

WESTERN DIVISION SYSTEM
RESOURCES DIVISION
LOVELAND, COLORADO

JULY 1, 2012
WATER SUPPLY AND UTILIZATION REPORT
WESTERN DIVISION SYSTEM
PICK-SLOAN MISSOURI BASIN PROGRAM

PRECIPITATION BELOW AVERAGE
TEMPERATURES ABOVE AVERAGE

Precipitation was below average over the Colorado-Big Thompson Project (Project) during June. The Willow Creek and Lake Granby watersheds were the lowest at 15 percent of average. The Poudre watershed was the highest at 57 percent of average.

Temperatures over the Project were above average for June. Fort Collins had the warmest June on record according to the Colorado Climate Center at Colorado State University. Several record high temperatures were reported for Fort Collins in June.

PRECIPITATION

Watershed	June Precipitation			October-June Precipitation		
	2012 (Inches)	Avg <u>1</u> / (Inches)	% of Avg	WY2012 (Inches)	Avg <u>1</u> / (Inches)	% of Avg
Green Mtn.	0.46	1.22	38	8.67	12.64	69
Willow Crk.	0.20	1.36	15	7.18	12.22	59
L. Granby	0.20	1.36	15	7.18	12.22	59
L. Estes	0.71	1.80	39	9.90	12.61	79
St. Vrain	0.71	1.80	39	9.90	12.61	79
Poudre	1.02	1.80	57	7.79	10.42	75

1/ 30 year average, 1971-2000

INFLOWS WELL BELOW AVERAGE

Inflows were well below average over the Project during June. The inflow to Willow Creek was the lowest at 13 percent of average. The inflow to Lake Estes was the highest at 35 percent of average. Water year to date (October-June) inflows have been 62 percent of average.

RESERVOIR INFLOW

Reservoir	June Inflow			October-June Inflow		
	2012 (KAF)	Avg <u>1</u> / (KAF)	% of Avg	WY 2012 (KAF)	Avg <u>1</u> / (KAF)	% of Avg
Green Mtn.*	33.7	128.2	26	169.8	270.1	63
Willow Crk.	2.6	19.5	13	27.3	51.7	53
L. Granby	29.3	98.8	30	123.1	190.5	65
L. Estes <u>2</u>	11.9	33.7	35	35.2	60.0	59

* Undepleted

1/ 30 year average, 1971-2000

2/ Lake Estes Computed Inflow

The dates and rates of peak snowmelt runoff are shown in the table below:

2012 DAILY PEAK RUNOFF

Reservoir	Date	2012 Avg. Daily Peak Inflow (cfs)
Green Mtn 1/	6-6-12	878
Willow Creek	4-27-12	231
Lake Granby	5-23-12	919
Lake Estes	6-5-12	323

1/ Undepleted

2012 BYPASS/SPILL (AF)

Bypass/Spill	Granby	Willow Crk.	Green Mtn.
March	0	0	329
April	0	0	4002
May	0	0	4513
June	0	0	1859
Total	0	0	10,703

TRANSMOUNTAIN DIVERSIONS ABOVE AVERAGE

Transmountain diversions through Adams Tunnel during June were 209 percent of average. During June, 25,700 acre-feet of water was brought through the tunnel. Water year to date (October-June) diversions have been 109 percent of average.

TRANSMOUNTAIN DIVERSION

Adams Tun.	June			October-June		
	2012 (KAF)	Avg 1/ (KAF)	% of Avg.	WY 2012 (KAF)	Avg 1/ (KAF)	% of Avg
	25.7	12.3	209	181.2	165.7	109

1/ 30 year average, 1971-2000

RESERVOIR STORAGE VARIED

The Lake Granby storage of 419,900 acre-feet on June 30 was 35,800 acre-feet below average and 42,200 acre-feet lower than 1 year ago on this date. Terminal reservoir storage in Carter Lake and Horsetooth Reservoir was 75 and 90 percent of average, respectively.

Colorado-Big Thompson Project storage water in Lake Granby, Carter Lake, and Horsetooth was 612,100 acre-feet on June 30 which was 73,500 acre-feet below average and 76 percent of the total available storage capacity.

RESERVOIR STORAGE

Reservoir	Total Storage on June 30						Total Storage Cap.(KAF)
	2012 (KAF)	2012 (% of Avg)	2011 (KAF)	2010 (KAF)	2009 (KAF)	1971-00 Avg (KAF)	
Green Mtn	107.1	79	139.0	151.8	151.9	136.3	153.6
L. Granby	419.9	92	462.1	535.0	495.3	455.7	539.8
Horse-tooth	117.5	90	135.4	150.2	136.5	130.7	156.7
Carter L.	74.7	75	108.0	111.6	99.1	99.2	112.2
Dillon	234.9	93	238.6	257.1	259.4	251.4	254.0
Williams Fork	88.2	109	96.4	96.3	96.4	81.1 <u>1/</u>	96.8
Project	Total Storage Water in Lake Granby, Carter Lake, and Horsetooth Reservoir on June 30						
CBT	612.1	89	705.5	796.8	730.9	685.6	808.7

1/ 20 year average, 1970-1989.

PROJECT WATER DELIVERIES ABOVE AVERAGE

Project water deliveries during June were 280 percent of average. Colorado-Big Thompson seasonal deliveries (November 2011-June 2012) were 209 percent of average to date.

Units = 1000 AF

Project	Delivery Point	June Delivery			Seasonal Delivery Through June 30		
		2012	Avg <u>1</u> /	% of Avg.	2012	Avg <u>1</u> /	% of Avg
	Carter Lake *	21.6	7.1	304	56.0	17.2	326
	Hansen F.C. *	10.1	2.8	361	14.5	12.9	112
	Horsetooth Res *	18.1	7.9	229	47.2	26.3	179
CBT Total		49.8	17.8	280	117.7	56.4	209

1/ 30 year average, 1971-2000

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

WESTERN DIVISION SYSTEM
GENERATION BELOW AVERAGE

System generation of 260,900,000 kilowatt-hours of energy produced during June was 85 percent of average. Total system generation for the water year (October-June) was 1,634,400,000 kilowatt-hours which was 89 percent of average.

WESTERN DIVISION SYSTEM
GROSS GENERATION

Powerplant	June Gross Generation			Accum. Gross Generation <u>1/</u>		
	2012 (GWH)	Avg <u>2/</u> (GWH)	% of Avg.	WY 2012 (GWH)	Avg <u>2/</u> (GWH)	% of Avg
Green Mtn.	2.3	5.9	39	22.2	30.5	73
Marys Lake	4.1	2.0	205	30.9	28.0	110
Estes	10.8	6.1	177	82.3	74.1	111
Pole Hill	19.2	20.6	93	116.2	128.0	91
Flatiron 1&2	25.4	26.4	96	158.7	167.7	95
Big Thompson	1.7	2.7	63	3.3	5.5	60
Seminole	19.3	15.6	124	92.2	99.5	93
Kortes	19.4	14.9	130	96.1	105.9	91
Fremont C.	22.6	31.2	72	97.8	148.3	66
Alcova	28.2	15.3	184	70.7	70.6	100
Glendo	20.3	14.4	141	48.1	35.1	137
Guernsey	3.9	3.6	108	10.6	10.0	106
Boysen	6.1	7.8	78	17.7	48.4	37
Heart Mtn.	3.2	2.8 <u>3/</u>	114	5.8	6.4 <u>3/</u>	91
Buffalo Bill	11.7	10.5 <u>3/</u>	111	46.7	41.5 <u>3/</u>	113
Shoshone	1.9	2.1 <u>3/</u>	90	11.9	14.1 <u>3/</u>	84
Spirit Mtn.	3.1	2.4 <u>3/</u>	129	8.5	5.2 <u>3/</u>	163
Mt. Elbert	20.8	19.3 <u>4/</u>	104	177.6	113.2 <u>4/</u>	157
Yellowtail	37.6	103.8 <u>5/</u>	36	537.1	711.1 <u>5/</u>	76
Total	260.9	307.4	85	1634.4	1843.1	89

1/ Oct-June

2/ 1976-2005 average

3/ 1995-2005 average

4/ 1990-1999 average

5/ 1971-1990 average; In general 1/2 of Yellowtail energy is dedicated to the Western Division System through marketing arrangement. The other 1/2 is marketed in Eastern Division System.

WESTERN DIVISION SYSTEM
PUMP ENERGY VARIED

The pump energy required for the Western Division System was varied for June. Colorado-Big Thompson Project pumping was 150 percent of average for June. Mt. Elbert pumping was 153 percent of average. Water year to date (October-June) pumping for the Western Division System was 162 percent of average.

PUMP ENERGY

Pumping Plant	June Pump Energy			Oct-June Pump Energy		
	2012 (GWH)	Avg <u>1/</u> (GWH)	% of Avg	WY2012 (GWH)	Avg <u>1/</u> (GWH)	% of Avg
Willow Crk	0.0	1.9	-	3.2	5.2	62
Farr	2.3	0.4	575	21.7	23.6	92
Flatiron 3	3.7	1.7	218	27.8	24.1	115
Mt. Elbert	29.0	18.9 <u>2/</u>	153	222.3	117.1 <u>2/</u>	190
Total	35.0	22.9	153	275.0	170.0	162

1/ 1976-2005 average

2/ 1990-1999 average

JULY 1, 2012
WATER SUPPLY AND UTILIZATION REPORT
FRYINGPAN-ARKANSAS PROJECT

PRECIPITATION BELOW AVERAGE

Precipitation was below average over the Fryingpan-Arkansas Project (Project) during June. Precipitation at Ruedi Reservoir (Nast SNOTEL) was the lowest at 9 percent of average. Precipitation at Twin Lakes Reservoir was the highest at 66 percent of average.

PRECIPITATION

Stations	June Precipitation			October-June Precipitation		
	2012 (Inches)	Avg (Inches)	% of Avg	WY2012 (Inches)	Avg (Inches)	% of Avg
Ruedi *	0.10	1.06 <u>1/</u>	9	10.90	17.79 <u>1/</u>	61
Turquoise	0.16	1.11 <u>2/</u>	14	8.11	11.43 <u>2/</u>	71
Twin Lakes	0.56	.85 <u>3/</u>	66	4.01	5.91 <u>3/</u>	68
Pueblo	0.14	1.41 <u>4/</u>	10	5.39	8.01 <u>4/</u>	67

* Used Nast SNOTEL site
1/ 1971-2000 average for Nast
2/ 1973-1999 average
3/ 1966-1999 average
4/ 1976-1999 average

INFLOWS BELOW AVERAGE

Native inflows were below average over the Project during June. The inflow to Pueblo Reservoir was the lowest at 10 percent of average. The inflow to Ruedi Reservoir was the highest at 27 percent of average. Water year to date (October-June) inflows over the Fryingpan-Arkansas Project were 46 percent of average.

RESERVOIR INFLOW*

Reservoir	June Inflow			October-June Inflow		
	2012 (KAF)	Avg (KAF)	% of Avg	WY2012 (KAF)	Avg (KAF)	% of Avg
Ruedi	12.4	45.6 <u>1/</u>	27	55.2	99.8 <u>1/</u>	55
Turquoise	2.8	12.0 <u>2/</u>	23	12.4	21.9 <u>2/</u>	57
Twin Lakes	9.1	39.4 <u>2/</u>	23	31.1	62.3 <u>2/</u>	50
Pueblo	14.1	148.2 <u>2/</u>	10	154.1	360.2 <u>2/</u>	43

* Computed Native Inflow
1/ 1970-1989 average
2/ 1966-1986 average

RESERVOIR STORAGE VARIED

Reservoir storage is varied on the Fryingpan-Arkansas Project. Turquoise Lake is the lowest at 76 percent of average. Pueblo Reservoir is the highest at 101 percent of average. The total water in storage in the four reservoirs of 479,100 acre-feet, at the end of June, was 57,500 acre-feet lower than 1 year ago on this date.

RESERVOIR STORAGE

Reservoir	Total Storage on June 30						Total Storage Capacity (AF)
	2012 (KAF)	2012 (% of Avg)	2011 (KAF)	2010 (KAF)	2009 (KAF)	Avg (KAF)	
Ruedi	89.8	93	99.4	101.8	101.1	96.4 <u>1/</u>	102,373
Turquoise	87.4	76	95.9	118.3	126.7	115.1 <u>2/</u>	129,398
Twin Lakes	111.7	89	119.3	122.7	127.7	125.9 <u>3/</u>	141,000
Pueblo	190.2	101	222.0	239.9	222.6	187.6 <u>1/</u>	256,949 <u>4/</u>
Project	Total Storage Water in Turquoise, Twin Lakes, and Pueblo Reservoirs on June 30						
Fry-Ark	389.3	91	437.2	480.9	477.0	428.6	527,347

1/ 1982-2007 average

2/ 1989-2007 average

3/ 1987-2007 average

4/ Top of active conservation capacity

COOPERATORS

Many organizations and individuals furnish information for the Water Supply and Utilization Report. Their cooperation is gratefully appreciated, especially:

Natural Resource Conservation Service
<http://www.wcc.nrcs.usda.gov/>
Snow Survey Units
Denver, Colorado
<http://www.co.nrcs.usda.gov/snosurvfs.htm>
Casper, Wyoming
and
Portland, Oregon

Department of Commerce
NOAA, National Weather Service
Boulder, Colorado
<http://www.crh.noaa.gov/den/>
Cheyenne, Wyoming
Salt Lake City, Utah

Department of Energy
Western Area Power Administration
Rocky Mountain Region
Loveland, Colorado
<http://www.wapa.gov/RM/RM.HTM>

Colorado Climate Center
Colorado State University
Fort Collins, Colorado
<http://ccc.atmos.colostate.edu/Access.html>