DESCRIPTION OF THE COLORADO-BIG THOMPSON PROJECT

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

The C-BT spreads over approximately 250 miles in the state of Colorado. It stores, regulates, and diverts water from the Colorado River west of the Rocky Mountains, providing supplemental water for irrigation of 720,000 acres of land east of the Rocky Mountains. It also provides water for municipal and industrial use, hydroelectric power, and water-oriented recreation.

Major features of the C-BT includes; dams, dikes, reservoirs, powerplants, pumping plants, pipelines, tunnels, transmission lines, substations, and other associated structures (Appendix B - 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 (NCWCD) apportions the water used for irrigation to more than 120 ditches and 60 reservoirs. Twenty-nine communities receive municipal and industrial water from the C-BT. The Western Area Power Administration 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 system under the Continental Divide.

Western Slope System

The C-BT's storage facilities on the west slope are Shadow Mountain Reservoir (Shadow Mountain Lake), Grand Lake, and Granby Reservoir (Lake Granby) located on the Colorado River near the city of Granby. The system also includes Willow Creek Reservoir located on Willow Creek, a tributary to the Colorado River below Lake Granby, and Green Mountain Reservoir located on the Blue River, a tributary to the Colorado River.

Shadow Mountain Reservoir captures and stores mountain runoff from the Colorado River and pumped water from Granby Reservoir. Shadow Mountain Lake connects with Grand Lake to make a single body of water from which diversions are made into Adams Tunnel to begin the journey to the eastern slope system. Flows are released from Shadow Mountain Reservoir to the Colorado River where it is then captured in Granby Reservoir.

Granby Reservoir, completed in 1950, collects and stores most of the water supply for the C-BT. The reservoir stores flows 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 Farr Pumping

Plant, located on Lake Granby, lifts the water 99 feet to Granby Pump Canal where it is conveyed 1.8 miles back to Shadow Mountain Reservoir. The Farr Pumping Plant has three units with a combined installed capacity of 1,200 ft^3/s. The reservoirs spillway is controlled by two radial gates, with a total release capacity of 11,500 ft^3/s. Releases are made from Lake Granby to the Colorado River in order to maintain the river as a live fishing stream.

Completed in 1953, Willow Creek Reservoir has a total storage capacity of 10,600 acre-feet. The uncontrolled spillway has a maximum flow capacity of 3,200 ft^3/s. The Willow Creek Pumping Plant lifts the water 175 feet into the Willow Creek Feeder Canal where it flows by gravity back into Lake Granby. The Willow Creek Feeder Canal has a capacity of 400 ft^3/s.

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 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 Senate Document 80, 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. 91CW247, Colorado Water Division 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, then to other uses based on a priority system or on specific agreements.

Eastern Slope System

The C-BT's storage facilities on the east slope are the East Portal Reservoir, Marys Lake Reservoir (Marys Lake), and Lake Estes, which is located on the Big Thompson River. The system also includes, Pinewood Reservoir, Flatiron Reservoir, Carter Lake, and Horsetooth Reservoir. There are also several locations for power generation which include Marys Lake Powerplant, Pole Hill Powerplant, Flatiron Powerplant and Pump Turbine, and the Big Thompson Powerplant.

Flows emerge from the Adams Tunnel on the east slope into the East Portal Reservoir. The East Portal Reservoir is located on the Wind River, a tributary to the Big Thompson River. Flows are released from East Portal Reservoir into a siphon where it travels across Aspen Creek Valley and through the Rams Horn Mountain. At this point, water enters a steel penstock and falls 205 feet to Marys Lake Powerplant, located on Marys Lake. Marys Lake provides afterbay and forebay capacity for re-regulating the flow. The water is then conveyed from Marys Lake to Lake Estes Powerplant, located on Lake Estes, through Prospect Mountain Conduit and Prospect Mountain Tunnel.

Lake Estes, located on the Big Thompson River, was completed in 1949 and is formed by Olympus Dam. Lake Estes serves as an afterbay for the Estes Powerplant by providing regulating capacity for power generation purposes. Lake Estes has a total capacity of 3,100 acre-feet and stores inflows from the Big Thompson River. The spillway has five radial gates with a

total discharge capacity of 21,200 ft^3/s. The center gate has been automated and is operated remotely from the Casper Control Center (CCC). The Estes Powerplant has three hydroelectric units with a total capacity of 45 megawatt and a combined flow capacity of 1,300 ft^3/s. Release can be made from Lake Estes to the Big Thompson River.

Water from Lake Estes and the Big Thompson River flows are conveyed by Olympus Siphon and Tunnel (550 ft^3/s capacity), 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 Reservoir, and Bald Mountain Pressure Tunnel, and eventually drops 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 Reservoir 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, Saint Vrain Creek, and Boulder Creek Supply Canal. The Boulder Creek Supply Canal 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 below the river and highway. Water from the Big Thompson River can be diverted into the Charles Hansen Feeder 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 Big Thompson River are dropped through a chute from the feeder canal ahead of the siphon crossing, or are passed through the Big Thompson Powerplant.

Horsetooth Reservoir is located west of Fort Collins and is created and enclosed by two natural hogback ridges, Horsetooth, Soldier, Dixon, and Spring Canyon Dams and Satanka Dike. 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. The Dixon Feeder Canal supplies water for the irrigated area that was cut off from its original water supply when Horsetooth Reservoir was constructed. 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 Charles Hansen Supply Canal supplies the city of Greeley municipal water works. Water is delivered to the Cache la Poudre River to replace, by exchange, water diverted upstream to the North Poudre Supply Canal, which conveys water to the North Poudre Irrigation Company System.

SUMMARY OF OPERATIONS FOR WATER YEAR 2011

The Northern Colorado mountains experienced snowpack of historic proportions during water year 2011 (WY 2011). For the C-BT it represented the highest snowpack totals as well as the highest runoff volume in the history of the project. Many locations across Northern Colorado also reported record snowpack readings. Alternate operational plans were required for some of the C-BT facilities in order to properly manage the tremendous volumes of runoff as well as peak flows. All C-BT facilities assisted in preventing potential damages due to the record year.

The C-BT operations during WY 2011 were driven by impressive snowpack and high runoff volumes. The planning stages for spring and summer operations began in early January and continued throughout the spring and early summer. The expected high releases and reservoir elevations at some facilities required levels of coordination and public outreach perhaps never seen before in C-BT history. The Annual Operating Plan (AOP) was revised monthly during the fall, winter and spring to accommodate the increasing snowpack and expected high runoff.

Snow began to fall over the mountains in late October 2010 and continued through the winter months. Through the entire winter season the snowpack was measured to be at average or above average over most locations within the C-BT region. Temperatures over the mountains remained relatively cold until late May and early June, preventing snowmelt at higher elevations. On the west slope, snowstorms continued to hit the mountains adding to the snowpack. Some locations experienced snowstorms as late as June and many locations recorded snow depths several inches deeper than their previous all-time records. The cool temperatures over the high country kept the snowpack intact until late June at most locations, where at lower elevations the snow began to melt much earlier. By late June, the runoff began to increase rapidly which resulted in most locations recording their highest peak inflow in July. On the east slope, the snowpack situation was similar. Record snowpack during winter months at many locations was followed by more snow and cool temperatures in the spring. Temperatures began to warm up slightly at lower elevation by late April, but the mountains remained cold, preventing the snow at higher elevations from melting too quickly. Significant runoff on the east slope materialized in mid-May and remained high throughout the spring and summer, with peak flows occurring July.

WY 2011 operations began with the Pinewood Reservoir nearly empty for the fall maintenance season at Flatiron Powerplant on the east slope. The butterfly valve seals replacement project at the Bald Mountain valve structure for the Flatiron Powerplant penstocks had to be drained completely in order to provide a dry and safe work environment. Therefore, Pinewood Reservoir remained empty from October 1, 2010, through late December 2010 and consequently Olympus Tunnel was not in operation during this time period. Only C-BT water needed for deliveries down the Big Thompson River was brought through the Adams Tunnel during October 2010.

With parts of the C-BT not in operation, the high water surface elevation at Granby Reservoir became a concern as winter approached. The high water surface elevation had kept the siphon under highway 34 submerged throughout early fall. By November, it became necessary to lower Granby Reservoir's water surface elevation enough to protect the siphon from freezing during the winter. The C-BT began diverting approximately 420 ft^3/sec during the first few days of

November 2010. With Pinewood Reservoir completely drained and the Olympus Tunnel not in operation, it became necessary to move water down the Big Thompson River canyon and recapture it at the Dille Tunnel diversion structure. After recapture, the water was redirected to Horsetooth Reservoir for storage. Once Granby's water surface elevation lowered and temperatures dropped below freezing in late November, all the water diversions through Adams Tunnel and Dille Tunnel were suspended.

As soon as all the maintenance work along the east slope facilities of the C-BT ended, the diversions of water from the west slowly resumed. The Pinewood Reservoir storage content was slowly increased while engineers tested the new seals for the Bald Mountain valves. By late December, the Adams Tunnel was once again moving 550 ft^3/sec. except for a couple of temporary interruptions, the flow through the Adams Tunnel was kept at 550 ft^3/sec from late December until early June.

Pumping to Carter Reservoir also began in late December and continued through the winter and spring months. Both Carter and Horsetooth Reservoirs water surface elevations continued to rise, steadily, during those months. With Granby Reservoir's water surface elevation higher than normal for the season and the accumulating snowpack increasing to record levels, the annual maintenance for the Charles Hansen Feeder Canal was delayed until the fall.

West slope water continued to flow uninterrupted through Adams Tunnel in an attempt to lower Granby Reservoir and Willow Creek Reservoir water surface elevations in preparation for the upcoming runoff season. By early spring it was clear that the late spring and summer season was going to produce record volumes of runoff. It was also clear that releases through the spillway at Granby Reservoir were going to be significant. Pre-emptive releases at both Granby and Willow Creek Reservoir's began in early April. The releases were carefully increased following the runoff and inflow patterns. Granby Reservoir's content was 355,000 acre-feet by the middle of May, with approximately 185,000 acre-feet of storage capacity available. The expected runoff volume for the April through July period was over 300,000 acre-feet. Meetings were held at Grand County in April to alert the public about the likelihood of a significant spill and the potential for high releases. Encroachment into the flood plain had become a concern for the Eastern Colorado Area Office and NCWCD, not just below Granby Reservoir but also below Willow Creek Reservoir, where another significant spill was also expected.

Runoff at the Blue River watershed began in early May and by then Green Mountain Reservoir was holding only 50,616 acre-feet in storage, lower than normal for that time of the year. The reservoir water surface elevation was lowered because of the impending high runoff and the need for extra storage capacity to manage the releases during peak runoff season in a safe manner. The low water surface elevation created 103,000 acre-feet of empty space in the reservoir. With the inflow forecasted at 475,000 acre-feet between April and September, good planning and preparation were critical. The reservoir's low water surface elevation created concerns by recreationists during the spring months as this was beginning to impact boating and fishing.

Green Mountain Reservoir's start-of-fill for WY 2011 was not declared until May 13. But once the start-of-fill was declared the reservoir level began to rise rapidly. As predicted, by late May the high inflow pushed the water surface up to more seasonal levels. By May 31, the reservoir

storage content was up to 70,000 acre-feet. The 103,000 acre-feet of empty space, along with pre-emptive releases proved to be sufficient for Green Mountain to limit flows below the dam to 3,300 ft^3/sec, when at times the actual inflow was several hundred ft^3/sec higher. There were no flood damages attributed to Green Mountain operations in WY 2011.

Also in early May, with Carter Reservoir at almost full capacity and Horsetooth Reservoir water surface elevation getting significantly high, a decision was made to deliver non-charge C-BT water. For a brief period in early May non-charge C-BT water was delivered from Horsetooth and Carter Reservoirs, as well as from the Trifurcation at the Big Thompson River canyon mouth. A combined total of 27,883 acre-feet was delivered out of the three locations. Unfortunately, the Big Thompson Powerplant could not take full advantage of these unexpected deliveries because the powerplant was unavailable at the time due to maintenance and testing. The powerplant did not become available until May 10. The wasteway was used to deliver most of the non-charge water from the Trifurcation. The non-charge releases from both reservoirs pushed their respective content volume down for the first time since early winter. Non-charge deliveries ended on May 11. Once the non-charge deliveries ended both, Carter and Horsetooth Reservoir water surface elevations began to rise again.

By mid-June, temperatures began to warm triggering increases in runoff throughout C-BT. With the impending spills at Willow Creek and Granby Reservoirs as well as the flooding potential along the Colorado River, it was imperative to continue moving C-BT water through the Adams Tunnel for as long as conditions along the Big Thompson River allowed. The Adams Tunnel was kept running at full capacity through May and early June. By June 7, the C-BT began capturing and storing east slope native water and therefore the flow through Adams Tunnel was reduced significantly. The diversions were reduced to accommodate the native water flow through Olympus Tunnel. The Big Thompson River remained a free river for the rest of June and most of July during which time the C-BT continued to capture and store east slope water.

On the west slope, releases from Willow Creek reached over 1,300 ft^3/sec in June, the highest in history. Meanwhile at Granby, the radial gates at the spillway were open 5 feet, clear above the water surface, before the water surface even reached the crest of the spillway. The operation allowed free-flow over the spillway for several weeks. As the inflow to Granby increased, the reservoir's water surface eventually reached the bottom of the gates turning the spillway discharge from free-flow to a submerged flow. The Bureau of Reclamation's Technical Center as well the Great Plains Regional Office was notified of this operation previous to opening the gates. The releases over the spillway at Granby combined with the valve discharge eventually reached a maximum flow of 2,255 ft^3/sec from June 24 to June 26. This discharge was the highest release from Granby in more than a decade. Some properties embedded in the flood plain downstream from both reservoirs were slightly impacted but no damages were reported.

On the east slope, the highest daily average flow recorded for the Big Thompson River above Lake Estes was 1,444 ft^3/sec on July 1, with a peak hourly reading of 1,740 ft^3/sec. The highest release from Olympus Dam to the Big Thompson River was 908 ft^3/sec recorded on June 7, which were made through the dam's three radial gates. There was no flooding reported above or below Lake Estes this summer.

The Olympus Tunnel was able to move almost 30,000 acre-feet of east slope water between June and July, which kept Pole Hill Powerplant and Flatiron's Unit #1 generating at full capacity the entire time. Meanwhile, Dille Tunnel diversion was able to catch a total of over 7,000 acre-feet of east slope native water. A total of 33,534 acre-feet of native water was stored at Horsetooth Reservoir while 4,683 acre-feet was stored at Carter Reservoir.

Despite the record snowpack and the high runoff, the C-BT operations were able to implement programs such as the Grand Lake water clarity initiative as part of its operations. After months of deliberation, with the C-BT system almost 100 percent full by the middle of July and no demands for project water given the abundant water supply, a final decision was reached to curtail diversions from the west as well as pumping from the Farr Plant for several weeks. The operation provided an opportunity to observe the impact on water clarity at Grand Lake. Pumping at the Farr Plant was suspended for 6 weeks to meet the water clarity program's request for the year.

Other operations were also very successful in WY 2011. Recreation benefited from full reservoirs, as well as from healthy flows along the Colorado and Arkansas Rivers. The C-BT's flexibility also allowed the system to capture over 38,218 acre-feet of priority water from the east slope. Priority water substituted skim water while producing almost as much power generation as a regular skim operation. A description of the skim operation is included on page 43.

A total of 245,200 acre-feet of water was diverted from the west slope via the Adams Tunnel in WY 2011. Despite several weeks of minimal diversions in October and December, along with several weeks capturing east slope priority water during the summer, and more than 5 weeks of limited diversions due to the water clarity operation at Grand Lake, by the end of the water year the Adams Tunnel had diverted 108 percent of the 30-year average. Also, with plenty of water flowing down the Big Thompson River the demands for C-BT water did not materialize until August.

By the end of WY 2011, Horsetooth Reservoir storage content had dropped from 152,684 acre-feet on July 24 to 109,274 acre-feet by September 30, which was the highest since 1999. Meanwhile, Carter Reservoir had dropped from a full capacity in early June to approximately 72,572 acre-feet by September 30, its highest since 1999. Over on the west slope, Granby Reservoir was holding 499,000 acre-feet on September 30, 2011. The maximum storage content achieved by the C-BT system during WY 2011 was 792,000 acre-feet on July 28. That combined content did not include parts of the collection and conveyance systems. The collection and conveyance systems can add another 34,000 acre-feet at any given time.

The initial quota for C-BT water set by the NCWCD in November was 50 percent or 155,000 acre-feet. The quota was increased in April to 80 percent or 248,000 acre-feet. The project ended the water year delivering a total of 205,198 acre-feet from which 130,770 acre-feet was C-BT water, 40,003 acre-feet of C-BT accounted as carry-over from the previous water year, 13,459 acre-feet of C-BT water from the regional pool, 18,023 acre-feet of Windy Gap Project water, and 2,943 acre-feet for replacements. Potential carryover volume for WY 2012 is 60,644 acre-feet.

The total C-BT power generation for the WY 2011 was above average with 690.9 gigawatt hours (GWh) produced, representing 115 percent of the 30-year average. This total includes power generated at Green Mountain, Marys, Estes, Pole Hill, Flatiron, and Big Thompson Powerplants. All the powerplants in the system, with the exception of the Big Thompson Powerplant, produced over 110 percent of the 30-year average. The Big Thompson Powerplant produced 96 percent of the 30-year average in WY 2011.

A total of 15,391 acre-feet was skimmed via the Olympus Tunnel for power generation purposes while 45,347 acre-feet was skimmed via the Dille Tunnel. Water skimmed via the Olympus Tunnel allows power generation at Pole Hill Powerplant, as well as Flatiron and Big Thompson powerplants. Water skimmed via the Dille Tunnel can only be used to augment power generation at the Big Thompson Powerplant. All the water diverted for skim purposes is returned to the Big Thompson River at the Charles Hansen Feeder Canal Trifurcation via the Big Thompson Powerplant or wasteway.

WATER YEAR 2011 OPERATIONS

Green Mountain Reservoir

The Green Mountain Reservoir contributing watershed experienced a record snowpack during WY 2011. The cold spring temperatures kept the snowpack intact during April into early May, particularly at higher elevations. The snowstorms kept adding to the already deep snowpack, even as late as the end of May.

Green Mountain's lowest reservoir elevation for WY 2011 was 7,881.19 feet and was reached on May 14. The storage content at that elevation was 50,616 acre-feet. By contrast, on May 14 of the previous year the reservoir content was approximately 88,000 acre-feet or elevation of 7,913 feet. The low water surface elevation created concerns among recreationists.

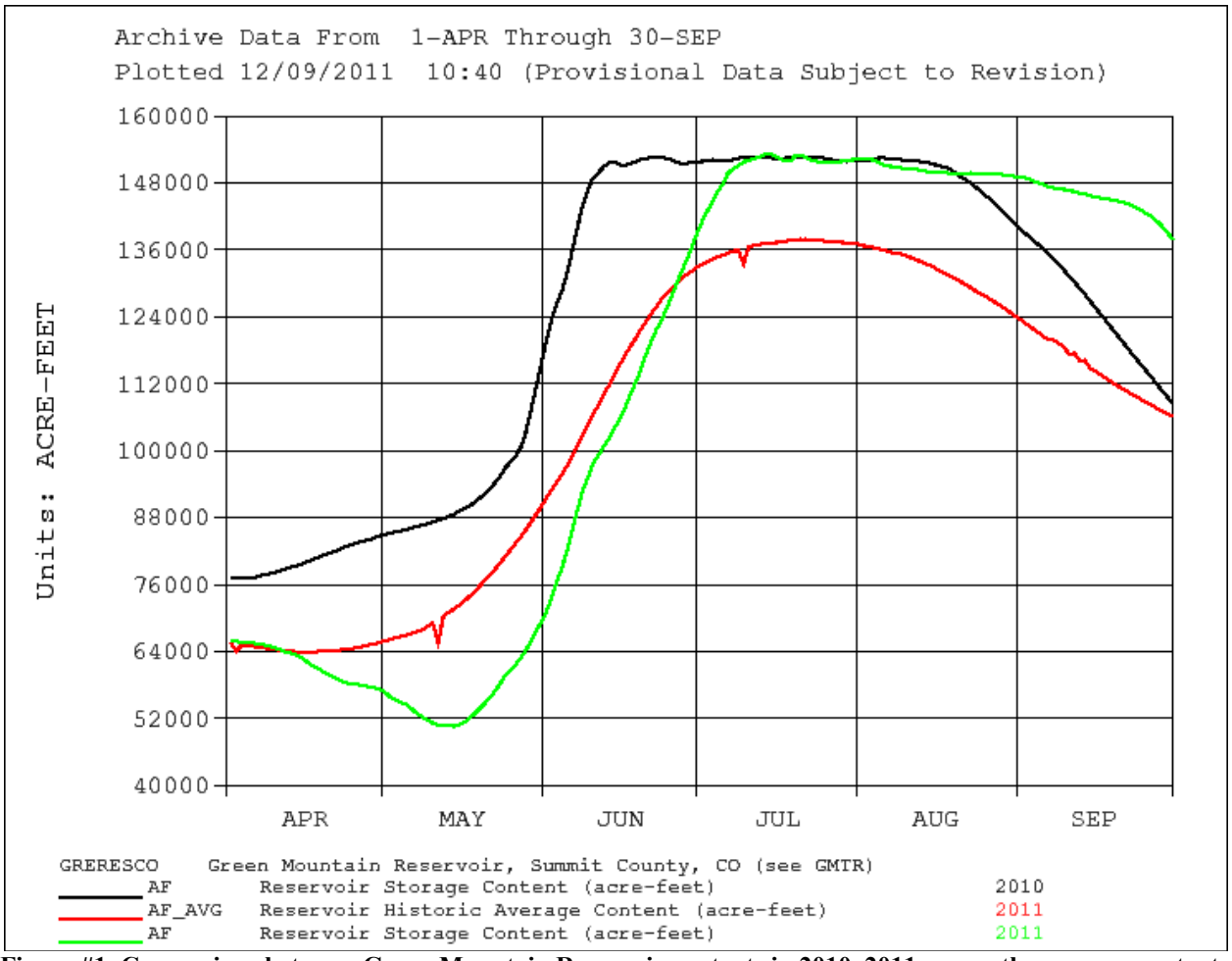

Figure #1: **Comparison between Green Mountain Reservoir contents in 2010, 2011 versus the average content.**

By early May, the meltdown began at lower elevations, and from that point on the runoff climbed at a steady pace. Releases from Dillon Reservoir began to increase in early May adding to the inflow to Green Mountain. By late May, the computed inflow to Green Mountain had reached over 2,000 ft^3/sec and the reservoir's water surface elevation was rising rapidly. Inflow to Green Mountain continued to climb through June, as releases from Dillon remained near or above 1,000 ft^3/sec the entire month. The snow at higher elevations also began to melt at a fast pace in early June.

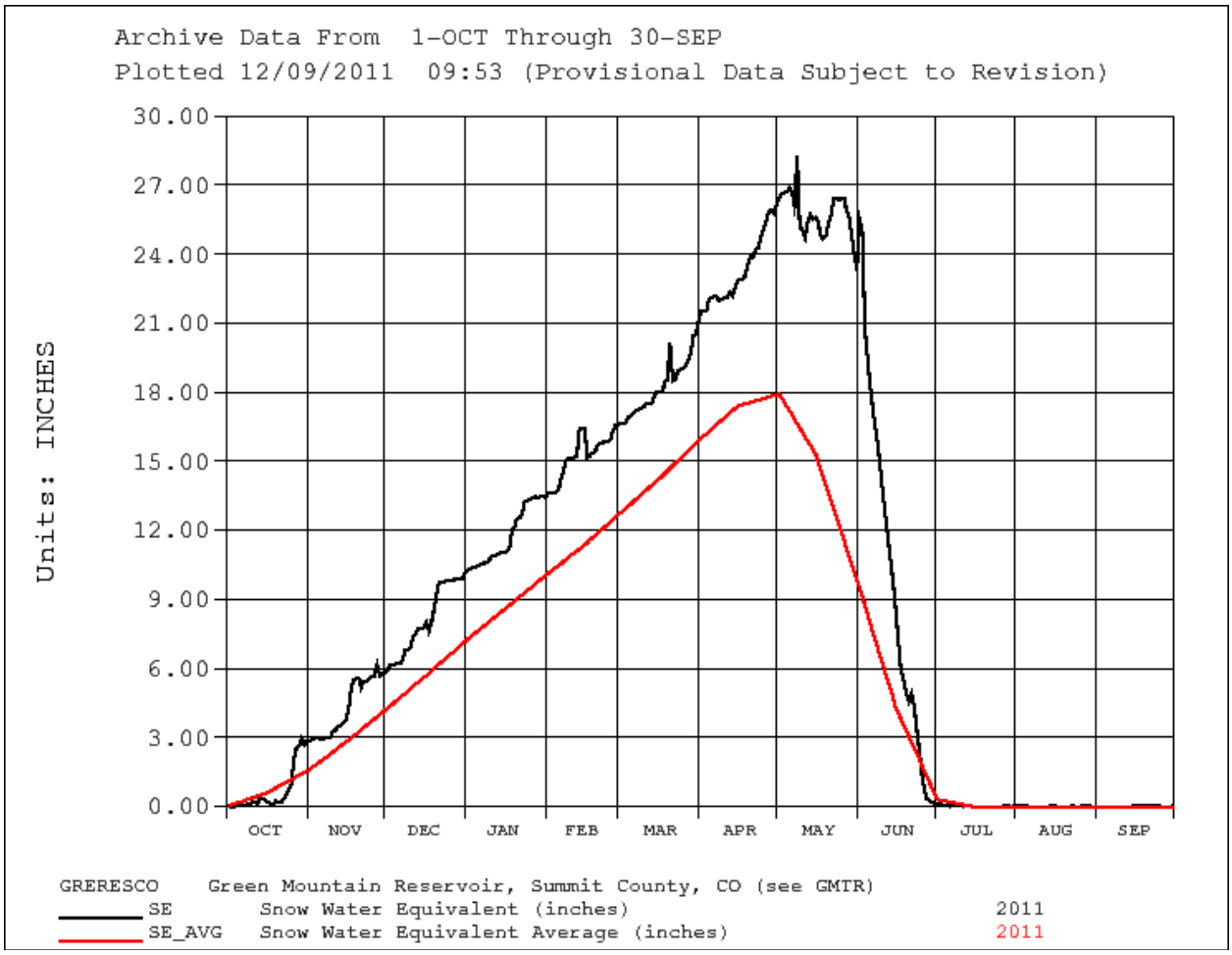

Figure #2: **Snow-water equivalent versus snow-water equivalent 30-year average for the Green Mountain Reservoir drainage area.**

Due to the very large snowpack, start of fill for Green Mountain Reservoir was declared as May 13, 2011, with the reservoir holding 50,786 acre-feet in storage, well below its historic 65,000 acre-feet start of fill target. Pursuant to the State Engineers Office's interim policy, "Administration of Green Mountain Reservoir for 2011" of May 4, 2011 (Attachment B), Green Mountain Reservoir achieved a "paper fill" on June 9, 2011. On that date, Denver Water and Colorado Springs Utilities (Cities) owed Green Mountain Reservoir 10,627 acre-feet of water for their out-of-priority diversions. A provision of the interim policy allowed Green Mountain Reservoir to continue storing its inflow under a 1955 priority date after "paper filling" to reduce the amount of water owed by the Cities.

Under this provision, Green Mountain Reservoir was able to store sufficient water by June 14 to entirely eliminate the amount owed by the Cities.

By taking advantage of free river conditions, Green Mountain Reservoir was able to continue storing some inflow after June 14, attaining a maximum physical content for the year of 153,153 acre-feet on July 14. With the reservoir achieving a "paper fill" this year, the 52,000 acre-feet Colorado-Big Thompson Project replacement pool, the 5,000 acre-feet Silt Project reservation, the 66,000 acre-feet 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 2011. 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 2011, the water surface elevation remained above 7880.0 feet during the irrigation season, and therefore, the drawdown rate limitations were never triggered.

While the interim policy requires that upstream depletions by Green Mountain beneficiaries junior to Green Mountain Reservoir be charged against the "paper fill" of Green Mountain Reservoir, those depletions were not charged against this year's HUP allocation. Therefore, the entire 66,000 acre-feet HUP allocation remained available when the reservoir achieved its "paper fill" on June 9. Between June 10 and June 14, while Green Mountain Reservoir was storing inflow under a 1955 priority date pursuant to the interim policy, a total of 22 acre-feet was used to augment the water rights of HUP beneficiaries. With the very wet conditions and the lack of a main stem call, no releases to augment the water rights of HUP beneficiaries downstream of Green Mountain Reservoir were necessary after June 14.

HUP surplus releases began on September 2 and averaged approximately 50 ft^3/sec through September 7 when they were temporarily terminated due to increasing natural flows in the basin. The HUP surplus releases resumed on September 23 as drier conditions returned to the basin and continued through October 30 when they were terminated for the year. During this period, HUP surplus releases varied between 8 ft^3/sec and 806 ft^3/sec, averaging about 500 ft^3/sec. HUP surplus releases totaled 37,132 acre-feet in 2011, with all 37,132 acre-feet being released under the Municipal / Recreation Contract and none being attributable to the Grand Valley Powerplant. Together, the release for HUP beneficiaries and the HUP surplus release totaled 37,154 acre-feet in 2011. This resulted in an HUP balance of 28,846 acre-feet on October 31.

Operations at Blue River, Dillon, and Green Mountain Reservoirs during WY 2011 are summarized in Table 2, Appendix B. Gross generation at the Green Mountain Powerplant totaled 78,000,000 kilowatt-hours during WY 2011. That total was 150 percent of the 30-year average.

Willow Creek Reservoir

Similar to the Blue River, the Willow Creek contributing watershed also experienced a record snowpack during the winter and spring months of WY 2011. WY 2011 was the wettest year on record for the Willow Creek Reservoir area. The above average snow-water content resulted in

an April-July most-probable runoff forecast of 86,000 acre-feet or 179 percent of average. Preparations for a record runoff season began early. Pre-empted releases began as early as the middle of March. The reservoir elevation was lowered to almost 8,092.0 feet, a storage content of just below 3,200 acre-feet (Illustrated in Figure #3). Improvements to the channel below the spillway were completed in the early spring, ahead of the runoff season. Close coordination between NCWCD, ECAO, local officials, and property owners directly below the dam, along with other federal agencies such as the United States Fish and Wildlife Service, National Weather Service, and the United States Geological Survey, also began before spring arrived. Figure #4 compares the 30-year average snow-water equivalent for the drainage area around Willow Creek Reservoir and the measured snow-water equivalent during WY 2011.

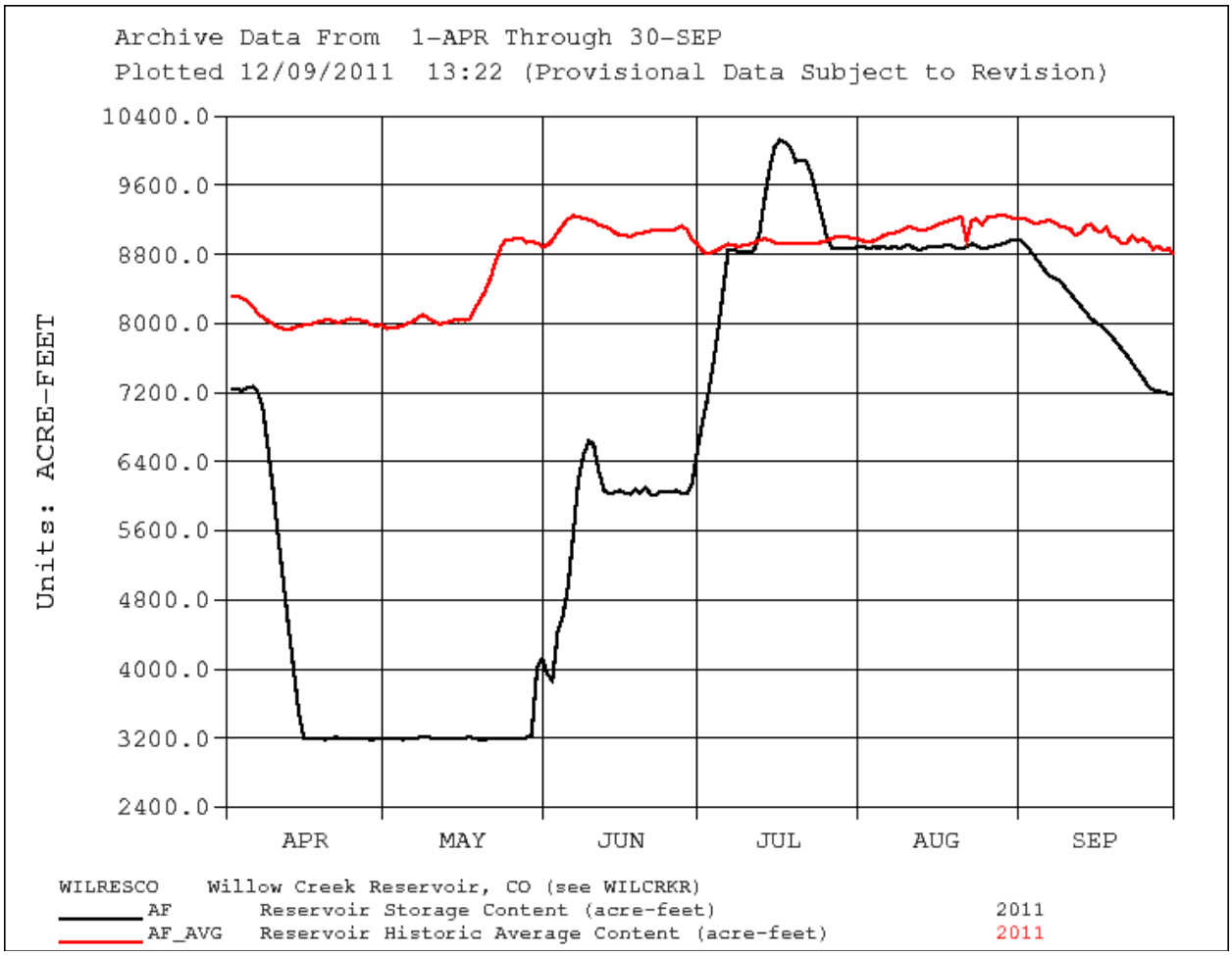

Figure #3: **Comparison between Willow Creek's Reservoir content in WY 2011 versus the average content.**

Releases from Willow Creek reached over 1,300 ft^3/s in early June. The highest release for the year was 1,350 ft^3/s on June 8, the highest in C-BT history. The peak of the inflow was recorded on June 7, a daily average flow of 1,651 ft^3/s. Between May 29 and June 14, 2011, the inflow to Willow Creek continually exceeded 1,000 ft^3/s. All the inflow to Willow Creek Reservoir was passed downstream through the outlet work gates. The uncontrolled spillway was never used during WY 2011. There were no incidents reported due to the increased releases. The total

inflow for the water year was estimated at 139,100 acre-feet, or 232 percent of average. The total volume of water spilled from Willow Creek during WY 2011 was 130,445 acre-feet. The main reason for the spill was system capacity. The availability of east slope water and the water clarity operation at Grand Lake were also contributing factors. With Granby also spilling water there was no reason to run the pumps and move water from Willow Creek Reservoir to Granby Reservoir.

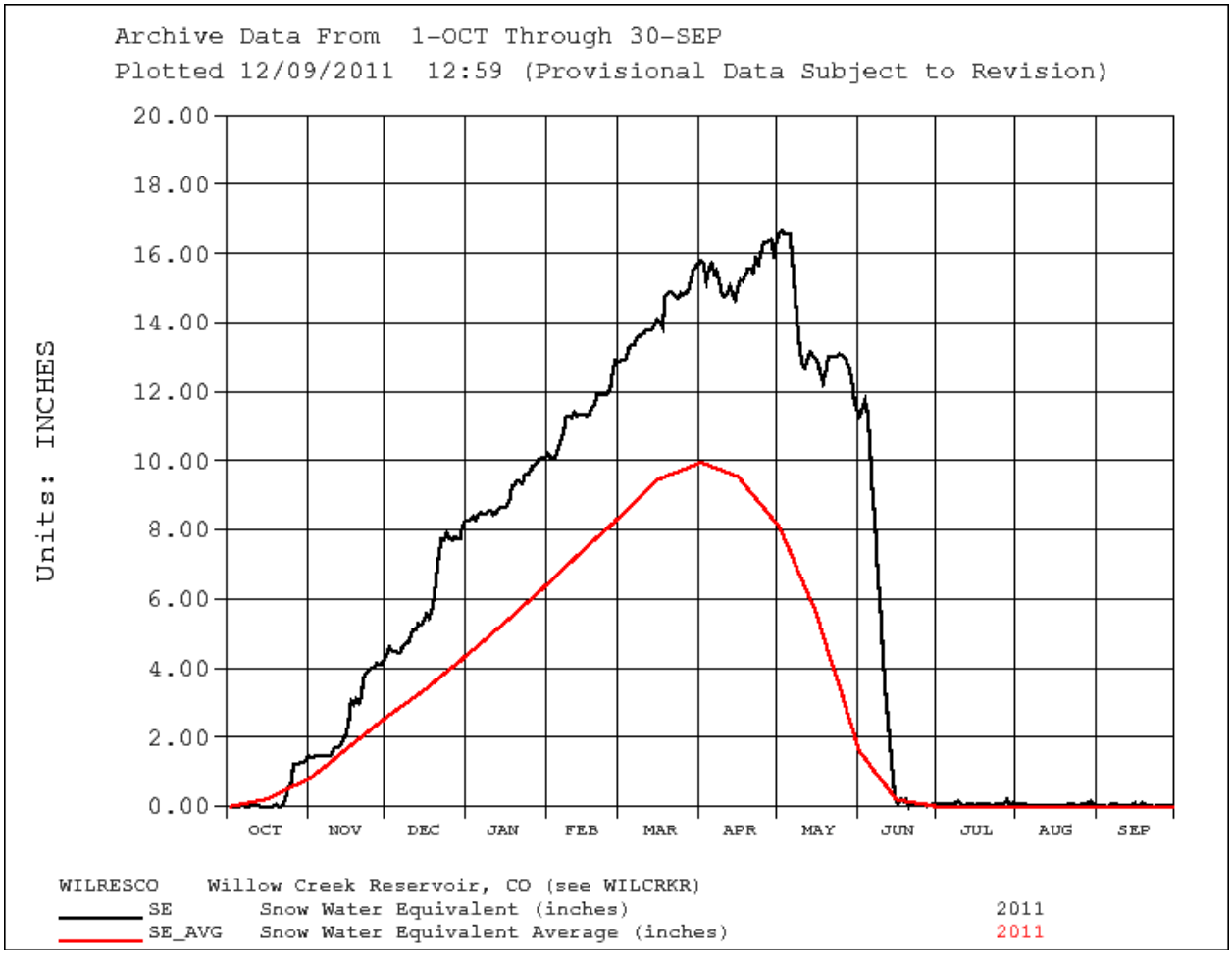

Figure #4: **Snow-water equivalent versus snow-water equivalent 30-year average for the Willow Creek Reservoir drainage area.**

Granby Reservoir

Granby Reservoir's carryover content going into WY 2011 was 492,044 acre-feet, or 130 percent of the 30-year average for October 1. The reservoir level began to drop during the summer of WY 2010 and continued to decline throughout the fall and winter months. By the middle of May, the reservoir content had dropped to 355,107 acre-feet. Diversions through the Adams Tunnel were kept at full capacity, with only minor interruptions, from late December 2010 through early June 2011.

Lake Granby's began the WY 2011 with above-average snowpack, and that trend continued through the winter and spring months. Similar to other sections of the C-BT the snowpack for the watershed remained well-above average until July. The most-probable runoff forecast for April-July predicted 313,000 acre-feet of inflow or 160 percent of average. Given the high runoff expectation pre-emptive releases began in March. Between April and June, a series of spring storms added to the already above-average snowpack. The May through July forecast was updated and the most-probable forecast was increased to 317,000 acre-feet for the remaining 3 months of runoff. A series of snow storms continued to add to the snowpack well into June. Figure #5 compares average and recorded snowpack conditions for the drainage area around Granby Reservoir during WY 2011.

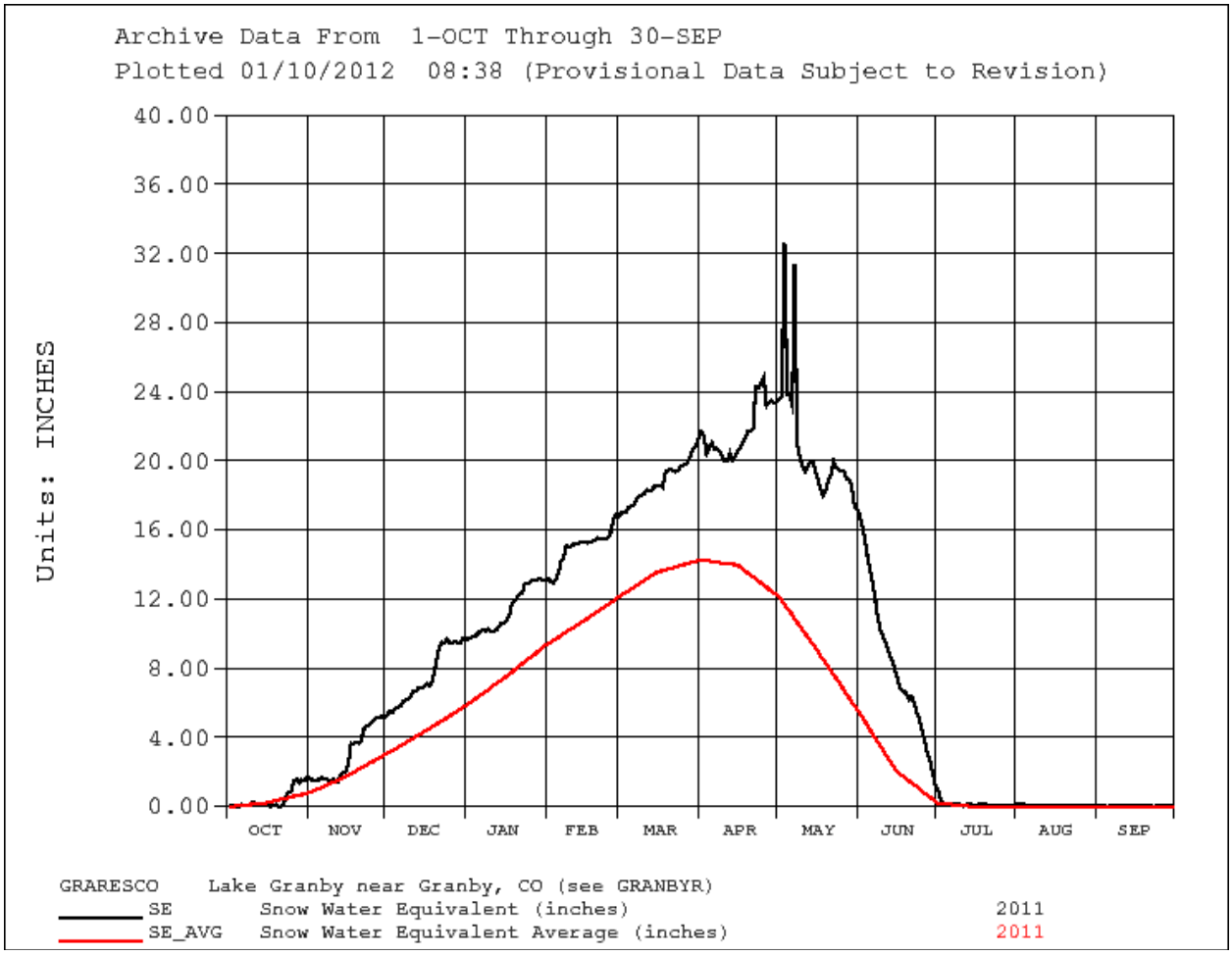

Figure #5: **Snow-water equivalent versus snow-water equivalent 30-year average for the Granby Reservoir drainage area.**

The high carryover volume combined with the expected record runoff for the season forced NCWCD and ECAO to continue pre-emptive releases in April. As inflow to the reservoir began to rise, releases were also steadily increased. Significant water discharges from Granby Reservoir continued into the summer months. Releases through the outlet works and the spillway were as high as 2,255 ft^3/sec. This flow was recorded at the Colorado River gage near Granby on June 24. The peak release flow as well as several other flow regimes were confirmed by measurements made by the United States Geological Survey. A total of 182,561 acre-feet of

water was spilled from Granby during WY 2011. The main reason for the spill was system capacity. The availability of east slope water and the water clarity operation at Grand Lake were also contributing factors. Inflow computations for the runoff season determined that the total inflow to Granby had been 416,300 acre-feet or 212 percent of average. The reservoir water surface reached elevation 8279.0 feet on August 8, the highest of the year. Figure #6 illustrates the storage content for Granby Reservoir in WY 2011 compared to the average content based on the historical records.

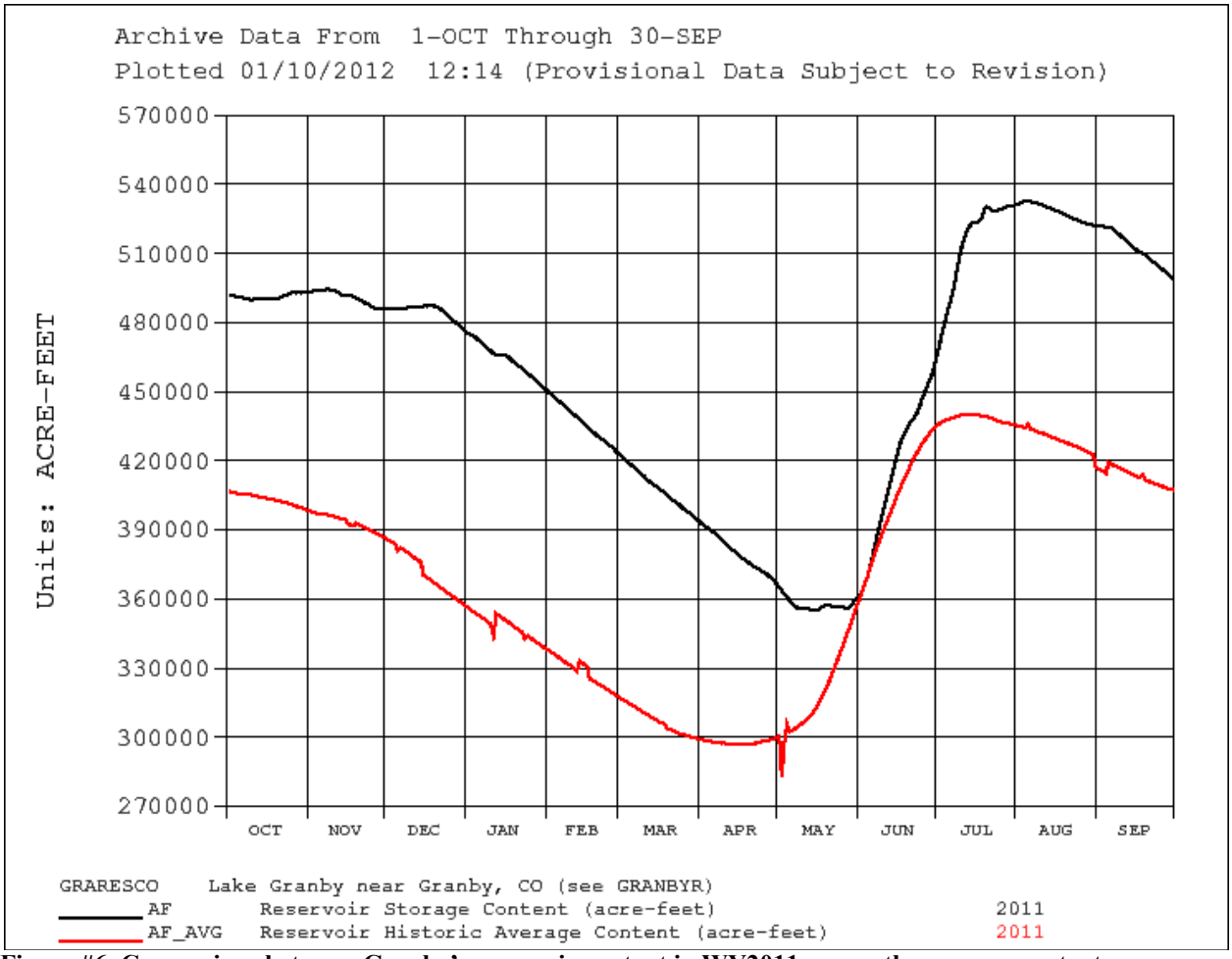

Figure #6: **Comparison between Granby's reservoir content in WY2011 versus the average content.**

Granby Reservoir finished the WY 2011 with 498,974 acre-feet in storage, which represents 114 percent of the 30-year average. Total precipitation during WY 2011 for the Granby Reservoir watershed was 23.13 inches or 133 percent of average. The 30-year average precipitation for the watershed is 17.35 inches. The highest daily average natural inflow to Lake Granby was 4,053 ft^3/s recorded on July 1. This inflow included the inflow to Granby, Grand Lake, and Shadow Mountain Reservoir.

Grand Lake/Shadow Mountain Reservoir

Operations at Grand Lake and Shadow Mountain were relatively normal until warmer temperatures triggered tremendous flows from all the tributaries. The availability of east slope priority water in June forced a reduction in diversions through Adams Tunnel. High releases began in May and continued through July. Releases from Shadow Mountain to the Colorado River were increased when the Adams Tunnel diversions were reduced in June. The high release from Shadow Mountain was recorded on July 1 at 3,314 ft^3/s. No damages were reported due to this high releases. The operations were closely monitored by Farr Pumping Plant and ECAO personnel. Diversions through Adams Tunnel resumed in July only to be interrupted in August to accommodate the water clarity operation for WY 2011.

Between August and September, the regular operations of the C-BT were modified in order to conduct the water clarity operation for Grand Lake. WY 2011 was the fourth year in a row that the study was conducted. Unlike previous years, the plan for the WY 2011's operation was to turn off the pumps at the Farr Pumping Plant for several weeks between August and September. The Adams Tunnel diversions were limited to only a portion of the native inflow to Grand Lake. The test began in early August and continued through September 7. Regular operations for the C-BT resumed after the test was concluded. Results of the study will be disclosed at a future date. The Adams Tunnel diverted a total of 245,300 acre-feet during WY 2011.

Lake Estes

During the winter of WY 2011 the Big Thompson River watershed experienced a series of strong winter storms which laid the base for one of the deepest snowpacks ever recorded in the area. As the spring season arrived more storms kept adding to the snowpack. By early May, the snowpack at the Big Thompson River watershed was 160 percent of the 30-year average. Cool temperatures kept the snow from melting early at higher elevations. The snow-water content in early May was approximately 30 inches. Based on the April snowpack numbers the April-July runoff forecast called for a most-probable volume of 119,000 acre-feet at the Big Thompson River canyon mouth or 130 percent of the 30-year average. That prediction was increased to 120,000 acre-feet in May. Runoff began in early May and slowly increased through the spring and early summer. By the end of May, the flows at the Big Thompson River gage above Lake Estes was sustaining a daily average of 400 ft^3/sec. Daily average flows as high as 1,444 ft^3/sec were recorded at that station in July. Figure #7 shows a graph comparing the average snowpack and the measured snowpack for WY 2011 within the Big Thompson River drainage area above Lake Estes and Olympus Dam.

By the middle of Jun, the high runoff coming from snowmelt and rain showers had pushed the inflow to Lake Estes up to a daily average of over 800 ft^3/sec. Those averages never dropped below 800 ft^3/sec until the middle of July. Releases from the dam reached as much as 908 ft^3/sec on June 7. No damages or injuries were reported due to reservoir operations. While the releases from the dam were above 800 ft^3/sec, the Olympus Tunnel was also moving water at full capacity to catch as much east slope native water as possible. The operation prevented potential flooding down the Big Thompson Canyon.

Combined releases from Olympus Dam, via Olympus Tunnel and down the Big Thompson River, reached totals of 1,400 ft^3/s. Runoff continued to rise until July. The peak inflow for the runoff season in WY 2011 occurred on July 9, an hourly flow computation of 1,291 ft^3/sec. The April-July total runoff for the Big Thompson River at the canyon mouth was 133,083 acre-feet, 14,000 acre-feet higher than predicted in April.

The high runoff during the spring allowed the C-BT to capture over 38,218 acre-feet of native Big Thompson River water which was eventually stored at Carter and Horsetooth Reservoirs. From that total, the Olympus Dam captured 29,807 acre-feet. The C-BT entered priority to capture east slope native water on June 7. With many of the local storage reservoirs near full capacity and with the continuing wet conditions over the region, demands for water was at the lowest in June and July. Demands for C-BT water did not begin until August. The C-BT continued diverting and storing east slope water until July 22. The Adams Tunnel trans-mountain diversions was at a minimum for most of June, because of the priority water availability, and during August because of the Grand Lake water clarity operation. The Foothill's conveyance system however kept running at nearly full capacity during most of that time, capturing native water while generating maximum power with Pole Hill and Flatiron Powerplants.

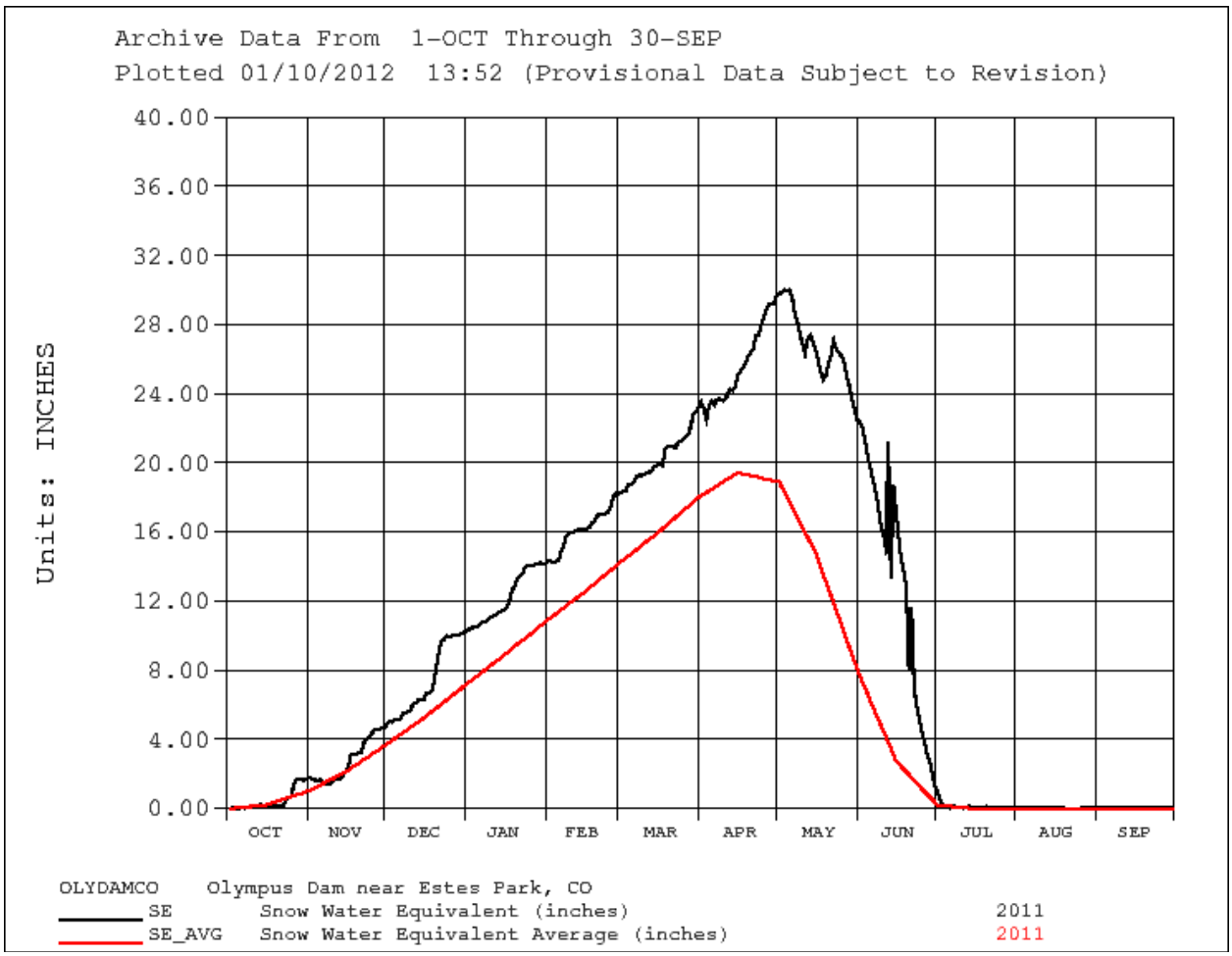

Figure #7: **Snow-water equivalent versus snow-water equivalent's 30-year average for the Olympus Dam drainage area.**

The skim operation of WY 2011 was also very successful. Olympus Tunnel was able to skim a total of 23,090 acre-feet of water between late April and the middle of August. The Dille Tunnel was able to skim 24,117 acre-feet of water for power generation at the Big Thompson Powerplant.

Foothill's Lower System

The C-BT power system along the foothills ran at maximum capacity for the majority of WY 2011. Flatiron's Unit #1 was available the entire year with no operational limitations other than the regular rough zones. The rewind work for Flatiron's Unit #2 continued through most of the year. The availability of just one unit at Flatiron Powerplant minimized any peaking-power operations for the plant, but the availability of Unit #1 allowed the system to run at full capacity. All the demands for C-BT water were met on time while the power generation operations were very successful. The skim operation had a good season in WY 2011. Also, the east slope priority water captured via Olympus Tunnel kept Pole Hill and Flatiron Powerplants running at full capacity for most of the runoff season.

The water year began with lower than normal fall season demands for C-BT water during October 2010. Pinewood Reservoir was drained in late September 2010 in order to replace the valve seals at the Bald Mountain headgate structure. The reservoir water surface elevation at Pinewood was down to 6550.0 feet by October 1. The work on the seals required a completely dry Bald Mountain Tunnel. With water from Pinewood still draining down through the Bald Mountain Tunnel, it was necessary to install stoplogs at the intake structure to the tunnel, and to open the outlet works valve at the Rattlesnake Dam to release more water and lower the water surface down to 6542.0 feet. Since the invert to the intake for the outlet works is higher than 6550.0 feet, a pump was used to force the water out of the reservoir. Work on the Bald Mountain seals continued until December 16.

While work at Bald Mountain progressed, the Olympus Tunnel under clearance, deliveries of C-BT water were made directly from Olympus Dam during that period. The Dille Tunnel diversion structure was used to recapture C-BT water from the Big Thompson River and send it north to Horsetooth. The Dille Tunnel continued to be used until December 1. By December the temperatures turned colder and ice formation along the river became an issue. From that point on until December 16, all the C-BT water requirements were met via Flatiron's Unit #3, using Carter Lake as the water source.

An incident took place the evening of November 25 which caused a spill at the Dille Tunnel diversion structure. The flow of 440 ft^3/sec from Olympus Dam was lowered early that week to allow the Colorado Division of Wildlife to do fish shocking along the river. At the same time a cold front moved in just before the flows were returned back to 440 ft^3/sec. The drastic drop in temperatures combined with the sudden increase in flows caused an ice jam at the Dille Tunnel diversion structure triggering a significant spill that started the evening of November 25 and lasted until the next morning. The spill pushed the river flow up by several hundred cubic feet per second, however, no damages or injuries were reported. Complaints from property owners along the river below the structure were immediately addressed.

By December 17, water began to flow once again through the Olympus Tunnel. Except for short interruptions, the tunnel continued moving water at maximum capacity from December 17 until early August. By early August, the Grand Lake water quality operation began and flows were dropped significantly. From December through early June most of the water passing through the Foothill's system was C-BT water. On June 7, the C-BT entered priority to capture east slope water. For the following several weeks most of the water running through the Olympus Tunnel was mainly east slope water. During August, while the Grand Lake water clarity operation was taking place, most of the water moving through the Olympus Tunnel was skim water used for power generation purposes. After September 6, once the Grand Lake water clarity operation ended, the Adams Tunnel flow was once again increased to maximum capacity. The high flows through Olympus Tunnel continued through September and into October 2011. Pole Hill and Flatiron Powerplants produced just over 450 GWh, which was more than their average of 399 GWh during WY 2011. Due to the large volume of east slope water stored by the C-BT in WY 2011 the Big Thompson Powerplant produced below average power generation with 10.5 GWh. The average production for the plant is 10.9 GWh. The six powerplants in the C-BT produced a total of 690.9 GWh of energy during WY 2011 or 115 percent of average. The 30-year average for the six powerplants is 599.4 GWh.

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 comes from the Flatiron Pumping Plant which has a capacity of up to 480 ft^3/s when Carter is at its lowest level.

Carter Lake Reservoir began the WY 2011 with a storage content of just over 54,000 acre-feet. When Pinewood Reservoir was drained in late September 2010, pumping to Carter Lake stopped. The reservoir level began a steady decline in October 2010. By early December, the reservoir content had dropped to 36,000 acre-feet. During December Flatiron's Unit #3 was used as a generator to keep sufficient water in the Charles Hansen Feeder Canal. Carter Lake's level continued to drop until late December. By late December, once the Bald Mountain headgate structure work ended, the valve seals were calibrated and water began to flow through the system once again. Pumping to Carter resumed shortly after that and continued until June 11, with only a couple of brief interruptions in January and later in May. Pumping resumed on June 28 and continued for another 19 days, with one more short pumping session of only 3 days in late July and 16 days in September. By the end of the water year Carter's water content was slightly over 72,000 acre-feet.

The pumping sessions with Flatiron Unit #3 during the WY 2011 required a total of 41.6 GWh of energy, 155 percent of the 30-year average. That was significantly higher than the previous 2 years. Water deliveries via the Saint Vrain Supply Canal were low during WY 2011 due to the tremendous snowpack and the abundant water moving down the Big Thompson River during June and July. The deliveries for the year through the Saint Vrain Supply Canal totaled 57,778 acre-feet. The 30-year average total is 70,150 acre-feet for water delivery. The month of August had the highest volume of water deliveries out of Carter Lake with a total of 14,964 acre-feet, approximately 7,000 acre-feet less than the previous year for the same month. All the recreation and water delivery targets for Carter Lake Reservoir were met during WY 2011.

Horsetooth Reservoir

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

Horsetooth Reservoir began WY 2011 with 102,285 acre-feet of water in storage and a water surface elevation of 5400.23 feet. With the C-BT water season ending on October 31 the demands for C-BT water continued throughout October 2010. The reservoir continued to drop in elevation rapidly, ending the month at 5379.59 feet and 71,429 acre-feet in storage. Horsetooth reached its lowest level for the year at 5378.21 feet on November 11.

With pumping operations to Carter Reservoir taking precedence during the winter and early spring months, deliveries of C-BT water to Horsetooth were low at the beginning. Despite the relatively low inflows early in the year, Horsetooth continued climbing steadily during the winter and early spring. By May 3, 2011, Horsetooth had reached an elevation of 5413.68 feet. It was

also in early May that the NCWCD declared non-charge on C-BT water. Between May 4 and May 11 a total of 15,000 acre-feet of water was released from Horsetooth as part of the non-charge operation. Horsetooth's water surface elevation dropped almost 7 feet during the operation, but the reservoir once again began rising on May 12.

By early June, the C-BT was declared to be in priority to capture native water from the Big Thompson River. At that point, with Carter Reservoir practically full to capacity, most of the priority water was sent to Horsetooth. Horsetooth's elevation continued to rise through June and July until peaking on July 24 at elevation 5428.00 feet, which was the highest since water year 2003.

Similar to Carter Reservoir, Horsetooth Reservoir water surface eleveation began to drop rapidly once the warm and dry weather arrived. Water demands began to increase in early August. The water clarity operation for Grand Lake limited any diversions from the west slope during August and part of September. By the end of September, the reservoir's water surface elevation had dropped over 25 feet. This was still a higher elevation than any recent years for the same month.

WY 2011 was a very successful operational year for Horsetooth Reservoir. The reservoir met all the targets and obligations for the year and provided one of the best recreational seasons in the last 10 years.

FLOOD BENEFITS

Precipitation in Colorado was above-average throughout most of the state during WY 2011. However, the area covered by the C-BT experienced one of the highest snowpacks ever recorded in the region. The northern mountains of Colorado were blanketed with snowstorm after snowstorm from winter until late spring. Most of the contributing drainage areas around the C-BT received more snow than ever before in the history of the project.

By early spring, the snowpack was already above average and rising. Preparations for a potential record-runoff season began early. By March, the decision was reached to begin pre-emptive releases at Willow Creek Reservoir, followed shortly after by Granby Reservoir. Green Mountain's water surface level was also lowered more than usual, sparking concerns from recreationist.

When the spring months arrived, temperatures remained cooler than normal preventing the runoff from having an early start. By the middle of May, air temperatures began to warm up slowly and runoff started at most locations. The late spring season brought more snow storms for the northern mountains of Colorado. While most of the snow in the lower elevations was melting rapidly, over the higher elevation the snowpack was rising. Inflows at many reservoirs rose slowly throughout the spring. By early summer some areas had seen the peak inflows pass, but the shear volume of the runoff was the highest ever experienced in C-BT history. Inflow to most reservoirs remained higher than normal through the summer and into the fall months. a series of emergency operations which were not expected given the below-average total precipitation. Once the snow was gone by late June the high flows dropped rapidly.

Green Mountain and Granby Reservoirs, both recorded their highest releases since 1995 and 1996, respectively. Meanwhile, Willow Creek's releases reached record levels in June. Some properties in the flood plain were impacted, but no damages or injuries were reported.

Based on the data collected from the Colorado River Basin, and according to figures provided by the U.S. Army Corps of Engineers, the C-BT reservoirs over the west slope prevented a total of $29,500 in potential flood damages during WY 2010. According to the Corps of Engineers report a total of $18,000 was attributed to the Green Mountain Reservoir operations while $11,500 was attributed to the operations at Willow Creek Reservoir, Granby Reservoir and Shadow Mountain/Grand Lake. Since construction, the C-BT has prevented potential flood damages totaling $510,300.

C-BT PLANNING AND CONTROL

The C-BT is operated to provide supplemental municipal and industrial water supply, as well as irrigation water supply and hydroelectric power production. Some of the benefits from the operation of the project are reduction of flood damages, recreation, and fish-and-wildlife preservation, among others. 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 Water Resources Group of the Bureau of Reclamation, ECAO, 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 Division of Water Resources of the state of Colorado, the NCWCD, Upper Colorado and Great Plains Regions of the Bureau of Reclamation, the Western Area Power Administration (from the Department of Energy), other Bureau of Reclamation groups, 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 the C-BT 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. 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 ECAO to develop the AOP and water supply forecasts.

ANNUAL OPERATING PLAN FOR WATER YEAR 2012

Three operation studies or model runs for the C-BT were developed in October 2011 to establish the Annual Operating Plan (AOP) for WY 2012 based on different potential 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 the AOP model run was revised in January 2012. The January 2012 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 WY 2012 has a one-in-twenty chance of being less than the reasonable-minimum and a one-in-twenty chance of being greater than the reasonable-maximum. Statistically, inflows in 2012 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 percent chance of occurrence. The three studies for WY 2012 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 results are compared to the forecasted inflows developed by the NCWCD and discussed with NCWCD officials during monthly meetings. 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 WY 2012 are similar because winter inflows are nearly the same under the three conditions of inflow. The operations and project condition for the WY 2012 October-January C-BT facilities are summarized in the following paragraphs.

Green Mountain Reservoir

Green Mountain Reservoir began the WY 2012 with 137,885 acre-feet in storage, over 17,000 acre-feet above the 30-year average. Releases for power generation and C-BT replacement continued from WY 2011 into WY 2012. Releases from Green Mountain Reservoir for replacement, bypass of inflow, discretionary power generation and other reservoir operations totaled over 78,151 acre-feet between October and December 2011. Those releases lowered the storage content to approximately 93,844 acre-feet by December 31.

Willow Creek Reservoir

Willow Creek Reservoir began the water year with 7,182 acre-feet in storage. Its water surface level is typically lowered during late fall in order to prepare the reservoir for the winter and early spring operations. Pumping from Willow Creek to Granby Reservoir is typically done to accomplish that. Once pumping ends in November, the canal between Willow Creek and Granby Reservoirs is then winterized.

This water year however, the high level at Granby Reservoir prevented any pumping in October and November. Releases from Willow Creek were kept high throughout those 2 months in order to lower the reservoir level and prepare it for winter operations. Average releases for October and November were 33 ft^3/sec and 22 ft^3/sec, respectively. By late November, the flow had been reduced down to the typical 7 ft^3/sec.

Granby Reservoir

The storage in Granby Reservoir at the beginning of the WY 2012 was 498,974 acre-feet, over 6,000 acre-feet higher than the previous year and approximately 64,000 acre-feet above the 30-year average. The reservoir elevation on October 1, 2011, was 8274.28 feet.

The high reservoir level was expected for October 1, given the tremendous snowpack experienced in WY 2011. In order to protect the siphon under US Highway 34 from freezing it was imperative to lower Granby's level another 2 ¼ feet. The Adams Tunnel continued to run at full capacity for most of October, trying to lower Granby Reservoir before winter. By late October, the Olympus Tunnel was shutdown in order to accommodate the C-BT fall-maintenance period. Given the limitation in the system, the Adams Tunnel flow was finally reduced to 300 ft^3/sec andcontinued until the middle of November. By the middle of November, Granby's water surface elevation had dropped to 8269.30 feet. Granby Reservoir finished December 2011 with a water surface elevation of 8268.91 feet.

East Slope Terminal Storage

Diversions through Adams Tunnel were kept at maximum capacity during most of October, 2011. The flow was eventually reduced on October 28, the same day that the Olympus Tunnel entered its clearance period. The Adams Tunnel flow was reduced to 300 ft^3/sec, where it remained for most of the month of November. On November 28, with the Olympus Tunnel still unavailable to move C-BT water, the Big Thompson River became the conveyance vehicle for the C-BT water. Water was sent down the river and recaptured at the Dille Tunnel diversion structure. The flow from Dille Tunnel was all redirected north towards Horsetooth Reservoir. This operation continued until November 25.

Lake Estes was drained between November 17 and November 21 to allow personnel from Estes Powerplant to recalibrate the radial gates at Olympus Dam. Work on the calibration of the gates was completed in one day and the reservoir level began to rise immediately after the work concluded. Lake Estes reached the regular operational level by November 24.

Marys Lake was also drained in late November to allow multiple inspections at different facilities, and to complete several maintenance projects. The Adams Tunnel was shutdown on November 24 and a clearance on the West Portal gates was put in place immediately. Marys Lake was completely drained by November 25. Marys Lake remained empty until the clearance on the Adams Tunnel' West Portal was removed. C-BT water began to flow through the Adams Tunnel once again on December 27.

From late November until the middle of December, while the Adams Tunnel remained under clearance, Carter Lake supplied all the water needed to keep the Charles Hansen Feeder Canal functioning. Flatiron's Unit #3 was used multiple times as a generator was used to bring the water down from Carter Lake.

Pumping to Carter resumed late in December. Carter Lake ended December with 63,128 acre-feet in storage and rising, while Horsetooth's content was 116,761 acre-feet and holding steady.

Snowpack totals for several river basins in Colorado over the first 3 months of WY 2012 are presented in Figure #8.

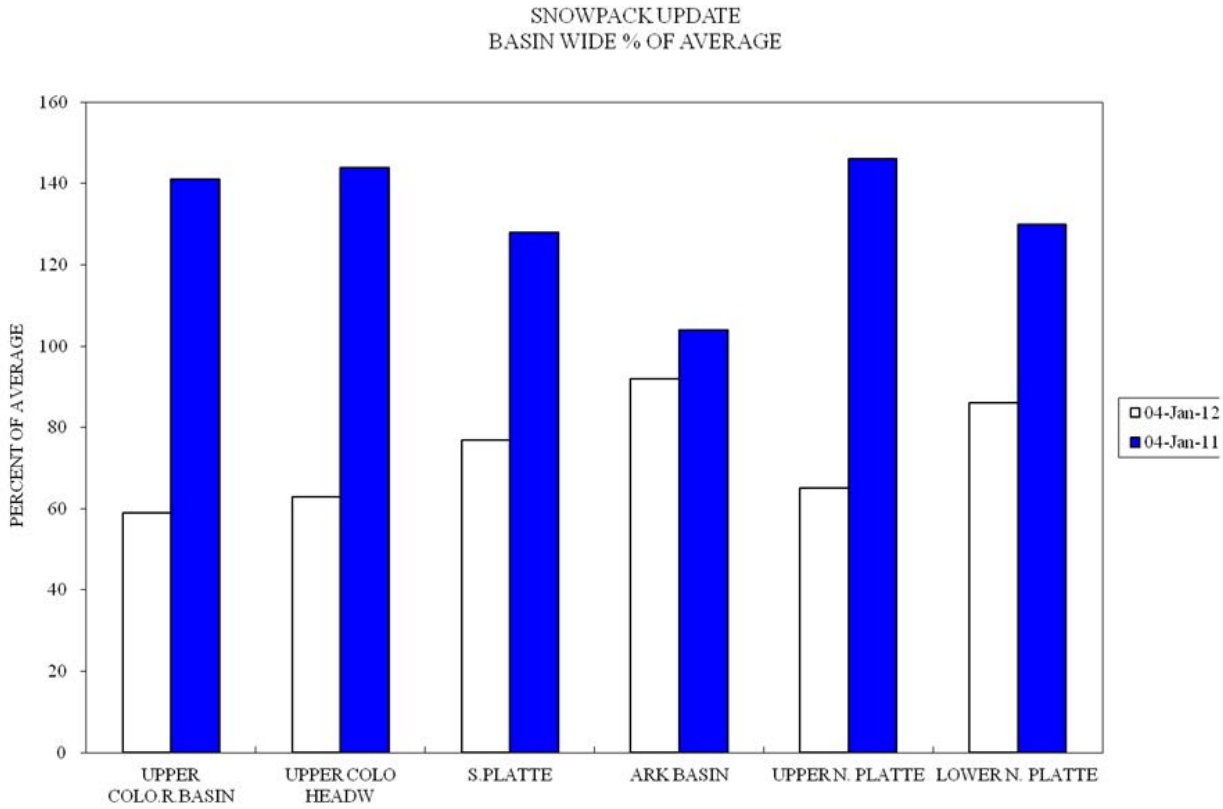

Figure #8: **Snowpack percent-of-averages over several river basins in Colorado; first 3 months of WY 2011 and WY 2012.**

FEBRUARY THROUGH SEPTEMBER

Most-Probable Inflow Forecast

Green Mountain Reservoir

Green Mountain Reservoir's target storage content for March 31 is 70,000 acre-feet. Under the most-probable runoff conditions the reservoir content will decline slowly during the late winter and early spring. The reservoir elevation could drop slightly below that target. By late April 2012, the reservoir content will bounce back and rise to 73,500 acre-feet. After the start-of-fill the reservoir level is expected to rise rapidly. Under the most-probable runoff conditions the reservoir is expected to reach a physical fill by early July. Its storage content by the end of July is expected to be 149,500 acre-feet.

According to the most-probable runoff forecast, it appears at this time that Green Mountain Reservoir might be able to participate in CROS this coming spring, however, a decision will be made later in the spring. CROS is an interagency program developed to enhance the spring peak flows along the 15-Mile-Reach of the Colorado River in an attempt to benefit endangered species of fish. The operational principle is to pass excess native inflow while continuing the process of filling the reservoir. Regardless of whether Green Mountain participates in the CROS operation or not during 2012, the reservoir is expected to fill by early July. Assuming the predicted inflows and releases materialize for August and September, Green Mountain's Reservoir storage content is projected to drop to approximately 119,200 acre-feet by the end of September.

If the coming spring conditions result in a most-probable runoff, Denver and Colorado Springs' Blue River depletions are projected to be approximately 84,400 acre-feet during the WY 2012.

Willow Creek Reservoir

Under the most-probable runoff conditions, pumping operations from Willow Creek Reservoir to Granby Reservoir should resume in late April 2012 and likely continue through June. As usual, the peak runoff is predicted for May. Under such conditions the releases to the river should average 7 ft^3/s most of WY 2012, with perhaps higher releases between May and July, although nothing compared to the releases experienced in WY 2011. By the end of WY 2012, the Willow Creek Reservoir storage content should be approximately 7,200 acre-feet.

Granby Reservoir

If the most-probable runoff conditions prevail over the Granby Reservoir drainage area, its reservoir storage content should approach a low point of approximately 400,000 acre-feet by the end of April 2012. Runoff is expected to begin in late April or early May. Native runoff along with the pumping operation from Willow Creek should push the reservoir up rapidly in May and June. Under the most-probable runoff conditions the Windy Gap pumps should remain off-line this year. The reservoir should reach a maximum content for the year of 490,000 acre-feet sometime in late June, with a water surface elevation of 8273.0 feet. The reservoir elevation is expected to peak 6.5 feet below its maximum operational limit of 8279.50 feet.

Under the most-probable runoff conditions there will not be a spill at Granby Reservoir this water year. Under those circumstances, Lake Granby will not be able to participate in the CROS during the spring of 2012. By September 30, Granby Reservoir's content is expected to drop to 462,400 acre-feet. The most-probable runoff forecast assumes that some pumping from Farr Plant to Shadow Mountain will take place in August. The forecast assumes that 11,600 acre-feet will be moved from Granby to Shadow Mountain Reservoir that month. A decision about any possible alternative operational options will be made later in the spring.

East Slope - Colorado-Big Thompson Project

If the local climatic conditions produce a most-probable runoff event during WY 2012, irrigation, municipal, and industrial demands for C-BT and Windy Gap Project water totaling 246,700 acre-feet should be expected. That volume includes water to be delivered from Horsetooth Reservoir and Carter Lake, as well as the Charles Hansen Feeder Canal Trifurcation and other sections of the C-BT conveyance system. This total includes potential Windy Gap Project deliveries of 19,100 acre-feet.

Pumping to Carter Lake will resume in late February, once the annual maintenance work on Flatiron Powerplant's Unit #3 is completed. Once on, the pump is expected to run uninterrupted until late June. Under the most-probable runoff plan Carter Lake is expected to reach its maximum elevation for the water year by late June. Carter Lake will reach a storage content of approximately 107,000 acre-feet before its water surface level begins to drop due to higher water demands. Pumping could resume in July and again in September. Total volume pumped to Carter Lake this water year is expected to be 107,300 acre-feet. Under this plan a total of 104,700 acre-feet is expected to be delivered from Carter Lake this year, which includes Windy Gap Project water. By the end of the water year, the reservoir content is projected to drop down to 49,000 acre-feet.

The Charles Hansen Feeder Canal 930 Section will undergo maintenance between late March and April. The canal will not be available to deliver water to Horsetooth Reservoir between March 30 and April 20. Maintenance on the Charles Hansen Feeder Canal 550 Section will not begin until sometime in the fall, most likely September. The maintenance on each section of the canal normally lasts 2 weeks.

Deliveries of C-BT and Windy Gap water from the Charles Hansen Feeder Canal to the Big Thompson River are expected to total 24,700 acre-feet, with an additional 400 acre-feet delivered from Olympus Dam. Deliveries from the Charles Hansen Feeder Canal are made from the Trifurcation located at the Big Thompson River canyon mouth using the Big Thompson Powerplant, the wasteway chute, or sometimes both simultaneously.

Reasonable-Minimum Inflow Forecast

Green Mountain Reservoir

Green Mountain Reservoir's target storage content for March 31 under the reasonable-minimum inflow forecast is 75,000 acre-feet. Under the reasonable-minimum runoff conditions the reservoir content will decline slowly during the late winter and early spring. The reservoir elevation could drop slightly below that target. By April 2012, the reservoir content will stabilize and perhaps rise to 76,100 acre-feet. After the start-of-fill the reservoir level is expected to rise rapidly. Under the reasonable-minimum runoff conditions the reservoir is not expected to reach a physical fill this water year. However a paper fill should be expected for Green Mountain in WY 2012, based on the reasonable-minimum runoff forecast. Its storage content by the end of June is expected to be 114,800 acre-feet.

According to the reasonable-minimum runoff forecast, it appears at this time that Green Mountain Reservoir will not be able to participate in CROS this coming spring. A decision will be made later in the spring. The CROS is an interagency program developed to enhance the spring peak flows along the 15-Mile-Reach of the Colorado River in an attempt to benefit endangered species of fish. The operational principle is to pass excess native inflow while continuing the process of filling the reservoir. Assuming the predicted inflow and releases materialize for August and September, Green Mountain's Reservoir storage content is projected to drop to approximately 78,900 acre-feet by the end of September.

If the coming spring conditions result in a reasonable-minimum runoff, the Denver and Colorado Springs Blue River depletions are projected to be approximately 68,900 acre-feet during the WY 2012.

Willow Creek Reservoir

Under the reasonable-minimum runoff conditions, pumping operations from Willow Creek Reservoir to Granby Reservoir should resume in late April 2012. As usual, the peak runoff is predicted for May. The Willow Creek Canal pumps will likely run during May and June also. Under such conditions the releases to the river should average 7 ft^3/s most of WY 2012, with perhaps higher releases between May and July, although nothing compared to the releases experienced in WY 2011. By the end of WY 2012, the Willow Creek Reservoir storage content should be approximately 7,200 acre-feet.

Granby Reservoir

If the reasonable-minimum runoff conditions prevail over the Granby Reservoir drainage area, its reservoir storage content should be approaching a low point of approximately 393,000 acre-feet by the end of May 2012. Runoff is expected to begin in late April or early May. Native runoff along with the pumping operation from Willow Creek will not be sufficient to push the reservoir up very rapidly in May and June. Under the reasonable-minimum runoff, Granby reservoir will only reach an elevation of approximately 8259.0 feet in June, a content of 398,000 acre-feet. Given the low flow under the reasonable-minimum conditions, the Windy Gap pumps

should remain off-line this year.

Under the reasonable-minimum runoff conditions there will not be a spill at Granby Reservoir this water year. Since the operational pool is not expected to fill under these conditions, Lake Granby will not be able to participate in CROS during the spring of 2012. By September 30 Granby Reservoir's content is expected to drop to 325,900 acre-feet. The reasonable-minimum runoff forecast assumes that significant pumping from Farr Plant to Shadow Mountain will take place in August. The forecast assumes that 29,200 acre-feet will be moved from Granby to Shadow Mountain Reservoir that month. A decision about any possible alternative operational options will be made later in the spring.

East Slope - Colorado-Big Thompson Project

If the local climatic conditions produce a reasonable-minimum runoff event during WY 2012, irrigation, municipal and industrial demands for C-BT and Windy Gap Project water totaling 292,300 acre-feet should be expected. That volume includes water to be delivered from Horsetooth Reservoir and Carter Lake as well as the Charles Hansen Feeder Canal Trifurcation and other sections of the C-BT conveyance system. This total includes potential Windy Gap Project deliveries of 19,200 acre-feet.

Pumping to Carter Lake will resume in late February, once the annual maintenance work on Flatiron Powerplant's Unit #3 is completed. Once on, the pump is expected to run uninterrupted until late June or early July. Under the reasonable-minimum runoff plan Carter Lake is expected to reach its maximum elevation for the water year by late June. Carter Lake will reach a storage content of approximately 103,300 acre-feet before its water surface level begins to drop due to higher water demands. Pumping could resume in August and September depending on the conditions at the time. Total volume pumped to Carter Lake this water year under this plan is expected to be 121,100 acre-feet. Also under this plan a total of 118,200 acre-feet are expected to be delivered from Carter Lake this year. That volume includes Windy Gap Project water. By the end of the water year the reservoir content should drop down to 49,000 acre-feet.

The Charles Hansen Feeder Canal 930 Section will undergo maintenance between late March and April. The canal will not be available to deliver water to Horsetooth Reservoir between March 30 and April 20. Maintenance on the Charles Hansen Feeder Canal 550 Section will not begin until sometime in the fall, most likely September. The maintenance on each section of the canal normally lasts 2 weeks.

Deliveries of C-BT and Windy Gap water from the Charles Hansen Feeder Canal to the Big Thompson River are expected to total 42,500 acre-feet under the reasonable-minimum plan, with an additional 700 acre-feet delivered from Olympus Dam. Deliveries from the Charles Hansen Feeder Canal are made from the trifurcation located at the Big Thompson River canyon mouth using the Big Thompson Powerplant, the wasteway chute, or sometimes both simultaneously.

Reasonable-Maximum Inflow Forecast

Green Mountain Reservoir

Green Mountain Reservoir's target storage content for March 31 under the reasonable-maximum inflow forecast is 70,000 acre-feet. Under the reasonable-maximum runoff conditions the reservoir content will decline slowly during the late winter and early spring. The reservoir elevation could drop slightly below that target, particularly if the snowpack is significantly above average. By April 2012, the reservoir content should begin to rise, and once the start-of-fill is declared the reservoir level is expected to rise rapidly. Under the reasonable-maximum runoff conditions the reservoir is expected to reach a physical fill this water year by early July.

According to the reasonable-maximum runoff forecast, it appears likely that Green Mountain Reservoir will be able to participate in CROS this coming spring. A decision will be made later in the spring. The CROS is an interagency program developed to enhance the spring peak flows along the 15-Mile-Reach of the Colorado River in an attempt to benefit endangered species of fish. The operational principle is to pass excess native inflow while continuing the process of filling the reservoir. Assuming the predicted inflow and releases materialize for August and September, Green Mountain's Reservoir storage content is projected to drop to approximately 131,100 acre-feet by the end of September.

If the coming spring conditions result in a reasonable-maximum runoff, the Denver and Colorado Springs Blue River depletions are projected to be approximately 84,400 acre-feet during the WY 2012.

Willow Creek Reservoir

Under the reasonable-maximum runoff conditions, pumping operations from Willow Creek Reservoir to Granby Reservoir should be minimal at best. Some pumping could take place in April, while the reservoir level at Granby is dropping, but it all depends on the conditions at the moment. As usual, the peak of the runoff is predicted for May. Under a reasonable-maximum runoff scenario, the releases to Willow Creek below the reservoir should be expected to be high during May and June, bypassing most of the runoff inflow of WY 2012. Pre-emptive releases should also be expected. The capacity of the outlet works should be sufficient to pass all the inflow without using the spillway. By the end of WY 2012, the Willow Creek Reservoir storage content could be as high as 10,200 acre-feet.

Granby Reservoir

If the reasonable-maximum runoff conditions prevail over the Granby Reservoir drainage area, its reservoir storage content should be approaching a low point of approximately 398,000 acre-feet by sometime in April 2012. Runoff is expected to begin in late April or early May. Native runoff by itself should be sufficient to push Granby's reservoir level to its maximum capacity. Under the reasonable-maximum runoff, Granby Reservoir should reach an elevation of approximately 8278.50 feet or higher by late June. Given the high runoff and reservoir levels

under the reasonable-maximum conditions, the Windy Gap pumps will remain off-line this year.

Under the reasonable-minimum runoff conditions pre-emptive releases will be necessary, perhaps beginning as early as April. Therefore, under such conditions, Granby Reservoir should be able to participate in CROS operations this water year. Similar to WY 2011, both the outlet works valves and the spillway gates will be used to manage reservoir releases. Under this scenario, Lake Granby will be able to participate in CROS during the spring of 2012, if such operation is conducted. By September 30, Granby Reservoir's is expected to be holding 530,000 acre-feet. The reasonable-maximum runoff forecast assumes that very limited pumping from Farr Plant to Shadow Mountain will take place in August. The forecast assumes that only 1,300 acre-feet will be moved from Granby to Shadow Mountain Reservoir that month. A decision about any possible alternative operational options will be made later in the spring.

East Slope - Colorado-Big Thompson Project

If the local climatic conditions produce a reasonable-maximum runoff event during WY 2012, irrigation, municipal, and industrial demands for C-BT and Windy Gap Project water totaling 172,400 acre-feet should be expected. That volume includes water to be delivered from Horsetooth Reservoir and Carter Lake as well as the Charles Hansen Feeder Canal Trifurcation and other sections of the C-BT conveyance system. This total includes potential Windy Gap Project deliveries of 19,400 acre-feet.

Pumping to Carter Lake will resume in late February, once the annual maintenance work on Flatiron Powerplant's Unit #3 is completed. Once on, the pump is expected to run uninterrupted until the middle of July. Under the reasonable-maximum runoff plan Carter Lake is expected to reach its maximum elevation for the water year by the middle of July. Carter Lake will reach a storage content of approximately 110,000 acre-feet before its water surface level begins to drop due to higher water demands in late July and August. Pumping is not expected to resume after July. Total volume pumped to Carter Lake this water year under this plan is expected to be 91,000 acre-feet. Also under this plan a total of 74,500 acre-feet are expected to be delivered from Carter Lake this year. That volume includes Windy Gap Project water. By the end of the water year the reservoir content should drop to 83,800 acre-feet.

The Charles Hansen Feeder Canal 930 Section will undergo maintenance between late March and April. The canal will not be available to deliver water to Horsetooth Reservoir between March 30 and April 20. Maintenance on the Charles Hansen Feeder Canal 550 Section will not begin until sometime in the fall, most likely September. The maintenance on each section of the canal normally lasts 2 weeks.

Deliveries of C-BT and Windy Gap water from the Charles Hansen Feeder Canal to the Big Thompson River are expected to total 22,600 acre-feet under the reasonable-maximum plan, with an additional 200 acre-feet delivered from Olympus Dam. Deliveries from the Charles Hansen Feeder Canal are made from the Trifurcation located at the Big Thompson River canyon mouth using the Big Thompson Powerplant, the wasteway chute, or sometimes both simultaneously.

IRRIGATION REQUIREMENTS

The amount of water to be made available to the C-BT for irrigation will be determined by NCWCD. 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^3/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^3/s during May-July period, 40 ft^3/s during August, and 20 ft^3/s during September is required at this location downstream of Lake Granby. The flow during 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 in Acre-Feet	Percentage Reduction in Minimum Release
220,000 - 230,000	15
210,000 - 220,000	20
195,000 - 210,000	25
Less than 195,000	30

Adjustments will be made in the reductions, when appropriate, based on revised forecasts and consideration of actual flows during May, 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^3/s or inflow (whichever is the lesser) from Willow Creek Reservoir is required between October 1 and April 30 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^3/s during September and October, 45 ft^3/s during November and December, 20 ft^3/s from January through May, 50 ft^3/s in June and July, and 40 ft^3/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

(ft^3/s)	Period
25	November 1 - April 15
50	April 16 - April 30
100	May 1 - May 15
125	May 16 - August 15
100	August 16 - August 31
75	September 1 - September 15
50	September 16 - October 31

Diversion of flows from the Big Thompson River at 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 Federal Register, 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 10-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.[1]

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.[2]

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

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

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

Background and Authority

The Orchard Mesa Check (Check) is a structure below the common afterbay of the Orchard Mesa Irrigation District (OMID) Pumping Plant and the federal Grand Valley Powerplant in the Grand Valley of Colorado. The 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 the Bureau of 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.

The skim operation of WY 2011 was a very successful one. Even though a large portion of the C-BT system's capacity was occupied by surplus native water been captured and stored at Carter and Horsetooth Reservoirs instead of skim water, Pole Hill and Flatiron Powerplants benefited significantly from the operation. The plants were running at full capacity most of the runoff season. The movement of surplus native water through the C-BT conveyance system kept the Olympus Tunnel running full most of the spring and summer months. Meanwhile the diversions through the Dille Tunnel kept the Big Thompson Powerplant generating at nearly full capacity for most of June and part of July and August. The Olympus Tunnel had the opportunity to skim only portions of all the available water from the Big Thompson River in August and September.

It is expected that during WY 2012 the C-BT will also have a successful skim operation. Flatiron Powerplant's Unit #2 should be available for power generation by early spring 2012. Once the Unit #2 is commissioned and fully available, Flatiron's Unit #1 will be taken down for maintenance as well as to finish the interior coating of penstock #1. Unit #2 will be the only unit available later in the spring and summer months, but it will have the same capacity as Unit #1.

During WY 2012, most of the skim water is expected to be captured at Olympus Dam and diverted using Olympus Tunnel. Dille Tunnel's contribution is anticipated to be lower in WY 2012 than in WY 2011, although its contribution should be significant. The skim total through the Olympus Tunnel should surpass the WY 2011 volume.

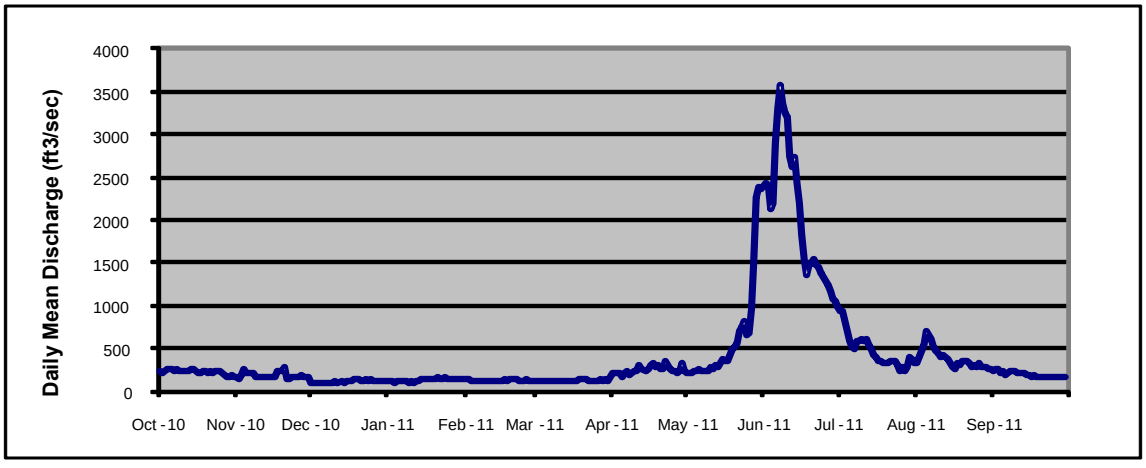
APPENDIX A – DAILY RECORDS

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

Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, on Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River.
Gage. –Water level recorder with satellite telemetry. Elevation of gage is 7960 from topographic map.
Remarks.-- Inflow computed daily based on change in content from midnight to midnight, and on the 24-hour average releases from Green Mountain Reservoir. Recorders were operated from 01-Oct-2010 to 30-Sep-2011. Records are complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	235	159	98	121	131	118	214	214	2444	935	336	236
2	204	150	95	124	136	116	203	211	2398	934	387	258
3	243	184	93	128	124	117	218	202	2136	821	474	264
4	251	262	100	104	120	111	210	231	2188	695	547	219
5	253	220	100	106	118	118	158	244	2903	574	691	237
6	251	207	100	125	124	115	203	250	3309	514	659	187
7	243	207	100	124	125	111	231	236	3568	480	599	224
8	255	203	101	106	125	122	194	230	3368	594	523	241
9	239	172	102	99	118	118	220	223	3262	592	467	224
10	226	171	101	106	109	122	234	278	3197	612	439	213
11	234	154	108	100	116	117	235	258	2745	595	404	205
12	238	165	103	115	121	114	304	298	2621	603	424	206
13	225	165	107	121	126	113	261	269	2725	533	369	207
14	246	157	100	135	124	117	236	330	2438	493	322	197
15	261	173	107	142	111	124	259	381	2188	430	291	190
16	244	158	121	148	123	106	297	346	1832	394	253	168
17	213	160	114	149	129	116	325	344	1547	359	326	177
18	221	228	148	143	126	120	291	411	1366	360	314	165
19	237	225	134	151	139	135	305	502	1463	321	357	161
20	242	290	134	146	142	131	248	509	1509	337	343	162
21	221	144	127	152	134	130	265	563	1540	341	359	162
22	233	139	127	145	141	128	341	698	1469	351	324	160
23	220	168	134	152	123	121	315	753	1456	342	288	173
24	231	174	128	152	119	123	268	827	1372	301	301	169
25	225	162	129	147	135	118	243	644	1326	245	292	174
26	201	167	129	144	107	111	230	681	1246	284	317	169
27	194	176	107	140	109	129	221	961	1179	242	281	174
28	167	175	114	137	116	118	244	1547	1087	282	281	171
29	170	174	114	137		129	329	2261	1047	402	275	158
30	184	155	121	143		128	231	2391	977	375	259	158
31	171		121	132		155		2372		329	267	
Min	167	139	93	99	107	106	158	202	977	242	253	158
Max	261	290	148	152	142	155	341	2391	3568	935	691	264
Mean	225	181	113	131	124	121	251	634	2064	473	380	194
ac-ft	13814	10777	6963	8071	6872	7430	14913	38929	122579	29046	23302	11500

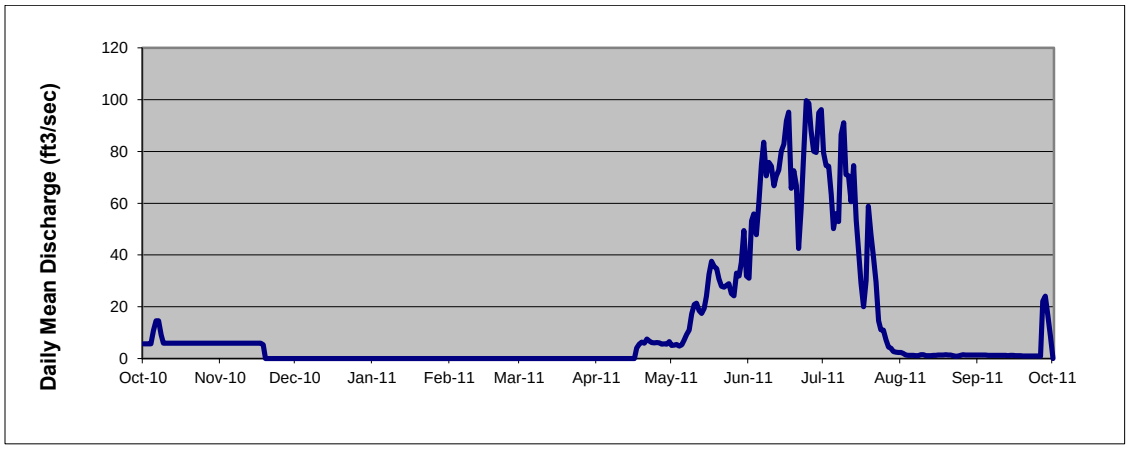


Appendix A (Table 2 of 38)
Elliot Creek Canal near Green Mountain Reservoir, CO

Location. --Lat 39°52'25", long 106°19'49", Summit County, Hydrologic Unit 14010002 , on left bank at concrete flume structure, and 1.1 mi west of Heeney, Colorado.
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 1-Oct-2010 through 18-Nov-2010 and between 17-Apr-2011 and 30-Sep-2011. The station is winterized therefore no date is reported during winter. Records are complete and reliable only while recorder is operated. This record contains operational data which could be subject to future revisions and changes. Official data is published by the United States Geological Survey.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6	6	0	0	0	0	0	5	31	79	2	1
2	6	6	0	0	0	0	0	5	53	74	2	1
3	6	6	0	0	0	0	0	5	56	74	1	1
4	6	6	0	0	0	0	0	5	48	63	1	1
5	11	6	0	0	0	0	0	5	60	50	1	1
6	15	6	0	0	0	0	0	7	75	56	1	1
7	15	6	0	0	0	0	0	9	84	53	1	1
8	9	6	0	0	0	0	0	11	71	87	1	1
9	6	6	0	0	0	0	0	17	76	91	1	1
10	6	6	0	0	0	0	0	21	74	71	1	1
11	6	6	0	0	0	0	0	21	67	71	1	1
12	6	6	0	0	0	0	0	19	70	61	1	1
13	6	6	0	0	0	0	0	17	73	75	1	1
14	6	6	0	0	0	0	0	19	80	53	1	1
15	6	6	0	0	0	0	0	24	83	42	1	1
16	6	6	0	0	0	0	0	33	92	29	1	1
17	6	6	0	0	0	0	4	38	95	20	1	1
18	6	5	0	0	0	0	5	36	66	30	1	1
19	6	0	0	0	0	0	6	35	73	59	1	1
20	6	0	0	0	0	0	6	31	67	48	1	1
21	6	0	0	0	0	0	8	28	43	39	1	1
22	6	0	0	0	0	0	7	28	58	29	1	1
23	6	0	0	0	0	0	6	28	79	15	1	1
24	6	0	0	0	0	0	6	29	100	11	1	1
25	6	0	0	0	0	0	6	25	99	11	1	1
26	6	0	0	0	0	0	6	24	88	7	1	1
27	6	0	0	0	0	0	5	33	80	4	1	22
28	6	0	0	0	0	0	6	32	80	4	1	24
29	6	0	0	0		0	6	37	95	3	1	16
30	6	0	0	0		0	7	49	96	2	1	9
31	6		0	0		0		32		2	1	
Min	6	0	0	0	0	0	0	5	31	2	1	1
Max	15	6	0	0	0	0	8	49	100	91	2	24
Mean	7	4	0	0	0	0	3	23	74	42	1	3
ac-ft	410	209	0	0	0	0	165	1402	4375	2604	80	198

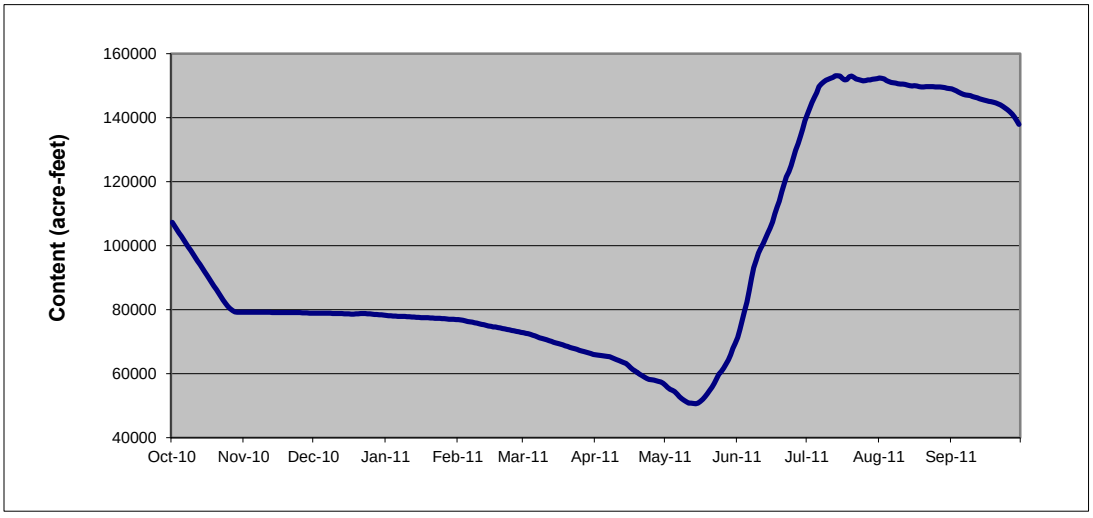


Appendix A (Table 3 of 38)
Green Mountain Reservoir, CO

Location. --Lat 39°52'42", long 106°19'42", Summit County, Hydrologic Unit 14010002, on Green Mountain Dam, 13 miles southeast of Kremmling, Colorado, on the Blue River..
Gage. –Water level recorder with satellite telemetry. Elevation of gage is 7960 from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam. Construction completed in 1943. Impoundment began on 16-Nov-1942. Green Mountain Reservoir provides storage used for replacement water of the Colorado-Big Thompson Project diversions. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. Maximum capacity is 153,639 acre-feet at elevation 7950.00 ft, with 146,779 acre-feet of active capacity. Records are complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	107307	79231	78914	78229	76886	72769	65880	56398	71297	141175	152391	149033
2	106196	79218	78927	78151	76796	72607	65765	55670	73758	142912	152328	148763
3	105098	79244	78941	78099	76667	72483	65731	55128	76641	144723	152159	148431
4	104008	79244	78914	78007	76473	72283	65570	54799	79390	146446	151672	148057
5	102893	79231	78901	77981	76331	72010	65513	54372	82423	147849	151293	147683
6	101775	79231	78888	77955	76202	71764	65433	53635	85915	149742	151084	147289
7	100668	79231	78901	77929	76060	71519	65260	52817	89695	150539	150916	147125
8	99568	79231	78861	77890	75931	71248	65008	52172	93102	151189	150811	147001
9	98479	79231	78848	77890	75764	71003	64735	51685	95496	151778	150644	146898
10	97370	79218	78835	77837	75585	70794	64418	51191	97708	152074	150497	146672
11	96271	79192	78809	77759	75432	70576	64090	50814	99226	152370	150497	146446
12	95194	79165	78782	77694	75266	70321	63785	50786	100731	152645	150392	146220
13	94099	79139	78769	77668	75100	70115	63506	50738	102271	153110	150224	145973
14	92999	79112	78742	77642	74922	69848	63182	50616	103878	153153	150036	145747
15	91863	79099	78742	77602	74781	69593	62603	50814	105458	153068	149973	145541
16	90737	79126	78703	77550	74641	69378	61922	51247	107374	152349	149994	145356
17	89608	79139	78650	77524	74564	69186	61266	52019	109910	151862	149931	145172
18	88489	79126	78650	77472	74413	68959	60757	52837	111996	151947	149763	145029
19	87366	79112	78676	77485	74299	68708	60326	53733	113937	152835	149680	144866
20	86279	79099	78690	77446	74148	68457	59771	54700	116895	153068	149680	144601
21	85174	79139	78782	77393	73997	68243	59376	55751	119240	152687	149742	144356
22	84067	79112	78782	77354	73846	68043	58903	56970	121508	152180	149784	144009
23	82997	79086	78782	77302	73708	67818	58471	58387	123085	151968	149763	143540
24	81909	79126	78742	77276	73544	67594	58221	59749	125064	151736	149700	143033
25	81057	79073	78676	77197	73393	67346	58117	60703	127477	151587	149659	142508
26	80308	79046	78597	77158	73242	67123	57992	61680	129788	151651	149638	141902
27	79733	79007	78544	77093	73080	66913	57795	62937	131952	151841	149596	141155
28	79350	78980	78465	77054	72918	66750	57588	64294	134099	151862	149512	140214
29	79192	78954	78412	77016		66518	57401	65915	136426	152053	149407	139094
30	79178	78901	78399	76977		66274	57022	67889	138995	152159	149262	137885
31	79205		78321	76951		66041		69437		152285	149158	
Min	79178	78901	78321	76951	72918	66041	57022	50616	71297	141175	149158	137885
Max	107307	79244	78941	78229	76886	72769	65880	69437	138995	153153	152391	149033
EOM	79205	78901	78321	76951	72918	66041	57022	57022	138995	152285	149158	137885

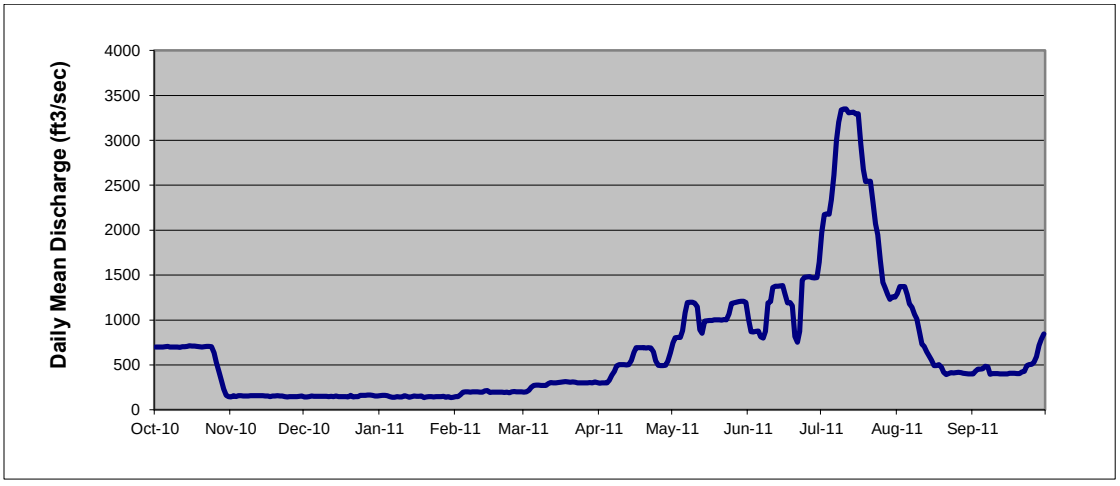


Appendix A (Table 4 of 38)
Blue River below Green Mountain Reservoir, CO

Location.--Lat 39°52'49", long 106°20'00", Summit County, Hydrologic Unit 14010002, on left bank 0.3 miles upstream from Elliot Creek, 0.3 miles downstream from Green Mountain Reservoir and 13 miles southeast of Kremmling.
Gage.-- Water-stage recorder with satellite telemetry. Datum of gage is 7682.66 feet (levels by U.S. Bureau of Reclamation).
Remarks.--Drainage area is 599 mi^2 including 15.3 mi^2 of Elliot Creek above the diversion for Elliot Creek feeder canal. Flow regulated by Green Mountain Reservoir since 1942. Diversions for irrigation of 5,000 acres upstream from station. Transmountain diversions upstream from station. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes. Official record is published by the United States Geological Survey.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	700	145	145	159	147	197	296	745	1013	1973	1295	401
2	699	159	142	162	147	201	300	803	869	2173	1373	427
3	699	148	148	161	170	217	299	806	866	2182	1372	454
4	698	159	156	158	198	250	299	808	875	2178	1371	452
5	704	157	150	146	200	270	329	882	877	2337	1282	456
6	706	155	149	140	200	274	385	1081	815	2612	1179	486
7	701	155	149	141	198	276	429	1195	798	3001	1142	479
8	700	153	150	147	199	273	489	1199	873	3203	1064	395
9	698	157	149	142	202	273	505	1197	1190	3338	1011	402
10	697	156	151	145	202	273	503	1186	1205	3351	873	404
11	696	156	149	157	198	292	502	1148	1362	3351	731	403
12	701	157	149	150	196	303	500	892	1375	3308	706	400
13	703	157	149	140	209	300	503	852	1378	3312	645	400
14	705	158	153	148	213	301	548	988	1380	3315	602	400
15	712	156	148	153	193	303	640	993	1382	3294	552	401
16	709	154	146	152	198	307	692	996	1291	3295	492	407
17	709	145	147	152	197	312	692	997	1190	2959	494	407
18	708	155	148	155	197	314	692	1001	1193	2675	503	407
19	702	153	144	135	197	312	691	1001	1158	2542	476	404
20	698	156	160	144	197	309	690	1003	818	2546	416	404
21	703	155	142	147	192	312	691	999	752	2543	392	421
22	707	153	147	146	196	309	687	1005	873	2314	403	430
23	705	148	146	144	191	299	646	1001	1442	2072	414	493
24	703	145	160	146	201	301	545	1065	1477	1948	411	505
25	636	148	161	148	205	300	494	1184	1478	1663	414	506
26	529	148	162	146	201	302	494	1191	1481	1417	417	529
27	430	148	166	151	201	300	493	1197	1473	1359	416	592
28	325	147	165	139	200	302	497	1205	1470	1282	405	718
29	234	151	160	146		299	543	1210	1471	1229	405	785
30	163	152	153	135		310	636	1209	1643	1257	401	844
31	146		155	138		304		1194		1256	401	
Min	146	145	142	135	147	197	296	745	752	1229	392	395
Max	712	159	166	162	213	314	692	1210	1643	3351	1373	844
Mean	623	153	152	148	194	287	524	1040	1182	2429	712	474
ac-ft	38264	9081	9304	9057	10778	17612	31106	63819	70225	149064	43679	28137

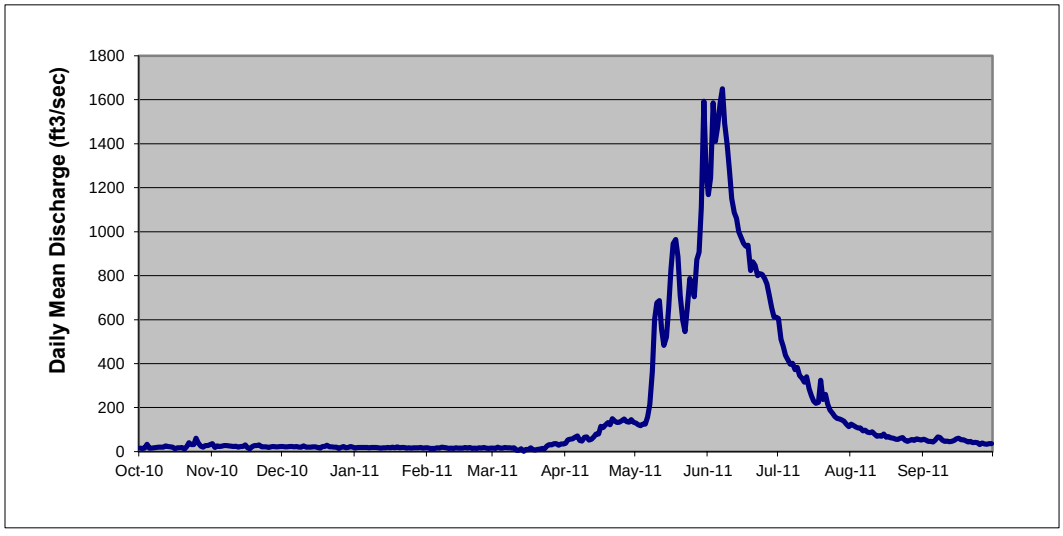


Appendix A (Table 5 of 38)
Willow Creek Reservoir, CO

Location. -- Lat 40°08'52", long 105°56'28", Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 8130 from topographic map.
Remarks.—Inflow computed daily using change in content from midnight to midnight, plus the 24-hour average releases through the Willow Creek Pump Canal and the reservoir outlet works. Recorders were operated from 01-Oct-2010 to 30-Sep-2011. Records are complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	15	36	22	16	17	16	37	129	1169	605	124	57
2	14	19	22	19	14	14	54	121	1245	511	119	53
3	15	26	22	19	14	20	57	117	1587	478	112	46
4	34	24	22	18	14	16	58	124	1412	438	107	47
5	15	24	23	19	17	15	64	125	1476	416	107	44
6	16	28	21	18	15	18	70	157	1587	397	94	52
7	17	27	23	17	19	17	50	214	1650	401	97	66
8	18	26	19	18	18	17	47	365	1491	373	88	64
9	19	24	21	19	17	16	65	601	1393	382	86	52
10	19	23	26	18	14	17	67	677	1278	345	89	46
11	20	24	19	17	16	5	52	686	1151	333	79	48
12	26	19	21	15	14	6	57	554	1086	315	70	45
13	23	23	21	17	16	13	67	482	1061	340	72	46
14	22	23	22	17	15	1	80	521	1000	285	69	50
15	20	30	22	19	15	10	80	655	975	255	80	57
16	13	17	18	17	15	8	114	826	948	229	65	61
17	17	13	16	20	18	17	108	945	934	220	68	54
18	17	23	23	17	16	8	120	965	939	224	62	53
19	18	27	23	21	18	7	130	886	823	324	60	49
20	11	27	28	18	14	10	122	709	863	237	57	43
21	23	30	22	19	15	12	149	597	846	261	55	46
22	40	22	21	19	14	14	138	545	800	215	60	41
23	31	22	20	15	16	13	132	651	809	189	63	41
24	32	22	20	16	16	26	133	787	806	174	52	40
25	61	18	15	15	18	31	140	755	787	160	47	31
26	39	22	19	17	15	31	147	703	762	151	50	39
27	25	23	23	17	14	36	137	873	713	148	55	35
28	20	21	17	17	15	36	134	907	653	143	51	33
29	28	22	19	18		29	145	1110	612	138	58	35
30	28	23	22	16		34	134	1594	611	124	55	37
31	32		20	17		34		1267		113	53	
Min	11	13	15	15	14	1	37	117	611	113	47	31
Max	61	36	28	21	19	36	149	1594	1650	605	124	66
Mean	23	23	21	18	16	18	96	634	1049	288	74	47
ac-ft	1441	1396	1289	1078	872	1077	5723	38904	62308	17667	4563	2793

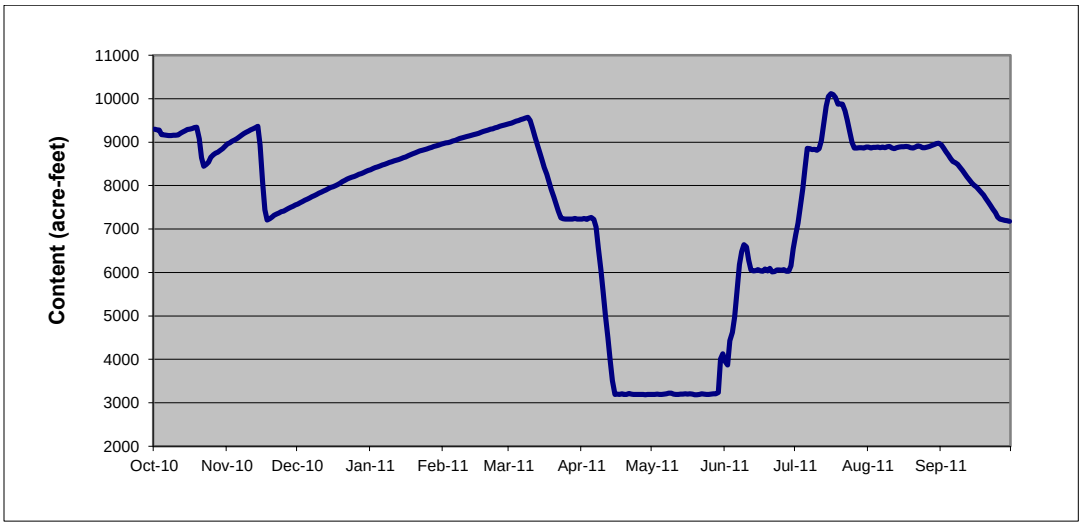


Appendix A (Table 6 of 38)
Willow Creek Reservoir, CO

Location. –-Lat 40° 08’52”, long 105° 56’28”, Grand County, Hydrologic Unit 14010001, at Willow Creek Dam, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 8130 from topographic map.
Remarks.—Reservoir is formed by an earth-fill dam. Construction completed in 1953. Impoundment began on April 2, 1953. Willow Creek Reservoir stores water from Willow Creek for diversion to Granby Reservoir via the Willow Creek Canal. Maximum capacity is 10,600 acre-feet at elevation 8,130.00 ft, with 9,100 acre-feet of active capacity between elevations 8077.00 and 8130.00 feet. Recorder was operated from 01-Oct 2010 to 30-Sep-2011. Record is complete and fair, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	9296	8957	7579	8368	8970	9427	7230	3194	3945	6875	8890	8939
2	9286	8981	7605	8390	8983	9441	7243	3194	3870	7135	8864	8866
3	9278	9017	7632	8413	8994	9465	7220	3200	4428	7503	8879	8784
4	9173	9048	7661	8432	9007	9482	7249	3189	4622	7933	8877	8705
5	9165	9081	7689	8454	9025	9496	7268	3192	4974	8408	8885	8622
6	9157	9118	7716	8474	9041	9517	7220	3200	5532	8856	8869	8557
7	9154	9157	7745	8492	9065	9537	7044	3206	6183	8848	8885	8524
8	9154	9194	7768	8512	9083	9556	6564	3220	6481	8830	8869	8486
9	9157	9226	7794	8532	9101	9572	6069	3220	6641	8835	8892	8425
10	9160	9256	7828	8552	9115	9496	5561	3202	6592	8812	8905	8351
11	9171	9286	7851	8569	9131	9307	5028	3192	6282	8848	8864	8275
12	9207	9307	7877	8584	9144	9123	4495	3195	6060	9035	8851	8200
13	9237	9337	7902	8602	9160	8955	3983	3197	6035	9457	8872	8125
14	9267	9367	7930	8619	9176	8764	3506	3199	6044	9820	8885	8059
15	9291	8929	7956	8642	9192	8589	3191	3206	6069	10055	8895	8010
16	9299	8071	7976	8661	9207	8415	3198	3203	6038	10119	8895	7965
17	9318	7446	7993	8687	9229	8258	3195	3209	6025	10093	8903	7909
18	9337	7204	8024	8707	9245	8086	3204	3199	6078	10029	8898	7849
19	9342	7239	8054	8733	9267	7911	3189	3182	6038	9874	8874	7780
20	9075	7273	8093	8754	9280	7741	3195	3188	6098	9880	8864	7700
21	8642	7318	8121	8776	9296	7577	3211	3191	6016	9877	8885	7626
22	8444	7346	8147	8800	9310	7417	3199	3207	6018	9721	8916	7543
23	8492	7372	8171	8814	9326	7256	3192	3203	6056	9506	8900	7461
24	8541	7400	8195	8830	9345	7239	3191	3193	6056	9261	8869	7378
25	8649	7417	8207	8846	9367	7228	3194	3191	6049	8994	8874	7277
26	8712	7444	8229	8864	9383	7232	3192	3203	6069	8866	8887	7230
27	8746	7472	8258	8882	9396	7232	3191	3207	6027	8866	8905	7218
28	8771	7499	8278	8900	9410	7226	3187	3208	6027	8874	8921	7202
29	8812	7525	8299	8918		7241	3194	3233	6153	8874	8950	7190
30	8853	7552	8326	8934		7226	3195	4012	6542	8864	8968	7179
31	8903		8351	8952		7226		4126		8887	8976	
Min	8444	7204	7579	8368	8970	7226	3187	3182	3870	6875	8851	7179
Max	9342	9367	8351	8952	9410	9572	7268	4126	6641	10119	8976	8939
EOM	8903	7552	8351	8952	9410	7226	3195	3195	6542	8887	8976	7179

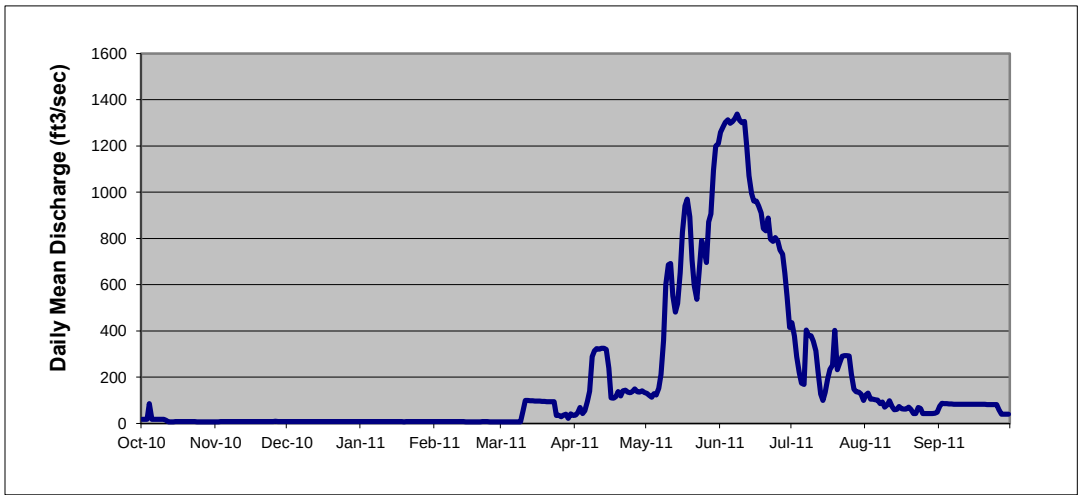


Appendix A (Table 7 of 38)
Willow Creek below Willow Creek Reservoir, CO

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-2010 to 30-Sep-2011. Records are complete and reliable. The official record is published by the Division of Water Resources, state of Colorado. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	18	7	8	8	8	7	35	129	1259	436	123	74
2	18	7	8	8	7	7	47	121	1282	378	131	87
3	18	8	8	8	7	7	69	114	1302	289	104	86
4	85	8	8	8	7	7	43	129	1313	220	105	85
5	18	8	8	8	7	7	55	123	1297	174	103	84
6	18	8	8	8	7	7	95	152	1304	169	100	84
7	18	7	8	8	7	7	139	211	1319	404	86	83
8	18	7	8	8	7	7	289	358	1338	381	92	82
9	18	8	8	8	7	7	314	600	1310	379	70	82
10	18	8	8	8	7	55	324	686	1301	356	80	82
11	14	8	8	8	7	100	321	691	1306	313	98	82
12	7	9	8	8	7	99	325	552	1197	220	73	82
13	7	8	8	8	7	98	325	482	1071	127	59	82
14	7	8	8	8	7	98	320	518	994	100	60	82
15	7	8	8	7	7	97	239	652	961	134	73	82
16	7	8	8	7	7	96	110	828	961	194	63	82
17	8	8	8	7	7	96	110	941	941	233	61	82
18	8	8	8	7	7	95	115	969	911	252	62	82
19	7	8	8	7	7	95	136	893	843	403	71	82
20	8	8	8	7	7	94	119	706	833	232	61	82
21	8	7	8	8	7	94	141	595	888	260	42	82
22	8	7	8	7	7	94	144	536	797	291	42	82
23	7	8	8	7	7	94	135	653	787	293	69	81
24	7	8	8	8	7	34	132	791	804	293	65	81
25	7	8	8	8	7	35	138	756	788	292	42	81
26	7	9	8	7	7	28	149	696	749	213	43	60
27	7	8	8	7	7	36	137	871	732	147	43	40
28	7	7	8	8	7	39	136	906	650	137	43	40
29	7	8	8	8		22	141	1095	547	136	43	40
30	7	8	8	8		41	133	1200	414	127	44	40
31	7		8	8		34		1209		99	48	
Min	7	7	8	7	7	7	35	114	414	99	42	40
Max	85	9	8	8	8	100	325	1209	1338	436	131	87
Mean	13	8	8	8	7	53	164	618	1007	248	71	76
ac-ft	803	473	480	466	403	3246	9735	37948	59797	15206	4356	4506

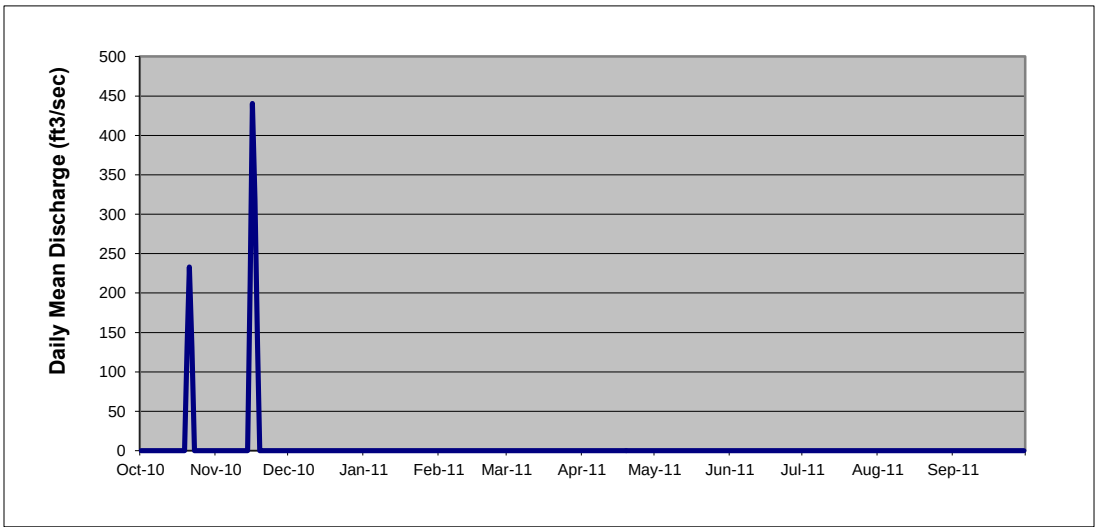


Appendix A (Table 8 of 38)
Willow Creek Pump Canal, CO

Location. –-Lat 40°08'39", long 105°54'10", Grand County, Hydrologic Unit 14010001, at Willow Creek Pump Canal, 4 miles north of Granby, Colorado, on Willow Creek, a tributary of the Colorado River.
Gage.— Water-stage recorder with satellite telemetry at 15 foot Parshall Flume. Elevation of gage is 8300 feet from topographic map.
Remarks.—Canal is used to divert water from Willow Creek Reservoir to Granby Reservoir. Diversions are seasonal, mainly during late spring and early summer. Construction completed in 1953. Length of the canal is 3.4 miles. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	212	0	0	0	0	0	0	0	0	0	0
16	0	440	0	0	0	0	0	0	0	0	0	0
17	0	319	0	0	0	0	0	0	0	0	0	0
18	0	135	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	133	0	0	0	0	0	0	0	0	0	0	0
21	233	0	0	0	0	0	0	0	0	0	0	0
22	131	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	233	440	0	0	0	0	0	0	0	0	0	0
Mean	16	37	0	0	0	0	0	0	0	0	0	0
ac-ft	984	2192	0	0	0	0	0	0	0	2	12	12

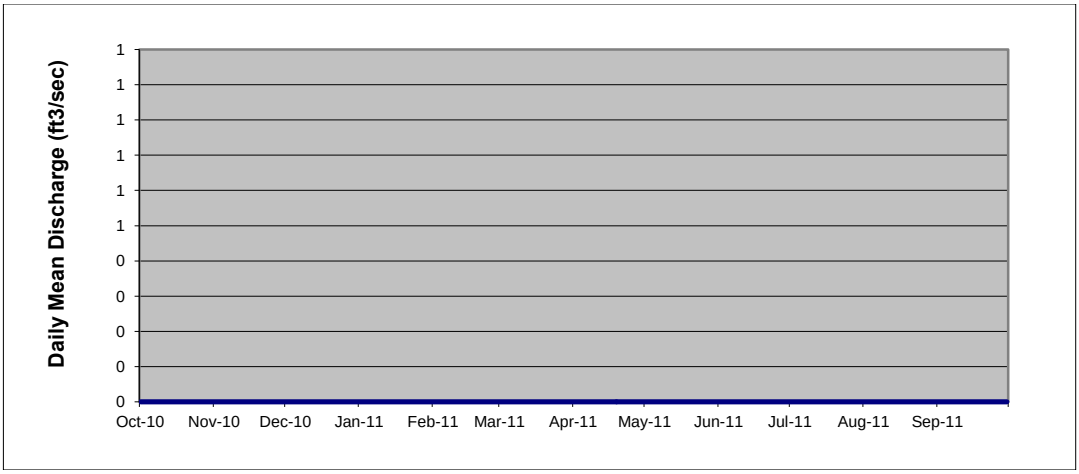


Appendix A (Table 9 of 38)
Windy Gap Pumping Plant, CO

Location. --Lat 40°06'24", long 105°58'48", Grand County, Hydrologic Unit 14010001, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Reading taken directly from the pumps. Elevation of the pumping plant is 7823 from topographic map.
Remarks.— Water is pumped from Windy Gap Reservoir to Granby Reservoir. Water is stored at Granby Reservoir before delivery through Adams Tunnel. Data was provided by Farr Pumping Plant operators each morning. Data was collected from 01-Oct-2010 to 30-Sep-2011. Records are complete and reliable, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

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

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

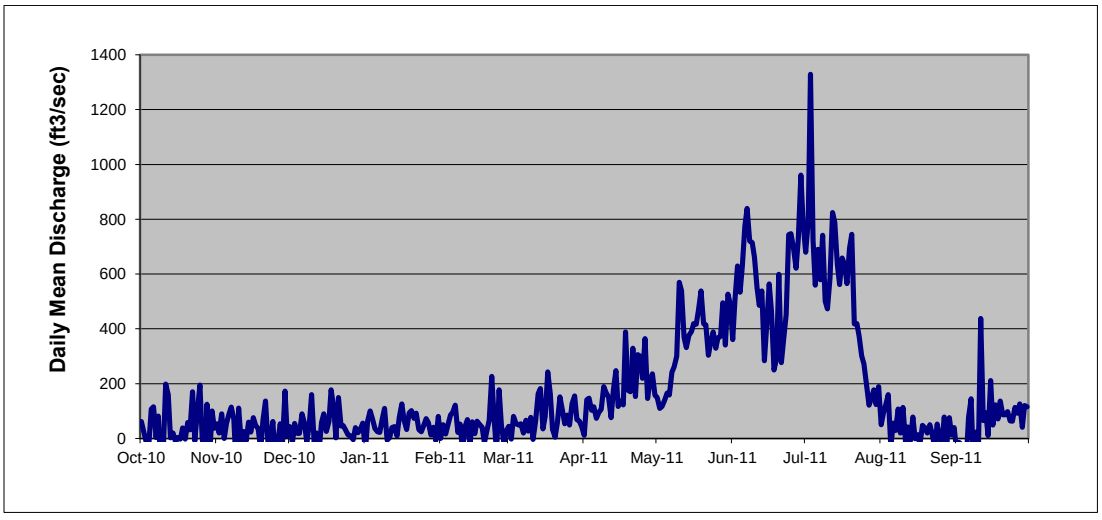


Appendix A (Table 10 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 from topographic map.
Remarks.-- Inflow computed daily based on change in content from midnight to midnight, and on the average daily releases through the reservoir outlet works. Recorders were operated from 01-Oct-2010 to 30-Sep-2011. These values do not include inflows to Grand Lake, Shadow Mountain or Willow Creek Reservoirs. Records are complete, but the data has not been revised. This record consists of operational data which could be subject to future revisions and changes.

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	62	53	43	-48	0	44	12	149	360	680	50	-38
2	23	20	-16	63	51	-2	141	110	506	794	94	-14
3	-12	90	54	101	16	80	147	117	629	1329	126	-22
4	-28	0	19	73	49	54	103	139	534	724	160	-25
5	108	55	19	36	86	50	116	166	628	559	-28	-72
6	116	90	90	24	96	54	74	159	776	690	56	77
7	4	115	55	22	121	20	96	242	840	579	30	144
8	82	70	-15	72	22	67	106	261	721	741	107	-121
9	-115	-121	55	110	53	27	189	301	715	501	20	24
10	-28	111	160	-5	-48	77	168	570	661	473	114	-26
11	198	-10	-15	4	43	-3	150	539	550	585	-12	438
12	160	25	20	39	69	63	75	369	485	824	42	66
13	2	-12	-50	43	-20	164	176	332	538	789	-9	93
14	20	59	58	9	61	183	248	377	284	634	78	10
15	-13	24	90	77	17	35	117	390	409	562	-1	211
16	4	76	26	126	63	80	137	420	564	659	14	49
17	-2	48	61	66	52	243	122	417	466	633	-23	122
18	38	36	178	33	40	162	389	468	250	566	47	71
19	-2	-42	112	94	-16	33	177	539	292	694	39	137
20	58	67	2	102	29	4	171	419	599	745	20	86
21	31	137	150	74	67	57	329	415	276	418	51	86
22	171	-24	45	92	226	152	153	304	371	420	17	98
23	-9	2	47	33	60	101	306	349	453	374	-31	64
24	101	62	29	24	-51	54	300	389	744	301	53	63
25	195	-78	12	47	178	85	219	330	748	272	-2	114
26	5	-15	9	73	50	49	365	368	693	197	-16	92
27	-117	54	-5	57	-19	128	146	373	621	121	78	126
28	125	-16	39	13	28	156	206	495	728	144	-19	41
29	-75	173	22	41		69	235	341	961	177	76	120
30	100	9	33	-8		63	158	527	786	123	13	116
31	37		56	81		43		493		189	40	
Min	-117	-121	-50	-48	-51	-3	12	110	250	121	-31	-121
Max	198	173	178	126	226	243	389	570	961	1329	160	438
Mean	40	35	45	51	47	77	178	350	573	532	38	71
ac-ft	2451	2095	2739	3101	2618	4733	10559	21511	34036	32667	2346	4220

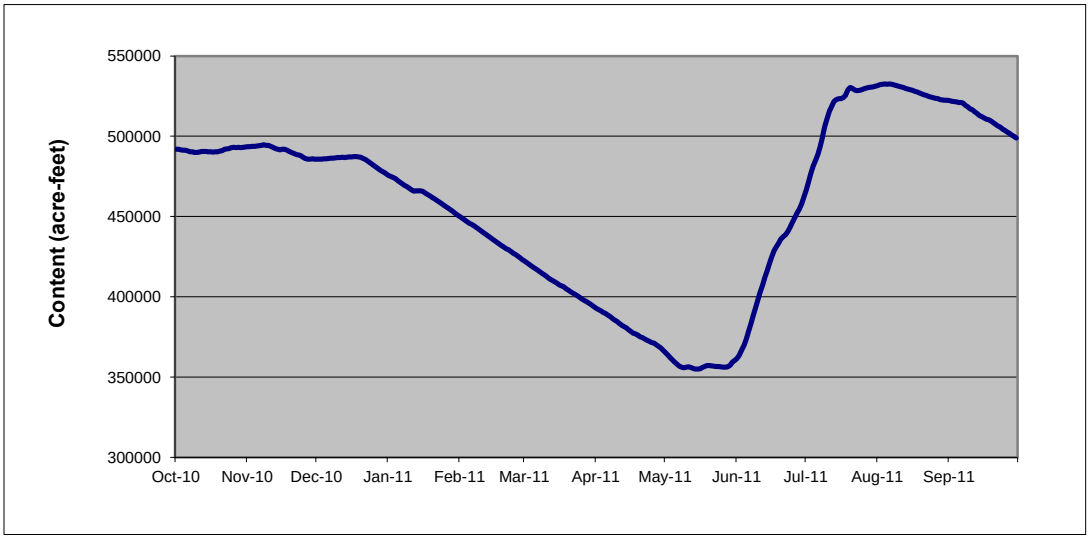


Appendix A (Table 11 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam and four earth-fill dikes. Construction completed in 1950. Impoundment began on 14-Sep-1949. Granby Reservoir provides west-slope storage for the Colorado-Big Thompson Project. Maximum capacity is 539,800 acre-feet at elevation 8,280.00, with 463,300 acre-feet of active capacity between elevations 8186.90 and 8280.00 feet. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. Records are complete, but the data has not been revised. A new recorder was added in the spring. This record consists of operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	491968	493506	485699	475524	449897	422232	392827	365289	361577	466755	531513	522180
2	491829	493576	485699	474901	448899	421136	392019	363791	363612	471745	532090	521895
3	491620	493784	485839	474421	447832	420234	391398	362176	366970	477036	532377	521611
4	491412	493784	485908	473595	446835	419212	390409	360744	369861	481393	532521	521326
5	491412	493924	485978	472499	445970	418183	389665	359373	373611	485071	532449	520969
6	490921	494132	486186	471470	445110	417223	388672	358005	378421	488690	532521	521041
7	490293	494413	486324	470444	444311	416203	387750	356938	383561	493506	532306	520538
8	490293	494624	486324	469485	443385	415247	386576	356226	388549	499247	532018	519253
9	490015	494413	486463	468668	442393	414227	385588	355811	393199	505856	531513	518185
10	489876	494413	486809	467575	441204	413271	384668	356167	397812	511224	531223	517046
11	490224	493715	486809	466549	440148	412062	383622	356403	402577	515622	530720	516476
12	490501	493088	486878	465871	439225	411045	382393	355989	407242	518682	530289	515265
13	490432	492388	486809	465939	438042	410283	381477	355453	411998	521539	529782	514204
14	490432	491829	486948	465939	437057	409524	380801	355099	416077	522896	529422	512925
15	490293	491620	487156	466074	436006	408446	379638	355099	420363	523398	528993	512216
16	490293	491968	487225	465533	435025	407494	378542	355158	424615	523327	528563	511365
17	490224	491968	487365	464647	434043	406927	377442	355989	428829	523969	528060	510660
18	490293	491342	487365	463560	432994	406171	376956	356699	431233	525402	527554	510165
19	490293	490501	487225	462746	431954	405160	376102	357236	433386	528921	526981	509456
20	490640	489876	486948	461869	430909	404023	375132	357295	436006	530289	526406	508536
21	491131	489390	486186	460985	429930	403020	374583	357117	437451	529782	525831	507408
22	491829	488760	485490	460106	429282	402326	373794	356938	438767	528778	525331	506492
23	492038	488342	484586	459094	428309	401383	373066	356580	440742	528420	524831	505716
24	492248	487856	483541	458083	427140	400381	372463	356580	443252	528491	524473	504516
25	492949	486948	482504	457073	426426	399439	371674	356462	446367	528921	524041	503675
26	493088	486186	481462	456128	425459	398438	371191	356344	449430	529494	523612	502758
27	492880	485699	480352	455124	424294	397625	370162	356226	452239	529927	523327	501846
28	493088	485699	479386	454047	423259	396878	369260	356403	454719	530361	522896	500791
29	492949	485978	478418	453039		395878	368174	357354	457812	530576	522681	499882
30	493158	485699	477522	451905		394878	366790	359432	462071	530720	522465	498966
31	493297		476622	450966		393948		360447		531078	522394	
Min	489876	485699	476622	450966	423259	393948	366790	355099	361577	466755	522394	498966
Max	493297	494624	487365	475524	449897	422232	392827	365289	462071	531078	532521	522180
EOM	493297	485699	476622	450966	423259	393948	366790	366790	462071	531078	522394	498966

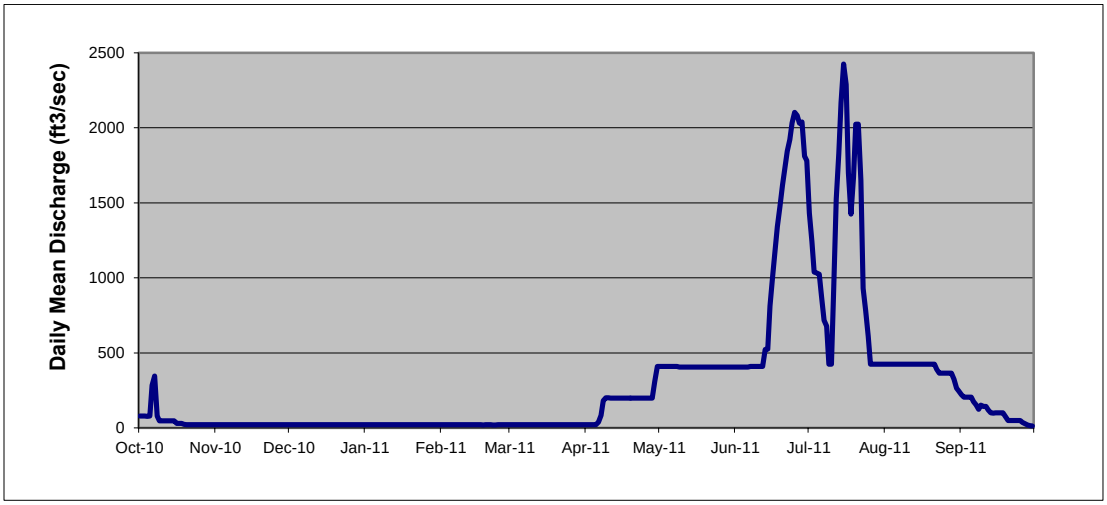


Appendix A (Table 12 of 38)
Granby Reservoir, CO

Location. --Lat 40°08'54", long 105°51'48", Grand County, Hydrologic Unit 14010001, on Granby Dam, 5.5 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Water level recorder with satellite telemetry. Elevation of gage is 8300 feet, from topographic map.
Remarks.--Reservoir is formed by an earth-fill dam and four earth-fill dikes. Construction completed in 1950. Impoundment began on 14-Sep-1949. Granby Reservoir provides west-slope storage for the Colorado-Big Thompson Project. Data was provided by personnel from the Northern Colorado Water Conservancy District. Releases were made through the outlet works valve and through the spillway radial gates during runoff. 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 seasons. Data was recorded from 01-Oct-2010 to 30-Sep-2011. Records are complete and fair. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	79	22	21	21	21	21	21	410	405	1432	425	223
2	79	22	21	21	21	21	21	410	405	1242	425	205
3	79	22	21	21	21	21	21	410	405	1038	425	205
4	78	22	21	21	21	21	21	410	405	1032	425	205
5	79	22	21	21	21	21	21	410	405	1024	425	205
6	285	22	22	21	21	21	40	410	405	876	425	175
7	347	22	22	21	21	21	83	410	410	717	425	154
8	79	22	22	21	21	21	181	410	410	679	425	124
9	47	22	22	21	21	21	201	405	410	425	425	153
10	47	22	22	21	21	21	201	405	410	425	425	143
11	47	22	22	21	21	21	200	405	410	921	425	143
12	47	22	22	21	21	21	200	405	410	1525	425	120
13	47	22	22	21	21	21	200	405	524	1829	425	100
14	47	22	22	21	21	21	200	405	525	2167	425	99
15	47	22	22	21	21	21	200	405	814	2425	425	101
16	31	22	22	21	21	21	200	405	1005	2288	425	101
17	30	22	22	21	21	21	200	405	1187	1700	425	101
18	30	22	22	21	20	21	200	405	1342	1425	425	101
19	25	22	22	21	21	21	200	405	1475	1671	425	75
20	21	22	22	21	21	21	199	405	1616	2025	425	50
21	22	22	22	21	21	21	200	405	1724	2025	425	50
22	22	22	21	21	20	21	200	405	1846	1651	391	50
23	22	22	21	21	20	21	200	405	1921	930	365	50
24	22	21	21	21	21	21	199	405	2033	780	365	50
25	22	21	21	21	21	21	199	405	2103	610	365	50
26	22	21	21	21	21	21	199	405	2082	425	365	37
27	22	21	21	21	21	21	199	405	2031	425	365	28
28	22	21	21	21	21	21	200	405	2040	425	365	19
29	22	21	21	21		21	312	405	1811	425	324	15
30	22	21	21	21		21	410	405	1781	425	266	14
31	22		21	21		21		405		425	246	
Min	21	21	21	21	20	21	21	405	405	425	246	14
Max	347	22	22	21	21	21	410	410	2103	2425	425	223
Mean	58	22	22	21	21	21	171	406	1092	1142	398	105
ac-ft	3590	1293	1321	1289	1158	1289	10153	24938	64845	70116	24437	6229

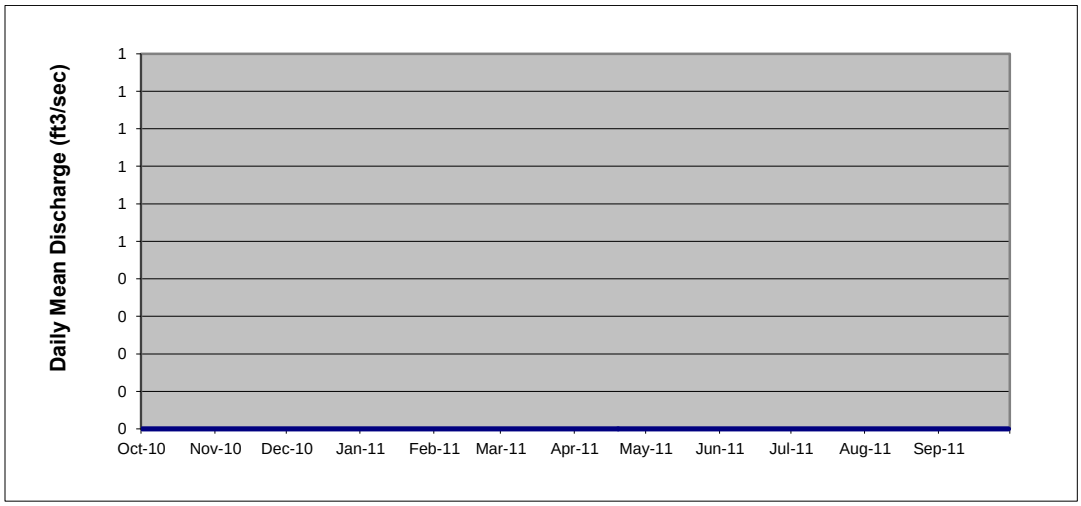


Appendix A (Table 13 of 38)
Farr Pumping Plant, Granby Reservoir, CO

Location. --Lat 40°11'30", long 105°52'52", Grand County, Hydrologic Unit 14010001, at Farr Pumping Plant on the north end of Granby Reservoir, 8 miles northeast of Granby, Colorado, on the Colorado River.
Gage.-- Reading taken directly from the pumps, based on conduit pressure and Granby Reservoir's elevation. Elevation of the pumping plant is 8320 from topographic map.
Remarks.-- Water is pumped from Granby to the Granby Pump Canal which discharges into Shadow Mountain Reservoir. The operation keeps Shadow Mountain Reservoir/Grand Lake at a steady water surface level when transmountain diversions via Adams Tunnel are taking place. Data was provided by Farr Pumping Plant operators each morning. Data was collected from 01-Oct-2010 to 30-Sep-2011. 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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	0	0	0	0
Mean	0	0	0	0	0	0	0	0	0	0	0	0
ac-ft	0	0	0	0	0	0	0	0	0	0	0	0

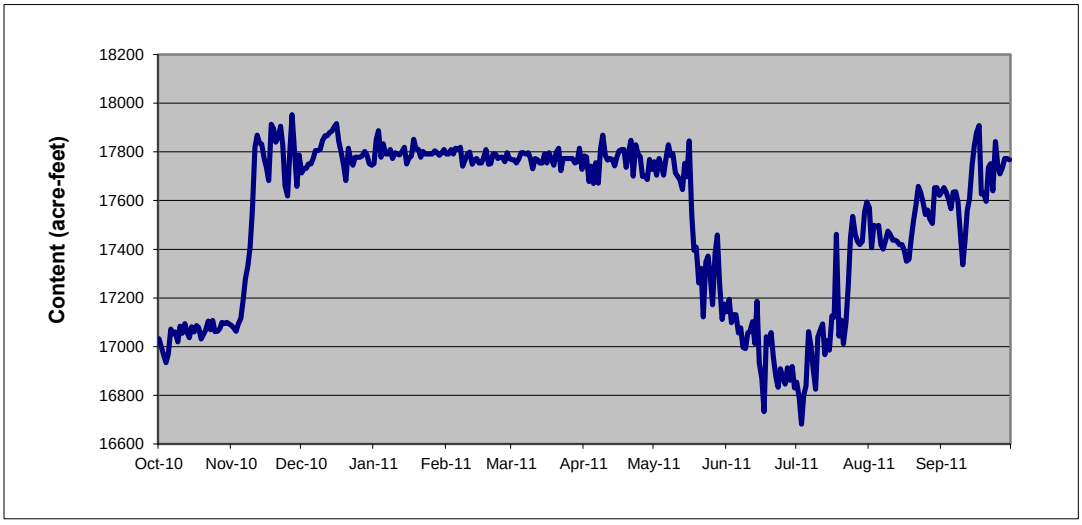


Appendix A (Table 14 of 38)
Shadow Mountain/Grand Lake, CO

Location. --Lat 40°12'26", long 105°50'28", Grand County, Hydrologic Unit 14010001, on the Colorado River at the Shadow Mountain outlet works structure, 10 miles northeast of Granby, Colorado.
Gage.--Water-stage recorder with satellite telemetry. Elevation of gage is 8375 feet from topographic map.
Remarks.--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-2010 to 30-Sep-2011. Some data were provided by Farr Pumping Plant personnel during down time. Records are complete and fair. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	17033	17087	17713	17751	17791	17767	17783	17759	17143	16854	17571	17634
2	16996	17077	17732	17850	17791	17767	17779	17704	17195	16788	17406	17653
3	16964	17063	17732	17887	17809	17754	17679	17772	17098	16682	17498	17634
4	16934	17093	17750	17778	17791	17772	17742	17741	17132	16802	17493	17603
5	16968	17116	17750	17832	17814	17796	17670	17704	17131	16839	17498	17566
6	17072	17190	17773	17791	17809	17796	17755	17769	17056	17061	17419	17634
7	17052	17277	17805	17791	17819	17791	17672	17830	17078	17006	17400	17635
8	17060	17332	17805	17809	17741	17796	17813	17785	16997	16914	17437	17593
9	17020	17411	17810	17772	17767	17772	17868	17793	16992	16825	17474	17470
10	17084	17561	17847	17796	17791	17731	17785	17714	17056	17039	17461	17336
11	17055	17819	17866	17791	17799	17772	17766	17699	17063	17065	17437	17436
12	17095	17868	17866	17786	17749	17767	17772	17685	17102	17094	17437	17560
13	17058	17837	17879	17800	17767	17754	17769	17645	17013	16966	17432	17607
14	17037	17832	17884	17819	17772	17754	17743	17753	17186	17025	17419	17744
15	17082	17771	17902	17750	17754	17791	17778	17698	16933	16986	17419	17825
16	17060	17734	17915	17774	17754	17754	17804	17845	16868	17126	17395	17879
17	17087	17682	17842	17783	17778	17796	17809	17542	16734	17121	17350	17908
18	17079	17913	17795	17851	17809	17767	17809	17395	17040	17462	17359	17627
19	17032	17895	17745	17814	17749	17746	17738	17409	17011	17043	17446	17632
20	17050	17840	17681	17809	17752	17796	17801	17261	17058	17109	17516	17597
21	17068	17863	17814	17778	17791	17814	17848	17322	16956	17011	17584	17736
22	17105	17905	17769	17801	17791	17722	17701	17123	16875	17101	17658	17751
23	17069	17826	17746	17791	17772	17772	17830	17348	16833	17248	17634	17640
24	17108	17661	17778	17791	17778	17772	17793	17372	16909	17447	17598	17843
25	17061	17619	17778	17791	17778	17772	17779	17288	16876	17534	17542	17749
26	17063	17801	17778	17791	17759	17772	17699	17172	16846	17461	17561	17709
27	17073	17952	17783	17804	17796	17772	17701	17385	16913	17432	17524	17736
28	17100	17795	17801	17796	17772	17754	17685	17459	16862	17419	17506	17772
29	17095	17658	17788	17785		17759	17769	17259	16918	17432	17653	17772
30	17100	17786	17751	17796		17814	17727	17111	16830	17552	17653	17767
31	17093		17746	17809		17727		17175		17594	17621	
Min	16934	17063	17681	17750	17741	17722	17670	17111	16734	16682	17350	17336
Max	17108	17952	17915	17887	17819	17814	17868	17845	17195	17594	17658	17908
EOM	17093	17786	17746	17809	17772	17727	17727	17727	16830	17594	17621	17767

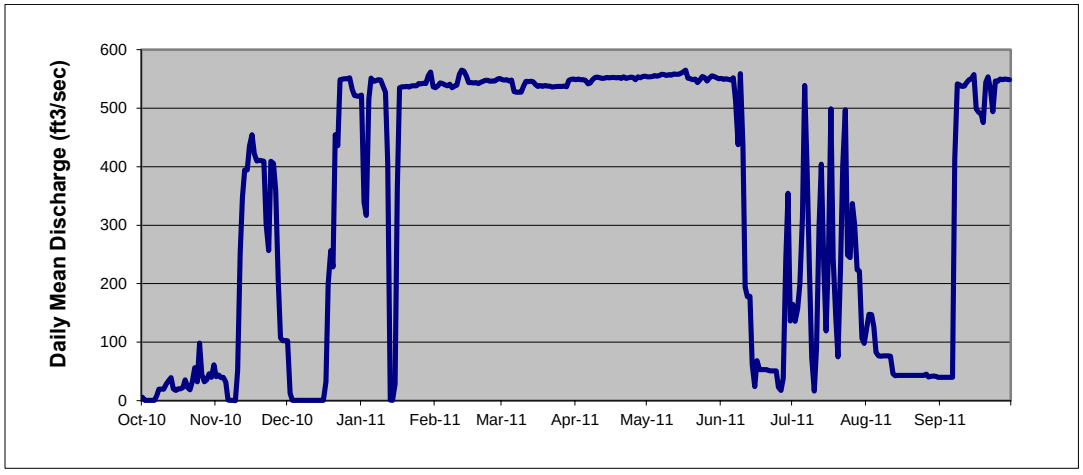


Appendix A (Table 15 of 38)
Alva B. Adams Tunnel at East Portal, near Estes Park, CO

Location. --Lat 40°19'40", long 105°34'39", Larimer County, Hydrologic Unit 10190006, 4.5 miles southwest of Estes Park, Colorado.
Gage.-- Water-stage recorder with satellite telemetry at 15 foot Parshall flume. Elevation of gage is 8250 from topographic map.
Remarks.-- Constructed between 1940 and 1947. Tunnel is 13.1 miles long, and extends between Grand Lake and Estes Park. Its maximum capacity is 550 cubic feet per second. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes. The official record is published by the CDWR

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	6	41	102	522	535	549	549	554	551	165	125	40
2	1	43	12	339	538	548	550	553	549	136	148	40
3	1	39	1	317	543	548	549	554	550	157	147	40
4	1	40	1	515	542	547	549	556	549	200	127	40
5	1	32	1	551	540	548	547	554	548	313	83	40
6	1	1	1	546	538	529	542	556	552	539	76	40
7	8	1	1	547	541	527	543	558	513	387	76	413
8	20	0	1	548	535	527	549	558	437	222	76	542
9	20	0	1	548	538	528	553	556	559	74	76	540
10	20	52	1	538	540	538	553	557	437	16	76	537
11	28	253	1	527	558	546	552	556	194	90	76	538
12	34	347	1	407	565	546	551	559	178	298	46	544
13	39	394	1	1	563	546	551	558	178	404	42	549
14	20	394	1	1	555	546	552	558	62	226	43	551
15	18	435	1	28	544	541	552	560	24	119	43	557
16	20	454	1	363	544	537	552	562	68	267	43	499
17	20	422	32	535	543	539	553	565	53	499	43	493
18	22	410	200	536	543	537	552	551	53	243	43	491
19	36	411	256	536	542	539	552	550	53	144	43	475
20	23	410	229	537	544	538	551	548	53	75	43	544
21	18	409	455	536	546	538	554	549	52	227	43	553
22	34	302	436	538	547	536	551	544	51	402	43	531
23	56	257	549	538	547	537	552	549	51	497	43	494
24	32	409	550	538	546	537	553	554	51	249	43	546
25	99	405	550	542	546	537	552	552	23	244	43	546
26	45	359	550	541	546	537	548	546	17	337	46	550
27	32	204	552	542	550	538	554	552	38	301	41	549
28	36	107	532	542	551	537	552	555	241	224	41	550
29	46	102	522	556		548	554	554	354	222	42	549
30	40	103	521	562		549	555	552	136	107	41	549
31	61		520	537		550		550		98	40	
Min	1	0	1	1	535	527	542	544	17	16	40	40
Max	99	454	552	562	565	550	555	565	559	539	148	557
Mean	27	228	212	465	545	540	551	554	239	241	63	431
ac-ft	1655	13537	13023	28545	30235	33155	32722	34019	14209	14810	3844	25595

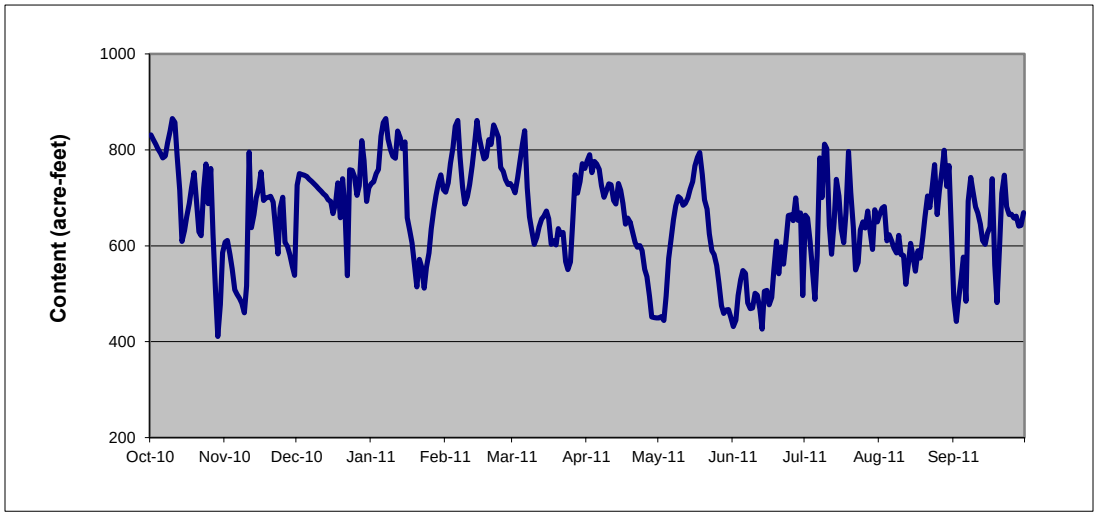


Appendix A (Table16 of 38)
Marys Lake, CO

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 acre-feet. Marys Lake is 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-2010 to 30-Sep-2011. The gage does not record water surface levels below elevation 8,022.62 feet, content of 321 acre-feet. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete and reliable.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	832	608	727	730	712	722	777	449	432	664	665	489
2	822	611	750	733	731	711	790	452	445	658	678	442
3	812	581	749	751	772	742	753	444	496	609	682	488
4	802	552	747	759	806	775	776	495	530	553	610	532
5	793	508	745	829	850	812	770	574	548	488	623	576
6	783	499	739	856	861	840	760	611	542	580	610	484
7	787	490	734	865	786	721	725	654	481	784	595	693
8	815	481	730	823	722	661	701	683	469	700	585	743
9	840	460	725	800	687	628	714	703	471	812	622	713
10	865	516	719	786	703	603	729	699	501	802	582	681
11	858	796	714	783	728	618	727	685	497	643	580	668
12	787	638	709	839	768	639	695	688	468	582	520	645
13	717	665	704	826	810	656	687	700	426	650	562	611
14	609	700	696	802	861	662	730	718	505	739	605	603
15	632	720	692	816	826	672	716	734	507	704	576	626
16	661	754	667	658	801	657	689	767	477	636	547	639
17	689	695	689	631	782	603	645	785	492	606	590	740
18	721	700	731	606	785	610	658	795	552	668	575	560
19	752	701	658	558	821	602	649	748	610	796	617	482
20	696	703	740	514	811	635	629	696	542	711	661	598
21	629	691	681	572	852	624	607	677	598	639	704	709
22	621	641	538	556	840	628	597	625	562	550	680	747
23	720	583	759	511	826	567	601	590	612	565	725	682
24	770	678	757	555	763	550	590	582	663	633	770	665
25	688	701	744	585	755	566	551	559	664	650	665	666
26	761	607	705	635	738	649	535	523	652	637	715	658
27	624	599	725	676	728	748	495	475	700	672	756	662
28	504	582	819	705	730	710	452	459	653	633	800	641
29	411	557	778	733		734	450	466	669	592	724	643
30	478	539	692	748		772	450	467	496	675	767	669
31	586		721	717		761		449		650	620	
Min	411	460	538	511	687	550	450	444	426	488	520	442
Max	865	796	819	865	861	840	790	795	700	812	800	747
EOM	586	539	721	717	730	761	450	450	496	650	620	669

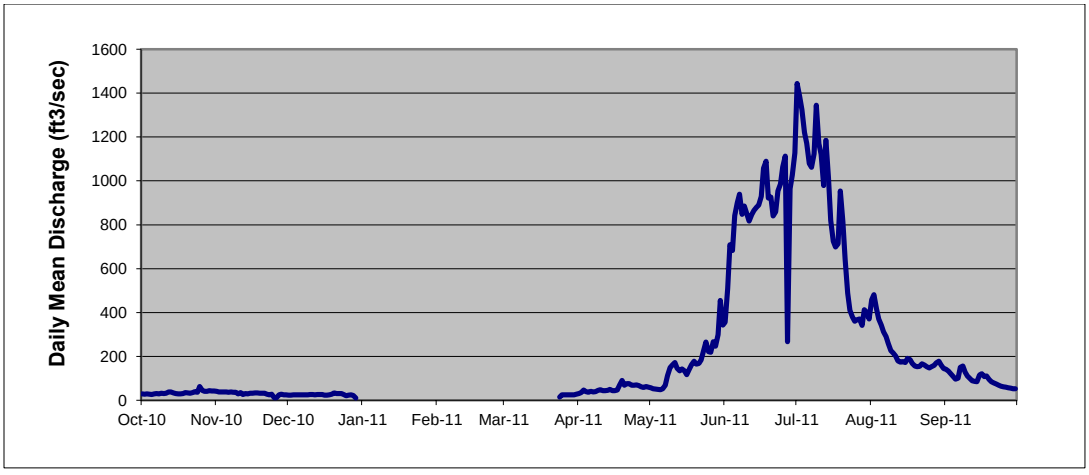


Appendix A (Table 17 of 38)
Big Thompson River above Lake Estes, CO

Location. --Lat 40°22'42", long 105°30'48", Larimer County, Hydrologic Unit 10190006, 600 feet downstream from bridge on state highways 7 and 36 in Estes Park, Colorado, downstream from Black Canyon Creek, and 0.3 miles northwest of Estes Powerplant.
Gage.-- Water-stage recorder with satellite telemetry. 15 foot Parshall flume with overflow weirs and supplemental outside gage. Datum of gage at 7492.5 feet.
Remarks.— Drainage area is 137 mi^2. Station consists of data collection platform as primary record with graphic chart recorder as backup. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The station is shutdown during winter (December 29 through March 24). Values for the off-season are estimated. Flash boards on each side of the flume were removed in early spring 2011. A new rating table was created by the Colorado Division of Water Resources (CDWR). The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the CDWR as a component of the C-BT project. This record contains operational data which could be subject to future revisions and changes. Data published by the CDWR.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	29	40	24	0	0	0	31	57	356	1444	459	141
2	28	38	24	0	0	0	35	53	508	1384	481	132
3	29	38	25	0	0	0	47	51	709	1325	417	120
4	28	38	25	0	0	0	39	50	682	1221	371	108
5	27	37	25	0	0	0	36	48	842	1171	342	96
6	29	37	25	0	0	0	40	52	900	1079	312	101
7	30	37	25	0	0	0	38	69	939	1062	291	150
8	30	36	25	0	0	0	40	112	848	1123	258	156
9	32	36	25	0	0	0	46	149	885	1344	226	129
10	31	29	26	0	0	0	48	161	848	1170	215	111
11	32	35	26	0	0	0	43	172	817	1121	201	99
12	37	26	24	0	0	0	44	145	845	979	180	89
13	37	30	26	0	0	0	44	135	864	1184	174	86
14	33	29	26	0	0	0	50	143	879	1014	176	84
15	31	33	26	0	0	0	44	134	890	820	172	116
16	30	32	24	0	0	0	44	116	929	725	191	121
17	29	33	24	0	0	0	47	142	1058	698	185	107
18	31	33	24	0	0	0	69	161	1090	714	168	111
19	35	33	27	0	0	0	90	177	922	954	156	94
20	33	31	34	0	0	0	69	165	926	813	153	84
21	32	31	31	0	0	0	75	168	841	643	155	78
22	35	28	30	0	0	0	76	183	860	489	166	74
23	40	25	30	0	0	0	69	228	954	410	160	68
24	37	27	26	0	0	14	69	265	986	380	154	64
25	63	11	20	0	0	25	69	221	1064	360	147	61
26	46	11	24	0	0	25	67	219	1112	367	153	60
27	41	25	25	0	0	25	61	266	266	370	158	57
28	40	27	22	0	0	25	59	247	964	341	171	55
29	44	25	10	0		24	62	298	1026	412	178	53
30	43	24	0	0		25	60	455	1128	399	161	52
31	42		0	0		27		343		370	145	
Min	27	11	0	0	0	0	31	48	266	341	145	52
Max	63	40	34	0	0	27	90	455	1128	1444	481	156
Mean	35	31	23	0	0	6	54	167	865	835	222	95
ac-ft	2143	1817	1436	0	0	375	3190	10263	51360	51258	13610	5658

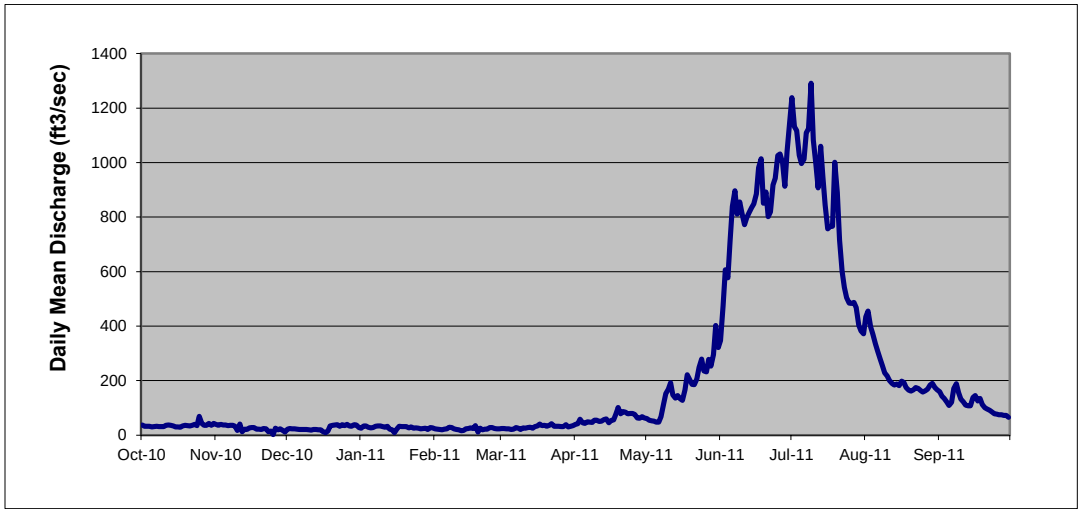


Appendix A (Table 18 of 38)
Olympus Dam, CO

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

Inflow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	37	40	22	25	23	24	39	61	347	1239	434	159
2	32	36	25	33	22	24	42	55	474	1132	455	143
3	33	39	23	33	21	23	58	53	606	1117	397	135
4	32	37	23	29	19	23	46	52	577	1027	370	122
5	30	37	22	27	22	21	43	47	714	996	335	108
6	32	34	21	28	23	22	49	48	839	1013	308	120
7	32	36	20	32	29	28	48	68	897	1109	279	171
8	32	36	20	34	28	25	46	113	811	1125	254	189
9	32	33	20	34	23	20	54	153	856	1291	229	156
10	31	17	20	31	20	26	54	168	815	1082	217	132
11	36	40	19	29	19	26	49	192	773	994	200	121
12	37	13	21	32	16	28	51	147	798	907	190	110
13	36	21	20	22	17	29	57	136	816	1060	184	108
14	34	21	19	19	23	26	59	145	834	946	188	108
15	31	27	20	8	24	31	45	133	848	844	182	139
16	30	27	12	23	26	34	54	128	885	757	198	145
17	29	28	9	33	24	40	55	166	981	765	193	126
18	34	22	14	31	35	35	77	221	1014	767	175	135
19	36	22	33	32	11	36	101	203	851	1001	165	113
20	35	20	36	31	25	33	78	187	892	889	162	101
21	34	24	38	27	19	36	86	186	801	716	167	96
22	36	23	38	30	21	42	84	206	820	600	175	91
23	39	13	33	26	22	33	78	249	918	543	171	86
24	35	14	38	27	28	33	80	279	943	505	164	79
25	69	1	34	25	27	32	79	235	1026	485	158	77
26	43	25	39	23	24	31	76	232	1031	483	163	75
27	36	19	34	25	22	31	63	278	999	487	169	75
28	36	23	32	25	23	38	62	253	913	468	184	72
29	43	17	38	20		30	68	296	1041	404	190	72
30	36	12	37	28		33	63	402	1147	383	175	66
31	43		27	27		35		321		372	166	
Min	29	1	9	8	11	20	39	47	347	372	158	66
Max	69	40	39	34	35	42	101	402	1147	1291	455	189
Mean	36	25	26	27	23	30	62	175	842	823	226	114
ac-ft	2192	1502	1602	1681	1266	1836	3655	10713	50030	50506	13851	6786

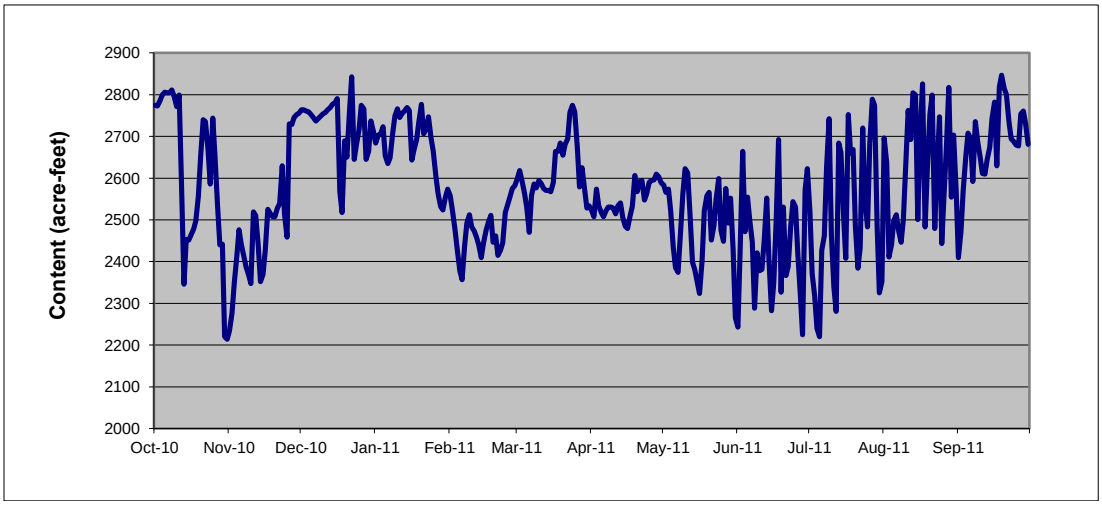


Appendix A (Table 19 of 38)
Olympus Dam, CO

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-2010 to 30-Sep-2011. Records are complete and reliable, but the data has not been revised. This record contains operational data which could be subject to future revisions and changes. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2775	2234	2764	2684	2558	2597	2522	2584	2244	2521	2696	2410
2	2773	2276	2764	2703	2522	2618	2508	2566	2429	2371	2637	2472
3	2785	2347	2761	2705	2476	2594	2574	2574	2664	2317	2411	2571
4	2799	2413	2759	2723	2429	2564	2534	2521	2472	2241	2440	2650
5	2806	2476	2752	2654	2378	2530	2517	2434	2554	2220	2497	2708
6	2804	2442	2745	2635	2357	2470	2508	2386	2499	2427	2513	2696
7	2804	2413	2737	2648	2439	2559	2522	2375	2447	2462	2475	2592
8	2812	2387	2742	2706	2492	2585	2530	2462	2288	2625	2447	2735
9	2794	2368	2749	2749	2513	2577	2530	2563	2421	2742	2501	2689
10	2771	2347	2754	2766	2483	2594	2529	2623	2378	2465	2640	2650
11	2799	2519	2757	2745	2473	2587	2514	2613	2381	2338	2762	2611
12	2592	2511	2764	2756	2459	2575	2534	2517	2448	2281	2693	2609
13	2346	2439	2769	2761	2440	2571	2541	2399	2553	2684	2804	2645
14	2453	2352	2777	2769	2410	2571	2506	2381	2403	2662	2799	2674
15	2452	2370	2780	2762	2445	2567	2484	2351	2282	2513	2501	2742
16	2464	2427	2791	2643	2475	2589	2480	2323	2349	2408	2716	2782
17	2478	2525	2567	2669	2494	2664	2509	2402	2508	2752	2826	2630
18	2497	2516	2517	2693	2511	2664	2532	2522	2693	2660	2483	2819
19	2558	2508	2689	2735	2447	2684	2606	2558	2327	2669	2623	2847
20	2652	2508	2650	2777	2462	2655	2567	2566	2530	2486	2754	2815
21	2740	2529	2757	2706	2415	2681	2592	2452	2367	2384	2799	2801
22	2735	2539	2843	2718	2427	2694	2594	2486	2387	2432	2480	2735
23	2669	2630	2645	2747	2445	2757	2547	2551	2484	2720	2621	2694
24	2586	2514	2681	2696	2517	2775	2563	2599	2544	2549	2747	2688
25	2744	2459	2716	2664	2536	2759	2591	2475	2530	2483	2443	2679
26	2650	2730	2775	2606	2556	2676	2594	2448	2421	2682	2558	2677
27	2532	2728	2766	2563	2575	2579	2596	2575	2322	2789	2682	2754
28	2440	2745	2645	2532	2582	2625	2609	2492	2225	2775	2817	2761
29	2442	2752	2664	2524		2579	2603	2553	2572	2486	2554	2730
30	2220	2756	2737	2554		2529	2589	2429	2623	2325	2703	2681
31	2214		2711	2574		2534		2265		2352	2571	
Min	2214	2234	2517	2524	2357	2470	2480	2265	2225	2220	2411	2410
Max	2812	2756	2843	2777	2582	2775	2609	2623	2693	2789	2826	2847
EOM	2214	2756	2711	2574	2582	2534	2589	2589	2623	2352	2571	2681



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

Location. --Lat 40°22'35", long 105°29'06", Larimer County, Hydrologic Unit 10190006, 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 mi^2. Area at site used between 29-Jan-1934 and 21-Mar-1951 was 162 mi^2. Station consists of data collection platform and digital recorder as primary record. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete. Flow calculations during peak runoff could lose accuracy as the water begins to flow over the outside boards. This record contains operational data which could be subject to future revisions and changes. The official record is published by the CDWR.

Discharge, Cubic Feet per Second, Daily Mean Values

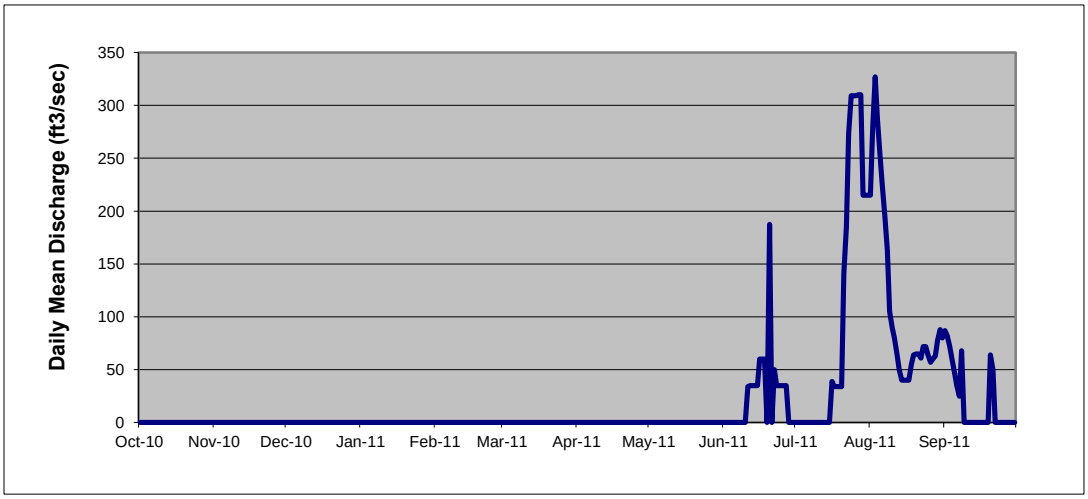
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	35	59	25	21	20	21	39	70	385	811	148	74
2	35	57	25	21	20	21	44	69	373	790	128	75
3	28	57	26	20	20	20	44	59	453	772	127	77
4	28	58	25	21	20	20	54	61	649	750	125	77
5	30	58	28	21	20	20	53	60	651	818	124	78
6	37	57	28	20	19	20	53	61	861	850	125	74
7	37	55	28	20	20	20	53	61	908	819	124	76
8	33	54	20	20	20	21	53	61	779	746	124	85
9	46	52	20	21	20	21	53	98	784	692	125	183
10	48	51	21	21	20	21	53	148	697	687	125	157
11	53	65	20	21	20	21	61	211	421	675	125	135
12	211	443	20	21	20	21	60	205	402	720	127	118
13	234	438	21	21	20	21	61	200	399	682	126	109
14	53	441	20	21	20	21	61	155	373	584	127	100
15	37	443	20	21	20	21	73	152	375	504	125	104
16	29	435	20	21	20	21	72	140	374	562	128	120
17	27	431	20	21	20	21	61	131	378	567	130	146
18	29	434	20	21	20	20	62	157	379	474	124	124
19	25	436	20	21	20	20	72	207	499	524	95	129
20	38	430	20	21	20	20	111	206	314	549	96	56
21	41	429	20	22	20	20	90	258	347	482	100	53
22	76	345	21	21	20	21	91	207	317	478	98	89
23	78	253	20	22	20	20	104	230	332	335	97	87
24	83	434	20	21	20	21	82	259	376	256	98	90
25	129	423	20	20	20	21	87	310	494	205	98	81
26	97	295	21	21	20	21	87	257	549	175	101	85
27	197	228	21	20	20	20	88	232	505	168	101	159
28	178	130	21	20	21	21	80	307	685	169	100	205
29	134	128	20	20		41	79	262	656	264	99	204
30	153	122	20	20		42	77	462	784	204	99	80
31	52		21	20		40		415		171	100	
Min	25	51	20	20	19	20	39	59	314	168	95	53
Max	234	443	28	22	21	42	111	462	908	850	148	205
Mean	75	245	22	21	20	22	69	184	517	532	115	108
ac-ft	4579	14538	1334	1276	1108	1381	4074	11313	30686	32637	7064	6396

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

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado.
Gage.-- Water-stage recorder and satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. The hydropower diversion operation, also known as the skim operation, diverts water from the Big Thompson River through Olympus Tunnel for power generation at three power plants down the foothills, before returning it to the Big Thompson River near the canyon mouth. The skim daily value is determined based on the data from the stream gages in the system. Period of record includes from 01-Oct-2010 through 30-Sep-2011. Records are complete and reliable. This record contains operational data which could be subject to future revisions and changes.

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	215	87
2	0	0	0	0	0	0	0	0	0	0	277	82
3	0	0	0	0	0	0	0	0	0	0	327	72
4	0	0	0	0	0	0	0	0	0	0	287	60
5	0	0	0	0	0	0	0	0	0	0	253	47
6	0	0	0	0	0	0	0	0	0	0	225	35
7	0	0	0	0	0	0	0	0	0	0	196	25
8	0	0	0	0	0	0	0	0	0	0	163	68
9	0	0	0	0	0	0	0	0	0	0	105	0
10	0	0	0	0	0	0	0	0	0	0	90	0
11	0	0	0	0	0	0	0	0	34	0	80	0
12	0	0	0	0	0	0	0	0	35	0	65	0
13	0	0	0	0	0	0	0	0	35	0	50	0
14	0	0	0	0	0	0	0	0	35	0	40	0
15	0	0	0	0	0	0	0	0	35	0	40	0
16	0	0	0	0	0	0	0	0	60	39	40	0
17	0	0	0	0	0	0	0	0	60	34	40	0
18	0	0	0	0	0	0	0	0	60	34	55	0
19	0	0	0	0	0	0	0	0	0	34	64	0
20	0	0	0	0	0	0	0	0	188	34	65	64
21	0	0	0	0	0	0	0	0	0	141	65	50
22	0	0	0	0	0	0	0	0	50	185	61	0
23	0	0	0	0	0	0	0	0	35	273	72	0
24	0	0	0	0	0	0	0	0	35	309	72	0
25	0	0	0	0	0	0	0	0	35	309	64	0
26	0	0	0	0	0	0	0	0	35	309	57	0
27	0	0	0	0	0	0	0	0	35	310	60	0
28	0	0	0	0	0	0	0	0	0	310	63	0
29	0	0	0	0		0	0	0	0	215	78	0
30	0	0	0	0		0	0	0	0	215	88	0
31	0		0	0		0		0		215	80	
Min	0	0	0	0	0	0	0	0	0	0	40	0
Max	0	0	0	0	0	0	0	0	188	310	327	87
Mean	0	0	0	0	0	0	0	0	26	96	111	20
ac-ft	0	0	0	0	0	0	0	0	1518	5873	6805	1168

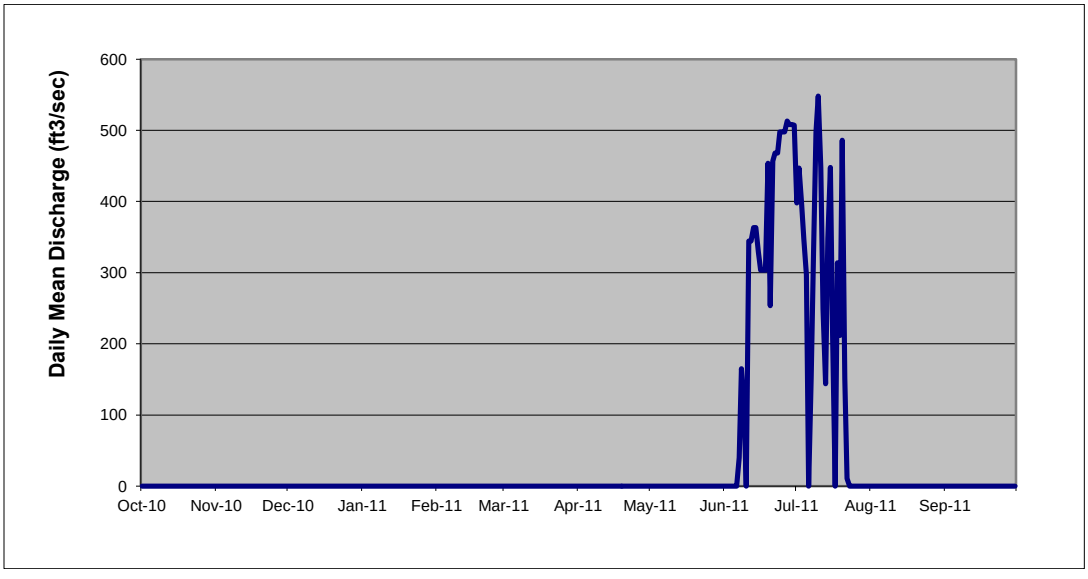


Appendix A (Table 22 of 38)
Olympus Tunnel, CO

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado.
Gage.-- Water-stage recorder and satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. The right for the C-BT to divert native water is determined by the state of Colorado. Period of record from 01-Oct-2010 through 30-Sep-2011. Record is complete and reliable.

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	398	0	0
2	0	0	0	0	0	0	0	0	0	447	0	0
3	0	0	0	0	0	0	0	0	0	397	0	0
4	0	0	0	0	0	0	0	0	0	347	0	0
5	0	0	0	0	0	0	0	0	0	297	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	40	153	0	0
8	0	0	0	0	0	0	0	0	165	321	0	0
9	0	0	0	0	0	0	0	0	112	498	0	0
10	0	0	0	0	0	0	0	0	0	548	0	0
11	0	0	0	0	0	0	0	0	345	448	0	0
12	0	0	0	0	0	0	0	0	345	248	0	0
13	0	0	0	0	0	0	0	0	364	144	0	0
14	0	0	0	0	0	0	0	0	364	348	0	0
15	0	0	0	0	0	0	0	0	329	448	0	0
16	0	0	0	0	0	0	0	0	304	209	0	0
17	0	0	0	0	0	0	0	0	304	0	0	0
18	0	0	0	0	0	0	0	0	304	314	0	0
19	0	0	0	0	0	0	0	0	454	212	0	0
20	0	0	0	0	0	0	0	0	254	486	0	0
21	0	0	0	0	0	0	0	0	457	152	0	0
22	0	0	0	0	0	0	0	0	468	11	0	0
23	0	0	0	0	0	0	0	0	468	0	0	0
24	0	0	0	0	0	0	0	0	498	0	0	0
25	0	0	0	0	0	0	0	0	498	0	0	0
26	0	0	0	0	0	0	0	0	498	0	0	0
27	0	0	0	0	0	0	0	0	513	0	0	0
28	0	0	0	0	0	0	0	0	508	0	0	0
29	0	0	0	0		0	0	0	508	0	0	0
30	0	0	0	0		0	0	0	507	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	513	548	0	0
Mean	0	0	0	0	0	0	0	0	287	207	0	0
ac-ft	0	0	0	0	0	0	0	0	17061	12746	0	0

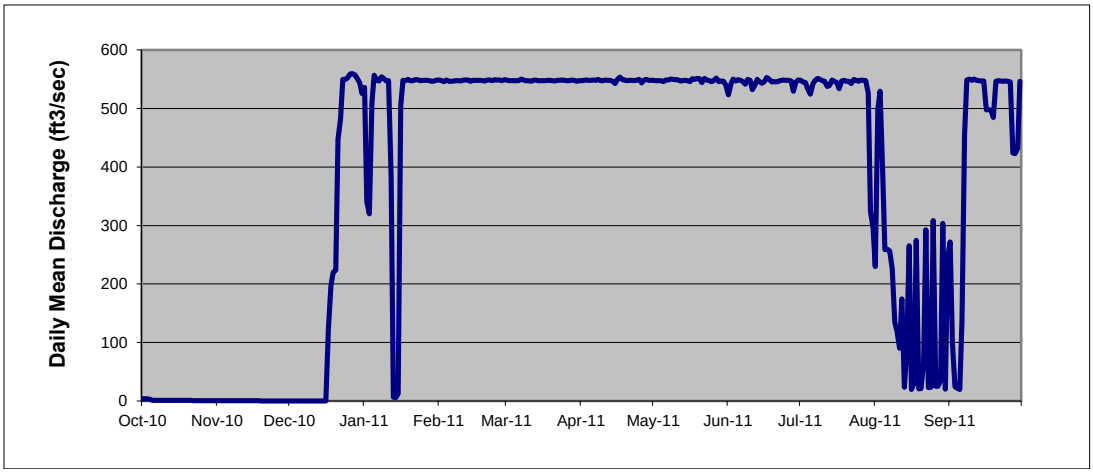


Appendix A (Table 23 of 38)
Olympus Tunnel, CO

Location. --Lat 40°22'24", long 105°29'00", Larimer County, Hydrologic Unit 10190006, southeast of Estes Park, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry. Elevation of gage is 7460 from topographic map.
Remarks.— Constructed between 1949 and 1952. The tunnel is 7.2 miles long, between Estes Park and the Pole Hill Canal. Its diameter is 9.75 feet and maximum capacity is 550 cubic feet per second. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Records are complete and reliable, but the data has not been revised. This record contains operational data which could be subject to future revisions and changes. The official record is published by the CDWR.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4	0	0	536	549	548	547	548	524	548	230	272
2	4	0	0	341	548	547	548	547	542	545	498	100
3	4	0	0	320	546	547	548	548	550	544	529	25
4	3	0	0	510	549	548	548	548	547	533	394	22
5	1	0	0	557	546	548	548	546	549	525	259	19
6	1	0	0	549	547	548	548	549	548	542	259	138
7	1	0	0	547	547	550	548	549	546	548	257	454
8	1	0	0	554	547	548	550	551	541	551	226	548
9	1	0	0	551	548	547	547	550	550	550	135	550
10	1	0	0	547	547	548	547	549	548	547	119	548
11	1	0	0	548	549	547	549	549	532	546	90	551
12	1	0	0	384	549	548	548	547	540	538	175	548
13	1	0	0	6	549	549	548	548	550	539	23	547
14	1	0	0	6	546	547	546	548	546	549	85	547
15	1	0	0	12	548	548	543	548	543	547	265	547
16	1	0	0	504	548	548	550	546	546	544	20	498
17	1	0	123	548	548	548	554	551	553	534	30	498
18	1	0	198	548	548	548	549	550	550	547	275	497
19	1	0	220	549	548	548	548	551	545	548	21	485
20	1	0	224	548	547	548	548	551	546	546	21	546
21	1	0	448	547	549	547	548	544	545	547	65	547
22	1	0	482	549	548	548	548	551	547	543	293	547
23	1	0	550	549	548	548	547	549	548	550	23	547
24	1	0	550	548	549	549	549	548	549	548	23	547
25	1	0	553	548	549	548	550	546	548	547	309	546
26	1	0	559	548	549	548	544	548	548	549	25	546
27	0	0	559	548	547	548	549	552	547	548	25	424
28	0	0	557	548	549	549	550	546	529	548	35	423
29	0	0	552	546		548	548	547	545	527	304	432
30	0	0	544	547		547	548	546	549	324	20	546
31	0		526	549		547		540		297	247	
Min	0	0	0	6	546	547	543	540	524	297	20	19
Max	4	0	559	557	549	550	554	552	553	551	529	551
Mean	1	0	214	474	548	548	548	548	545	529	170	435
ac-ft	72	15	13153	29091	30373	33627	32560	33638	32380	32466	10451	25834

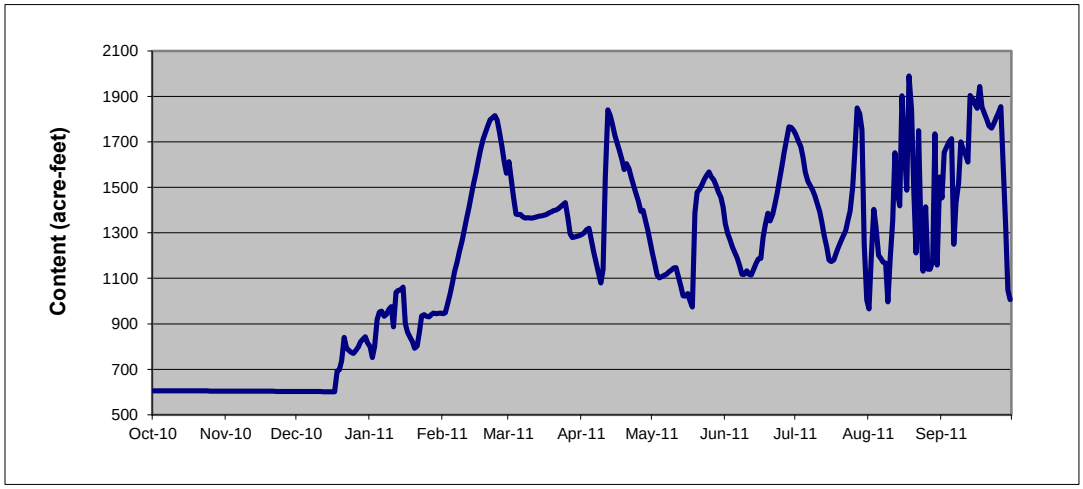


Appendix A (Table 24 of 38)
Pinewood Reservoir near Loveland, Colorado, CO

Location. --Lat 40°22', long 105°17.9', Larimer County, Hydrologic Unit 10190006, 10 miles southwest of Loveland, Colorado.
Gage.-- Water-level recorder with satellite telemetry. Elevation of gage is 6,600 feet from topographic map.
Remarks.-- Constructed between 1951 and 1952. Impoundment began in January 4, 1954. Active capacity between elevations 6,550.00 and 6.580.00 is 1,570 acre-feet. Used as the forebay storage for Flatiron Powerplant. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is capable of measuring the water surface elevation down to 6555.70 feet, a content of 604 acre-feet. The reservoir was drained between October 1 and December 18. Record is complete and reliable, but the quality of the data cannot be confirmed. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	605	604	602	800	945	1614	1293	1213	1340	1730	966	1454
2	605	604	602	751	949	1536	1300	1161	1295	1705	1189	1654
3	605	604	602	799	987	1459	1313	1114	1268	1679	1404	1679
4	605	604	602	919	1032	1382	1321	1102	1239	1632	1325	1700
5	605	604	602	951	1078	1381	1271	1107	1212	1567	1201	1715
6	605	604	602	956	1131	1381	1220	1113	1189	1527	1188	1249
7	605	604	602	933	1172	1369	1171	1119	1154	1509	1172	1433
8	605	603	602	941	1217	1365	1127	1128	1118	1488	1166	1519
9	605	603	602	965	1263	1367	1079	1136	1118	1462	996	1700
10	605	603	602	976	1311	1366	1139	1146	1133	1431	1180	1668
11	605	603	602	886	1359	1365	1548	1148	1117	1394	1351	1643
12	605	603	601	1039	1411	1369	1841	1109	1115	1344	1653	1611
13	605	603	601	1047	1464	1371	1817	1066	1141	1288	1486	1905
14	605	603	601	1048	1515	1374	1780	1023	1166	1237	1418	1889
15	605	603	601	1062	1566	1376	1729	1023	1185	1182	1904	1867
16	605	603	601	901	1617	1378	1695	1033	1188	1173	1686	1849
17	605	603	601	862	1665	1381	1662	1000	1279	1181	1488	1944
18	605	603	693	841	1713	1388	1622	974	1335	1209	1991	1854
19	605	603	697	821	1740	1392	1580	1388	1386	1236	1841	1825
20	605	603	737	792	1768	1397	1604	1479	1353	1262	1488	1799
21	605	603	840	802	1798	1401	1583	1491	1383	1285	1211	1770
22	605	603	794	863	1807	1406	1545	1512	1426	1310	1749	1762
23	605	603	784	934	1816	1415	1505	1535	1473	1354	1331	1781
24	605	603	774	940	1796	1425	1472	1555	1539	1396	1132	1805
25	604	603	770	932	1746	1433	1442	1568	1595	1500	1414	1830
26	604	603	783	930	1680	1367	1394	1548	1655	1664	1140	1856
27	604	603	798	940	1614	1296	1399	1533	1714	1850	1140	1608
28	604	602	820	948	1563	1279	1357	1509	1767	1825	1175	1331
29	604	602	833	945		1282	1311	1482	1764	1754	1736	1048
30	604	602	843	946		1286	1262	1457	1749	1252	1158	1006
31	604		817	948		1288		1414		1004	1545	
Min	604	602	601	751	945	1279	1079	974	1115	1004	966	1006
Max	605	604	843	1062	1816	1614	1841	1568	1767	1850	1991	1944
EOM	604	602	817	948	1563	1288	1262	1262	1749	1004	1545	1006

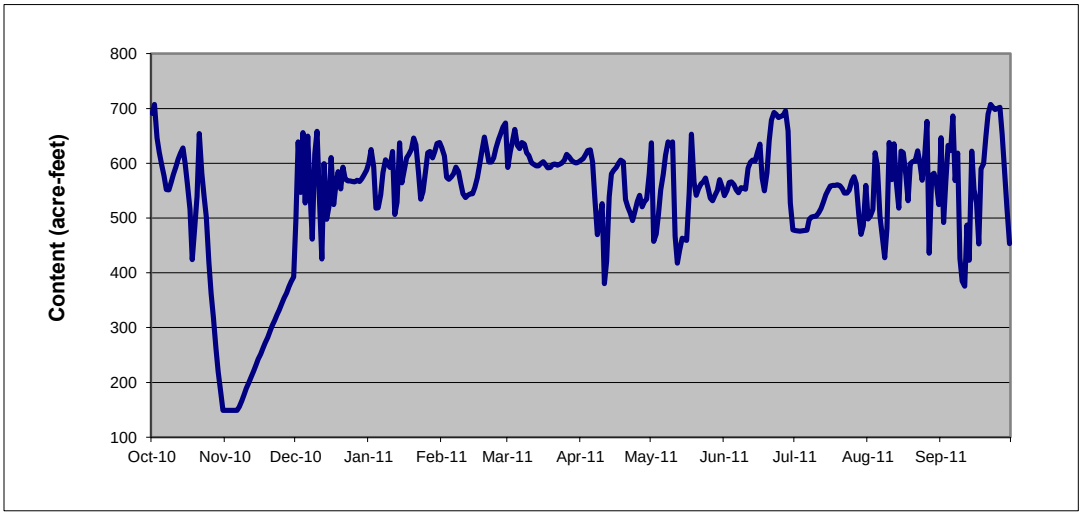


Appendix A (Table 25 of 38)
Flatiron Reservoir, CO

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-2010 to 30-Sep-2011. Record is complete but unreliable. The quality is the data cannot be confirmed. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	691	149	498	601	628	592	605	637	541	477	498	647
2	708	149	639	625	613	621	609	457	550	477	504	492
3	646	149	547	594	574	641	615	471	565	476	516	567
4	620	149	656	518	570	662	623	507	566	477	619	632
5	596	149	527	519	575	632	625	551	561	477	595	623
6	577	149	650	543	581	627	603	580	551	478	504	687
7	552	156	550	583	593	638	537	614	546	498	469	568
8	551	167	461	606	584	635	469	639	555	502	427	619
9	565	178	618	599	564	619	495	632	555	503	482	426
10	580	189	658	592	544	614	526	639	553	504	638	385
11	593	200	528	621	537	601	380	467	591	510	570	376
12	607	210	425	506	541	598	421	418	602	518	636	487
13	618	221	599	529	544	595	539	441	606	528	567	423
14	628	231	498	637	544	595	580	463	604	543	518	622
15	599	242	520	564	555	599	587	461	619	551	622	552
16	561	252	610	586	574	603	592	459	635	558	619	527
17	516	262	525	610	597	598	600	546	573	560	579	453
18	424	272	561	616	621	591	606	653	549	560	532	590
19	484	282	585	625	648	592	603	566	582	561	599	599
20	539	293	553	646	626	597	534	542	642	559	604	648
21	654	304	593	634	602	599	520	553	678	554	604	690
22	581	314	571	584	602	596	509	563	693	546	623	708
23	540	324	568	534	610	598	496	566	689	546	600	702
24	502	332	568	548	628	600	514	573	683	551	569	698
25	419	344	567	584	643	606	530	554	686	567	614	700
26	362	354	566	619	654	616	541	536	688	576	677	702
27	320	363	569	621	666	612	520	532	696	563	436	653
28	263	375	567	610	674	606	530	542	659	506	578	581
29	220	384	572	621		603	534	550	527	470	582	518
30	187	393	579	636		601	580	570	478	486	567	453
31	149		588	638		603		557		559	525	
Min	149	149	425	506	537	591	380	418	478	470	427	376
Max	708	393	658	646	674	662	625	653	696	576	677	708
EOM	149	393	588	638	674	603	580	580	478	559	525	453

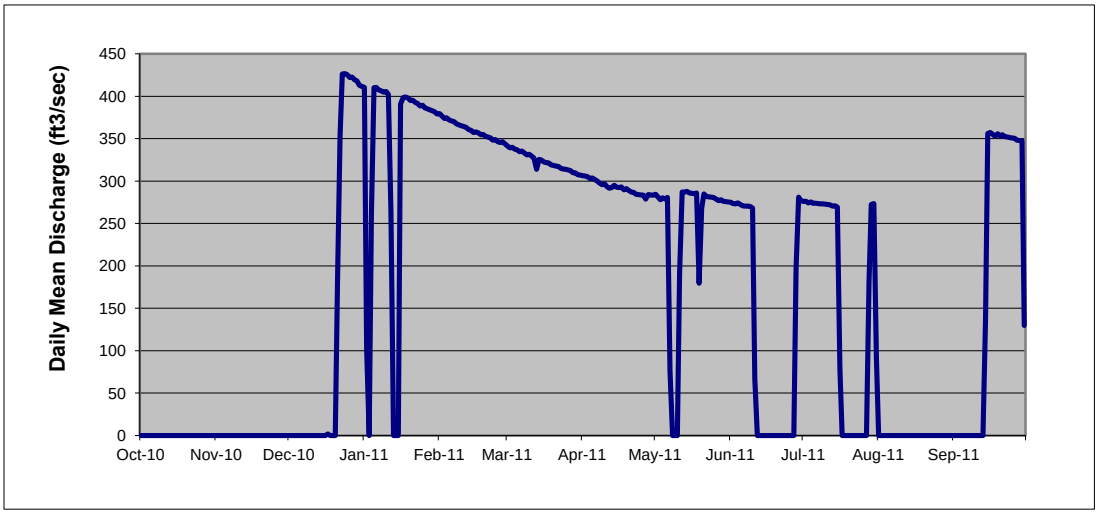


Appendix A (Table 26 of 38)
Flatiron Powerplant Unit #3 Pump, CO

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.-- Flatiron Powerplant was 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 480 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 the water up to Carter Lake into flow, using an efficiency curve. Record is complete and fair, but the quality of the data cannot be confirmed. This record contains operational data which could be subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	410	380	342	306	284	275	276	0	0
2	0	0	0	103	377	339	306	281	273	276	0	0
3	0	0	0	0	374	340	305	278	273	274	0	0
4	0	0	0	263	375	338	303	280	274	276	0	0
5	0	0	0	410	372	337	304	279	273	274	0	0
6	0	0	0	411	371	335	302	281	271	274	0	0
7	0	0	0	407	370	335	300	76	271	274	0	0
8	0	0	0	406	367	333	298	0	270	273	0	0
9	0	0	0	405	366	331	296	0	270	273	0	0
10	0	0	0	405	365	332	297	0	268	273	0	0
11	0	0	0	402	364	329	293	192	67	272	0	0
12	0	0	0	262	363	327	292	287	0	272	0	0
13	0	0	0	0	361	314	292	287	0	270	0	0
14	0	0	0	0	360	326	295	288	0	271	0	136
15	0	0	0	0	357	325	293	286	0	269	0	356
16	0	0	0	391	358	323	292	286	0	78	0	357
17	0	0	2	399	357	322	293	285	0	0	0	355
18	0	0	0	399	354	321	290	286	0	0	0	353
19	0	0	0	398	355	319	291	180	0	0	0	356
20	0	0	0	395	353	318	289	268	0	0	0	353
21	0	0	182	396	352	318	287	285	0	0	0	355
22	0	0	354	393	351	317	287	282	0	0	0	352
23	0	0	426	391	348	315	285	281	0	0	0	352
24	0	0	427	389	349	314	284	281	0	0	0	351
25	0	0	425	389	346	314	284	281	0	0	0	351
26	0	0	422	386	346	313	283	279	0	0	0	350
27	0	0	423	385	346	312	279	277	0	0	0	348
28	0	0	419	384	344	310	284	278	197	182	0	348
29	0	0	418	383		310	284	276	281	272	0	347
30	0	0	413	382		308	283	276	276	274	0	130
31	0		412	379		307		275		92	0	
Min	0	0	0	0	344	307	279	0	0	0	0	0
Max	0	0	427	411	380	342	306	288	281	276	0	357
Mean	0	0	139	327	360	323	293	241	118	161	0	185
ac-ft	0	0	8561	20047	19965	19845	17376	14800	7010	9892	0	10989

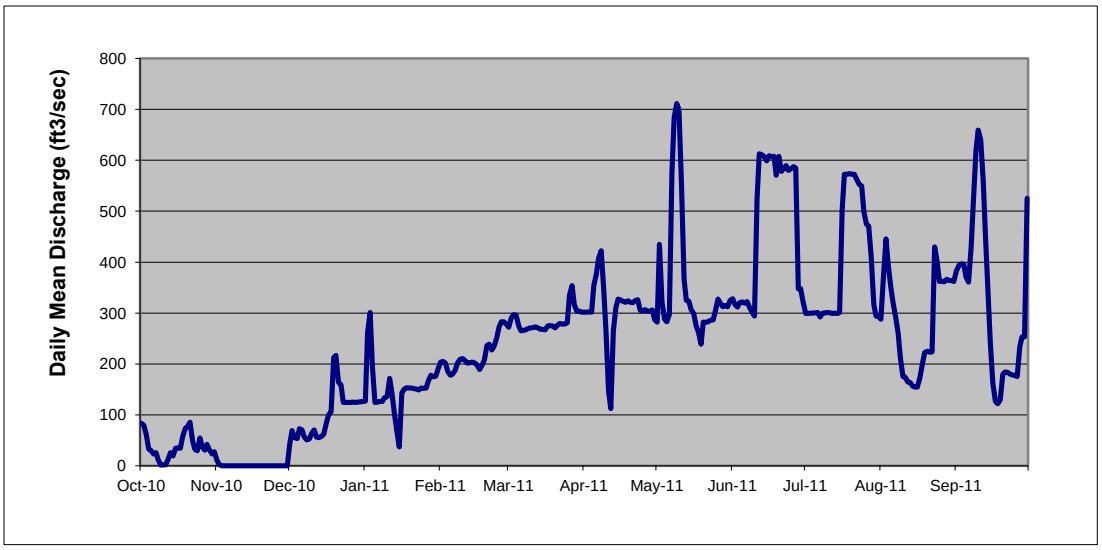


Appendix A (Table 27 of 38)
Charles Hansen Feeder Canal 930 Section, CO

Location. --Lat 40°22'26", long 105°13'52", Larimer County, Hydrologic Unit 10190006, 8 miles southwest of Loveland, Colorado.
Gage.-- Water-stage recorder with satellite telemetry. Elevation of gage is 5470 feet from topographic map.
Remarks.-- Constructed between 1949 and 1953. The canal is 3.8 miles long and has a maximum capacity of 930 cubic feet per second. The canal is used to move Colorado-Big Thompson Project water and diverted native water to the Big Thompson River and/or Horsetooth Reservoir. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. Record is complete, but the data quality is extremely poor. This record contains operational data which could be subject to future revisions and changes.

Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	84	12	44	127	204	272	302	282	328	299	288	383
2	79	3	69	262	205	291	302	435	317	299	371	393
3	62	0	55	301	202	297	302	322	312	300	446	397
4	33	0	54	195	185	296	301	288	321	300	394	396
5	31	0	73	125	178	275	355	283	322	301	351	371
6	23	0	71	125	181	265	377	297	319	301	321	361
7	26	0	57	126	188	266	408	575	323	293	293	428
8	11	0	51	127	202	267	423	684	311	300	260	518
9	2	0	53	134	209	270	345	711	303	300	212	617
10	2	0	64	136	211	271	264	699	294	301	176	659
11	2	0	71	172	207	272	147	551	523	300	174	641
12	13	0	57	144	202	273	113	367	613	299	165	557
13	26	0	56	102	203	271	265	325	611	300	164	449
14	20	0	58	70	204	269	311	323	608	299	157	338
15	35	0	63	37	202	268	327	307	599	301	155	241
16	36	0	84	144	198	267	325	299	609	502	155	162
17	34	0	100	150	189	275	323	274	607	573	174	127
18	57	0	106	153	197	275	321	262	608	573	201	122
19	73	0	213	153	208	275	324	239	571	574	223	129
20	78	0	217	153	236	271	321	282	608	572	225	180
21	85	0	164	152	239	276	321	282	578	573	223	185
22	50	0	159	151	228	280	324	284	583	563	224	184
23	33	0	125	149	235	278	326	286	590	553	430	181
24	30	0	125	153	250	278	306	287	580	549	405	179
25	55	0	125	152	273	281	304	305	583	499	362	177
26	38	0	125	153	283	336	307	328	587	474	362	176
27	31	0	125	167	283	354	304	319	585	471	361	233
28	42	0	125	178	278	316	304	312	347	409	367	254
29	31	0	125	175		304	306	315	348	316	364	253
30	23	0	126	176		303	287	313	322	294	364	526
31	28		127	192		302		325		293	362	
Min	2	0	44	37	178	265	113	239	294	293	155	122
Max	85	12	217	301	283	354	423	711	613	574	446	659
Mean	38	0	99	153	217	284	308	360	474	396	282	327
ac-ft	2325	29	6067	9374	12035	17412	18305	22094	28132	24314	17280	19437

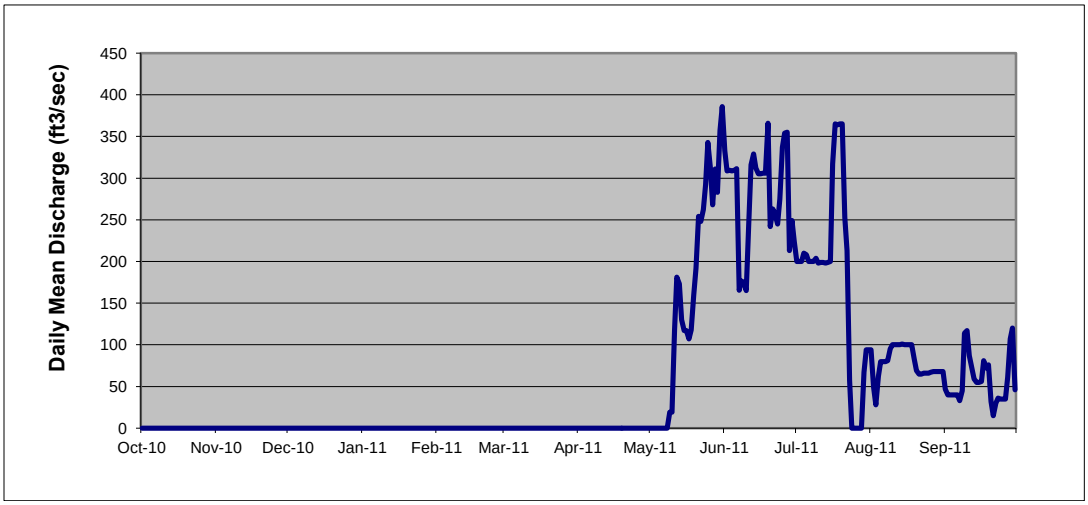


Appendix A (Table 28 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry at Parshall Flume. Elevation of gage is 5520 feet from topographic map.
Remarks.-- Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. The hydropower diversion operation, also known as the skim operation, diverts water from the Big Thompson River through Dille Tunnel for power generation at the Big Thompson Power Plant, where the diverted water is returned to the river. The skim daily value is determined based on the data from the gage. Recorder was operated from 01-Oct-2010 to 01-Dec-2010, and from 28-Apr-2011 to 30-Sep-2011. 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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	333	200	94	47
2	0	0	0	0	0	0	0	0	309	200	49	40
3	0	0	0	0	0	0	0	0	310	200	28	40
4	0	0	0	0	0	0	0	0	309	210	62	40
5	0	0	0	0	0	0	0	0	310	208	80	40
6	0	0	0	0	0	0	0	0	312	200	80	40
7	0	0	0	0	0	0	0	0	166	200	80	33
8	0	0	0	0	0	0	0	0	177	200	81	45
9	0	0	0	0	0	0	0	19	175	204	95	114
10	0	0	0	0	0	0	0	19	165	198	100	117
11	0	0	0	0	0	0	0	118	247	199	100	87
12	0	0	0	0	0	0	0	181	316	199	100	72
13	0	0	0	0	0	0	0	173	329	198	100	59
14	0	0	0	0	0	0	0	130	312	199	101	55
15	0	0	0	0	0	0	0	117	305	200	100	55
16	0	0	0	0	0	0	0	117	305	317	100	56
17	0	0	0	0	0	0	0	107	306	365	100	81
18	0	0	0	0	0	0	0	118	306	364	100	72
19	0	0	0	0	0	0	0	160	366	365	83	76
20	0	0	0	0	0	0	0	192	242	365	69	32
21	0	0	0	0	0	0	0	254	263	253	65	15
22	0	0	0	0	0	0	0	248	257	213	65	30
23	0	0	0	0	0	0	0	262	245	57	66	36
24	0	0	0	0	0	0	0	292	275	0	66	35
25	0	0	0	0	0	0	0	343	337	0	66	35
26	0	0	0	0	0	0	0	312	354	0	67	35
27	0	0	0	0	0	0	0	268	355	0	68	61
28	0	0	0	0	0	0	0	311	213	0	68	107
29	0	0	0	0		0	0	283	249	67	68	120
30	0	0	0	0		0	0	357	224	94	68	46
31	0		0	0		0		386		94	68	
Min	0	0	0	0	0	0	0	0	165	0	28	15
Max	0	0	0	0	0	0	0	386	366	365	101	120
Mean	0	0	0	0	0	0	0	154	279	180	79	57
ac-ft	0	0	0	0	0	0	0	9439	16569	11027	4825	3408

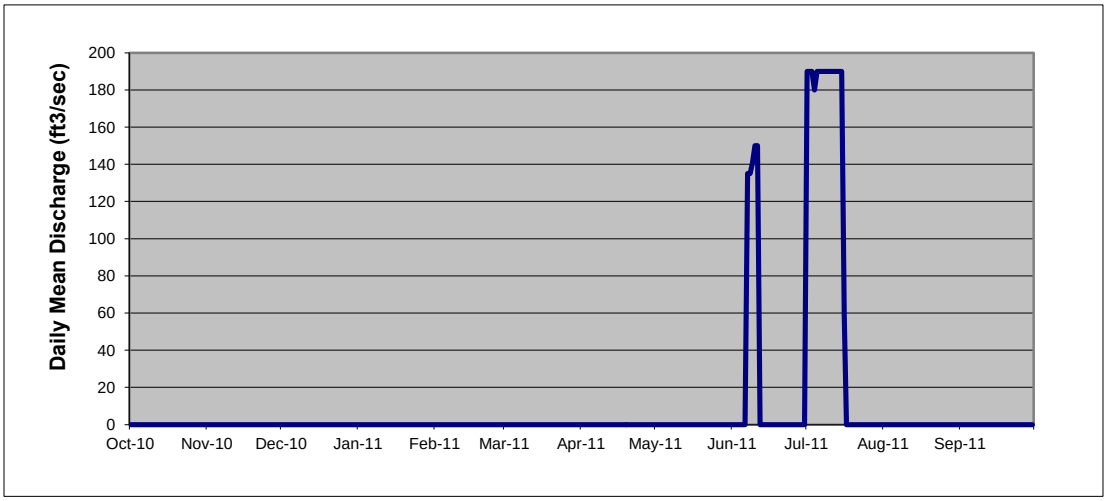


Appendix A (Table 29 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- None.
Remarks.-- Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. The right to divert native run-off is determined by the state of Colorado. Recorder was operated from 01-Oct-2010 to 01-Dec-2010, and from 28-Apr-2011 to 30-Sep-2011. Record is complete and reliable. This record contains operational data which could be subject to future revisions and changes.

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	190	0	0
2	0	0	0	0	0	0	0	0	0	190	0	0
3	0	0	0	0	0	0	0	0	0	190	0	0
4	0	0	0	0	0	0	0	0	0	180	0	0
5	0	0	0	0	0	0	0	0	0	190	0	0
6	0	0	0	0	0	0	0	0	0	190	0	0
7	0	0	0	0	0	0	0	0	135	190	0	0
8	0	0	0	0	0	0	0	0	135	190	0	0
9	0	0	0	0	0	0	0	0	141	190	0	0
10	0	0	0	0	0	0	0	0	150	190	0	0
11	0	0	0	0	0	0	0	0	150	190	0	0
12	0	0	0	0	0	0	0	0	0	190	0	0
13	0	0	0	0	0	0	0	0	0	190	0	0
14	0	0	0	0	0	0	0	0	0	190	0	0
15	0	0	0	0	0	0	0	0	0	190	0	0
16	0	0	0	0	0	0	0	0	0	59	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0		0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	0	0	0	0	0	0	0	0	150	190	0	0
Mean	0	0	0	0	0	0	0	0	24	94	0	0
ac-ft	0	0	0	0	0	0	0	0	1409	5750	0	0

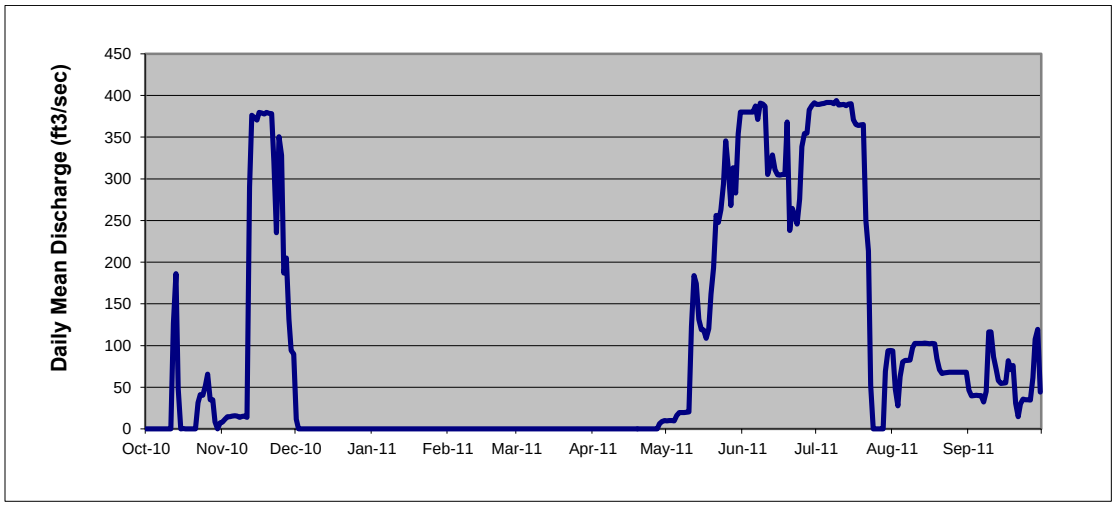


Appendix A (30 of 38)
Dille Tunnel near Drake, CO

Location. --Lat 40°25'02", long 105°14'35", Larimer County, Hydrologic Unit 10190006, 11 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry at Parshall Flume. Elevation of gage is 5520 feet from topographic map.
Remarks.— Constructed in 1950. Maximum capacity is 600 cubic feet per second. Dille Tunnel diverts water from the Big Thompson River for power generation and water supply. Recorder was operated from 01-Oct-2010 to 01-Dec-2010, and from 28-Apr-2011 to 30-Sep-2011.
The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR, Northern Colorado Water Conservancy District (NCWCD) and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Data published by the Colorado Division of Water Resources, state of Colorado. Record is complete and reliable, but data have 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	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	8	12	0	0	0	0	10	380	389	94	47
2	0	12	0	0	0	0	0	10	380	389	48	40
3	0	15	0	0	0	0	0	10	380	390	28	40
4	0	15	0	0	0	0	0	10	380	390	63	40
5	0	15	0	0	0	0	0	16	380	392	80	40
6	0	16	0	0	0	0	0	20	387	392	82	40
7	0	15	0	0	0	0	0	20	371	392	82	32
8	0	14	0	0	0	0	0	20	391	390	82	45
9	0	15	0	0	0	0	0	20	390	394	97	116
10	0	16	0	0	0	0	0	20	387	388	103	116
11	0	14	0	0	0	0	0	123	305	389	103	87
12	127	290	0	0	0	0	0	184	317	389	103	72
13	186	376	0	0	0	0	0	174	329	388	103	58
14	48	373	0	0	0	0	0	131	311	390	103	55
15	0	371	0	0	0	0	0	119	305	390	102	55
16	0	380	0	0	0	0	0	119	305	371	102	56
17	0	379	0	0	0	0	0	109	305	365	103	82
18	0	378	0	0	0	0	0	120	305	364	102	71
19	0	380	0	0	0	0	0	162	368	365	84	76
20	0	378	0	0	0	0	0	193	238	365	71	31
21	0	378	0	0	0	0	0	256	265	250	67	15
22	32	321	0	0	0	0	0	248	256	213	67	30
23	41	235	0	0	0	0	0	263	246	52	68	36
24	40	351	0	0	0	0	0	294	276	0	68	35
25	52	328	0	0	0	0	0	346	339	0	68	35
26	66	187	0	0	0	0	0	312	354	0	68	35
27	35	205	0	0	0	0	0	268	355	0	68	61
28	35	132	0	0	0	0	6	313	383	0	68	107
29	9	94	0	0		0	9	283	388	69	68	119
30	0	90	0	0		0	10	354	391	94	68	44
31	8		0	0		0		380		94	68	
Min	0	8	0	0	0	0	0	10	238	0	28	15
Max	186	380	12	0	0	0	10	380	391	394	103	119
Mean	22	193	0	0	0	0	1	158	339	273	80	57
ac-ft	1349	11445	26	4	3	4	53	9715	20128	16741	4912	3398

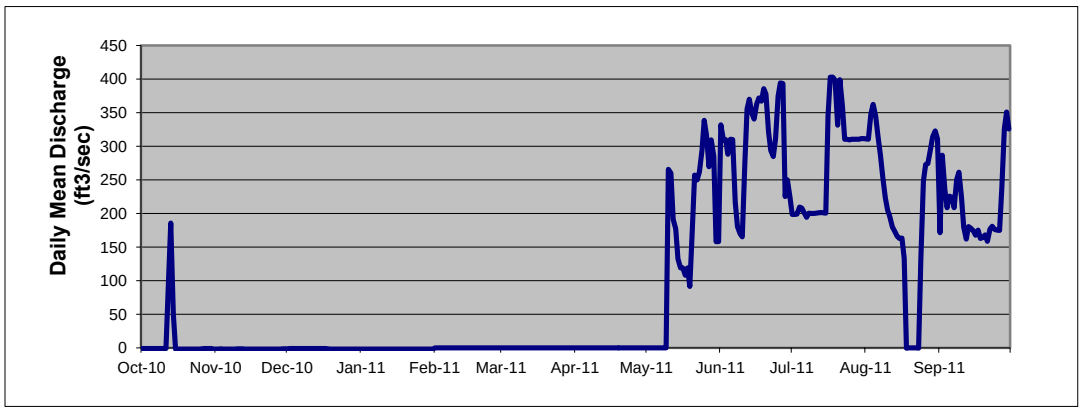


Appendix A (Table 31 of 38)
Big Thompson Power Plant, CO

Location. --Lat 40°25'16", long 105°13'26", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Flow meter with satellite telemetry. Elevation of gage is 5280 feet from topographic map.
Remarks.-- Initial operation in 1959. Maximum capacity is 400 cubic feet per second. Power plant returns hydropower diversions to the Big Thompson River downstream of the Big Thompson River canyon mouth. The plant is also used to deliver Colorado-Big Thompson project and Windy Gap Project water to the Big Thompson River. The plant is winterized each year from November through April. This record contains data recorded between 01-Oct-2010 and 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. The official record is published by the CDWR. Record is complete and fair, but the data have 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	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	-1	-2	-1	-2	0	0	0	0	332	199	311	171
2	-1	-2	-1	-2	0	0	0	0	309	199	310	286
3	-1	-1	-1	-2	0	0	0	0	310	199	348	236
4	-1	-2	-1	-2	0	0	0	0	288	210	362	208
5	-1	-2	-1	-2	0	0	0	0	310	208	344	225
6	-1	-2	-1	-2	0	0	0	0	310	201	315	224
7	-1	-2	-1	-2	0	0	0	0	216	194	286	209
8	-1	-2	-1	-2	0	0	0	0	180	201	254	250
9	-1	-2	-1	-2	0	0	0	0	170	200	223	261
10	-1	-1	-1	-2	0	0	0	266	165	200	205	224
11	-1	-1	-1	-2	0	0	0	260	274	201	195	179
12	100	-2	-1	-2	0	0	0	191	356	201	180	162
13	186	-2	-1	-2	0	0	0	177	370	201	174	180
14	51	-2	-1	-2	0	0	0	132	349	201	166	178
15	-2	-2	-1	-2	0	0	0	119	340	200	163	174
16	-2	-2	-1	-2	0	0	0	119	363	346	163	167
17	-2	-2	-1	-2	0	0	0	108	372	403	133	175
18	-2	-2	-1	-2	0	0	0	119	367	403	0	163
19	-2	-2	-2	-2	0	0	0	91	385	398	0	164
20	-2	-2	-2	-2	0	0	0	178	378	331	0	168
21	-2	-2	-2	-2	0	0	0	257	322	399	0	158
22	-2	-2	-2	-2	0	0	0	250	294	359	0	177
23	-2	-2	-2	-2	0	0	0	262	284	310	0	181
24	-2	-2	-2	-2	0	0	0	293	311	311	132	176
25	-2	-2	-2	-2	0	0	0	338	375	309	248	175
26	-1	-2	-2	-2	0	0	0	317	394	310	273	175
27	-1	-2	-2	-2	0	0	0	270	393	310	274	237
28	-1	-2	-2	-2	0	0	0	309	225	310	295	326
29	-1	-2	-2	-2		0	0	285	250	310	314	351
30	-1	-1	-2	-2		0	0	158	224	311	323	326
31	-2		-2	-2		0		158		311	311	
Min	-2	-2	-2	-2	0	0	0	0	165	194	0	158
Max	186	-1	-1	-2	0	0	0	338	394	403	362	351
Mean	10	-2	-1	-2	0	0	0	150	307	272	203	210
ac-ft	589	-107	-89	-122	0	0	0	9221	18250	16723	12479	12452

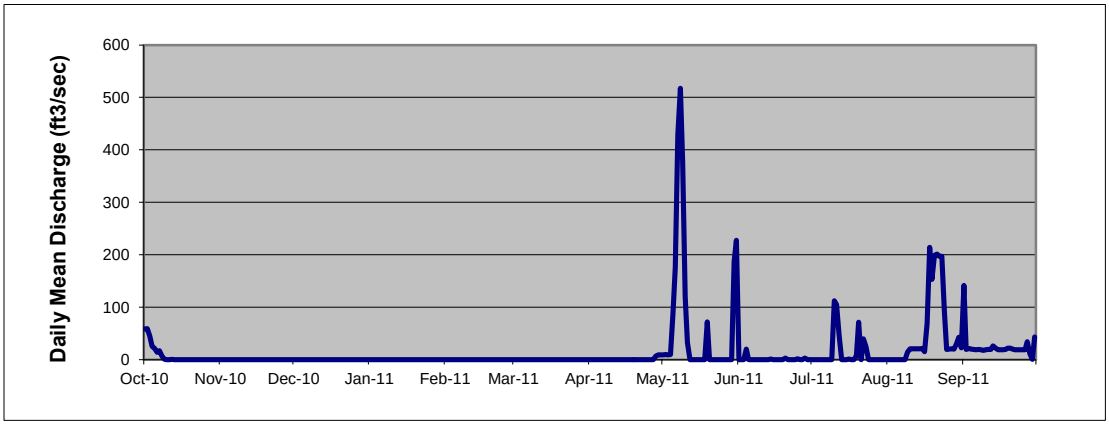


Appendix A (Table 32 of 38)
Charles Hansen Feeder Canal Wasteway, CO

Location. --Lat 40°25'13", long 105°13'28", Larimer County, Hydrologic Unit 10190006, 9 miles west of Loveland, Colorado, on the Big Thompson River.
Gage.-- Water-stage recorder with satellite telemetry at 15 foot Parshall Flume. Elevation of gage is 5465 feet from Designer's Operating Criteria.
Remarks.-- Constructed between 1949 and 1953. Maximum capacity is 400 cubic feet per second. The structure is used to return diverted water and to deliver Colorado-Big Thompson Project and Windy Gap Project water to the Big Thompson River. The structure is winterized between November and April. Recorder was operated between the middle of April and 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. The official record is published by the CDWR. Record is complete and reliable, but the data have not been revised. Record contains provisional operations data subject to future revisions and changes.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	59	0	0	0	0	0	0	9	0	0	0	142
2	59	0	0	0	0	0	0	10	0	0	0	20
3	44	0	0	0	0	0	0	9	0	0	0	21
4	25	0	0	0	0	0	0	10	20	0	0	20
5	21	0	0	0	0	0	0	90	0	0	0	19
6	14	0	0	0	0	0	0	176	0	0	0	19
7	17	0	0	0	0	0	0	429	0	0	0	20
8	6	0	0	0	0	0	0	517	0	0	0	19
9	0	0	0	0	0	0	0	377	0	0	14	17
10	0	0	0	0	0	0	0	119	0	112	21	19
11	0	0	0	0	0	0	0	32	0	105	21	19
12	0	0	0	0	0	0	0	0	0	46	21	19
13	0	0	0	0	0	0	0	0	0	0	21	26
14	0	0	0	0	0	0	0	0	1	0	21	22
15	0	0	0	0	0	0	0	0	0	0	21	19
16	0	0	0	0	0	0	0	0	0	1	15	19
17	0	0	0	0	0	0	0	0	0	0	69	19
18	0	0	0	0	0	0	0	0	0	0	214	19
19	0	0	0	0	0	0	0	72	0	7	153	22
20	0	0	0	0	0	0	0	0	3	71	199	22
21	0	0	0	0	0	0	0	0	0	0	201	20
22	0	0	0	0	0	0	0	0	0	40	197	19
23	0	0	0	0	0	0	0	0	0	24	197	19
24	0	0	0	0	0	0	0	0	0	0	92	19
25	0	0	0	0	0	0	0	0	1	0	20	19
26	0	0	0	0	0	0	0	0	0	0	20	19
27	0	0	0	0	0	0	0	0	0	0	20	34
28	0	0	0	0	0	0	7	0	3	0	20	12
29	0	0	0	0		0	9	0	0	0	31	0
30	0	0	0	0		0	9	187	0	0	43	43
31	0		0	0		0		228		0	22	
Min	0	0	0	0	0	0	0	0	0	0	0	0
Max	59	0	0	0	0	0	9	517	20	112	214	142
Mean	8	0	0	0	0	0	1	73	1	13	53	24
ac-ft	489	0	0	0	0	0	49	4486	57	807	3272	1439

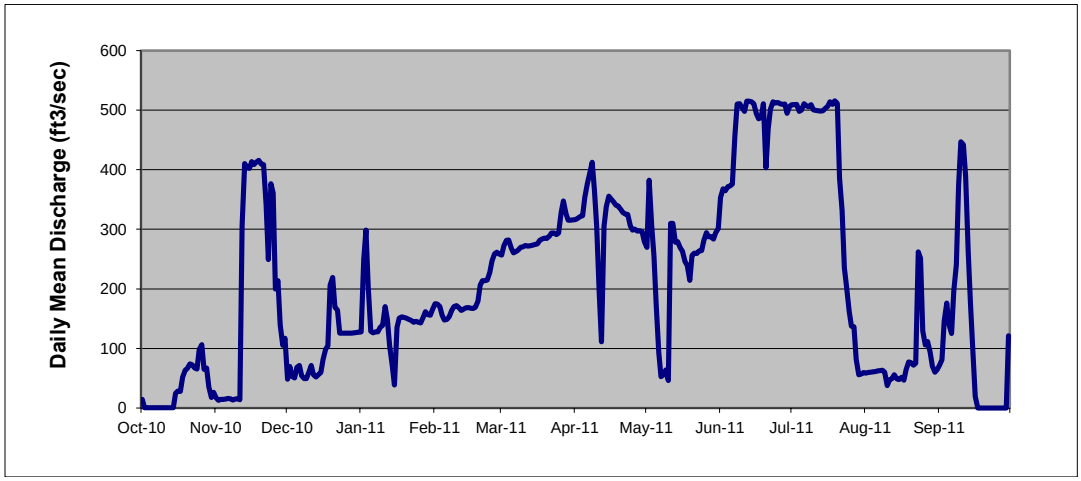


Appendix A (Table 33 of 38)
Charles Hansen Feeder Canal 550 Section, CO

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 move native runoff to Horsetooth Reservoir. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR, the Northern Colorado Water Conservancy District (NCWCD) and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete and reliable, but the data have not been revised. Record contains provisional operations data subject to future revisions and changes. The official record is published by the CDWR.

Discharge, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	14	18	48	128	175	256	316	269	354	509	59	72
2	0	13	70	249	175	272	318	382	368	509	60	81
3	0	15	53	299	170	281	321	305	365	510	60	146
4	0	14	50	204	156	282	323	255	372	498	61	176
5	0	15	68	129	148	269	354	173	372	500	61	140
6	0	16	71	126	149	260	377	93	376	511	62	125
7	0	15	54	128	153	263	393	53	457	507	63	196
8	0	14	49	128	164	265	413	56	510	505	63	240
9	0	15	49	136	170	270	366	64	510	509	60	374
10	0	15	61	138	172	271	305	46	504	501	38	447
11	0	14	72	170	168	273	193	310	498	500	47	442
12	0	306	56	148	164	272	111	310	515	499	49	389
13	0	410	52	104	166	272	305	278	515	498	56	263
14	0	403	56	72	168	273	338	279	514	499	49	177
15	25	402	60	39	169	274	355	269	510	503	48	91
16	28	413	81	135	167	275	351	263	494	507	51	19
17	28	409	99	151	167	281	346	246	485	514	47	0
18	52	413	104	153	169	284	341	239	488	509	65	0
19	64	416	206	152	179	285	339	214	511	515	77	0
20	67	409	219	151	206	285	333	256	403	511	76	0
21	74	408	169	149	214	289	328	260	469	386	72	0
22	72	341	164	147	214	294	326	260	501	331	75	0
23	67	249	126	144	215	294	325	264	514	235	262	0
24	65	377	126	146	228	291	306	264	512	203	251	0
25	98	361	126	144	247	294	299	281	513	162	130	0
26	106	200	126	143	259	328	300	294	511	138	106	0
27	65	214	126	153	262	347	297	287	510	136	112	0
28	67	139	126	162	258	326	298	288	510	82	94	0
29	36	105	126	157		315	296	283	495	56	70	0
30	18	117	127	156		315	279	294	506	57	60	121
31	26		127	165		315		301		60	64	
Min	0	13	48	39	148	256	111	46	354	56	38	0
Max	106	416	219	299	262	347	413	382	515	515	262	447
Mean	32	209	98	149	188	286	318	240	472	386	79	117
ac-ft	1934	12390	6034	9117	10396	17564	18909	14726	28042	23676	4845	6930

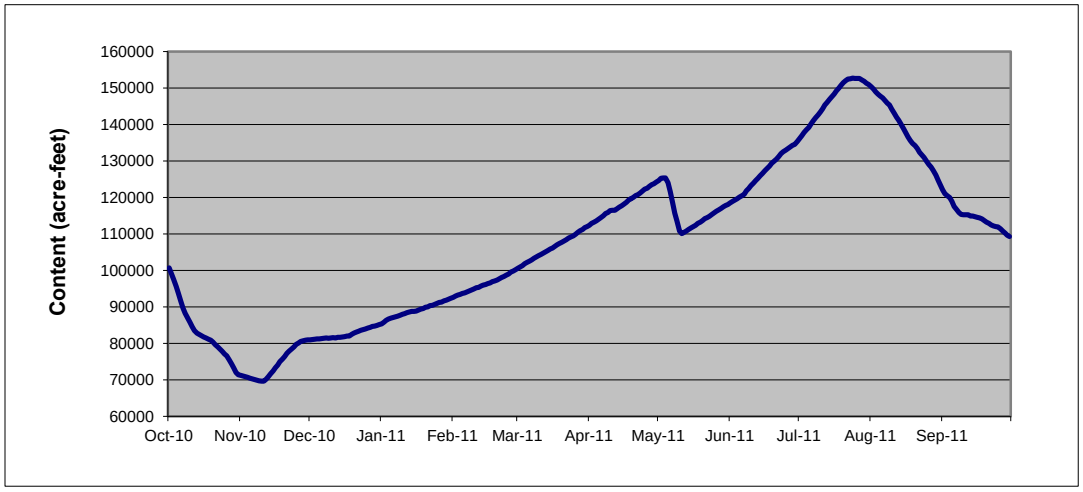


Appendix A (34 of 38)
Horsetooth Reservoir near Fort Collins, CO

Location. --Lat 40°36'00", long 105°10'05" , Larimer County, Hydrologic Unit 10190007, at Horsetooth Dam outlet works, 4.8 miles west of Fort Collins, Colorado.
Gage.— Water level recorder with satellite telemetry. Elevation of gage is 5300 from topographic map.
Remarks.—Reservoir is formed by four earth-fill dams. Construction completed in 1949. Impoundment began in 1951. Horsetooth Reservoir is one of two terminal reservoirs for Colorado-Big Thompson Project diversions. Transmountain diversions are stored at Horsetooth Reservoir before final delivery. Maximum capacity is 156,735 acre-feet at elevation 5430.00 ft, with 142,038 acre-feet of active storage. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR, the Northern Colorado Water Conservancy District (NCWCD) and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete and reliable, but the data have not been revised. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	100710	71265	80930	85348	92637	100613	112378	124679	118526	136141	150381	122081
2	99116	71060	81046	85781	92961	101001	112909	125238	118931	136935	149764	121050
3	97519	70884	81162	86287	93211	101342	113217	125383	119318	137769	148910	120447
4	95605	70667	81190	86676	93429	101829	113578	125365	119670	138492	148335	119988
5	93647	70477	81234	86946	93678	102187	114024	123995	120094	139236	147782	118983
6	91632	70275	81350	87066	93881	102561	114507	121565	120430	140174	147229	117563
7	89761	70071	81365	87307	94146	102904	114973	118702	120909	141018	146559	116690
8	88272	69923	81481	87487	94380	103296	115597	115666	121796	141828	145892	115839
9	86946	69748	81423	87728	94678	103690	115891	113474	122474	142659	145304	115336
10	85766	69694	81510	87955	94929	104018	116360	110811	123224	143453	144192	115215
11	84592	69640	81611	88182	95242	104380	116500	110051	123905	144251	143066	115250
12	83544	70153	81510	88423	95384	104759	116500	110405	124607	145343	141963	115215
13	82780	70912	81699	88621	95699	105056	116952	110778	125274	146049	141095	114921
14	82414	71673	81699	88727	95936	105469	117388	111202	125997	146875	140058	114887
15	82108	72494	81728	88772	96125	105867	117756	111645	126595	147644	138892	114697
16	81757	73306	81816	88893	96425	106165	118176	112003	127359	148354	137750	114576
17	81496	74053	81976	89137	96568	106563	118702	112378	127943	149228	136576	114420
18	81162	74957	82049	89395	96916	106980	119247	112892	128563	149984	135576	114110
19	80915	75684	82443	89578	97138	107379	119617	113268	129369	150741	134824	113715
20	80322	76415	82839	89868	97392	107698	120024	113715	129866	151520	134243	113268
21	79673	77248	83102	90021	97710	108099	120500	114162	130509	152002	133403	112857
22	79071	77858	83352	90357	98045	108400	120785	114489	131211	152403	132378	112446
23	78442	78428	83559	90434	98364	108820	121263	114818	131969	152563	131636	112208
24	77787	79014	83779	90725	98652	109207	121743	115353	132527	152684	130971	112020
25	77092	79760	83970	90970	99036	109511	122260	115752	132973	152644	129939	111883
26	76583	80120	84178	91216	99517	109933	122563	116186	133384	152604	129040	111356
27	75446	80539	84385	91323	99807	110405	123027	116587	133832	152604	128326	110811
28	74345	80727	84636	91632	100209	110862	123512	116986	134262	152222	127395	110219
29	73209	80872	84770	91879		111253	123780	117441	134543	151801	126142	109629
30	72042	80988	84932	92141		111730	124193	117826	135369	151340	124769	109274
31	71428		85185	92404		112020		118106		150921	123422	
Min	71428	69640	80930	85348	92637	100613	112378	110051	118526	136141	123422	109274
Max	100710	80988	85185	92404	100209	112020	124193	125383	135369	152684	150381	122081
EOM	71428	80988	85185	92404	100209	112020	124193	124193	135369	150921	123422	109274

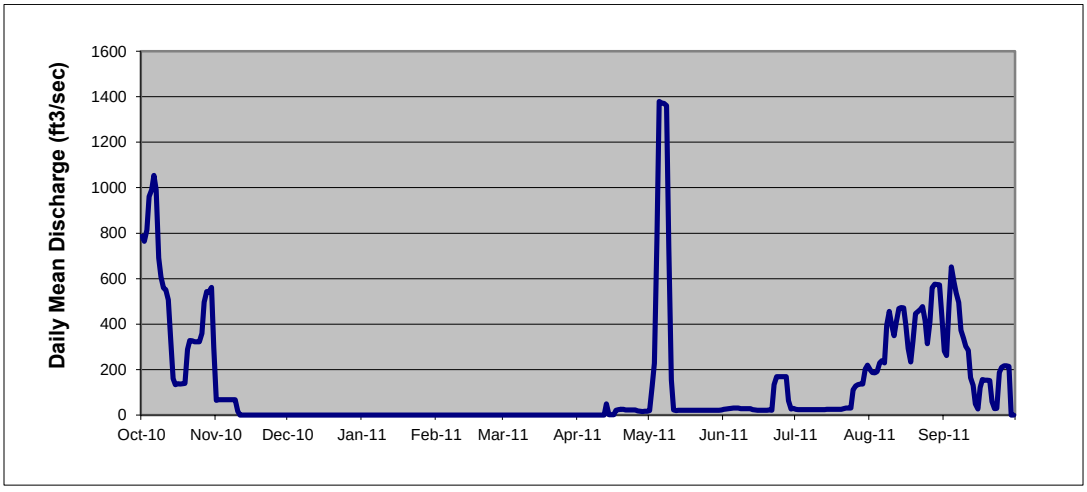


Appendix A (35 of 38)
Charles Hansen Supply Canal below Horsetooth Reservoir, CO

Location. --Lat 40°36'01", long 105°10'18", Larimer County, Hydrologic Unit 10190007, 4 miles west of Fort Collins, Colorado.
Gage.-- 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 and Windy Gap Project water stored at Horsetooth Reservoir. Recorder was operated from 01-Oct-2010 to 30-Sep-2011 by the Northern Colorado Water Conservancy District (NCWCD). The satellite transmitter and license is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR, the NCWCD and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete and reliable, but the data have 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	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	787	65	0	0	0	0	0	19	25	26	199	281
2	764	68	0	0	0	0	0	127	27	24	187	262
3	813	68	0	0	0	0	0	229	27	24	185	490
4	961	68	0	0	0	0	0	777	29	24	191	652
5	991	68	0	0	0	0	0	1379	30	24	229	587
6	1054	68	0	0	0	0	0	1373	30	24	239	537
7	990	68	0	0	0	0	0	1370	30	24	229	496
8	691	68	0	0	0	0	0	1360	29	24	396	373
9	607	68	0	0	0	0	0	739	28	24	456	337
10	558	17	0	0	0	0	0	155	28	24	400	302
11	552	0	0	0	0	0	0	22	28	24	349	284
12	506	0	0	0	0	0	0	19	28	24	409	165
13	341	0	0	0	0	0	49	20	24	24	468	131
14	161	0	0	0	0	0	1	21	22	24	472	50
15	133	0	0	0	0	0	1	20	22	25	471	27
16	138	0	0	0	0	0	1	20	22	25	393	121
17	137	0	0	0	0	0	21	20	22	25	292	156
18	138	0	0	0	0	0	24	20	22	25	234	153
19	139	0	0	0	0	0	25	20	22	25	325	153
20	288	0	0	0	0	0	25	20	22	25	446	152
21	328	0	0	0	0	0	22	20	21	29	455	58
22	326	0	0	0	0	0	22	20	134	31	465	27
23	322	0	0	0	0	0	22	20	169	31	477	29
24	322	0	0	0	0	0	22	20	169	31	415	187
25	322	0	0	0	0	0	23	21	169	111	313	210
26	359	0	0	0	0	0	18	21	169	128	409	216
27	497	0	0	0	0	0	16	21	169	133	561	217
28	543	0	0	0	0	0	16	21	64	136	575	214
29	541	0	0	0		0	17	21	27	136	574	0
30	562	0	0	0		0	17	22	29	203	573	0
31	299		0	0		0		23		219	440	
Min	133	0	0	0	0	0	0	19	21	24	185	0
Max	1054	68	0	0	0	0	49	1379	169	219	575	652
Mean	489	21	0	0	0	0	11	257	54	54	382	229
ac-ft	30042	1236	0	0	0	0	680	15765	3237	3315	23418	13597

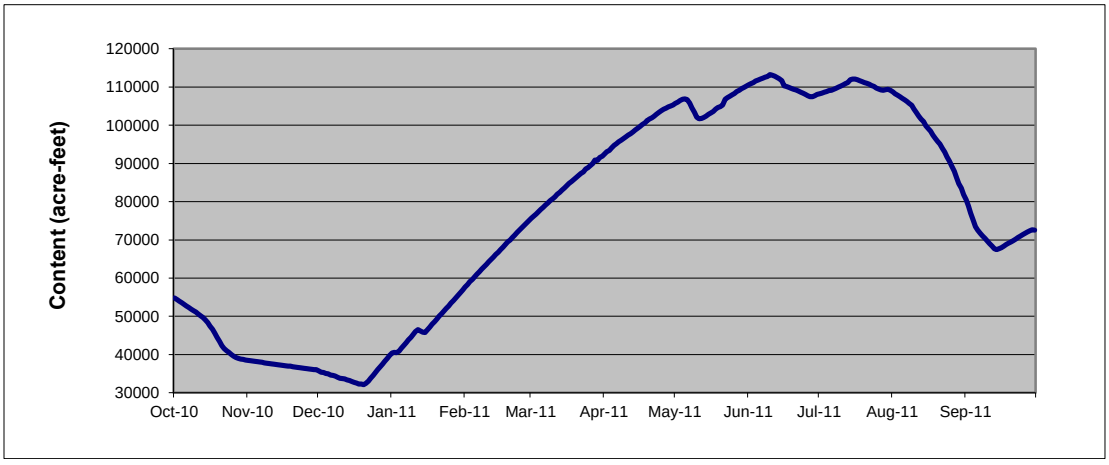


Appendix A (36 of 38)
Carter Lake near Berthoud, Colorado, CO

Location. --Lat 40°19' 28" , long 105°12' 41" , Larimer County, Hydrologic Unit 10190006, on Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.
Gage.--Water level recorder with satellite telemetry. Elevation of gage is 5770 from topographic map.
Remarks.--Reservoir is formed by three earth-fill dams. Construction completed in 1952. Carter Lake is one of two terminal reservoirs for Colorado-Big Thompson Project water diversions. Transmountain water diversions are stored at Carter Lake before final delivery. Maximum capacity is 112,200 acre-feet at elevation 5759.00 ft, with 108,900 acre-feet of active capacity. Recorder was operated from 01-Oct-2010 to 30-Sep-2011. The gage is owned by the United States Bureau of Reclamation (USBR) and is operated cooperatively by the USBR, the Northern Colorado Water Conservancy District (NCWCD) and the Colorado Division of Water Resources (CDWR) as a component of the C-BT project. Record is complete and reliable, but the data have not been revised. This record contains operational data which could be subject to future revisions and changes.

Storage, Acre-Feet, 2400-hour Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	54832	38511	35725	40431	57636	75656	92518	105709	110620	108206	108713	80543
2	54361	38433	35361	40551	58309	76239	93054	106046	110916	108421	108251	78889
3	53962	38346	35293	40463	59041	76773	93386	106483	111167	108646	107867	77004
4	53573	38261	35021	40927	59664	77347	94074	106775	111543	108839	107461	75156
5	53167	38174	34976	41651	60347	77984	94732	106898	111806	109042	107034	73463
6	52745	38057	34615	42379	60986	78523	95185	106730	112103	109189	106652	72522
7	52324	37956	34539	43104	61676	79102	95651	105832	112343	109405	106214	71765
8	51913	37840	34421	43851	62320	79643	96106	104569	112561	109688	105721	71067
9	51451	37754	34054	44552	62976	80236	96497	103366	112790	109960	105217	70373
10	51086	37638	33823	45307	63626	80768	96965	102113	113249	110210	104223	69701
11	50618	37553	33749	46049	64277	81312	97433	101692	113099	110563	103355	69030
12	50160	37468	33667	46485	64913	81910	97771	101803	112801	110893	102345	68352
13	49713	37382	33356	46167	65512	82456	98285	102047	112504	111144	101615	67706
14	49146	37305	33230	45874	66170	83065	98733	102401	112194	111932	100930	67446
15	48404	37267	32994	45790	66822	83614	99204	102867	111703	112125	99874	67716
16	47454	37181	32685	46477	67475	84173	99676	103222	110324	112103	99149	67996
17	46569	37066	32502	47175	68092	84766	100192	103655	110187	111909	98470	68372
18	45623	36989	32305	47919	68759	85255	100655	104223	109915	111668	97465	68798
19	44536	36989	32269	48617	69438	85808	101184	104625	109654	111429	96475	69118
20	43407	36842	32159	49318	69993	86308	101604	104871	109439	111178	95749	69487
21	42346	36688	32429	50005	70617	86873	101991	105307	109200	110962	95056	69827
22	41610	36612	33038	50696	71234	87346	102401	106831	108952	110711	93945	70217
23	41015	36574	33786	51399	71961	87798	102878	107214	108668	110426	92989	70617
24	40559	36497	34547	52079	72532	88545	103344	107574	108364	110142	91717	70979
25	40009	36420	35293	52754	73265	88914	103823	107991	108048	109779	90556	71362
26	39589	36344	36038	53467	73840	89485	104234	108353	107720	109495	89274	71686
27	39249	36259	36819	54121	74427	89972	104480	108782	107439	109223	88008	72039
28	39006	36175	37514	54770	75076	90896	104781	109178	107506	109189	86330	72355
29	38848	36091	38253	55484		90853	105071	109609	107709	109325	84693	72671
30	38722	36015	39006	56201		91545	105295	109903	108025	109416	83521	72572
31	38558		39763	56930		91919		110267		109166	81879	
Min	38558	36015	32159	40431	57636	75656	92518	101692	107439	108206	81879	67446
Max	54832	38511	39763	56930	75076	91919	105295	110267	113249	112125	108713	80543
EOM	38558	36015	39763	56930	75076	91919	105295	105295	108025	109166	81879	72572

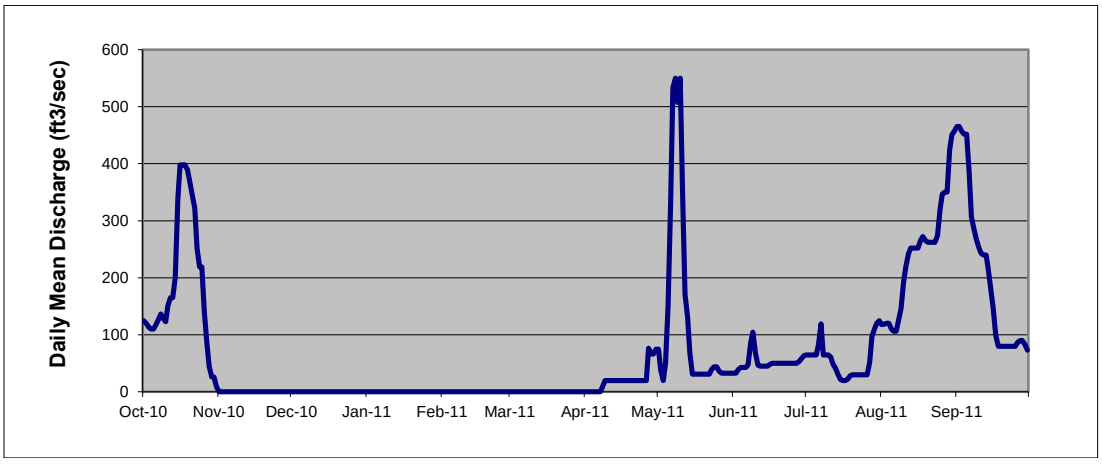


Appendix A (37 of 38)
Saint Vrain Canal below Carter Reservoir, CO

Location. --Lat 40°19'27", long 105°12'35", Larimer County, Hydrologic Unit 10190006, downstream from Carter Reservoir Dam #1, 7 miles northwest of Berthoud, Colorado, and 10 miles west of Loveland, Colorado.
Gage.-- Water-stage recorder with telephone telemetry. Data provided by the Northern Colorado Water Conservancy District. Elevation of gage is 5,590 feet from topographic map.
Remarks.-- Constructed between 1952 and 1954. The canal is 9.8 miles long and has a maximum capacity of 625 cubic feet per second. The canal is used to deliver Colorado-Big Thompson Project and Windy Gap Project water as well as diverted native water from conveyance contract holders. Record was provided by the Northern Colorado Water Conservancy District for the period 01-Oct-2010 to 30-Sep-2011. Record is complete and fair. This record contains operational data which could be subject to future revisions and changes.

Flow, Cubic Feet per Second, Daily Mean Values

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	125	0	0	0	0	0	0	75	33	65	118	465
2	120	0	0	0	0	0	0	38	33	65	119	465
3	113	0	0	0	0	0	0	20	40	65	120	456
4	110	0	0	0	0	0	0	50	43	65	120	452
5	110	0	0	0	0	0	0	150	43	65	110	452
6	117	0	0	0	0	0	0	332	43	83	106	384
7	127	0	0	0	0	0	0	532	47	119	106	307
8	137	0	0	0	0	0	9	550	86	65	127	285
9	129	0	0	0	0	0	20	507	104	65	146	268
10	123	0	0	0	0	0	20	550	68	65	193	253
11	151	0	0	0	0	0	20	356	47	62	220	243
12	165	0	0	0	0	0	20	171	45	48	242	240
13	165	0	0	0	0	0	20	131	45	42	252	240
14	200	0	0	0	0	0	20	69	45	31	252	213
15	338	0	0	0	0	0	20	31	45	21	252	177
16	398	0	0	0	0	0	20	31	48	20	252	147
17	398	0	0	0	0	0	20	31	50	20	265	99
18	398	0	0	0	0	0	20	31	50	22	272	80
19	390	0	0	0	0	0	20	31	50	28	265	80
20	366	0	0	0	0	0	20	31	50	30	262	80
21	345	0	0	0	0	0	20	31	50	30	262	80
22	322	0	0	0	0	0	20	31	50	30	262	80
23	252	0	0	0	0	0	20	40	50	30	262	80
24	219	0	0	0	0	0	20	44	50	30	274	80
25	219	0	0	0	0	0	20	44	50	30	320	80
26	138	0	0	0	0	0	20	37	50	30	347	87
27	84	0	0	0	0	0	77	33	50	52	350	90
28	45	0	0	0	0	0	67	33	54	96	350	90
29	26	0	0	0		0	67	33	59	110	425	83
30	26	0	0	0		0	75	33	64	120	450	73
31	9		0	0		0		33		125	457	
Min	9	0	0	0	0	0	0	20	33	20	106	73
Max	398	0	0	0	0	0	77	550	104	125	457	465
Mean	189	0	0	0	0	0	22	133	51	56	244	207
ac-ft	11611	0	0	0	0	0	1295	8137	3051	3424	14964	12296

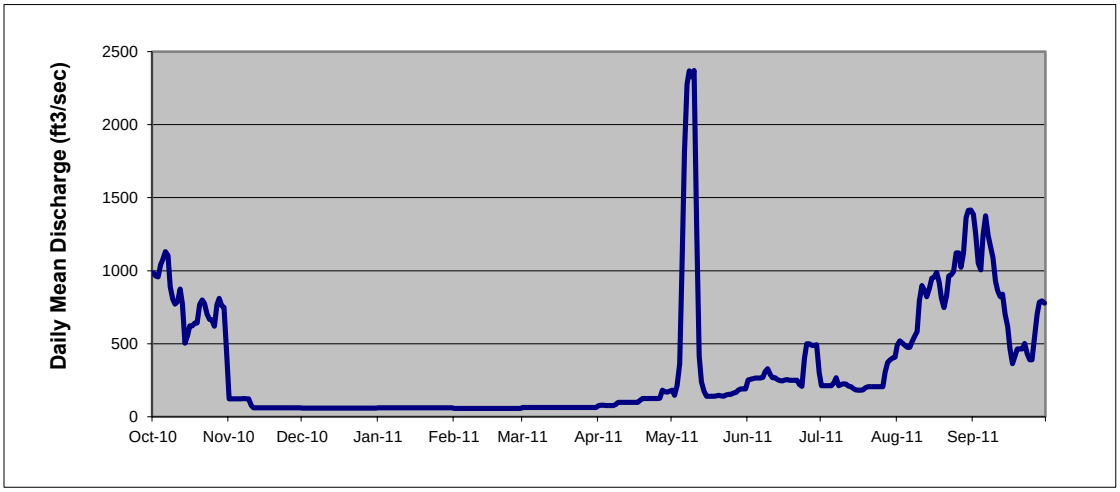


Appendix A (38 of 38)
Colorado-Big Thompson Project, CO

Location. -- Larimer , Grand, Summit, Boulder, Weld counties in Colorado, hydrologic units 14010001, 14010002 and 10190006, 10190007, on the Colorado River, Big Thompson River and Cache La Poudre River Basins.
Remarks.— This table presents a summation of all the daily deliveries of Colorado-Big Thompson Project and Windy Gap Project water through the Saint Vrain Canal, the Charles Hansen Supply Canal, the Dixon Canal ,the Charles Hansen Feeder Canal and small deliveries upstream from Flatiron Reservoir. These values include metered water. The Colorado-Big Thompson Project is a transmountain water diversion system. The water diverted is used for irrigation, municipal and industrial purposes, to generate hydroelectric power and to provide recreation for the public. This record contains operational data which could be subject to future revisions and changes. Period of record is between 01-Oct-2010 and 30-Sep-2011. Data was provided by the Northern Colorado Water Conservancy District. Record is complete and reliable.

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

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	987	122	60	61	57	64	77	182	252	214	491	1385
2	965	122	60	61	57	64	79	148	256	214	519	1251
3	957	122	60	61	57	64	79	215	261	214	504	1051
4	1041	122	60	61	57	64	78	362	265	214	490	1007
5	1078	122	60	61	57	64	77	1001	265	214	476	1240
6	1131	122	60	61	57	64	77	1814	266	232	476	1376
7	1105	125	60	61	57	64	77	2276	271	268	514	1241
8	889	122	60	61	57	64	86	2369	309	214	551	1169
9	804	122	60	61	57	64	98	2327	328	222	583	1090
10	771	80	60	61	57	64	99	2371	291	226	793	928
11	790	62	60	61	57	64	99	1309	268	223	898	860
12	873	62	60	61	57	64	99	415	267	211	865	822
13	774	62	60	61	57	64	99	239	254	205	822	840
14	504	62	60	61	57	64	99	176	248	193	878	701
15	555	62	60	61	57	64	99	140	246	184	948	617
16	622	62	60	61	57	64	99	141	251	182	955	468
17	622	62	60	61	57	64	99	140	254	182	988	364
18	642	62	60	61	57	64	114	140	251	184	920	417
19	643	62	60	61	57	64	125	142	249	199	811	464
20	768	62	60	61	57	64	125	148	249	205	748	464
21	799	62	60	61	57	64	125	143	249	205	829	464
22	775	62	60	61	57	64	125	140	222	205	965	503
23	702	62	60	61	57	64	125	149	208	207	972	433
24	666	62	60	61	57	64	125	153	402	207	994	391
25	663	62	60	61	57	64	125	153	499	206	1121	390
26	620	62	60	61	57	64	126	162	499	207	1121	546
27	767	62	60	61	57	64	182	166	489	304	1023	702
28	812	62	60	61	57	64	171	183	489	373	1122	784
29	759	62	60	61		64	170	191	494	390	1363	793
30	750	62	60	61		64	177	191	303	402	1412	779
31	448		60	61		64		191		407	1416	
Min	448	62	60	61	57	64	77	140	208	182	476	364
Max	1131	125	60	61	57	64	182	2371	499	407	1416	1385
Mean	783	81	60	61	57	64	111	577	305	236	857	785
ac-ft	48079	4812	3679	3750	3157	3909	6604	35391	18125	14484	52613	46611



APPENDIX B – OPERATIONAL DATA

TABLE 1

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

(Data in Acre-feet)

Reservoir	Dead Storage 1/	Active Storage 2/	Total Storage	Normal Minimum Storage	Limitation on normal minimum storage
Green Mountain	6,860	146,779	153,639	47,684	Minimum elevation for rated power output
Willow Creek	1,486	9,779	10,553	6,675	Elevation of pump canal head-works
Lake Granby	74,190	465,568	539,758	74,190	Lowest outlet elevation
Shadow Mountain	506	16,848	17,354	16,026	Minimum permissible Grand Lake elevation; 8,366 ft.
Grand Lake	3/	511	1,015	504	Legislation limits fluctuation
Marys Lake	42	885	927	308	Minimum elevation for power generation
Lake Estes	409	2,659	3,068	740	Minimum elevation to release 550 ft^3/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^3/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	

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

TABLE 2

COLORADO-BIG THOMPSON PROJECT

MONTHLY SUMMARY
WATER YEAR 2011 **OF BLUE RIVER OPERATIONS** **(ACRE-FEET)**

	INI	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
UNDEPLETED RUNOFF ABOVE GREEN MTN. RESERVOIR		14,500	12,300	11,400	9,600	8,100	10,200	20,500	62,900	209,700	184,800	51,450	25,700	621,150
UNDEPLETED RUNOFF ABOVE DILLON RES.		8,600	6,700	6,000	5,300	4,300	5,300	10,000	34,400	133,400	106,200	28,700	14,900	363,800
PERCENT OF TOTAL UN-DEPLETED RUNOFF ORI-GINATING ABOVE DILLON		0.593	0.545	0.526	0.552	0.531	0.520	0.488	0.547	0.636	0.575	0.558	0.580	0.586
DEPLETIONS BY 1929 COLORADO SPRINGS RIGHT		0	0	0	0	0	0	13	76	428	0	0	0	517
DEPLETIONS BY 1948 COLORADO SPRINGS RIGHT		48	-113	-36	0	0	0	17	321	3150	1315	9	5	4716
INFLOW TO DILLON		8,500	6,800	6,080	5,260	4,330	5,260	9,930	34,000	129,750	104,800	28,700	14,900	358,310
DILLON STORAGE (1000 AF)	229.9	219.7	217.8	219.0	220.9	222.3	221.8	212.8	184.9	238.6	256.1	253.3	247.8	
ROBERTS TUNNEL DIVERSIONS		14,200	4,700	1,470	0	0	0	7,230	13,400	11 ,450	3,000	11,700	12,650	79,800
DILLON OUTFLOW TO THE RIVER		3,350	3,180	3,370	3,320	2,980	5,750	11,650	48,000	63,850	83,250	18,700	6,500	253,900
TOTAL DEPLETIONS BY DENVER		5,100	3,600	2,700	1,900	1,400	-500	-1,700	-13,900	65,400	21,400	9,900	8,300	103,600
RUNOFF ORIGINATING BETWEEN DILLON AND GREEN MTN RESERVOIR		6,100	5,700	5,400	4,400	3,800	5,050	10,700	29,100	78,100	80,100	23,200	11,000	262,650
ACTUAL INFLOW TO GREEN MTN RESERVOIR		9,350	8,800	8,700	7,700	6,700	10,700	22,150	76,500	140,800	162,000	41,500	17,400	512,300
GREEN MTN RESERVOIR														

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

2011 ACTUAL OPERATIONS

	WATER IN 1000 ACRE-FEET				* * *	* * *	* * *	* * *	* * *	ENERGY IN GWH			
	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
GREEN MOUNTAIN RESERVOIR													
Depleted Watershed Inflow	512.4	9.4	8.8	8.7	7.7	6.7	10.7	22.2	76.5	140.8	162.0	41.5	17.4
Turbine Release	416.9	38.2	9.1	9.3	9.1	10.8	17.5	30.7	63.4	70.0	87.0	43.7	28.1
Bypass	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0
Spill	61.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	60.8	0.0	0.0
End of Month Content	108.4	79.2	78.9	78.3	77.0	72.9	66.0	57.0	69.4	139.0	152.3	149.2	137.9
Kwh/AF		193.7	109.9	107.5	109.9	129.6	160.0	169.4	164.0	200.0	212.6	217.4	206.4
Generation	78.0	7.4	1.0	1.0	1.0	1.4	2.8	5.2	10.4	14.0	18.5	9.5	5.8
WILLOW CREEK RESERVOIR													
Inflow	139.2	1.4	1.4	1.3	1.0	0.9	1.1	5.7	38.9	62.4	17.7	4.6	2.8
Release to River	137.4	0.7	0.5	0.4	0.4	0.4	3.2	9.8	38.0	59.9	15.2	4.4	4.5
Pumped to Granby	3.2	1.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
End of Month Content	9.3	8.9	7.6	8.4	9.0	9.4	7.2	3.2	4.1	6.5	8.9	9.0	7.2
Pump Energy	0.7	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRANBY - SHADOW MOUNTAIN - GRAND LAKE													
Natural Watershed Inflow	487.3	7.9	6.6	5.7	4.8	4.2	5.8	17.4	55.4	184.4	159.1	24.0	12.0
Total Inflow into Granby	417.8	7.4	7.4	5.5	4.4	3.8	6.1	12.7	30.0	170.2	142.9	19.3	8.1
Granby Fish Release	117.0	3.6	1.3	1.3	1.3	1.2	1.3	10.2	25.0	20.6	20.5	24.5	6.2
Granby Seepage	5.4	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.5	0.6	0.6
Granby Spill	94.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.3	49.7	0.0	0.0
Adams Tunnel	245.3	1.6	13.5	13.0	28.6	30.3	33.2	32.8	34.2	13.6	14.6	4.0	25.9
Granby End of Month content	492.2	493.4	485.7	476.6	450.9	423.3	394.0	366.8	360.4	462.1	531.2	522.4	499.0
SM-GL End of Month Content	17.1	17.1	17.8	17.7	17.8	17.8	17.7	17.7	17.2	16.8	17.6	17.6	17.8
Pumped from Granby	178.2	0.6	13.0	12.8	28.3	29.8	33.6	28.4	8.9	0.0	0.0	0.1	22.7
Granby Pump Kwh/AF		000.0	146.2	148.4	151.9	154.4	151.8	154.9	157.3	0.0	0.0	0.0	141.0
Granby Pump Energy	26.8	0.0	1.9	1.9	4.3	4.6	5.1	4.4	1.4	0.0	0.0	0.0	3.2

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

2011 ACTUAL OPERATIONS

	WATER IN 1000 ACRE -FEET				***	***	***	***	***	ENERGY IN GWH			
	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MARYS LAKE – ESTES – FLATIRON													
Adams Tunnel Water	245.3	1.6	13.5	13.0	28.6	30.3	33.2	32.8	34.2	13.6	14.6	4.0	25.9
Marys Lake Generation	41.7	0.0	1.9	2.2	5.2	5.4	6.0	6.0	6.2	2.2	2.0	0.0	4.6
Estes Generation	110.5	0.7	6.0	5.7	13.2	14.2	15.6	15.4	15.1	5.7	6.1	1.2	11.6
Divertible Big -Thompson	99.2	0.0	0.0	0.1	0.1	0.0	0.3	1.4	3.4	41.7	42.5	6.9	2.8
Diverted Big -Thompson Water	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	5.9	6.8	1.2
Olympus Tunnel	273.9	0.0	0.0	13.2	29.1	30.4	33.6	32.6	33.7	32.4	32.5	10.5	25.9
Pole Hill Generation	196.9	0.0	0.0	9.0	20.9	22.1	24.4	23.9	24.9	24.0	23.7	5.6	18.4
Flatiron 1 & 2 Generation	253.3	0.2	0.0	10.7	26.5	27.7	31.6	30.6	31.8	30.5	31.2	8.2	24.3
Flatiron 3 Turbine Release	12.2	0.5	0.0	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.9
Flatiron 3 Kwh/AF Gen.		200.0	0.0	150.0	250.0	0.0	0.0	0.0	0.0	0.0	0.0	218.8	206.9
Flatiron 3 Generation	2.5	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6
Flatiron 3 Pumping	128.7	0.0	0.0	8.6	20.1	20.0	19.9	17.4	14.8	7.0	9.9	0.0	11.0
Flatiron 3 Kwh/AF Pump		0.0	0.0	267.4	283.6	305.0	326.6	350.6	358.1	371.4	363.6	0.0	309.1
Flatiron 3 Pump Energy	41.6	0.0	0.0	2.3	5.7	6.1	6.5	6.1	5.3	2.6	3.6	0.0	3.4
CARTER LAKE													
Pumped from Flatiron	128.7	00	0.0	8.6	20.1	20.0	19.9	17.4	14.8	7.0	9.9	0.0	11.0
Release to Flatiron	12.2	0.5	0.0	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4	2.9
Irrigation Delivery	86.5	15.4	1.5	1.2	1.3	1.2	1.3	3.1	10.6	6.3	7.3	20.3	17.0
Evaporation & Seepage	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.5	0.4	0.4	0.2
End of Month Content	55.3	38.6	36.0	39.8	56.9	75.1	91.9	105.3	109.1	108.0	109.2	81.9	72.6
BIG THOMPSON POWERPLANT													
Diverted Dille Tunnel Water	68.35	1.6	11.6	0.0	0.0	0.0	0.0	0.05	9.7	20.3	16.8	4.9	3.4
Irrigation Delivery	31.15	3.0	0.01	0.01	0.01	0.01	0.01	0.2	5.4	3.4	1.3	6.2	11.6
Turbine Release	70.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	9.7	18.3	16.7	12.5	12.5
Generation	10.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	2.5	1.9	1.8
HORSETOOTH RESERVOIR													
Hansen Feeder Canal Inflow	136.6	1.1	12.4	6.0	9.1	9.2	14.0	15.2	14.0	24.8	22.6	2.8	5.4
Irrigation Delivery	111.0	29.3	2.3	1.4	1.1	1.3	1.2	2.0	18.9	5.0	5.1	25.8	17.6
Evaporation	3.8	0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.3	0.8	0.8	0.8	0.4
End of Month Content	102.3	71.4	81.0	85.2	92.4	100.2	112.0	124.2	118.1	135.4	150.9	123.4	109.3
TOTAL CBT DELIVERY	228.65	47.7	3.81	2.61	2.41	2.51	2.51	5.3	34.9	14.7	13.7	52.3	46.2

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

2011 ACTUAL OPERATIONS

	WATER IN 1000 ACRE-FEET	* * *	* * *	* * *	* * *	* * *	ENERGY IN GWH					
	INITIAL OR TOTAL	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
BASE GENERATION													
Green Mountain	78.0	7.4	1.0	1.0	1.0	1.4	2.8	5.2	10.4	14.0	18.5	9.5	5.8
Flatiron 3	2.5	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6
Big Thompson	10.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	2.5	1.9	1.8
TOTAL	91.0	7.6	1.0	1.3	1.1	1.4	2.8	5.2	11.8	16.8	21.0	12.8	8.2
LOAD FOLLOWING GENERATION													
Marys Lake	41.7	0.0	1.9	2.2	5.2	5.4	6.0	6.0	6.2	2.2	2.0	0.0	4.6
Estes	110.5	0.7	6.0	5.7	13.2	14.2	15.6	15.4	15.1	5.7	6.1	1.2	11.6
Pole Hill	196.9	0.0	0.0	9.0	20.9	22.1	24.4	23.9	24.9	24.0	23.7	5.6	18.4
Flatiron 1 & 2	253.3	0.2	0.0	10.7	26.5	27.7	31.6	30.6	31.8	30.5	31.2	8.2	24.3
TOTAL	602.4	0.9	7.9	27.6	65.8	69.4	77.6	75.9	78.0	62.4	63.0	15.0	58.9
PUMP ENERGY													
Willow Creek	0.7	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Granby	26.8	0.0	1.9	1.9	4.3	4.6	5.1	4.4	1.4	0.0	0.0	0.0	3.2
Flatiron 3	41.6	0.0	0.0	2.3	5.7	6.1	6.5	6.1	5.3	2.6	3.6	0.0	3.4
TOTAL	69.1	0.2	2.4	4.2	10.0	10.7	11.6	10.5	6.7	2.6	3.6	0.0	6.6
TOTAL GENERATION	693.4	8.5	8.9	28.9	66.9	70.8	80.4	81.1	89.8	79.2	84.0	27.8	67.1
TOTAL GENERATION MINUS PUMP	624.3	8.3	6.5	24.7	56.9	60.1	68.8	70.6	83.1	76.6	80.4	27.8	60.5

TABLE 4

COLORADO-BIG THOMPSON PROJECT

FLOOD DAMAGE PREVENTED IN WATER YEAR 2011

	Cumulative Total Prior to WY 2011	WY 2011	Cumulative Total Current
Granby, Willow Creek, Shadow Mountain and Grand Lake	$346,200	$11,500.00	$357,700
Green Mountain	$134,600	$18,000.00	$152,600
Total	$480,800	$29,500.00	$510,300

CBTAOP V1.10 Run: 09-Jan-2012 08:42
Most Probable Plan (70% Quota)

COLORADO-BIG THOMPSON MONTHLY OPERATIONS

HYDROLOGY OPERATIONS

Green Mtn Reservoir — Initial Cont 93.8 kaf, Elev 7916.90 ft; Maximum Cont 153.6 kaf, Elev 7949.91 ft; Minimum Cont 6.0 kaf, Elev 7795.72 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dillon Inflow	kaf	4.0	3.6	4.3	9.4	37.8	53.6	29.9	15.8	7.8	6.1	4.9	4.4	181.6
Dillon-Grn Mtn Gain	kaf	3.8	3.2	4.1	9.5	26.7	36.2	21.9	13.3	8.4	6.4	4.8	4.2	142.5
Undepleted Inflow	kaf	7.8	6.8	8.4	18.9	64.5	89.8	51.8	29.1	16.2	12.5	9.7	8.6	324.1
Depletion	kaf	0.0	0.0	0.0	5.2	25.5	36.9	12.7	2.8	0.9	0.4	0.0	0.0	84.4
Depleted Inflow	kaf	7.8	6.8	8.4	13.7	39.0	52.9	39.1	26.3	15.3	12.1	9.7	8.6	239.7
Turbine Release	kaf	15.9	14.8	15.9	9.9	6.1	13.0	33.8	38.1	32.7	43.0	12.0	10.3	245.5
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	15.9	14.8	15.9	9.9	6.1	13.0	33.8	38.1	32.7	43.0	12.0	10.3	245.5
Min Release	cfs	159	153	172	167	100	73	550	620	550	700	201	168	
Total River Release	cfs	259	257	259	166	99	218	550	620	550	699	202	168	
Evaporation	kaf	0.0	0.0	0.2	0.3	0.5	0.8	0.8	0.6	0.5	0.4	0.1	0.0	4.2
End-Month Targets	kaf			70.0	85.0	110.0	145.0	152.0	145.0				97.0	
End-Month Content	kaf	85.7	77.7	70.0	73.5	105.9	145.0	149.5	137.1	119.2	87.9	85.5	83.8	
End-Month Elevation	ft	7911.29	7905.36	7899.24	7902.08	7924.63	7945.78	7947.96	7941.85	7932.35	7912.85	7911.15	7909.92	

Willow Crk Reservoir — Initial Cont 8.1 kaf, Elev 8120.90 ft; Maximum Cont 10.2 kaf, Elev 8128.83 ft; Minimum Cont 2.0 kaf, Elev 8081.92 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native Inflow	kaf	0.8	0.7	1.0	4.6	21.1	11.6	2.7	1.6	1.4	1.1	0.9	0.8	48.3
Min Release	kaf	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	0.4	0.4	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	1.5	2.6	2.2	0.5	0.4	0.4	0.4	0.4	10.0
Pumped to Granby	kaf	0.0	0.0	0.0	6.3	17.7	8.9	0.4	1.0	2.7	0.0	0.0	0.0	37.0
Evaporation	kaf	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.6
End-Month Targets	kaf			7.2	7.2	9.0	9.0	9.0	9.0	7.2	7.2	7.2		
End-Month Content	kaf	8.5	8.8	9.4	7.2	9.0	9.0	9.0	9.0	7.2	7.9	8.4	8.8	
End-Month Elevation	ft	8122.55	8123.73	8126.00	8116.90	8124.50	8124.50	8124.50	8124.50	8116.90	8120.05	8122.14	8123.73	

Lake Granby — Initial Cont 461.9 kaf, Elev 8268.92 ft; Maximum Cont 536.1 kaf, Elev 8279.50 ft; Minimum Cont 76.5 kaf, Elev 8186.91 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	1.8	1.6	2.1	7.3	27.3	23.6	7.8	4.7	2.4	2.1	1.3	1.4	83.4
Rels frm Shadow Mtn	kaf	1.2	1.1	1.2	1.2	14.1	12.2	3.1	2.5	2.1	2.2	2.7	2.8	46.4
Pump frm Windy Gap	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pump frm Willow Crk	kaf	0.0	0.0	0.0	6.3	17.7	8.9	0.4	1.0	2.7	0.0	0.0	0.0	37.0
Total Inflow	kaf	3.0	2.7	3.3	14.8	59.1	44.7	11.3	8.2	7.2	4.3	4.0	4.2	166.8
Min River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Pumped to Shadow Mtn	kaf	13.9	19.7	25.7	16.8	0.0	0.0	8.9	11.6	16.4	19.7	3.9	23.9	160.5
Evaporation	kaf	0.0	0.0	0.9	1.5	2.4	3.1	2.8	2.2	2.0	1.5	0.7	0.2	17.3
Seepage loss	kaf	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	4.2
End-Month Content	kaf	449.5	431.1	406.2	401.2	452.9	489.4	483.7	475.2	462.4	444.0	441.9	420.5	
End-Month Elevation	ft	8267.07	8264.28	8260.39	8259.60	8267.58	8272.91	8272.09	8270.86	8268.99	8266.24	8265.93	8262.64	

Shadow Mtn — Initial Cont 17.7 kaf, Elev 8366.62 ft; Maximum Cont 18.4 kaf, Elev 8367.00 ft; Minimum Cont 16.6 kaf, Elev 8366.02 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	2.8	2.3	3.1	10.9	40.9	35.4	11.7	7.1	3.6	3.2	2.0	2.1	125.1
Pumped from Granby	kaf	13.9	19.7	25.7	16.8	0.0	0.0	8.9	11.6	16.4	19.7	3.9	23.9	160.5
Total Inflow	kaf	16.7	22.0	28.8	27.7	40.9	35.4	20.6	18.7	20.0	22.9	5.9	26.0	285.6
Min River Release	kaf	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	2.2	2.7	2.8	24.3
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	12.9	9.2	0.0	0.0	0.0	0.0	0.0	0.0	22.1
Total River Release	kaf	1.2	1.1	1.2	1.2	14.1	12.2	3.1	2.5	2.1	2.2	2.7	2.8	46.4
Adams Tunnel Flow	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	234.5
Evaporation	kaf	0.0	0.0	0.3	0.4	0.7	0.8	0.7	0.6	0.5	0.4	0.2	0.1	4.7
End-Month Content	kaf	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	20.3	13.1	33.8	365.9
Actual delivery	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	234.5
% max delivery	%	46	66	81	80	77	69	50	46	53	100	23	68	

Big T @ Lake Estes	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big Thompson inflow	kaf	1.0	0.7	1.0	3.3	15.1	32.2	16.4	8.4	3.8	2.6	1.8	1.2	87.5
Min river release	kaf	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	3.1	1.5	1.5	45.3
Act river release	kaf	1.0	0.7	1.0	2.2	7.3	21.8	7.7	6.9	3.7	2.6	1.5	1.2	57.6
Skim water available	kaf	0.0	0.0	0.0	1.1	8.2	24.8	8.7	1.5	0.1	0.0	0.3	0.0	44.7
Skim water diverted	kaf	0.0	0.0	0.0	1.1	7.8	10.4	8.7	1.5	0.1	0.0	0.3	0.0	29.9
% skim diverted	%				100	95	42	100	100	100		100		
Irrigation demand	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4
Total river release	kaf	1.0	0.7	1.0	2.2	7.4	21.9	7.8	7.0	3.7	2.6	1.5	1.2	58.0

Olympus Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	33.8	10.8	33.8	377.1
Actual delivery	kaf	15.5	20.9	27.3	27.2	33.8	32.7	25.4	17.0	17.5	20.3	3.3	23.1	264.0
% max delivery	%	46	66	81	83	100	100	75	50	54	60	31	68	
Seepage and Evap	kaf	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.2	1.5
Inflow to Flatiron	kaf	15.4	20.8	27.2	27.1	33.7	32.6	25.3	16.8	17.3	20.1	3.3	22.9	262.5

Carter Lake		Initial Cont Elev	58.3 kaf 5706.83 ft			Maximum Cont Elev	112.2 kaf 5758.98 ft			Minimum Cont Elev	11.2 kaf 5639.99 ft		
	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pump from Flatiron	kaf	2.2	7.1	20.5	18.0	17.4	16.0	2.6	0.0	2.3	10.1	0.0	11.1	107.3
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	0.0	0.0	0.1	0.2	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.0	2.5
Seepage loss	kaf	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.7
End-Month Targets	kaf	58.5	63.7	81.9	92.7	101.0	107.1	90.0	65.4	49.0	50.0	50.0	70.0	
End-Month Content	kaf	58.5	63.7	81.9	92.7	101.0	107.1	90.0	65.5	49.0	49.7	47.6	56.7	
End-Month Elevation	ft	5707.05	5712.65	5731.08	5741.37	5749.00	5754.48	5738.84	5714.55	5696.30	5697.12	5694.65	5705.06	
Irrigation demand	kaf	0.0	0.0	0.0	4.1	3.7	3.3	12.7	18.0	13.4	6.2	0.0	0.0	61.4
Metered delivery	kaf	1.5	1.4	1.6	2.2	3.1	3.9	4.7	4.5	3.6	2.4	1.5	1.5	31.9
Windy Gap demand	kaf	0.4	0.4	0.4	0.5	1.7	2.0	1.7	1.6	1.4	0.5	0.4	0.4	11.4
Total demand	kaf	1.9	1.8	2.0	6.8	8.5	9.2	19.1	24.1	18.4	9.1	1.9	1.9	104.7
Total delivery	kaf	1.9	1.8	2.0	6.8	8.5	9.2	19.1	24.1	18.4	9.1	1.9	1.9	104.7
% 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

Hansen Canal 930	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Minimum flow	kaf	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	0.7	1.5	1.5	26.2
Maximum flow	kaf	57.2	53.5	57.2	27.7	57.2	55.3	57.2	57.2	55.3	57.2	27.7	57.2	619.9
Actual flow	kaf	13.2	13.7	6.7	9.1	16.3	16.6	22.7	16.8	15.0	10.0	3.3	11.8	155.2

Dille Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big T @ Canyon Mouth	kaf	1.4	1.3	1.8	5.6	21.6	35.2	21.8	10.9	5.1	4.0	2.3	1.5	112.5
Less Estes Skim	kaf	0.0	0.0	0.0	1.1	7.8	10.4	8.7	1.5	0.1	0.0	0.3	0.0	29.9
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4
Handy Ditch release	kaf	0.0	0.0	0.0	1.2	1.2	1.2	1.8	2.9	1.7	1.2	0.0	0.0	11.2
Water available	kaf	1.4	1.3	1.8	3.3	12.7	23.7	11.4	6.6	3.3	2.8	2.0	1.5	71.8
Water diverted	kaf	0.0	0.0	0.0	3.3	12.7	13.5	11.4	6.6	3.3	2.8	0.0	0.0	53.6
% diverted	%				100	100	57	100	100	100	100			

Trifurcation Works	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rels from Flatiron	kaf	13.2	13.7	6.7	9.1	16.3	16.6	22.7	16.8	15.0	10.0	3.3	11.8	155.2
Rels to 550 Canal	kaf	13.2	13.7	6.7	8.0	8.5	6.2	12.0	9.3	4.6	4.0	3.0	11.8	101.0
Big T irrigation	kaf	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.0	10.3	6.0	0.0	0.0	24.3
Dille Tunnel	kaf	0.0	0.0	0.0	3.3	12.7	13.5	11.4	6.6	3.3	2.8	0.0	0.0	53.6
Tot rels to river	kaf	0.0	0.0	0.0	4.4	20.5	23.9	22.1	14.1	13.7	8.8	0.3	0.0	107.8
Irrigation demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	1.7	5.7	10.1	6.0	0.0	0.0	23.5
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.4
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.0	0.0	0.8
Total requirement	kaf	0.0	0.0	0.0	0.0	0.1	0.1	2.1	6.1	10.3	6.0	0.0	0.0	24.7
Total delivery	kaf	0.0	0.0	0.0	0.0	0.1	0.1	2.1	6.1	10.3	6.0	0.0	0.0	24.7
% required delivery	%	0	0	0	0	100	100	100	100	100	100	0	0	
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	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow from Flatiron	kaf	13.2	13.7	6.7	8.0	8.5	6.2	12.0	9.3	4.6	4.0	3.0	11.8	101.0
Maximum flow	kaf	32.0	29.9	32.0	30.9	32.0	30.9	32.0	32.0	15.5	32.0	30.9	32.0	362.1
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	2.2
Irrigation demand	kaf	0.4	0.4	0.4	0.5	0.9	0.7	1.5	1.4	1.4	0.9	0.2	0.4	9.1
Irrigation delivery	kaf	0.4	0.4	0.4	0.5	0.9	0.7	1.5	1.4	1.4	0.9	0.2	0.4	9.1
Minimum flow	kaf	6.1	5.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	6.1	31.5
Rels to Horsetooth	kaf	12.6	13.1	6.1	7.3	7.4	5.3	10.3	7.7	3.0	2.9	2.8	11.2	89.7

Horsetooth Reservoir		Initial Cont		116.8 kaf		Maximum Cont		156.7 kaf		Minimum Cont		5.0 kaf		
				Elev 5408.84 ft				Elev 5429.98 ft				Elev 5297.06 ft		
	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow	kaf	12.6	13.1	6.1	7.3	7.4	5.3	10.3	7.7	3.0	2.9	2.8	11.2	89.7
Total irr delivery	kaf	1.7	1.6	1.7	2.3	3.7	4.2	29.1	33.9	15.1	11.5	1.4	1.6	107.8
Evaporation loss	kaf	0.0	0.0	0.3	0.5	0.7	0.9	0.7	0.5	0.4	0.3	0.1	0.0	4.4
Seepage loss	kaf	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.7
End-Month Targets	kaf	127.5	138.9	142.9	147.2	150.0	150.0	130.3	103.5	90.9	81.9	83.1	92.6	
End-Month Content	kaf	127.5	138.9	142.9	147.2	150.0	150.0	130.3	103.5	90.9	81.9	83.1	92.6	
End-Month Elevation	ft	5414.85	5420.96	5423.04	5425.25	5426.66	5426.66	5416.38	5400.97	5393.03	5387.02	5387.84	5394.14	
Irrigation demand	kaf	0.0	0.0	0.0	0.2	0.4	0.6	22.9	28.2	11.0	10.5	0.0	0.0	73.8
Metered delivery	kaf	1.3	1.2	1.3	1.7	2.9	3.2	5.1	4.6	3.0	0.6	1.0	1.2	27.1
Windy Gap demand	kaf	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.1	1.1	0.4	0.4	0.4	6.9
Total demand	kaf	1.7	1.6	1.7	2.3	3.7	4.2	29.1	33.9	15.1	11.5	1.4	1.6	107.8
Total irr delivery	kaf	1.7	1.6	1.7	2.3	3.7	4.2	29.1	33.9	15.1	11.5	1.4	1.6	107.8
% required delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total CBT Delivery	kaf	3.2	3.0	3.3	8.7	11.1	11.8	48.7	62.5	42.5	26.6	2.7	3.1	227.2

Windy Gap Ownership	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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	kaf	0.8	0.8	0.8	0.9	2.1	2.4	3.1	3.0	2.7	0.9	0.8	0.8	19.1
Spill	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	-0.8	-1.6	-2.4	-3.3	-5.4	-7.8	-10.9	-13.9	-16.6	-17.5	-18.3	-19.1	

PUMPING AND GENERATION OPERATIONS

Green Mtn Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Generation	gwh	18.600	17.400	9.300	18.000	18.600	18.000	18.600	18.600	18.000	18.600	9.000	18.600	201.300
Generation	gwh	2.859	2.575	2.676	1.651	1.097	2.596	7.075	7.911	6.575	8.090	2.131	1.814	47.050
% Max Generation	%	15	15	29	9	6	14	38	43	37	43	24	10	
Ave kwh/af		180	174	168	167	180	200	209	208	201	188	178	176	

Willow Crk Pumping	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	0.0	0.0	0.0	26.8	27.7	26.8	27.7	27.7	26.8	0.0	0.0	0.0	163.5
Actual pumping	kaf	0.0	0.0	0.0	6.3	17.7	8.9	0.4	1.0	2.7	0.0	0.0	0.0	37.0
Pump energy	gwh	0.000	0.000	0.000	1.342	3.770	1.896	0.085	0.213	0.575	0.000	0.000	0.000	7.881
% max pumping	%				24	64	33	1	4	10				
Average kwh/af					213	213	213	213	213	213				

Lake Granby Pumping	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	36.9	35.7	36.9	435.6
Actual pumping	kaf	13.9	19.7	25.7	16.8	0.0	0.0	8.9	11.6	16.4	19.7	3.9	23.9	160.5
Pump energy	gwh	2.002	2.857	3.752	2.470	0.000	0.000	1.264	1.659	2.345	2.837	0.566	3.466	23.218
% max pumping	%	38	57	70	47			24	31	46	53	11	65	
Average kwh/af		144	145	146	147			142	143	143	144	145	145	

Marys Lake Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	
Max generation	gwh	6.060	5.620	6.060	5.840	6.060	5.840	6.060	6.060	5.840	2.980	0.000	2.980	59.400
Generation	gwh	2.700	3.690	4.860	4.620	4.620	3.980	2.960	2.720	3.080	2.980	0.000	2.980	39.190
% Max Generation	%	45	66	80	79	76	68	49	45	53	100		100	
Ave kwh/af		174	177	178	177	177	178	176	174	177	176		176	

Lake Estes Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	
Max generation	gwh	10.450	9.740	10.450	10.060	14.920	14.450	14.920	14.920	14.450	14.920	14.450	14.920	158.650
Generation	gwh	7.200	9.260	10.450	10.060	11.540	9.860	7.720	7.240	7.960	9.020	1.300	10.150	101.760
% Max Generation	%	69	95	100	100	77	68	52	49	55	60	9	68	
Ave kwh/af		465	443	441	439	442	440	460	464	457	444	433	439	

Pole Hill Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Olympus Tunnel flow	kaf	15.5	20.9	27.3	27.2	33.8	32.7	25.4	17.0	17.5	20.3	3.3	23.1	264.0
Max generation	gwh	25.260	23.620	25.260	24.460	25.260	24.460	25.260	25.260	24.460	25.260	0.000	5.750	254.310
Generation	gwh	11.620	15.560	20.340	20.270	25.190	24.380	18.910	12.820	13.240	15.070	0.000	5.750	183.150
% Max Generation	%	46	66	81	83	100	100	75	51	54	60		100	
Ave kwh/af		750	744	745	745	745	746	744	754	757	742		676	

Flatiron 1&2 Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow to Flatiron	kaf	15.4	20.8	27.2	27.1	33.7	32.6	25.3	16.8	17.3	20.1	3.3	22.9	262.5
Max generation	gwh	29.040	27.180	29.040	28.130	29.040	28.130	29.040	29.040	28.130	29.040	0.000	7.000	292.810
Generation	gwh	13.720	18.620	23.720	23.660	28.960	28.040	22.580	15.000	15.470	17.990	0.000	7.000	214.760
% Max Generation	%	47	69	82	84	100	100	78	52	55	62		100	
Ave kwh/af		891	895	872	873	859	860	892	893	894	895		824	

Flatiron 3 Pump/Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	5.6	8.2	20.4	17.9	17.4	15.9	17.1	19.8	16.4	23.7	0.0	11.6	174.0
Pump from Flatiron	kaf	2.2	7.1	20.5	18.0	17.4	16.0	2.6	0.0	2.3	10.1	0.0	11.1	107.3
Pump energy	gwh	0.631	2.066	6.396	6.138	6.316	6.080	0.954	0.000	0.656	2.767	0.000	3.086	35.090
% max pumping	%	39	87	100	101	100	101	15		14	43		96	
Average kwh/af		287	291	312	341	363	380	367		285	274		278	
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
Maximum generation	gwh	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
Actual generation	gwh	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	%													
Average kwh/af														

Big Thompson Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total release	kaf	0.0	0.0	0.0	4.4	20.5	23.9	22.1	14.1	13.7	8.8	0.3	0.0	107.8
Turbine release	kaf	0.0	0.0	0.0	4.4	20.5	23.9	22.1	14.1	13.7	8.8	0.0	0.0	107.5
Wasteway release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Max generation	gwh	0.000	0.000	0.000	3.800	3.940	3.800	3.940	3.940	3.800	3.940	0.000	0.000	27.160
Generation	gwh	0.000	0.000	0.000	0.480	3.200	3.800	3.520	2.020	2.000	1.060	0.000	0.000	16.080
% Max Generation	%				13	81	100	89	51	53	27			
Ave kwh/af					109	156	159	159	143	146	120			

PROJECT GENERATION AND PUMPING SUMMARY

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Big Thompson	gwh	0.000	0.000	0.000	0.480	3.200	3.800	3.520	2.020	2.000	1.060	0.000	0.000	16.080
Green Mtn	gwh	2.859	2.575	2.676	1.651	1.097	2.596	7.075	7.911	6.575	8.090	2.131	1.814	47.050
Flatiron 3	gwh	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
Total	gwh	2.859	2.575	2.676	2.131	4.297	6.396	10.595	9.931	8.575	9.150	2.131	1.814	63.130
Load Following Generation:														
Marys Lake	gwh	2.700	3.690	4.860	4.620	4.620	3.980	2.960	2.720	3.080	2.980	0.000	2.980	39.190
Lake Estes	gwh	7.200	9.260	10.450	10.060	11.540	9.860	7.720	7.240	7.960	9.020	1.300	10.150	101.760
Pole Hill	gwh	11.620	15.560	20.340	20.270	25.190	24.380	18.910	12.820	13.240	15.070	0.000	5.750	183.150
Flatiron 1,2	gwh	13.720	18.620	23.720	23.660	28.960	28.040	22.580	15.000	15.470	17.990	0.000	7.000	214.760
Total	gwh	35.240	47.130	59.370	58.610	70.310	66.260	52.170	37.780	39.750	45.060	1.300	25.880	538.860
Total generation	gwh	38.099	49.705	62.046	60.741	74.607	72.656	62.765	47.711	48.325	54.210	3.431	27.694	601.990
Total max generation	gwh	89.410	83.560	80.110	90.290	97.820	94.680	97.820	97.820	94.680	94.740	23.450	49.250	993.630

Project Pump Energy 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Granby	gwh	2.002	2.857	3.752	2.470	0.000	0.000	1.264	1.659	2.345	2.837	0.566	3.466	23.218
Willow Creek	gwh	0.000	0.000	0.000	1.342	3.770	1.896	0.085	0.213	0.575	0.000	0.000	0.000	7.881
Flatiron 3	gwh	0.631	2.066	6.396	6.138	6.316	6.080	0.954	0.000	0.656	2.767	0.000	3.086	35.090
Total pump energy	gwh	2.633	4.923	10.148	9.950	10.086	7.976	2.303	1.872	3.576	5.604	0.566	6.552	66.189
Total net generation	gwh	35.466	44.782	51.898	50.791	64.521	64.680	60.462	45.839	44.749	48.606	2.865	21.142	535.801

Release Flexibility 2012			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel	Min	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	
Adams Tunnel	Max	kaf	15.5	20.9	27.3	26.1	26.1	22.4	16.8	15.6	17.4	20.3	3.0	23.1	
Marys Lake	Min	gwh	2.700	3.690	4.860	4.620	4.620	3.980	2.960	2.720	3.080	2.980	0.000	2.980	
Marys Lake	Max	gwh	2.700	3.690	4.860	4.620	4.620	3.980	2.960	2.720	3.080	2.980	0.000	2.980	
Lake Estes	Min	gwh	7.200	9.260	10.450	10.060	11.540	9.860	7.720	7.240	7.960	9.020	1.300	10.150	
Lake Estes	Max	gwh	7.200	9.260	10.450	10.060	11.540	9.860	7.720	7.240	7.960	9.020	1.300	10.150	
Olympus Tunnel	Min	kaf	15.5	20.9	27.3	27.2	33.8	32.7	25.4	17.0	17.5	20.3	3.3	23.1	
Olympus Tunnel	Max	kaf	15.5	20.9	27.3	27.2	33.8	32.7	25.4	17.0	17.5	20.3	3.3	23.1	
Pole Hill	Min	gwh	11.700	15.630	20.410	20.340	25.260	24.460	18.980	13.000	13.400	15.210	0.000	5.750	
Pole Hill	Max	gwh	11.700	15.630	20.410	20.340	25.260	24.460	18.980	13.000	13.400	15.210	0.000	5.750	
Flatiron 1&2	Min	gwh	13.720	18.620	23.720	23.660	28.960	28.040	22.580	15.000	15.470	17.990	0.000	7.000	
Flatiron 1&2	Max	gwh	13.720	18.620	23.720	23.660	28.960	28.040	22.580	15.000	15.470	17.990	0.000	7.000	
Load following	Min	gwh	35.320	47.200	59.440	58.680	70.380	66.340	52.240	37.960	39.910	45.200	1.300	25.880	
Load following	Max	gwh	35.320	47.200	59.440	58.680	70.380	66.340	52.240	37.960	39.910	45.200	1.300	25.880	
Total project	Min	gwh	38.179	49.775	62.116	60.811	74.677	72.736	62.835	47.891	48.485	54.350	3.431	27.694	
Total project	Max	gwh	38.179	49.775	62.116	60.811	74.677	72.736	62.835	47.891	48.485	54.350	3.431	27.694	

GENERATION CAPACITY AND DURATION

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Green Mtn	mw	3.8	3.7	3.6	2.3	1.5	3.6	9.5	10.6	9.1	10.9	3.0	2.4	
Flatiron 3	mw													
Big Thompson	mw				0.7	4.3	5.3	4.7	2.7	2.8	1.4			
Total base load	mw	3.8	3.7	3.6	3.0	5.8	8.9	14.2	13.3	11.9	12.3	3.0	2.4	

Load Following Generation:													
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	11.0	8.1	3.4	4.2	4.2	6.8	10.9	11.0	10.6	8.5	17.0	6.4
Max Capacity	mw	7.4	8.1	8.1	8.1	8.1	8.1	8.0	7.5	8.1	8.1	2.7	8.1
Duration	hr/d	12.1	14.9	19.6	18.8	18.8	16.2	12.1	12.0	12.4	14.5	7.0	16.6
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	17.0	12.0
Max Capacity	mw	18.8	26.4	34.0	32.5	32.5	28.6	20.6	18.9	21.3	24.9	7.0	29.5
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	7.0	12.0
Pole Hill													
Min Capacity	mw	0.0	0.0	0.0	0.0	34.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	8.7	4.0	4.1	12.0	12.0	5.4	11.5	11.2	9.1	16.7	7.0
Max Capacity	mw	32.5	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	11.0	34.0
Duration	hr/d	12.0	15.3	20.0	19.9	12.0	12.0	18.6	12.5	12.9	14.9	7.3	17.0
Flatiron 1&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	12.0	8.7	9.5	12.0	11.4	11.4	12.0	16.7	12.0
Max Capacity	mw	38.6	50.4	67.6	67.3	86.0	85.2	62.6	42.6	43.3	48.3	13.0	55.8
Duration	hr/d	12.0	12.0	12.0	12.0	10.0	10.0	12.0	12.6	12.6	12.0	7.3	12.0
Total Load Following													
Min Capacity	mw	0.0	0.0	0.0	0.0	34.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Capacity	mw	97.3	118.9	143.7	141.9	160.6	155.9	125.2	103.0	106.7	115.3	33.7	127.4
Total Project Capacity													
Min Capacity	mw	3.8	3.7	3.6	3.0	39.8	42.9	14.2	13.3	11.9	12.3	3.0	2.4
Max Capacity	mw	101.1	122.6	147.3	144.9	166.4	164.8	139.4	116.3	118.6	127.6	36.7	129.8

CBTAOP V1.10 Run: 09-Jan-2012 08:42
Minimum Reasonable Plan (90% Quota)

COLORADO-BIG THOMPSON MONTHLY OPERATIONS

HYDROLOGY OPERATIONS

Green Mtn Reservoir — Initial Cont 93.8 kaf, Elev 7916.90 ft; Maximum Cont 153.6 kaf, Elev 7949.91 ft; Minimum Cont 6.0 kaf, Elev 7795.72 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dillon Inflow	kaf	4.0	3.6	4.3	7.6	25.7	31.2	12.8	10.0	5.7	6.1	4.9	4.4	120.3
Dillon-Grn Mtn Gain	kaf	3.8	3.2	4.1	8.2	19.3	22.7	11.5	9.9	5.9	6.4	4.8	4.2	104.0
Undepleted Inflow	kaf	7.8	6.8	8.4	15.8	45.0	53.9	24.3	19.9	11.6	12.5	9.7	8.6	224.3
Depletion	kaf	0.0	0.0	0.0	4.5	22.6	28.0	9.7	2.8	0.9	0.4	0.0	0.0	68.9
Depleted Inflow	kaf	7.8	6.8	8.4	11.3	22.4	25.9	14.6	17.1	10.7	12.1	9.7	8.6	155.4
Turbine Release	kaf	15.7	14.7	11.2	9.9	4.1	4.3	27.7	24.6	24.4	24.6	12.0	10.3	183.5
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	15.7	14.7	11.2	9.9	4.1	4.3	27.7	24.6	24.4	24.6	12.0	10.3	183.5
Min Release	cfs	159	153	172	167	67	73	450	400	410	400	201	168	
Total River Release	cfs	255	256	182	166	67	72	450	400	410	400	202	168	
Evaporation	kaf	0.0	0.0	0.2	0.3	0.5	0.7	0.7	0.5	0.4	0.3	0.1	0.0	3.7
End-Month Targets	kaf		78.0	75.0	85.0	110.0	145.0	152.0	145.0				97.0	
End-Month Content	kaf	85.9	78.0	75.0	76.1	93.9	114.8	101.0	93.0	78.9	66.1	63.7	62.0	
End-Month Elevation	ft	7911.44	7905.59	7903.27	7904.13	7916.96	7929.87	7921.59	7916.36	7906.28	7895.94	7893.83	7892.30	

Willow Crk Reservoir — Initial Cont 8.1 kaf, Elev 8120.90 ft; Maximum Cont 10.2 kaf, Elev 8128.83 ft; Minimum Cont 2.0 kaf, Elev 8081.92 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native Inflow	kaf	0.8	0.7	1.0	3.6	9.9	5.3	2.2	1.1	0.7	1.1	0.9	0.8	28.1
Min Release	kaf	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	0.4	0.4	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	1.5	2.6	2.2	0.5	0.4	0.4	0.4	0.4	10.0
Pumped to Granby	kaf	0.0	0.0	0.0	5.3	6.5	2.6	0.0	0.4	2.0	0.0	0.0	0.0	16.8
Evaporation	kaf	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.6
End-Month Targets	kaf			7.2	7.2	9.0	9.0	9.0	9.0	7.2	7.2	7.2		
End-Month Content	kaf	8.5	8.8	9.4	7.2	9.0	9.0	8.9	9.0	7.2	7.9	8.4	8.8	
End-Month Elevation	ft	8122.55	8123.73	8126.00	8116.90	8124.50	8124.50	8124.12	8124.50	8116.90	8120.05	8122.14	8123.73	

Lake Granby — Initial Cont 461.9 kaf, Elev 8268.92 ft; Maximum Cont 536.1 kaf, Elev 8279.50 ft; Minimum Cont 76.5 kaf, Elev 8186.91 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	1.8	1.6	2.1	5.0	13.7	15.8	5.9	2.5	1.6	2.1	1.3	1.4	54.8
Rels frm Shadow Mtn	kaf	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	2.2	2.7	2.8	24.3
Pump frm Windy Gap	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pump frm Willow Crk	kaf	0.0	0.0	0.0	5.3	6.5	2.6	0.0	0.4	2.0	0.0	0.0	0.0	16.8
Total Inflow	kaf	3.0	2.7	3.3	11.5	21.4	21.4	9.0	5.4	5.7	4.3	4.0	4.2	95.9
Min River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Pumped to Shadow Mtn	kaf	13.9	19.7	25.8	20.4	15.2	8.6	25.4	29.2	21.9	19.3	3.9	23.5	226.8
Evaporation	kaf	0.0	0.0	0.9	1.5	2.3	2.8	2.5	1.9	1.7	1.3	0.6	0.2	15.7
Seepage loss	kaf	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.2	3.9
End-Month Content	kaf	449.5	431.1	406.1	394.2	393.2	398.1	373.9	345.3	325.9	308.1	306.1	285.2	
End-Month Elevation	ft	8267.07	8264.28	8260.38	8258.48	8258.32	8259.11	8255.18	8250.37	8247.01	8243.84	8243.47	8239.62	

Shadow Mtn — Initial Cont 17.7 kaf, Elev 8366.62 ft; Maximum Cont 18.4 kaf, Elev 8367.00 ft; Minimum Cont 16.6 kaf, Elev 8366.02 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	2.8	2.3	3.1	7.5	20.5	23.7	8.9	3.7	2.5	3.2	2.0	2.1	82.3
Pumped from Granby	kaf	13.9	19.7	25.8	20.4	15.2	8.6	25.4	29.2	21.9	19.3	3.9	23.5	226.8
Total Inflow	kaf	16.7	22.0	28.9	27.9	35.7	32.3	34.3	32.9	24.4	22.5	5.9	25.6	309.1
Min River Release	kaf	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	2.2	2.7	2.8	24.3
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	2.2	2.7	2.8	24.3
Adams Tunnel Flow	kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	280.1
Evaporation	kaf	0.0	0.0	0.3	0.4	0.7	0.8	0.7	0.6	0.5	0.4	0.2	0.1	4.7
End-Month Content	kaf	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	20.3	13.1	33.8	365.9
Actual delivery	kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	280.1
% max delivery	%	46	66	81	80	100	87	90	88	67	98	23	67	

Big T @ Lake Estes	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big Thompson inflow	kaf	1.0	0.7	1.0	1.9	10.9	19.6	12.5	5.8	2.8	2.6	1.8	1.2	61.8
Min river release	kaf	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	3.1	1.5	1.5	45.3
Act river release	kaf	1.0	0.7	1.0	1.9	10.8	15.3	9.0	5.8	2.8	2.6	1.5	1.2	53.6
Skim water available	kaf	0.0	0.0	0.0	0.0	4.0	12.2	4.8	0.0	0.0	0.0	0.3	0.0	21.3
Skim water diverted	kaf	0.0	0.0	0.0	0.0	0.1	4.3	3.5	0.0	0.0	0.0	0.3	0.0	8.2
% skim diverted	%					3	35	73				100		
Irrigation demand	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.7
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.7
Total river release	kaf	1.0	0.7	1.0	1.9	10.9	15.4	9.2	6.0	2.9	2.6	1.5	1.2	54.3

Olympus Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	33.8	10.8	33.8	377.1
Actual delivery	kaf	15.5	20.9	27.4	26.3	33.8	32.7	33.8	29.6	21.7	19.9	3.3	22.7	287.6
% max delivery	%	46	66	81	80	100	100	100	88	66	59	31	67	
Seepage and Evap	kaf	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.2	1.5
Inflow to Flatiron	kaf	15.4	20.8	27.3	26.2	33.7	32.6	33.7	29.4	21.5	19.7	3.3	22.5	286.1

Carter Lake		Initial Cont Elev	58.3 kaf 5706.83 ft			Maximum Cont Elev	112.2 kaf 5758.98 ft			Minimum Cont Elev	11.2 kaf 5639.99 ft		
	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pump from Flatiron	kaf	2.2	7.1	20.5	17.9	17.0	16.1	9.2	4.4	5.2	10.4	0.0	11.1	121.1
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	0.0	0.0	0.1	0.2	0.4	0.5	0.4	0.3	0.3	0.2	0.1	0.0	2.5
Seepage loss	kaf	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.7
End-Month Targets	kaf	58.5	63.7	81.9	92.7	101.0	107.1	90.0	65.4	49.0	50.0	50.0	70.0	
End-Month Content	kaf	58.5	63.7	81.9	92.5	99.1	103.3	90.0	65.4	49.0	50.0	47.9	57.0	
End-Month Elevation	ft	5707.05	5712.65	5731.08	5741.18	5747.28	5751.08	5738.84	5714.44	5696.30	5697.46	5695.01	5705.40	
Irrigation demand	kaf	0.0	0.0	0.0	4.2	5.0	5.3	15.5	22.5	16.1	6.2	0.0	0.0	74.8
Metered delivery	kaf	1.5	1.4	1.6	2.2	3.1	3.9	4.7	4.5	3.7	2.4	1.5	1.5	32.0
Windy Gap demand	kaf	0.4	0.4	0.4	0.5	1.7	2.0	1.7	1.6	1.4	0.5	0.4	0.4	11.4
Total demand	kaf	1.9	1.8	2.0	6.9	9.8	11.2	21.9	28.6	21.2	9.1	1.9	1.9	118.2
Total delivery	kaf	1.9	1.8	2.0	6.9	9.8	11.2	21.9	28.6	21.2	9.1	1.9	1.9	118.2
% 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	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Minimum flow	kaf	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	0.7	1.5	1.5	26.2
Maximum flow	kaf	57.2	53.5	57.2	27.7	57.2	55.3	57.2	57.2	55.3	57.2	27.7	57.2	619.9
Actual flow	kaf	13.2	13.7	6.8	8.3	16.7	16.5	24.5	25.0	16.3	9.3	3.3	11.4	165.0

Dille Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big T @ Canyon Mouth	kaf	1.4	1.3	1.8	2.9	14.0	23.0	15.1	7.2	3.9	4.0	2.3	1.5	78.4
Less Estes Skim	kaf	0.0	0.0	0.0	0.0	0.1	4.3	3.5	0.0	0.0	0.0	0.3	0.0	8.2
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.7
Handy Ditch release	kaf	0.0	0.0	0.0	1.2	1.2	1.2	1.8	2.9	1.7	1.2	0.0	0.0	11.2
Water available	kaf	1.4	1.3	1.8	1.7	12.8	17.6	10.0	4.5	2.3	2.8	2.0	1.5	59.7
Water diverted	kaf	0.0	0.0	0.0	1.7	12.8	17.6	10.0	4.5	2.3	2.8	0.0	0.0	51.7
% diverted	%				100	100	100	100	100	100	100			

Trifurcation Works	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rels from Flatiron	kaf	13.2	13.7	6.8	8.3	16.7	16.5	24.5	25.0	16.3	9.3	3.3	11.4	165.0
Rels to 550 Canal	kaf	13.2	13.7	6.8	8.1	14.3	10.9	17.7	16.9	5.5	3.3	3.0	11.4	124.8
Big T irrigation	kaf	0.0	0.0	0.0	0.2	2.3	1.3	3.3	8.1	10.8	6.0	0.0	0.0	32.0
Dille Tunnel	kaf	0.0	0.0	0.0	1.7	12.8	17.6	10.0	4.5	2.3	2.8	0.0	0.0	51.7
Tot rels to river	kaf	0.0	0.0	0.0	1.9	15.2	23.2	16.8	12.6	13.1	8.8	0.3	0.0	91.9
Irrigation demand	kaf	0.0	0.0	0.0	0.2	2.3	1.3	3.1	7.9	10.6	6.0	0.0	0.0	31.4
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.7
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.6
Total requirement	kaf	0.0	0.0	0.0	0.2	2.4	1.4	3.5	8.3	10.9	6.0	0.0	0.0	32.7
Total delivery	kaf	0.0	0.0	0.0	0.2	2.4	1.4	3.5	8.3	10.9	6.0	0.0	0.0	32.7
% required delivery	%	0	0	0	100	100	100	100	100	100	100	0	0	
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	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow from Flatiron	kaf	13.2	13.7	6.8	8.1	14.3	10.9	17.7	16.9	5.5	3.3	3.0	11.4	124.8
Maximum flow	kaf	32.0	29.9	32.0	30.9	32.0	30.9	32.0	32.0	15.5	32.0	30.9	32.0	362.1
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	2.2
Irrigation demand	kaf	0.4	0.4	0.5	0.6	0.9	0.8	1.7	1.7	1.5	0.9	0.2	0.2	9.8
Irrigation delivery	kaf	0.4	0.4	0.5	0.6	0.9	0.8	1.7	1.7	1.5	0.9	0.2	0.2	9.8
Minimum flow	kaf	6.1	5.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	6.1	31.5
Rels to Horsetooth	kaf	12.6	13.1	6.1	7.3	13.2	9.9	15.8	15.0	3.8	2.2	2.8	11.0	112.8

Horsetooth Reservoir		Initial Cont Elev 5408.84 ft 116.8 kaf				Maximum Cont Elev 5429.98 ft 156.7 kaf				Minimum Cont Elev 5297.06 ft 5.0 kaf				
	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow	kaf	12.6	13.1	6.1	7.3	13.2	9.9	15.8	15.0	3.8	2.2	2.8	11.0	112.8
Total irr delivery	kaf	1.7	1.6	1.7	2.3	9.7	8.6	34.6	41.2	15.9	10.8	1.4	1.4	130.9
Evaporation loss	kaf	0.0	0.0	0.3	0.5	0.7	0.9	0.7	0.5	0.4	0.3	0.1	0.0	4.4
Seepage loss	kaf	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	1.7
End-Month Targets	kaf	127.5	138.9	142.9	147.2	150.0	150.0	130.3	103.5	90.9	81.9	83.1	92.6	
End-Month Content	kaf	127.5	138.9	142.9	147.2	149.8	150.0	130.3	103.5	90.9	81.9	83.1	92.6	
End-Month Elevation	ft	5414.85	5420.96	5423.04	5425.25	5426.56	5426.66	5416.38	5400.97	5393.03	5387.02	5387.84	5394.14	
Irrigation demand	kaf	0.0	0.0	0.0	0.2	6.3	4.9	27.9	35.1	11.5	9.8	0.0	0.0	95.7
Metered delivery	kaf	1.3	1.2	1.3	1.7	3.0	3.3	5.5	4.9	3.2	0.6	1.0	1.0	28.0
Windy Gap demand	kaf	0.4	0.4	0.4	0.4	0.4	0.4	1.2	1.2	1.2	0.4	0.4	0.4	7.2
Total demand	kaf	1.7	1.6	1.7	2.3	9.7	8.6	34.6	41.2	15.9	10.8	1.4	1.4	130.9
Total irr delivery	kaf	1.7	1.6	1.7	2.3	9.7	8.6	34.6	41.2	15.9	10.8	1.4	1.4	130.9
% required delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total CBT Delivery	kaf	3.2	3.0	3.4	9.1	20.7	19.6	58.6	76.8	46.7	25.9	2.7	2.7	272.4

Windy Gap Ownership	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	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	kaf	0.8	0.8	0.8	0.9	2.1	2.4	3.1	3.0	2.8	0.9	0.8	0.8	19.2
Spill	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	-0.8	-1.6	-2.4	-3.3	-5.4	-7.8	-10.9	-13.9	-16.7	-17.6	-18.4	-19.2	

PUMPING AND GENERATION OPERATIONS

Green Mtn Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Generation	gwh	18.600	17.400	9.300	18.000	18.600	18.000	18.600	18.600	18.000	18.600	8.869	18.067	200.636
Generation	gwh	2.824	2.560	1.906	1.678	0.723	0.811	5.283	4.531	4.320	4.116	1.942	1.651	32.345
% Max Generation	%	15	15	20	9	4	5	28	24	24	22	22	9	
Ave kwh/af		180	174	170	169	176	189	191	184	177	167	162	160	

Willow Crk Pumping	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	0.0	0.0	0.0	26.8	27.7	26.8	27.7	27.7	26.8	0.0	0.0	0.0	163.5
Actual pumping	kaf	0.0	0.0	0.0	5.3	6.5	2.6	0.0	0.4	2.0	0.0	0.0	0.0	16.8
Pump energy	gwh	0.000	0.000	0.000	1.129	1.385	0.554	0.000	0.085	0.426	0.000	0.000	0.000	3.579
% max pumping	%				20	23	10		1	7				
Average kwh/af					213	213	213		213	213				

Lake Granby Pumping	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	36.9	35.7	36.9	435.6
Actual pumping	kaf	13.9	19.7	25.8	20.4	15.2	8.6	25.4	29.2	21.9	19.3	3.9	23.5	226.8
Pump energy	gwh	2.002	2.857	3.767	2.999	2.250	1.264	3.759	4.380	3.329	2.992	0.608	3.690	33.897
% max pumping	%	38	57	70	57	41	24	69	79	61	52	11	64	
Average kwh/af		144	145	146	147	148	147	148	150	152	155	156	157	

Marys Lake Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	
Max generation	gwh	6.060	5.620	6.060	5.840	6.060	5.840	6.060	6.060	5.840	2.980	0.000	2.980	59.400
Generation	gwh	2.700	3.690	4.880	4.660	6.060	5.100	5.400	5.280	3.860	2.980	0.000	2.980	47.590
% Max Generation	%	45	66	81	80	100	87	89	87	66	100		100	
Ave kwh/af		174	177	178	177	179	179	177	177	177	176		176	

Lake Estes Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	
Max generation	gwh	10.450	9.740	10.450	10.060	14.920	14.450	14.920	14.920	14.450	14.920	14.450	14.920	158.650
Generation	gwh	7.200	9.260	10.450	10.060	14.920	12.550	13.450	13.120	9.620	8.860	1.300	9.980	120.770
% Max Generation	%	69	95	100	100	100	87	90	88	67	59	9	67	
Ave kwh/af		465	443	441	439	441	440	441	440	441	445	433	440	

Pole Hill Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Olympus Tunnel flow	kaf	15.5	20.9	27.4	26.3	33.8	32.7	33.8	29.6	21.7	19.9	3.3	22.7	287.6
Max generation	gwh	25.260	23.620	25.260	24.460	25.260	24.460	25.260	25.260	24.460	25.260	0.000	5.750	254.310
Generation	gwh	11.620	15.560	20.410	19.560	25.190	24.380	25.190	21.980	16.100	14.850	0.000	5.750	200.590
% Max Generation	%	46	66	81	80	100	100	100	87	66	59		100	
Ave kwh/af		750	744	745	744	745	746	745	743	742	746		676	

Flatiron 1&2 Gen	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow to Flatiron	kaf	15.4	20.8	27.3	26.2	33.7	32.6	33.7	29.4	21.5	19.7	3.3	22.5	286.1
Max generation	gwh	29.040	27.180	29.040	28.130	29.040	28.130	29.040	29.040	28.130	29.040	0.000	7.000	292.810
Generation	gwh	13.720	18.620	23.780	23.120	28.960	28.040	28.960	25.320	19.250	17.630	0.000	7.000	234.400
% Max Generation	%	47	69	82	82	100	100	100	87	68	61		100	
Ave kwh/af		891	895	871	882	859	860	859	861	895	895		824	

Flatiron 3 Pump/Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	5.6	8.2	20.4	17.9	17.5	16.3	17.4	19.8	16.4	23.6	0.0	11.6	174.7
Pump from Flatiron	kaf	2.2	7.1	20.5	17.9	17.0	16.1	9.2	4.4	5.2	10.4	0.0	11.1	121.1
Pump energy	gwh	0.631	2.066	6.396	6.104	6.120	6.005	3.330	1.417	1.482	2.850	0.000	3.086	39.487
% max pumping	%	39	87	100	100	97	99	53	22	32	44		96	
Average kwh/af		287	291	312	341	360	373	362	322	285	274		278	
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
Maximum generation	gwh	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
Actual generation	gwh	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	%													
Average kwh/af														

Big Thompson Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total release	kaf	0.0	0.0	0.0	1.9	15.2	23.2	16.8	12.6	13.1	8.8	0.3	0.0	91.9
Turbine release	kaf	0.0	0.0	0.0	1.9	15.2	23.2	16.8	12.6	13.1	8.8	0.0	0.0	91.6
Wasteway release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Max generation	gwh	0.000	0.000	0.000	3.800	3.940	3.800	3.940	3.940	3.800	3.940	0.000	0.000	27.160
Generation	gwh	0.000	0.000	0.000	0.163	2.240	3.740	2.560	1.820	1.920	1.060	0.000	0.000	13.503
% Max Generation	%				4	57	98	65	46	51	27			
Ave kwh/af					86	147	161	152	144	147	120			

PROJECT GENERATION AND PUMPING SUMMARY

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Big Thompson	gwh	0.000	0.000	0.000	0.163	2.240	3.740	2.560	1.820	1.920	1.060	0.000	0.000	13.503
Green Mtn	gwh	2.824	2.560	1.906	1.678	0.723	0.811	5.283	4.531	4.320	4.116	1.942	1.651	32.345
Flatiron 3	gwh	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
Total	gwh	2.824	2.560	1.906	1.841	2.963	4.551	7.843	6.351	6.240	5.176	1.942	1.651	45.848
Load Following Generation:														
Marys Lake	gwh	2.700	3.690	4.880	4.660	6.060	5.100	5.400	5.280	3.860	2.980	0.000	2.980	47.590
Lake Estes	gwh	7.200	9.260	10.450	10.060	14.920	12.550	13.450	13.120	9.620	8.860	1.300	9.980	120.770
Pole Hill	gwh	11.620	15.560	20.410	19.560	25.190	24.380	25.190	21.980	16.100	14.850	0.000	5.750	200.590
Flatiron 1,2	gwh	13.720	18.620	23.780	23.120	28.960	28.040	28.960	25.320	19.250	17.630	0.000	7.000	234.400
Total	gwh	35.240	47.130	59.520	57.400	75.130	70.070	73.000	65.700	48.830	44.320	1.300	25.710	603.350
Total generation	gwh	38.064	49.690	61.426	59.241	78.093	74.621	80.843	72.051	55.070	49.496	3.242	27.361	649.198
Total max generation	gwh	89.410	83.560	80.110	90.290	97.820	94.680	97.820	97.820	94.680	94.740	23.319	48.717	992.966

Project Pump Energy 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Granby	gwh	2.002	2.857	3.767	2.999	2.250	1.264	3.759	4.380	3.329	2.992	0.608	3.690	33.897
Willow Creek	gwh	0.000	0.000	0.000	1.129	1.385	0.554	0.000	0.085	0.426	0.000	0.000	0.000	3.579
Flatiron 3	gwh	0.631	2.066	6.396	6.104	6.120	6.005	3.330	1.417	1.482	2.850	0.000	3.086	39.487
Total pump energy	gwh	2.633	4.923	10.163	10.232	9.755	7.823	7.089	5.882	5.237	5.842	0.608	6.776	76.963
Total net generation	gwh	35.431	44.767	51.263	49.009	68.338	66.798	73.754	66.169	49.833	43.654	2.634	20.585	572.235

Release Flexibility 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel	Min kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	
Adams Tunnel	Max kaf	15.5	20.9	27.4	26.3	33.8	28.5	30.5	29.8	21.8	19.9	3.0	22.7	
Marys Lake	Min gwh	2.700	3.690	4.880	4.660	6.060	5.100	5.400	5.280	3.860	2.980	0.000	2.980	
Marys Lake	Max gwh	2.700	3.690	4.880	4.660	6.060	5.100	5.400	5.280	3.860	2.980	0.000	2.980	
Lake Estes	Min gwh	7.200	9.260	10.450	10.060	14.920	12.550	13.450	13.120	9.620	8.860	1.300	9.980	
Lake Estes	Max gwh	7.200	9.260	10.450	10.060	14.920	12.550	13.450	13.120	9.620	8.860	1.300	9.980	
Olympus Tunnel	Min kaf	15.5	20.9	27.4	26.3	33.8	32.7	33.8	29.6	21.7	19.9	3.3	22.7	
Olympus Tunnel	Max kaf	15.5	20.9	27.4	26.3	33.8	32.7	33.8	29.6	21.7	19.9	3.3	22.7	
Pole Hill	Min gwh	11.700	15.630	20.480	19.640	25.260	24.460	25.260	22.120	16.260	14.950	0.000	5.750	
Pole Hill	Max gwh	11.700	15.630	20.480	19.640	25.260	24.460	25.260	22.120	16.260	14.950	0.000	5.750	
Flatiron 1&2	Min gwh	13.720	18.620	23.780	23.120	28.960	28.040	28.960	25.320	19.250	17.630	0.000	7.000	
Flatiron 1&2	Max gwh	13.720	18.620	23.780	23.120	28.960	28.040	28.960	25.320	19.250	17.630	0.000	7.000	
Load following	Min gwh	35.320	47.200	59.590	57.480	75.200	70.150	73.070	65.840	48.990	44.420	1.300	25.710	
Load following	Max gwh	35.320	47.200	59.590	57.480	75.200	70.150	73.070	65.840	48.990	44.420	1.300	25.710	
Total project	Min gwh	38.144	49.760	61.496	59.321	78.163	74.701	80.913	72.191	55.230	49.596	3.242	27.361	
Total project	Max gwh	38.144	49.760	61.496	59.321	78.163	74.701	80.913	72.191	55.230	49.596	3.242	27.361	

GENERATION CAPACITY AND DURATION

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Green Mtn	mw	3.8	3.7	2.6	2.3	1.0	1.1	7.1	6.1	6.0	5.5	2.7	2.2	
Flatiron 3	mw													

Big Thompson	mw				0.2	3.0	5.2	3.4	2.4	2.7	1.4		
Total base load	mw	3.8	3.7	2.6	2.5	4.0	6.3	10.5	8.5	8.7	6.9	2.7	2.2

TABLE 5B
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Load Following Generation:													
Marys Lake													
Min Capacity	mw	0.0	0.0	0.0	0.0	8.1	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	11.0	8.1	3.3	4.1	12.0	2.5	1.6	1.7	7.2	8.8	17.0	6.7
Max Capacity	mw	7.4	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	2.7	8.1
Duration	hr/d	12.1	14.9	19.7	18.9	12.0	20.5	22.0	21.5	15.8	14.2	7.0	16.4
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	11.0	12.0	12.4	12.0	12.0	12.0	17.0	12.0
Max Capacity	mw	18.8	26.4	34.1	32.8	45.0	35.6	40.1	37.7	27.7	24.1	7.0	29.0
Duration	hr/d	12.0	12.0	12.0	12.0	10.0	12.0	11.7	12.0	12.0	12.0	7.0	12.0
Pole Hill													
Min Capacity	mw	0.0	0.0	0.0	0.0	34.0	34.0	34.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	8.7	3.9	4.7	12.0	12.0	12.0	2.4	8.1	9.4	16.7	7.3
Max Capacity	mw	32.5	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	11.0	34.0
Duration	hr/d	12.0	15.3	20.1	19.3	12.0	12.0	12.0	21.7	15.9	14.6	7.3	16.7
Flatiron 1&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	12.0	8.7	9.5	8.7	11.8	12.0	12.0	16.7	12.0
Max Capacity	mw	38.6	50.4	67.9	64.6	86.0	85.2	86.0	75.6	52.5	47.4	13.0	55.0
Duration	hr/d	12.0	12.0	12.0	12.0	10.0	10.0	10.0	11.9	12.0	12.0	7.3	12.0
Total Load Following													
Min Capacity	mw	0.0	0.0	0.0	0.0	42.1	34.0	35.4	0.0	0.0	0.0	0.0	0.0
Max Capacity	mw	97.3	118.9	144.1	139.5	173.1	162.9	168.2	155.4	122.3	113.6	33.7	126.1
Total Project Capacity													
Min Capacity	mw	3.8	3.7	2.6	2.5	46.1	40.3	45.9	8.5	8.7	6.9	2.7	2.2
Max Capacity	mw	101.1	122.6	146.7	142.0	177.1	169.2	178.7	163.9	131.0	120.5	36.4	128.3

CBTAOP V1.10 Run: 09-Jan-2012 08:42
Maximum Reasonable Plan (50% Quota)

COLORADO-BIG THOMPSON MONTHLY OPERATIONS

HYDROLOGY OPERATIONS

Green Mtn Reservoir — Initial Cont 93.8 kaf, Elev 7916.90 ft; Maximum Cont 153.6 kaf, Elev 7949.91 ft; Minimum Cont 6.0 kaf, Elev 7795.72 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Dillon Inflow	kaf	4.0	3.6	4.3	11.0	46.6	90.3	48.5	28.9	10.3	6.1	4.9	4.4	262.9
Dillon-Grn Mtn Gain	kaf	3.8	3.2	4.1	10.4	32.0	58.2	33.0	21.2	10.0	6.4	4.8	4.2	191.3
Undepleted Inflow	kaf	7.8	6.8	8.4	21.4	78.6	148.5	81.5	50.1	20.3	12.5	9.7	8.6	454.2
Depletion	kaf	0.0	0.0	0.0	5.2	25.5	36.9	12.7	2.8	0.9	0.4	0.0	0.0	84.4
Depleted Inflow	kaf	7.8	6.8	8.4	16.2	53.1	111.6	68.8	47.3	19.4	12.1	9.7	8.6	369.8
Turbine Release	kaf	15.9	14.8	15.9	9.9	18.6	75.8	61.0	53.6	32.7	43.0	12.0	10.3	363.5
Spill/Waste	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	15.9	14.8	15.9	9.9	18.6	75.8	61.0	53.6	32.7	43.0	12.0	10.3	363.5
Min Release	cfs	159	153	172	167	100	73	550	620	550	700	201	168	
Total River Release	cfs	259	257	259	166	303	1274	992	872	550	699	202	168	
Evaporation	kaf	0.0	0.0	0.2	0.3	0.5	0.8	0.8	0.7	0.6	0.4	0.2	0.0	4.5
End-Month Targets	kaf			70.0	85.0	110.0	145.0	152.0	145.0				97.0	
End-Month Content	kaf	85.7	77.7	70.0	76.0	110.0	145.0	152.0	145.0	131.1	99.8	97.3	95.6	
End-Month Elevation	ft	7911.29	7905.36	7899.24	7904.05	7927.08	7945.78	7949.15	7945.78	7938.76	7920.82	7919.21	7918.09	

Willow Crk Reservoir — Initial Cont 8.1 kaf, Elev 8120.90 ft; Maximum Cont 10.2 kaf, Elev 8128.83 ft; Minimum Cont 2.0 kaf, Elev 8081.92 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native Inflow	kaf	0.8	0.7	1.0	5.1	27.9	25.5	6.4	3.0	1.5	1.1	0.9	0.8	74.7
Min Release	kaf	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	0.4	0.4	0.4	10.0
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	23.3	22.8	4.1	2.4	1.0	0.6	0.5	0.4	55.1
Total River Release	kaf	0.4	0.4	0.4	0.4	24.8	25.4	6.3	2.9	1.4	1.0	0.9	0.8	65.1
Pumped to Granby	kaf	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Evaporation	kaf	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.7
End-Month Targets	kaf			7.2	7.2	9.0	9.0	9.0	9.0	7.2	7.2	7.2		
End-Month Content	kaf	8.5	8.8	9.4	7.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	
End-Month Elevation	ft	8122.55	8123.73	8126.00	8116.90	8128.83	8128.83	8128.83	8128.83	8128.83	8128.83	8128.83	8128.83	

Lake Granby — Initial Cont 461.9 kaf, Elev 8268.92 ft; Maximum Cont 536.1 kaf, Elev 8279.50 ft; Minimum Cont 76.5 kaf, Elev 8186.91 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	1.8	1.6	2.1	4.4	28.8	46.4	16.4	8.6	3.4	2.1	1.3	1.4	118.3
Rels frm Shadow Mtn	kaf	1.2	1.1	1.2	1.2	15.1	46.2	3.1	2.5	2.1	2.2	2.7	2.8	81.4
Pump frm Windy Gap	kaf	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Pump frm Willow Crk	kaf	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Total Inflow	kaf	3.0	2.7	3.3	12.4	53.9	92.6	19.5	11.1	5.5	4.3	4.0	4.2	216.5
Min River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	4.9	2.5	1.2	1.2	1.2	1.2	26.2
Pumped to Shadow Mtn	kaf	13.0	18.8	24.9	19.4	0.0	0.0	12.8	1.3	4.4	8.2	2.6	7.5	112.9
Evaporation	kaf	0.0	0.0	0.9	1.5	2.3	3.1	2.9	2.3	2.1	1.6	0.7	0.2	17.6
Seepage loss	kaf	0.3	0.3	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	4.8
End-Month Content	kaf	450.4	432.9	408.8	398.8	445.4	529.8	528.2	532.7	530.0	522.9	522.0	516.9	
End-Month Elevation	ft	8267.21	8264.56	8260.81	8259.22	8266.45	8278.62	8278.40	8279.02	8278.65	8277.66	8277.53	8276.82	

Shadow Mtn — Initial Cont 17.7 kaf, Elev 8366.62 ft; Maximum Cont 18.4 kaf, Elev 8367.00 ft; Minimum Cont 16.6 kaf, Elev 8366.02 ft

2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Native inflow	kaf	2.8	2.3	3.1	6.5	43.3	69.6	24.5	12.8	5.1	3.2	2.0	2.1	177.3
Pumped from Granby	kaf	13.0	18.8	24.9	19.4	0.0	0.0	12.8	1.3	4.4	8.2	2.6	7.5	112.9
Total Inflow	kaf	15.8	21.1	28.0	25.9	43.3	69.6	37.3	14.1	9.5	11.4	4.6	9.6	290.2
Min River Release	kaf	1.2	1.1	1.2	1.2	1.2	3.0	3.1	2.5	2.1	2.2	2.7	2.8	24.3
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	13.9	43.2	0.0	0.0	0.0	0.0	0.0	0.0	57.1
Total River Release	kaf	1.2	1.1	1.2	1.2	15.1	46.2	3.1	2.5	2.1	2.2	2.7	2.8	81.4
Adams Tunnel Flow	kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	204.1
Evaporation	kaf	0.0	0.0	0.3	0.4	0.7	0.8	0.7	0.6	0.5	0.4	0.2	0.1	4.7
End-Month Content	kaf	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	
End-Month Elevation	ft	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	8366.62	

Adams Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	20.3	13.1	33.8	365.9
Actual delivery	kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	204.1
% max delivery	%	43	63	78	74	81	69	99	33	21	43	13	20	

Big T @ Lake Estes	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big Thompson inflow	kaf	1.0	0.7	1.0	3.3	15.1	32.2	16.4	8.4	3.8	2.6	1.8	1.2	87.5
Min river release	kaf	1.5	1.4	1.5	2.2	6.9	7.4	7.7	6.9	3.7	3.1	1.5	1.5	45.3
Act river release	kaf	1.0	0.7	1.0	2.2	8.8	22.1	16.0	6.9	3.7	2.6	1.5	1.2	67.7
Skim water available	kaf	0.0	0.0	0.0	1.1	8.2	24.8	8.7	1.5	0.1	0.0	0.3	0.0	44.7
Skim water diverted	kaf	0.0	0.0	0.0	1.1	6.3	10.1	0.4	1.5	0.1	0.0	0.3	0.0	19.8
% skim diverted	%				100	77	41	5	100	100		100		
Irrigation demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2
Total river release	kaf	1.0	0.7	1.0	2.2	8.8	22.1	16.1	7.0	3.7	2.6	1.5	1.2	67.9

Olympus Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	31.6	33.8	32.7	33.8	32.7	33.8	33.8	32.7	33.8	10.8	33.8	377.1
Actual delivery	kaf	14.6	20.0	26.5	25.4	33.8	32.7	33.8	12.4	7.0	8.8	2.0	6.7	223.7
% max delivery	%	43	63	78	78	100	100	100	37	21	26	19	20	
Seepage and Evap	kaf	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.2	1.5
Inflow to Flatiron	kaf	14.5	19.9	26.4	25.3	33.7	32.6	33.7	12.2	6.8	8.6	2.0	6.5	222.2

Carter Lake		Initial Cont Elev	58.3 kaf 5706.83 ft			Maximum Cont Elev	112.2 kaf 5758.98 ft			Minimum Cont Elev	11.2 kaf 5639.99 ft		
	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Pump from Flatiron	kaf	1.9	6.8	20.2	17.0	16.8	15.7	12.6	0.0	0.0	0.0	0.0	0.0	91.0
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	0.0	0.0	0.1	0.2	0.4	0.5	0.5	0.4	0.3	0.2	0.1	0.0	2.7
Seepage loss	kaf	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	1.9
End-Month Targets	kaf	58.5	63.7	81.9	92.7	110.0	110.0	110.0	65.4	49.0	50.0	50.0	70.0	
End-Month Content	kaf	58.5	63.7	81.9	92.7	101.9	109.5	110.0	95.3	83.8	74.3	72.2	70.2	
End-Month Elevation	ft	5707.05	5712.65	5731.08	5741.37	5749.82	5756.60	5757.04	5743.79	5732.92	5723.58	5721.46	5719.42	
Irrigation demand	kaf	0.0	0.0	0.0	3.8	3.2	2.9	6.4	9.4	7.2	6.2	0.0	0.0	39.1
Metered delivery	kaf	1.2	1.1	1.3	1.5	2.1	2.5	3.3	3.0	2.4	2.4	1.5	1.5	23.8
Windy Gap demand	kaf	0.4	0.4	0.4	0.5	1.7	2.0	1.7	1.8	1.4	0.5	0.4	0.4	11.6
Total demand	kaf	1.6	1.5	1.7	5.8	7.0	7.4	11.4	14.2	11.0	9.1	1.9	1.9	74.5
Total delivery	kaf	1.6	1.5	1.7	5.8	7.0	7.4	11.4	14.2	11.0	9.1	1.9	1.9	74.5
% 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	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Minimum flow	kaf	4.6	4.3	4.6	1.5	1.5	1.5	1.5	1.5	1.5	0.7	1.5	1.5	26.2
Maximum flow	kaf	57.2	53.5	57.2	27.7	57.2	55.3	57.2	57.2	55.3	57.2	27.7	57.2	619.9
Actual flow	kaf	12.6	13.1	6.2	8.3	16.9	16.9	21.1	12.2	6.8	8.6	2.0	6.5	131.2

Dille Tunnel	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Big T @ Canyon Mouth	kaf	1.4	1.3	1.8	5.6	21.6	35.2	21.8	10.9	5.1	4.0	2.3	1.5	112.5
Less Estes Skim	kaf	0.0	0.0	0.0	1.1	6.3	10.1	0.4	1.5	0.1	0.0	0.3	0.0	19.8
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2
Handy Ditch release	kaf	0.0	0.0	0.0	1.2	1.2	1.2	1.8	2.9	1.7	1.2	0.0	0.0	11.2
Water available	kaf	1.4	1.3	1.8	3.3	14.1	23.9	19.7	6.6	3.3	2.8	2.0	1.5	81.7
Water diverted	kaf	0.0	0.0	0.0	3.3	14.1	13.2	19.7	6.6	3.3	2.8	0.0	0.0	63.0
% diverted	%				100	100	55	100	100	100	100			

Trifurcation Works	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rels from Flatiron	kaf	12.6	13.1	6.2	8.3	16.9	16.9	21.1	12.2	6.8	8.6	2.0	6.5	131.2
Rels to 550 Canal	kaf	12.6	13.1	6.2	7.1	9.5	6.2	19.3	7.2	2.4	2.6	1.7	6.5	94.4
Big T irrigation	kaf	0.0	0.0	0.0	0.1	1.1	0.6	1.4	3.5	4.3	6.0	0.0	0.0	17.0
Dille Tunnel	kaf	0.0	0.0	0.0	3.3	14.1	13.2	19.7	6.6	3.3	2.8	0.0	0.0	63.0
Tot rels to river	kaf	0.0	0.0	0.0	4.5	21.5	23.9	21.5	11.6	7.7	8.8	0.3	0.0	99.8
Irrigation demand	kaf	0.0	0.0	0.0	0.1	1.1	0.6	1.1	3.2	4.0	6.0	0.0	0.0	16.1
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.9
Total requirement	kaf	0.0	0.0	0.0	0.1	1.1	0.6	1.5	3.6	4.3	6.0	0.0	0.0	17.2
Total delivery	kaf	0.0	0.0	0.0	0.1	1.1	0.6	1.5	3.6	4.3	6.0	0.0	0.0	17.2
% required delivery	%	0	0	0	100	100	100	100	100	100	100	0	0	
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	2012	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow from Flatiron	kaf	12.6	13.1	6.2	7.1	9.5	6.2	19.3	7.2	2.4	2.6	1.7	6.5	94.4
Maximum flow	kaf	32.0	29.9	32.0	30.9	32.0	30.9	32.0	32.0	15.5	32.0	30.9	32.0	362.1
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	2.2
Irrigation demand	kaf	0.2	0.2	0.2	0.3	0.5	0.4	0.8	0.8	0.7	0.9	0.2	0.2	5.4
Irrigation delivery	kaf	0.2	0.2	0.2	0.3	0.5	0.4	0.8	0.8	0.7	0.9	0.2	0.2	5.4
Minimum flow	kaf	6.1	5.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	6.1	31.5
Rels to Horsetooth	kaf	12.2	12.7	5.8	6.6	8.8	5.6	18.3	6.2	1.5	1.5	1.5	6.1	86.8

Horsetooth Reservoir		Initial Cont Elev	116.8 kaf 5408.84 ft			Maximum Cont Elev	156.7 kaf 5429.98 ft			Minimum Cont Elev	5.0 kaf 5297.06 ft		
2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow	kaf	12.2	12.7	5.8	6.6	8.8	5.6	18.3	6.2	1.5	1.5	1.5	6.1	86.8
Total irr delivery	kaf	1.3	1.2	1.4	1.6	5.1	4.5	17.3	20.5	8.4	10.8	1.4	1.6	75.1
Evaporation loss	kaf	0.0	0.0	0.3	0.5	0.7	0.9	0.8	0.6	0.5	0.4	0.2	0.1	5.0
Seepage loss	kaf	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	2.1
End-Month Targets	kaf	127.5	138.9	142.9	147.2	150.0	150.0	150.0	135.0	125.0	81.9	83.1	92.6	
End-Month Content	kaf	127.5	138.9	142.9	147.2	150.0	150.0	150.0	135.0	127.4	117.5	117.2	121.4	
End-Month Elevation	ft	5414.85	5420.96	5423.04	5425.25	5426.66	5426.66	5426.66	5418.90	5414.79	5409.24	5409.07	5411.46	
Irrigation demand	kaf	0.0	0.0	0.0	0.0	2.9	2.1	13.0	16.4	5.3	9.8	0.0	0.0	49.5
Metered delivery	kaf	0.9	0.8	1.0	1.2	1.8	2.0	3.2	3.0	2.0	0.6	1.0	1.2	18.7
Windy Gap demand	kaf	0.4	0.4	0.4	0.4	0.4	0.4	1.1	1.1	1.1	0.4	0.4	0.4	6.9
Total demand	kaf	1.3	1.2	1.4	1.6	5.1	4.5	17.3	20.5	8.4	10.8	1.4	1.6	75.1
Total irr delivery	kaf	1.3	1.2	1.4	1.6	5.1	4.5	17.3	20.5	8.4	10.8	1.4	1.6	75.1
% required delivery	%	100	100	100	100	100	100	100	100	100	100	100	100	
Shortage	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total CBT Delivery	kaf	2.3	2.1	2.5	6.9	11.6	10.5	27.9	35.9	21.6	25.9	2.7	2.9	152.8

Windy Gap Ownership 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Accrual	kaf	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
Total release	kaf	0.8	0.8	0.8	0.9	2.1	2.4	3.1	3.2	2.8	0.9	0.8	0.8	19.4
Spill	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
End-month Ownership	kaf	-0.8	-1.6	-2.4	-3.3	3.6	1.2	-1.9	-5.1	-7.9	-8.8	-9.6	-10.4	

PUMPING AND GENERATION OPERATIONS

Green Mtn Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Generation	gwh	18.600	17.400	9.300	18.000	18.600	18.000	18.600	18.600	18.000	18.600	9.000	18.600	201.300
Generation	gwh	2.859	2.575	2.676	1.660	3.381	15.217	12.800	11.247	6.717	8.373	2.222	1.894	71.621
% Max Generation	%	15	15	29	9	18	85	69	60	37	45	25	10	
Ave kwh/af		180	174	168	168	182	201	210	210	205	195	185	184	

Willow Crk Pumping 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	0.0	0.0	0.0	26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.8
Actual pumping	kaf	0.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Pump energy	gwh	0.000	0.000	0.000	1.448	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.448
% max pumping	%				25									
Average kwh/af					213									

Lake Granby Pumping 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	36.9	34.5	36.9	35.7	36.9	35.7	36.9	36.9	35.7	36.9	35.7	36.9	435.6
Actual pumping	kaf	13.0	18.8	24.9	19.4	0.0	0.0	12.8	1.3	4.4	8.2	2.6	7.5	112.9
Pump energy	gwh	1.872	2.726	3.635	2.852	0.000	0.000	1.792	0.182	0.616	1.148	0.367	1.058	16.248
% max pumping	%	35	54	67	54			35	4	12	22	7	20	
Average kwh/af		144	145	146	147			140	140	140	140	141	141	

Marys Lake Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	
Max generation	gwh	6.060	5.620	6.060	5.840	6.060	5.840	6.060	6.060	5.840	2.980	0.000	2.980	59.400
Generation	gwh	2.560	3.600	4.700	4.360	4.900	4.020	6.000	1.900	1.090	1.460	0.000	1.070	35.660
% Max Generation	%	42	64	78	75	81	69	99	31	19	49		36	
Ave kwh/af		175	180	177	179	178	178	179	173	158	166		160	

Lake Estes Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	
Max generation	gwh	10.450	9.740	10.450	10.060	14.920	14.450	14.920	14.920	14.450	14.920	14.450	14.920	158.650
Generation	gwh	6.800	8.900	10.450	10.060	12.100	9.940	14.800	4.900	2.860	3.800	0.000	2.780	87.390
% Max Generation	%	65	91	100	100	81	69	99	33	20	25		19	
Ave kwh/af		466	445	441	439	440	440	442	445	414	432		415	

Pole Hill Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Olympus Tunnel flow	kaf	14.6	20.0	26.5	25.4	33.8	32.7	33.8	12.4	7.0	8.8	2.0	6.7	223.7
Max generation	gwh	25.260	23.620	25.260	24.460	25.260	24.460	25.260	25.260	24.460	25.260	0.000	5.750	254.310
Generation	gwh	10.950	14.950	19.720	18.910	25.190	24.380	25.190	9.240	4.640	5.820	0.000	4.400	163.390
% Max Generation	%	43	63	78	77	100	100	100	37	19	23		77	
Ave kwh/af		750	748	744	744	745	746	745	745	663	661		657	

Flatiron 1&2 Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow to Flatiron	kaf	14.5	19.9	26.4	25.3	33.7	32.6	33.7	12.2	6.8	8.6	2.0	6.5	222.2
Max generation	gwh	29.040	27.180	29.040	28.130	29.040	28.130	29.040	29.040	28.130	29.040	0.000	7.000	292.810
Generation	gwh	12.950	17.810	23.240	22.580	28.960	28.040	28.960	10.880	5.580	7.080	0.000	5.250	191.330
% Max Generation	%	45	66	80	80	100	100	100	37	20	24		75	
Ave kwh/af		893	895	880	892	859	860	859	892	821	823		808	

Flatiron 3 Pump/Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	5.6	8.2	20.4	17.9	17.3	15.7	15.8	16.6	13.3	19.6	0.0	10.3	160.7
Pump from Flatiron	kaf	1.9	6.8	20.2	17.0	16.8	15.7	12.6	0.0	0.0	0.0	0.0	0.0	91.0
Pump energy	gwh	0.545	1.979	6.302	5.797	6.115	6.029	4.952	0.000	0.000	0.000	0.000	0.000	31.719
% max pumping	%	34	83	99	95	97	100	80						
Average kwh/af		287	291	312	341	364	384	393						
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
Maximum generation	gwh	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
Actual generation	gwh	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	%													
Average kwh/af														

Big Thompson Gen 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total release	kaf	0.0	0.0	0.0	4.5	21.5	23.9	21.5	11.6	7.7	8.8	0.3	0.0	99.8
Turbine release	kaf	0.0	0.0	0.0	4.5	21.5	23.9	21.5	11.6	7.7	8.8	0.0	0.0	99.5
Wasteway release	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Max generation	gwh	0.000	0.000	0.000	3.800	3.940	3.800	3.940	3.940	3.800	3.940	0.000	0.000	27.160
Generation	gwh	0.000	0.000	0.000	0.500	3.400	3.800	3.400	1.620	0.900	1.060	0.000	0.000	14.680
% Max Generation	%				13	86	100	86	41	24	27			
Ave kwh/af					111	158	159	158	140	117	120			

PROJECT GENERATION AND PUMPING SUMMARY

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Big Thompson	gwh	0.000	0.000	0.000	0.500	3.400	3.800	3.400	1.620	0.900	1.060	0.000	0.000	14.680
Green Mtn	gwh	2.859	2.575	2.676	1.660	3.381	15.217	12.800	11.247	6.717	8.373	2.222	1.894	71.621
Flatiron 3	gwh	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
Total	gwh	2.859	2.575	2.676	2.160	6.781	19.017	16.200	12.867	7.617	9.433	2.222	1.894	86.301
Load Following Generation:														
Marys Lake	gwh	2.560	3.600	4.700	4.360	4.900	4.020	6.000	1.900	1.090	1.460	0.000	1.070	35.660
Lake Estes	gwh	6.800	8.900	10.450	10.060	12.100	9.940	14.800	4.900	2.860	3.800	0.000	2.780	87.390
Pole Hill	gwh	10.950	14.950	19.720	18.910	25.190	24.380	25.190	9.240	4.640	5.820	0.000	4.400	163.390
Flatiron 1,2	gwh	12.950	17.810	23.240	22.580	28.960	28.040	28.960	10.880	5.580	7.080	0.000	5.250	191.330
Total	gwh	33.260	45.260	58.110	55.910	71.150	66.380	74.950	26.920	14.170	18.160	0.000	13.500	477.770
Total generation	gwh	36.119	47.835	60.786	58.070	77.931	85.397	91.150	39.787	21.787	27.593	2.222	15.394	564.071
Total max generation	gwh	89.410	83.560	80.110	90.290	97.820	94.680	97.820	97.820	94.680	94.740	23.450	49.250	993.630

Project Pump Energy 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Granby	gwh	1.872	2.726	3.635	2.852	0.000	0.000	1.792	0.182	0.616	1.148	0.367	1.058	16.248
Willow Creek	gwh	0.000	0.000	0.000	1.448	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.448
Flatiron 3	gwh	0.545	1.979	6.302	5.797	6.115	6.029	4.952	0.000	0.000	0.000	0.000	0.000	31.719
Total pump energy	gwh	2.417	4.705	9.937	10.097	6.115	6.029	6.744	0.182	0.616	1.148	0.367	1.058	49.415
Total net generation	gwh	33.702	43.130	50.849	47.973	71.816	79.368	84.406	39.605	21.171	26.445	1.855	14.336	514.656

Release Flexibility 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel	Min kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	
Adams Tunnel	Max kaf	14.6	20.0	26.5	24.3	27.5	22.6	33.5	11.0	6.9	8.8	1.7	6.7	
Marys Lake	Min gwh	2.560	3.600	4.700	4.360	4.900	4.020	6.000	1.900	1.090	1.460	0.000	1.070	
Marys Lake	Max gwh	2.560	3.600	4.700	4.360	4.900	4.020	6.000	1.900	1.090	1.460	0.000	1.070	
Lake Estes	Min gwh	6.800	8.900	10.450	10.060	12.100	9.940	14.800	4.900	2.860	3.800	0.000	2.780	
Lake Estes	Max gwh	6.800	8.900	10.450	10.060	12.100	9.940	14.800	4.900	2.860	3.800	0.000	2.780	
Olympus Tunnel	Min kaf	14.6	20.0	26.5	25.4	33.8	32.7	33.8	12.4	7.0	8.8	2.0	6.7	
Olympus Tunnel	Max kaf	14.6	20.0	26.5	25.4	33.8	32.7	33.8	12.4	7.0	8.8	2.0	6.7	
Pole Hill	Min gwh	11.020	15.000	19.800	18.980	25.260	24.460	25.260	9.380	4.800	5.960	0.000	4.560	
Pole Hill	Max gwh	11.020	15.000	19.800	18.980	25.260	24.460	25.260	9.380	4.800	5.960	0.000	4.560	
Flatiron 1&2	Min gwh	12.950	17.810	23.240	22.580	28.960	28.040	28.960	10.880	5.580	7.080	0.000	5.250	
Flatiron 1&2	Max gwh	12.950	17.810	23.240	22.580	28.960	28.040	28.960	10.880	5.580	7.080	0.000	5.250	
Load following	Min gwh	33.330	45.310	58.190	55.980	71.220	66.460	75.020	27.060	14.330	18.300	0.000	13.660	
Load following	Max gwh	33.330	45.310	58.190	55.980	71.220	66.460	75.020	27.060	14.330	18.300	0.000	13.660	
Total project	Min gwh	36.189	47.885	60.866	58.140	78.001	85.477	91.220	39.927	21.947	27.733	2.222	15.554	
Total project	Max gwh	36.189	47.885	60.866	58.140	78.001	85.477	91.220	39.927	21.947	27.733	2.222	15.554	

GENERATION CAPACITY AND DURATION

Project Generation 2012		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Green Mtn	mw	3.8	3.7	3.6	2.3	4.5	21.1	17.2	15.1	9.3	11.3	3.1	2.5	
Flatiron 3	mw													
Big Thompson	mw				0.7	4.6	5.3	4.6	2.2	1.3	1.4			
Total base load	mw	3.8	3.7	3.6	3.0	9.1	26.4	21.8	17.3	10.6	12.7	3.1	2.5	

Load Following Generation:													
Marys Lake													
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	10.9	8.7	4.0	5.6	3.2	6.7	12.0	11.0	10.2	9.4	12.0	10.6
Max Capacity	mw	6.9	8.1	8.1	8.1	8.1	8.1	8.1	5.0	2.7	3.5	0.0	2.7
Duration	hr/d	12.1	14.3	19.0	17.4	19.8	16.3	12.0	12.0	13.8	13.6	12.0	13.4
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	11.0	12.0	12.0	12.0	12.0	12.0
Max Capacity	mw	17.5	24.2	33.0	30.3	34.2	28.8	45.0	14.0	8.4	11.0	0.0	8.1
Duration	hr/d	12.0	12.0	12.0	12.0	12.0	12.0	10.0	12.0	12.0	12.0	12.0	12.0
Pole Hill													
Min Capacity	mw	0.0	0.0	0.0	0.0	34.0	34.0	34.0	0.0	0.0	0.0	0.0	0.0
Duration	hr/d	12.0	9.3	4.6	5.4	12.0	12.0	12.0	12.0	12.0	12.0	20.0	12.0
Max Capacity	mw	31.2	34.0	34.0	34.0	34.0	34.0	34.0	25.8	12.0	16.6	11.0	11.7
Duration	hr/d	12.0	14.7	19.5	18.6	12.0	12.0	12.0	12.0	12.0	12.0	4.0	12.0
Flatiron 1&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	12.0	8.7	9.5	8.7	12.0	12.0	12.0	20.0	12.0
Max Capacity	mw	36.0	47.8	65.2	62.6	86.0	85.2	86.0	30.4	15.4	20.8	13.0	14.5
Duration	hr/d	12.0	12.0	12.0	12.0	10.0	10.0	10.0	12.0	12.0	12.0	4.0	12.0
Total Load Following													
Min Capacity	mw	0.0	0.0	0.0	0.0	34.0	34.0	42.1	0.0	0.0	0.0	0.0	0.0
Max Capacity	mw	91.6	114.1	140.3	135.0	162.3	156.1	173.1	75.2	38.5	51.9	24.0	37.0
Total Project Capacity													
Min Capacity	mw	3.8	3.7	3.6	3.0	43.1	60.4	63.9	17.3	10.6	12.7	3.1	2.5
Max Capacity	mw	95.4	117.8	143.9	138.0	171.4	182.5	194.9	92.5	49.1	64.6	27.1	39.5

APPENDIX C - EXHIBITS

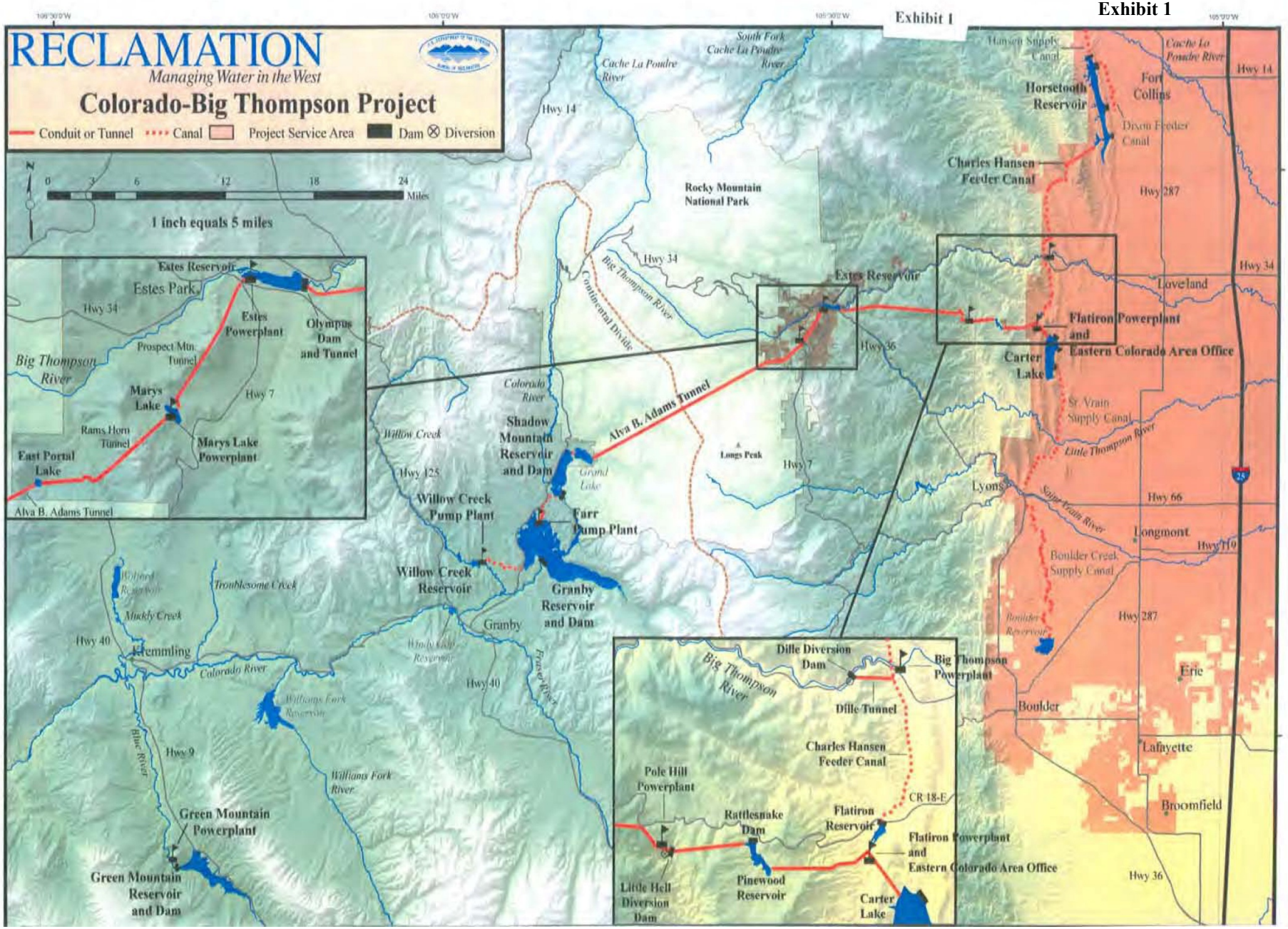
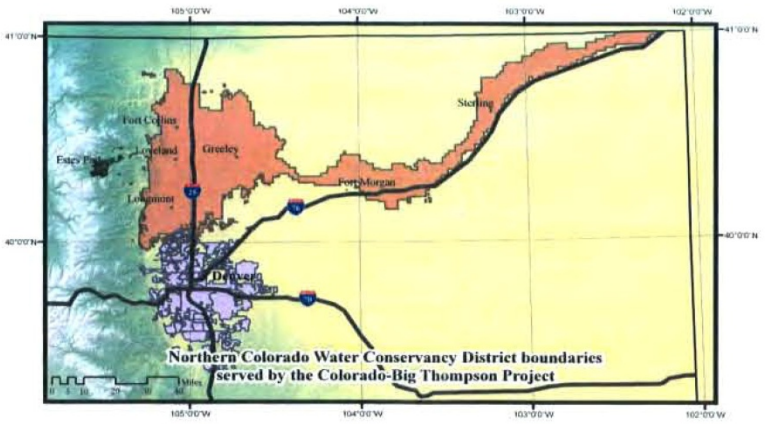


Exhibit 1
RECLAMATION
Managing Water in the West
Colorado-Big Thompson Project
Conduit or Tunnel
Canal
Project Service Area
Dam
Diversion
1 inch equals 5 miles
Miles
Estes Reservoir
Estes Park
Hwy 34
Estes Powerplant
Olympus Dam and Tunnel
Prospect Mtn. Tunnel
Big Thompson River
Marys Lake
Hwy 7
Rams Horn Tunnel
Marys Lake Powerplant
East Portal Lake
Alva B. Adams Tunnel
Rocky Mountain National Park
Hwy 14
Cache La Poudre River
South Fork Cache La Poudre River
Hansen Supply Canal
Horsetooth Reservoir
Fort Collins
Dixon Feeder Canal
Charles Hansen Feeder Canal
Hwy 287
Continental Divide
Colorado River
Willow Creek
Shadow Mountain Reservoir and Dam
Alva B. Adams Tunnel
Grand Lake
Longs Peak
Hwy 125
Willow Creek Pump Plant
Farr Pump Plant
Willow Creek Reservoir
Granby Reservoir and Dam
Granby
Windy Gap Reservoir
Troublesome Creek
Muddy Creek
Hwy 40
Kremmling
Colorado River
Williams Fork Reservoir
Williams Fork River
Blue River
Hwy 9
Green Mountain Powerplant
Green Mountain Reservoir and Dam
Estes Reservoir
Flatiron Powerplant and Eastern Colorado Area Office
Loveland
Carter Lake
Hwy 36
St. Vrain Supply Canal
Little Thompson River
Lyons
St. Vrain River
Hwy 66
Longmont
Hwy 119
Boulder Creek Supply Canal
Boulder Reservoir
Hwy 287
Erie
Boulder
Lafayette
Broomfield
Hwy 36
Dille Diversion Dam
Big Thompson Powerplant
Dille Tunnel
Charles Hansen Feeder Canal
Pole Hill Powerplant
CR 18-E
Rattlesnake Dam
Flatiron Reservoir
Flatiron Powerplant and Eastern Colorado Area Office
Little Hell Diversion Dam
Pinewood Reservoir
Carter Lake



Colorado-Big Thompson Facts

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

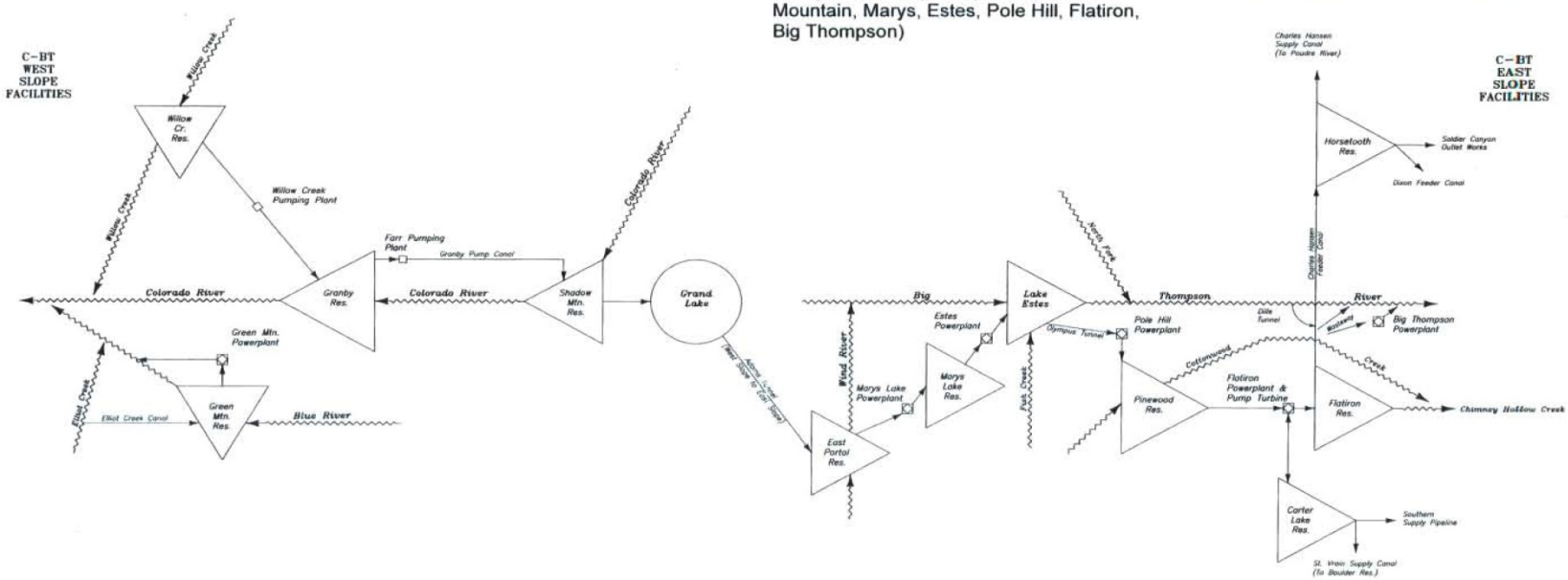


Exhibit 2

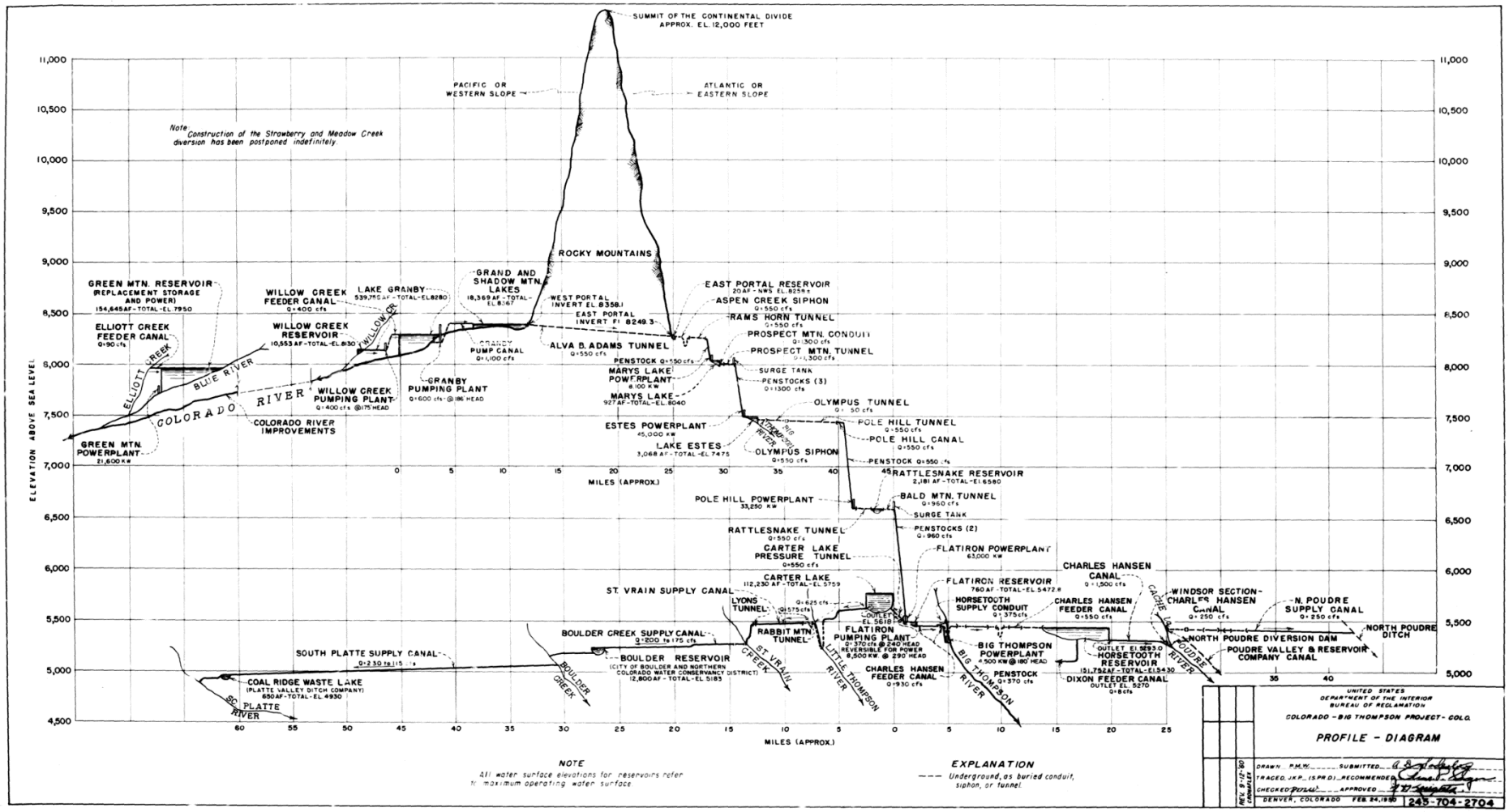
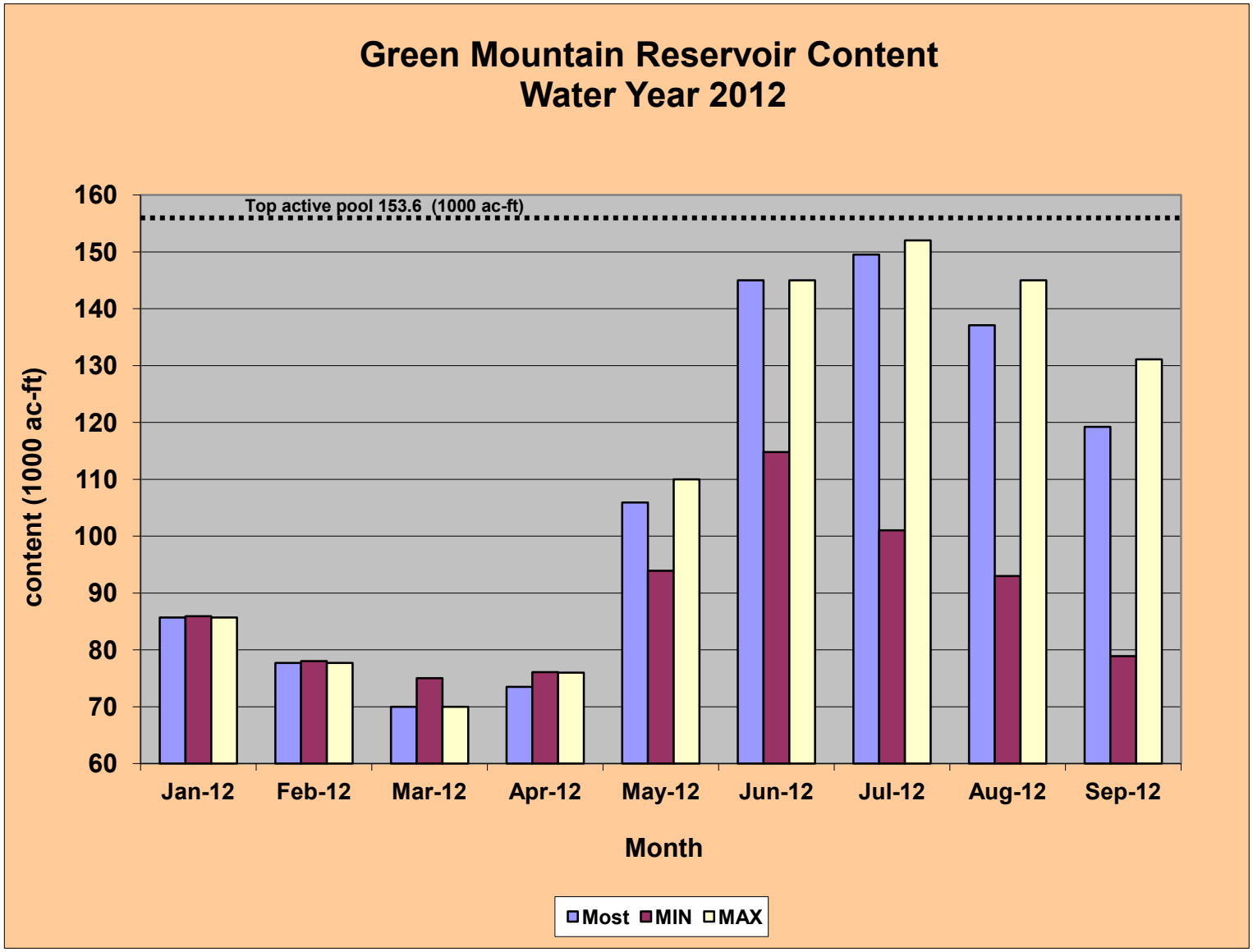
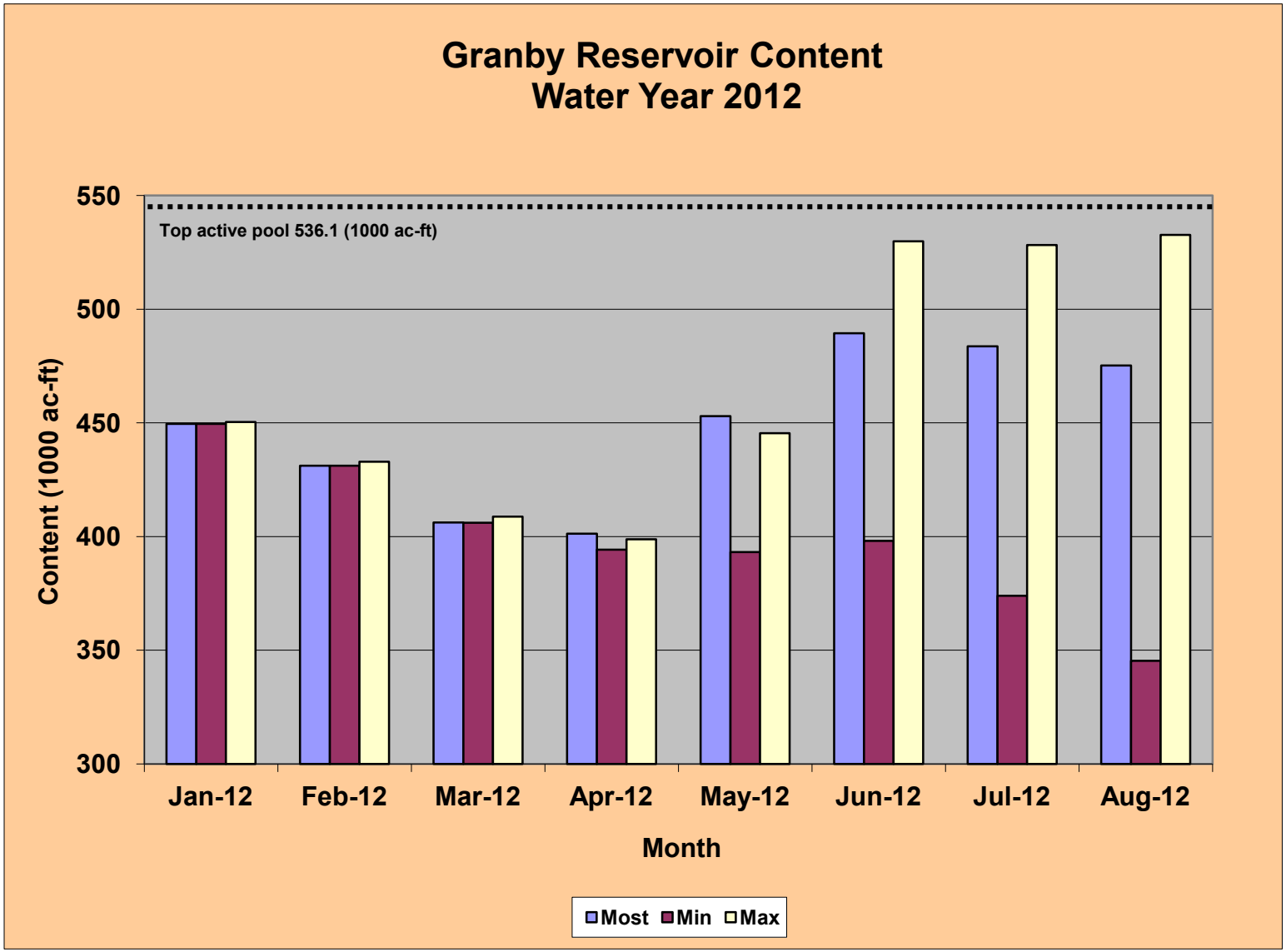

SUMMIT OF THE CONTINENTAL DIVIDE
APPROX. EL. 12,000 FEET
PACIFIC OR WESTERN SLOPE
ATLANTIC OR EASTERN SLOPE
Note: Construction of the Strawberry and Meadow Creek diversion has been postponed indefinitely.
ROCKY MOUNTAINS
GREEN MTN. RESERVOIR (REPLACEMENT STORAGE AND POWER) 154,645AF-TOTAL-EL. 7950
ELLIOTT CREEK FEEDER CANAL Q=90 cfs
WILLOW CREEK FEEDER CANAL Q=400 cfs
LAKE GRANBY 539,755AF-TOTAL-EL.8280
WILLOW CREEK RESERVOIR 10,553AF-TOTAL-EL.8130
GRANBY PUMP CANAL Q=1,100 cfs
GRAND AND SHADOW MTN. LAKES 18,369AF-TOTAL-EL.8367
WEST PORTAL INVERT EL. 8358.1
EAST PORTAL INVERT EL. 8249.3
ALVA B. ADAMS TUNNEL Q=550 cfs
EAST PORTAL RESERVOIR 20AF-NWS EL.8254
ASPEN CREEK SIPHON Q=550 cfs
RAMS HORN TUNNEL Q=550 cfs
PROSPECT MTN. CONDUIT Q=1300 cfs
PROSPECT MTN. TUNNEL Q=1,300 cfs
SURGE TANK
PENSTOCKS (3) Q=1300 cfs
PENSTOCK Q=550 cfs
MARYS LAKE POWERPLANT 8,100 KW
MARYS LAKE 927AF-TOTAL-EL.8040
GRANBY PUMPING PLANT Q=600 cfs @186' HEAD
WILLOW CREEK PUMPING PLANT Q=400 cfs @175' HEAD
COLORADO RIVER IMPROVEMENTS
ELLIOTT CREEK
BLUE RIVER
COLORADO RIVER
WILLOW CR.
GREEN MTN. POWERPLANT 21,600 KW
ESTES POWERPLANT 45,000 KW
LAKE ESTES 3,068AF-TOTAL-EL.7475
THOMPSON RIVER
OLYMPUS TUNNEL Q=50 cfs
POLE HILL TUNNEL Q=550 cfs
POLE HILL CANAL Q=550 cfs
OLYMPUS SIPHON Q=550 cfs
PENSTOCK Q=550 cfs
RATTLESNAKE RESERVOIR 2,181AF-TOTAL-EL.6580
POLE HILL POWERPLANT 33,250 KW
BALD MTN. TUNNEL Q=960 cfs
SURGE TANK
PENSTOCKS (2) Q=960 cfs
RATTLESNAKE TUNNEL Q=550 cfs
CARTER LAKE PRESSURE TUNNEL Q=550 cfs
FLATIRON POWERPLANT 63,000 KW
CARTER LAKE 112,230 AF-TOTAL-EL.5759
ST. VRAIN SUPPLY CANAL
LYONS TUNNEL Q=575 cfs
Q=625 cfs
OUTLET EL. 5618
FLATIRON PUMPING PLANT Q=370 cfs @ 240' HEAD REVERSIBLE FOR POWER 8,500 KW @ 290' HEAD
CHARLES HANSEN CANAL Q=1,500 cfs
FLATIRON RESERVOIR 760 AF-TOTAL-EL.5472.8
HORSETOOTH SUPPLY CONDUIT Q=375 cfs
CHARLES HANSEN FEEDER CANAL Q=550 cfs
WINDSOR SECTION-CHARLES HANSEN CANAL Q=250 cfs
N. POUDRE SUPPLY CANAL Q=250 cfs
NORTH POUDRE DITCH
CACHE LA POUDRE RIVER
NORTH POUDRE DIVERSION DAM
POUDRE VALLEY & RESERVOIR COMPANY CANAL
BOULDER CREEK SUPPLY CANAL 3-200 to 175 cfs
RABBIT MTN. TUNNEL
ST. VRAIN CREEK
LITTLE THOMPSON RIVER
BIG THOMPSON RIVER
BIG THOMPSON POWERPLANT 4,500 KW @ 180' HEAD
OUTLET EL. 5293.0
HORSETOOTH RESERVOIR 151,752AF-TOTAL-EL.5430
DIXON FEEDER CANAL OUTLET EL. 5270 Q=85 cfs
CHARLES HANSEN FEEDER CANAL Q=930 cfs
PENSTOCK Q=370 cfs
SOUTH PLATTE SUPPLY CANAL Q=230 to 115 cfs
BOULDER RESERVOIR (CITY OF BOULDER AND NORTHERN COLORADO WATER CONSERVANCY DISTRICT) 12,800AF-TOTAL-EL.5183
BOULDER CREEK
COAL RIDGE WASTE LAKE (PLATTE VALLEY DITCH COMPANY) 650AF-TOTAL-EL.4930
SO. PLATTE RIVER
ELEVATION ABOVE SEA LEVEL
MILES (APPROX.)
NOTE
All water surface elevations for reservoirs refer to maximum operating water surface
EXPLANATION
Underground, as buried conduit, siphon, or tunnel
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION
COLORADO - BIG THOMPSON PROJECT - COLO.
PROFILE - DIAGRAM
DRAWN P.M.W. SUBMITTED
TRACED J.K.P. (S.P.R.D.) RECOMMENDED
CHECKED APPROVED
DENVER, COLORADO FEB. 24, 1950
245-704-2704

Exhibit 3



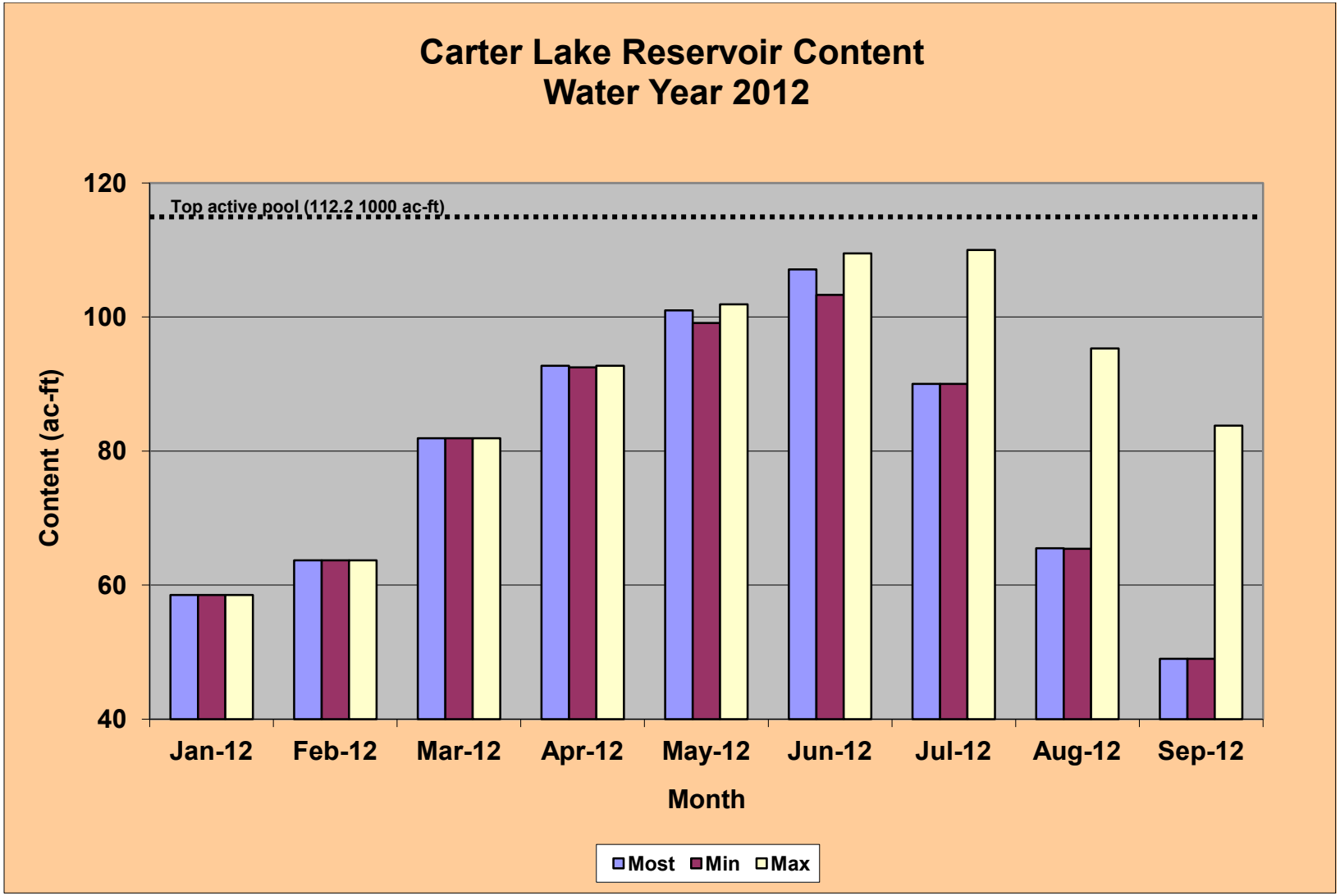
Active Pool between elevations 7,800.00 and 7,950.00 feet (between 6,860 and 153,639 acre-feet).

Exhibit 4



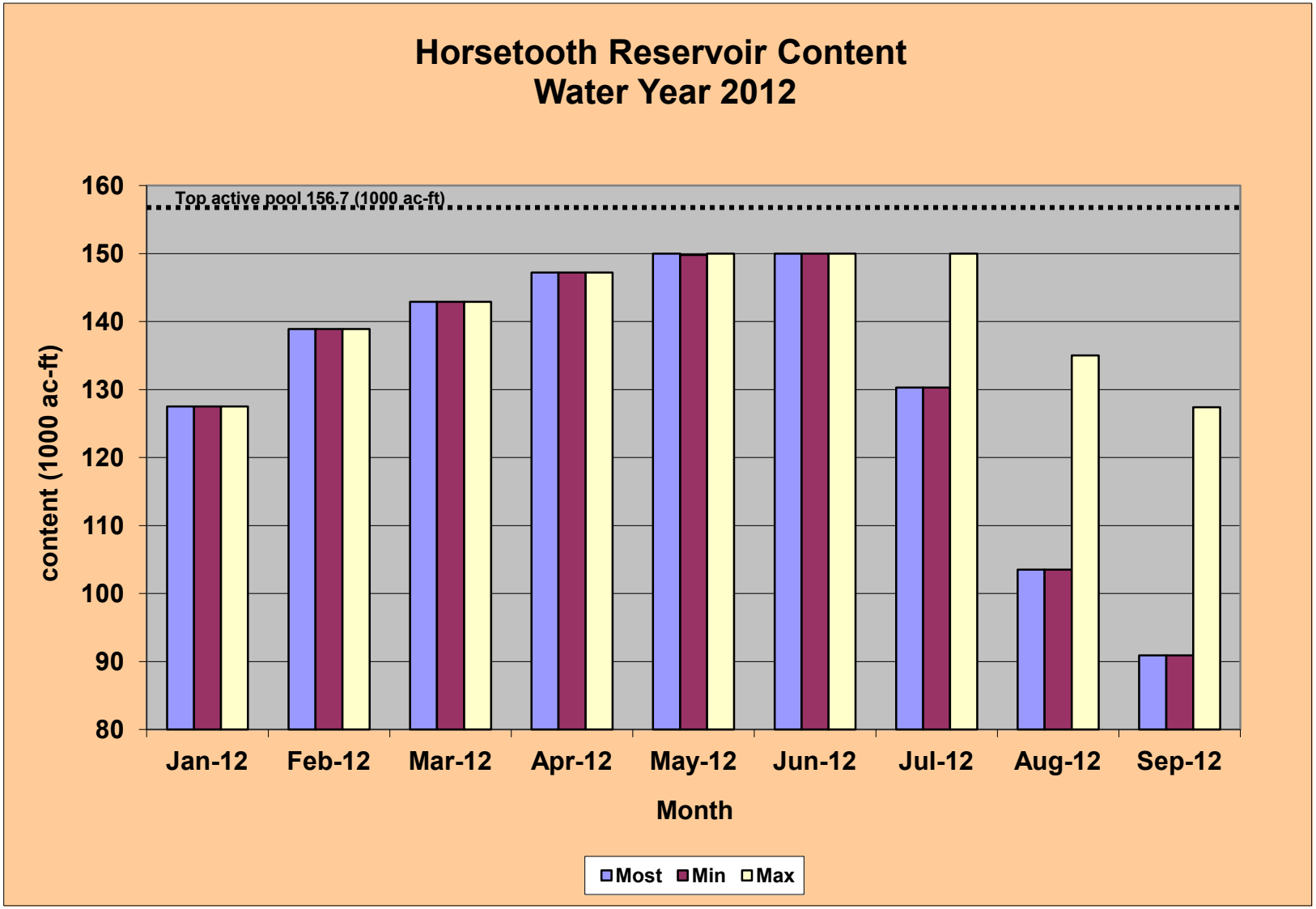
Active Pool between elevations 8,186.90 and 8,280.00 feet (between 74,190 and 539,758 acre-feet).

Exhibit 5



Active Pool between elevations 5,618.00 and 5,759.00 feet (3,306 and 112,230 acre-feet).

Exhibit 6



Active Pool between elevations 5,325.00 and 5,430.00 feet (between 17,600 and 156,735 acre-feet)

WESTERN DIVISION POWER SYSTEM
WATER YEAR 2011 – GENERATION AND PUMP ENERGY SUMMARY

Water Year 2011 (WY 2011) was a very productive year for power plants in the Colorado-Big Thompson (C-BT) And the Fryingpan-Arkansas (FryArk) projects. C-BT powerplants produced an accumulated gross generation total of 690.9 giga-watt hours (GWh) of electricity during WY 2011 representing 115 percent of its 30-year average. Meanwhile the gross generation produced by the entire Western Division Power System's (System) was 3,265.5 GWh or 123 percent of average. Gross generation includes one-half of the Yellowtail generation. Total generation is the gross generation less the energy used for pumping at Farr Plant, Willow Creek Pump, Flatiron Unit #3 and the two Mount Elbert units. The System's total generation was 2,363.6 GWh. The average for a water year is 3,802.1 GWh. The total System load includes firm energy deliveries, C-BT use-energy, support-energy, plant station service, and an estimate of transmission-system losses.

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

Inflow for all the C-BT reservoirs was the highest on record during WY 2011. The months of May through July were particularly high for most reservoirs. For the C-BT the snowpack recorded was the highest in project history, causing substantial spills at Granby and Green Mountain. By late June the C-BT reservoirs were holding nearly 100 percent of its total capacity. Diversions through the Adams Tunnel were high during the winter and spring in order to fill Carter and Horsetooth Reservoirs. But by the middle of June the diversions from the west slope diminished. The high runoff experienced in May, June, and July of 2011 kept the Pole hill and Flatiron Powerplants operating at full capacity and uninterrupted.

There was no pumping from the Willow Creek Canal during WY 2011. Pumping at the Farr Plant was below average while at Flatiron Powerplant was above average. The energy used at those two plants to pump C-BT water during WY 2011 totaled 68.5 GWh. That total represents 119 percent of the average. The total energy used from the System to pump water during water year 2011 (including Mount Elbert) totaled 536.6 GWh. The average energy used per water year is 245.2 GWh. Mount Elbert's total energy used to pump water was 467.6 GWh. The average energy used according to the 10-year average (years 1990-1999) is 182.1 GWh.

According to the numbers provided by WAPA's office in Loveland sales of electric power totaled 3,055,233 mega-watt hours (MWh) during WY 2011 for a total of $97,776,695. Energy deficits were covered by a combination of scheduled interchange energy, use of the Mount Elbert pumped storage plant, and power purchases. The power purchases totaled 599,173 MWh during WY 2011 for which WAPA paid a total of $22,352,168, significantly higher than the previous water year.

WESTERN DIVISION POWER SYSTEM
WATER YEAR 2012 – GENERATION AND PUMP ENERGY FORECAST

Under the most-probable runoff condition plan developed on October 2011, the gross generation for the C-BT powerplants is projected to be 679.2 GWh for the WY 2012, while pump energy requirements from the C-BT Power System are expected to reach 73.3 GWh. The total generation for the entire Western Division Power System (System) is expected to be 2,134.3 GWh, with a total load of 2,163.4 GWh, leaving a shortfall of 29.1 GWh. The System generation includes one-half of the total Yellowtail Powerplant generation and the Mount Elbert Powerplant generation resulting from Fryingpan-Arkansas Project water deliveries. The total load includes energy deliveries under firm contracts, seasonal support energy deliveries, energy dedicated for C-BT use, estimates of station service energy, and estimates of transmission system losses.

Under the reasonable-minimum runoff conditions plan from October 2011, the Gross generation for the C-BT powerplants is projected to be 638.6 GWh in WY 2012 while the total System generation is projected to be 1,832.2 GWh during WY 2012, 331.2 GWh less than the total generation projected under most probable runoff conditions. Under this plan, pump energy requirements for the C-BT would total 75.7 GWh. The total System load is expected to be 2163.4 GWh over the entire water year, leaving a total generation shortfall of 331.2 GWh. Under the reasonable-minimum runoff conditions total generation shortfalls are expected for almost every month of the water year, with the exception of May, June, August, and September.

If reasonable-maximum runoff conditions occur during WY 2012, the C-BT Powerplants should produce 656 GWh of power generation while the System generation should total 2546.7 GWh, 412.4 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 55.7 GWh. The total System load is expected to be 2,163.4 GWh over the entire water year, leaving a total generation surplus of 383.3 GWh.

Tables 4A through 4C summarize the projected monthly System generation, pump energy, and loads for the three forecasted runoff conditions for WY 2012. 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.

APPENDIX A - TABLES

TABLE 1

WESTERN DIVISION SYSTEM
GROSS GENERATION - WATER YEAR 2011
(Energy in GWh)

Powerplant	Accumulated Gross Generation 1/		
	WY 2011	Yearly Avg.2/	Percent of Avg.
Green Mountain	78.0	51.9	150
Marys Lake	41.7	37.3	112
Estes	110.5	100.3	110
Pole Hill	196.9	172.3	114
Flatiron 1 & 2	253.3	226.7	112
Big Thompson	10.5	10.9	96
Seminoe	191.7	132.5	145
Kortes	118.4	140.3	84
Fremont Canyon	291.6	239.6	122
Alcova	166.2	118.1	141
Glendo	162.6	80.3	202
Guernsey	25.2	19.4	130
Boysen	63.9	69.3	92
Heart Mountain	16.1	15.2 3/	106
Buffalo Bill	79.9	69.4 3/	115
Shoshone	18.4	20.4 3/	90
Spirit Mountain	13.8	14.0 3/	99
Mt. Elbert	381.4	169.0 4/	226
Yellowtail4/	1045.4	959.0 5/	109
Total	3265.5	2645.9	123

1/ October-September
2/ 1976-2005 average
3/ 1995-2005 average
4/ 1990-1999 average
5/ 1971-1990 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.

TABLE 2

WESTERN DIVISION SYSTEM
PUMP ENERGY-WATER YEAR 2011

Pumping Plant	October-September Pump Energy		
	WY 2011 (GWh)	Avg. 1/ (GWh)	Percent of Avg.
Willow Greek	0.5	5.7	9
Granby (Farr Plant)	26.9	30.6	88
Flatiron Unit #3	41.6	26.8	155
Mt. Elbert	467.6	182.1 2/	257
Total	536.6	245.2	219

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

TABLE 3

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2011 OPERATIONS
GROSS GENERATION LESS PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Mt. Elbert *	0.1	4.9	4.4	6.0	6.4	6.7	2.0	2.3	7.6	5.8	1.1	0.3
Green Mtn.	7.4	1.0	1.0	1.0	1.4	2.8	5.2	10.4	14.0	18.5	9.5	5.8
Willow Cr. pump	0.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Farr pump	0.0	1.9	1.9	4.3	4.6	5.1	4.4	1.4	0.0	0.0	0.0	3.2
Marys Lake	0.0	1.9	2.2	5.2	5.4	6.0	6.0	6.2	2.2	2.0	0.0	4.6
Estes	0.7	6.0	5.7	13.2	14.2	15.6	15.4	15.1	5.7	6.1	1.2	11.6
Pole Hill	0.0	0.0	9.0	20.9	22.1	24.4	23.9	24.9	24.0	23.7	5.6	18.4
Flatiron 1&2	0.2	0.0	10.7	26.5	27.7	31.6	30.6	31.8	30.5	31.2	8.2	24.3
Flatiron 3	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.6
Flatiron 3 pump	0.0	0.0	2.3	5.7	6.1	6.5	6.1	5.3	2.6	3.6	0.0	3.4
Big Thompson	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4	2.8	2.5	1.9	1.8
Seminoe	4.8	4.6	4.7	4.7	13.0	23.5	33.2	30.1	24.0	22.7	15.0	11.4
Kortes	2.3	0.0	0.6	1.2	7.6	9.6	8.9	18.8	16.6	24.5	16.0	12.3
Fremont Canyon	0.4	6.9	7.3	7.2	6.3	32.2	40.5	45.9	36.3	36.8	43.9	27.9
Alcova	3.1	3.1	3.7	3.8	3.3	8.9	23.0	28.5	27.3	25.1	21.7	14.7
Glendo	0.0	0.0	0.0	0.0	0.2	19.3	24.4	25.7	26.0	26.5	22.8	17.7
Guernsey	0.0	0.0	0.0	0.0	0.0	4.0	4.0	4.4	4.2	4.2	1.9	2.5
Pilot Butte **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Boysen	3.9	4.2	4.3	4.3	3.0	3.9	6.6	10.3	8.9	2.3	7.4	4.8
Shoshone	1.7	1.6	1.8	1.8	0.8	1.8	1.6	1.5	1.4	1.1	1.7	1.6
Buffalo Bill	4.5	2.4	2.3	2.1	2.1	2.2	8.0	8.4	10.9	12.8	12.4	11.8
Spirit Mtn.	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.8	3.0	3.1	2.8
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
Heart Mtn.	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.3	3.2	2.8	3.4	3.4
Yellowtail/2	26.9	21.4	21.8	23.2	19.8	23.7	52.8	66.2	70.8	84.3	71.4	40.8
Fry-Ark	0.1	4.9	4.4	6.0	6.4	6.7	2.0	2.3	7.6	5.8	1.1	0.3
CBT	8.3	6.5	24.7	56.9	60.1	68.8	70.6	83.1	76.6	80.4	27.8	60.5
North Platte	10.6	14.6	16.3	16.9	30.4	97.5	134.0	153.4	134.4	139.8	121.3	86.5
Bighorn	38.1	29.6	30.2	31.4	25.7	31.6	69.5	91.7	97.0	106.3	99.4	65.2
TOTAL GEN	57.1	55.6	75.5	111.2	122.6	204.5	276.1	330.4	315.5	332.3	249.6	212.5
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
SURPLUS/DEFICIT	-105.4	-106.7	-101.7	-61.4	-14.5	55.3	99.8	145.6	104.3	70.1	38.4	55.7

* projected values are historic average flow through energy

** projected values are marketed energy

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2012 FORECASTED OPERATIONS
MOST PROBABLE WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.7
Green Mtn.	8.5	3.1	3.1	3.0	2.7	3.0	1.6	3.1	5.7	9.3	8.0	6.5	57.7
Willow Cr. pump	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.1	3.2	0.4	0.2	0.6	9.6
Farr pump	3.9	0.8	2.0	2.0	2.4	4.4	1.5	0.0	0.0	2.4	4.1	3.3	26.9
Marys Lake	3.0	0.0	2.5	2.8	3.2	5.7	2.8	3.6	3.9	6.1	5.8	4.6	44.1
Estes	13.4	2.7	6.6	7.3	8.2	10.5	7.4	9.1	9.8	14.9	14.5	11.6	115.9
Pole Hill	22.6	0.0	5.8	11.9	13.7	23.8	13.0	21.2	24.4	25.2	25.1	19.5	206.1
Flatiron 1&2	26.0	0.0	7.0	14.0	16.0	27.4	15.2	24.5	28.0	29.0	28.9	23.1	239.0
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	2.8	0.0	0.0	0.0	1.5	6.3	4.0	6.2	5.8	6.0	1.8	2.4	36.8
Big Thompson	1.5	0.0	0.0	0.0	0.0	0.0	0.5	3.2	3.8	3.5	2.0	2.0	16.5
Seminoe	5.7	5.5	5.7	5.7	5.3	5.7	26.5	33.3	31.6	19.4	19.2	18.2	181.9
Kortes	5.6	5.4	5.6	5.6	5.2	5.6	26.1	27.6	26.7	18.5	18.5	18.0	168.5
Fremont Canyon	0.3	7.1	7.3	7.3	6.9	7.4	13.8	31.0	45.8	47.2	18.1	15.6	207.7
Alcova	4.1	4.1	4.2	4.2	3.9	4.2	4.1	14.6	26.7	27.6	7.5	7.3	112.4
Glendo	0.0	0.0	0.0	0.0	0.0	0.3	3.0	16.4	25.5	26.7	22.0	7.3	101.2
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.8	3.7	3.8	3.8	3.4	20.3
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	0.0	0.0	0.0	0.0	0.0	0.0	5.7	11.9	11.5	11.9	8.8	5.4	55.2
Shoshone	2.2	2.2	2.2	1.1	1.0	1.1	1.1	1.1	2.2	2.2	2.1	1.1	19.7
Buffalo Bill	5.9	0.0	1.7	4.2	3.9	4.1	4.0	13.1	13.0	13.4	13.4	12.7	89.2
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.0	2.7	2.8	3.2	3.2	3.0	17.7
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.	2.2	0.0	0.0	0.0	0.0	0.0	0.9	3.4	4.3	4.5	4.5	3.6	23.3
Yellowtail/2	44.2	35.8	36.6	36.0	33.1	35.1	33.7	44.8	60.7	53.0	40.2	37.3	490.5
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	68.2	4.9	23.0	36.9	39.9	59.6	33.8	54.5	66.7	79.2	78.1	61.1	605.9
North Platte	15.8	22.1	22.8	22.8	21.3	23.1	75.4	126.6	160.0	143.3	89.2	69.8	792.0
Bighorn	56.6	38.0	40.5	41.3	38.0	40.3	47.0	78.1	95.7	89.4	73.4	64.3	702.6
TOTAL GEN	141.9	67.4	88.7	103.4	102.4	125.6	159.7	263.2	327.0	316.2	242.7	196.2	2134.3
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	-20.6	-94.9	-88.5	-69.2	-34.7	-23.6	-16.6	78.4	115.8	54.0	31.5	39.4	-29.1

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY

** PROJECTED VALUES ARE MARKETED ENERGY

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2012 FORECASTED OPERATIONS
REASONABLE-MINIMUM WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.1	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.7
Green Mtn.	8.5	3.1	3.1	3.0	2.7	1.9	1.7	0.7	0.8	5.3	5.2	4.8	40.8
Willow Cr. pump	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.0	0.8	0.0	0.1	0.4	4.4
Farr pump	3.9	0.8	2.0	2.0	2.4	4.5	2.0	0.7	0.0	2.6	4.9	2.3	28.1
Marys Lake	3.0	0.0	2.5	2.8	3.2	5.7	3.4	5.1	3.6	4.5	6.1	2.6	42.5
Estes	13.4	2.7	6.6	7.3	8.2	10.5	8.6	12.6	9.1	11.0	14.9	7.0	111.8
Pole Hill	22.6	0.0	5.8	11.9	13.7	23.9	14.6	24.2	24.2	22.0	25.0	11.2	198.9
Flatiron 1&2	26.0	0.0	7.0	14.0	16.0	27.5	17.1	27.9	27.9	25.3	28.7	13.2	230.5
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	2.8	0.0	0.0	0.0	1.5	6.3	5.1	6.2	6.1	3.9	3.4	0.0	35.3
Big Thompson	1.5	0.0	0.0	0.0	0.0	0.0	0.2	2.2	3.7	2.6	1.8	1.9	14.0
Seminoe	5.7	5.5	5.7	5.7	5.3	5.7	5.5	16.8	16.4	16.8	16.5	15.6	121.3
Kortes	5.6	5.4	5.6	5.6	5.2	5.6	5.4	16.4	15.8	16.4	16.4	15.8	119.1
Fremont Canyon	0.3	7.1	7.3	7.3	6.8	7.3	13.7	35.6	34.9	38.2	36.8	33.3	228.6
Alcova	4.1	4.1	4.2	4.2	3.9	4.2	4.1	17.2	16.7	17.9	17.9	17.3	115.6
Glendo	0.0	0.0	0.0	0.0	0.0	0.0	3.6	15.0	11.3	23.4	16.8	6.1	76.2
Guernsey	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.8	3.7	3.8	3.8	3.4	20.3
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	0.0	0.0	0.0	0.0	0.0	0.0	3.8	5.7	5.8	6.4	5.6	4.7	31.8
Shoshone	2.2	2.2	2.2	1.1	1.0	1.1	1.1	1.1	1.1	1.2	1.1	1.1	16.5
Buffalo Bill	5.9	0.0	2.0	4.2	3.8	4.1	3.9	13.3	12.8	13.1	13.3	10.7	87.1
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.0	2.8	2.9	3.0	2.9	2.8	17.1
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.	2.2	0.0	0.0	0.0	0.0	0.0	0.9	1.3	1.5	3.0	1.0	0.3	10.2
Yellowtail/2	39.4	35.8	36.4	35.8	32.9	28.3	21.9	24.9	27.1	29.1	28.6	26.0	366.0
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	68.2	5.0	23.0	36.9	39.9	58.6	37.3	63.9	62.5	64.1	73.4	38.1	570.8
North Platte	15.8	22.1	22.7	22.7	21.3	22.8	34.2	104.7	98.8	116.4	108.2	91.6	681.2
Bighorn	52.6	38.4	40.7	41.0	37.8	33.5	33.4	51.0	55.3	59.5	56.2	47.2	546.5
TOTAL GEN	137.9	67.8	88.8	103.1	102.1	117.4	108.3	223.5	221.3	244.4	239.7	178.0	1832.2
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	-24.6	-94.5	-88.4	-69.5	-35.0	-31.8	-68.0	38.7	10.1	-17.8	28.5	21.2	-331.2

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY
** PROJECTED VALUES ARE MARKETED ENERGY

TABLE 4C

PICK-SLOAN MISSOURI BASIN PROGRAM WESTERN DIVISION POWER SYSTEM
WATER YEAR 2012 FORECASTED OPERATIONS
REASONABLE-MAXIMUM WATER SUPPLY CONDITION
GROSS GENERATION AND PUMPING IN GIGAWATT-HOURS

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Mt. Elbert *	1.3	2.4	2.4	2.5	3.0	2.5	3.5	3.9	4.7	4.4	2.0	1.0	33.6
Green Mtn.	8.5	3.1	3.1	3.0	2.7	3.8	1.6	3.6	16.8	18.6	11.2	6.7	82.6
Willow 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
Farr pump	3.9	0.8	1.8	1.9	2.1	4.1	0.8	0.0	0.0	0.0	3.1	0.6	19.2
Marys Lake	3.0	0.0	2.3	2.6	2.8	5.5	2.5	4.0	4.1	4.8	5.6	1.1	38.4
Estes	13.4	2.7	6.1	7.1	7.4	10.5	6.6	9.9	10.1	11.9	14.0	2.9	102.4
Pole Hill	22.6	0.0	5.8	11.4	12.1	23.3	11.2	24.8	24.4	25.2	25.1	6.1	191.8
Flatiron 1&2	26.0	0.0	7.0	13.5	14.2	26.8	13.2	28.5	28.0	29.0	28.9	7.4	222.4
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	2.8	0.0	0.0	0.0	1.1	6.2	3.7	6.3	6.0	6.2	4.1	0.0	36.4
Big Thompson	1.5	0.0	0.0	0.0	0.0	0.0	0.6	3.9	3.8	3.9	3.3	1.3	18.3
Seminoe	5.7	5.5	5.7	5.7	5.4	11.5	32.2	33.4	32.0	32.6	21.3	20.3	211.3
Kortes	5.6	5.4	5.6	5.6	5.2	11.3	26.7	27.6	26.7	27.6	20.7	20.0	188.0
Fremont Canyon	0.3	7.1	7.3	7.3	6.9	15.0	45.6	47.2	45.8	47.3	47.1	9.2	286.1
Alcova	4.1	4.1	4.2	4.2	3.9	7.9	24.1	27.6	26.7	27.6	27.6	4.2	165.9
Glendo	0.0	0.0	0.0	0.0	0.0	5.8	17.4	28.2	27.3	28.2	26.0	13.9	146.9
Guernsey	0.0	0.0	0.0	0.0	0.0	3.1	3.6	3.8	3.7	3.8	3.8	3.4	25.2
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	0.0	0.0	0.0	0.0	0.0	0.0	10.7	11.1	11.4	11.9	10.7	6.5	62.3
Shoshone	2.2	2.2	2.2	1.1	1.1	1.1	1.4	2.2	2.2	2.2	2.2	1.1	21.3
Buffalo Bill	5.9	0.0	1.7	4.2	3.9	4.2	13.0	13.4	13.0	13.4	13.4	12.7	98.6
Spirit Mtn.	1.7	0.0	0.0	0.0	0.0	0.0	1.4	2.5	2.7	3.2	3.2	3.0	17.8
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.	2.2	0.0	0.0	0.0	0.0	0.0	2.2	4.5	4.3	4.5	4.5	3.6	25.6
Yellowtail/2	48.9	35.9	36.7	36.2	33.4	42.0	56.3	79.2	96.0	96.7	47.2	39.4	647.7
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	68.2	4.9	22.5	35.6	36.0	59.5	31.1	68.4	81.2	87.1	80.9	24.8	600.3
North Platte	15.8	22.1	22.8	22.8	21.4	54.6	149.6	167.8	162.1	167.1	146.4	71.0	1023.4
Bighorn	62.5	38.0	40.6	41.4	38.4	47.2	85.6	114.4	133.1	136.0	84.2	68.0	889.5
TOTAL GEN	147.8	67.4	88.2	102.4	98.7	163.8	269.9	354.5	381.0	394.5	313.5	164.9	2546.7
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	-14.7	-94.9	-89.0	-70.2	-38.4	14.6	93.6	169.7	169.8	132.3	102.3	8.1	383.3

* PROJECTED VALUES ARE HISTORIC AVERAGE FLOW THROUGH ENERGY
** PROJECTED VALUES ARE MARKETED ENERGY

Table 5

COLORADO-BIG THOMPSON AND FRYINGPAN-ARKANSAS PROJECTS
ESTIMATED MAINTENANCE SCHEDULE FOR WATER YEAR 2012

Facility	Description of Work	Begin Date	End Date	Generation Affected	Water ops Affected
Marys Lake Plant	Annual Maintenance 2012	2-Nov-12	14-Dec-12	Y	N
Estes Unit 1	Unit #1 Annual and Penstock Inspection	9-Jan-12	17-Feb-12	Y	N
Estes Unit 2	Unit #2 Annual and Penstock Inspection	27-Feb-12	6-Apr-12	Y	N
Estes Unit 3	Unit #3 Annual and Penstock Inspection	9-Apr-12	18-May-12	Y	N
Estes Units - All	Black Start Annual Test	15-May-12	15-May-12	Y	Y
Pole Hill Canal (ARRA)	Canal Lining Repair - Seal any possible leaks	2-Nov-12	16-Nov-12	Y	Y
Pole Hill Unit Annual	Annual Maintenance	2-Nov-12	14-Dec-12	Y	N
Flatiron Unit #3	Annual Maintenance	9-Jan-12	23-Feb-12	N	Y
Flatiron Unit 2 Return date unknown	Stator Rewind w/ Core Replacement Option		30-Mar-12	Y	N
Flatiron Penstocks	Bald Mt. Butterfly Valve Refurbish	2-Nov-12	14-Dec-12	Y	Y
Flatiron Unit #1	Annual Maintenance	30-Apr-12	15-Jun-12	Y	N
Flatiron Unit #1, Penstock	Inside coating	30-Apr-12	30-Nov-11	Y	N
Big T Powerplant	Annual Maintenance	5-Mar-12	23-Apr-12	N	N
Hansen Canal 930 Section	Annual Maintenance of Canal	30-Mar-12	20-Apr-12	Y	Y
Hansen Canal 550 Section	Annual Maintenance of Canal	14-Sep-12	28-Sep-12	Y	Y
Green Mountain Unit #1	GM Unit #1 Annual Maintenance	3-Jan-12	10-Feb-12	N	N
Green Mountain Unit #2	GM Unit #2 Annual Maintenance	21-Feb-12	30-Mar-12	N	N
Green Mountain Unit #2	KZ2A Annual Transformer Maintenance	5-Mar-12	7-Mar-12	N	N
Mt Elbert Units # 1 and #2	Annual Maintenance 2012	1-Oct-12	7-Jan-13	Y	N

TABLE 6

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 (ft^3/s)
Green Mountain	2	13,000	26,000	192-262	1,660
Marys Lake	1	8,100	8,100	202-217	550
Estes	3	16,500	49,500	551-571	1,300
Pole Hill	1	33,250	33,250	830-838	550
Flatiron	2	43,000	86,000	1,096 - 1,118	1,070
(Flatiron 1/)	1	8,500	8,500	158-287	440
Big Thompson	1	5,300	5,300	183- 184	350
Seminoe	3	15,000	45,000	97-227	2,850
Kortes	3	12,000	36,000	192-204	2,700
Fremont Canyon	2	33,000	66,000	247-363	2,200
Alcova	2	18,000	36,000	153-165	2,200
Glendo	2	19,000	38,000	73-156	2,800
Guernsey	2	2,400	4,800	89-91	820
Pilot Butte2/	2	800	1,600	-- --	---
Boysen	2	7,500	15,000	72-112	2,415
Shoshone3/	1	3,000	3,000	-- --	---
Buffalo Bill3/	3	6,000	18,000	-- --	---
Heart Mountain	1	5,000	5,000	265-275	355
Mt. Elbert	2	103,000	206,000	447-477	6,400
Yellowtail	4	72,000	288,000	327-440	8,500
TOTAL	34	--------	979,050	----------	-------

TABLE 7

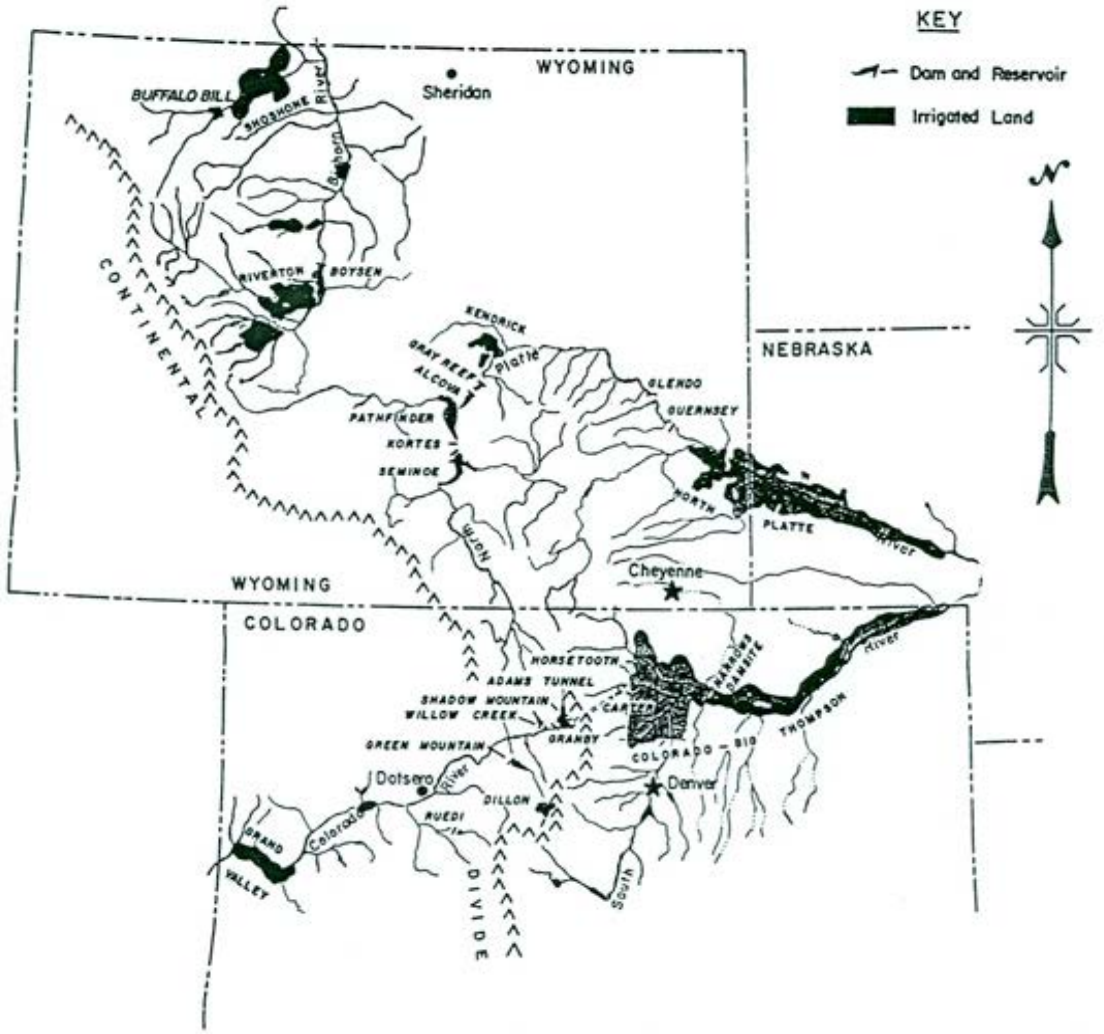
WESTERN DIVISION - PICK-SLOAN MISSOURI BASIN PROGRAM

PUMPING PLANT DATA

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

APPENDIX B - EXHIBITS

Exhibit 1



PICK-SLOAN MISSOURI BASIN PROJECT

WESTERN DIVISION

WATER RESOURCE MAP

50 0 50 100

SCALE OF MILES

MAP NO. X-700-121

JUNE 1, 1976

Exhibit 2

LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2011

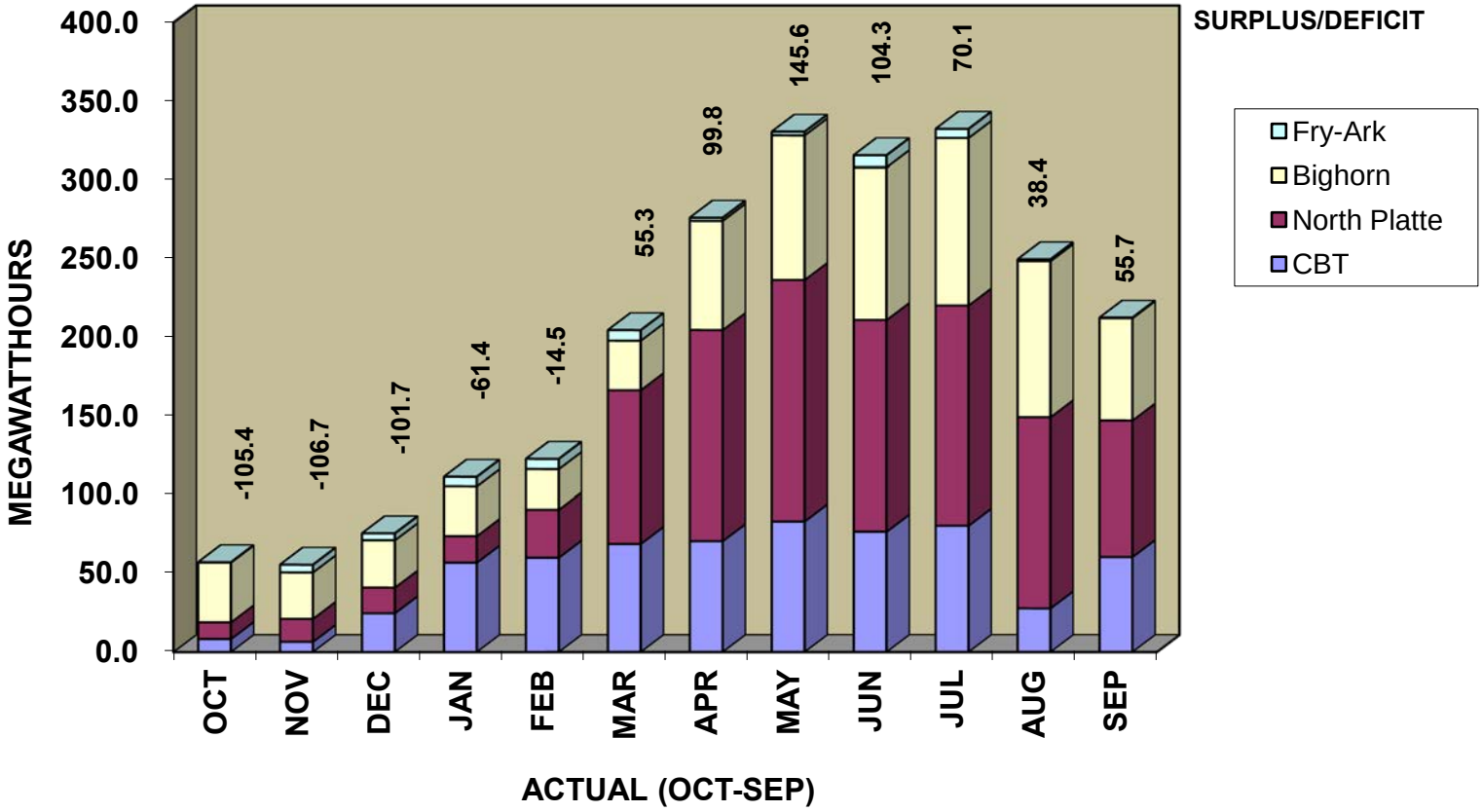


Exhibit 3

LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2012

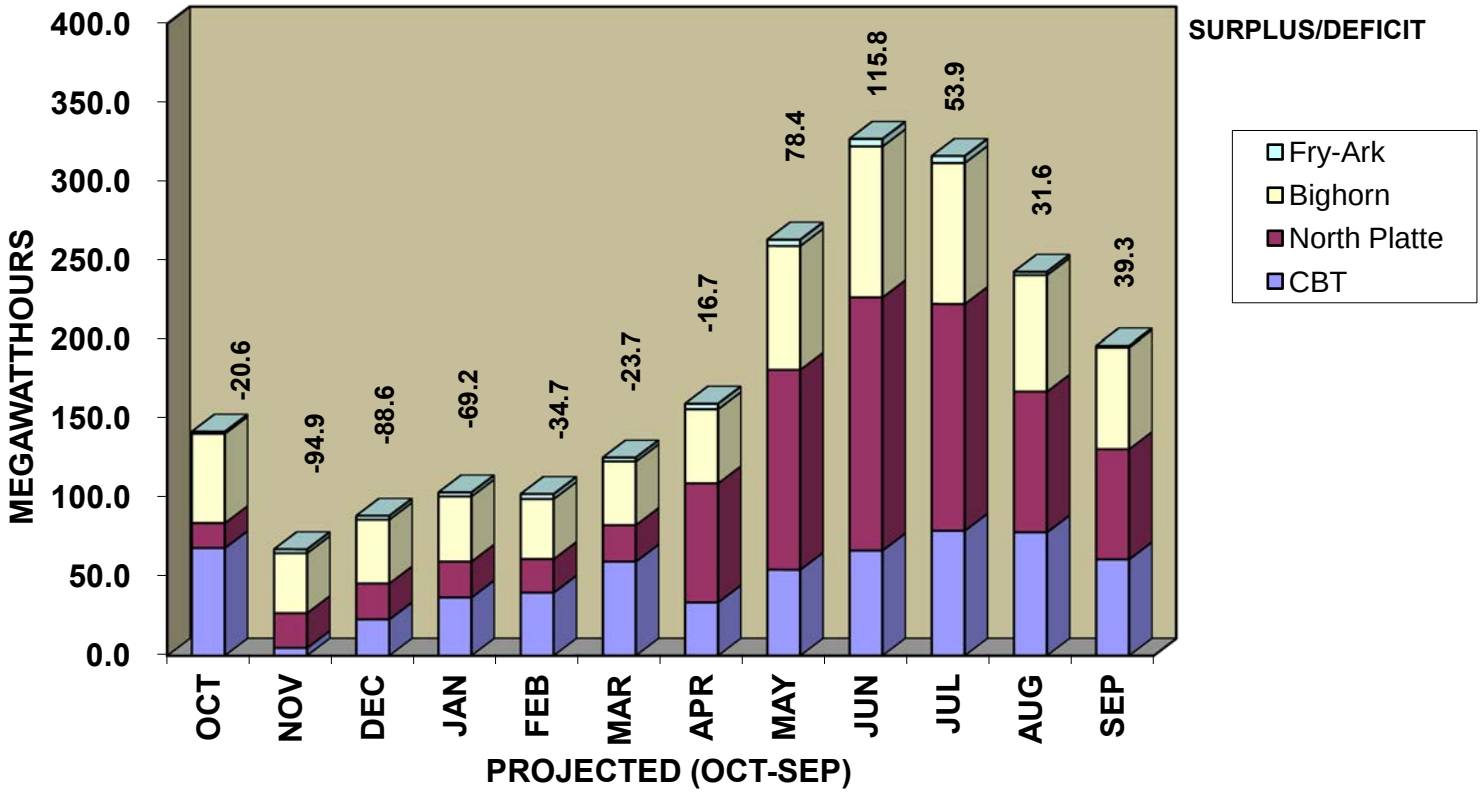


Exhibit 4A

PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2012
FOR MOST PROBABLE INFLOW

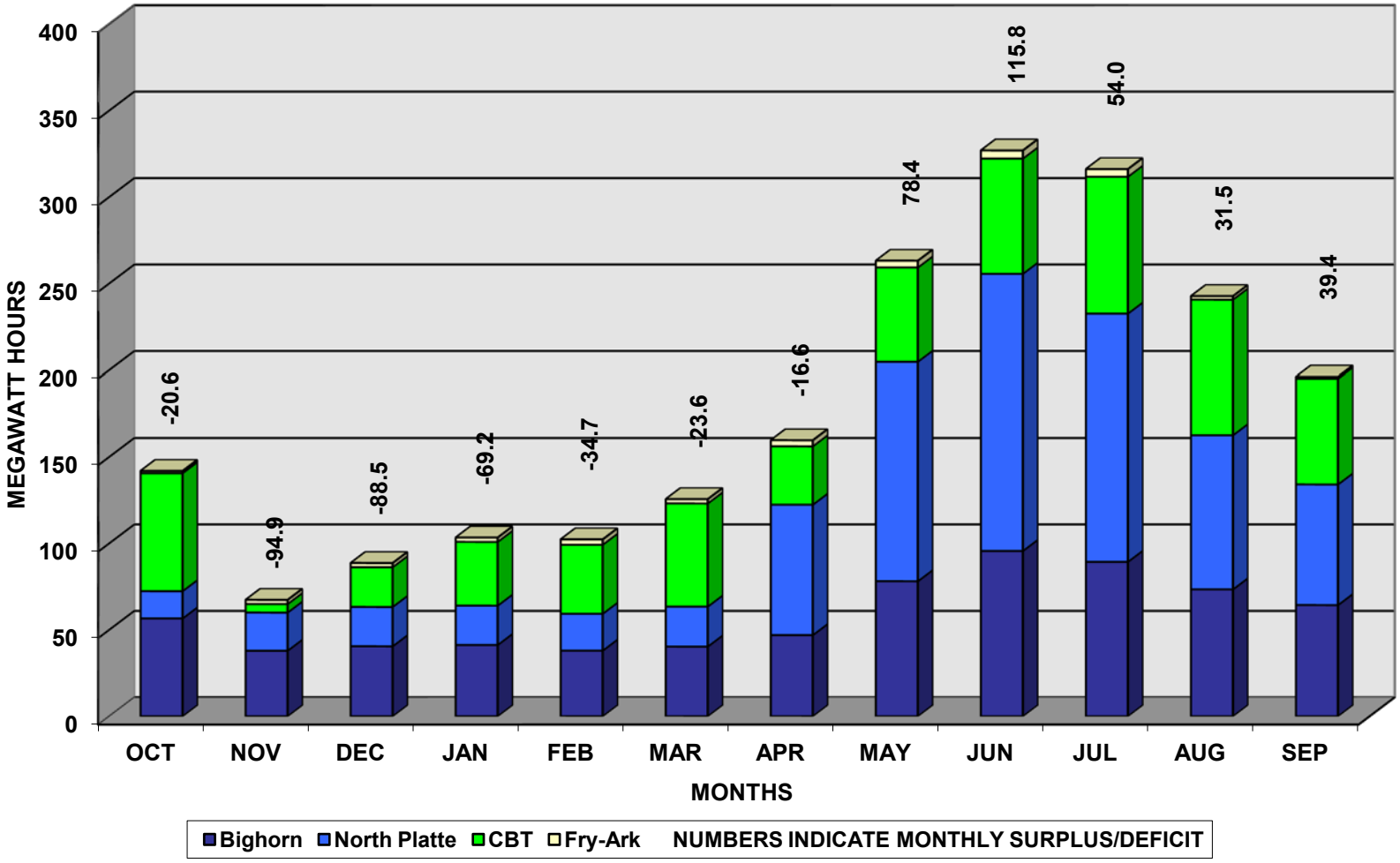


Exhibit 4B

PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2012
FOR REASONABLE MINIMUM INFLOW

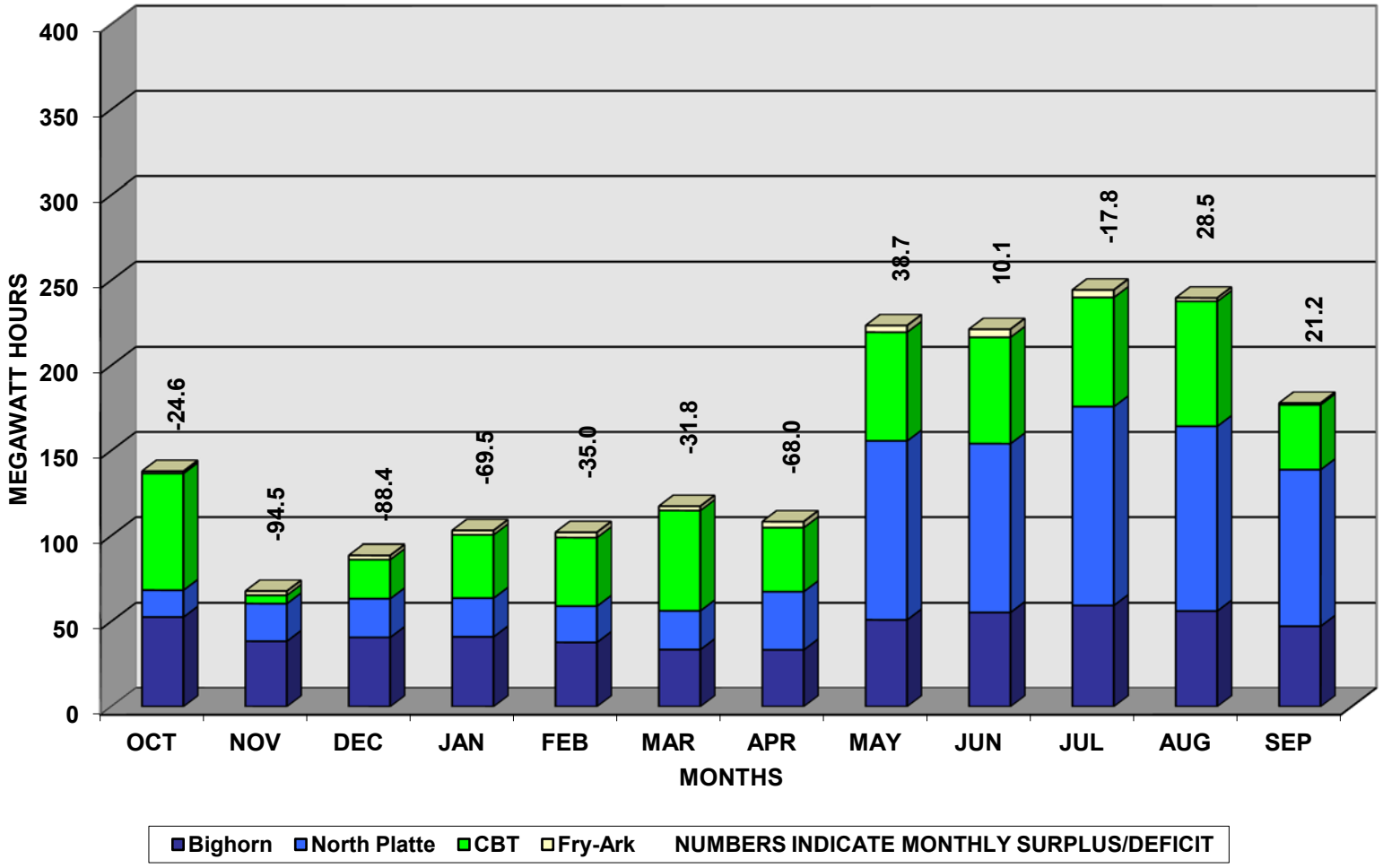


Exhibit 4C

PROJECTED LAP GROSS GENERATION LESS PUMPING
WATER YEAR 2012
FOR REASONABLE MAXIMUM INFLOW