</u>	<u>177</u>	<u>426</u>	<u>356</u>	211	<u>158</u>	581
<u>16</u>	217	<u>19</u>	<u>518</u>	<u>524</u>	<u>105</u>	<u>151</u>	<u>175</u>	412	388	325	135	581
<u>17</u>	202	22	<u>519</u>	486	109	<u>151</u>	<u>168</u>	<u>401</u>	<u>434</u>	<u>507</u>	280	<u>579</u>
<u>18</u>	173	21	<u>521</u>	385	<u>110</u>	<u>151</u>	<u>165</u>	<u>401</u>	418	<u>556</u>	<u>548</u>	581
<u>19</u>	<u>152</u>	21	<u>528</u>	278	<u>78</u>	<u>151</u>	<u>164</u>	<u>357</u>	<u>436</u>	<u>567</u>	<u>555</u>	582
20	<u>166</u>	21	<u>528</u>	<u>144</u>	32	<u>135</u>	<u>164</u>	<u>377</u>	<u>370</u>	<u>574</u>	<u>598</u>	604
21	<u>161</u>	<u>20</u>	<u>529</u>	<u>89</u>	32	129	164	414	<u>353</u>	<u>590</u>	612	623
22	123	20	<u>529</u>	<u>78</u>	<u>26</u>	143	<u>165</u>	407	337	<u>590</u>	608	577
23	64	20	531	<u>78</u>	22	<u>157</u>	<u>165</u>	<u>463</u>	320	<u>550</u>	613	578
24	<u>50</u>	<u>19</u>	<u>529</u>	<u>79</u>	<u>47</u>	<u>158</u>	<u>164</u>	<u>349</u>	<u>309</u>	618	<u>614</u>	<u>579</u>
<u>25</u>	<u>35</u>	<u>19</u>	<u>529</u>	74	508	<u>163</u>	<u>162</u>	<u>306</u>	<u>314</u>	<u>657</u>	602	534
26	<u>39</u>	<u>19</u>	<u>532</u>	<u>65</u>	<u>504</u>	<u> 1 59</u>	<u>153</u>	248	<u>316</u>	<u>646</u>	<u>593</u>	450
27	35	21	<u>530</u>	<u>62</u>	<u>372</u>	<u>160</u>	<u>113</u>	<u>208</u>	300	<u>533</u>	<u>578</u>	285
28	<u>43</u>	<u>37</u>	<u>528</u>	67	262	<u>153</u>	<u>91</u>	<u>216</u>	286	<u>443</u>	<u>561</u>	210
29	<u>46</u>	<u>79</u>	<u>526</u>	<u>74</u>		98	<u>94</u>	282	301	<u>396</u>	<u>480</u>	<u>536</u>
30	<u>47</u>	90	<u>530</u>	<u>76</u>		7	<u>141</u>	<u>397</u>	277	318	341	546
<u>31</u>	28		532	<u>80</u>		<u>0</u>		<u>401</u>		224	219	
<u>Min</u>	28	1	23	<u>62</u>	22	0	0	159	229	182	135	97
Max	354	90	532	534	508	168	<u>177</u>	<u>463</u>	<u>457</u>	657	614	623
Mean	175	23	353	343	131	127	94	335	335	<u>367</u>	459	462
ac-ft	10762	1 367	21695	21025	7253	7783	5608	20573	19902	22528	28171	27460

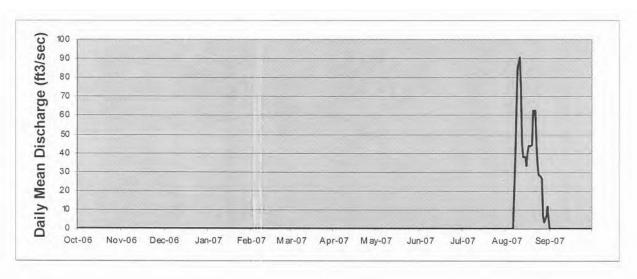


Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River. Gage.-- Water-stage recorder with satellite telemetry at Parshall Flume. Elevation of gage is 5520 feet from topographic map.

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. Recorder was operated from 01-Oct-2006 to 08-Nov-2006, and from 29-Mar-2007 to 30-Sep-2007. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

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

	<u>Oct</u>	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	<u>0</u>	0	0	0	<u>0</u>	<u>0</u>	0	0	0	0	<u>0</u>	0
2	0	<u>0</u>	<u>0</u>	0	<u>0</u>	0	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0
3	0	<u>0</u>	0	0	0	<u>0</u>	0	0	<u>0</u>	0	0	0
4	0	0	0	0	0	<u>0</u>	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>0</u>	0
6	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>0</u>	0
7	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>37</u>	0
8	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>65</u>	0
9	0	0	0	0	0	0	0	0	0	0	<u>86</u>	0
10	0	0	0	0	0	<u>0</u>	0	0	0	0	91	0
<u>11</u>	0	0	0	0	0	0	0	0	0	0	<u>74</u>	0
12	0	0	0	0	0	0	0	0	0	0	<u>46</u>	0
13	0	<u>0</u>	0	0	0	0	0	0	0	0	38	0
14	0	<u>-</u> 0	0	0	<u>0</u>	0	0	0	0	0	<u>38</u>	0
<u>15</u>	0	0	0	0	0	0	0	0	0	0	34	0
16	0	<u>0</u>	0	0	0	0	0	0	0	0	41	0
17	0	0	0	0	<u></u>	<u> </u>	0	0	0	0	44	0
18	0	0	0	0	0	0	0	0	0	0	44	0
19	0	0	0	0	0	0	0	0	0	0	44	0
20	0	0	0	0	0	0	0	0	0	0	63	0
21	0	0	0	0	0	0	0	0	0	0	<u>62</u>	0
22	0	0	0	0	0	0	0	0	0	<u>0</u>	<u>45</u>	0
23	0	0	0	0	0	0	0	0	0	0	<u>35</u>	0
24	0	0	0	0	0	0	0	0	0	0	29	0
25	0	0	0	<u>0</u>	0	0	0	0	0	0	27	0
26	0	0	0	0	0	0	0	0	0	0	<u>26</u>	0
27	0	0	0	0	0	0	0	0	0	0	<u>7</u>	0
28	<u>0</u>	0	0	0	0	0	0	0	0	0	4	0
29	0	0	0	0		0	0	0	0	0	<u>6</u>	0
30	0	0	0	0		0	0	0	0	0	<u>12</u>	0
31	0		0	0		0		0		0	6	
Min	<u>0</u>	0	0	0	0	0	0	0	0	0	<u>0</u>	0
Max	0	0	0	0	0	0	0	0	0	0	91	0
Mean	0	0	0	0	0	0	0	0	0	<u>0</u>	32	0
ac-ft	0	0	0	0	0	0	0	0	0	0	1979	0

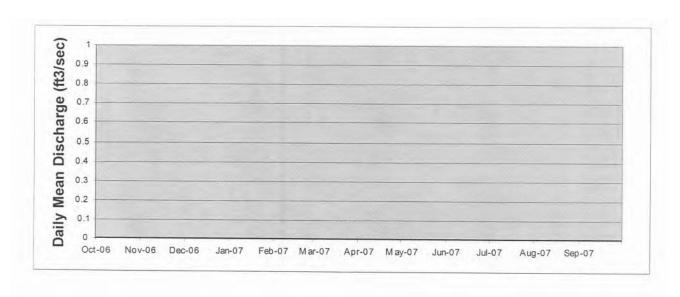


Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 mks west of Loveland, Colorado, on the Big Thompson River. Gage.-- None.

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. Recorder was operated from 01-Oct-2006 to 08-Nov-2006, and from 29-Mar-2007 to 30-Sep-2007. 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

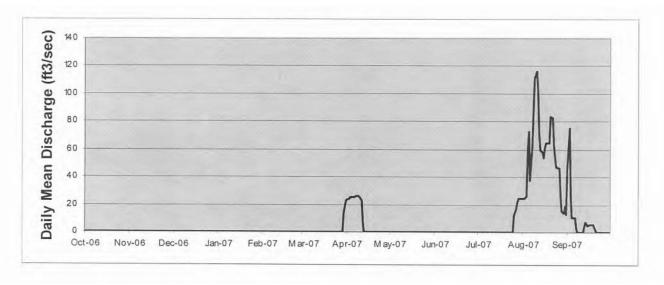
	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
<u>1</u>	0	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	0	0	0	0	0	0
2	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0	0	0
3	0	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0
<u>4</u>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



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. Recorder was operated from 01-Oct-2006 to 08-Nov-2006, and from 29-Mar-2007 to 30-Sep-2007. Record is complete and reliable, although data was not reviced. 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	<u>Feb</u>	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	24	0	0	0	24	49
2	0	0	0	0	0	0	24	0	0	0	<u>25</u>	75
3	0	0	0	0	0	0	25	0	0	<u>0</u>	27	28
4	0	0	<u>0</u>	0	<u>0</u>	0	<u>25</u>	0	0	0	<u>61</u>	10
5	0	0	<u>0</u>	0	0	0	<u>25</u>	0	0	0	<u>73</u>	11
6	0	<u>0</u>	0	0	<u>0</u>	0	<u>25</u>	0	0	0	38	<u>10</u>
7	0	0	0	0	<u>0</u>	0	<u> 26</u>	0	0	0	<u>62</u>	3
8	0	0	0	0	0	<u>0</u>	<u>26</u>	0	<u>0</u>	<u>0</u>	90	0
9	0	0	0	0	0	0	<u>26</u>	<u>0</u>	0	<u>0</u>	<u>111</u>	0
10	0	0	<u>0</u>	0	0	0	<u>25</u>	0	0	0	<u>116</u>	0
11	0	<u>0</u>	<u>0</u>	0	0	0	<u>23</u>	0	0	0	<u>100</u>	0
12	0	0	<u>0</u>	0	0	<u>0</u>	<u>7</u>	<u>0</u>	<u>0</u>	<u>0</u>	71	0
13	0	0	0	0	0	0	0	0	0	0	<u>60</u>	8
<u>1 4</u>	0	0	0	0	0	0	0	0	0	<u>0</u>	<u>58</u>	7
<u>15</u>	<u>0</u>	<u>0</u>	0	0	0	0	0	0	<u>0</u>	0	<u>54</u>	5
16	0	<u>0</u>	0	<u>0</u>	0	<u>0</u>	0	<u>0</u>	0	0	<u>61</u>	6
<u>17</u>	0	<u>0</u>	0	<u>0</u>	0	0	0	0	<u>0</u>	<u>0</u>	64	6
18	0	<u>0</u>	<u>0</u>	0	0	0	<u>0</u>	0	0	<u>0</u>	64	6
<u>19</u>	0	0	0	0	0	0	<u>0</u>	<u>0</u>	0	0	<u>65</u>	6
20	0	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	0	0	0	0	83	2
21	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0	0	0	<u>0</u>	0	<u>83</u>	0
22	0	0	<u>0</u>	0	0	0	<u>0</u>	<u>0</u>	<u>0</u>	0	63	0
23	0	0	<u>0</u>	0	0	<u>0</u>	0	0	0	0	<u>55</u>	0
24	0	0	0	0	0	0	0	0	0	<u>0</u>	<u>47</u>	0
25	0	0	<u>0</u>	0	0	0	0	0	0	0	<u>47</u>	0
<u> 26</u>	<u>0</u>	0	0	0	0	0	0	<u>0</u>	0	12	<u>47</u>	0
<u>27</u>	0	0	<u>0</u>	0	0	<u>0</u>	0	0	0	<u>17</u>	27	0
28	0	0	<u>0</u>	0	<u>0</u>	0	0	<u>0</u>	0	22	<u>16</u>	0
<u>29</u>	0	<u>0</u>	<u>0</u>	0		<u>0</u>	0	0	0	24	<u>14</u>	0
30	0	0	0	0		<u>14</u>	<u>0</u>	0	0	<u>24</u>	<u>19</u>	0
<u>31</u>	0		0	<u>0</u>		23		<u>0</u>		24	<u>13</u>	
Min	0	0	0	0	0	0	0	0	0	0	13	0
Max	0	0	0	0	0	23	26	<u>0</u>	0	24	116	75
Mean	0	0	0	0	0	1	9	0	0	4	56	8
ac-ft	0	0	0	0	0	<u>73</u>	<u>556</u>	0	0	247	3440	458



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

Location. --Lat 40°25'16", long 105°1326", 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 canyon mouth. Power plant is also used to deliver Colorado-Big Thompson project water. Recorder was operated from 01-Oct-2006 to 02-Nov-2006 and from 30-Jul-2007 to 30-Sep-2007. The plant is winterized from November through April each year. 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	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	Mar	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	37	0	0	0	0	0	0	0	<u>0</u>	0	0	104
2	0	0	0	0	0	0	0	0	0	0	<u>64</u>	101
3	0	0	0	0	0	0	0	0	0	0	<u>174</u>	<u>96</u>
4	0	0	0	0	0	0	0	0	0	0	133	102
<u>5</u>	0	0	0	0	0	0	0	0	0	0	<u>101</u>	<u>178</u>
6	0	0	0	0	0	0	0	<u>0</u>	<u>0</u>	0	<u>106</u>	220
7	0	0	0	0	0	0	0	0	0	0	<u>104</u>	211
8	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>102</u>	205
9	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>73</u>	204
10	0	0	0	0	0	0	0	0	0	0	<u>74</u>	207
11	0	0	0	0	0	0	0	0	0	0	<u>145</u>	209
12	0	0	0	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	0	0	<u>120</u>	211
<u>13</u>	0	0	0	0	0	0	0	0	0	0	<u>110</u>	<u>158</u>
<u>14</u>	0	0	0	0	0	0	0	0	<u>0</u>	0	<u>114</u>	146
<u>15</u>	0	0	0	0	0	0	0	0	0	0	112	<u>151</u>
<u>16</u>	0	0	0	0	0	0	0	0	0	0	122	161
17	0	0	0	0	0	0	0	0	0	0	123	180
18	0	0	0	0	0	0	0	0	0	0	1 23	195
<u>19</u>	0	0	0	0	0	0	0	0	0	0	<u>119</u>	232
20	0	0	0	0	0	0	0	0	0	0	1 37	219
21	0	0	0	0	0	0	0	0	0	0	<u>139</u>	151
22	0	0	0	0	0	0	0	0	0	0	1 20	119
23	0	0	0	0	0	0	0	0	0	0	110	115
24	<u>0</u>	0	<u>0</u>	0	0	0	0	0	<u>0</u>	0	103	109
<u>25</u>	0	<u>0</u>	0	<u>0</u>	0	0	0	0	0	0	103	120
<u> 26</u>	0	0	0	0	0	0	0	0	<u>0</u>	0	103	133
27	<u>0</u>	0	0	0	0	0	0	0	0	0	31	42
<u>28</u>	0	0	0	0	0	0	0	0	0	0	73	0
<u>29</u>	0	0	0	0		0	0	0	0	0	102	0
<u>30</u>	<u>0</u>	0	0	0		0	0	0	0	0	103	0
<u>31</u>	<u>0</u>		0	0		0		0		0	99	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	37	0	0	0	0	0	0	0	0	0	<u>u</u> 174	232
Mean	1	0	0	0	0	0	0	0	0	0	105	143
ac-ft	73	0	0	0	0	0	0	0	0	0		8472
<del>uo-it</del>	10		<u> </u>		<u> </u>	<u>U</u>	<u> </u>	<u>U</u>	U	U	<u>6419</u>	<u>8472</u>



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

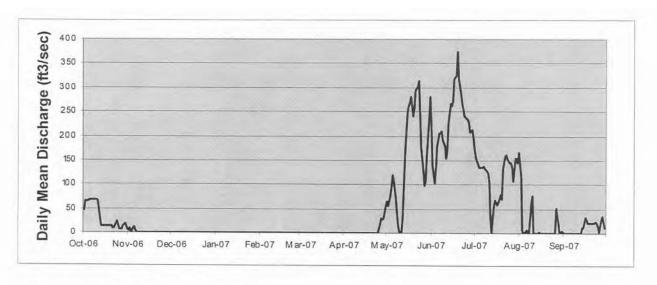
Location. --Lat 40°25'13", long 105°13'28", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado, on the Big. Thompson River.

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 deliver Colorado-Big Thompson Project water to the Big Thompson River. Recorder was operated from 01-Oct-2006 to 15-Nov-2006, and from 12-Apr-2007 to 30-Sep-2007. Record is complete and reliable. These data are provisional operations data and are subject to further revision and change.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	<u>Jan</u>	Feb	Mar	<u>Apr</u>	May	Jun	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	<u>46</u>	<u>5</u>	0	0	0	0	0	<u>65</u>	225	<u>173</u>	<u>166</u>	0
2	<u>66</u>	9	0	0	0	0	0	<u>57</u>	<u>141</u>	<u>156</u>	<u>118</u>	0
3	<u>66</u>	11	0	0	0	0	0	<u>78</u>	102	142	7	0
4	65	<u>10</u>	0	0	0	0	0	<u>97</u>	<u>130</u>	<u>136</u>	0	0
5	67	12	0	0	0	0	0	<u>119</u>	178	<u>136</u>	0	0
6	68	4	0	0	0	0	0	<u>107</u>	206	1 35	<u>7</u>	0
7	<u>68</u>	0	0	0	0	0	0	<u>69</u>	206	<u>137</u>	0	0
8	<u>68</u>	0	0	0	0	0	0	<u>37</u>	211	1 34	0	0
9	68	0	0	0	0	0	0	14	<u>191</u>	132	64	0
10	67	0	0	0	0	0	0	3	181	125	<u> 77</u>	0
11	65	0	0	0	0	0	0	3	154	106	0	0
12	29	0	0	0	0	0	0	37	171	35	0	0
13	14	0	0	0	0	0	0	<u>105</u>	226	0	<u>0</u>	0
14	13	0	0	0	0	0	0	<u>169</u>	266	<u>56</u>	0	12
<u>15</u>	13	0	0	0	0	0	0	247	262	67	2	11
16	15 1	0	0	0	0	0	0	262	273	<u>64</u>	0	33
17	<u>15</u>	0	0	0	0	0	0	270	319	58	0	27
18	15	0	0	0	<u>-</u> 0	0	<u>_</u>	281	325	<u>70</u>	0	21
19	<u>15</u>	0	0	0	0	0	<u>0</u>	241	374	79	0	21
20	14	0	0 !	0	0	0	0	257	319	<u></u>	0	20
21	10	0	0	0	0	0	0	295	287	134	<u>0</u>	20
22	9	0	0	0	0	0	0	301	267	158	0	20
23	<u>15</u>	0	0	0	0	0	0	313	254	161	0	24
24	23	0	0	0	0	0	0	245	240	1 51	0	21
25	14	0	0	0	0	0	0	177	236	146	0	14
26	8	0	0	0	0	0	19	128	233	146	0	3
27	8	0	0	0	0	0	31	98	226	135	52	28
28	1 <u>5</u>	0	0	0	0	0	27	105	208	108	22	35
29	1 <u>7</u>	0	0	0		0	31	159	212	154	0	23
30	18	0	0	0		0	<u>56</u>	235	196	155	0	12
31	6		0	0		0	_	280		145	5	
		_										
<u>Min</u>	<u>6</u>	0	0	<u>0</u>	0	0	0	3	<u>102</u>	0	0	0
<u>Max</u>	<u>68</u>	12	0	<u>0</u>	0	0	<u>56</u>	<u>313</u>	<u>374</u>	<u>173</u>	<u>166</u>	35
<u>Mean</u>	<u>32</u>	<u>1</u>	0	0	<u>0</u>	<u>0</u>	<u>5</u>	<u>157</u>	227	<u>116</u>	<u>17</u>	12
<u>ac-ft</u>	<u>1980</u>	<u>81</u>	0	0	0	0	<u>325</u>	<u>9610</u>	<u>13502</u>	<u>7138</u>	<u>1029</u>	683



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

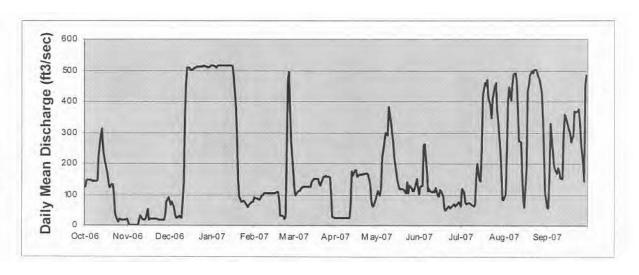
Location. --Lat 40°25'25", long 105°13'34", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado.

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 convey Colorado-Big Thompson Project water and diverted native water to Horsetooth Reservoir. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. 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

	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	Sep
1	128	9	<u>81</u>	<u>514</u>	90	<u>176</u>	24	<u>97</u>	<u>103</u>	64	<u>85</u>	<u>59</u>
2	<u>149</u>	11	<u>66</u>	<u>514</u>	<u>89</u>	122	<u>24</u>	<u>114</u>	<u>127</u>	<u>121</u>	<u>101</u>	<u>56</u>
3	147	0	<u>77</u>	<u>513</u>	<u>89</u>	99	<u>25</u>	<u>98</u>	<u>130</u>	<u>108</u>	243	<u>158</u>
4	146	1	60	<u>509</u>	<u>85</u>	<u>110</u>	<u>25</u>	<u>122</u>	<u>260</u>	<u>76</u>	<u>403</u>	331
5	146	1	34	<u>517</u>	83	<u>113</u>	<u>25</u>	220	<u> 262</u>	<u>71</u>	<u>444</u>	<u>250</u>
6	<u>144</u>	1	26	516	98	<u>114</u>	<u>25</u>	242	<u>174</u>	<u>73</u>	<u>404</u>	199
7	144	1	25	<u>517</u>	97	<u>121</u>	<u> 26</u>	299	<u>114</u>	<u>75</u>	<u>456</u>	183
8	144	<u>1</u>	31	<u>514</u>	104	<u>126</u>	<u>26</u>	297	<u>118</u>	<u>71</u>	<u>488</u>	167
9	145	<u>16</u>	24	516	104	<u>126</u>	<u> 26</u>	293	<u>113</u>	<u>66</u>	<u>491</u>	187
10	1 46	32	23	<u>516</u>	104	126	<u>25</u>	<u>381</u>	<u>108</u>	<u>64</u>	<u>462</u>	180
11	227	20	<u>136</u>	<u>515</u>	<u>104</u>	<u>126</u>	24	337	<u>113</u>	<u>70</u>	377	<u>154</u>
12	293	<u>18</u>	<u>360</u>	<u>516</u>	<u>104</u>	<u>126</u>	<u>65</u>	304	<u>109</u>	<u>159</u>	272	<u>151</u>
13	311	<u>18</u>	460	<u>516</u>	<u>104</u>	<u>127</u>	<u>176</u>	275	123	202	270	291
14	251	22	509	516	<u>104</u>	128	<u>163</u>	225	98	<u>1</u> 48	<u>172</u>	359
<u>15</u>	221	<u>52</u>	510	<u>516</u>	104	142	180	<u>173</u>	<u>96</u>	142	<u>88</u>	<u>352</u>
16	<u>185</u>	<u>19</u>	503	512	<u>105</u>	<u>151</u>	178	1 46	<u>116</u>	246	<u>60</u>	323
17	168	21	502	478	110	<u>151</u>	<u>156</u>	129	113	419	<u>181</u>	309
18	142	21	503	384	110	<u>151</u>	<u>166</u>	119	93	<u>458</u>	437	<u>301</u>
19	122	21	510	285	84	152	166	<u>118</u>	<u>56</u>	<u>453</u>	448	269
20	133	<u></u>	510	150	<u></u> <u>31</u>	137	<u>166</u>	119	47	<u>469</u>	<u>484</u>	291
21	134	20	511	93	<u>31</u>	129	<u>167</u>	<u>116</u>	<u>61</u>	<u>413</u>	500	370
22	103	<u>19</u>	511	<u>78</u>	<u>27</u>	1 41	<u>167</u>	<u>105</u>	<u>65</u>	386	<u>493</u>	366
23	39	<u>19</u>	513	<u>78</u>	22	<u>158</u>	<u>167</u>	140	<u>57</u>	348	<u>503</u>	367
24	19	<u>19</u>	511	<u>79</u>	<u>28</u>	159	<u>167</u>	<u>106</u>	<u>60</u>	<u>410</u>	<u>501</u>	<u>376</u>
<u>25</u>	12	<u>18</u>	512	<u>76</u>	<u>474</u>	<u>160</u>	<u>165</u>	<u>129</u>	<u>68</u>	<u>448</u>	<u>488</u>	338
<u> 26</u>	22	<u>18</u>	<u>515</u>	<u>67</u>	<u>495</u>	<u>157</u>	<u>135</u>	123	<u>70</u>	<u>460</u>	<u>479</u>	270
27	<u>17</u>	<u>18</u>	<u>512</u>	<u>61</u>	<u>376</u>	<u>156</u>	<u>85</u>	<u>111</u>	62	<u>377</u>	<u>469</u>	195
28	<u>17</u>	34	<u>511</u>	<u>66</u>	269	<u>154</u>	<u>65</u>	<u>111</u>	<u>65</u>	336	<u>429</u>	144
29	<u>16</u>	<u>76</u>	<u>510</u>	<u>74</u>		<u>101</u>	63	122	<u>77</u>	247	<u>349</u>	<u>456</u>
<u>30</u>	<u>17</u>	<u>90</u>	<u>512</u>	<u>76</u>		<u>26</u>	<u>85</u>	<u>152</u>	<u>71</u>	1 76	233	484
<u>31</u>	<u>20</u>		<u>515</u>	<u>78</u>		23		<u>121</u>		<u>86</u>	109	
<u>Min</u>	<u>12</u>	0	23	<u>61</u>	22	23	24	<u>97</u>	<u>47</u>	<u>64</u>	60	<u>56</u>
Max	<u>311</u>	90	<u>515</u>	<u>517</u>	495	<u>176</u>	180	381	262	<u>469</u>	<u>503</u>	484
Mean	126	21	341	334	<u>129</u>	129	99	<u>176</u>	104	234	352	264
ac-ft	<u>7733</u>	1238	20950	20512	7175	7895	5852	<u>10775</u>	6194	14339	21617	15706



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

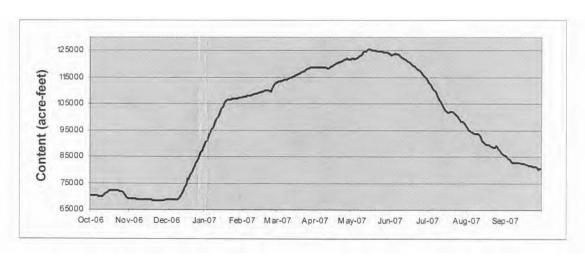
Location. -Lat 40°36'00", long 105°10'05", Larimer County, Hydrologic Unit 10190007, at Horsetooth Dam outlet works, 4.8 miles west of Fort Collars, Colorado

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-2006 to 30-Sep-2007. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	70,112	69,196	68,660	89,289	107,497	113,080	118,720	121,885	123,511	113,715	96,662	85,453
2	70.207	69,156	68,754	90,311	107,547	113,200	118,649	121,957	123,386	113,011	95,699	85,274
3	70,247	69,102	68,861	91,262	107,647	113,337	118,632	121,868	123,404	112,344	95,039	84,740
4	70.274	69,035	68,901	92,234	107,798	113,491	118,597	121,903	123,565	111,525	94,740	84,310
<u>5</u>	70,247	68,982	68.901	93,242	107,932	113,612	118,632	122,188	123,852	110,880	94,349	83,764
6	70.126	68.982	68,901	94,224	107,999	113,783	118,544	122.492	123,744	110.236	94,005	83,058
7	70,004	68,888	68,888	<u>95,148</u>	108.166	113,973	118,544	122,956	123,529	109,612	93,896	82,794
8	69,991	68,767	68,861	96,141	108,267	114,162	118,544	123,314	123,135	108.720	93,818	82,838
9	70,072	68,794	68,848	97,138	108,384	114,300	118,509	123,708	122,742	107,748	93,756	82,853
<u>10</u>	70,058	68,794	68,821	98,141	108,501	114,472	118,562	124,229	122,367	106,813	93,678	82,926
11	70,261	68,767	69.009	99.084	108,736	114.679	118,439	124,571	122,046	105,767	93,522	82,912
12	70,681	68,714	69,681	100,065	108,871	114.852	118,456	124.823	121,779	104,874	92,884	82,897
<u>13</u>	71,170	68,593	70.559	101,017	108.972	115,042	118,720	125,148	121,583	104,199	92,110	82,604
<u>14</u>	71.578	68,620	71,428	102,040	109,140	115,180	118,948	125,310	121,245	103,444	91.139	82,531
<u>15</u>	71,865	68,687	72,357	103,002	109,292	115,440	119,177	125,346	120,926	102.626	90,311	82,472
16	72,110	68,647	73,361	104,002	109,511	115,752	119,459	125,328	120,518	101,991	89,807	82,385
<u>17</u>	72,247	68,633	74,316	104,891	109,612	115,943	119,723	125,256	120,165	101,617	89,456	82,239
18	72.329	68,647	76,697	105,651	109,780	116,151	120,023	125,238	119,705	101,634	<u>89,563</u>	82,063
19	72,302	68,607	76;218	106,231	109,882	116,360	120,182	125,076	119,282	101,877	89,456	81,845
20	72.357	68,513	<u>77,460</u>	106,480	109,865	116,569	120,465	124,967	118,930	102.105	89,197	81,583
21	72,357	<u>68,540</u>	78,413	106,547	109,831	116,708	120,625	124,877	118,526	102,203	88,878	81,466
22	72,274	68,540	79,401	106,680	109,831	116,969	120,855	124.841	118,333	101,780	88,651	81,452
23	72,192	68,460	80,365	106,713	109.865	117,266	121,050	124,805	117,948	101.098	88,393	81,350
<u>24</u>	71,960	68,433	81,365	106,846	109.747	117,633	121,334	124,733	117,563	100,549	<u>88,575</u>	81,408
<u>25</u>	71,796	68,380	82,385	106,946	110,608	117,913	121,619	124,625	117,231	99,968	89,091	81,350
26	71,701	68,380	83,367	106,996	111,559	118,263	121,796	124,517	116,708	99,534	88,863	81,161
27	71,455	68,339	84,310	107,013	112,293	118,456	121,903	124,427	116,169	99,036	88,166	80,770
28	70,830	68,366	85,393	107,080	112,823	118.684	121.832	124,247	115,596	<u>98,364</u>	<u>87,457</u>	80,250
<u>29</u>	70,193	68,460	86,377	107,146		118,772	121,850	124,265	115,007	98.141	86,616	80,409
30	69,546	<u>68,674</u>	87,367	107,230		118,807	121,850	123,996	114,403	97,870	86,064	80,625
31	69,290		88.333	107,363		118,755		123,816		97,472	85,661	
Min	69,290	68,339	68,660	89,289	107,497	113.080	118,439	121,868	114,403	97,472	85,661	80,250
Max	72,357	69,196	88,333	107,363	112,823	118,807	121,903	125.346	123,852	113,715	96,662	85,453
EOM	69,290	68,674	88,333	107,363	112,823	<u>118,755</u>	<u>121,850</u>	123,816	114,403	97,472	85.661	80,625



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

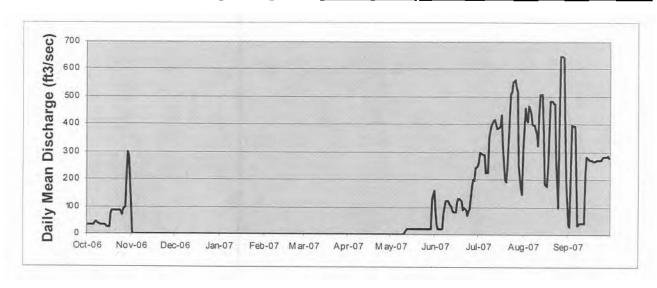
Location. --Lat 40°3601", long 105°10'18", Larimer County, Hydrologic Unit 10190007, 4 miles west of Fort Collins, Colorado.

Gage.-- Water-stage recorder with satellite telemetry at concrete control. Elevation of gage is 5280 feet from topographic map.

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 water stored at Horsetooth Reservoir. Recorder was operated from 01-Oct-2006 to 30-Sep-2007. 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	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	Aug	<u>Sep</u>
1	33	0	0	0	0	0	0	0	<u>87</u>	<u>264</u>	<u>313</u>	36
2	<u>33</u>	0	0	0	0	0	0	0	<u>36</u>	299	<u>457</u>	27
3	<u>33</u>	0	0	0	0	0	0	0	<u>19</u>	<u>295</u>	<u>423</u>	220
4	33	0	0	0	0	0	0	0	<u>19</u>	292	<u>410</u>	397
<u>5</u>	33	0	0	0	0	0	0	0	<u>19</u>	292	<u>468</u>	393
6	<u>40</u>	0	0	0	0	0	0	0	19	223	442	395
7	<u>43</u>	0	0	0	0	0	0	0	80	227	403	194
8	<u>36</u>	0	0	0	0	0	0	0	124	352	399	33
9	<u>35</u>	0	0	0	0	0	0	0	124	379	399	40
10	34	0	0	0	0	0	0	0	124	399	363	43
<u>11</u>	32	0	0	0	0	0	0	9	106	414	325	43
<u>12</u>	32	0	0	0	0	0	0	19	101	417	443	41
<u>13</u>	32	0	0	0	0	0	0	<u>19</u>	87	399	509	227
14	28	0	0	0	0	0	0	<u>19</u>	<u>81</u>	387	508	282
<u>15</u>	26	0	0	0	0	0	0	<u>19</u>	<u></u>	387	370	277
<u>16</u>	<u>25</u>	0	0	0	0	0	0	<u>19</u>	118	399	185	272
<u>17</u>	72	0	0	0	0	0	0	19	131	434	175	270
<u>18</u>	88	0	0	0	0	0	0	<u>19</u>	1 31	320	250	268
<u>19</u>	88	0	0	0	0	0	0	<u>19</u>	122	201	375	267
20	<u>87</u>	0	0	0	0	0	0	<u>19</u>	90	192	483	267
21	<u>85</u>	0	0	0	0	0	0	19	97	240	484	269
22	84	0	0	0	0	0	0	19	90	424	474	270
23	<u>84</u>	0	0	0	0	0	0	<u>19</u>	71	513	474	270
24	84	0	0	0	0	0	0	19	87	518	268	269
<u>25</u>	<u>71</u>	0	0	0	0	0	0	19	<u>96</u>	553	97	279
<u> 26</u>	<u>91</u>	0	0	0	0	0	0	<u>19</u>	<u>175</u>	<u>561</u>	405	284
<u>27</u>	<u>99</u>	0	0	0	0	0	0	19	200	533	645	284
28	223	0	0	0	0	0	0	<u>19</u>	198	521	646	284
<u>29</u>	<u>297</u>	0	0	0		0	0	<u>19</u>	243	251	644	285
<u>30</u>	286	0	0	0		0	0	132	251	169	400	279
<u>31</u>	<u>108</u>		<u>0</u>	<u>0</u>		0		<u>158</u>		146	197	
Min	<u>25</u>	<u>0</u>	<u>0</u>	<u>0</u>	0	<u>0</u>	<u>0</u>	0	<u>19</u>	<u>146</u>	<u>97</u>	27
Max	<u>297</u>	0	<u>0</u>	0	0	0	0	<u>158</u>	<u>251</u>	<u>561</u>	646	397
Mean	<u>77</u>	<u>0</u>	0	0	0	0	0	20	107	355	<u>401</u>	225
ac-ft	4703	0	0	0	0	0	0	1 251	6333	21770	24615	13387



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

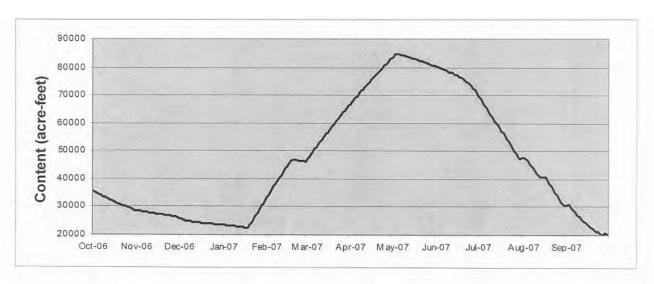
Location. --Lat  $40^{\circ}19'$  28", long  $105^{\circ}12'$  41", Larimer County, Hydrologic Unit 10190006, m Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.

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-2006 to 30-Sep-2007. 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	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	<u>35,391</u>	28,457	25,816	23,506	33,437	46,628	<u>66,924</u>	83,610	80,246	69,733	47,479	30,621
2	35,134	28,388	25,615	23,461	34,225	47,394	67,559	84,066	80,144	68,915	47,733	30,872
3	34,908	28,346	25,442	23,409	35,059	48,081	68,091	84,606	79,940	<u>67,975</u>	47,251	30,471
4	34,592	28,249	25,209	23,377	35,732	48,719	68,721	84,762	79,787	67,261	46,678	29,867
<u>5</u>	34,375	28,180	24.974	23,307	<u>36.549</u>	<u>49,455</u>	69,362	84,658	79,583	66.540	45,957	29,268
<u>6</u>	34,069	28,076	24,980	23,275	<u>37,366</u>	50,143	69,850	<u>84,554</u>	79,328	65,708	45,374	28,659
7	33,741	27,972	24,848	23,211	38,143	50,791	70,500	84,502	<u>79,104</u>	64,909	44,735	28,000
8	33,467	28,000	24.874	23,173	<u>38,935</u>	51,538	71,171	84,346	<u>78,901</u>	64,094	44,082	27,415
9	33,363	27,834	24,683	23,083	39,720	52,140	71,663	84,139	<u>78,637</u>	63,340	43,376	26,964
10	33,105	27,800	24.650	23,051	40,486	52,859	72,196	83,983	78,383	62,486	42,706	26,354
<u>11</u>	32,921	27,765	24,585	22,962	41,208	53,379	72,810	83,817	<u>78,302</u>	61.581	41,934	25,809
<u>1</u> <u>2</u>	32,664	27,655	24,552	22,924	41,942	54,104	73,405	83.714	78,028	60.838	41,168	25,302
<u>13</u>	32,407	27,621	24.453	22,861	42,771	<u>54,815</u>	73,912	83,455	77,796	60.136	40,886	24,848
<u> 14</u>	32,210	27,518	24,453	22,893	<u>43,458</u>	55,404	74,410	83.351	77,442	59,363	40.926	24,421
<u>15</u>	31,963	27,497	24,349	22,734	44,288	56,166	75,059	83,196	77,270	58,631	40,838	24,023
<u>16</u>	31,672	27,381	24,251	22.576	45,033	56,715	75,670	83,020	76,977	57,847	40,878	23,602
<u>17</u>	31,499	27,278	24,185	22.457	45,749	57,439	76,253	82,886	76,705	57,122	40.686	23,243
18	31,116	27,244	24,120	22,576	46,502	58,020	76,877	82,680	76,474	56,481	<u> 39,967</u>	22,829
<u>19</u>	30,908	27,141	24.120	22.893	47,015	58,704	77,341	82,556	76,122	55,717	39,171	22,406
20	30,693	27,080	24.120	23.705	46,888	59,317	77,745	82,370	75,720	54,948	38,456	22,069
21	30,514	27,005	24,088	24,493	46,804	<u>59,970</u>	78,231	82,216	<u>75,259</u>	54,237	37,676	21,758
22	30,300	26,903	23,990	25,388	46,762	60,570	78,820	82,102	74,859	53,388	36,888	21,345
23	30,194	26,801	23,958	26,118	46,628	61,228	79,277	81,876	<u>74,490</u>	52,596	36,007	21,039
24	29,973	26,767	23.899	26,937	46,586	61,926	<u>79,940</u>	81.670	74,111	51,695	<u>35,096</u>	20,736
<u>25</u>	29,796	26,685	23,861	27,765	46,460	62,627	80,512	81,486	73,792	50,783	34.181	20,440
<u> 26</u>	29,690	26,631	23.789	28,589	46,376	63,246	80,973	81,362	73,206	49,928	33,437	20,135
27	29,514	26,591	23.699	<u> 29.415</u>	46,376	63,858	81,588	81,157	72,641	49,104	32,576	20,380
28	29.268	26,435	23,699	30,087	46,250	64,435	82,051	80,952	72,008	48,336	31,846	20,772
<u> 29</u>	28,987	26,259	23,667	30,908		65,004	82,628	80,819	71,249	47,564	31,124	20,500
<u>30</u>	28,736	26,051	23,634	31,781		65.670	83,072	80,665	<u>70,575</u>	47,310	30,436	20,224
<u>31</u>	28,520		23,538	32,590		66,301		80,512		47,479	30,436	
Min	28,520	26,051	23,538	22,457	33,437	46,628	66,924	80,512	<u>70,575</u>	47,310	30,436	20,135
Max	35,391	28,457	<u>25,816</u>	32,590	47,015	66,301	83,072	84.762	80,246	69,733	47,733	30,872
EOM	28,520	26,051	23,538	32.590	46,250	66,301	83,072	80,512	70,575	47,479	30.436	20.224



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

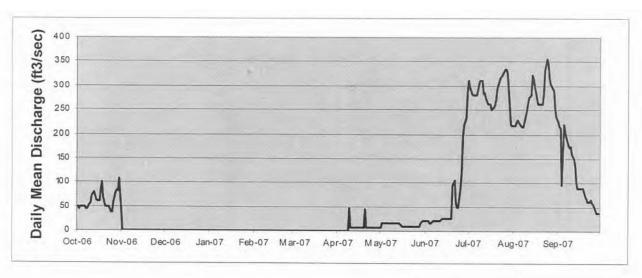
Location. --Lat 40°1927", long 105°12'35", Larimer County, Hydrologic Unit 10190006, downstream from Carter Reservoir Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.

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 water and diverted native water to project share holders. Recorder was operated by Northern Colorado Water Conservancy District from 01-Oct-2006 to 30-Sep-2007. 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	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	Aug	Sep
1	<u>49</u>	<u>0</u>	0	0	0	0	0	8	20	<u>310</u>	<u>217</u>	225
2	<u>45</u>	0	0	0	0	0	0	1 5	20	297	<u>217</u>	216
3	<u>48</u>	0	0	0	0	0	0	16	20	283	226	214
4	<u>50</u>	0	0	0	0	0	0	<u>16</u>	17	280	230	97
<u>5</u>	<u>50</u>	0	0	0	0	0	0	<u>16</u>	<u>17</u>	280	225	220
<u>6</u>	<u>50</u>	0	0	0	0	0	0	16	20	280	218	207
7	<u>43</u>	0	0	0	0	0	0	<u>16</u>	20	290	216	193
8	<u>44</u>	0	0	0	0	0	0	16	20	<u>305</u>	216	177
9	<u>53</u>	0	0	0	0	0	<u>48</u>	<u>16</u>	20	310	237	173
<u>10</u>	<u>56</u>	0	0	0	0	0	8	<u>16</u>	20	310	248	175
<u>11</u>	<u>72</u>	0	0	0	0	0	8	<u>16</u>	20	282	263	158
12	80	0	0	0	0	0	8	<u>16</u>	<u>23</u>	<u>286</u>	277	150
<u>13</u>	<u>73</u>	0	0	0	0	0	8	<u>16</u>	<u>25</u>	274	280	137
<u>14</u>	<u>63</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	8	<u>16</u>	<u>25</u>	263	323	103
<u>15</u>	<u>60</u>	0	<u>0</u>	0	0	0	8	12	<u>25</u>	<u>263</u>	<u>315</u>	90
<u>16</u>	<u>60</u>	<u>0</u>	0	0	0	0	8	<u>10</u>	<u>25</u>	<u>261</u>	300	90
<u>17</u>	88	0	<u>0</u>	0	0	0	8	<u>10</u>	<u>25</u>	<u>250</u>	275	90
<u>18</u>	100	<u>0</u>	<u>0</u>	<u>0</u>	0	0	8	<u>10</u>	<u>25</u>	<u>255</u>	262	90
<u>19</u>	<u>67</u>	0	0	0	0	0	8	<u>10</u>	<u>25</u>	<u>260</u>	262	90
20	<u>50</u>	0	0	<u>0</u>	0	0	<u>45</u>	<u>10</u>	<u>96</u>	270	262	73
<u>21</u>	<u>50</u>	0	<u>0</u>	<u>0</u>	<u>0</u>	0	8	<u>10</u>	<u>106</u>	296	262	68
22	50	0	0	<u>0</u>	<u>0</u>	<u>0</u>	8	<u>10</u>	<u>58</u>	<u>312</u>	284	60
23	<u>50</u>	0	0	0	<u>0</u>	0	8	<u>10</u>	<u>50</u>	<u>318</u>	332	62
24	<u>37</u>	0	0	0	0	0	8	<u>10</u>	50	320	<u>357</u>	65
<u>25</u>	<u>37</u>	0	<u>0</u>	0	0	0	8	<u>10</u>	88	330	<u>347</u>	58
<u> 26</u>	<u>59</u>	0	<u>0</u>	0	0	0	8	<u>10</u>	125	335	<u>316</u>	55
27	<u>79</u>	<u>0</u>	0	0	0	<u>0</u>	8	<u>10</u>	<u>196</u>	335	305	44
<u>28</u>	<u>84</u>	0	<u>0</u>	0	<u>0</u>	0	8	<u>10</u>	220	328	<u>295</u>	38
29	<u>82</u>	0	0	<u>0</u>		<u>0</u>	8	<u>16</u>	233	<u>257</u>	290	38
30	109	0	<u>0</u>	<u>0</u>		<u>0</u>	<u>8</u>	20	288	<u>219</u>	<u>254</u>	38
<u>31</u>	<u>42</u>		<u>0</u>	0		0		<u>20</u>		217	236	
Min	37	0	0	0	0	0	0	8	17	217	216	38
Max	109	0	0	0	0	0	<u>~</u> 48	20	288	335	357	225
Mean	61	0	0	0	0	0	8	13	64	286	269	116
ac-ft	3719	0	0	0	0	0	<u>5</u> 01	818	3809	1 <u>7576</u>	16523	6919
<u> </u>	<u> </u>	<u>×</u>	<u>×</u>		<u> </u>	<del>`</del>	<u> </u>	010	3003	1310	10020	0313



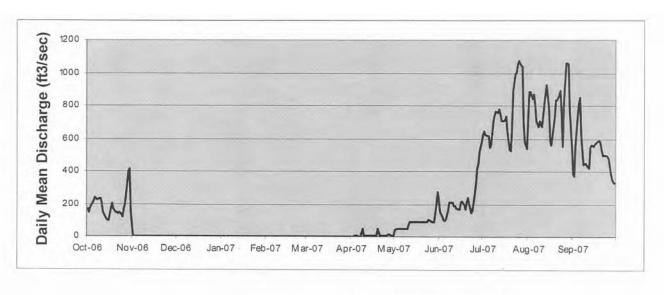
#### Appendix A (38 of 38) Colorado-Big Thompson Project, CO

Location. Larimer, Grand, Summit, Boulder, Weld counties in Colorado, hydrologic units 14010001, 14010002 aid 10190006, 10190007, in the Colorado River, Big Thompson River and Cache La Poudre River basins.

Remarks.— This table presents a summation of all the daily deliveries of C-BT water through the Saint Vrain Canal, the Charles Hansen Supply Canal, the Dixon Canal and from the Charles Hansen Feeder Canal (it does not include metered water). The C-BT Project is a transmountain water diversion system that stores, regulates and transports water from the Colorado River Basin to the Big-Thompson River Basin. The water diverted is used for irrigation, municipal and industrial purposes, to generate hydroelectric power and for recreation. This record contains operational data which could be subject to future revisions and changes. Period of record between 01-Oct-2006 and 30-Sep-2007.

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

	Oct	Nov	Dec	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	May	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1	<u>166</u>	11	<u>0</u>	0	0	<u>1</u>	11	9	228	<u>624</u>	<u>729</u>	388
2	<u>145</u>	0	0	0	0	11	11	<u>39</u>	<u>152</u>	<u>647</u>	<u>884</u>	370
3	<u>176</u>	0	0	0	0	1	11	<u>51</u>	<u>124</u>	<u>622</u>	888	<u>561</u>
4	190	0	0	0	0	11	6	<u>51</u>	<u>106</u>	<u>615</u>	<u>841</u>	742
<u>5</u>	216	0	0	0	0	1	8	<u>51</u>	100	<u>616</u>	<u>870</u>	<u>814</u>
6	237	0	0	0	0	11	3	<u>51</u>	<u>104</u>	<u>547</u>	<u>804</u>	847
7	233	0	0	0	0	11	11	<u>51</u>	<u>165</u>	<u>560</u>	<u>709</u>	627
8	226	0	0	0	0	<u>1</u>	11	<u>51</u>	<u>209</u>	<u>711</u>	<u>672</u>	442
9	231	0	0	0	0	11	<u>49</u>	<u>51</u>	209	<u>741</u>	<u>707</u>	446
<u>10</u>	230	0	0	0	0	11	9	<u>51</u>	209	<u>764</u>	689	450
<u>11</u>	204	0	0	0	1	1	9	<u>77</u>	<u>191</u>	<u>754</u>	<u>676</u>	434
<u>12</u>	1 47	0	0	0	1	<u>1</u>	9	<u>95</u>	<u>189</u>	<u>778</u>	<u>812</u>	424
<u>13</u>	120	0	0	0	1	1	9	<u>95</u>	<u>177</u>	<u>750</u>	<u>879</u>	545
14	1 06	0	0	0	1	1	9	<u>95</u>	171	712	930	563
15	<u>101</u>	0	0	0	1	1	9	<u>91</u>	<u>171</u>	<u>706</u>	<u>788</u>	553
16	<u>100</u>	0	0	<u>0</u>	1	1	9	89	209	715	<u>592</u>	566
17	<u>174</u>	0	<u>0</u>	<u>0</u>	1	1	9	89	221	738	558	573
18	203	0	0	0	1	1	9	89	198	644	619	585
19	169	0	0	0	1	1	9	89	171	533	732	587
20	<u>151</u>	0	0	0	1	1	46	89	214	526	835	569
21	146	0	<u>0</u>	0	1	1	9	89	236	663	837	523
22	144	0	0	0	1	1	9	89	174	893	847	497
23	144	0	0	0	1	1	9	90	144	995	895	498
24	130	0	0	0	1	1	9	<u>89</u>	160	1006	725	497
<u>25</u>	<u>117</u>	0	0	0	1	1	9	103	207	1052	552	494
26	166	0	0	0	11	1	9	102	323	1073	831	477
<u>27</u>	197	0	0	0	1	1	<u>17</u>	91	423	1043	1059	384
28	328	0	0	0	1	1	12	89	444	1036	1058	349
29	398	0	0	<u>0</u>		1	9	90	519	702	1052	339
30	412	0	0	0		1	9	206	586	583	769	329
31	<u>156</u>		0	0		1		274		543	554	
<u>Min</u>	100	0	<u>0</u>	<u>0</u>	0	11	11	9	<u>100</u>	<u>526</u>	<u>552</u>	329
Max	412	11	0	0	11	1	49	274	<u>586</u>	1073	1059	847
Mean	<u>189</u>	0	0	0	1	1	10	86	224	738	<u>787</u>	516
ac-ft	11607	1	0	<u>0</u>	<u>35</u>	<u>61</u>	<u>612</u>	<u>5267</u>	1 3328	<u>45323</u>	48292	30637



## 

(Data in Acre-feet)

	Dead	Active	Total	Normal Minimum	The second secon
Reservoir	Storage 1/	Storage 2/	<u>Storage</u>	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 ft <sup>3</sup> /s
Pinewood Lake	416	1,765	2,181	613	Minimum elevation for power generation
Flatiron	125	635	760	324	Minimum elevation to release 550 ft <sup>3</sup> /s
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	

<sup>1/</sup> Storage capacity below elevation of lowest outlet

<sup>2/</sup> Total storage minus dead storage

<sup>3/</sup> Not determined

#### COLORADO-BIG THOMPSON PROJECT

## MONTHLY SUMMARY

W		OF BLUE RIV	VER OPERATI	ONS		(A	CRE-FEET)							
UNDEPLETED RUNOFF	INI	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
ABOVE GREEN MTN. RESERVOIR		17,900	11,200	9,700	8,800	8,700	13,300	20,600	92,600	112,100	50,400	33,900	22,300	401,500
UNDEPLETED RUNOFF														
ABOVE DILLON RES.		11,000	7,700	6,000	5,400	5,300	6,900	11,600	60,100	73,700	29,300	20,300	11,050	248,350
PERCENT OF TOTAL UN- DEPLETED RUNOFF ORI -														
GINATING ABOVE DILLON		0.615	0.688	0.619	0.614	0.609	0.519	0.563	0.649	0.657	0.581	0.599	0.496	0.619
DEPLETIONS BY 1929 COLORADO SPRINGS RIGHT		0	0	0	0	0	0	34	284	674	218	120	94	1424
DEPLETIONS BY 1948 COLORADO SPRINGS RIGHT		-28	-196	0	0	0	0	155	1767	551	1721	271	40	4,281
INFLOW TO DILLON		11,000	7,900	6,000	5,400	5,200	6,900	11,400	58,000	72,400	27,300	19,900	10,900	242,300
DILLON STORAGE (1000 AF)	250.1	246.4	241.5	240.0	241.0	241.8	243.0	242.4	251.0	256.7	254.1	253.2	251.8	
ROBERTS TUNNEL DI VERSI ONS		4,800	2,000	500	0	500	0	0	0	5,000	18,900	9,500	400	41,600
DILLON OUTFLOW														
TO THE RIVER		8,700	9,900	7,000	4,400	3,900	5,800	12,000	48,700	60,800	9,800	10,100	10,700	191,800
TOTAL DEPLETIONS BY DENVER		2,300	-2,000	-1,000	900	1,400	1,200	-600	9,200	11,600	17,400	9,700	200	50,300
RUNOFF ORIGINATING BETWEEN DILLON AND														
GREEN MTN RESERVOIR		7,000	3,600	3,750	3,450	3,480	6,460	9,150	33,300	39,400	21,500	13,900	11,500	156,490
ACTUAL INFLOW TO GREEN MTN RESERVOIR		15,600	13,300	10,600	7,800	7,300	12,100	21,000	81,300	99,300	31,100	23,900	22,000	345,300
GREEN MTN RESERVOIR STORAGE (1000 AF)	112.6	108.7	105.4	96.6	86.6	79.7	72.4	74.5	116.3	152.7	152.4	1 35.6	108.9	
TOTAL GREEN MTN OUTFLOW		19,100	16,700	19,400	17,800	14,300	19,400	18,700	39,100	62,000	30,500	39,800	48,200	345,000

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

#### 2007 ACTUAL OPERATIONS

	١	NATER IN	N 1000 AC	RE-FEET						1	ENERGY IN GW	/H	
	INITIAL												
	OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
GREEN MOUNTAIN RESERVOIR													
Depleted Watershed Inflow	345.3	15.6	13.3	10.6	7.8	7.3	12.1	21.0	81.3	99.3	31.1	23.9	22.0
Turbine Release	331.9	19.1	16.7	19.4	17.8	14.3	19.4	18.7	39.1	49.0	30.4	39.8	48.2
Bypass	13.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.1	0.0	0.0
Spill	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
End of Month Content	112.6	108.7	105.4	96.6	86.6	79.7	72.4	74.5	116.3	152.7	152.4	135.6	108.9
Kwh/AF		199.0	197.6	185.6	168.5	153.8	159.8	160.4	184.1	200.0	190.8	178.4	182.6
Generation	60.7	3.8	3.3	3.6	3.0	22	3.1	3.0	7.2	9.8	5.8	7.1	8.8
WILLOW CREEK RESERVOIR													
Inflow	44.8	1.1	1.0	0.9	0.7	0.7	1.9	5.0	18.6	8.8	2.5	2.0	1.6
Release to River	5.45	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.7	0.7	0.5	0.3	0.25
Pumped to Granby	38.15	0.0	2.3	0.0	0.0	0.0	2.5	3.9	17.8	7.5	0.0	2.55	1.6
End of Month Content	8.8	9.4	7.6	8.0	8.3	8.6	7.4	7.9	7.7	8.1	9.9	8.9	8.5
Pump Energy	7.9	0.0	0.5	0.0	0.0	0.0	0.5	0.8	3.7	1.5	0.0	0.5	0.4
GRANBY - SHADOW MOUNTAIN - 0	GRAND LAKE												
Natural Watershed Inflow	199.95	5.6	2.7	7.0	3.4	3.1	7.4	16.1	58.2	57.5	19.05	11.6	8.3
Total Inflow into Granby	261.9	'17.5	7.7	6.1	3.9	3.4	8.2	20.9	87.1	73.5	14.8	11.0	7.8
Granby Fish Release	28.9	1.4	1.2	1.2	1.2	1.1	1.3	1.2	4.4	5.3	5.8	2.5	2.3
Granby Seepage	3.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.3	0.3	0.3
Granby Spill	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
Adams Tunnel	233.8	8.3	0.5	21.5	31.3	22.4	30.6	26.2	9.7	3.5	20.1	32.4	27.3
Granby End of Month content	382.0	389.1	394.9	362.7	333.4	312.7	290.4	288.3	369.0	433.9	423.0	398.8	376.3
SM-GL End of Month Content	17.8	4.7	1.5	17.8	17.7	17.7	17.6	17.9	17.8	17.7	17.8	17.8	17.6
Pumped from Granby	220.6	7.4	0.0	36.9	31.6	22.66	28.8	20.7	0.0	0.7	16.8	30.0	25.7
Granby Pump Kwh/AF		162.2	0.0	159.9	164.6	167.7	173.6	173.9	170.7	0.0	154.8	156.7	159.5
Granby Pump Energy	36.1	1.2	0.0	5.9	5.2	3.8	5.0	3.6	0.0	0.0	2.6	4.7	4.1

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

#### 2007 ACTUAL OPERATIONS

		*	* *	E	ENERGY IN C	GWH .								
	INITIAL													
	OR TOTAL	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
MARYS LAKE - ESTES - FLATIRON  Adams Tuppel Water 222.9 9.2 0.5 21.5 21.2 22.4 20.6 26.2 0.7 2.5 20.1 22.4 27.4														
Adams Tunnel Water	233.8	8.3	0.5	21.5	31.3	22.4	30.6	26.2	9.7	3.5	20.1	32.4	27.3	
Marys Lake Generation	41.1	1.3	0.0	3.9	5.8	4.0	5.7	4.6	1.4	0.3	3.4	5.8	4.9	
Estes Generation	103.2	3.5	0.0	9.7	13.9	9.7	13.6	11.2	3.8	1.4	9.1	14.8	12.5	
Divertible Big-Thompson	39.1	0.0	0.5	0.2	0.0	0.0	1.1	1.7	12.7	15.7	4.9	1.1	1.2	
Diverted Big-Thompson Water	33.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	12.6	15.5	3.7	0.0	0.9	
Olympus Tunnel	266.9	9.96	0.0	21.1	31.0	22.5	30.7	26.0	22.6	19.5	23.6	31.9	28.0	
Pole Hill Generation	184.4	1.5	0.0	14.2	22.9	16.1	22.7	18.8	15.9	13.2	16.3	22.9	19.9	
Flatiron 1 & 2 Generation	241.6	8.4	0.2	18.8	29.1	21.1	28.8	24.4	20.3	16.1	19.3	29.1	26.0	
Flatiron 3 Turbine Release	0.03	0.0	0.0	0.0	.03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Flatiron 3 Pumping	82.5	0.0	0.0	0.0	11.0	15.4	23.0	20.4	2.3	0.0	1.2	6.0	3.2	
Flatiron 3 Kwh/AF Pump		0.0	0.0	0.0	263.6	272.7	295.6	318.6	348.7	0.0	250.0	283.3	250.0	
Flatiron 3 Pump Energy	24.0	0.0	0.0	0.0	2.9	4.2	6.8	6.5	0.8	0.0	0.3	1.7	0.8	
CARTER LAKE														
Pumped from Flatiron	82.5	0.0	0.0	0.0	11.0	15.4	23.0	20.4	2.3	0.0	1.2	6.0	3.2	
Release to Flatiron	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Irrigation Delivery	83.9	6.5	1.5	1.4	1.3	1.3	1.7	2.3	4.1	8.3	22.5	20.8	12.2	
Evaporation & Seepage	1.95	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.45	0.2	0.2	
End of Month Content	35.7	28.5	26.1	23.5	32.6	46.2	66.3	83.07	80.5	70.6	47.5	30.4	20.2	
BIG THOMPSON POWERPLAN	IT													
Diverted Dille Tunnel Water	4.77	0.0	0.0	0.0	0.0	0.0	0.07	0.6	0.0	0.0	0.2	3.4	0.5	
Irrigation Delivery	34.41	3.3	0.01	0.01	0.01	0.05	0.08	0.15	3.4	3.5	6.3	7.3	10.3	
Turbine Release	14.97	0.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	8.5	
Generation	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1	
HORSETOOTH RESERVOIR														
Hansen Feeder Canal Inflow	126.9	6.6	1.2	21.0	20.5	7.1	7.8	5.8	7.6	3.2	12.4	19.9	13.8	
Irrigation Delivery	101.0	6.3	1.1	1.2	1.3	1.2	1.4	2.0	4.6	9.9	26.2	28.9	16.9	
Evaporation	4.1	0.2	0.1	0.0	0.0	0.0	0.2	0.4	0.6	0.8	0.8	0.6	0.4	
End of Month Content	70.1	69.3	68.7	88.3	107.4	112.8	118.8	121.85	123.8	114.4	97.5	85.7	80.6	
TOTAL CBT DELIVERY	219.31	16.1	2.61	2.61	2.61	2.55	3.18	4.45	12.1	21.7	55.0	57.0	39.4	

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

#### 2007 ACTUAL OPERATIONS

WATER IN 1000 ACRE-FEET ENERGY IN GWH

	INITIAL OR TOTAL	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	NUL	JUL	AUG	SEP
BASE GENERATION .													
Green Mountain	60.7	3.8	3.3	3.6	3.0	2.2	3.1	3.0	7.2	9.8	5.8	7.1	8.8
Flatiron 3	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
Big Thompson	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1
TOTAL	62.5	3.8	3.3	3.6	3.0	2.2	3.1	3.0	7.2	9.8	5.8	7.8	9.9
LOAD FOLLOWING GENERATION													
Marys Lake	41.1	1.3	0.0	3.9	5.8	4.0	5.7	4.6	1.4	0.3	3.4	5.8	4.9
Estes	103.2	3.5	0.0	9.7	13.9	9.7	13.6	11.2	3.8	1.4	9.1	14.8	12.5
Pole Hill	184.4	1.5	0.0	14.2	22.9	16.1	22.7	18.8	15.9	13.2	16.3	22.9	19.9
Flatiron 1 & 2	241.6	8.4	0.2	18.8	29.1	21.1	28.8	24.4	20.3	16.1	19.3	29.1	26.0
TOTAL	570.3	14.7	0.2	46.6	71.7	50.9	70.8	59.0	41.4	31.0	48.1	72.6	63.3
PUMP ENERGY													
Willow Creek	7.9	0.0	0.5	0.0	0.0	0.0	0.5	0.8	3.7	1.5	0.0	0.5	0.4
Granby	36.1	1.2	0.0	5.9	5.2	3.8	5.0	3.6	0.0	0.0	2.6	4.7	4.1
Flatiron 3	24.0	0.0	0.0	0.0	2.9	4.2	6.8	6.5	0.8	0.0	0.3	1.7	0.8
TOTAL	68.0	1.2	0.5	5.9	8.1	8.0	12.3	10.9	4.5	1.5	2.9	6.9	5.3
TOTAL GENERATION	632.8	18.5	3.5	50.2	74.7	53.1	73.9	62.0	48.6	40.8	53.9	80.4	73.2
TOTAL GENERATION MINUS PUMP		17.3	3.0	44.3	66.6	45.1	61.6	51.1	44.1	39.3	51.0	73.5	67.9

## COLORADO-BIG THOMPSON PROJECT

## FLOOD DAMAGE PREVENTED IN WATER YEAR 2007

	Cumulative Total Prior to WY2006	WY2007	Cumulative Total Current
Granby	\$288,200	\$0.00	\$288,200
Green Mountain	\$99,100	\$6,000.00	\$105,100
Total	\$387,300	\$6,000.00	\$393,300

CBTAOP V1.10 Run: 14-Jan-2008 15:32 Most Probable Plan (70% Quota)

#### COLORADO-BIG THOMPSON MONTHLY OPERATIONS

#### HYDROLOGY OPERATIONS

Green Mtn Reservoir		I	nitial Cor		08.9 kaf	Ma	aximum Co		53.6 kaf	M	inimum Co		6.0 kaf	
	2007	Oct	Ele Nov	ev 792 Dec	6.43 ft Jan	Feb	El Mar	ev 794	9.91 ft May	Jun	Jul	lev 779! Aug	5.72 ft Sep	Total
Dillon Inflow	kaf	9.6	5.9	5.5	3.9	3.6	4.3	10.8	41.9	73.0	37.0	18.6	8.8	222.9
Dillon-Grn Mtn Gain	kaf	9.6	6.0	5.6	3.6	3.3	4.2	10.4	29.1	47.9	26.2	15.0	9.1	170.0
Undepleted Inflow	kaf	19.2	11.9	11.1	7.5	6.9	8.5	21.2	71.0	120.9	63.2	33.6	17.9	392.9
Depletion Depleted Inflow	kaf kaf	1.2	-5.6 17.5	1.2 9.9	1.0 6.5	0.4 6.5	0.9 7.6	0.0 21.2	10.0 61.0	13.3 107.6	15.3 47.9	3.3	-0.3 18.2	40.7 352.2
Depiceda iniio"	71012	10.0	17.0											
Turbine Release	kaf	34.9	17.9	12.7	14.8	11.5	17.4 0.0	10.9	25.5 0.0	63.1	47.0 0.0	51.8	47.6 0.0	355.1 0.0
Spill/Waste Total River Release	kaf kaf	0.0 34.9	0.0 17.9	0.0 12.7	14.8	11.5	17.4	10.9	25.5	63.1	47.0	51.8	47.6	355.1
Min Release Total River Release	cfs cfs	567 568	294 301	205 207	200 241	200 200	200 283	167 183	67 415	73 1060	693 764	843 842	800 800	
TOTAL KIVEL KELEASE	CIB	300	301	207	211	200	203	103	113	1000	,,,,	012	000	
Evaporation	kaf	0.4	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.9	0.9	0.6	0.5	4.4
End-Month Targets End-Month Content	kaf kaf	91.7 91.6	91.1 91.1	88.3 88.3	80.0 80.0	75.0 75.0	65.0 65.0	75.0 75.0	110.0 110.0	153.6 153.6	153.6 153.6	131.5	101.6	
End-Month Elevation			7915.07											
111. 01. 0		-			0 5 15	34.	a		10 2 1	34.			7.2 kaf	
willow Crk Reservoi	r	1	nitial Cor 81		8.5 kaf 2.55 ft	IVI	aximum Co 81		10.2 kaf 8.83 ft	IVI.	inimum Co E:		7.2 Kai 6.90 ft	
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Native Inflow	1 5	2.2	1.5	1.3	0.8	0.7	1.0	3.6	23.7	16.9	4.1	1.6	1.1	58.5
Min Release	kaf kaf	0.4	0.4	0.4	0.8	0.7	0.4	0.4	1.5	2.6	2.2	0.5	0.4	10.0
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	1.5	2.6	2.2	0.5	0.4	10.0
Pumped to Granby	kaf	1.1	2.6	0.0	0.0	0.0	0.0	5.7	20.3	13.2	2.8	0.8	0.8	47.3
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	9.1 9.1	7.6 7.6	0.5	0.0	9.2	0.0	7.2	9.0 9.0	10.0 10.0	9.0 9.0	9.2	9.0 9.0	
End-Month Content	kaf			8.5	8.9		9.8							
End-Month Elevation	ft	8124.88	8118.74	8122.55	8124.12	8125.26	8127.44	8116.90	8124.50	8128.14	8124.50	8125.26	8124.50	
	ft						8127.44							
End-Month Elevation	ft		8118.74 8 nitial Cor 810	nt 3	8124.12 76.3 kaf 5.57 ft		8127.44 aximum Co El	nt 5	8124.50 36.1 kaf 9.50 ft		inimum Co	ont '	8124.50 76.5 kaf 6.91 ft	
	ft 2007		nitial Cor	nt 3	76.3 kaf		aximum Co	nt 5	36.1 kaf		inimum Co	ont '	76.5 kaf	Total
Lake Granby Native inflow	2007 kaf	Oct 3.9	nitial Cor 810 Nov 1.6	nt 3 ev 825 Dec	76.3 kaf 5.57 ft Jan 1.4	Ma Feb	aximum Co El Mar 1.4	nt 5 ev 827 Apr 4.5	36.1 kaf 9.50 ft May 20.4	M: Jun 35.8	inimum Co E: Jul 15.2	ont 8180 Aug	76.5 kaf 5.91 ft Sep 2.1	94.1
Lake Granby  Native inflow Rels frm Shadow Mtn	2007 kaf kaf	Oct 3.9 12.0	nitial Cor 810 Nov 1.6 2.7	nt 3 ev 825 Dec 2.0 2.8	76.3 kaf 5.57 ft Jan 1.4 1.2	Ma Feb 1.2 1.1	aximum Co El Mar 1.4 1.2	nt 5 ev 827 Apr 4.5 1.2	36.1 kaf 9.50 ft May 20.4 6.6	M: Jun 35.8 29.2	inimum Co Ei Jul 15.2 3.1	ont 8186 Aug 4.6 2.5	76.5 kaf 5.91 ft Sep 2.1 2.1	94.1 65.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap	2007 kaf kaf kaf	Oct 3.9 12.0 0.0	nitial Cor 810 Nov 1.6 2.7 0.0	nt 3 ev 825 Dec 2.0 2.8 0.0	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0	Ma Feb 1.2 1.1 0.0	aximum Co El Mar 1.4 1.2 0.0	nt 5 ev 827 Apr 4.5 1.2 5.0	36.1 kaf 9.50 ft May 20.4 6.6 10.0	M: Jun 35.8 29.2 5.0	inimum Co E: Jul 15.2 3.1 0.0	ont 8180 Aug 4.6 2.5 0.0	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0	94.1 65.7 20.0
Lake Granby  Native inflow Rels frm Shadow Mtn	2007 kaf kaf kaf	Oct 3.9 12.0	nitial Cor 810 Nov 1.6 2.7	nt 3 ev 825 Dec 2.0 2.8	76.3 kaf 5.57 ft Jan 1.4 1.2	Ma Feb 1.2 1.1	aximum Co El Mar 1.4 1.2	nt 5 ev 827 Apr 4.5 1.2	36.1 kaf 9.50 ft May 20.4 6.6	M: Jun 35.8 29.2	inimum Co Ei Jul 15.2 3.1	ont 8186 Aug 4.6 2.5	76.5 kaf 5.91 ft Sep 2.1 2.1	94.1 65.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow	2007 kaf kaf kaf kaf kaf	3.9 12.0 0.0 1.1 17.0	nitial Cor 816 Nov 1.6 2.7 0.0 2.6 6.9	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6	Me Feb 1.2 1.1 0.0 0.0 2.3	aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3	M: Jun 35.8 29.2 5.0 13.2 83.2	inimum Cc E. Jul 15.2 3.1 0.0 2.8 21.1	ont 8180 Aug 4.6 2.5 0.0 0.8 7.9	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0	94.1 65.7 20.0 47.3 227.1
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow Min River Release	2007 kaf kaf kaf kaf	3.9 12.0 0.0 1.1	nitial Cor 810 Nov 1.6 2.7 0.0 2.6	at 3 ev 825 Dec 2.0 2.8 0.0 0.0	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0	Ma Feb 1.2 1.1 0.0 0.0	aximum Co El Mar 1.4 1.2 0.0	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3	Jun 35.8 29.2 5.0 13.2	inimum Co E Jul 15.2 3.1 0.0 2.8	Aug 4.6 2.5 0.0 0.8	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8	94.1 65.7 20.0 47.3
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow	2007 kaf kaf kaf kaf kaf	3.9 12.0 0.0 1.1 17.0	nitial Con 81 Nov 1.6 2.7 0.0 2.6 6.9	nt 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6	Ma Feb 1.2 1.1 0.0 0.0 2.3	maximum Co El Mar 1.4 1.2 0.0 0.0 2.6	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3	M: Jun 35.8 29.2 5.0 13.2 83.2	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1	ont 8188 Aug 4.6 2.5 0.0 0.8 7.9 2.5	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0	94.1 65.7 20.0 47.3 227.1
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release	2007  kaf kaf kaf kaf kaf kaf	3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8	nitial Cor 81d Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0	ant 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0	Market Ma	aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0	36.1 kaff 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3	ent 8188 Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass	2007  kaf kaf kaf kaf kaf kaf	3.9 12.0 0.0 1.1 17.0	nitial Cor 810 Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0	nt 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0	mar Co El Mar 1.4 1.2 0.0 0.0 2.6	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3	M: Jun 35.8 29.2 5.0 13.2 83.2	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1	ont 8188 Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0	94.1 65.7 20.0 47.3 227.1 25.0 0.0
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss	2007  kaf kaf kaf kaf kaf kaf kaf kaf kaf ka	3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 4	nitial Con 81.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3	at 3 ev 825 Dec 2.0 2.8 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3	Me Feb 1.2 1.1 1.0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3	Aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 6.0 3.3	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 24.5 1.8 0.4	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content	2007  kaf kaf kaf kaf kaf kaf kaf kaf kaf ka	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5	nitial Cor 81d Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0	Me Feb 1.2 1.1 1.0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4	aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4	36.1 kaf 9.50 ft May 20.4 6.66 10.0 20.3 57.3 4.6 0.0 4.6	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4 381.8	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 0.4 359.1	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation	2007  kaf kaf kaf kaf kaf kaf kaf kaf kaf ka	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5	nitial Con 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0	Me Feb 1.2 1.1 1.0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4	aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4	36.1 kaf 9.50 ft May 20.4 6.66 10.0 20.3 57.3 4.6 0.0 4.6	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 0.4 359.1	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content	2007  kaf kaf kaf kaf kaf kaf kaf kaf kaf ka	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5	nitial Cor 81d Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 23.5 0.2 0.3 329.6 8247.66	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 3314.0 8244.90 17.6 kaf	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89	Aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78 aximum Co	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt	36.1 kaf 9.50 ft May 20.4 6.66 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70	M. Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4 381.8 8256.47 ont	76.5 kaf 5.91 ft Sep 2.1 2.0 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 359.1 8252.71	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation	2007  kaf kaf kaf kaf kaf kaf kaf kaf kaf ka	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5	nitial Con 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 23.5 0.2 0.3 329.6 8247.66	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0 8244.90	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89	Aximum Co E1 Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft	M. Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4 381.8 8256.47 ont	76.5 kaf 6.91 ft Sep 2.1 2.0 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 6.02 ft	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn	2007  kaf kaf kaf kaf kaf kaf kaf kaf f taf kaf caf kaf kaf caf kaf caf kaf caf kaf kaf caf kaf caf kaf caf caf kaf caf caf caf caf caf caf caf caf caf c	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 0.0 1.8 0.3 374.5 8255.28	nitial Con 81.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Con Ele	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.3 329.6 8247.66	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89 Me	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78 aximum Co: E1 Mar	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul	August 1.0 mt 1.	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 25.0 3.9
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow	2007 kafi kafi kafi kafi kafi kafi kafi kafi	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28	nitial Cor 816 Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor Ele Nov	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 at ev 836 Dec 3.0	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan 2.1	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89 Me	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78  Aximum Co E1 Mar 2.2	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun 53.8	inimum Cc Ei Jul  15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 2.5 21.9 2.0 0.4 381.8 8256.47 20th Lev 8366 Aug 6.9	76.5 kaf 6.91 ft Sep 2.1 2.0 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn	2007  kaf kaf kaf kaf kaf kaf kaf kaf f taf kaf caf kaf kaf caf kaf caf kaf caf kaf kaf caf kaf caf kaf caf caf kaf caf caf caf caf caf caf caf caf caf c	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 0.0 1.8 0.3 374.5 8255.28	nitial Con 81.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Con Ele	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.3 329.6 8247.66	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89 Me	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78 aximum Co: E1 Mar	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May	M: Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul	August 1.0 mt 1.	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 25.0 3.9
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby Total Inflow	2007 kafi kafi kafi kafi kafi kafi kafi kafi	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 I	nitial Cor 814 Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor Ele Nov 2.3 29.3 31.6	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 at ev 836 Dec 3.0 23.5 26.5	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7 18.8	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.8 17.5 19.3	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 27.5 0.7 0.3 270.3 8236.78 Aximum Co E1 Mar  2.2 27.5 29.7	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6 28.4	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 9.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0 30.6	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 6.0.3 388.5 8257.56 M. Jun  53.8 0.0 53.8	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul 22.7 2.7 25.4	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 0.4 381.8 8256.47 ont lev 8366 49 21.9 28.8	76.5 kaf 5.91 ft Sep 2.1 0.0 0.8 5.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5 27.6	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby	2007 kaff kaff kaff kaff kaff kaff kaff kaff	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 I: Oct 5.9 15.3	nitial Cor 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor Nov 2.3 29.3	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 0.0 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 at ev 836 Dec 3.0 23.5	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.8 17.5	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78 Aximum Co. E1 Mar 2.2 27.5	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0	M. Jun 35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun 53.8	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc Sulinimum Cc 3.3 Jul 22.7 2.7	Aug 4.66 2.55 0.00 0.8 7.9 2.5 0.00 2.5 21.9 2.00 0.4 381.8 8256.47 200 0.4 Aug 6.9 21.9	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby Total Inflow Min River Release	2007 kaff kaff kaff kaff kaff kaff kaff kaff	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 II. Oct 5.9 15.3 21.2	nitial Cor 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor El. Nov 2.3 29.3 31.6	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 at ev 836 Dec 3.0 23.5 26.5	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7 18.8	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.8 17.5 19.3	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.7 0.3 270.3 8236.78 Aximum Co E1 Mar  2.2 27.5 29.7	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6 28.4	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0 30.6	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56  M.  Jun  53.8 0.0 53.8	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul 22.7 2.7 25.4 3.1	Aug 4.6 (2.5 0.0 0.8 7.9 2.5 0.0 0.4 381.8 8256.47 ont lev 836(4.9 21.9 28.8 2.5	76.5 kaf 5.91 ft Sep 2.1 2.0 0.0 0.8 5.0 1.0 24.5 1.8 0.4 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5 27.6	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7
Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby Total Inflow Min River Release Spill/Bypass Total River Release	2007 kaf	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 II. Oct 5.9 15.3 21.2 12.0 0.0 0.0 1.1 17.0 0.0 1.8 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9	nitial Cor 81.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor El. Nov 2.3 29.3 31.6	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 Dec 3.0 23.5 26.5 2.8 0.0 2.8	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 6.1 1.2 0.0 1.2 16.7 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7 18.8 1.2 0.0 18.2 0.0 0.3 18.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.8 17.5 19.3 1.1 0.0 1.1	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.7 0.3 270.3 8236.78 Aximum Co E1 Mar  2.2 27.5 29.7	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6 28.4 1.2 0.0 1.2	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0 30.6 1.2 5.4 6.6	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun 53.8 0.0 53.8 3.0 26.2 29.2	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul 22.7 2.7 25.4 3.1 0.0 3.1	Aug 4.6 (2.5 (0.0 (0.8 (0.7 (0.1 (0.1 (0.1 (0.1 (0.1 (0.1 (0.1 (0.1	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5 27.6 2.1 0.0 2.1	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mt: Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby Total Inflow Min River Release Spill/Bypass Total River Release Adams Tunnel Flow Evaporation	2007 kafi kafi kafi kafi kafi kafi kafi kafi	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 1: Oct 5.9 15.3 21.2	nitial Con 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Con El Nov	at 3 ev 825 Dec 2.0 2.0 2.0 2.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 at ev 836 Dec 3.0 23.5 26.5	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.7 0.0 0.3 314.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7 18.8 1.2 0.0	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.88 17.5 19.3	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.7 0.3 270.3 8236.78 aximum Co: E1 Mar 2.2 27.5 29.7	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6 28.4 1.2 0.0	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0 30.6 1.2 5.4	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56 M: Jun  53.8 0.0 53.8	inimum Cc E: Jul 15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 81 Jul 22.7 25.4 3.1 0.0	Aug 4.6 2.5 0.0 0.8 7.9 2.5 0.0 0.4 381.8 8256.47 ont 1.1 1.2 2.8 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 24.5 1.8 0.4 359.1 8252.71 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5 27.6	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7
Lake Granby  Native inflow Rels frm Shadow Mtn Pump frm windy Gap Pump frm Willow Crk Total Inflow  Min River Release Spill/Bypass Total River Release Pumped to Shadow Mtn Evaporation Seepage loss End-Month Content End-Month Elevation Shadow Mtn  Native inflow Pumped from Granby Total Inflow  Min River Release Spill/Bypass Total River Release Adams Tunnel Flow	2007 kaff kaff kaff kaff kaff kaff kaff kaff	1: Oct 3.9 12.0 0.0 1.1 17.0 1.8 0.0 1.8 15.3 1.4 0.3 374.5 8255.28 II. Oct 5.9 15.3 21.2 12.0 0.0 0.0 1.1 17.0 0.0 1.8 1.9 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	nitial Cor 81. Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 nitial Cor El. Nov 2.3 29.3 31.6 2.7 0.0 2.7	at 3 ev 825 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 8247.66 bet 836 Dec 3.0 2.8 0.0 2.8 2.8 0.0 1.1 17.6	76.3 kaf 5.57 ft Jan 1.4 1.2 0.0 0.0 2.6 6 1.2 16.7 0.0 8244.90 17.6 kaf 6.57 ft Jan 2.1 16.7 18.8 1.2 0.0 1.2 17.6 0.0 1.2	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.5 0.0 0.3 297.4 8241.89 Me Feb 1.8 17.5 19.3 1.1 0.0 1.1 18.2 0.0 0.7.6	Aximum Co E1 Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.5 0.7 0.3 270.3 8236.78 Aximum Co E1 Mar  2.2 27.5 29.7 1.2 0.0 1.2 28.2 0.3 17.6	nt 5 ev 827 Apr 4.5 1.2 5.0 5.7 16.4 1.2 0.0 1.2 21.6 1.2 0.3 262.4 8235.24 nt ev 836 Apr 6.8 21.6 28.4 1.2 0.0 1.2 26.8 0.4 17.6	36.1 kaf 9.50 ft May 20.4 6.6 10.0 20.3 57.3 4.6 0.0 1.9 0.3 312.9 8244.70 18.4 kaf 7.00 ft May 30.6 0.0 30.6 1.2 5.4 6.6 6.6	M.  Jun  35.8 29.2 5.0 13.2 83.2 4.7 0.0 4.7 0.0 2.6 0.3 388.5 8257.56  M: Jun  53.8 0.0 53.8 3.0 26.2 29.2 23.8 0.8 17.6	inimum Cc E: Jul  15.2 3.1 0.0 2.8 21.1 3.3 0.0 3.3 2.7 2.5 0.4 400.7 8259.52 inimum Cc 8: Jul  22.7 2.7 25.4 3.1 0.0 3.1 21.6 0.7 17.6	Aug 4.6 (2.5 (0.0 (0.8 (0.7 (0.9 (0.9 (0.9 (0.9 (0.9 (0.9 (0.9 (0.9	76.5 kaf 5.91 ft Sep 2.1 2.1 0.0 0.8 5.0 1.0 0.0 1.0 24.5 1.8 359.1 8252.71 16.6 kaf 5.02 ft Sep 3.1 24.5 27.6 2.1 0.0 2.1 25.0 0.5	94.1 65.7 20.0 47.3 227.1 25.0 0.0 25.0 200.5 14.9 3.9 Total 141.2 200.5 341.7

Adams Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max 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 9 max delivery	kaf 9	8.8 26	28.7 88	23.6 70	17.6 52	18.2 58	28.2 83	26.8 82	23.3 69	23.8 73	21.6 64	25.7 76	25.0 76	271.3
Big T B Lake Estes	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big Thompson inflow Min river release	kaf kaf	3.2	1.6 1.5	1.1	0.8 1.5	0.7	1.0	2.8	18.1 6.9	33.1 7.4	14.5 7.7	7.1 6.9	4.2	88.2 45.3
Act river release	kaf	3.1	1.5	1.1	0.8	0.7	1.0	2.2	7.6	24.2	7.7	6.9	3.7	60.5
Skim water available		0.1	0.1	0.0	0.0	0.0	0.0	0.6	11.2 10.5	25.7 8.9	6.8 6.8	0.2	0.5 0.5	45.2 27.7
Skim water diverted % skim diverted	kaf %	0.1 100	0.1 100	0.0	0.0	0.0	0.0	100	94	35	100	100	100	27.7
Irrigation 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
Irrigation delivery Total river release	kaf kaf	0.0 3.1	0.0 1.5	0.0	0.0	0.0	0.0 1.0	0.0 2.2	0.0 7.6	0.0 24.2	0.0 7.7	0.0 6.9	0.0 3.7	0.0 60.5
Olympus Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max 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	29.8	396.1
Actual delivery % max delivery	kaf %	8.9 26	28.8 88	23.6 70	17.6 52	18.2 58	28.2 83	27.4 84	33.8 100	32.7 100	28.4 84	25.9 77	25.5 86	299.0
Seepage and Evap Inflow to Flatiron	kaf kaf	0.2 8.7	0.2 28.6	0.2 23.4	0.1 17.5	0.1 18.1	0.1 28.1	0.1 27.3	0.1 33.7	0.1 32.6	0.1 28.3	0.2 25.7	0.2 25.3	1.7 297.3
	Kai				20.2 kaf				12.2 kaf		nimum Cor		1.2 kaf	
Carter Lake		11	nitial Co El		20.2 Kar 7.19 ft	ма	ximum Cor Ele		12.2 Kai 3.98 ft	PI I	Ele	ev 5639	.99 ft	
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Pump from Flatiron Release to Flatiron	kaf kaf	4.0	7.3 0.0	2.6 0.0	1.8	2.8 0.0	26.0 0.0	0.0	18.7	16.9 0.0	6.0 0.0	7.3	5.3	121.1
Evaporation loss	kaf	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.3	0.3	2.2
Seepage loss End-Month Targets	kaf kaf	0.0 14.2	0.0 18.4	18.6	18.8	20.1	44.2	62.0	71.8	78.5	68.0	55.9	49.0	1.1
End-Month Content	kaf	14.2	18.4	18.6	18.8	20.1	44.2	60.7	71.8	78.5	68.0	55.9	49.0	
End-Month Elevation	ft	5646.29	5654.11	5654.46	5654.81	5657.02	5690.58	5709.44	5721.06	5727.76	5717.15 5	704.18 5	5696.30	
Irrigation demand	kaf	5.6	0.0	0.0	0.0	0.0	0.0	3.3	2.7	4.3	9.8	13.3	7.2	46.2
Metered delivery	kaf kaf	3.4 0.9	2.3 0.7	2.1 0.3	1.2	1.1	1.3	1.7 0.5	2.4	2.9 2.4	3.8 2.3	3.6 2.1	2.9 1.7	28.7 14.1
Windy Gap demand Total demand	kaf	9.9	3.0	2.4	1.6	1.5	1.7	5.5	7.1	9.6	15.9	19.0	11.8	89.0
Total delivery	kaf	9.9	3.0	2.4	1.6	1.5	1.7	5.5	7.1	9.6	15.9	19.0 100	11.8 100	89.0
<pre>% required delivery Shortage</pre>	· %	100	100 0.0	100	100	100	100	100	100 0.0	100	100 0.0	0.0	0.0	0.0
Hansen Canal 930	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Minimum flow	kaf	1.5	1.5	15.4	15.4	14.4	6.1	1.5	1.5	1.5	1.5	1.5	1.5	63.3
Maximum flow Actual flow	kaf kaf	57.2 4.7	55.3 21.3	57.2 20.8	57.2 15.7	53.5 15.3	57.2 2.1	11.1 4.9	57.2 15.0	55.3 15.7	57.2 22.3	57.2 18.4	55.3 20.0	630.9 176.2
Dille Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big T B Canyon Mout		4.3	2.4	1.6	1.3	1.2	1.7	6.0	21.7	36.2	23.3	11.5	5.6	116.8
Less Estes Skim	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.6	10.5	8.9	6.8	0.2	0.5	27.7
Big T irr (Estes)	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
Handy Ditch release Water available	kaf kaf	1.2	0.0 2.3	0.0 1.6	0.0 1.3	0.0 1.2	0.0 1.7	1.2 4.2	1.2	1.2 26.1	1.8 14.7	2.9 8.4	1.7	11.2 77.9
Water diverted % diverted	kaf 9	0.0	0.0	0.0	0.0	0.0	0.0	4.2	10.0	13.1	14.5	8.4	3.4 100	53.6
Trifurcation Works	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Rels from Flatiron	kaf	4.7	21.3	20.8	15.7	15.3	2.1	4.9	15.0	15.7	22.3	18.4	20.0	176.2
Rels to 550 Canal	kaf	3.5	21.2	20.8	15.7	15.3	2.1	3.6	2.3	4.9	12.1	12.3	13.2	127.0
Big T irrigation	kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7	2.2	1.9	3.4	5.9	6.3	21.5
Dille Tunnel Tot rels to river	kaf kaf	0.0 1.2	0.0	0.0	0.0	0.0	0.0	4.2 5.5	10.0 22.7	13.1 23.9	14.5 24.7	8.4 14.5	3.4 10.2	53.6 102.8
Irrigation demand	kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7	2.2	1.9	3.0	5.5	6.0	20.4
Big T irr (Estes)	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 Total requirement	kaf kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 2.2	0.0 1.9	0.4 3.4	0.4 5.9	0.3 6.3	1.1 21.5
Total delivery	kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7	2.2	1.9	3.4	5.9	6.3	21.5
9 required delivery Shortage	. % kaf	100 0.0	0	0	0	0	0.0	100	100	100	100	100 0.0	100 0.0	0.0
Snortage Hansen Canal 550	2007	0.0 Oct	0.0 Nov	0.0 Dec	0.0 Jan	0.0 Feb	0.0 Mar	0.0 Apr	0.0 May	0.0 Jun	0.0 Jul	0.0 Aug	0.0 Sep	Total
Inflow from Flatiro		3.5	21.2	20.8	15.7	15.3	2.1	3.6	2.3	4.9	12.1	12.3	13.2	127.0
Maximum flow	kaf	16.0	30.9	32.0	32.0	29.9	32.0	16.4	32.0	30.9	32.0	32.0	30.9	347.0
Seepage loss Irrigation demand	kaf 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 9.7
Irrigation delivery		0.7	0.1	0.1	0.3	0.2	0.3	0.3	0.5 0.5	0.4	2.3	2.3	2.2	9.7
Minimum flow	kaf	1.5	0.0	3.1	3.1	2.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	21.1
Rels to Horsetooth	kaf	2.6	20.9	20.5	15.2	14.9	1.6	3.1	1.6	4.3	9.6	9.8	10.8	114.9

Horsetooth Reservoir	007	In Oct	itial Con El Nov		0.6 kaf .12 ft Jan	Ma Feb	жітит Cor Sla Mar		6.7 kaf .98 ft May	Mi Jun	nimum Cor El		5.0 kaf .06 ft Sep	Total
	kaf kaf	2.6 21.0	20.9	20.5	15.2 2.0	14.9 1.9	1.6 2.0	3.1 2.6	1.6 7.4	4.3 8.3	9.6 21.3	9.8 26.3	10.8 15.8	114.9 110.7
Seepage loss } End-Month Targets }	kaf kaf kaf kaf ft	0.3 0.1 61.8 61.8 5372.29	0.1 0.1 81.4 81.4 5386.67	0.0 0.1 100.8 100.8 5399.32	0.0 0.2 113.8 113.8 5407.11	0.0 0.1 126.7 126.7 5414.41	0.3 0.1 125.9 125.9 5413.97 5	0.4 0.2 125.8 125.8 5413.91	0.6 0.2 119.2 119.2 5410.21	0.8 0.2 114.2 114.2 5407.34	0.7 0.2 101.6 101.6 5399.81	0.5 0.1 84.5 84.5 5388.79 5	0.4 0.1 79.0 79.0	4.1
Metered delivery } Windy Gap demand } Total demand } Total irr delivery } % required delivery	kaf kaf kaf kaf kaf kaf	17.6 3.1 0.3 21.0 21.0 100 0.0	0.0 1.1 0.0 1.1 1.1 100	0.0 1.0 0.0 1.0 1.0	0.0 1.6 0.4 2.0 2.0 100 0.0	0.0 1.5 0.4 1.9 1.9	0.0 1.6 0.4 2.0 2.0 100 0.0	0.1 2.1 0.4 2.6 2.6 100 0.0	3.5 3.5 0.4 7.4 7.4 100 0.0	4.1 3.8 0.4 8.3 8.3 100	13.8 6.0 1.5 21.3 21.3 100 0.0	19.5 5.3 1.5 26.3 26.3 100 0.0	10.4 4.0 1.4 15.8 15.8 100 0.0	69.0 34.6 7.1 110.7 110.7
	kaf	31.5	3.5	3.2	3.1	2.8	3.2	8.2	14.8	17.4	38.7	49.5	32.7	208.6
Windy Gap Ownership 20	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total release I	kaf kaf kaf kaf N OP	0.0 1.2 0.0 47.2 PERATIONS	0.0 0.7 0.0 46.5	0.0 0.3 0.0 46.2	0.0 0.8 0.0 45.4	0.0 0.8 0.0 44.6	0.0 0.8 0.0 43.8	4.5 0.9 0.0 47.4	9.0 2.4 0.0 54.0	4.5 2.8 0.0 55.7	0.0 4.2 0.0 51.5	0.0 4.0 0.0 47.5	0.0 3.4 0.0 44.1	18.0 22.3 0.0
Green Mtn Gen 2	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
	gwh gwh %	15.438 6.497 42 186	14.940 3.236 22 181	15.438 2.283 15 180	15.438 2.601 17 176	14.442 1.966 14 171	15.438 2.880 19 166	14.940 1.804 12 166	15.438 4.628 30 181	14.940 12.794 86 203	15.438 9.964 65 212	15.438 10.739 70 207	14.940 9.295 62 195	182.268 68.687
	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Actual pumping	kaf kaf gwh %	27.7 1.1 0.234 4 213	26.8 2.6 0.554 10 213	0.0 0.0 0.000	0.0 0.0 0.000	0.0 0.0 0.000	0.0 0.0 0.000	26.8 5.7 1.214 21 213	27.7 20.3 4.324 73 213	26.8 13.2 2.812 49 213	27.7 2.8 0.596 10 213	27.7 0.8 0.170 3 213	26.8 0.8 0.170 3 213	218.0 47.3 10.074
Lake Granby Pumping 20	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Actual pumping	kaf kaf gwh %	36.9 15.3 2.280 41 149	35.7 29.3 4.395 82 150	36.9 23.5 3.572 64 152	36.9 16.7 2.572 45 154	34.5 17.5 2.730 51 156	36.9 27.5 4.373 75 159	35.7 21.6 3.521 61 163	36.9 0.0 0.000	35.7 0.0 0.000	36.9 2.7 0.400 7 148	36.9 21.9 3.241 59 148	35.7 24.5 3.651 69 149	435.6 200.5 30.735
Marys Lake Gen 2	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max generation	kaf gwh gwh %	8.8 0.000 0.000	28.7 2.320 2.320 100 177	23.6 6.060 4.220 70 179	17.6 6.060 3.120 51 177	18.2 5.620 3.240 58 178	28.2 6.060 5.040 83 179	26.8 2.880 2.880 100 176	23.3 0.000 0.000	23.8 2.880 2.880 100 176	21.6 6.060 3.820 63 177	25.7 6.060 4.570 75 178	25.0 5.840 4.500 77 180	49.840 36.590
Lake Estes Gen 2	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max generation	kaf gwh gwh %	8.8 14.920 3.800 25 432	28.7 14.450 12.650 88 441	23.6 14.920 10.400 70 441	17.6 13.400 8.040 60 457	18.2 9.740 8.260 85 454	28.2 10.450 10.450 100 441	26.8 10.060 10.060 100 439	23.3 10.450 10.250 98 440	23.8 14.450 10.500 73 441	21.6 14.920 9.540 64 442	25.7 14.920 11.350 76 442	25.0 14.450 11.000 76 440	157.130 116.300
Pole Hill Gen 2	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max generation	kaf gwh gwh %	8.9 25.260 5.890 23 662	28.8 24.460 13.720 56 476	23.6 25.260 14.150 56 600	17.6 25.260 13.400 53 761	18.2 23.620 13.240 56 727	28.2 25.260 14.150 56 502	27.4 24.460 13.720 56 501	33.8 25.260 14.150 56 419	32.7 24.460 13.720 56 420	28.4 25.260 14.150 56 498	25.9 25.260 14.150 56 546	25.5 24.460 13.720 56 538	299.0 298.280 158.160
Flatiron 1&2 Gen 2	007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max generation	kaf gwh gwh %	8.7 16.550 7.160 43 823	28.6 16.010 16.010 100 894	23.4 16.550 16.550 100 895	17.5 16.550 15.650 95 894	18.1 15.470 15.470 100 894	28.1 16.550 16.550 100 895	27.3 16.010 16.010 100 894	33.7 16.550 16.550 100 895	32.6 16.010 16.010 100 894	28.3 16.550 16.550 100 895	25.7 16.550 16.550 100 895	25.3 16.010 16.010 100 894	297.3 195.360 185.070

Flatiron 3 Pump/	Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total-
Maximum pumping Pump from Flatin Pump energy % max pumping	kaf on kaf gwh %	8.1 4.0 0.956 49	26.2 7.3 1.737 28	5.4 2.6 0.627 48	5.4 1.8 0.434 33	25.3 2.8 0.675 11	26.1 26.0 6.630 100	22.4 22.4 6.227 100	21.3 18.7 5.610 88	19.4 16.9 5.357 87	20.4 6.0 1.878 29	10.9 7.3 2.139 67	22.4 5.3 1.473 24	213.3 121.1 33.743
Average kwh/af		239	238	241	241	241	255	278	300	317	313	293	278	
Release to Flat: Maximum generation Actual generation % max generation Average kwh/af	on gwh	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000	0.0 0.000 0.000
Big Thompson Ger	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total release Turbine release Wasteway release Max generation Generation % Max Generation Ave kwh/af	gwh gwh	1.2 0.0 1.2 0.000 0.000	0.1 0.0 0.1 0.000 0.000	0.0 0.0 0.0 0.00 0.000	0.0 0.0 0.0 0.000 0.000	0.0 0.0 0.0 0.000 0.000	0.0 0.0 0.0 0.000 0.000	5.5 5.5 0.0 3.800 0.600 16 109	22.7 22.7 0.0 3.940 3.640 92 160	23.9 23.9 0.0 3.800 3.800 100 159	24.7 24.7 0.0 3.940 3.940 100 160	14.5 14.5 0.0 3.940 2.100 53 145	10.2 10.2 0.0 3.800 1.340 35 131	102.8 101.5 1.3 23.220 15.420
PROJECT GENERATI	ON AND PU	MPING SU	MMARY											
Project Generati	on 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation: Big Thompson Green Mtn Flatiron 3 Total	gwh gwh gwh	0.000 6.497 0.000 6.497	0.000 3.236 0.000 3.236	0.000 2.283 0.000 2.283	0.000 2.601 0.000 2.601	0.000 1.966 0.000 1.966	0.000 2.880 0.000 2.880	0.600 1.804 0.000 2.404	3.640 4.628 0.000 8.268	3.800 12.794 0.000 16.594	3.940 9.964 0.000 13.904	2.100 10.739 0.000 12.839	1.340 9.295 0.000 10.635	15.420 68.687 0.000 84.107
Load Following G Marys Lake Lake Estes Pole Hill Flatiron 1,2 Total	eneration gwh gwh gwh gwh gwh	0.000 3.800 5.890 7.160 16.850	2.320 12.650 13.720 16.010 44.700	4.220 10.400 14.150 16.550 45.320	3.120 8.040 13.400 15.650 40.210	3.240 8.260 13.240 15.470 40.210	5.040 10.450 14.150 16.550 46.190	2.880 10.060 13.720 16.010 42.670	0.000 10.250 14.150 16.550 40.950	2.880 10.500 13.720 16.010 43.110	3.820 9.540 14.150 16.550 44.060	4.570 11.350 14.150 16.550 46.620	4.500 11.000 13.720 16.010 45.230	36.590 116.300 158.160 185.070 496.120
Total generation	_	23.347 72.168	47.936 72.180	47.603 78.228	42.811 76.708	42.176 68.892	49.070 73.758	45.074 72.150	49.218 71.638	59.704 76.540	57.964 82.168	59.459 82.168	55.865 79.500	580.227 906.098
Project Pump Ene	ergy 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Granby Willow Creek Flatiron 3 Total pump energ	gy gwh gwh gwh gwh	2.280 0.234 0.956 3.470	4.395 0.554 1.737 6.686	3.572 0.000 0.627 4.199	2.572 0.000 0.434 3.006	2.730 0.000 0.675 3.405	4.373 0.000 6.630 11.003	3.521 1.214 6.227 10.962	0.000 4.324 5.610 9.934	0.000 2.812 5.357 8.169	0.400 0.596 1.878 2.874	3.241 0.170 2.139 5.550	3.651 0.170 1.473 5.294	30.735 10.074 33.743 74.552
Total net genera	ation gwh	19.877	41.250	43.404	39.805	38.771	38.067	34.112	39.284	51.535	55.090	53.909	50.571	505.675
Release Flexibil	-	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Adams Tunnel	Min kaf Max kaf	8.8	28.7 28.7	23.6 23.6	17.6 17.6	18.2 18.2	28.2 28.2	26.8 26.8	23.3	23.8	21.6 21.6	25.7 25.7	25.0 25.0	
Marys Lake Marys Lake	Min gwh Max gwh	0.000	2.320 2.320	4.220 4.220	3.120 3.120	3.240 3.240	5.040 5.040	2.880 2.880	0.000	2.880 2.880	3.820 3.820	4.570 4.570	4.500 4.500	
Lake Estes Lake Estes	Min gwh Max gwh	3.800 3.800	12.650 12.650	10.400 10.400	8.040 8.040	8.260 8.260	10.450 10.450	10.060 10.060	10.250 10.250	10.500 10.500	9.540 9.540	11.350 11.350	11.000 11.000	
Olympus Tunnel Olympus Tunnel	Min kaf Max kaf	8.9 8.9	28.8 28.8	23.6 23.6	17.6 17.6	18.2 18.2	28.2 28.2	27.4 27.4	33.8 33.8	32.7 32.7	28.4 28.4	25.9 25.9	25.5 25.5	
Pole Hill Pole Hill	Min gwh Max gwh	6.030 6.030	21.540 21.540	17.680 17.680	13.480 13.480	13.940 13.940	21.060 21.060	20.480	25.260 25.260	24.460 24.460	21.220 21.220	19.330 19.330	19.050 19.050	
Flatiron 152 Flatiron 152	Min gwh Max gwh	7.160 7.160	16.010 16.010	16.550 16.550	15.650 15.650	15.470 15.470	16.550 16.550	16.010 16.010	16.550 16.550	16.010 16.010	16.550 16.550	16.550 16.550	16.010 16.010	
Load following Load following	Min gwh Max gwh	16.990 16.990	52.520 52.520	48.850 48.850	40.290 40.290	40.910 40.910	53.100 53.100	49.430 49.430	52.060 52.060	53.850 53.850	51.130 51.130	51.800 51.800	50.560 50.560	
Total project Total project	Min gwh Max gwh	23.487 23.487	55.756 55.756	51.133 51.133	42.891 42.891	42.876 42.876	55.980 55.980	51.834 51.834	60.328 60.328	70.444 70.444	65.034 65.034	64.639 64.639	61.195 61.195	
GENERATION CAPAC	CITY AND D	URATION												
Project Generati	on 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation: Green Mtn Flatiron 3 Big Thompson	mw mw	8.7	4.5	3.1	3.5	2.8	3.9	2.5	6.2 4.9	17.8	13.4	14.4	12.9	
Total base loa	ıd mw	8.7	4.5	3.1	3.5	2.8	3.9	3.3	11.1	23.1	18.7	17.2	14.8	

Load Following Gen	eration,												
Marys Lake													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	9.4	2.3	6.1	10.5	10.0	2.7	3.7	6.3	5.9	7.4	4.5	5.0
Max Capacity	mw	3.5	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
Duration	hr/d	13.6	20.7	16.9	12.5	13.0	20.3	19.3	16.7	17.1	15.6	18.5	18.0
Lake Estes													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Max Capacity	mw	11.0	35.8	29.8	21.6	22.3	35.1	33.4	29.6	29.9	27.4	31.9	30.9
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Pole Hill													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	34.0	0.0	0.0	0.0
Duration	hr/d	12.0	2.9	6.7	11.1	10.6	3.3	3.9	12.0	12.0	3.2	5.0	5.3
Max Capacity	mw	16.8	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Duration	hr/d	12.0	21.1	17.3	12.9	13.4	20.7	20.1	12.0	12.0	20.8	19.0	18.7
Flatiron 16.2													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	12.0	12.0	11.6	11.9	12.0	12.0	8.7	9.5	12.0	12.0	12.0
Max Capacity	mw	21.1	72.4	57.2	43.5	44.2	70.4	67.9	86.0	85.2	71.2	63.4	62.6
Duration	hr/d	12.0	12.0	12.0	12.5	12.1	12.0	12.0	10.0	10.0	12.0	12.0	12.0
Total Load Followi	.ng												
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	34.0	0.0	0.0	0.0
Max Capacity	mw	52.4	150.3	129.1	107.2	108.6	147.6	143.4	157.7	157.2	140.7	137.4	135.6
Total Project Capa	city												
Min Capacity	mw	8.7	4.5	3.1	3.5	2.8	3.9	3.3	45.1	57.1	18.7	17.2	14.8
Max Capacity	mw	61.1	154.8	132.2	110.7	111.4	151.5	146.7	168.8	180.3	159.4	154.6	150.4

CBTAOP V1.10 Run: 14-Jan-2008 15:33 Minimum Reasonable Plan (80% Quota)

#### COLORADO-BIG THOMPSON MONTHLY OPERATIONS

#### HYDROLOGY OPERATIONS

Green Mtn Reservoir		Ir	nitial Cont		08.9 kaf	Ma	aximum Co		3.6 kaf	Mi	nimum Cor		6.0 kaf	
	2007	Oct	Elev Nov	7926 Dec	Jan	Feb	El Mar	ev 7949 Apr	0.91 ft May	Jun	Ele Jul	Aug	.72 ft Sep	Total
Dillon Inflow Dillon-Grn Mtn Gain	kaf kaf	9.6 9.6	5.9 6.0	5.5 5.6	3.9 3.6	3.6 3.3	4.3 4.2	7.0 7.4	27.2 20.3	29.9 21.9	14.4 12.5	10.6 10.2	6.4 6.7	128.3 111.3
Undepleted Inflow	kaf	19.2	11.9	11.1	7.5	6.9	8.5	14.4	47.5	51.8	26.9 11.3	20.8	13.1	239.6 55.3
Depletion Depleted Inflow	kaf kaf	1.2 18.0	-5.6 17.5	1.2 9.9	0.8 6.7	0.5 6.4	1.2 7.3	3.9 10.5	15.0 32.5	15.0 36.8	15.6	13.3	9.8	184.3
Turbine Release	kaf	34.9	17.9	12.7	15.0	11.5	12.3	9.9	4.1	4.3	33.2	42.4	38.4	236.6
Spill/Waste Total River Release	kaf kaf	0.0 34.9	0.0 17.9	0.0 12.7	0.0 15.0	0.0 11.5	0.0 12.3	0.0 9.9	0.0 4.1	0.0 4.3	0.0 33.2	0.0 42.4	0.0 38.4	236.6
Min Release Total River Release	cfs cfs	567 568	294 301	205 207	200 244	200 200	200 200	167 166	67 67	73 72	540 540	690 690	645 645	
Evaporation	kaf	0.4	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.8	0.7	0.5	0.3	3.8
End-Month Targets End-Month Content	kaf kaf	91.7 91.6	91.1 91.1	88.3 88.3	80.0 80.0	75.0 74.9	70.0 69.7	75.0 70.0	110.0 97.9	153.6 129.6	153.6 111.3	81.7	52.8	
End-Month Elevation	ft	7915.41	7915.07 79	13.13	7907.11	7903.19	7898.99	7899.24	7919.60	7937.97	7927.85 7	908.38 7	7883.38	
Willow Crk Reservoi	2007	Iı Oct	nitial Cont Elev Nov	8122 Dec	8.5 kaf 2.55 ft Jan	M: Feb	aximum Co El Mar		10.2 kaf 3.83 ft May	Mi Jun	inimum Cor Ele Jul		7.2 kaf .90 ft Sep	Total
Native Inflow	kaf	2.2	1.5	1.3	0.8	0.7	1.0	4.0	11.4	6.7	2.2	1.3	0.9	34.0
Min Release	kaf	0.4	0.4	0.4	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	10.0
Spill/Bypass Total River Release	kaf kaf	0.0	0.0	0.0	0.0	0.0	0.0 0.4	0.0	0.0 1.5	0.0 2.6	0.0 2.2	0.0	0.0	0.0 10.0
Pumped to Granby	kaf	1.1	2.6	0.0	0.0	0.0	0.0	6.1	8.0	3.0	0.9	0.6	0.5	22.8
Evaporation End-Month Targets	kaf kaf	0.1 9.1	0.0 7.6	0.0	0.0	0.0	0.0	0.1 7.2	0.1 9.0	0.1	0.1 9.0	0.1	0.1 9.0	0.7
End-Month Content End-Month Elevation	kaf	9.1	7.6 8118.74 81	8.5 22.55	8.9 8124.12	9.2 8125.26	9.8 8127.44	7.2	9.0	10.0	9.0	9.1 8124.88	9.0 8124.50	
Lake Granby		Iı	nitial Coot Elev		76.3 kaf 5.57 ft	Ma	aximum Co		36.1 kaf 9.50 ft	M	inimum Cor		6.5 kaf .91 ft	
	2007	Oct	NOV	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Native inflow	kaf	3.9	1.6	2.0	1.4	1.2	1.4	4.4	15.6	16.9	5.4	2.7	2.0	58.5
Rels frm Shadow Mtn Pump frm Windy Gap	kaf kaf	12.0	2.7	2.8	1.2	1.1	1.2	1.2	1.2	3.0 0.0	3.1 0.0	2.5 0.0	2.1 0.0	34.1 0.0
Pump frm Willow Crk		1.1	2.6	0.0	0.0	0.0	0.0	6.1	8.0	3.0	0.9	0.6	0.5	22.8
Total Inflow	kaf	17.0	6.9	4.8	2.6	2.3	2.6	11.7	24.8	22.9	9.4	5.8	4.6	115.4
Min River Release	kaf kaf	1.8	1.2	1.2	1.2	1.1	1.2	1.2	4.6	4.7	3.3	2.5	1.0	25.0 0.0
Spill/Bypass Total River Release	kaf	1.8	1.2	1.2	1.2	1.1	1.2	1.2	4.6	4.7	3.3	2.5	1.0	25.0
Pumped to Shadow Mti		15.3	29.3	23.5	16.7	17.5	27.5	21.8	1.9	2.3	17.2	24.7	24.7	222.4 13.5
Evaporation Seepage loss	kaf kaf	1.4	0.6	0.2	0.0	0.0	0.7	1.2	1.9	2.4	2.1 0.3	1.6	1.4	3.6
End-Month Content End-Month Elevation	kaf ft	374.5 8255.28	350.0 8251.17 82	329.6 47.66	314.0 8244.90	297.4 8241.89	270.3 8236.78	257.5 3234.27	273.6 8237.41	286.8 8239.92	273.3 8237.36	250.0 8232.76	227.2 8228.04	
Shadow Mtn		Iı	nitial Cont Elev		17.6 kaf 5.57 ft	M	aximum Co El		18.4 kaf 7.00 ft	M	inimum Cor Ele		6.6 kaf .02 ft	
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Native inflow Pumped from Granby	kaf	5.9 15.3	2.3 29.3	3.0	2.1 16.7	1.8 17.5	2.2 27.5	6.6 21.8	23.3 1.9	25.3 2.3	8.2 17.2	4.1 24.7	2.9 24.7	87.7 222.4
Total Inflow	kaf kaf		31.6	23.5 26.5	18.8	19.3	29.7	28.4	25.2	27.6	25.4	28.8	27.6	310.1
Min River Release	kaf	12.0	2.7	2.8	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	34.1
Spill/Bypass Total River Release	kaf kaf	0.0 12.0	0.0 2.7	0.0	0.0	0.0	0.0	0.0	0.0 1.2	0.0 3.0	0.0 3.1	0.0	0.0 2.1	0.0 34.1
Adams Tunnel Flow	kaf kaf	8.8	28.7	23.6	17.6	18.2	28.2	26.8	23.3	23.8	21.6	25.7	25.0	271.3
Evaporation End-Month Content	kai kai	0.4 17.6	0.2 17.6	0.1 17.6	0.0 17.6	0.0 17.6	0.3 17.6	0.4 17.6	0.7 17.6	0.8 17.6	0.7 17.6	0.6 17.6	0.5 17.6	4.7
End-Month Elevation	ft	8366.57	8366.57 83	66.57	8366.57	8366.57	8366.57	8366.57	8366.57	8366.57	8366.57 8	366.57 8	3366.57	
Adams Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max Tunnel Capacity Actual delivery	kaf kaf	33.8	32.7 28.7	33.8 23.6	33.8 17.6	31.6 18.2	33.8 28.2	32.7 26.8	33.8 23.3	32.7 23.8	33.8 21.6	33.8 25.7	32.7 25.0	399.0 271.3
% max delivery	Kal %	26	88	70	52	58	83	82	23.3 69	73	64	76	76	2/1.3

Big T B Lake Estes	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big Thompson inflow	kaf	3.2	1.6	1.1	0.8	0.7	1.0	2.1	10.2	17.2	11.0	6.4	3.1	58.4
Min river release	kaf	3.1	1.5	1.5	1.5	1.4	1.5	2.2	6.9	7.4 8.3	7.7 7.7	6.9 6.4	3.7 3.1	45.3 42.7
Act river release Skim water available	kaf kaf	3.1 0.1	1.5 0.1	1.1	0.8	0.7	1.0	2.1 0.0	6.9 3.3	9.8	3.3	0.0	0.0	16.6
Skim water diverted	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.3	8.9	3.3	0.0	0.0	15.7
% skim diverted	%	100	100						100	91	100			
Irrigation 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
Irrigation delivery	kaf	0.0	0.0 1.5	0.0	0.0	0.0	0.0 1.0	0.0 2.1	0.0 6.9	0.0 8.3	0.0 7.7	0.0 6.4	0.0 3.1	0.0 42.7
Total river release	kaf	3.1	1.5	1.1	0.0	0.7	1.0	2.1	0.5	0.5				
Olympus Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max 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	29.8	396.1
Actual delivery	kaf	8.9	28.8	23.6	17.6	18.2	28.2 83	26.8 82	26.6 79	32.7 100	24.9 74	25.7 76	25.0 84	287.0
B max delivery	В	26	88	70	52	58	0.3	02	79	100	74	70	04	
Seepage and Evap	kaf	0.2	0.2	0.2	0.1	0.1	0.1	0.1 26.7	0.1 26.5	0.1 32.6	0.1 24.8	0.2 25.5	0.2 24.8	1.7 285.3
Inflow to Flatiron	kaf	8.7	28.6	23.4	17.5	18.1	28.1	20.7	20.5	32.0	24.0	23.3	24.0	203.3
Carter Lake		Iı	nitial Cont		20.2 kaf	Ma	aximum Cor		12.2 kaf	Mi	nimum Cont Elev		1.2 kaf .99 ft	
	2007	Oct	Ele Nov	v 565. Dec	7.19 ft Jan	Feb	Ele Mar	ev 5/58 Apr	8.98 ft May	Jun	Jul	Aug	.99 It Sep	Total
				2.6	1.0	0.0	26.0	22.4	18.7	16.9	6.0	7.3	5.3	121.1
Pump from Flatiron Release to Flatiron	kaf kaf	4.0	7.3 0.0	2.6	1.8	2.8	26.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
										٠.		0.3	0.3	2.2
Evaporation loss Seepage loss	kaf kaf	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.3	0.3	1.1
End-Month Targets	kaf	14.2	18.4	18.6	18.8	20.1	44.2	62.0	71.8	78.5	68.0	55.9	49.0	
End-Month Content End-Month Elevation	kaf ft	14.2 5646.29	18.4	18.6	18.8	20.1	44.2	60.7	71.8	78.5	68.0 5717.15 57	55.9	49.0 5696.30	
End-Month Elevation	11	3040.29	3034.11 3	054.40	3034.01	3037.02	3090.30	3703.44	3721.00	3/2/./0		04.10		
Irrigation demand	kaf	5.6	0.0	0.0	0.0	0.0	0.0	3.3	2.7	4.3	9.8 3.8	13.3	7.2 2.9	46.2 28.7
Metered delivery Windy Gap demand	kaf kaf	3.4 0.9	2.3 0.7	0.3	1.2	1.1	1.3	1.7	2.4	2.9 2.4	2.3	2.1	1.7	14.1
Total demand	kaf	9.9	3.0	2.4	1.6	1.5	1.7	5.5	7.1	9.6	15.9	19.0	11.8	89.0
Total delivery	kaf	9.9	3.0	2.4	1.6	1.5	1.7	5.5	7.1	9.6 100	15.9	19.0 100	11.8 100	89.0
B required delivery Shortage	B kaf	100	100 0.0	100	100	100	100 0.0	100	100 0.0	0.0	100 0.0	0.0	0.0	0.0
Hansen Canal 930	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
													_	
Minimum flow Maximum flow	kaf kaf	1.5 57.2	1.5 55.3	15.4 57.2	15.4 57.2	14.4 53.5	6.1 57.2	1.5 11.1	1.5 57.2	1.5 55.3	1.5 57.2	1.5 57.2	1.5 55.3	63.3 630.9
Actual flow	kaf	4.7	21.3	20.8	15.7	15.3	2.1	4.3	7.8	15.7	18.8	18.2	19.5	164.2
Dille Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big T B Canyon Mouth	kaf	4.3	2.4	1.6	1.3	1.2	1.7	2.5	11.3	19.2	13.0	8.0	4.2	70.7
Less Estes Skim	kaf	0.1	0.1	0.0	0.0	0.0	0.0	0.0	3.3	8.9	3.3	0.0	0.0	15.7
Big T irr (Estes) Handy Ditch release	kaf kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 1.2	0.0 1.8	0.0 2.9	0.0 1.7	0.0 11.2
Water available	kaf	3.0	2.3	1.6	1.3	1.2	1.7	1.3	6.8	9.1	7.9	5.1	2.5	43.8
Water diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	1.3	6.8	9.1	7.9	5.1	2.5	32.7
% diverted	8							100	100	100	100	100	100	
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Rels from Flatiron Rels to 550 Canal	kaf kaf	4.7	21.3 21.2	20.8	15.7 15.7	15.3 15.3	2.1 2.1	4.3	7.8	15.7 4.9	18.8 12.1	18.2 12.3	19.5 13.2	164.2 127.0
Big T irrigation Dille Tunnel	kaf kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7	2.2 6.8	1.9 9.1	3.4 7.9	5.9 5.1	6.3 2.5	21.5 32.7
Tot rels to river	kaf	1.2	0.1	0.0	0.0	0.0	0.0	2.0	12.3	19.9	14.6	11.0	8.8	69.9
Irrigation demand	kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7	2.2	1.9	3.0	5.5	6.0	20.4
Big T irr (Estes)	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	1.1
Total requirement Total delivery	kaf kaf	1.1	0.0	0.0	0.0	0.0	0.0	0.7 0.7	2.2	1.9 1.9	3.4	5.9 5.9	6.3 6.3	21.5 21.5
% 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
Hansen Canal 550	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Inflow from Flatiron		3.5	21.2	20.8	15.7	15.3	2.1	3.6	2.3	4.9	12.1	12.3	13.2	127.0
Maximum flow Seepage loss	kaf kaf	16.0 0.2	30.9 0.2	32.0	32.0	29.9 0.2	32.0 0.2	16.4 0.2	32.0 0.2	30.9 0.2	32.0 0.2	32.0	30.9 0.2	347.0 2.4
Irrigation demand	kaf	0.7	0.1	0.1	0.3	0.2	0.2	0.2	0.5	0.2	2.3	2.3	2.2	9.7
Irrigation delivery	kaf	0.7	0.1	0.1	0.3	0.2	0.3	0.3	0.5	0.4	2.3	2.3	2.2	9.7
Minimum flow Rels to Horsetooth	kaf kaf	1.5 2.6	0.0 20.9	3.1	3.1 15.2	2.9 14.9	1.5 1.6	1.5	1.5 1.6	1.5 4.3	1.5 9.6	1.5 9.8	1.5 10.8	21.1 114.9

Horsetooth Reservoir	Ir	nitial Con	t 8	0.6 kaf	Ma	ximum Co		6.7 kaf	Mi	nimum Co		5.0 kaf	
2007	Oct	81e Nov	v 5386 Dec	.12 ft Jan	Feb	81 Mar	ev 5429. Apr	.98 ft May	Jun	El Jul	ev 5297 Aug	.06 ft Sep	Total
Inflow kaf Total irr delivery kaf	2.6 21.0	20.9	20.5	15.2 2.0	14.9 1.9	1.6	3.1	1.6 7.4	4.3	9.6 21.3	9.8 26.3	10.8 15.8	114.9 110.7
Evaporation loss kaf	0.3	0.1	0.0	0.0	0.0	0.3	0.4	0.6	0.8	0.7	0.5	0.4	4.1
Seepage loss kaf	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	1.7
End-Month Targets kaf End-Month Content kaf	61.8 61.8	81.4 81.4	100.8 100.8	113.8 113.8	126.7 126.7	125.9 125.9	125.8 125.8	119.2 119.2	114.2 114.2	101.6 101.6	84.5 84.5	79.0 79.0	
		5386.67 5										5385.01	
Irrigation demand kaf	17.6	0.0	0.0	0.0	0.0	0.0	0.1	3.5	4.1	13.8	19.5	10.4	69.0
Metered delivery kaf	3.1	1.1	1.0	1.6	1.5	1.6	2.1	3.5	3.8	6.0	5.3	4.0	34.6
Windy Gap demand kaf	0.3	0.0	0.0	0.4	0.4 1.9	0.4	0.4 2.6	0.4 7.4	0.4 8.3	1.5 21.3	1.5 26.3	1.4 15.8	7.1 110.7
Total demand kaf Total irr delivery kaf	21.0 21.0	1.1	1.0	2.0	1.9	2.0	2.6	7.4	8.3	21.3	26.3	15.8	110.7
% 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
Total CST Delivery kaf	31.5	3.5	3.2	3.1	2.8	3.2	8.2	14.8	17.4	38.7	49.5	32.7	208.6
windy Gap Ownership 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Accrual kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 4.2	0.0 4.0	0.0 3.4	0.0 22.3
Total release kaf Spill kaf	1.2	0.7	0.3	0.8	0.8	0.8	0.9	2.4	2.8	0.0	0.0	0.0	0.0
End-month Ownership kaf	47.2	46.5	46.2	45.4	44.6	43.8	42.9	40.5	37.7	33.5	29.5	26.1	
PUMPING AND GENERATION OF	PERATIONS												
Green Mtn Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max Generation gwh	15.438	14.940	15.438	15.438	14.442	15.438	14.940	15.438	14.940	15.438	15.438	14.940	182.268
Generation gwh	6.497	3.236	2.283	2.636	1.965	2.056	1.637	0.720	0.834	6.548	7.797	6.279	42.488
% Max Generation %	42	22	15	17	14	13	11	5	6	42	51	42	
Ave kwh/af	186	181	180	176	171	167	165	176	194	197	184	164	
willow Crk Pumping 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Maximum pumping kaf	27.7 1.1	26.8	0.0	0.0	0.0	0.0	26.8 6.1	27.7 8.0	26.8 3.0	27.7 0.9	27.7 0.6	26.8 0.5	218.0 22.8
Actual pumping kaf Pump energy gwh	0.234	2.6 0.554	0.00	0.000	0.000	0.000	1.299	1.704	0.639	0.192	0.128	0.107	4.857
% max pumping %	4	10					23	29	11	3	2	2	
Average kwh/af	213	213					213	213	213	213	213	213	
Lake Granby Pumping 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	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	15.3	29.3	23.5	16.7	17.5 2.730	27.5 4.373	21.8 3.553	1.9 0.310	2.3 0.368	17.2 2.752	24.7 4.051	24.7 4.174	222.4 35.130
Pump energy gwh % max pumping %	2.280	4.395 82	3.572 64	2.572 45	2.730	4.373	3.553	0.310	0.300	47	4.031	69	33.130
Average kwh/af	149	150	152	154	156	159	163	163	160	160	164	169	
Marys Lake Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Flow kaf	8.8	28.7	23.6	17.6	18.2	28.2	26.8	23.3	23.8	21.6	25.7	25.0	
Max generation gwh	0.000	2.320	6.060	6.060	5.620	6.060	2.880	0.000	2.880	6.060	6.060	5.840	49.840
Generation gwh % Max Generation %	0.000	2.320 100	4.220 70	3.120 51	3.240 58	5.040	2.880 100	0.000	2.880 100	3.820 63	4.570 75	4.500 77	36.590
Ave kwh/af		177	179	177	178	179	176		176	177	178	180	
Lake Estes Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Flow kaf	8.8	28.7	23.6	17.6	18.2	28.2	26.8	23.3	23.8	21.6	25.7	25.0	
Max generation gwh	14.920	14.450	14.920	13.400	9.740	10.450	10.060	10.450	14.450	14.920	14.920	14.450	157.130
Generation gwh % Max Generation %	3.800 25	12.650 88	10.400	8.040	8.260 85	10.450 100	10.060 100	10.250 98	10.500 73	9.540 64	11.350 76	11.000 76	116.300
Ave kwh/af	432	441	441	457	454	441	439	440	441	442	442	440	
Pole Hill Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Olympus Tunnel flow kaf	8.9	28.8	23.6	17.6	18.2	28.2	26.8	26.6	32.7	24.9	25.7	25.0	287.0
Max generation gwh Generation gwh	25.260 5.890	24.460 13.720	25.260 14.150	25.260 13.400	23.620 13.240	25.260 14.150	24.460 13.720	25.260 14.150	24.460 13.720	25.260 14.150	25.260 14.150	24.460 13.720	298.280 158.160
% Max Generation %	23	56	56	53	56	56	56	56	56	56	56	56	
Ave kwh/af	662	476	600	761	727	502	512	532	420	568	551	549	
Flatiron 152 Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Inflow to Flatiron kaf	8.7	28.6	23.4	17.5	18.1	28.1	26.7	26.5	32.6	24.8	25.5	24.8	285.3
Max generation gwh Generation gwh	16.550 7.160	16.010 16.010	16.550 16.550	16.550 15.650	15.470 15.470	16.550 16.550	16.010 16.010	16.550 16.550	16.010 16.010	16.550 16.550	16.550 16.550	16.010 16.010	195.360 185.070
% Max Generation %	43	100	100	95	100	10.330	10.010	10.330	100	10.330	10.330	100	
Ave kwh/af	823	894	895	894	894	895	894	895	894	895	895	894	

														PAGE 4 of
Flatiron 3 Pump	Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Maximum pumping	kaf	8.1	26.2	5.4	5.4	25.3	26.1	22.4	21.3	19.4	20.4	10.9	22.4	213.3
Pump from Flatin		4.0	7.3	2.6	1.8	2.8	26.0	22.4	18.7	16.9	6.0	7.3	5.3	121.1
Pump energy	gwh	0.956	1.737	0.627	0.434	0.675	6.630	6.227	5.610	5.357	1.878	2.139	1.473	33.743
% max pumping Average kwh/af	%	49 239	28 238	48 241	33 241	11 241	100 255	100 278	88 300	87 317	29 313	67 293	24 278	
										0.0	0.0		0.0	0.0
Release to Flat: Maximum generat:		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
Actual generation	_	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
% max generation	1 %													
Average kwh/af														
Big Thompson Ger	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total release	kaf	1.2	0.1	0.0	0.0	0.0	0.0	2.0	12.3	19.9	14.6	11.0	8.8	69.9
Turbine release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	2.0	12.3	19.9	14.6	11.0	8.8	68.6
Wasteway release		1.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
Max generation Generation	gwh gwh	0.000	0.000	0.000	0.000	0.000	0.000	3.800 0.171	3.940 1.760	3.800	3.940 2.120	3.940 1.500	3.800 1.060	23.220 9.691
% Max Generation	_	0.000	0.000	0.000	0.000	0.000	0.000	5	45	81	54	38	28	3.031
Ave kwh/af								86	143	155	145	136	120	
PROJECT GENERAT	ION AND PU	MPING SU	MMARY											
Project Generat:	ion 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation:														
Big Thompson	gwh	0.000	0.000	0.000	0.000	0.000	0.000	0.171	1.760	3.080	2.120	1.500	1.060	9.691
Green Mtn Flatiron 3	gwh gwh	6.497 0.000	3.236 0.000	2.283	2.636 0.000	1.965	2.056 0.000	1.637	0.720	0.834	6.548 0.000	7.797 0.000	6.279 0.000	42.488 0.000
Total	gwh	6.497	3.236	2.283	2.636	1.965	2.056	1.808	2.480	3.914	8.668	9.297	7.339	52.179
Load Following (	eneration	:												
Marys Lake	gwh	0.000	2.320	4.220	3.120	3.240	5.040	2.880	0.000	2.880	3.820	4.570	4.500	36.590
Lake Estes	gwh	3.800	12.650	10.400	8.040	8.260	10.450	10.060	10.250	10.500	9.540	11.350	11.000	116.300
Pole Hill Flatiron 1,2	gwh gwh	5.890 7.160	13.720 16.010	14.150 16.550	13.400 15.650	13.240 15.470	14.150 16.550	13.720 16.010	14.150 16.550	13.720 16.010	14.150 16.550	14.150 16.550	13.720	158.160
Total	gwh	16.850	44.700	45.320	40.210	40.210	46.190	42.670	40.950	43.110	44.060	46.620	16.010 45.230	185.070 496.120
Total generation	ı gwh	23.347	47.936	47.603	42.846	42.175	48.246	44.478	43.430	47.024	52.728	55.917	52.569	548.299
Total max genera	_	72.168	72.180	78.228	76.708	68.892	73.758	72.150	71.638	76.540	82.168	82.168	79.500	906.098
Project Pump End	ergy 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Granby	gwh	2.280	4.395	3.572	2.572	2.730	4.373	3.553	0.310	0.368	2.752	4.051	4.174	35.130
Willow Creek	gwh	0.234	0.554	0.000	0.000	0.000	0.000	1.299	1.704	0.639	0.192	0.128	0.107	4.857
Flatiron 3 Total pump energ	gwh gy gwh	0.956 3.470	1.737 6.686	0.627 4.199	0.434	0.675 3.405	6.630 11.003	6.227 11.079	5.610 7.624	5.357 6.364	1.878 4.822	2.139 6.318	1.473 5.754	33.743 73.730
Total net genera		19.877	41.250	43.404	39.840	38.770	37.243	33.399	35.806	40.660	47.906	49.599	46.815	474.569
Release Flexibil	lity 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Adams Tunnel	Min kaf Max kaf	8.8	28.7 28.7	23.6 23.6	17.6	18.2	28.2	26.8	23.3	23.8	21.6	25.7	25.0	
	Max Kai	0.0		23.0	17.6	18.2	28.2	26.8	23.3	23.8	21.6	25.7	25.0	
Marys Lake Marys Lake	Min gwh Max gwh	0.000	2.320	4.220 4.220	3.120 3.120	3.240 3.240	5.040 5.040	2.880 2.880	0.000	2.880 2.880	3.820 3.820	4.570	4.500	
	nax gwn	0.000	2.320	4.220	3.120	3.240	5.040	2.000	0.000	2.000	3.020	4.570	4.500	
Lake Estes Lake Estes	Min gwh Max gwh	3.800 3.800	12.650 12.650	10.400	8.040 8.040	8.260 8.260	10.450 10.450	10.060 10.060	10.250 10.250	10.500 10.500	9.540 9.540	11.350	11.000	
	nax gwn	3.000	12.050	10.100	0.010	0.200	10.450	10.000	10.250	10.500	9.540	11.350	11.000	
Olympus Tunnel Olympus Tunnel	Min kaf Max kaf	8.9 8.9	28.8 28.8	23.6 23.6	17.6 17.6	18.2 18.2	28.2 28.2	26.8 26.8	26.6 26.6	32.7 32.7	24.9 24.9	25.7	25.0	
	nax nai	0.9	20.0	23.0	17.0	10.2	28.2	20.8	20.0	32.7	24.9	25.7	25.0	
Pole Hill Pole Hill	Min gwh Max gwh	6.030 6.030	21.540 21.540	17.680	13.480	13.940	21.060	20.040	19.880	24.460	18.630	19.190	18.700	
	Max gwii	6.030	21.540	17.680	13.480	13.940	21.060	20.040	19.880	24.460	18.630	19.190	18.700	
Flatiron 152 Flatiron 152	Min gwh	7.160	16.010	16.550	15.650	15.470	16.550	16.010	16.550	16.010	16.550	16.550	16.010	
riaciion 132	Max gwh	7.160	16.010	16.550	15.650	15.470	16.550	16.010	16.550	16.010	16.550	16.550	16.010	
Load following	Min gwh	16.990	52.520	48.850	40.290	40.910	53.100	48.990	46.680	53.850	48.540	51.660	50.210	
Load following	Max gwh	16.990	52.520	48.850	40.290	40.910	53.100	48.990	46.680	53.850	48.540	51.660	50.210	
Total project	Min gwh	23.487	55.756	51.133	42.926	42.875	55.156	50.798	49.160	57.764	57.208	60.957	57.549	
Total project	Max gwh	23.487	55.756	51.133	42.926	42.875	55.156	50.798	49.160	57.764	57.208	60.957	57.549	
GENERATION CAPA	CITY AND D	URATION												
Project Generati	on 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation:														
Green Mtn Flatiron 3	mw	8.7	4.5	3.1	3.5	2.8	2.8	2.3	1.0	1.2	8.8	10.5	8.7	
Big Thompson	mw mw							0.2	2.4	4.3	2.8	2.0	1.5	
Total base loa		8.7	4.5	3.1	3.5	2.8	2.8	2.5	3.4	5.5	11.6	12.5	10.2	

Load Following Gen	eration:												
Marys Lake													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	9.4	2.3	6.1	10.5	10.0	2.7	3.7	6.3	5.9	7.4	4.5	5.0
Max Capacity	mw	3.5	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
Duration	hr/d	13.6	20.7	16.9	12.5	13.0	20.3	19.3	16.7	17.1	15.6	18.5	18.0
Lake Estes													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Max Capacity	mw	11.0	35.8	29.8	21.6	22.3	35.1	33.4	29.6	29.9	27.4	31.9	30.9
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Pole Hill													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Duration	hr/d	12.0	2.9	6.7	11.1	10.6	3.3	4.3	4.5	12.0	5.8	5.1	5.7
Max Capacity	mw	16.8	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
Duration	hr/d	12.0	21.1	17.3	12.9	13.4	20.7	19.7	19.5	12.0	18.2	18.9	18.3
Flatiron 152													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	12.0	12.0	11.6	11.9	12.0	12.0	12.0	9.5	12.0	12.0	12.0
Max Capacity	mw	21.1	72.4	57.2	43.5	44.2	70.4	66.1	65.5	85.2	61.4	63.0	61.4
Duration	hr/d	12.0	12.0	12.0	12.5	12.1	12.0	12.0	12.0	10.0	12.0	12.0	12.0
Total Load Followi	ng												
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
Max Capacity	mw	52.4	150.3	129.1	107.2	108.6	147.6	141.6	137.2	157.2	130.9	137.0	134.4
Total Project Capa	city												
Min Capacity	mw	8.7	4.5	3.1	3.5	2.8	2.8	2.5	3.4	39.5	11.6	12.5	10.2
Max Capacity	mw	61.1	154.8	132.2	110.7	111.4	150.4	144.1	140.6	162.7	142.5	149.5	144.6
capacity					,								

CBTAOP V1.10 Run: 14-Jan-2008 15.33 Maximum Reasonable Plan (60% Quota)

#### COLORADO-BIG THOMPSON MONTHLY OPERATIONS

#### HYDROLOGY OPERATIONS

Green Mtn Reservoir	I	nitial Cont		8.9 kaf	Ma	aximum Cor		33.6 kaf	M	inimum Co		6.0 kaf	
2007	Oct	Elev Nov	7926. Dec	.43 ft Jan	Feb	81e Mar	ev 7949 Apr	9.91 ft May	Jun	Jul	lev 7795 Aug	.72 ft Sep	Total
Dillow Tuellous kee	9.6	5.9	5.5	3.9	3.6	4.3	8.3	49.7	116.7	76.4	34.0	13.4	331.3
Dillon Inflow kai Dillon-Grn Mtn Gain kai		6.0	5.6	3.6	3.3	4.2	8.9	33.8	74.1	49.9	24.4	12.0	235.4
Undepleted Inflow kar		11.9	11.1	7.5	6.9	8.5	17.2	83.5	190.8	126.3	58.4	25.4	566.7
Depletion kai		-5.6	1.2	1.0	0.4	0.9	0.0	10.0 73.5	13.3 177.5	15.3 111.0	3.3 55.1	-0.3 25.7	40.7 526.0
Depleted Inflow kar	18.0	17.5	9.9	6.5	6.5	7.6	17.2	73.5	1//.5	111.0	33.1	23.7	320.0
Turbine Release kar		17.9	12.7	14.8	11.5	22.4	11.9	58.0	76.5	72.8	54.4	47.6	435.4
Spill/Waste ka: Total River Release ka:		0.0 17.9	0.0 12.7	0.0 14.8	0.0 11.5	0.0 22.4	0.0 11.9	0.0 58.0	26.6 103.1	37.3 110.1	0.0 54.4	0.0 47.6	63.9 499.3
Total River Release ka	34.9	17.9	12.7	14.0	11.5	22.1	11.9	30.0	103.1	110.1	31.1		1,,,,
Min Release cf:		294	205	200	200	200	167	67	73	693	843	800	
Total River Release cfs	568	301	207	241	200	364	200	943	1733	1791	885	800	
Evaporation kar	0.4	0.1	0.0	0.0	0.0	0.2	0.3	0.5	0.8	0.9	0.7	0.6	4.5
End-Month Targets ka		91.1	88.3	80.0	75.0	60.0	65.0	80.0	153.6 153.6	153.6 153.6	153.6	131.1	
End-Month Content ka: End-Month Elevation f		91.1 7915.07 79	88.3 913.13 '	80.0 7907.11	75.0 7903.27	60.0 7890.45	65.0 7894.98	80.0 7907.11					
												7 2 1 5	
Willow Crk Reservoir	I	nitial Cont Elev		8.5 kaf .55 ft	Ma	aximum Coı 81		10.2 kaf 3.83 ft	M:	inimum Co El		7.2 kaf 5.90 ft	
200*	Oct		v 6122 Dec	Jan	Feb	Mar	ev 6120 Apr	May	Jun	Jul	Aug	Sep	Total
							_	_					
Native Inflow ka		1.5	1.3	0.8	0.7	1.0	5.6	33.0	34.0	8.4	3.3	1.8	93.6
Min Release ka		0.4	0.4	0.4	0.4	0.4	0.4	1.5 0.7	2.6 4.5	2.2	0.5	0.4	10.0 5.2
Spill/Bypass ka: Total River Release ka:		0.0	0.0	0.0	0.4	0.0	0.0	2.2	7.1	2.2	0.5	0.0	15.2
rotar River Refease Ra.	. 0.1	0.1	0.1										
Pumped to Granby ka		2.6	0.0	0.0	0.0	0.0	7.7	27.7	26.8	7.3	2.0	2.0	77.2 0.7
Evaporation ka: End-Month Targets ka:		0.0 7.6	0.0	0.0	0.0	0.0	0.1 7.2	0.1 9.0	0.1 10.0	0.1 9.0	0.1	0.1 9.0	0.7
End-Month Targets ka End-Month Content ka		7.6	8.5	8.9	9.2	9.8	7.2	10.2	10.0	9.0	9.7	9.0	
	8124.88										8127.09	8124.50	
Lake Granby						aximum Co	nt 5:	36.1 kaf	M	inimum Co	ont 7	76.5 kaf	
Lake Granby		nitial Cont	t 37	6.3 kaf .57 ft		aximum Con		36.1 kaf 9.50 ft	М	E		76.5 kaf 5.91 ft	
Lake Granby	I	nitial Cont	t 37	6.3 kaf					M. Jun				Total
200	I 7 Oct	nitial Cont Ele Nov	t 37 v 8255 Dec	6.3 kaf .57 ft	Ma	El	ev 8279	9.50 ft		E	lev 8186	5.91 ft	Total
	Oct 3.9	nitial Cont	t 37 v 8255	6.3 kaf .57 ft Jan	Ma Feb	El Mar	ev 8279 Apr	9.50 ft May	Jun	E: Jul	lev 8186 Aug	5.91 ft Sep	
200' Native inflow ka	Oct 3.9	nitial Cont Elev Nov 1.6	t 37 v 8255 Dec 2.0	6.3 kaf .57 ft Jan 1.4	Ma Feb	E1 Mar 1.4 1.2 0.0	8279 Apr 5.0 1.2 0.0	9.50 ft May 25.4 15.5 0.0	Jun 61.8 59.2 0.0	35.4 33.7 0.0	10.7 2.5 0.0	5.91 ft Sep 4.2 2.1 0.0	154.0 135.2 0.0
Native inflow ka Rels frm Shadow Mtn ka Pump frm Windy Gap ka Pump frm Willow Crk ka	Oct 3.9 12.0 0.0 1.1	nitial Cont Elev Nov 1.6 2.7 0.0 2.6	t 37 v 8255 Dec 2.0 2.8 0.0 0.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0	Feb 1.2 1.1 0.0 0.0	E1 Mar 1.4 1.2 0.0	8279 Apr 5.0 1.2 0.0 7.7	9.50 ft May 25.4 15.5 0.0 27.7	Jun 61.8 59.2 0.0 26.8	35.4 33.7 0.0 7.3	10.7 2.5 0.0 2.0	5.91 ft Sep 4.2 2.1 0.0 2.0	154.0 135.2 0.0 77.2
200'  Native inflow ka  Rels frm Shadow Mtn ka  Pump frm Windy Gap ka	Oct 3.9 12.0 0.0 1.1	nitial Cont Eler Nov 1.6 2.7 0.0	t 37 v 8255 Dec 2.0 2.8 0.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0	Feb 1.2 1.1 0.0	E1 Mar 1.4 1.2 0.0	8279 Apr 5.0 1.2 0.0	9.50 ft May 25.4 15.5 0.0	Jun 61.8 59.2 0.0	35.4 33.7 0.0	10.7 2.5 0.0	5.91 ft Sep 4.2 2.1 0.0	154.0 135.2 0.0
Native inflow ka Rels frm Shadow Mtn ka Pump frm Windy Gap ka Pump frm Willow Crk ka	T Oct 3.9 2 12.0 0.0 1.1 17.0	nitial Cont Elec Nov 1.6 2.7 0.0 2.6 6.9	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6	Feb 1.2 1.1 0.0 0.0 2.3	E1. Mar  1.4 1.2 0.0 0.0 2.6	8279 Apr 5.0 1.2 0.0 7.7 13.9	9.50 ft May 25.4 15.5 0.0 27.7 68.6	Jun 61.8 59.2 0.0 26.8 147.8	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3	10.7 2.5 0.0 2.0 15.2	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3	154.0 135.2 0.0 77.2 366.4
Native inflow ka Rels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk Total Inflow ka Min River Release ka Spill/Bypass ka	Oct 3.9 12.0 0.0 1.1 17.0 1.8 1.8 0.0	Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6	Ma Feb 1.2 1.1 0.0 0.0 2.3 1.1	E1. Mar 1.4 1.2 0.0 0.0 2.6	8279 Apr 5.0 1.2 0.0 7.7 13.9	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3 0.0	10.7 2.5 0.0 2.0 15.2 2.5 0.0	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3	154.0 135.2 0.0 77.2 366.4 25.0 0.0
Native inflow ka Rels frm Shadow Mtn ka Pump frm Windy Gap ka Pump frm Willow Crk ka Total Inflow ka Min River Release ka	Oct 3.9 12.0 0.0 1.1 17.0 1.8 1.8 0.0	nitial Cont Elec Nov 1.6 2.7 0.0 2.6 6.9	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6	Feb 1.2 1.1 0.0 0.0 2.3	E1. Mar  1.4 1.2 0.0 0.0 2.6	8279 Apr 5.0 1.2 0.0 7.7 13.9	9.50 ft May 25.4 15.5 0.0 27.7 68.6	Jun 61.8 59.2 0.0 26.8 147.8	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3	10.7 2.5 0.0 2.0 15.2	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3	154.0 135.2 0.0 77.2 366.4
Native inflow ka Rels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk Total Inflow ka Min River Release ka Spill/Bypass ka	Oct 3.9 2 12.0 0.0 1.1 17.0 1.8 0.0 1.8	Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1	E1. Mar 1.4 1.2 0.0 0.0 2.6	8279 Apr 5.0 1.2 0.0 7.7 13.9	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3 0.0	lev 8186 Aug 10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow ka Rels frm Shadow Mtn Pump frm Windy Gap ka Pump frm Willow Crk A Total Inflow ka  Min River Release ka Spill/Bypass ka Total River Release ka Pumped to Shadow Mtn kas Evaporation kas	7 Oct 3.9 12.0 0.0 1.1 17.0 17.1 18.8 0.0 18.8 15.3 1.4	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6	2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0	M&Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4	E1. Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7	E3 Jul 35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8	lev 8186 Aug 10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow karels frm Shadow Mtn karels frm Windy Gap karels frm Willow Crk karels frm Willow Crk karels frm Karels ka	7 Oct 3.9 5 12.0 0.0 5 1.1 17.0 5 1.8 0.00 5 1.8 1.8 5 1.8 5 1.4 5 0.3	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3	E1. Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3	8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.0	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow karels frm Shadow Mtn karels frm Shadow Mtn karels frm Willow Crk karels from Willow Karels from Karels	T  Oct  3.9  12.0  0.0  1.1  17.0  1.8  0.0  1.8  15.3  1.4  15.3  1.4  374.5	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3	t 375 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0 0.3 314.2	Me Feb 1.2 1.1 1.0 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7	E1. Mar  1.4 1.2 0.0 0.0 2.6  1.2 0.0 1.2 27.4 0.7 0.3 270.7	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8	E: Jul 35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4 532.7	lev 8186 Aug 10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow ka Rels frm Shadow Mtn ka Pump frm Windy Gap ka Pump frm Willow Crk ka Total Inflow ka  Min River Release ka Spill/Bypass ka Total River Release ka  Pumped to Shadow Mtn ka: Evaporation ka Seepage loss ka End-Month Content ka End-Month Elevation f	7 Oct 3.9 12.0 0.0 1.1 17.0 18 1.8 15.3 14.4 0.3 374.5 8255.28	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8	x 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 0.0 0.3 314.2 8244.93	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 20.7 1.2 20.7 1.2 8235.00	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 0.3 322.9 8246.48	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05	E: Jul  35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4 532.7 8279.02	lev 8186 Aug 10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow karels frm Shadow Mtn karels frm Shadow Mtn karels frm Willow Crk karels from Willow Karels from Karels	7 Oct 3.9 12.0 0.0 1.1 17.0 18 1.8 15.3 14.4 0.3 374.5 8255.28	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0 0.3 314.2	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94	E1. Mar  1.4 1.2 0.0 0.0 2.6  1.2 0.0 1.2 27.4 0.7 0.3 270.7	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7     8279.02 inimum Cc	lev 8186 Aug 10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow ka Rels frm Shadow Mtn ka Pump frm Windy Gap ka Pump frm Willow Crk ka Total Inflow ka  Min River Release ka Spill/Bypass ka Total River Release ka  Pumped to Shadow Mtn ka: Evaporation ka Seepage loss ka End-Month Content ka End-Month Elevation f	7 Oct 3.9 12.0 0.0 5 1.1 17.0 18 1.8 5 0.0 18 1.8 1.4 0.3 5 374.5 18255.28	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont 81e	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0 0.3 314.2 8244.93	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Co	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9 8246.48	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum Cc	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 2.3 8279.25	5.91 ft Sep 4.2 2.1 0.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow karels for the National Inflormation karels for the National Inflormation Inf	T  Oct  3.9  12.0  0.0  1.1  17.0  1.8  0.0  1.8  1.8  0.0  1.8  1.8  0.3  3.4  0.3  3.74.5  8255.28	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont 81er	t 377 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1 v 8366 Dec	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.7.4 0.0 0.3 297.7 8241.94 Me	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Co:	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00 nt ev 836	9.50 ft May 25.4 15.5 0.0 27.7 68.6 0.0 4.6 0.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum CC     8:     Jul	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1 1ev 8366 Aug	5.91 ft Sep 4.2 2.1 0.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow Karels Inflowed Karels Inflowed In	T 7 Oct 8 3.9 6 12.0 7 0.0 7 0.0 8 1.1 8 0.0 8 1.8 8 0.0 8 15.3 8 1.4 8 0.3 7 374.5 8 8255.28  T 7 Oct 5 .9	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8	v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0 0.3 314.2 8244.93	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94 Ma	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Co:	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00 nt ev 836	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum Cc	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow Infl	TO Oct 3.9 12.0 0.0 1.1 17.0 18 1.8 15.3 1.4 18 1.4 18 18 18 18 18 18 18 18 18 18 18 18 18	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont Nov 2.3 29.3	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1 v 8366 Dec 3.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 16.5 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1	M8 Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94 M8 Feb	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Coi	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00 nt ev 8366 Apr 7.5	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum Cc     8:     Jul 53.2	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1 1ev 8366 Aug	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow karels Infl	TO Oct 3.9 12.0 0.0 1.1 17.0 18 1.8 0.0 18 15.3 374.5 18255.28 IF Oct 5.9 15.3 21.2	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 350.0 8251.17 8 nitial Cont 81er Nov 2.3 29.3 31.6	v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1 v 8366 Dec 3.0 23.5	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.1 17.4 0.0 0.3 297.7 8241.94 Me Feb 1.88 17.4	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Common Common E1. Mar 2.2 27.4	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 20.7 1.2 8235.00 nt ev 836' Apr 7.5 20.7	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 3.3 22.9 8246.48 18.4 kaf 7.00 ft May 38.2 0.0	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7 0.0	E:     Jul  35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4 532.7 8279.02 inimum Cc 8: Jul 53.2 0.0	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1 1ev 8366 Aug	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2
Native inflow karels frm Shadow Mtn karels frm Shadow Mtn karels frm Windy Gap karels frm Willow Crk karels frm Willow Crk karels from Willow Crk karels from Willow Karels from Karels fr	T  7	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont Nov 2.3 29.3 31.6 2.7 0.0	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1 v 8366 Dec 3.0 23.5 26.5	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5 18.6	M8 Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94 M6 Feb 1.8 17.4 19.2	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Coi E1. Mar 2.2 27.4 29.6	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 20.7 1.2 8235.00 nt ev 8366 Apr 7.5 20.7 28.2	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May 38.2 0.0 38.2	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7 0.0 92.7	E:     Jul  35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4 532.7 8279.02 inimum Cc 8: Jul 53.2 0.0 53.2 3.1 30.6	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1ev 8366 Aug	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep 6.4 5.3 11.7	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2 Total 231.3 163.7 395.0
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow karels Infl	T  7 Oct  8 3.9  12.0  0.0  1.1  17.0  8 1.8  6 0.0  1.8  7 0.3  374.5  8255.28  T  7 Oct  5 .9  15.3  21.2  6 12.0  6 0.0	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont Nov 2.3 29.3 31.6 2.7 0.0	v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 t 1 v 8366 Dec 3.0 23.5 26.5 2.8	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5 18.6	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 11 17.4 0.0 0.3 297.7 8241.94 Me Feb 1.8 17.4 19.2	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Communication E1. Mar  2.2 27.4 29.6	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 8235.00 nt ev 836' Apr 7.5 20.7 28.2 1.2	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May 38.2 0.0 38.2	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7 0.0 92.7	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum Cc 8: Jul 53.2 0.0 53.2 3.1	lev 8186 Aug  10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1 lev 8366 Aug  16.0 8.3 24.3 2.5	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep 6.4 5.3 11.7	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2 Total 231.3 163.7 395.0
Native inflow karels frm Shadow Mtn karels frm Shadow Mtn karels frm Windy Gap karels frm Willow Crk karels frm Willow Crk karels from Willow Crk karels from Willow Karels from Karels fr	TO Oct 3.9 12.0 0.0 1.1 17.0 18.1 18.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 81er Nov  2.3 29.3 31.6 2.7 0.0 2.7	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.3 329.6 t 1 v 8366 Dec 3.0 23.5 26.5 2.8 0.0	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5 18.6	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 1.1 17.4 0.0 0.3 297.7 8241.94 Me Feb 1.88 17.4 19.2 1.1 0.0	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Co: E1. Mar 2.2 27.4 29.6	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 20.7 1.2 0.3 261.2 8235.0 nt ev 836' Apr 7.5 20.7 28.2 1.2 0.0	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May 38.2 0.0 38.2	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7 0.0 92.7	E:     Jul  35.4 33.7 0.0 7.3 76.4 3.3 0.0 3.3 0.0 2.8 0.4 532.7 8279.02 inimum Cc 8: Jul 53.2 0.0 53.2 3.1 30.6	10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1ev 8366 Aug	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep 6.4 5.3 11.7	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2 Total 231.3 163.7 395.0
Native inflow karels frm Shadow Mtn karels frm Shadow Mtn karels frm Windy Gap Pump frm Willow Crk karels from Shadow Mtn karels from Granby Karels	T  Oct  3.9  12.0  0.0  1.1  17.0  1.8  0.0  1.8  1.8  0.3  3.4  0.3  3.4  0.3  3.4  1.4  0.3  3.4  1.5  1.5  3.7  Oct  5.9  1.5  7  Oct  6.1  1.8  8.8  1.0  1.8  8.8  1.0  1.8  1.0  1.8  1.0  1.8  1.0  1.8  1.0  1.8  1.0  1.0	nitial Cont Eler Nov  1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont 81er Nov 2.3 29.3 31.6 2.7 0.0 2.7 28.7	t 37 v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.3 329.6 247.66 tt 1 v 8366 Dec 3.0 0.2 3.5 26.5 2.8 0.0 2.8 23.6 0.1	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 1.2 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5 18.6 1.2 0.0 0.3 314.2 8244.93	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 1.7.4 0.0 0.3 297.7 8241.94 Me Feb 1.8 17.4 19.2 1.1 0.0 1.1 18.1	E1. Mar  1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 8236.85 aximum Co: E1. Mar 2.2 27.4 29.6 1.2 0.0 1.2 27.4 0.3	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00 nt ev 836' Apr 7.5 20.7 28.2 1.2 0.0 1.2 26.6 0.4	9.50 ft May 25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 2.0 0.3 322.9 8246.48 18.4 kaf 7.00 ft May 38.2 0.0 38.2 14.3 15.5 22.0 0.7	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 0.4 462.8 8269.05 M Jun 92.7 0.0 92.7 3.0 56.2 59.2	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7     8279.02 inimum Cc     8:     Jul     53.2     0.0     53.2     3.1     30.6     33.7  18.8     0.7	lev 8186 Aug  10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25  ont 836 Aug  16.0 8.3 24.3 24.3 2.5 0.0 2.5	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep 6.4 5.3 11.7 2.1 0.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2 Total 231.3 163.7 395.0 34.1 101.1 135.2
Native inflow karels frm Shadow Mtn Pump frm Windy Gap Pump frm Willow Crk karels Inflow karels Inflowed Inflowe	TO Oct 3.9 12.0 0.0 1.1 17.0 18. 18. 15.3 1.4 0.3 18. 18. 15.3 14. 18. 18. 15. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18	nitial Cont Eler Nov 1.6 2.7 0.0 2.6 6.9 1.2 0.0 1.2 29.3 0.6 0.3 350.0 8251.17 8 nitial Cont 81er Nov 2.3 29.3 31.6 2.7 0.0 2.7 28.7 0.2	v 8255 Dec 2.0 2.8 0.0 0.0 4.8 1.2 0.0 1.2 23.5 0.2 0.3 329.6 247.66 tt 11 v 8366 Dec 3.0 23.5 26.5 2.8 0.0 2.8 23.6 0.1 17.6	6.3 kaf .57 ft Jan 1.4 1.2 0.0 0.0 2.6 6 1.2 16.5 0.0 0.3 314.2 8244.93 7.6 kaf .57 ft Jan 2.1 16.5 18.6 1.2 0.0 0.0 1.2	Me Feb 1.2 1.1 0.0 0.0 2.3 1.1 0.0 0.1 11 17.4 0.0 0.3 297.7 8241.94 Me Feb 1.8 17.4 19.2 1.1 0.0 1.1 18.1 0.0 17.6	E1. Mar 1.4 1.2 0.0 0.0 2.6 1.2 0.0 1.2 27.4 0.7 0.3 270.7 8236.85 aximum Co: E1. Mar 2.2 27.4 29.6 1.2 0.0 1.2 28.1 0.3 17.6	ev 8279 Apr 5.0 1.2 0.0 7.7 13.9 1.2 0.0 1.2 20.7 1.2 0.3 261.2 8235.00 nt ev 8366 Apr 7.5 20.7 28.2 1.2 0.0 1.2 2.6.6 0.4 17.6	9.50 ft May  25.4 15.5 0.0 27.7 68.6 4.6 0.0 4.6 0.0 3322.9 8246.48 18.4 kaf 7.00 ft May  38.2 1.2 14.3 15.5 22.0 0.7 17.6	Jun 61.8 59.2 0.0 26.8 147.8 4.7 0.0 4.7 0.0 2.8 8269.05 M Jun 92.7 0.0 92.7 3.0 56.2 59.2 32.7 0.8 817.6	E:     Jul     35.4     33.7     0.0     7.3     76.4     3.3     0.0     3.3     0.0     2.8     0.4     532.7 8279.02 inimum Cc 8:     Jul 53.2     0.0 53.2 3.1 30.6 33.7 18.8 0.7 17.6	lev 8186 Aug  10.7 2.5 0.0 2.0 15.2 2.5 0.0 2.5 8.3 2.3 0.5 534.3 8279.25 ont 1 lev 8366 Aug  16.0 8.3 24.3 2.5 0.0 2.5 21.2 2.6 6.7 6.6	5.91 ft Sep 4.2 2.1 0.0 2.0 8.3 1.0 0.0 1.0 5.3 2.1 0.5 533.7 8279.16 16.6 kaf 5.02 ft Sep 6.4 5.3 11.7 2.1 0.0 2.1 0.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0	154.0 135.2 0.0 77.2 366.4 25.0 0.0 25.0 163.7 16.1 4.2 Total 231.3 163.7 395.0 34.1 101.1 135.2

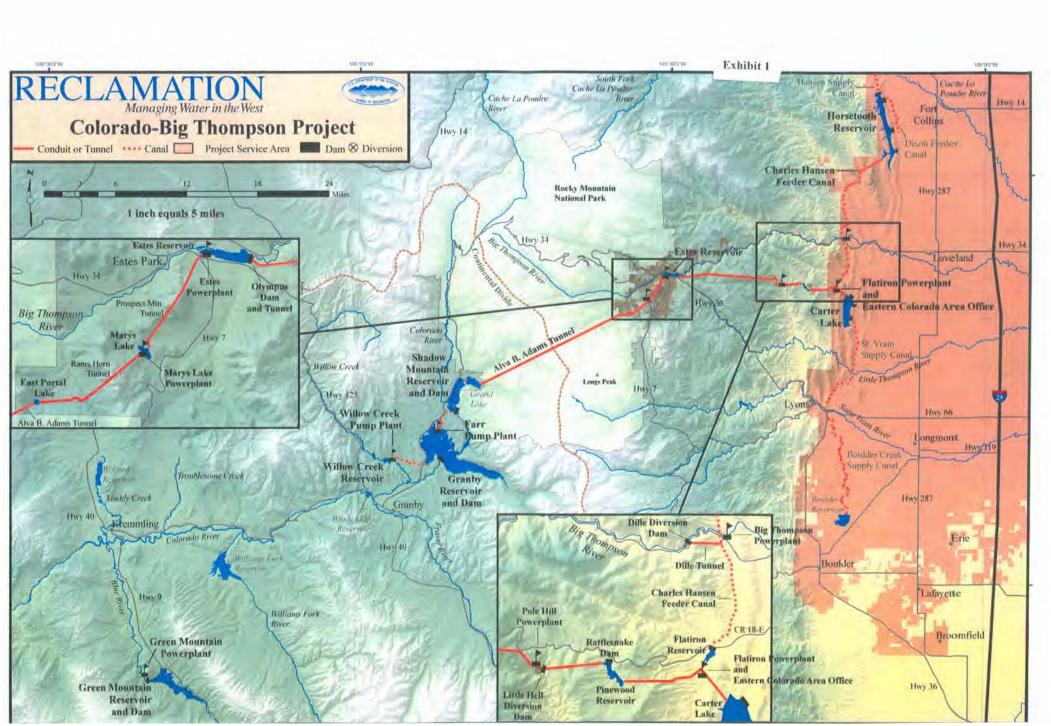
														•
Adams Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max Tunnel Capacity	kaf	33.8	32.7	33.8	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	399.0
Actual delivery % max delivery	kaf %	8.8 26	28.7 88	23.6 70	17.4 51	18.1 57	28.1 83	26.6 81	22.0 65	32.7 100	18.8 56	21.2 63	9.1 28	255.1
* max delivery		20		70	31									
Big T @ Lake Estes	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big Thompson inflow	kaf	3.2	1.6	1.1	0.8	0.7	1.0	3.2	19.4	51.7	33.3	14.3	6.4	136.7
Min river release	kaf	3.1	1.5 1.5	1.5 1.1	1.5	1.4	1.5 1.0	2.2	6.9 7.6	7.4 51.7	7.7 18.3	6.9 6.9	3.7 3.7	45.3 98.6
Act river release Skim water available	kaf e kaf	0.1	0.1	0.0	0.8	0.0	0.0	1.0	12.5	44.3	25.6	7.4	2.7	93.7
Skim water diverted	kaf	0.1	0.1	0.0	0.0	0.0	0.0	1.0	11.8	0.0	15.0	7.4	2.7	38.1
% skim diverted	%	100	100					100	94		59	100	100	
Irrigation 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
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0 0.7	0.0	0.0	0.0 7.6	0.0 51.7	0.0 18.3	0.0 6.9	0.0 3.7	0.0 98.6
Total river release	kaf	3.1	1.5	1.1	0.8	0.7	1.0	2.2	7.0	31.7	10.5	0.5	J.,	30.0
Olympus Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max 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	29.8	396.1
Actual delivery	kaf	8.9	28.8	23.6	17.4	18.1	28.1	27.6	33.8	32.7	33.8	28.6	11.8	293.2
% max delivery	%	26	88	70	51	57	83	84	100	100	100	85	40	
Seepage and Evap	kaf	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	1.7
Inflow to Flatiron	kaf	8.7	28.6	23.4	17.3	18.0	28.0	27.5	33.7	32.6	33.7	28.4	11.6	291.5
Carter Lake		I	nitial Co		0.2 kaf	Ma	ximum Con		2.2 kaf	Mi	nimum Con		1.2 kaf	
	2007	0	El Nov	ev 5657 Dec	.19 ft Jan	Feb	Ele Mar	v 5758 Apr	.98 ft May	Jun	Ele Jul	v 5639 Aug	.99 ft Sep	Total
	2007	Oct	NOV	Dec	Jan	reb	Mar	Apr	May	oun	oui	Aug	ьср	Iocai
Pump from Flatiron	kaf	4.0	7.3	2.6	1.8	2.8	26.0	22.4	17.9	17.8	9.0	6.5	0.0	118.1
Release to Flatiron	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
Evaporation loss	kaf	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.3	0.3	2.2
Seepage loss	kaf	0.0 14.2	0.0 18.4	0.0 18.6	0.0 18.8	0.0 20.1	0.1 44.2	0.2 62.0	0.2 71.8	0.2 81.0	0.2 75.0	0.1 65.0	0.1 49.0	1.1
End-Month Targets End-Month Content	kaf kaf	14.2	18.4	18.6	18.8	20.1	44.2	60.8	71.8	80.2	75.0	65.0	54.5	
End-Month Elevation	ft	5646.29	5654.11	5654.46	5654.81	5657.02	5690.58 5	709.55	721.06	5729.43	5724.28 5	714.02 5	702.61	
Irrigation demand	kaf	5.6	0.0	0.0	0.0	0.0	0.0	3.3	2.1	3.6	7.7	10.6	5.7	38.6
Metered delivery	kaf	3.4	2.3	2.1	1.2	1.1	1.3	1.6	2.3	2.8	3.6	3.4	2.7	27.8
windy Gap demand	kaf	0.9	0.7 3.0	0.3 2.4	0.4 1.6	0.4 1.5	0.4 1.7	0.5 5.4	2.0 6.4	2.4 8.8	2.3 13.6	2.1 16.1	1.7 10.1	14.1 80.5
Total demand Total delivery	kaf kaf	9.9 9.9	3.0	2.4	1.6	1.5	1.7	5.4	6.4	8.8	13.6	16.1	10.1	80.5
% 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
Hansen Canal 930	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Minimum flow	kaf	1.5	1.5	15.4	15.4	14.4	6.1	1.5	1.5	1.5	1.5	1.5	1.5	63.3
Maximum flow	kaf	57.2	55.3	57.2	57.2	53.5	57.2	11.1	57.2	55.3	57.2	57.2	55.3	630.9
Actual flow	kaf	4.7	21.3	20.8	15.5	15.2	2.0	5.1	15.8	14.8	24.7	21.9	11.6	173.4
Dille Tunnel	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Big T (i. Canyon Mout	h lenf	4.3	2.4	1.6	1.3	1.2	1.7	6.1	33.4	73.6	48.0	17.5	5.8	196.9
Less Estes Skim	kaf	0.1	0.1	0.0	0.0	0.0	0.0	1.0	11.8	0.0	15.0	7.4	2.7	38.1
Big T irr (Estes)	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
Handy Ditch release water available	kaf kaf	1.2	0.0 2.3	0.0 1.6	0.0	0.0 1.2	0.0 1.7	1.2	1.2	1.2 72.4	1.8 31.2	2.9 7.2	1.7 1.4	11.2 147.6
Water diverted	kaf	0.0	0.0	0.0	0.0	0.0	0.0	3.9	11.1	22.3	6.7	7.2	1.4	52.6
% diverted	8							100	54	31	21	100	100	
Trifurcation Works										_	Jul	Aug	Sep	Total
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	our			
Dela from Flatiron									_				_	173 4
Rels from Flatiron Rels to 550 Canal	2007 kaf kaf	Oct 4.7 3.5	Nov 21.3 21.2	Dec 20.8 20.8	Jan 15.5 15.5	Feb 15.2 15.2	Mar 2.0 2.0	Apr 5.1 3.5	May 15.8 2.2	14.8 13.2	24.7	21.9	11.6	173.4 117.2
Rels to 550 Canal	kaf kaf	4.7 3.5	21.3 21.2	20.8	15.5 15.5	15.2 15.2	2.0	5.1 3.5	15.8	14.8 13.2	24.7 6.7	21.9	11.6	117.2
Rels to 550 Canal Big T irrigation	kaf kaf kaf	4.7 3.5	21.3 21.2	20.8 20.8	15.5 15.5	15.2 15.2	2.0 2.0 0.0	5.1 3.5 0.6	15.8 2.2	14.8 13.2	24.7 6.7 3.0	21.9	11.6	117.2
Rels to 550 Canal	kaf kaf	4.7 3.5	21.3 21.2	20.8	15.5 15.5	15.2 15.2	2.0	5.1 3.5	15.8	14.8 13.2	24.7 6.7	21.9 9.6 4.9	11.6 3.8 5.1	117.2
Rels to 550 Canal Big T irrigation Dille Tunnel Tot rels to river	kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2	21.3 21.2 0.0 0.0 0.1	20.8 20.8 0.0 0.0	15.5 15.5 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5	15.8 2.2 1.8 11.1 24.7	14.8 13.2 1.6 22.3 23.9	24.7 6.7 3.0 6.7 24.7	21.9 9.6 4.9 7.2 19.5	11.6 3.8 5.1 1.4 9.2	117.2 18.1 52.6 108.8
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes)	kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0	21.3 21.2 0.0 0.0 0.1	20.8 20.8 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0	15.8 2.2 1.8 11.1 24.7	14.8 13.2 1.6 22.3 23.9 1.6 0.0	24.7 6.7 3.0 6.7 24.7 2.6 0.0	21.9 9.6 4.9 7.2 19.5	11.6 3.8 5.1 1.4 9.2 4.8 0.0	117.2 18.1 52.6 108.8 17.0 0.0
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river Irrigation demand Big T irr (Estes) Windy Gap demand	kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0	20.8 20.8 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0	14.8 13.2 1.6 22.3 23.9 1.6 0.0 0.0	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4	21.9 9.6 4.9 7.2 19.5 4.5 0.0	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3	117.2 18.1 52.6 108.8 17.0 0.0 1.1
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes)	kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0	21.3 21.2 0.0 0.0 0.1	20.8 20.8 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0	15.8 2.2 1.8 11.1 24.7	14.8 13.2 1.6 22.3 23.9 1.6 0.0	24.7 6.7 3.0 6.7 24.7 2.6 0.0	21.9 9.6 4.9 7.2 19.5	11.6 3.8 5.1 1.4 9.2 4.8 0.0	117.2 18.1 52.6 108.8 17.0 0.0
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery % required delivery	kaf kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 1.1 1.1	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0 0.0 0.6 0.6	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8	14.8 13.2 1.6 22.3 23.9 1.6 0.0 0.0 1.6 1.6	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0	21.9 9.6 4.9 7.2 19.5 4.5 0.0 0.4 4.9 4.9	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 5.1	117.2 18.1 52.6 108.8 17.0 0.0 1.1 18.1 18.1
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery	kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 0.0	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0 0.0 0.6	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8	14.8 13.2 1.6 22.3 23.9 1.6 0.0 0.0 1.6 1.6	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0	21.9 9.6 4.9 7.2 19.5 4.5 0.0 0.4 4.9 4.9	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 5.1	117.2 18.1 52.6 108.8 17.0 0.0 1.1 18.1
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery % required delivery	kaf kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 1.1 1.1	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0 0.0 0.6 0.6	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8	14.8 13.2 1.6 22.3 23.9 1.6 0.0 0.0 1.6 1.6	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0	21.9 9.6 4.9 7.2 19.5 4.5 0.0 0.4 4.9 4.9	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 5.1	117.2 18.1 52.6 108.8 17.0 0.0 1.1 18.1 18.1
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery % required delivery Shortage  Hansen Canal 550  Inflow from Flatiro	kaf kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 0.0 1.1 1.1 1.0 0.0 0.0	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 Nov	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0 0.6 0.6 100 0.0 Apr	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8 100 0.0	14.8 13.2 1.6 22.3 23.9 1.6 0.0 1.6 1.6 1.00 0.0 Jun 13.2	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0 100 0.0 Jul	21.9 9.6 4.9 7.2 19.5 0.0 4.5 0.0 4.9 4.9 100 0.0 Aug	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 5.1 100 0.0 Sep	117.2  18.1 52.6 108.8  17.0 0.0 1.1 18.1 0.0 Total
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery % required delivery Shortage  Hansen Canal 550  Inflow from Flatiro Maximum flow	kaf kaf kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 1.1 1.1 1.0 0.0 0.0 0.0	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.0 0.0 0.0 0.6 100 0.0 Apr 3.5 16.4	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8 100 0.0	14.8 13.2 1.6 22.3 23.9 1.6 0.0 0.0 1.6 1.6 100 0.0 Jun 13.2 30.9	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0 100 0.0 Jul 6.7 32.0	21.9 9.6 4.9 7.2 19.5 4.5 0.0 0.4 4.9 100 0.0 Aug 9.6 32.0	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 100 0.0 Sep 3.8 30.9	117.2  18.1 52.6 108.8  17.0 0.0 1.1 18.1 0.0  Total  117.2 347.0
Rels to 550 Canal  Big T irrigation Dille Tunnel Tot rels to river  Irrigation demand Big T irr (Estes) Windy Gap demand Total requirement Total delivery % required delivery Shortage  Hansen Canal 550  Inflow from Flatiro	kaf kaf kaf kaf kaf kaf kaf kaf kaf	4.7 3.5 1.1 0.0 1.2 1.1 0.0 0.0 0.0 1.1 1.1 1.0 0.0 0.0	21.3 21.2 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0 0.0 Nov	20.8 20.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.5 15.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	15.2 15.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	2.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	5.1 3.5 0.6 3.9 5.5 0.6 0.0 0.6 0.6 100 0.0 Apr	15.8 2.2 1.8 11.1 24.7 1.8 0.0 0.0 1.8 1.8 100 0.0	14.8 13.2 1.6 22.3 23.9 1.6 0.0 1.6 1.6 1.00 0.0 Jun 13.2	24.7 6.7 3.0 6.7 24.7 2.6 0.0 0.4 3.0 3.0 100 0.0 Jul	21.9 9.6 4.9 7.2 19.5 0.0 4.5 0.0 4.9 4.9 100 0.0 Aug	11.6 3.8 5.1 1.4 9.2 4.8 0.0 0.3 5.1 5.1 100 0.0 Sep	117.2  18.1 52.6 108.8  17.0 0.0 1.1 18.1 0.0 Total

Immigration delivery	kaf	0.7	0 1	0.1	0.0	0.2	0.3	0.3	0.5	0.4	2.2	2.2	2.1	9.3
Irrigation delivery Minimum flow	kaf	1.5	0.1	0.1 3.1	0.2 3.1	2.9	1.5	1.5	0.5 1.5	1.5	1.5	1.5	1.5	21.1
Rels to Horsetooth	kaf	2.6	20.9	20.5	15.1	14.8	1.5	3.0	1.5	12.6	4.3	7.2	1.5	105.5
Horsetooth Reservoir		Iı	nitial Co		30.6 kaf 5.12 ft	Ma	aximum Co		56.7 kaf 9.98 ft	Mi	nimum Co		5.0 kaf '.06 ft	
	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Inflow	kaf	2.6	20.9	20.5	15.1	14.8	1.5	3.0	1.5	12.6	4.3	7.2	1.5	105.5
Total irr delivery	kaf	21.0	1.1	1.0	1.9	1.8	1.9	2.5	6.4	7.2	17.9	21.6	13.2	97.5
Evaporation loss Seepage loss	kaf kaf	0.3	0.1	0.0	0.0	0.0	0.3	0.4	0.6	0.8	0.7	0.5	0.4	4.1 1.7
End-Month Targets	kaf	61.8	81.4	100.8	113.8	126.7	125.9	125.8	119.2	125.0	110.0	95.0	79.0	=
End-Month Content End-Month Elevation	kaf ft	61.8 5372.29	81.4 5386.67	100.8 5399.32	113.8 5407.11	126.7 5414.41	125.9 5413.97	125.8 5413.91	120.1 5410.72	124.5 5413.19	110.0 5404.88	95.0 5395.68	82.8 5387.63	
Irrigation demand	kaf	17.6	0.0	0.0	0.0	0.0	0.0	0.1	2.7	3.2	10.7	15.2	8.1	57.6
Metered delivery	kaf	3.1	1.1	1.0	1.5	1.4	1.5	2.0	3.3	3.6	5.7	4.9	3.7	32.8
Windy Gap demand	kaf	0.3	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	1.5	1.5	1.4	7.1
Total demand Total irr delivery	kaf kaf	21.0 21.0	1.1	1.0	1.9 1.9	1.8	1.9	2.5	6.4	7.2	17.9 17.9	21.6 21.6	13.2 13.2	97.5 97.5
% required delivery	kai %	100	100	1.0	1.9	1.8 100	1.9	100	6.4 100	7.2 100	17.9	100	100	97.5
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
Total CBT Delivery	kaf	31.5	3.5	3.2	2.9	2.7	3.1	7.9	12.7	15.2	32.5	40.8	27.1	183.1
Windy Gap Ownership	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Accrual	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total release Spill	kaf kaf	1.2	0.7	0.3	0.8	0.8	0.8	0.9	2.4	2.8	4.2	4.0	3.4	22.3
End-month Ownership	kaf	47.2	46.5	46.2	45.4	0.0 44.6	43.8	42.9	0.0 40.5	0.0 37.7	0.0 33.5	0.0 29.5	0.0 26.1	0.0
PUMPING AND GENERATI	ON OF	ERATIONS												
Green Mtn Gen	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Max Generation	gwh	15.438	14.940	15.438	15.438	14.442	15.438	14.476	15.438	14.940	15.438	15.438	14.940	181.804
Generation	gwh	6.497	3.236	2.283	2.601	1.966	3.667	1.905	9.704	14.940	15.438	11.533	9.864	83.634
% Max Generation Ave kwh/af	%	42 186	22 181	15 180	17 176	14 171	24 164	13 160	63 167	100 195	100 212	75 212	66 207	
	0007													
Willow Crk Pumping	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Maximum pumping Actual pumping	kaf kaf	27.7 1.1	26.8 2.6	0.0	0.0	0.0	0.0	26.8 7.7	27.7 27.7	26.8 26.8	27.7 7.3	27.7 2.0	26.8 2.0	218.0 77.2
Pump energy	gwh	0.234	0.554	0.000	0.000	0.000	0.000	1.640	5.900	5.708	1.555	0.426	0.426	16.443
% max pumping	8	4	10					29	100	100	26	7	7	
Average kwh/af		213	213					213	213	213	213	213	213	
Lake Granby Pumping	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	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 gwh	15.3 2.280	29.3 4.395	23.5 3.572	16.5 2.541	17.4 2.714	27.4	20.7 3.374	0.0	0.0	0.0	8.3	5.3	163.7
Pump energy % max pumping	gwii %	41	4.395	3.572	2.541	2.714	4.357 74	3.3/4 58	0.000	0.000	0.000	1.162	0.742 15	25.137
Average kwh/af		149	150	152	154	156	159	163				140	140	
Marys Lake Gen	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Flow	kaf	8.8	28.7	23.6	17.4	18.1	28.1	26.6	22.0	32.7	18.8	21.2	9.1	
Max generation	gwh	0.000	2.320	6.060	6.060	5.620	6.060	2.880	0.000	2.880	6.060	6.060	5.840	49.840
Generation	gwh	0.000	2.320	4.220	3.080	3.220	5.020	2.880	0.000	2.880	3.360	3.740	1.520	32.240
% Max Generation Ave kwh/af	%		100 177	70 179	51 177	57 178	83 179	100 176		100 176	55 179	62 176	26 167	
Lake Estes Gen	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Flow	kaf	8.8	28.7	23.6	17.4	18.1		26.6	_				_	
Max generation	gwh	14.920	14.450	14.920	13.400	9.740	28.1 10.450	10.060	22.0 10.450	32.7 14.450	18.8 14.920	21.2 14.920	9.1 14.450	157.130
Generation	gwh	3.800	12.650	10.400	7.960	8.230	10.450	10.060	9.700	14.450	8.440	9.380	3.950	109.470
<pre>% Max Generation Ave kwh/af</pre>	8	25	88	70	59	84	100	100	93	100	57	63	27	
Pole Hill Can	2007	432 Oct	441 Nov	441	457	455	441 Mar	439	441 Marr	442	449	442	434	m-+ - 3
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Olympus Tunnel flow Max generation	kaf	8.9	28.8	23.6	17.4	18.1	28.1	27.6	33.8	32.7	33.8	28.6	11.8	293.2
Max generation Generation	gwh gwh	25.260 5.890	24.460 13.720	25.260 14.150	25.260 13.240	23.620 13.240	25.260 14.150	24.460 13.720	25.260 14.150	24.460 13.720	25.260	25.260 14.150	24.460	298.280
% Max Generation	gwii %	23	56	56	13.240	13.240	14.150 56	13.720	14.150	13.720	14.150 56	14.150 56	8.780 36	153.060
Ave kwh/af		662	476	600	761	731	504	497	419	420	419	495	744	

														PF
Flatiron 1&2 Ger	n 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Inflow to Flati: Max generation Generation % Max Generation	gwh gwh	8.7 16.550 7.160 43	28.6 16.010 16.010	23.4 16.550 16.550	17.3 16.550 15.470 93	18.0 15.470 15.470 100	28.0 16.550 16.550 100	27.5 16.010 16.010 100	33.7 16.550 16.550 100	32.6 16.010 16.010 100	33.7 16.550 16.550 100	28.4 16.550 16.550 100 895	11.6 16.010 10.340 65 891	291.5 195.360 179.220
Ave kwh/af		823	894	895	894	894	895	894	895	894	895			m-+-1
Flatiron 3 Pump	/Gen 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Maximum pumping Pump from Flati: Pump energy % max pumping Average kwh/af	kaf ron kaf gwh %	8.1 4.0 0.956 49 239	26.2 7.3 1.737 28 238	5.4 2.6 0.627 48 241	5.4 1.8 0.434 33 241	25.3 2.8 0.675 11 241	26.1 26.0 6.630 100 255	22.4 22.4 6.250 100 279	21.3 17.9 5.370 84 300	19.3 17.8 5.660 92 318	19.8 9.0 2.889 45 321	10.4 6.5 1.996 63 307	21.5 0.0 0.000	211.2 118.1 33.224
	· 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
Release to Flat. Maximum generat: Actual generation % max generation Average kwh/af	ion gwh on gwh	0.0 0.000 0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Big Thompson Ger	n 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Total release Turbine release Wasteway release Max generation Generation % Max Generation Ave kwh/af	gwh gwh	1.2 0.0 1.2 0.000 0.000	0.1 0.0 0.1 0.000 0.000	0.0 0.0 0.0 0.000	0.0 0.0 0.0 0.000 0.000	0.0 0.0 0.0 0.000 0.000	0.0 0.0 0.0 0.000 0.000	5.5 5.5 0.0 3.800 0.600 16 109	24.7 24.7 0.0 3.940 3.940 100 160	23.9 23.9 0.0 3.800 3.800 100 159	24.7 24.7 0.0 3.940 3.940 100 160	19.5 19.5 0.0 3.940 3.000 76 154	9.2 9.2 0.0 3.800 1.140 30 124	108.8 107.5 1.3 23.220 16.420
PROJECT GENERAT	ION AND PU	MPING SU	MMARY											
Project Generat	ion 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation: Big Thompson	gwh	0.000	0.000	0.000	0.000	0.000	0.000	0.600	3.940	3.800	3.940	3.000	1.140	16.420
Green Mtn	gwh	6.497	3.236	2.283	2.601	1.966	3.667	1.905	9.704	14.940	15.438	11.533	9.864	83.634
Flatiron 3 Total	gwh gwh	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000 13.644	0.000 18.740	0.000 19.378	0.000 14.533	0.000 11.004	0.000 100.054
Load Following (														
Marys Lake	gwh	0.000	2.320	4.220	3.080	3.220	5.020	2.880	0.000	2.880	3.360	3.740	1.520	32.240
Lake Estes	gwh	3.800	12.650	10.400	7.960	8.230	10.450	10.060	9.700	14.450	8.440	9.380	3.950	109.470
Pole Hill	gwh	5.890	13.720	14.150	13.240	13.240	14.150	13.720	14.150	13.720	14.150	14.150	8.780	153.060
Flatiron 1,2 Total	gwh gwh	7.160 16.850	16.010 44.700	16.550 45.320	15.470 39.750	15.470 40.160	16.550 46.170	16.010 42.670	16.550 40.400	16.010 47.060	16.550 42.500	16.550 43.820	10.340 24.590	179.220 473.990
Total generation	_	23.347	47.936	47.603	42.351	42.126	49.837	45.175	54.044	65.800	61.878	58.353	35.594	574.044
Total max genera	_	72.168	72.180	78.228	76.708	68.892	73.758	71.686	71.638	76.540	82.168	82.168	79.500	905.634
Project Pump En	ergy 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Granby	gwh	2.280	4.395	3.572	2.541	2.714	4.357	3.374	0.000	0.000	0.000	1.162	0.742	25.137
Willow Creek	gwh	0.234	0.554	0.000	0.000	0.000	0.000	1.640	5.900	5.708	1.555	0.426	0.426	16.443
Flatiron 3 Total pump energ	gwh gy gwh	0.956 3.470	1.737 6.686	0.627 4.199	0.434 2.975	0.675 3.389	6.630 10.987	6.250 11.264	5.370 11.270	5.660 11.368	2.889 4.444	1.996 3.584	0.000 1.168	33.224 74.804
Total net genera	ation gwh	19.877	41.250	43.404	39.376	38.737	38.850	33.911	42.774	54.432	57.434	54.769	34.426	499.240
Release Flexibi	lity 2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Adams Tunnel Adams Tunnel	Min kaf Max kaf	8.8 8.8	28.7 28.7	23.6 23.6	17.4 17.4	18.1 18.1	28.1 28.1	26.6 26.6	22.0 22.0	32.7 32.7	18.8 18.8	21.2 21.2	9.1 9.1	
Marys Lake Marys Lake	Min gwh Max gwh	0.000	2.320 2.320	4.220 4.220	3.080 3.080	3.220 3.220	5.020 5.020	2.880	0.000	2.880 2.880	3.360 3.360	3.740 3.740	1.520 1.520	
Lake Estes Lake Estes	Min gwh Max gwh	3.800 3.800	12.650 12.650	10.400 10.400	7.960 7.960	8.230 8.230	10.450 10.450	10.060 10.060	9.700 9.700	14.450 14.450	8.440 8.440	9.380 9.380	3.950 3.950	
Olympus Tunnel Olympus Tunnel	Min kaf Max kaf	8.9 8.9	28.8 28.8	23.6 23.6	17.4 17.4	18.1 18.1	28.1 28.1	27.6 27.6	33.8 33.8	32.7 32.7	33.8 33.8	28.6 28.6	11.8 11.8	
Pole Hill Pole Hill	Min gwh Max gwh	6.030 6.030	21.540 21.540	17.680 17.680	13.320 13.320	13.870 13.870	20.980 20.980	20.620 20.620	25.260 25.260	24.460 24.460	25.260 25.260	21.380 21.380	8.940 8.940	
Flatiron 1&2 Flatiron 1&2	Min gwh Max gwh	7.160 7.160	16.010 16.010	16.550 16.550	15.470 15.470	15.470 15.470	16.550 16.550	16.010 16.010	16.550 16.550	16.010 16.010	16.550 16.550	16.550 16.550	10.340 10.340	
Load following Load following	Min gwh Max gwh	16.990 16.990	52.520 52.520	48.850 48.850	39.830 39.830	40.790 40.790	53.000 53.000	49.570 49.570	51.510 51.510	57.800 57.800	53.610 53.610	51.050 51.050	24.750 24.750	
Total project Total project	Min gwh Max gwh	23.487 23.487	55.756 55.756	51.133 51.133	42.431 42.431	42.756 42.756	56.667 56.667	52.075 52.075	65.154 65.154	76.540 76.540	72.988 72.988	65.583 65.583	35.754 35.754	

#### GENERATION CAPACITY AND DURATION

Project Generation	2007	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Base Generation: Green Mtn		8.7	4.5	3.1	3.5	2.8	4.9	2.6	13.0	20.8	20.8	15.5	13.7	
Flatiron 3	mw mw	8.7	4.5	3.1	3.5	2.0	4.5	2.0	13.0	20.0	20.0	13.3	13.7	
Big Thompson	mw							0.8	5.3	5.3	5.3	4.0	1.6	
Total base load	mw	8.7	4.5	3.1	3.5	2.8	4.9	3.4	18.3	26.1	26.1	19.5	15.3	
IOCAI DASE IOAG	IIIW	0.7	1.5	3.1	3.3	2.0	,	3.1	10.5	20.1	20.1			
Load Following Gene	eration:													
Marys Lake					0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	
Min Capacity	mw	0.0 9.4	0.0	0.0 6.1	10.6	10.1	2.7	3.9	7.0	12.0	9.6	7.8	9.3	
Duration	hr/d	3.5	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	3.6	
Max Capacity Duration	mw hr/d			16.9	12.4	12.9	20.3	19.1	16.0	12.0	13.4	15.2	13.7	
Duration Lake Estes	nr/a	13.6	20.7	10.9	12.4	12.9	20.3	19.1	16.0	12.0	13.4	13.2	13.7	
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MIN Capacity Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	11.0	12.0	12.0	12.0	
Duration Max Capacity	nr/a mw	11.0	35.8	29.8	21.3	22.2	35.0	33.1	28.0	45.0	23.3	26.9	11.3	
Max Capacity Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.0	12.0	12.0	12.0	
Pole Hill	III / G	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	10.0	12.0	12.0	12.0	
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	34.0	34.0	0.0	0.0	
Duration	hr/d	12.0	2.9	6.7	11.2	10.7	3.4	3.8	12.0	12.0	12.0	3.0	12.0	
Max Capacity	mw	16.8	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	24.4	
Duration	hr/d	12.0	21.1	17.3	12.8	13.3	20.6	20.2	12.0	12.0	12.0	21.0	12.0	
Flatiron 1&2	111, 0	12.0	21.1	17.5	12.0	10.0	20.0	20.2	12.0					
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Duration	hr/d	12.0	12.0	12.0	11.4	11.9	12.0	12.0	8.7	9.5	8.7	12.0	12.0	
Max Capacity	mw	21.1	72.4	57.2	43.3	44.0	70.0	68.5	86.0	85.2	86.0	71.6	28.8	
Duration	hr/d	12.0	12.0	12.0	12.6	12.1	12.0	12.0	10.0	10.0	10.0	12.0	12.0	
Total Load Followin	ng													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	42.1	34.0	0.0	0.0	
Max Capacity	mw	52.4	150.3	129.1	106.7	108.3	147.1	143.7	156.1	172.3	151.4	140.6	68.1	
Total Project Capa	city													
Min Capacity	mw	8.7	4.5	3.1	3.5	2.8	4.9	3.4	52.3	68.2	60.1	19.5	15.3	
Max Capacity	mw	61.1	154.8	132.2	110.2	111.1	152.0	147.1	174.4	198.4	177.5	160.1	83.4	

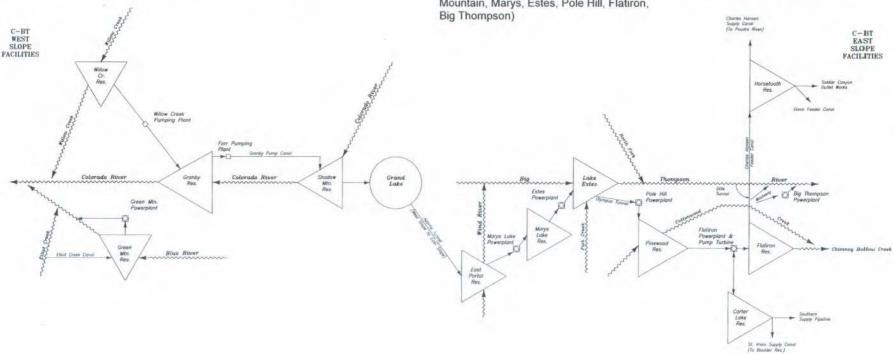


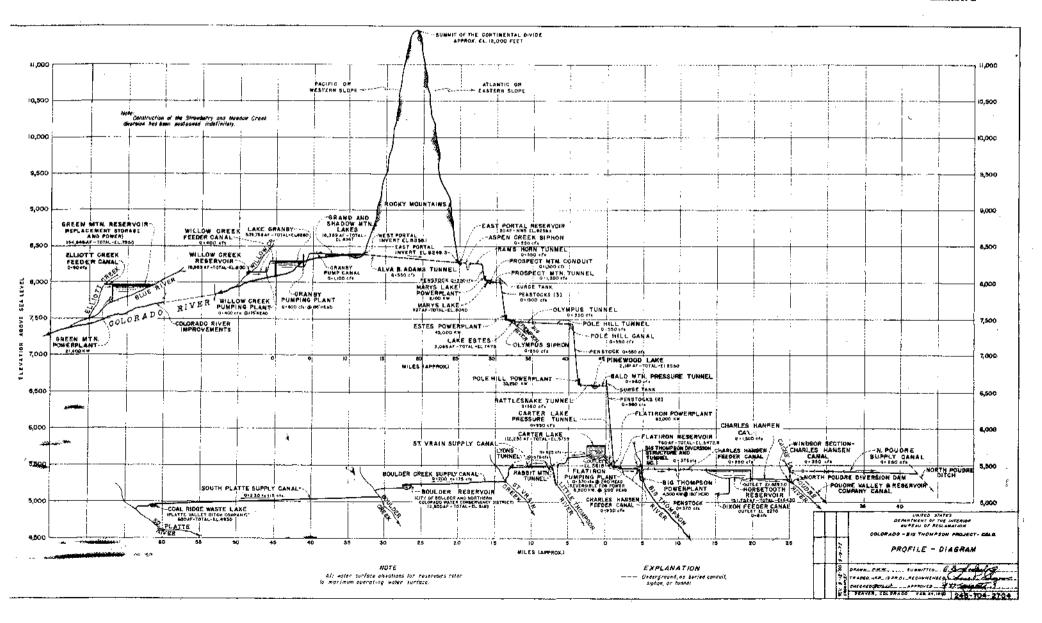


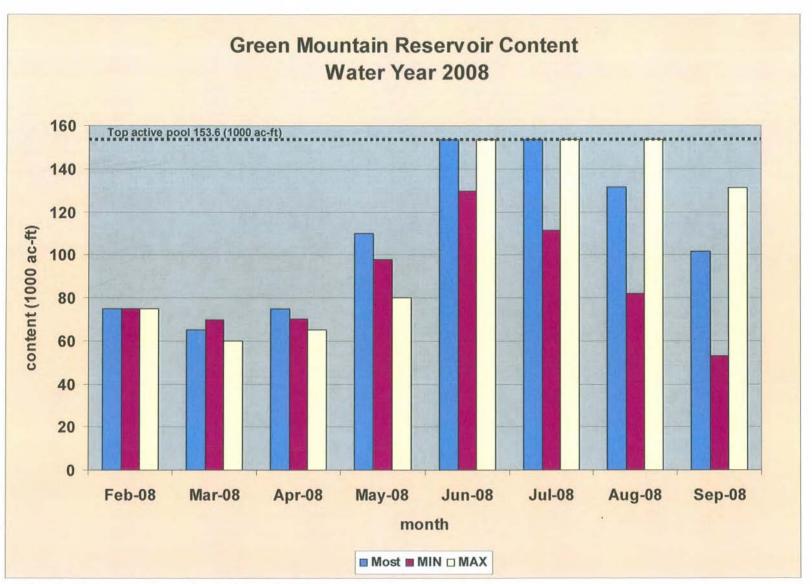
#### Colorado-Big Thompson Facts

- > A trans-mountain, trans-basin water diversion, storage, and delivery project
- > Signed into law by President Roosevelt in
- 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)

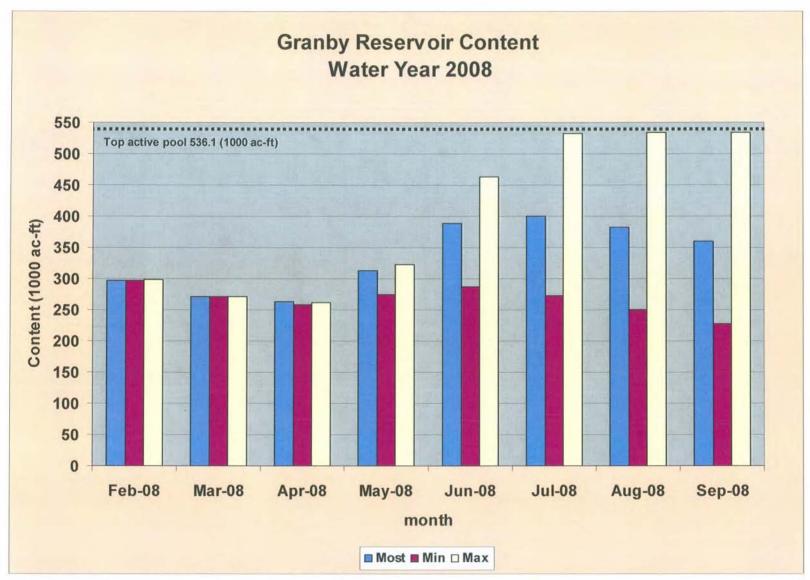
- > Water right allows for diversion of up to 310,000 acre-feet of water a year
- Average annual diversion over life of project is 260,000 acre-feet
- Water falls over 2000 feet from Continental Divide to Colorado's eastern Plains, providing for hydroelectric power generation.
- > Together, all six powerplants 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



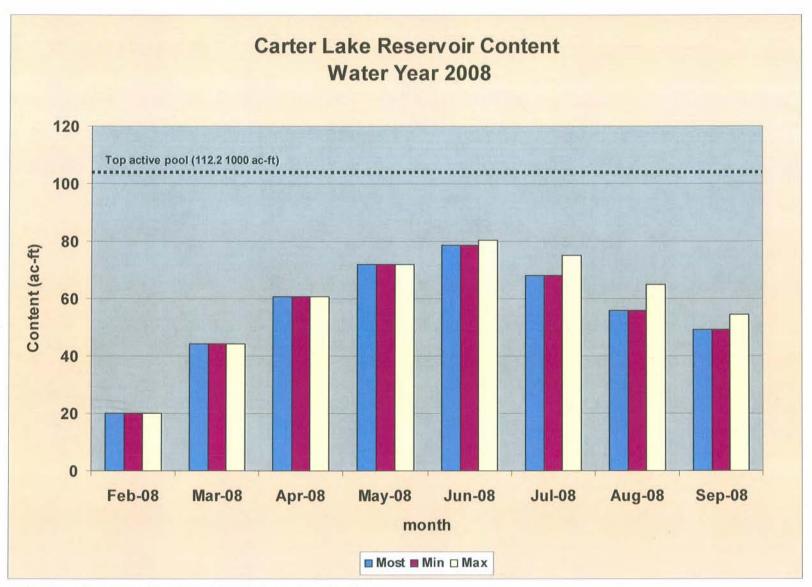




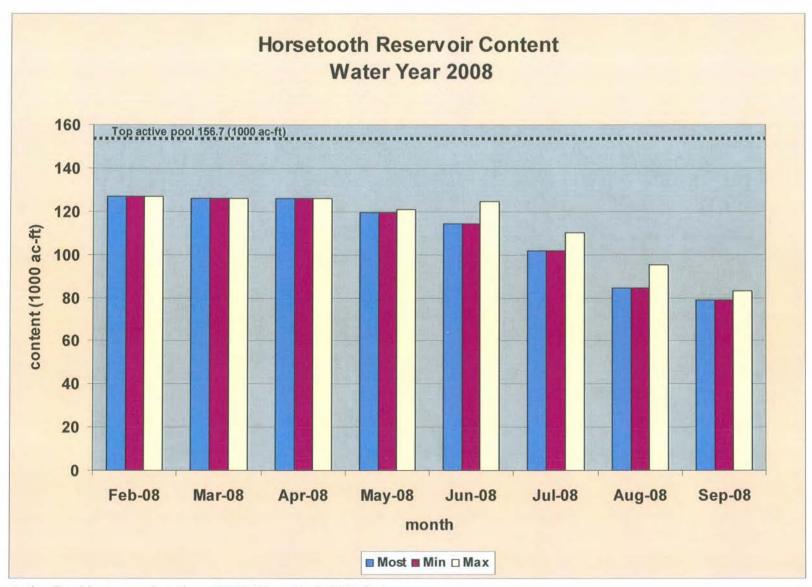
Active Pool between elevations 7,800.00 and 7,950.00 feet.



Active Pool between elevations 8,186.90 and 8,280.00 feet.



Active Pool between elevations 5,618.00 and 5,759.00 feet.



Active Pool between elevations 5,270.00 and 5,430.00 feet.

### WESTERN DIVISION POWER SYSTEM WATER YEAR 2007 — GENERATION AND PUMP ENERGY

The Western Division Power System (System) boundaries are illustrated in Exhibit 1. Hydropower generation was above average for most of the powerplants in the Colorado-Big Thompson Project (C-BT) during water year 2007, including Green Mountain. The low power generation at Green Mountain during water year 2006 was caused by the ring seal gate work which took place during the summer and other maintenance work. Green Mountain Powerplant produced 29.6 giga-watt-hours (GWh) during water year 2006, only 50% of its average yearly production, compared to 60.7 GWh in 2007 or 117% of average.

During water year 2007, the Western Division System's total gross generation was 1474.5 GWh (numbers provided by Western Area Power Administration). The C-BT system diverted sufficient water to keep its powerplants running consistently most of the water year. The total of 632.8 GWh during water year 2007 represented over 106% of the 30-year average for the six C-BT powerplants.

Inflow for the C-BT collection system over the west slope was lower than anticipated in water year 2007. After a wet beginning of winter, relatively dry weather dominated the over eastern plains enter a long drought. Those factors combined with high demands for C-BT water during the spring and summer months produced a situation that required prolonged water diversions through Adams Tunnel. Pumping at Willow Creek Canal Pump, the Farr Plant pumps at Granby, and the Flatiron Powerplant were needed to bring C-BT water to the east slope well into the summer months. The energy used to pump that water during water year 2007 totaled 68 GWh, 107% of the 30-year average. That is significantly higher than recent years. The total energy used to pump that water during water year 2007 totaled, including Mount Elbert was 480.7 GWh. That total represents 196% of average.

After subtracting pumping energy from the gross Western Division System generation, the net generation during the water year 2007 was 1474.5 GWh. The total generation is the gross generation less the total C-BT pumping; gross generation includes one-half of the Yellowtail generation. The total Western Division System load includes firm energy deliveries, C-BT use energy, support energy, plant station service, and an estimate of transmission system losses. Table 1 includes the totals for every powerplant in the system. Table 3 shows monthly generation and pumping energy, by plant, as well as monthly System loads for water year 2007. The total energy that was required to operate the pumps in the Western Division System (Table 2) during water year 2007 was 480.7, compared to 502.8 GWh the previous year.

The Western Area Power Administration's Loveland Area Office sold 2,527,074 mega-watt-hours (MWh) of power during water year 2007, with the price of \$71,664,376 (numbers provided by Western Area Power Administration). Energy deficits were covered by a combination of scheduled interchange energy, use of the Mount Elbert pumped storage plant, and power purchases. The Western Area Power Administration's Loveland Area Office power purchases totaled 829,048 MWh for water year 2007, for which they paid \$49,449,857 (numbers provided by Western Area Power Administration).

# WESTERN DIVISION POWER SYSTEM WATER YEAR 2008 — GENERATION AND PUMP ENERGY FORECAST

Under the most probable runoff conditions plan for January, 2007, pump energy requirements within the Colorado-Big Thompson project (C-BT) Power System alone are expected to total 75.2 GWh during water year 2008. The net generation for the C-BT powerplants is projected to be 633.5 GWh. The net generation for the entire Western Division Power System (System) is expected to be 1921 GWh, with a total load of 2,163.4 GWh, leaving a shortfall of 242.4 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 most probable runoff conditions the will be a shortfall over the entire System of 438.4 GWh between October of 2007 and the end of April of 2008, followed by a surplus of 196 GWh between May and September, 2008. A total surplus of 179.3 GWh is projected between the months of May and September.

Under the reasonable minimum runoff conditions, the total System net generation is projected to be 1,578.6 GWh during water year 2008, 343.4 GWh less than the net generation projected under most probable runoff conditions. Under the reasonable minimum runoff plan, pump energy requirements for the C-BT alone would total 83.9 GWh, all from C-BT pumping units. The C-BT powerplants will generatre a total of 637.8 GWh according to the same plan. The total System load is expected to be 2,163.4 GWh over the entire water year, leaving a total generation shortfall of 584.8 GWh. Under the reasonable minimum runoff conditions total generation shortfalls are expected for every month of the water year.

If reasonable maximum runoff conditions occur during water year 2008, the net System generation should total 2131.9 GWh, 210.9 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 74.9 GWh. The total System load is expected to be 2,163.4 GWh over the entire water year, leaving a total generation shortfall of 31.5 GWh. A total generation shortfall of 393.7 GWh is projected for the months October through March under those conditions, while a surplus of 362.3 GWh is projected for the period between April and September.

Tables 4A through 4C summarize the projected monthly System generation, pump energy, and loads for the three forecasted runoff conditions for water year 2008. 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. Tables 5a and 5b 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.

## WESTERN DIVISION SYSTEM GROSS GENERATION - WATER YEAR 2007 (Energy in GWh)

## <u>Accumulated</u> Gross Generation <u>1/</u>

Powerplant	WY 2007	Yearly Avg.2/	Percent of Avg.
Green Mountain	60.7	51.9	117
Marys Lake	41.1	37.3	110
Estes	103.2	100.3	103
Pole Hill	184.4	172.3	107
Flatiron 1 & 2	241.6	226.7	107
Big Thompson	1.8	10.9	17
Seminoe	96.8	132.5	73
Kortes	123.5	140.3	88
Fremont Canyon	174.0	239.6	73
Alcova	92.5	118.1	78
Glendo	58.7	80.3	73
Guernsey	14.6	19.4	75
Boysen	39.1	69.3	56
Heart Mountain	14.2	15.2 3/	93
Buffalo Bill	41.6	69.4 3/	60
Shoshone	20.3	20.4 3/	100
Spirit Mountain	16.3	14.0 3/	116
Mt. Elbert	313.5	169.0 4/	186
Yellowtail4/	365.3	959.0 5/	38
Total	2003.2	2645.9	75

<sup>1/</sup> October-September

<sup>2/ 1976-2005</sup> average

<sup>3/ 1995-2005</sup> average

<sup>4/ 1990-1999</sup> average

<sup>5/1971</sup>\_1990 average; one\_half of the Yellowtail energy is dedicated to the Western Division System through marketing arrangement. The other half is marketed through the Eastern Division System.

## WESTERN DIVISION SYSTEM PUMP ENERGY-WATER YEAR 2007

## October-September Pump Energy

Pumping Plant	WY2007 (GWh)	Avg. 1/ (GWh)	Percent of Avg.
Willow Greek	7.9	5.7	139
Granby (Farr Plant)	36.1	30.6	118
Flatiron Unit #3	24.0	26.8	90
Mt. Elbert	412.7	182.1 2/	227
Total	480.7	245.2	196

<sup>1/ 1976-2005</sup> average

<sup>2/ 1990-1999</sup> average

### PICK-SLOAN MISOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM WATER YEAR 2007 OPERATIONS GROSS GENERATION LESS PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	0.6	0.5	1.2	3.3	5.7	6.1	1.1	5.4	4.9	1.7	1.2	0.6	32.2
Green Mtn.	3.8	3.3	3.6	3.0	2.2	3.1	3.0	7.2	9.8	5.8	7.1	8.8	60.7
Willow Cr. pump	-	0.5	0.0	0.0	0.0	0.5	0.8	3.7	1.5	0.0	0.5	0.4	7.9
Farr pump	1.2	0.0	5.9	5.2	3.8	5.0	3.6	0.0	0.0	2.6	4.7	4.1	36.1
Marys Lake	1.3	0.0	3.9	5.8	4.0	5.7	4.6	1.4	0.3	3.4	5.8	4.9	41.1
Estes	3.5	0.0	9.7	13.9	9.7	13.6	11.2	3.8	1.4	9.1	14.8	12.5	103.2
Pole Hill	1.5	0.0	14.2	22.9	16.1	22.7	18.8	15.9	13.2	16.3	22.9	19.9	184.4
Flatiron 1&2	8.4	0.2	18.8	29.1	21.1	28.8	24.4	20.3	16.1	19.3	29.1	26.0	241.6
Flatiron 3	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
Flatiron 3 pump	0.0	0.0	0.0	2.9	4.2	6.8	6.5	0.8	0.0	0.3	1.7	0.8	24.0
Big Thompson	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.1	1.8
Seminoe	3.7	3.4	3.6	3.7	3.4	3.8	13.6	9.7	11.4	18.2	18.6	3.7	96.8
Kortes	4.9	4.7	5.0	5.1	4.5	5.2	17.5	11.4	13.1	22.1	24.6	5.4	123.5
Fremont Canyon	0.9	5.2	5.8	5.6	4.9	8.2	27.2	9.9	24.6	36.7	35.2	9.8	174.0
Alcova	3.1	3.0	3.0	3.0	2.7	4.0	12.4	4.0	12.6	19.9	20.2	4.6	92.5
Glendo	0.0	0.0	0.0	0.0	0.0	0.0	2.3	3.5	17.1	20.4	14.4	1.0	58.7
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.8	3.9	2.2	4.4	0.4	14.6
Pilot Butte **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.1	1.0	0.0	3.2
Boysen	2.1	2.1	2.3	2.4	2.1	2.2	2.3	5.0	5.2	5.6	4.6	3.2	39.1
Shoshone	1.9	1.8	1.4	1.5	0.6	1.3	1.4	2.2	2.1	2.1	2.1	1.9	20.3
Buffalo Bill	0.8	0.0	0.9	1.0	0.7	0.8	1.2	7.8	5.9	9.9	8.0	4.6	41.6
Spirit Mtn. Diamond Cr.	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.7	3.2	3.1	3.2	3.0	16.3
pump	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
Heart Mtn.	0.9	0.0	0.0	0.0	0.0	0.0	0.0	2.6	3.0	2.9	2.4	2.4	14.2
Yellowtail/2	11.7	11.5	14.3	15.6	12.4	14.0	12.8	13.8	15.4	21.9	22.5	17.1	182.7
Fry-Ark	0.6	0.5	1.2	3.3	5.7	6.1	1.1	5.4	4.9	1.7	1.2	0.6	32.2
CBT	17.3	3.0	44.3	66.6	45.1	61.6	51.1	44.1	39.3	51.1	73.5	67.9	564.9
North Platte	12.6	16.3	17.4	17.4	15.5	21.2	73.9	41.3	82.7	119.5	117.4	24.9	560.1
Bighorn	18.5	15.4	18.9	20.5	15.8	18.3	17.7	34.3	35.7	46.6	43.8	32.2	317.4
TOTAL GEN	49.0	35.2	81.8	107.8	82.0	107.1	143.7	125.0	162.6	218.8	235.9	125.6	1474.5
TOTAL LOAD	162.5	162.3	177.2	172.6	137.1	149.2	176.3	184.8	211.2	262.2	211.2	156.8	2163.4
SURPLUS/DEFICIT	-113.5	-127.1	-95.4	-64.8	-55.1	-42.1	-32.6	-59.8	-48.6	-43.4	24.7	-31.2	-688.9

### PICK-SLOAN MISOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM WATER YEAR 2008 FORECASTED OPERATIONS MOST PROBABLE WATER SUPPLY CONDITION

GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

						DPUMPING		ATT-HOUK					
	ОСТ	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	2.0	1.0	33.7
Green Mtn.	6.4	2.6	1.9	1.6	1.5	2.7	1.8	4.6	12.8	10.0	10.7	9.3	65.9
Willow Cr. pump	0.3	0.3	0.0	0.0	0.0	0.0	1.1	4.3	2.8	0.6	0.2	0.2	9.8
Farr pump	2.7	3.2	3.2	2.8	3.1	5.0	3.3	0.5	0.0	0.5	3.1	3.6	31.0
Marys Lake	0.0	2.3	3.7	3.5	3.7	5.7	2.9	0.0	2.9	3.9	4.5	4.4	37.5
Estes	4.7	9.3	9.1	8.7	9.2	10.5	10.1	10.5	9.8	9.7	10.9	10.8	113.3
Pole Hill	7.4	15.6	15.2	14.7	15.4	23.8	18.8	25.2	24.4	21.5	18.6	18.5	219.1
Flatiron 1&2	8.9	18.6	18.2	17.4	18.4	27.3	22.5	29.0	28.0	24.8	22.2	22.1	257.4
Flatiron 3	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
Flatiron 3 pump	1.0	1.4	0.3	0.0	1.1	6.7	5.9	6.1	4.5	2.6	2.5	2.3	34.4
Big Thompson	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.7	3.8	3.9	2.1	1.4	15.5
Seminoe	4.1	3.9	4.0	4.0	3.6	3.9	14.8	16.2	17.7	19.2	18.4	16.6	126.4
Kortes	5.6	5.4	5.6	5.6	5.2	5.6	21.0	21.7	21.0	21.7	21.7	21.0	161.1
Fremont Canyon	2.8	5.9	6.1	6.1	5.8	8.4	20.6	35.8	36.3	36.3	34.0	32.0	230.1
Alcove	5.5	4.1	4.2	4.2	3.9	5.5	9.3	20.0	20.0	19.6	19.6	18.9	134.8
Glendo	0.0	0.0	0.0	0.0	0.0	0.0	2.3	18.5	19.0	24.0	18.2	8.9	90.9
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	1.3	3.8	3.7	3.6	3.6	3.4	19.4
Pilot Butte**	0.4	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.2	1.2	1.2	1.2	7.0
Boysen	1.1	1.7	1.8	1.8	1.7	1.9	3.8	5.3	6.0	10.7	8.8	6.1	50.7
Shoshone	1.9	1.8	1.2	1.9	1.7	1.9	1.8	1.3	2.2	2.2	1.9	1.7	21.5
Buffalo Bill	2.7	0.0	0.0	0.0	0.0	0.0	5.4	13.0	13.0	13.4	13.4	13.0	73.9
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.5	2.6	2.8	3.3	3.3	3.1	18.3
Diamond Cr. pump	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
Heart Mtn.	1.2	0.0	0.0	0.0	0.0	0.0	2.2	4.1	4.3	4.5	4.5	4.3	25.1
Yellowtail/2	21.3	21.5	22.0	21.6	19.9	21.0	20.5	23.5	23.4	30.0	34.2	35.7	294.6
Fry-Ark	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.7
CBT	23.4	43.5	44.6	43.1	44.0	58.3	46.4	62.1	74.4	70.1	63.2	60.4	633.5
North Platte	18.0	19.3	19.9	19.9	18.5	23.4	69.3	116.0	117.7	124.4	115.5	100.8	762.7
Bighorn	30.3	25.0	25.0	25.3	23.3	24.8	35.8	51.0	52.9	65.3	67.3	65.1	491.1
TOTAL GEN	73.0	90.2	91.9	90.8	88.9	109.0	155.0	233.0	249.7	264.2	248.0	227.3	1921.0
TOTAL LOAD	162.5	162.3	177.2	172.6	137.1	149.2	176.3	184.8	211.2	262.2	211.2	156.8	2163.4
SURPLUS/DEFICIT	-89.5	-72.1	-85.3	-81.8	-48.2	-40.2	-21.3	48.2	38.5	2.0	36.8	70.5	-242.4

<sup>\*</sup> PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

<sup>\*&</sup>quot; PROJECTED VALUES ARE MARKETED ENERGY

## PICK-SLOAN MISOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM WATER YEAR 2008 FORECASTED OPERATIONS REASONABLE MINIMUM WATER SUPPLY CONDITION GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	ост	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	2.0	1.0	33.7
Green Mtn.	6.4	2.6	1.9	1.6	1.5	1.9	1.6	0.7	0.8	7.1	6.7	4.6	37.4
Willow Cr. pump	0.3	0.3	0.0	0.0	0.0	0.0	1.2	1.7	0.6	0.2	0.1	0.1	4.5
Farr pump	2.6	3.1	3.1	2.9	3.2	5.0	3.3	2.0	1.6	4.9	5.6	5.3	42.6
Marys Lake	0.0	2.3	3.6	3.5	3.7	5.7	2.9	0.0	2.9	6.1	6.1	5.3	42.1
Estes	4.4	9.1	8.9	8.7	9.3	10.4	10.1	10.4	13.9	14.9	14.9	13.1	128.1
Pole Hill	6.7	15.3	15.0	14.8	15.6	23.8	18.8	25.2	24.4	25.2	25.1	22.1	232.0
Flatiron 1&2	8.1	18.3	17.8	17.4	18.6	27.4	22.5	29.0	28.0	29.0	28.9	25.5	270.5
Flatiron 3	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
Flatiron 3 pump	0.9	1.3	0.2	0.0	1.2	6.7	5.9	5.9	6.2	3.7	2.6	2.2	36.8
Bi g Thompson	0.0	0.0	0.0	0.0	0.0	0.0	0.2	2.0	3.3	2.4	2.0	1.7	11.6
Seminoe	4.1	3.9	4.0	3.9	3.5	3.8	9.0	11.5	11.6	5.7	5.5	4.0	70.5
Kortes	5.6	5.4	5.6	5.6	5.2	5.6	13.3	16.9	16.4	8.0	8.0	6.1	101.7
Fremont Canyon	2.7	5.9	6.1	6.1	5.7	8.2	22.5	20.0	19.5	30.7	26.7	6.5	160.6
Alcove	5.4	4.1	4.2	4.2	3.9	5.4	10.8	11.3	10.5	17.1	17.1	4.2	98.2
Glendo	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.2	12.6	23.7	17.3	0.4	55.8
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.7	3.6	3.6	2.1	13.6
Pilot Butte **	1.2	0.5	0.0	0.0	0.0	0.0	0.8	1.9	4.0	3.8	3.7	1.7	17.6
Boysen	1.1	1.7	1.8	1.8	1.7	1.8	2.4	4.8	4.9	5.2	4.5	3.2	34.9
Shoshone	1.2	1.8	1.2	1.8	1.7	1.9	1.8	1.9	1.3	1.3	1.3	1.2	18.4
Buffalo Bill	3.6	0.0	0.0	0.0	0.0	0.0	1.7	13.3	12.8	13.1	13.3	9.8	67.6
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.6	2.9	3.0	3.0	3.0	2.9	18.1
Diamond Cr. pump	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
Heart Mtn.	1.2	0.0	0.0	0.0	0.0	0.0	2.2	0.6	1.6	3.0	1.0	1.3	10.9
Yellowtail/2	20.4	19.7	20.2	19.9	18.4	19.4	17.3	18.6	20.6	22.4	22.2	20.1	239.2
Fry-Ark	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.7
CBT	21.8	42.9	43.9	43.1	44.3	57.5	45.7	57.7	64.9	75.9	75.4	64.7	637.8
North Platte	17.8	19.3	19.9	19.8	18.3	23.0	56.2	61.5	74.3	88.8	78.2	23.3	500.4
Bighorn	30.4	23.7	23.2	23.5	21.8	23.1	27.8	44.0	48.2	51.8	49.0	40.2	406.7
TOTAL GEN	71.3	88.3	89.4	88.9	87.5	106.1	133.2	167.1	192.1	220.9	204.6	129.2	1578.6
TOTAL LOAD	162.5	162.3	177.2	172.6	137.1	149.2	176.3	184.8	211.2	262.2	211.2	156.8	2163.4
SURPLUS/DEFICIT	-91.2	-74.0	-87.8	-83.7	-49.6	-43.1	-43.1	-17.7	-19.1	-41.3	-6.6	-27.6	-584.8

<sup>\*</sup> PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

<sup>\*\*</sup> PROJECTED VALUES ARE MARKETED ENERGY

# PICK-SLOAN MISOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM WATER YEAR 2008 FORECASTED OPERATIONS REASONABLE MAXIMUM WATER SUPPLY CONDITION GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.0	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.6
Green Mtn.	6.4	2.6	1.9	1.6	2.1	2.8	1.9	9.0	14.9	15.4	11.5	9.9	80.0
Willow Cr. pump	0.3	0.3	0.0	0.0	0.0	0.0	1.6	5.9	5.7	1.6	0.4	0.4	16.2
Farr pump	2.7	3.2	3.2	2.8	3.1	4.9	3.0	0.0	0.0	0.0	0.6	0.7	24.2
Marys Lake	0.0	2.3	3.6	3.4	3.6	5.6	2.9	0.0	2.9	6.0	3.0	1.5	34.8
Estes	4.6	9.2	9.0	8.6	9.0	10.4	10.1	10.4	11.8	14.7	7.8	3.9	109.5
Pole Hill	7.4	15.4	15.1	14.6	15.1	23.5	18.2	25.2	24.4	25.2	18.1	8.7	210.9
Flatiron 1&2	8.9	18.4	18.0	17.1	18.1	27.0	21.8	29.0	28.0	29.0	21.6	10.2	247.1
Flatiron 3	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
Flatiron 3 pump	1.0	1.4	0.3	0.0	1.1	6.7	5.7	5.9	5.3	4.7	2.4	0.0	34.5
Big Thompson	0.0	0.0	0.0	0.0	0.0	0.0	0.6	3.9	3.8	3.9	3.1	1.2	16.5
Seminoe	4.1	4.0	4.1	4.0	3.8	4.1	19.6	22.4	25.6	22.7	22.7	21.6	158.7
Kortes	5.6	5.4	5.6	5.6	5.2	5.6	26.5	27.4	26.5	22.0	22.0	21.3	178.7
Fremont Canyon	2.8	5.9	6.1	6.1	5.8	8.4	12.0	9.5	11.4	33.6	30.8	29.1	161.5
Alcova	5.5	4.1	4.2	4.2	3.9	5.4	4.1	4.3	4.2	14.8	14.9	14.4	84.0
Glendo	0.0	0.0	0.0	0.0	0.0	0.0	5.1	11.7	12.2	25.6	20.1	9.7	84.4
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.8	3.7	3.6	3.6	3.3	21.1
Pilot Butte**	1.6	0.0	0.0	0.0	0.0	0.0	0.7	1.5	3.5	4.1	3.0	1.7	16.1
Boysen	1.1	1.7	1.8	1.8	1.7	5.8	7.7	8.5	10.5	11.9	10.8	7.4	70.7
Shoshone	1.2	1.2	0.6	1.3	1.2	1.3	1.7	2.2	2.2	2.2	2.2	2.2	19.5
Buffalo Bill	3.5	0.8	8.0	0.8	0.8	8.0	13.0	13.4	13.0	13.4	13.4	13.0	86.7
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.4	2.5	2.8	3.3	3.3	3.1	18.1
Diamond Cr. pump	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
Heart Mtn.	1.2	0.0	0.0	0.0	0.0	0.0	2.2	4.5	4.3	4.5	4.5	4.3	25.3
Yellowtail/2	20.6	25.8	26.2	25.6	23.4	25.0	39.2	78.5	93.2	96.8	49.6	45.7	549.6
Fry-Ark	1.3	2.4	2.4	2.5	3.0	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.6
CBT	23.3	43.0	44.1	42.5	43.7	57.7	45.2	65.7	74.8	87.9	61.7	34.3	623.9
North Platte	18.0	19.4	20.0	19.9	18.7	23.5	70.4	79.1	83.6	122.3	114.1	99.4	688.4
Bighorn	30.9	29.5	29.4	29.5	27.1	32.9	65.9	111.1	129.5	136.2	86.8	77.4	786.0
TOTAL GEN	73.5	94.3	95.9	94.4	92.5	116.6	185.0	259.8	292.6	350.8	264.6	212.1	2131.9
TOTAL LOAD	162.5	162.3	177.2	172.6	137.1	149.2	176.3	184.8	211.2	262.2	211.2	156.8	2163.4
SURPLUS/DEFICIT	-89.0	-68.0	-81.3	-78.2	-44.6	-32.6	8.7	75.0	81.4	88.6	53.4	55.3	-31.5

<sup>\*</sup> PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

<sup>&</sup>quot;\* PROJECTED VALUES ARE MARKETED ENERGY

Table 5

#### COLORADO-BIG THOMPSON AND FRYINGPAN-ARKANSAS PROJECTS MAINTENANCE SCHEDULE FOR WATER YEAR 2008

Item # Facility and description of outage	Begin date	End Date	Is power Generation Affected
E004 Estes Unit #2 Annual Maintenance E005 Estes Unit #1 Annual Maintenance E006 Estes Unit #3 Annual Maintenance	Mon 3/17/08	Thu 4/24/08	y
	Mon 2/4/08	Thu 3/13/08	Y
	Mon 4/28/08	Thu 6/5/08	Y
M002 Marys Lake Unit Excitation contract	Mon 10/20/08	Mon 11/17/08	у
F001 Flatiron Unit #1 Rewinding F002 Flatiron Unit #2 Available under limited capacity F003 Flatiron Unit #2 Repair and test Pressure ReliefValve vent tube F007 Flatiron Unit #3 Annual Maintenance	Wed 10/15/07	Mon 2/2/09	y
	Thu 11/08/07	Sun 10/04/09	y
	Mon 1/28/08	Fri 2/01/08	y
	Mon 1/9/08	Mon 2/18/08	N
PH001 Pole Hill Unit Annual Maintenance	Mon 10/13/08	Fri 11/28/08	y
PH004 Pole Hill Unit Excitation Contract - outage for Equipment Installation	Mon 10/13/08	Thu 11/13/08	y
BT001 Big Thompson PP Excitation CONTRACT BT002 Big Thompson shut down for winterized plant Dille Tunnel Shut down for winterization Winterize Dille Tunnel BT004 Big Thompson PP Annual Maintenance	Undetermined Fri 10/19/07 Thu 12/13/07 Undetermined	Undetermined Thu 4/10/08 Thu 4/10/08 <b>Undetermined</b>	y y N
GM001 Green Mtn Unit #1 Wicket Gate Adjustment! GM001A Spillway repair work GM002 Green Mnt Unit #1 Excitation contract GM002A Green Mtn Unit #1 Annual Maintenance GM003 Green Mnt Unit #2 Excitation contract GM003A Green Mnt Unit #2 Annual Maintenance	Mon 2/4/08 Thu 11/1/07 Mon 2/4/08 Mon 2/4/08 Mon 3/24/08 Mon 3/24/08	Fri 3/14/08 Tue 4/1/08 Wed 3/5/08 Fri 3/14/08 Fri 4/18/08 Fri 4/18/08	y N Y Y Y
Adams Tunnel Annual maintenance (dates tentative) CHFC 930 Section Annual maintenance (dates tentative) CHFC 550 Section Annual maintenance (dates tentative)	Fri 10 <sub>4/4</sub> /08	Fri <sup>411/14/08</sup>	Y
	Mon /08	Fri <sup>/1</sup> 8/08	Y
	Mon 9/12/08	Fri 0/26/08	N
ME004 Mt. Elbert Dual Unit outage, static start and CC2 Maintenance	Mon 2/11/08	Fri 2/15/07	Y
ME005 Mt. Elbert Unit #2 Annual Maintenance	<b>Mon 2/18/08</b>	<b>Fri 3/28/08</b>	Y

<sup>\*\*</sup> This list was Last updated 15-Jan-2008

# WESTERN DIVISION - PICK-SLOAN MISSOURI BASIN PROGRAM POWERPLANT DATA

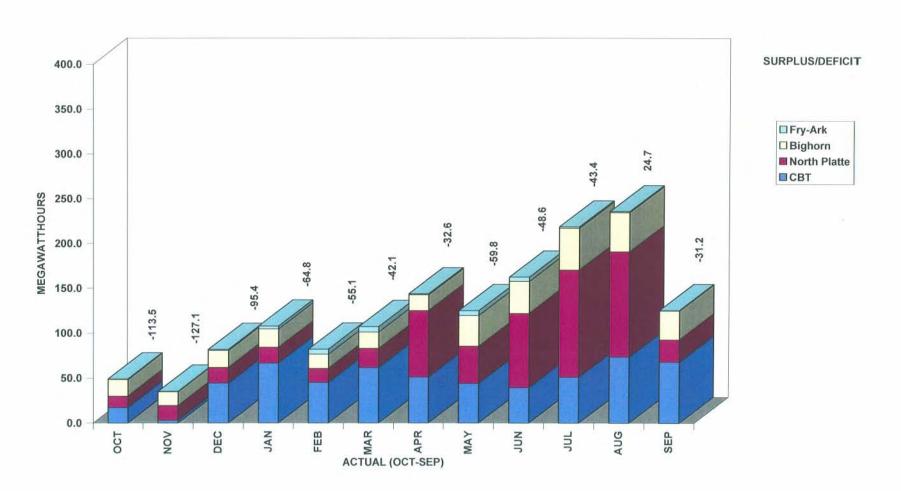
Facility	No. Units	Capacity Each Unit	Total Installed Capacity	Normal Operating Head (ft)	Output at Rated Head (ft3/s)
Green Mountain	2	13,000	26,000	192-262	1,660
Marys Lake	1	8,100	8,100	202-217	550
Estes	3	16,500	49,500	551-571	1,300
Pole Hill	1	33,250	33,250	830-838	550
Flatiron	2	43,000	86,000	1,096 - 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 Bi113/	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		

#### WESTERN DIVISION - PICK-SLOAN MISSOURI BASIN PROGRAM

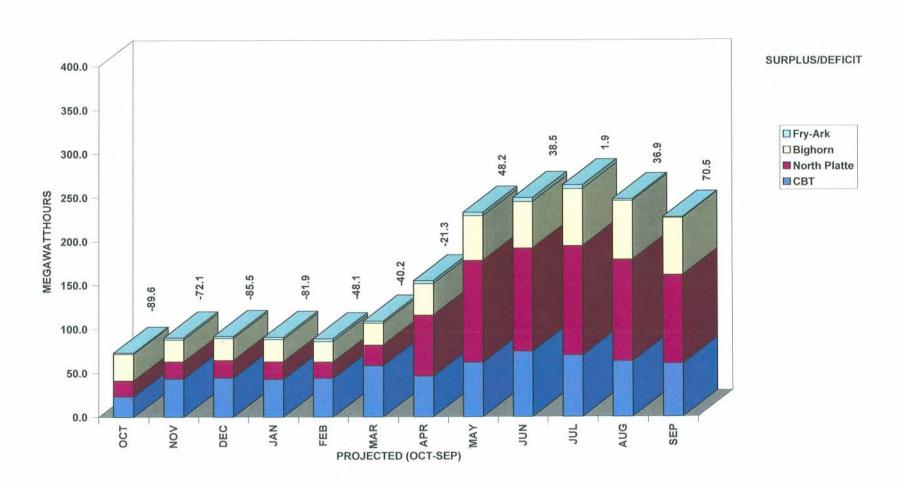
#### **PUMPING PLANT DATA**

	<u>Pumpi</u>	ng Units	<u>Plant</u>	Rating	
Facilities	No	Capacity (ft3/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

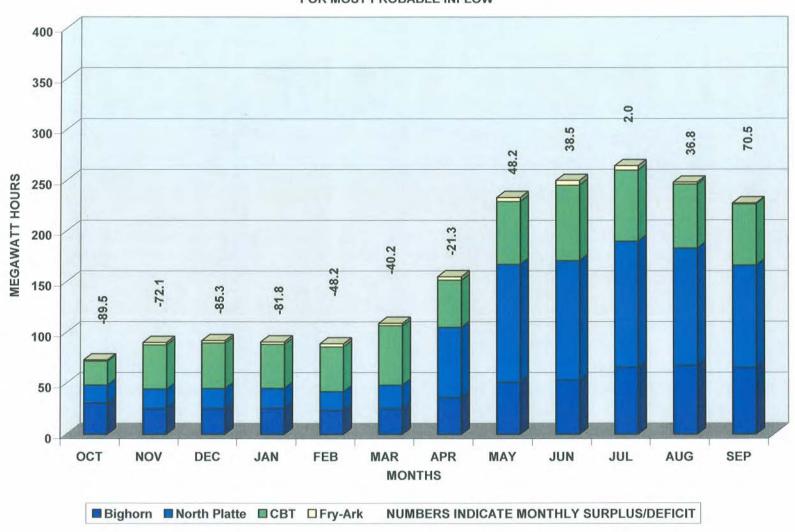
#### LAP GROSS GENERATION LESS PUMPING WATER YEAR 2007



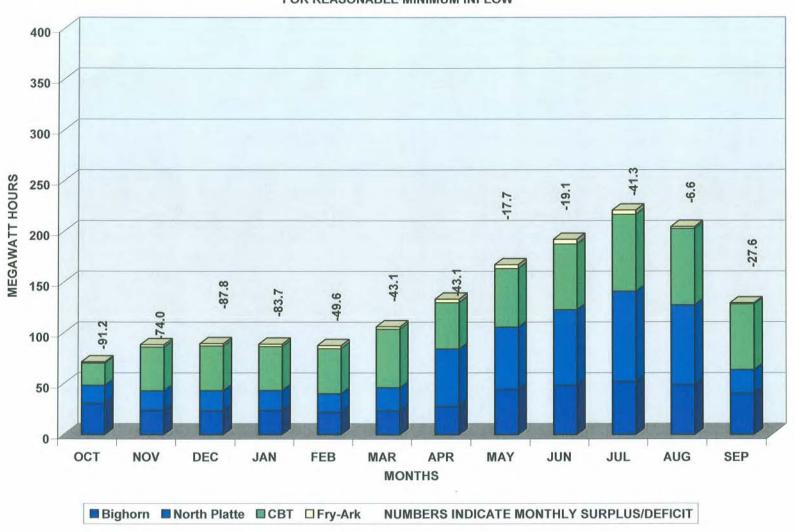
#### LAP GROSS GENERATION LESS PUMPING WATER YEAR 2008



## PROJECTED LAP GROSS GENERATION LESS PUMPING WATER YEAR 2008 FOR MOST PROBABLE INFLOW



#### PROJECTED LAP GROSS GENERATION LESS PUMPING WATER YEAR 2008 FOR REASONABLE MINIMUM INFLOW



## PROJECTED LAP GROSS GENERATION LESS PUMPING WATER YEAR 2008 FOR REASONABLE MAXIMUM INFLOW

