

COLORADO-BIG THOMPSON MONTHLY OPERATIONS

HYDROLOGY OPERATIONS

Green Mtn Reservoir		Initial Cont Elev 7898.40 ft				69.0 kaf				Maximum Cont Elev 7949.91 ft				153.6 kaf				Minimum Cont Elev 7795.72 ft				6.0 kaf	
2009		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total									
Dillon Inflow	kaf	4.0	3.6	4.3	6.8	24.6	33.5	18.2	10.0	5.7	8.2	6.1	4.4	129.4									
Dillon-Grn Mtn Gain	kaf	3.8	3.2	4.1	7.2	18.6	24.0	14.8	9.9	5.9	8.8	6.4	4.2	110.9									
Undepleted Inflow	kaf	7.8	6.8	8.4	14.0	43.2	57.5	33.0	19.9	11.6	17.0	12.5	8.6	240.3									
Depletion	kaf	0.4	-0.1	-0.8	3.8	21.5	30.5	15.1	6.9	2.7	2.1	0.7	0.6	83.4									
Depleted Inflow	kaf	7.4	6.9	9.2	10.2	21.7	27.0	17.9	13.0	8.9	14.9	11.8	8.0	156.9									
Turbine Release	kaf	12.3	11.1	12.3	10.0	3.8	3.7	23.5	18.7	16.2	21.5	15.5	10.9	159.5									
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	12.3	11.1	12.3	10.0	3.8	3.7	23.5	18.7	16.2	21.5	15.5	10.9	159.5									
Min Release	cfs	200	200	200	168	62	62	382	304	273	350	260	177										
Total River Release	cfs	200	200	200	168	62	62	382	304	272	350	260	177										
Evaporation	kaf	0.0	0.0	0.1	0.2	0.4	0.6	0.6	0.5	0.4	0.3	0.1	0.0	3.2									
End-Month Targets	kaf					75.0	90.0	145.0	152.0														
End-Month Content	kaf	64.1	59.9	56.7	56.7	74.2	96.9	90.7	84.5	76.8	69.9	66.1	63.2										
End-Month Elevation	ft	7894.18	7890.35	7887.29	7887.29	7902.64	7918.95	7914.80	7910.43	7904.67	7899.15	7895.94	7893.38										

Willow Crk Reservoir		Initial Cont Elev 8115.94 ft				7.0 kaf				Maximum Cont Elev 8128.83 ft				10.2 kaf				Minimum Cont Elev 8104.78 ft				5.0 kaf	
2009		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total									
Native Inflow	kaf	0.8	0.7	1.0	3.8	12.7	6.3	2.1	1.1	0.7	1.2	1.2	0.8	32.4									
Min Release	kaf	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	0.4	0.8	0.4	10.4									
Spill/Bypass	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0									
Total River Release	kaf	0.4	0.4	0.4	0.4	1.5	2.6	2.2	0.5	0.4	0.4	0.8	0.4	10.4									
Pumped to Granby	kaf	0.0	0.0	2.3	2.2	9.3	2.6	0.8	0.4	0.3	1.5	1.4	0.0	20.8									
Evaporation	kaf	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.6									
End-Month Targets	kaf					7.2	9.0	10.0	9.0				7.2										
End-Month Content	kaf	7.4	7.7	6.0	7.2	9.0	10.0	9.0	9.1	9.0	8.2	7.2	7.6										
End-Month Elevation	ft	8117.83	8119.18	8110.72	8116.90	8124.50	8128.14	8124.50	8124.88	8124.50	8121.32	8116.90	8118.74										

Lake Granby		Initial Cont Elev 356.8 kaf 8252.33 ft				Maximum Cont Elev 536.1 kaf 8279.50 ft				Minimum Cont Elev 76.5 kaf 8186.91 ft				Total
2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Native inflow	kaf	1.4	1.2	1.5	4.9	17.3	21.8	7.0	2.5	1.6	2.3	1.4	1.4	64.3
Rels frm Shadow Mtn	kaf	1.2	1.1	1.2	1.2	11.6	22.6	3.1	2.5	2.1	2.2	2.7	2.8	54.3
Pump frm Windy Gap	kaf	0.0	0.0	0.0	0.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
Pump frm Willow Crk	kaf	0.0	0.0	2.3	2.2	9.3	2.6	0.8	0.4	0.3	1.5	1.4	0.0	20.8
Total Inflow	kaf	2.6	2.3	5.0	8.3	43.2	52.0	10.9	5.4	4.0	6.0	5.5	4.2	149.4
Min River Release	kaf	1.2	1.1	1.2	1.2	4.6	4.7	3.3	2.5	1.0	1.4	1.2	1.2	24.6
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	3.3	2.5	1.0	1.4	1.2	1.2	24.6
Pumped to Shadow Mtn	kaf	29.3	24.6	27.3	21.4	0.0	0.0	16.1	32.2	31.2	29.5	4.2	30.8	246.6
Evaporation	kaf	0.0	0.0	0.8	1.2	1.9	2.5	2.3	1.8	1.6	1.1	0.5	0.1	13.8
Seepage loss	kaf	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	3.3
End-Month Content	kaf	328.6	304.9	280.3	264.5	300.9	345.4	334.3	302.9	272.8	246.6	246.0	217.9	
End-Month Elevation	ft	8247.48	8243.26	8238.69	8235.65	8242.53	8250.39	8248.48	8242.89	8237.26	8232.07	8231.95	8226.04	
Shadow Mtn		Initial Cont Elev 17.8 kaf 8366.68 ft				Maximum Cont Elev 18.4 kaf 8367.00 ft				Minimum Cont Elev 16.6 kaf 8366.02 ft				Total
2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	
Native inflow	kaf	2.1	1.9	2.2	7.4	26.0	32.6	10.6	3.7	2.5	3.5	2.0	2.1	96.6
Pumped from Granby	kaf	29.3	24.6	27.3	21.4	0.0	0.0	16.1	32.2	31.2	29.5	4.2	30.8	246.6
Total Inflow	kaf	31.4	26.5	29.5	28.8	26.0	32.6	26.7	35.9	33.7	33.0	6.2	32.9	343.2
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	10.4	19.6	0.0	0.0	0.0	0.0	0.0	0.0	30.0
Total River Release	kaf	1.2	1.1	1.2	1.2	11.6	22.6	3.1	2.5	2.1	2.2	2.7	2.8	54.3
Adams Tunnel Flow	kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	284.2
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	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	
End-Month Elevation	ft	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	8366.68	
Adams Tunnel	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	30.5	33.8	32.7	33.8	32.7	33.8	33.8	32.7	33.8	16.4	33.8	381.6
Actual delivery	kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	284.2
% max delivery	%	89	83	83	83	41	28	68	97	95	90	20	89	
Big T @ Lake Estes	2009	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	6.9	7.4	7.7	5.8	2.8	2.6	1.5	1.2	40.5
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	4.0	12.2	4.8	0.0	0.0	0.0	0.3	0.0	21.3
% skim diverted	%					100	100	100				100		
Irrigation demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Irrigation delivery	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total river release	kaf	1.0	0.7	1.0	1.9	6.9	7.4	7.7	5.8	2.8	2.6	1.5	1.2	40.5

Olympus Tunnel	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Tunnel Capacity	kaf	33.8	30.5	33.8	32.7	33.8	32.7	33.8	33.8	32.7	30.4	16.4	33.8	378.2
Actual delivery	kaf	30.2	25.4	28.0	27.2	17.7	21.4	27.7	32.8	31.1	30.4	3.6	30.0	305.5
% max delivery	%	89	83	83	83	52	65	82	97	95	100	22	89	
Seepage and Evap	kaf	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	1.7
Inflow to Flatiron	kaf	30.1	25.3	27.9	27.1	17.6	21.3	27.6	32.6	30.9	30.2	3.4	29.8	303.8

Carter Lake	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
				Initial Cont Elev 5711.48 ft	62.6 kaf			Maximum Cont Elev 5758.98 ft	112.2 kaf			Minimum Cont Elev 5639.99 ft	11.2 kaf	
Pump from Flatiron	kaf	20.6	16.7	4.2	9.9	0.0	0.0	5.6	9.2	10.5	7.0	0.0	20.6	104.3
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	0.2	0.3	0.4	0.5	0.4	0.3	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	0.1	0.1	0.1	0.1	1.7
End-Month Targets	kaf	81.4	96.4	98.4	102.0	94.0	80.9	67.0	53.0	49.0	45.0	40.0	66.2	
End-Month Content	kaf	81.4	96.4	98.4	102.0	92.9	80.9	67.0	53.0	49.0	45.0	43.3	62.4	
End-Month Elevation	ft	5730.59	5744.80	5746.64	5749.91	5741.56	5730.11	5716.12	5700.91	5696.30	5691.55	5689.49	5711.27	

Irrigation demand	kaf	0.0	0.0	0.0	3.4	3.8	5.6	12.4	16.8	9.1	7.5	0.0	0.0	58.6
Metered delivery	kaf	1.3	1.2	1.4	1.9	2.7	3.3	4.2	4.0	3.3	2.6	1.1	1.0	28.0
Windy Gap demand	kaf	0.4	0.4	0.4	0.5	2.0	2.4	2.3	2.0	1.7	0.6	0.4	0.4	13.5
Total demand	kaf	1.7	1.6	1.8	5.8	8.5	11.3	18.9	22.8	14.1	10.7	1.5	1.4	100.1
Total delivery	kaf	1.7	1.6	1.8	5.8	8.5	11.3	18.9	22.8	14.1	10.7	1.5	1.4	100.1
% 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

Hansen Canal	930	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Minimum flow	kaf		6.1	5.6	6.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	31.3
Maximum flow	kaf		57.2	51.6	57.2	27.7	57.2	55.3	57.2	57.2	55.3	57.2	55.3	57.2	645.6
Actual flow	kaf		9.5	8.6	23.7	17.2	17.6	21.3	22.0	23.4	20.4	23.2	3.4	9.2	199.5

Dille Tunnel	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
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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	4.0	12.2	4.8	0.0	0.0	0.0	0.3	0.0	21.3
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Handy Ditch release	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	8.8	9.6	8.5	4.3	2.2	2.8	2.0	1.5	45.9
Water diverted	kaf	0.0	0.0	0.0	1.7	8.8	9.2	8.5	4.3	2.2	2.8	0.0	0.0	37.5
% diverted	%				100	100	96	100	100	100	100			

Trifurcation Works	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Rels from Flatiron	kaf	9.5	8.6	23.7	17.2	17.6	21.3	22.0	23.4	20.4	23.2	3.4	9.2	199.5
Rels to 550 Canal	kaf	9.5	8.6	23.7	16.3	10.7	6.6	13.0	16.0	12.6	12.8	3.1	9.2	142.1
Big T irrigation	kaf	0.0	0.0	0.0	0.9	2.9	2.5	4.2	7.4	7.8	10.4	0.0	0.0	36.1
Dille Tunnel	kaf	0.0	0.0	0.0	1.7	8.8	9.2	8.5	4.3	2.2	2.8	0.0	0.0	37.5
Tot rels to river	kaf	0.0	0.0	0.0	2.6	15.7	23.9	17.5	11.7	10.0	13.2	0.3	0.0	94.9
Irrigation demand	kaf	0.0	0.0	0.0	0.9	2.9	2.5	3.8	7.0	7.5	10.4	0.0	0.0	35.0
Big T irr (Estes)	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Windy Gap demand	kaf	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.0	0.0	0.0	1.1
Total requirement	kaf	0.0	0.0	0.0	0.9	2.9	2.5	4.2	7.4	7.8	10.4	0.0	0.0	36.1
Total delivery	kaf	0.0	0.0	0.0	0.9	2.9	2.5	4.2	7.4	7.8	10.4	0.0	0.0	36.1
% 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	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow from Flatiron	kaf	9.5	8.6	23.7	16.3	10.7	6.6	13.0	16.0	12.6	12.8	3.1	9.2	142.1
Maximum flow	kaf	32.0	28.9	32.0	16.4	32.0	30.9	32.0	32.0	30.9	16.0	30.9	32.0	346.0
Seepage loss	kaf	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4
Irrigation demand	kaf	0.3	0.3	0.3	0.4	0.7	0.5	1.2	1.2	1.1	0.7	0.2	0.2	7.1
Irrigation delivery	kaf	0.3	0.3	0.3	0.4	0.7	0.5	1.2	1.2	1.1	0.7	0.2	0.2	7.1
Minimum flow	kaf	3.1	2.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	20.9
Rels to Horsetooth	kaf	9.0	8.1	23.2	15.7	9.8	5.9	11.6	14.6	11.3	11.9	2.7	8.8	132.6

Horsetooth Reservoir	2009	Initial Cont			79.2 kaf			Maximum Cont			156.7 kaf			Minimum Cont			5.0 kaf		
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total					
Inflow	kaf	9.0	8.1	23.2	15.7	9.8	5.9	11.6	14.6	11.3	11.9	2.7	8.8	132.6					
Total irr delivery	kaf	2.1	2.0	2.1	2.8	8.9	9.9	25.7	32.0	18.8	18.5	1.6	1.6	126.0					
Evaporation loss	kaf	0.0	0.0	0.2	0.4	0.7	0.8	0.7	0.5	0.4	0.3	0.1	0.0	4.1					
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	85.9	91.9	112.7	125.0	125.0	120.0	105.0	87.0	79.0	72.0	72.9	80.0						
End-Month Content	kaf	85.9	91.9	112.7	125.0	125.0	120.0	105.0	87.0	79.0	72.0	72.9	80.0						

End-Month Elevation	ft	5389.73	5393.68	5406.47	5413.47	5413.47	5410.67	5401.89	5390.47	5385.01	5380.01	5380.67	5385.71	
Irrigation demand	kaf	0.0	0.0	0.0	0.1	4.5	5.2	17.4	24.5	13.0	15.6	0.0	0.0	80.3
Metered delivery	kaf	1.7	1.6	1.7	2.3	4.0	4.3	6.8	6.0	4.4	2.5	1.2	1.2	37.7
Windy Gap demand	kaf	0.4	0.4	0.4	0.4	0.4	0.4	1.5	1.5	1.4	0.4	0.4	0.4	8.0
Total demand	kaf	2.1	2.0	2.1	2.8	8.9	9.9	25.7	32.0	18.8	18.5	1.6	1.6	126.0
Total irr delivery	kaf	2.1	2.0	2.1	2.8	8.9	9.9	25.7	32.0	18.8	18.5	1.6	1.6	126.0
% 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	3.3	3.1	3.4	9.0	18.6	21.4	45.8	59.5	38.4	39.3	2.5	2.4	246.7
Windy Gap Ownership 2009		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Accrual	kaf	0.0	0.0	0.0	0.0	4.5	4.5	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	2.4	2.8	4.2	3.9	3.4	1.0	0.8	0.8	22.6
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	49.1	48.3	47.5	46.6	48.7	50.4	46.2	42.3	38.9	37.9	37.1	36.3	

PUMPING AND GENERATION OPERATIONS

Green Mtn Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Max Generation	gwh	9.271	8.110	8.741	16.719	18.401	18.000	18.600	18.600	18.000	18.600	18.000	9.149	180.191
Generation	gwh	2.005	1.773	1.931	1.559	0.616	0.654	4.284	3.333	2.806	3.610	2.543	1.762	26.876
% Max Generation	%	22	22	22	9	3	4	23	18	16	19	14	19	
Ave kwh/af		163	160	157	156	162	177	182	178	173	168	164	162	
Willow Crk Pumping	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	0.0	0.0	27.7	26.8	27.7	26.8	27.7	27.7	26.8	27.7	26.8	0.0	245.7
Actual pumping	kaf	0.0	0.0	2.3	2.2	9.3	2.6	0.8	0.4	0.3	1.5	1.4	0.0	20.8
Pump energy	gwh	0.000	0.000	0.490	0.469	1.981	0.554	0.170	0.085	0.064	0.320	0.298	0.000	4.431
% max pumping	%			8	8	34	10	3	1	1	5	5		
Average kwh/af				213	213	213	213	213	213	213	213	213		
Lake Granby Pumping	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	36.9	33.3	36.9	35.7	36.9	35.7	36.9	36.9	35.7	36.9	35.7	36.9	434.4
Actual pumping	kaf	29.3	24.6	27.3	21.4	0.0	0.0	16.1	32.2	31.2	29.5	4.2	30.8	246.6
Pump energy	gwh	4.454	3.813	4.313	3.467	0.000	0.000	2.447	4.959	4.930	4.838	0.706	5.267	39.194
% max pumping	%	79	74	74	60			44	87	87	80	12	83	
Average kwh/af		152	155	158	162			152	154	158	164	168	171	
Marys Lake Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total

Adams Tunnel Flow	kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	
Max generation	gwh	6.060	5.400	6.060	5.840	6.060	5.840	6.060	6.060	5.840	5.380	0.000	0.000	58.600
Generation	gwh	5.340	4.540	5.000	4.840	2.440	1.540	4.080	5.860	5.520	5.380	0.000	0.000	44.540
% Max Generation	%	88	84	83	83	40	26	67	97	95	100			
Ave kwh/af		177	179	179	178	178	167	178	179	177	177			
Lake Estes Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Adams Tunnel Flow	kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	
Max generation	gwh	11.940	10.060	10.450	9.660	9.980	10.060	14.920	14.920	14.450	14.920	14.450	14.920	150.730
Generation	gwh	11.940	10.060	10.450	9.660	6.350	4.000	10.060	14.500	13.740	13.400	1.420	13.200	118.780
% Max Generation	%	100	100	100	100	64	40	67	97	95	90	10	88	
Ave kwh/af		441	439	441	441	464	435	439	442	442	441	430	440	
Pole Hill Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Olympus Tunnel flow	kaf	30.2	25.4	28.0	27.2	17.7	21.4	27.7	32.8	31.1	30.4	3.6	30.0	305.5
Max generation	gwh	25.260	22.800	25.260	24.460	25.260	24.460	25.260	25.260	24.460	22.720	0.000	5.750	250.950
Generation	gwh	10.200	9.240	10.200	9.880	10.200	9.880	10.200	10.200	9.880	10.200	0.000	4.640	104.720
% Max Generation	%	40	41	40	40	40	40	40	40	40	45		81	
Ave kwh/af		338	364	364	363	576	462	368	311	318	336		546	
Flatiron 1&2 Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Inflow to Flatiron	kaf	30.1	25.3	27.9	27.1	17.6	21.3	27.6	32.6	30.9	30.2	3.4	29.8	303.8
Max generation	gwh	12.050	10.880	12.050	11.690	12.050	11.690	12.050	12.050	11.690	12.050	0.000	5.580	123.830
Generation	gwh	12.050	10.880	12.050	11.690	12.050	11.690	12.050	12.050	11.690	12.050	0.000	5.580	123.830
% Max Generation	%	100	100	100	100	100	100	100	100	100	100		100	
Ave kwh/af		893	892	893	892	893	892	893	893	892	893		821	
Flatiron 3 Pump/Gen	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Maximum pumping	kaf	20.5	16.6	17.3	11.5	0.0	18.0	20.2	22.1	22.6	9.6	0.0	20.8	179.2
Pump from Flatiron	kaf	20.6	16.7	4.2	9.9	0.0	0.0	5.6	9.2	10.5	7.0	0.0	20.6	104.3
Pump energy	gwh	6.407	5.762	1.529	3.663	0.000	0.000	1.764	2.659	2.898	1.897	0.000	5.747	32.326
% max pumping	%	100	101	24	86			28	42	46	73		99	
Average kwh/af		311	345	364	370			315	289	276	271		279	
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	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total release	kaf	0.0	0.0	0.0	2.6	15.7	23.9	17.5	11.7	10.0	13.2	0.3	0.0	94.9

Turbine release	kaf	0.0	0.0	0.0	2.6	15.7	23.9	17.5	11.7	10.0	13.2	0.0	0.0	94.6
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	0.223	2.340	3.800	2.700	1.640	1.300	1.940	0.000	0.000	13.943
% Max Generation	%				6	59	100	69	42	34	49			
Ave kwh/af					86	149	159	154	140	130	147			

PROJECT GENERATION AND PUMPING SUMMARY

Project Generation	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Big Thompson	gwh	0.000	0.000	0.000	0.223	2.340	3.800	2.700	1.640	1.300	1.940	0.000	0.000	13.943
Green Mtn	gwh	2.005	1.773	1.931	1.559	0.616	0.654	4.284	3.333	2.806	3.610	2.543	1.762	26.876
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	2.005	1.773	1.931	1.782	2.956	4.454	6.984	4.973	4.106	5.550	2.543	1.762	40.819
Load Following Generation:														
Marys Lake	gwh	5.340	4.540	5.000	4.840	2.440	1.540	4.080	5.860	5.520	5.380	0.000	0.000	44.540
Lake Estes	gwh	11.940	10.060	10.450	9.660	6.350	4.000	10.060	14.500	13.740	13.400	1.420	13.200	118.780
Pole Hill	gwh	10.200	9.240	10.200	9.880	10.200	9.880	10.200	10.200	9.880	10.200	0.000	4.640	104.720
Flatiron 1,2	gwh	12.050	10.880	12.050	11.690	12.050	11.690	12.050	12.050	11.690	12.050	0.000	5.580	123.830
Total	gwh	39.530	34.720	37.700	36.070	31.040	27.110	36.390	42.610	40.830	41.030	1.420	23.420	391.870
Total generation	gwh	41.535	36.493	39.631	37.852	33.996	31.564	43.374	47.583	44.936	46.580	3.963	25.182	432.689
Total max generation	gwh	64.581	57.250	62.561	72.169	75.691	73.850	80.830	80.830	78.240	77.610	32.450	35.399	791.461
Project Pump Energy 2009														
Granby	gwh	4.454	3.813	4.313	3.467	0.000	0.000	2.447	4.959	4.930	4.838	0.706	5.267	39.194
Willow Creek	gwh	0.000	0.000	0.490	0.469	1.981	0.554	0.170	0.085	0.064	0.320	0.298	0.000	4.431
Flatiron 3	gwh	6.407	5.762	1.529	3.663	0.000	0.000	1.764	2.659	2.898	1.897	0.000	5.747	32.326
Total pump energy	gwh	10.861	9.575	6.332	7.599	1.981	0.554	4.381	7.703	7.892	7.055	1.004	11.014	75.951
Total net generation	gwh	30.674	26.918	33.299	30.253	32.015	31.010	38.993	39.880	37.044	39.525	2.959	14.168	356.738
Release Flexibility 2009														
Adams Tunnel	Min kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	
Adams Tunnel	Max kaf	30.2	25.4	28.0	27.2	13.7	9.2	22.9	32.8	31.1	30.4	3.3	30.0	
Marys Lake	Min gwh	5.340	4.540	5.000	4.840	2.440	1.540	4.080	5.860	5.520	5.380	0.000	0.000	
Marys Lake	Max gwh	5.340	4.540	5.000	4.840	2.440	1.540	4.080	5.860	5.520	5.380	0.000	0.000	
Lake Estes	Min gwh	11.940	10.060	10.450	9.660	6.350	4.000	10.060	14.500	13.740	13.400	1.420	13.200	
Lake Estes	Max gwh	11.940	10.060	10.450	9.660	6.350	4.000	10.060	14.500	13.740	13.400	1.420	13.200	

Olympus Tunnel	Min kaf	30.2	25.4	28.0	27.2	17.7	21.4	27.7	32.8	31.1	30.4	3.6	30.0
Olympus Tunnel	Max kaf	30.2	25.4	28.0	27.2	17.7	21.4	27.7	32.8	31.1	30.4	3.6	30.0
Pole Hill	Min gwh	22.560	18.980	20.900	20.340	13.560	16.020	20.690	24.540	23.270	22.720	0.000	5.750
Pole Hill	Max gwh	22.560	18.980	20.900	20.340	13.560	16.020	20.690	24.540	23.270	22.720	0.000	5.750
Flatiron 1&2	Min gwh	12.050	10.880	12.050	11.690	12.050	11.690	12.050	12.050	11.690	12.050	0.000	5.580
Flatiron 1&2	Max gwh	12.050	10.880	12.050	11.690	12.050	11.690	12.050	12.050	11.690	12.050	0.000	5.580
Load following	Min gwh	51.890	44.460	48.400	46.530	34.400	33.250	46.880	56.950	54.220	53.550	1.420	24.530
Load following	Max gwh	51.890	44.460	48.400	46.530	34.400	33.250	46.880	56.950	54.220	53.550	1.420	24.530
Total project	Min gwh	53.895	46.233	50.331	48.312	37.356	37.704	53.864	61.923	58.326	59.100	3.963	26.292
Total project	Max gwh	53.895	46.233	50.331	48.312	37.356	37.704	53.864	61.923	58.326	59.100	3.963	26.292

GENERATION CAPACITY AND DURATION

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Project Generation	2009	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Base Generation:														
Green Mtn	mw	2.7	2.6	2.6	2.2	0.8	0.9	5.8	4.5	3.9	4.9	3.5	2.4	
Flatiron 3	mw													
Big Thompson	mw				0.3	3.1	5.3	3.6	2.2	1.8	2.6			
Total base load	mw	2.7	2.6	2.6	2.5	3.9	6.2	9.4	6.7	5.7	7.5	3.5	2.4	
Load Following Generation:														
Marys Lake														
Min Capacity	mw	0.5	0.0	0.0	0.0	0.0	0.0	0.0	8.1	2.7	1.1	0.0	0.0	
Duration	hr/d	1.6	4.7	2.8	3.4	10.8	9.6	6.6	12.0	1.5	1.6	16.7	1.6	
Max Capacity	mw	8.1	8.1	8.1	8.1	6.4	3.8	8.1	8.1	8.1	8.1	2.7	8.1	
Duration	hr/d	21.8	18.3	20.2	19.6	12.3	13.4	16.5	12.0	22.5	21.9	7.3	21.6	
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	12.1	12.0	12.0	12.0	12.0	12.0	12.0	11.0	12.5	12.3	16.7	12.0	
Max Capacity	mw	38.9	31.5	34.8	33.8	16.3	11.5	29.3	45.0	42.3	39.7	7.0	38.1	
Duration	hr/d	11.9	12.0	12.0	12.0	12.0	12.0	12.0	10.0	11.2	11.7	7.3	12.0	
Pole Hill														
Min Capacity	mw	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0	0.0	
Duration	hr/d	2.0	5.4	3.5	4.1	11.0	8.3	3.7	12.0	1.2	1.8	16.4	2.2	
Max Capacity	mw	34.0	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	22.1	18.6	20.5	19.9	13.0	15.7	20.3	12.0	22.8	22.3	7.6	22.0	
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	11.6	12.0	12.0	12.0	11.6	12.0	12.0	9.5	11.2	11.5	16.6	11.7	
Max Capacity	mw	78.4	62.6	69.7	67.3	43.6	51.9	68.8	85.2	81.6	78.8	13.0	77.2	



Duration	hr/d	11.6	12.0	12.0	12.0	12.4	12.0	12.0	10.0	10.9	11.5	7.4	11.8
Total Load Following													
Min Capacity	mw	0.5	0.0	0.0	0.0	0.0	0.0	0.0	42.1	2.7	1.1	0.0	0.0
Max Capacity	mw	159.4	136.2	146.6	143.2	100.3	101.2	140.2	172.3	166.0	160.6	33.7	157.4
Total Project Capacity													
Min Capacity	mw	3.2	2.6	2.6	2.5	3.9	6.2	9.4	48.8	8.4	8.6	3.5	2.4
Max Capacity	mw	162.1	138.8	149.2	145.7	104.2	107.4	149.6	179.0	171.7	168.1	37.2	159.8