

**December 24-Month Study**  
**Date: December 6, 2010**

**From:** Water Resources Group, Salt Lake City  
**To:** All Colorado River Annual Operating Plan (AOP) Recipients

**Current Reservoir Status**

Reservoir	Novemeber Inflow (unregulated) (acre-feet)	Percent of Average (%)	December 5 Midnight Elevation (feet)	Reservoir Storage (acre-feet)
Fontenelle	34,000	79	6489.77	247,000
Flaming Gorge	31,000	56	6023.85	3,127,000
Blue Mesa	27,000	86	7486.74	554,000
Navajo	17,000	50	6061.84	1,390,000
Powell	438,000	81	3629.59	14,807,000

**Expected Operations**

The operation of Lake Powell and Lake Mead in this December 2010 24-Month Study is pursuant to the December 2007 Record of Decision on Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations of Lake Powell and Lake Mead (Interim Guidelines), and reflects the 2010 Annual Operating Plan (AOP) and draft 2011 AOP. Pursuant to the Interim Guidelines, the August 2010 24-Month Study projections of the January 1, 2011 system storage and reservoir water surface elevations set the operational tier for the coordinated operation of Lake Powell and Lake Mead during 2011.

The Lake Powell operational tier for water year 2011 is the Upper Elevation Balancing Tier. The Intentionally Created Surplus (ICS) Surplus condition is the criterion governing the operation of Lake Mead for calendar years 2010 and 2011.

Consistent with Section 6.B.4 of the Interim Guidelines, if the April 24-Month study projects the September 30 Lake Mead elevation to be below 1,075 feet and the September 30, Lake Powell elevation to be at or above 3,575 feet, the Secretary shall balance the contents of Mead and Powell but release not more than 9.0 maf. Consistent with this provision, the December 24-Month Study projects such an adjustment to occur in April, resulting in a water year release from Lake Powell of 9.0 maf.

Based on analysis of a range of inflow scenarios, the current probability of realizing an inflow volume that would trigger Equalization in 2011 is approximately 48 percent.

The Interim Guidelines are available for download at

<http://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>.

The 2010 AOP is available for download at

<http://www.usbr.gov/lc/region/g4000/AOP2010/AOP10.pdf>.

The draft 2011 AOP is available for download at

[http://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP11\\_draft.pdf](http://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP11_draft.pdf).

***Fontenelle Reservoir*** – Inflows for the month of November were 34,000 acre-feet, or 79% of average. The reservoir elevation is 6490 feet above sea level and 66% of capacity. Current inflows are approximately 600cfs and reservoir releases are 900 cfs. Releases will likely be close to 900 cfs for the fall and winter months. The reservoir elevation will continue to decline through the fall and winter.

The Colorado Basin River Forecast Center forecast for water year 2011 (October 2010 to September 2011) shows inflows are expected to be 72% of average. Note that at this time of the year, there is considerable uncertainty in the water year forecast. Inflows over the next three months are forecasted to be below average: 27,000 acre-ft (81%), 24,000 acre-ft (77%), and 25,000 acre-ft (86%) for December, January, and February, respectively.

The next Fontenelle Working Group meeting is scheduled for April 21, 2011 at 10:00 am at the Seedskadee National Wildlife Refuge Visitor Center. The Fontenelle Working Group is an open public forum for information exchange between Reclamation and other parties associated with the operation of Fontenelle Reservoir.

***Flaming Gorge Reservoir*** – November observed unregulated inflow into Flaming Gorge reservoir was 31,000 acre-feet (AF), or 56 percent of average inflow. The November end of month elevation was 6034.8 feet, which equates to 3.12 million acre-feet or 84 percent of live storage capacity. Releases out of Flaming Gorge are following a winter double peak fluctuation pattern with a daily average release rate of 1,150 cfs/day. It is anticipated that they will remain at this level until the end of January, when releases will be reduced to steady 800 cfs flows from the beginning of February until spring runoff occurs sometime in mid- to late-May 2011.

The next Flaming Gorge Working Group meeting is scheduled for April 26, 2011, at 7:00 p.m. in a location to be determined. The Flaming Gorge Working Group is an open public forum for information exchange between Reclamation and the stake holders of Flaming Gorge Dam. The public is encouraged to attend and comment on the operations and plans presented by Reclamation at these meetings. For more information on this group and these meetings please contact Ed Vidmar at 801-379-1182.

**Aspinall Unit Reservoirs** – November unregulated inflow into Blue Mesa Reservoir was 27,000 acre-feet or 86 percent of average. Precipitation during November was observed to be about 80 percent of average. The current inflow rate into Blue Mesa Reservoir is about 450 cfs while reservoir releases are averaging about 500 cfs. Blue Mesa's present elevation is 7486.74 feet, which corresponds to a storage content of about 556,000 acre-feet. The unregulated reservoir inflow into Blue Mesa Reservoir during water year 2009 was 725,000 acre-feet, or about 77 percent of average.

Releases from Crystal Dam are steady at about 500 cfs. This release rate is expected to stay at this level for the winter months. The Gunnison Diversion Tunnel was shut down for the season on November 1<sup>st</sup>, with exception of some small 50 to 80 cfs diversions taken bi-weekly for municipal water needs in Montrose, Colorado. River flows below the tunnel are essentially the same as releases from the Dam.

On December 1, 2010, the National Weather Service's River Forecasting Center issued its forecasted inflow into Blue Mesa for the next 3 months. The unregulated inflow forecast for December, January, and February is for 62,000 acre-feet, which is 87% of average for these months.

The next meeting of the "Aspinall Unit Working Group" will be held on Thursday January 20<sup>th</sup> in the Montrose, Colorado, starting at 1:00 PM. At this meeting, review of last summer and fall reservoir operations, and plans for this winter and next spring 2011 operations will be discussed. These meetings are open forum discussions on the Aspinall Unit reservoir operations with many interested groups participating. Anyone needing further information about these meetings should contact Dan Crabtree in the Grand Junction Area Office at (970) 248-0652.

**Navajo Reservoir** - As a result of forecasted cooler, wetter conditions in the San Juan River Basin, Reclamation decreased the release from Navajo Reservoir to 500 cfs on October 19, 2010. Reservoir releases are made for the authorized purposes of the Navajo Unit, and to attempt to maintain a target base flow through the endangered fish critical habitat reach of the San Juan River (Farmington to Lake Powell).

The San Juan River Basin Recovery Implementation Program recommends a target base flow of between 500 cfs and 1,000 cfs through the critical habitat area. The target base flow is calculated as the weekly average of gaged flows throughout the critical habitat area, therefore daily flows of less than 500 cfs may occur at some gages.

Pending significant changes in the weather and stream flow conditions, the reservoir release will likely remain at 500 cfs until next spring (2010).

Precipitation for the month of November in the San Juan River basin was about 60 percent of average. Unregulated inflow into Navajo Reservoir during the month of November was 17,200 acre-feet, or 50 percent of average. Currently, the daily reservoir inflow is averaging about 200 cfs. Diversions for NIIP have currently been shut down for

the winter. The reservoir water surface elevation is at 6061.84 feet, which corresponds to a storage content of about 1,371,000 acre-feet.

The next public meeting on Navajo Reservoir operations will be held on Tuesday, January 25, 2011 at 1:00 p.m. in Farmington, New Mexico. At this meeting, review of last summer and fall reservoir operations, and plans for this winter and spring 2011 operations will be discussed. These are open forum discussions on the operation of Navajo Reservoir with many interested groups participating. Anyone interested in the general operation of the reservoir is encouraged to attend. Please contact Pat Page in Reclamation's Durango, Colorado Office at (970) 385-6560 for information about these meetings or the daily operation of Navajo Reservoir.

**Glen Canyon Dam / Lake Powell** – During November 2010 the unregulated inflow to Lake Powell was 432 kaf (79% of average). This volume was about equal to the forecasted volume for November by the Colorado Basin River Forecast Center on November 1, 2010 which was 425 kaf (78% of average). Although the inflow to Lake Powell during November was near the level forecasted, the water surface elevation of Lake Powell at the end of November was 0.54 feet below what was projected in the November 24-Month Study. The November 24-Month Study projected that Lake Powell would end November at an elevation of 3630.85 feet above sea level. The elevation of Lake Powell at the end of the day on November 30, 2010 was 3630.31 feet above sea level. This 0.54 foot difference is equivalent to about 60,000 acre-feet of storage in Lake Powell. The end of month storage in Lake Powell for November 2010 was 14.888 maf which is 61.2% of the full capacity of 24.32 maf.

The release volume scheduled for December is 845 kaf which is equivalent to an average daily release rate of approximately 13,750 cfs. Daily fluctuations will likely peak near 16,000 cfs during the morning and afternoon and evening hours. Daily low releases will occur during the early morning hours (i.e. midnight to about 6:00 am) and will be about 8,500 cfs. The projected release volume for January is currently 865 kaf which is equivalent to an average daily release rate of approximately 14,050 cfs. The daily peak and low release rate in January will likely also range from 16,000 cfs to 8,500 cfs respectively.

In addition to the daily fluctuation pattern for power generation, the instantaneous releases from Glen Canyon Dam may also fluctuate somewhat to provide approximately 40 megawatts of system regulation. These instantaneous release adjustments maintain stable conditions within the electrical generation and transmission system and result in momentary release fluctuations within a range that is about 1100 cfs above or below the targeted release rate for a given hour of the day. These momentary fluctuations for regulation are very short lived and typically balance out over the hour. Spinning and non-spinning reserve generation is also maintained at Glen Canyon Dam. When an unanticipated electrical outage event occur within the electrical transmission system, this reserve generation at Glen Canyon Dam can be called upon up to a limit of 98 megawatts

(approximately 2,600 cfs of release) for a duration of up to 2 hours. Under normal circumstances, calls for reserve generation occur fairly infrequently and are for much less than the limit of 98 megawatts.

In August of 2010, the August 2010 24-Month Study Model was used to project the January 1, 2010 elevation of Lake Powell and Lake Mead under the most probable inflow scenario. Pursuant to the Interim Guidelines and based on this August projection, the operational tier for water year 2011 was selected to be the Upper Elevation Balancing Tier. Under the Upper Elevation Balancing Tier, there is a possibility that the annual release volume from Lake Powell could be 8.23 maf. There is also a possibility under this tier that Equalization or Balancing could occur in 2011 which would result in an annual release volume greater than 8.23 maf.

The possibility of Equalization or Balancing in 2011 is dependent on the end of water year 2011 reservoir conditions projected in the April 2011 24-Month Study under the most probable inflow scenario and with 8.23 maf projected for release from Lake Powell during water year 2011. For this reason it will not be known for certain whether Equalization or Balancing will occur in water year 2011 until April 2011. 24-Month Studies prior to April 2011 can project that Equalization or Balancing are likely to occur, but these projections are subject to change with changes in the forecasted hydrology of the Colorado River Basin. It is possible that a relatively small change in forecasted hydrology can have a large impact on the projected annual release volume.

The December 2010 24-Month Study with the most probable inflow and an 8.23 maf release does project that Balancing is likely to occur in 2011. For this reason, the projected most probable annual release volume for water year 2011 in the December 24-Month Study is 9.00 maf. Given the current range of uncertainty of the forecasted hydrology for water year 2011, it is possible that Equalization could occur in water year 2011 which would result if the annual release being greater than about 10.7 maf. Analysis of the probable range of inflows that could occur during water year 2011 indicate that the probability of Equalization occurring in 2011 is currently about 48%.

The current unregulated inflow forecast for Lake Powell projects the most probable unregulated inflow volumes for the next 3 months as follows: December-360 kaf (83% of average); January-350 kaf (86% of average); February-350 kaf (83% of average). The outlook for water year 2011, incorporating this new forecast, projects the most probable unregulated inflow volume to Lake Powell during water year 2011 to be 9.66 maf (80% of average). It is possible that the unregulated volume of inflow to Lake Powell in water year 2011 will be greater than or less than the most probable projection. The probable range of unregulated inflow volumes to Lake Powell during water year 2011 is currently projected to be as dry as 4.5 maf (37% of average) to as wet as 15.8 maf (131% of average).

## **Upper Colorado River Basin Hydrology**

In the Upper Colorado River Basin during water year 2010, the overall precipitation accumulated through September 30, 2009 was approximately 90% of average based on the 30 year average for the period from 1971 through 2000. For Water Year 2010 thus far, the estimated monthly precipitation within the Upper Colorado River Basin (above Lake Powell) as a percentage of average has been: (October - 135%, November - 95%).

The Climate Prediction Center outlook (dated November 18, 2010) for temperature over the next 3 months indicates that temperatures in the Upper Colorado River Basin are expected to be above average while precipitation over the next 3 months is projected to be near average.

## **Upper Colorado River Basin Drought**

The Upper Colorado River Basin continues to experience a protracted multi-year drought. Since 1999, inflow to Lake Powell has been below average in every year except water years 2005 and 2008. In the summer of 1999, Lake Powell was close to full with reservoir storage at 23.5 million acre-feet, or 97 percent of capacity. During the next 5 years (2000 through 2004) unregulated inflow to Lake Powell was well below average. This resulted in Lake Powell storage decreasing during this period to 8.0 million acre-feet (33 percent of capacity) which occurred on April 8, 2005. During 2005, 2008 and 2009, drought conditions eased somewhat with net gains in storage to Lake Powell. As of December 6, 2010 the storage in Lake Powell was approximately 14.79 million acre-feet (60.8 % of capacity) which is below desired levels. The overall reservoir storage in the Colorado River Basin as of December 6, 2010 is approximately 32.29 million acre-feet (54.3 % of capacity).

TO ALL ANNUAL OPERATING PLAN RECIPIENTS

MAILED FROM UPPER COLORADO REGION

WATER RESOURCES GROUP

ATTENTION UC-280

125 SOUTH STATE STREET, ROOM 6107

SALT LAKE CITY, UT 84138-5571

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RUNOFF AND INFLOW PROJECTIONS INTO UPPER BASIN RESERVOIRS ARE PROVIDED BY  
THE COLORADO RIVER FORECASTING SERVICE THROUGH THE NATIONAL WEATHER SERVICES'S  
COLORADO BASIN RIVER FORECAST CENTER AND ARE AS FOLLOWS

:			Obs			nov	Forecast		Outlook	
:	aug	sep	oct	nov	%Avg	dec	jan	feb	apr-jul	%Avg
GLDA3: Lake Powell	505	277	362	438	81%:	360/	350/	350/	/	/
GBRW4: Fontenelle	50	29	31	34	79%:	27/	24/	25/	/	/
GRNU1: Flaming Gorge	54	22	32	31	56%:	34/	31/	32/	/	/
BMDC2: Blue Mesa	56	23	29	27	86%:	23/	21/	18/	/	/
MPSC2: Morrow Point	56	23	30	29	86%:	25/	23/	21/	/	/
CLSC2: Crystal	61	26	34	32	81%:	29/	26/	25/	/	/
TPIC2: Taylor Park	9.6	6.3	6.6	4.6	92%:	4/	3.6/	3/	/	/
VCRC2: Vallecito	18.8	10.2	11.7	6.5	76%:	5/	4.2/	3.5/	/	/
NVRN5: Navajo	39	24	25	17.2	50%:	20/	19/	24/	/	/
LEMC2: Lemon	4.4	1.77	2.4	1.40	82%:	0.88/	0.75/	0.65/	/	/
MPHC2: McPhee	16.6	8.2	6.5	3.7	56%:	4/	3.5/	4/	/	/

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Fontenelle Reservoir

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	Regulated Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft
* Dec 2009	31	1	0	70	71	6485.42	198
H Jan 2010	28	1	38	30	69	6478.10	157
I Feb 2010	23	0	55	0	55	6471.41	125
S Mar 2010	43	0	56	0	56	6468.40	112
T Apr 2010	63	1	47	1	48	6471.88	127
O May 2010	40	1	49	0	49	6469.44	117
R Jun 2010	251	2	50	1	51	6502.04	314
I Jul 2010	134	3	91	22	113	6504.39	333
C Aug 2010	50	2	68	0	68	6501.76	312
A Sep 2010	29	2	26	35	61	6497.33	279
WY 2010	781	14	530	233	763		
L Oct 2010	31	1	5	55	59	6493.24	250
* Nov 2010	34	1	53	1	54	6490.17	229
Dec 2010	27	1	55	0	55	6485.76	201
Jan 2011	24	1	55	0	55	6480.34	169
Feb 2011	25	1	50	0	50	6475.34	143
Mar 2011	41	0	55	0	55	6472.14	128
Apr 2011	74	1	80	0	80	6470.55	121
May 2011	131	1	98	1	98	6477.32	153
Jun 2011	252	2	101	0	101	6500.36	302
Jul 2011	147	3	101	4	105	6505.47	341
Aug 2011	65	2	101	4	105	6500.10	300
Sep 2011	47	2	37	27	65	6497.48	280
WY 2011	898	15	791	91	883		
Oct 2011	48	1	67	0	67	6494.66	260
Nov 2011	41	1	65	0	65	6491.17	236
Dec 2011	32	1	67	0	67	6485.74	201
Jan 2012	30	1	67	0	67	6479.39	163
Feb 2012	28	0	62	0	62	6472.16	129
Mar 2012	52	0	67	0	67	6468.53	113
Apr 2012	89	1	83	0	83	6469.84	118
May 2012	176	1	86	0	86	6486.78	207
Jun 2012	307	2	104	104	208	6500.62	304
Jul 2012	185	3	100	44	144	6505.51	342
Aug 2012	82	2	86	0	86	6504.74	336
Sep 2012	48	2	62	0	62	6502.72	320
WY 2012	1119	15	916	148	1065		
Oct 2012	49	1	65	0	65	6500.48	303
Nov 2012	41	1	62	0	62	6497.55	281

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

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 Flaming Gorge Reservoir

	Unreg Inflow 1000 Ac-Ft	Regulated Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Bank Storage 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft	Yampa Flow 1000 Ac-Ft	Jensen Flow 1000 Ac-Ft
* Dec 2009	19	59	2	107	1	108	131	6027.38	3249	0	504
H Jan 2010	27	68	2	109	0	109	129	6026.29	3208	0	669
I Feb 2010	29	61	2	87	0	87	128	6025.55	3181	0	111
S Mar 2010	69	81	3	60	0	60	129	6026.01	3198	0	118
T Apr 2010	96	81	5	49	0	49	130	6026.69	3223	206	240
O May 2010	72	81	8	101	0	101	129	6025.97	3196	507	551
R Jun 2010	387	187	10	138	0	138	130	6026.97	3234	619	745
I Jul 2010	151	130	13	96	0	96	131	6027.51	3254	78	195
C Aug 2010	54	72	12	100	0	100	129	6026.47	3215	24	138
A Sep 2010	22	54	10	106	0	106	127	6024.83	3154	13	130
WY 2010	1018	1000	79	1167	1	1169					3698
L Oct 2010	32	60	7	77	0	77	126	6024.21	3131	28	113
* Nov 2010	31	52	4	63	0	63	125	6023.83	3117	0	107
Dec 2010	34	62	2	68	0	68	125	6023.65	3111	0	68
Jan 2011	31	62	2	68	0	68	125	6023.46	3104	0	68
Feb 2011	32	57	2	46	0	46	125	6023.70	3112	0	46
Mar 2011	63	77	3	49	0	49	126	6024.36	3137	0	49
Apr 2011	101	107	5	48	0	48	128	6025.79	3189	0	48
May 2011	163	130	8	103	0	103	129	6026.30	3209	0	103
Jun 2011	293	142	10	188	0	188	127	6024.86	3155	0	188
Jul 2011	160	118	13	81	0	81	128	6025.48	3178	0	81
Aug 2011	72	112	12	81	0	81	129	6025.96	3196	0	81
Sep 2011	53	71	11	78	0	78	128	6025.49	3178	0	78
WY 2011	1065	1050	78	947	0	947					1028
Oct 2011	55	74	7	81	0	81	127	6025.15	3166	0	81
Nov 2011	49	72	3	78	0	78	127	6024.91	3157	0	78
Dec 2011	36	70	2	81	0	81	127	6024.61	3146	0	81
Jan 2012	41	77	2	81	0	81	126	6024.48	3141	0	81
Feb 2012	46	80	2	75	0	75	126	6024.56	3144	0	75
Mar 2012	104	119	3	81	0	81	128	6025.48	3178	0	81
Apr 2012	142	136	5	78	0	78	130	6026.86	3229	0	78
May 2012	265	175	8	105	0	105	132	6028.44	3289	0	105
Jun 2012	399	300	11	212	0	212	135	6030.38	3364	0	212
Jul 2012	218	178	14	135	0	135	136	6031.08	3391	0	135
Aug 2012	96	100	13	135	0	135	134	6029.89	3345	0	135
Sep 2012	58	72	11	131	0	131	132	6028.14	3278	0	131
WY 2012	1510	1455	80	1272	0	1272					1272
Oct 2012	59	75	7	135	0	135	129	6026.42	3213	0	135
Nov 2012	50	71	3	131	0	131	127	6024.79	3153	0	131

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Taylor Park Reservoir

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	Regulated Inflow 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft
* Dec 2009	4	6	9309.18	69
H Jan 2010	4	6	9307.90	67
I Feb 2010	4	6	9306.55	65
S Mar 2010	4	6	9305.31	63
T Apr 2010	11	6	9308.40	67
O May 2010	22	9	9316.36	80
R Jun 2010	35	18	9325.55	97
I Jul 2010	10	20	9320.19	87
C Aug 2010	10	17	9316.06	80
A Sep 2010	6	14	9311.57	72
WY 2010	121	122		
L Oct 2010	7	6	9312.21	73
* Nov 2010	5	4	9312.27	74
Dec 2010	4	6	9311.04	72
Jan 2011	4	6	9309.54	69
Feb 2011	3	6	9307.61	66
Mar 2011	3	6	9305.63	63
Apr 2011	7	6	9305.96	64
May 2011	24	13	9312.94	75
Jun 2011	37	20	9322.55	92
Jul 2011	16	20	9320.39	88
Aug 2011	8	13	9317.61	83
Sep 2011	6	13	9313.54	76
WY 2011	123	120		
Oct 2011	6	10	9310.85	71
Nov 2011	5	6	9310.02	70
Dec 2011	4	6	9309.05	68
Jan 2012	4	6	9307.90	67
Feb 2012	4	6	9306.45	64
Mar 2012	4	6	9305.28	63
Apr 2012	8	8	9305.84	63
May 2012	27	14	9314.13	77
Jun 2012	43	20	9326.66	100
Jul 2012	20	22	9325.85	98
Aug 2012	10	22	9319.46	86
Sep 2012	7	16	9314.30	77
WY 2012	143	141		
Oct 2012	6	10	9312.00	73
Nov 2012	5	6	9311.33	72

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Blue Mesa Reservoir

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	Unreg Inflow 1000 Ac-Ft	Regulated Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir elevation EOM Feet	Live Storage 1000 Ac-Ft
* Dec 2009	21	23	0	47	0	47	7489.73	579
H Jan 2010	22	24	0	43	0	43	7487.22	560
I Feb 2010	22	24	0	38	0	38	7485.33	546
S Mar 2010	29	30	0	33	0	33	7484.88	542
T Apr 2010	96	92	1	45	0	45	7490.80	588
O May 2010	143	131	1	110	6	116	7492.59	602
R Jun 2010	205	186	1	51	0	51	7508.76	735
I Jul 2010	50	60	1	98	0	98	7504.17	696
C Aug 2010	56	63	1	92	0	92	7500.54	666
A Sep 2010	23	31	1	86	0	86	7493.54	609
WY 2010	725	726	8	754	6	760		
L Oct 2010	29	29	1	85	0	85	7486.20	552
* Nov 2010	27	27	0	24	0	24	7486.60	555
Dec 2010	23	25	0	27	0	27	7486.31	553
Jan 2011	21	23	0	26	0	26	7485.95	550
Feb 2011	18	21	0	21	0	21	7485.92	550
Mar 2011	28	31	0	29	0	29	7486.13	552
Apr 2011	70	69	1	41	0	41	7489.75	579
May 2011	185	174	1	89	0	89	7500.24	663
Jun 2011	225	208	1	67	0	67	7516.40	802
Jul 2011	90	94	2	109	0	109	7514.55	786
Aug 2011	48	53	1	122	0	122	7506.50	716
Sep 2011	35	42	1	113	0	113	7497.85	644
WY 2011	799	796	9	753	0	753		
Oct 2011	35	39	1	58	0	58	7495.45	624
Nov 2011	30	31	0	28	0	28	7495.86	628
Dec 2011	25	27	0	73	0	73	7490.00	581
Jan 2012	24	26	0	79	0	79	7482.99	528
Feb 2012	22	24	0	56	0	56	7478.63	496
Mar 2012	34	36	0	36	0	36	7478.57	496
Apr 2012	73	72	1	48	0	48	7481.78	519
May 2012	212	199	1	110	0	110	7493.30	607
Jun 2012	271	248	1	62	0	62	7515.21	792
Jul 2012	121	122	2	110	0	110	7516.40	802
Aug 2012	62	74	1	122	0	122	7510.78	753
Sep 2012	36	45	1	113	0	113	7502.73	684
WY 2012	945	944	9	895	0	895		
Oct 2012	36	39	1	58	0	58	7500.42	665
Nov 2012	31	32	0	28	0	28	7500.83	668

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Morrow Point Reservoir

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	Unreg Inflow 1000 Ac-Ft	Blue_Mesa Release 1000 Ac-Ft	Side Inflow 1000 Ac-Ft	Total Inflow 1000 Ac-Ft	Evap losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft
* Dec 2009	22	47	1	48	0	47	0	47	7153.12	112
H Jan 2010	24	43	2	45	0	47	0	47	7150.49	109
I Feb 2010	22	38	1	38	0	41	0	41	7147.10	107
S Mar 2010	29	33	1	34	0	34	0	34	7147.29	107
T Apr 2010	107	45	11	57	0	55	0	55	7149.84	109
O May 2010	159	116	16	132	0	129	0	129	7154.46	113
R Jun 2010	216	51	12	63	0	64	0	64	7153.15	112
I Jul 2010	51	98	1	98	0	96	0	96	7156.02	114
C Aug 2010	56	92	1	93	0	93	0	93	7155.63	114
A Sep 2010	23	86	0	87	0	92	0	92	7148.78	108
WY 2010	773	760	48	807	1	805	0	805		
L Oct 2010	30	85	1	86	0	82	0	82	7153.88	112
* Nov 2010	29	24	1	25	0	26	0	26	7152.79	111
Dec 2010	25	27	2	29	0	28	0	28	7153.73	112
Jan 2011	23	26	2	28	0	28	0	28	7153.73	112
Feb 2011	21	21	3	24	0	24	0	24	7153.73	112
Mar 2011	31	29	3	32	0	32	0	32	7153.73	112
Apr 2011	80	41	10	51	0	51	0	51	7153.73	112
May 2011	205	89	20	109	0	109	0	109	7153.73	112
Jun 2011	245	67	20	87	0	87	0	87	7153.73	112
Jul 2011	95	109	5	114	0	114	0	114	7153.73	112
Aug 2011	50	122	2	124	0	124	0	124	7153.73	112
Sep 2011	37	113	2	115	0	115	0	115	7153.73	112
WY 2011	871	753	71	825	0	821	0	821		
Oct 2011	37	58	2	60	0	60	0	60	7153.73	112
Nov 2011	32	28	2	30	0	30	0	30	7153.73	112
Dec 2011	27	73	2	75	0	75	0	75	7153.73	112
Jan 2012	26	79	2	81	0	81	0	81	7153.73	112
Feb 2012	25	56	3	59	0	59	0	59	7153.73	112
Mar 2012	38	36	4	40	0	40	0	40	7153.73	112
Apr 2012	84	48	11	59	0	59	0	59	7153.73	112
May 2012	237	110	25	135	0	135	0	135	7153.73	112
Jun 2012	292	62	21	83	0	83	0	83	7153.73	112
Jul 2012	127	110	7	117	0	117	0	117	7153.73	112
Aug 2012	65	122	4	126	0	126	0	126	7153.73	112
Sep 2012	39	113	3	116	0	116	0	116	7153.73	112
WY 2012	1031	895	86	981	0	981	0	981		
Oct 2012	38	58	3	61	0	61	0	61	7153.73	112
Nov 2012	33	28	2	30	0	30	0	30	7153.73	112

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Crystal Reservoir

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	unreg Inflow 1000 Ac-Ft	Morrow Release 1000 Ac-Ft	Side Inflow 1000 Ac-Ft	Total Inflow 1000 Ac-Ft	Power Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft	Tunnel Flow 1000 Ac-Ft	Below_tunnel Flow 1000 Ac-Ft
* Dec 2009	25	47	3	51	52	0	52	6743.59	14	1	53
H Jan 2010	26	47	3	50	49	0	49	6745.38	15	1	50
I Feb 2010	25	41	3	44	25	17	42	6751.67	17	1	43
S Mar 2010	33	34	4	38	38	0	38	6751.84	17	1	38
T Apr 2010	118	55	11	66	66	0	66	6750.96	16	34	34
O May 2010	179	129	20	148	108	39	148	6752.53	17	60	91
R Jun 2010	242	64	25	89	89	0	89	6752.91	17	56	39
I Jul 2010	55	96	4	100	100	0	100	6751.15	16	69	39
C Aug 2010	61	93	5	98	98	0	98	6749.05	16	68	37
A Sep 2010	26	92	3	95	95	0	95	6748.16	16	63	36
WY 2010	859	805	86	891	824	67	890			414	528
L Oct 2010	34	82	4	86	85	0	85	6750.41	16	51	33
* Nov 2010	32	26	4	30	30	0	30	6748.60	16	0	29
Dec 2010	29	28	4	32	31	0	31	6753.04	17	0	31
Jan 2011	26	28	3	31	31	0	31	6753.04	17	0	31
Feb 2011	25	24	4	28	28	0	28	6753.04	17	0	28
Mar 2011	35	32	4	36	36	0	36	6753.04	17	5	31
Apr 2011	92	51	12	63	63	0	63	6753.04	17	30	33
May 2011	230	109	25	134	134	0	134	6753.04	17	55	79
Jun 2011	275	87	30	117	117	0	117	6753.04	17	60	57
Jul 2011	105	114	10	124	124	0	124	6753.04	17	65	59
Aug 2011	56	124	6	130	130	0	130	6753.04	17	65	65
Sep 2011	43	115	6	121	121	0	121	6753.04	17	55	66
WY 2011	982	821	111	932	930	0	930			386	542
Oct 2011	43	60	6	66	66	0	66	6753.04	17	30	36
Nov 2011	37	30	5	35	35	0	35	6753.04	17	0	35
Dec 2011	32	75	5	80	80	0	80	6753.04	17	0	80
Jan 2012	31	81	5	86	86	0	86	6753.04	17	0	86
Feb 2012	29	59	4	63	63	0	63	6753.04	17	0	63
Mar 2012	46	40	7	47	47	0	47	6753.04	17	5	42
Apr 2012	96	59	12	71	71	0	71	6753.04	17	30	41
May 2012	272	135	35	170	134	36	170	6753.04	17	55	115
Jun 2012	330	83	38	122	122	0	122	6753.04	17	60	62
Jul 2012	144	117	17	134	134	0	134	6753.04	17	65	69
Aug 2012	74	126	8	134	134	0	134	6753.04	17	65	69
Sep 2012	45	116	6	122	122	0	122	6753.04	17	55	67
WY 2012	1181	981	150	1131	1095	36	1131			365	766
Oct 2012	44	61	6	67	67	0	67	6753.04	17	30	37
Nov 2012	38	30	5	35	35	0	35	6753.04	17	0	35

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Vallecito Reservoir

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	Regulated Inflow 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft
* Dec 2009	4	3	7630.60	46
H Jan 2010	4	3	7631.27	47
I Feb 2010	3	4	7630.95	46
S Mar 2010	3	8	7628.45	42
T Apr 2010	27	4	7640.13	65
O May 2010	69	20	7660.32	113
R Jun 2010	46	42	7661.51	116
I Jul 2010	12	37	7651.21	90
C Aug 2010	19	33	7645.00	75
A Sep 2010	10	26	7637.70	59
WY 2010	209	195		
L Oct 2010	12	13	7636.95	58
* Nov 2010	7	2	7639.20	63
Dec 2010	5	2	7640.65	66
Jan 2011	4	2	7641.71	68
Feb 2011	3	2	7642.51	70
Mar 2011	6	2	7644.29	74
Apr 2011	19	10	7647.89	82
May 2011	62	31	7660.16	113
Jun 2011	75	62	7664.83	125
Jul 2011	25	43	7657.79	106
Aug 2011	17	39	7648.63	84
Sep 2011	15	29	7641.99	69
WY 2011	249	237		
Oct 2011	12	20	7638.28	61
Nov 2011	8	6	7639.19	63
Dec 2011	6	5	7639.84	64
Jan 2012	5	3	7640.79	66
Feb 2012	5	3	7641.62	68
Mar 2012	8	3	7643.80	73
Apr 2012	22	10	7648.71	84
May 2012	69	45	7658.36	108
Jun 2012	78	60	7664.84	125
Jul 2012	31	43	7660.05	112
Aug 2012	19	39	7651.98	92
Sep 2012	17	29	7646.76	79
WY 2012	280	266		
Oct 2012	14	13	7646.99	80
Nov 2012	8	6	7647.98	82

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Navajo Reservoir

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	Mod_Unreg Inflow 1000 Ac-Ft	Azetea Tunnel_Div 1000 Ac-Ft	Reg Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	NIIP Diversion 1000 ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Live Storage 1000 Ac-Ft	Farm Flow 1000 Ac-Ft
* Dec 2009	13	0	12	1	0	32	6051.61	1245	48
H Jan 2010	15	0	14	1	0	32	6050.04	1226	49
I Feb 2010	16	0	16	1	0	27	6049.04	1214	43
S Mar 2010	64	1	68	1	3	31	6051.78	1247	52
T Apr 2010	222	22	179	2	12	28	6062.79	1384	75
O May 2010	264	35	182	4	26	30	6071.80	1506	126
R Jun 2010	152	27	116	5	40	33	6074.50	1544	118
I Jul 2010	15	2	39	5	47	58	6069.52	1474	72
C Aug 2010	39	2	52	4	35	41	6067.48	1446	69
A Sep 2010	24	1	39	3	25	45	6064.97	1412	57
WY 2010	855	89	753	29	202	423			801
L Oct 2010	25	0	27	2	8	36	6063.49	1393	46
* Nov 2010	17	0	12	1	1	29	6062.08	1374	46
Dec 2010	20	0	17	1	0	32	6060.82	1358	32
Jan 2011	19	0	17	1	0	32	6059.58	1343	32
Feb 2011	24	0	22	1	0	27	6059.14	1337	27
Mar 2011	77	1	72	2	4	31	6061.93	1372	31
Apr 2011	140	16	115	3	17	30	6066.95	1439	30
May 2011	260	35	194	4	29	85	6072.45	1515	85
Jun 2011	240	27	200	5	44	147	6072.78	1520	147
Jul 2011	45	4	59	5	47	37	6070.72	1491	37
Aug 2011	26	2	47	4	39	42	6067.92	1452	42
Sep 2011	34	1	48	3	22	36	6066.94	1439	36
WY 2011	927	86	829	29	211	563			590
Oct 2011	35	0	43	2	8	31	6067.11	1441	31
Nov 2011	31	0	29	1	0	30	6066.97	1439	30
Dec 2011	24	0	22	1	0	31	6066.30	1430	31
Jan 2012	22	0	20	1	0	31	6065.42	1418	31
Feb 2012	30	0	29	1	0	28	6065.40	1418	28
Mar 2012	88	1	83	2	4	50	6067.43	1445	50
Apr 2012	174	16	146	3	17	60	6072.28	1512	60
May 2012	279	35	219	4	29	200	6071.29	1499	200
Jun 2012	246	27	201	5	44	212	6066.99	1439	212
Jul 2012	74	4	82	5	47	37	6066.56	1434	37
Aug 2012	43	2	62	4	39	42	6064.79	1410	42
Sep 2012	42	1	54	3	22	36	6064.21	1402	36
WY 2012	1089	85	989	29	210	786			786
Oct 2012	40	0	40	2	8	31	6064.16	1402	31
Nov 2012	33	0	31	1	0	30	6064.14	1401	30

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Lake Powell

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	Unreg Inflow 1000 Ac-Ft	Regulated Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	PowerPlant Release 1000 Ac-Ft	Bypass Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Reservoir Elevation EOM Feet	Bank Storage 1000 Ac-Ft	EOM Storage 1000 Ac-Ft	Lees Ferry 1000 Ac-Ft
* Dec 2009	308	437	30	901	0	901	3626.22	18066	14434	925
H Jan 2010	302	425	9	900	0	900	3622.14	18023	13991	925
I Feb 2010	294	384	10	631	0	631	3620.16	17978	13780	644
S Mar 2010	477	474	17	602	0	602	3619.41	17912	13701	612
T Apr 2010	944	717	26	602	0	602	3620.50	17886	13816	614
O May 2010	1399	1224	32	601	0	601	3625.96	17887	14405	612
R Jun 2010	2776	2321	53	601	0	601	3638.82	18096	15864	612
I Jul 2010	674	706	65	802	0	802	3636.52	18203	15596	824
C Aug 2010	504	608	64	802	0	802	3634.55	18172	15369	826
A Sep 2010	277	461	58	480	0	480	3633.66	18197	15267	490
WY 2010	8737	8777	444	8234	0	8235				8419
L Oct 2010	362	512	41	495	0	495	3634.08	18125	15315	502
* Nov 2010	438	474	39	810	0	810	3630.31	18178	14888	826
Dec 2010	360	408	30	845	0	845	3626.41	18143	14455	845
Jan 2011	350	404	9	865	0	865	3622.41	18108	14020	865
Feb 2011	350	370	10	820	0	820	3618.40	18074	13594	820
Mar 2011	550	496	16	805	0	805	3615.51	18050	13293	805
Apr 2011	850	690	25	716	0	716	3615.05	18046	13245	716
May 2011	1900	1633	31	710	0	710	3622.89	18112	14071	710
Jun 2011	2500	2215	51	738	0	738	3634.75	18218	15391	738
Jul 2011	1050	1032	64	845	0	845	3635.74	18227	15505	845
Aug 2011	500	639	64	875	0	875	3633.32	18205	15228	875
Sep 2011	450	578	58	476	0	476	3633.68	18208	15269	476
WY 2011	9660	9451	438	9000	0	9000				9023
Oct 2011	507	559	41	492	0	492	3633.89	18210	15293	492
Nov 2011	520	546	39	800	0	800	3631.50	18188	15022	800
Dec 2011	414	513	30	950	0	950	3627.63	18154	14589	950
Jan 2012	384	487	9	950	0	950	3623.63	18119	14152	950
Feb 2012	398	459	10	900	0	900	3619.73	18085	13734	900
Mar 2012	628	573	16	900	0	900	3616.69	18060	13416	900
Apr 2012	950	780	25	1050	0	1050	3614.05	18038	13142	1050
May 2012	2161	1884	31	1125	0	1125	3620.51	18092	13817	1125
Jun 2012	2811	2452	50	1165	0	1165	3630.97	18184	14962	1165
Jul 2012	1346	1265	62	1225	0	1225	3630.79	18182	14942	1225
Aug 2012	566	706	61	1194	0	1194	3626.22	18141	14433	1194
Sep 2012	460	626	55	714	0	714	3625.00	18131	14300	714
WY 2012	11144	10848	429	11465	0	11465				11465
Oct 2012	514	611	38	738	0	738	3623.59	18118	14147	738
Nov 2012	523	598	36	800	0	800	3621.54	18101	13927	800

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Hoover Dam - Lake Mead

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	Glen Release 1000 Ac-Ft	Side Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Total Release 1000 Ac-Ft	Total Release 1000 CFS	SNWP Use 1000 Ac-Ft	Dwnstrm Reqmnts 1000 Ac-Ft	Bank Storage 1000 Ac-Ft	Reservoir Elevation EOM Feet	EOM Storage 1000 Ac-Ft
* Dec 2009	901	51	39	646	10.5	9	629	726	1096.30	11162
H Jan 2010	900	124	32	634	10.3	6	578	747	1100.02	11493
I Feb 2010	631	112	30	400	7.2	6	399	766	1103.21	11780
S Mar 2010	602	87	33	889	14.5	12	868	751	1100.66	11550
T Apr 2010	602	138	41	933	15.7	19	856	735	1098.00	11313
O May 2010	601	87	47	961	15.6	28	933	714	1094.30	10987
R Jun 2010	601	30	55	1007	16.9	27	1006	686	1089.30	10556
I Jul 2010	802	29	68	941	15.3	33	937	673	1086.97	10357
C Aug 2010	802	126	72	829	13.5	33	823	673	1086.91	10352
A Sep 2010	480	82	59	758	12.7	23	755	656	1083.81	10092
WY 2010	8235	928	564	9260		235	9039			
L Oct 2010	495	80	42	638	10.4	24	607	648	1082.36	9971
* Nov 2010	810	13	42	800	13.4	17	794	646	1081.94	9936
Dec 2010	845	57	37	641	10.4	7	641	659	1084.39	10140
Jan 2011	865	135	30	692	11.3	20	692	675	1087.26	10382
Feb 2011	820	135	28	619	11.1	18	619	693	1090.46	10655
Mar 2011	805	101	32	1010	16.4	24	1010	683	1088.70	10505
Apr 2011	716	71	39	1127	18.9	20	1127	658	1084.27	10130
May 2011	710	73	44	1006	16.4	31	1006	640	1080.91	9851
Jun 2011	738	28	53	883	14.8	26	883	628	1078.67	9667
Jul 2011	845	61	65	894	14.5	28	894	623	1077.73	9590
Aug 2011	875	106	69	778	12.7	31	778	630	1078.91	9686
Sep 2011	476	71	57	660	11.1	22	660	618	1076.68	9505
WY 2011	9000	930	539	9747		269	9710			
Oct 2011	492	55	41	488	7.9	26	488	617	1076.58	9497
Nov 2011	800	54	41	615	10.3	25	615	628	1078.57	9658
Dec 2011	950	57	36	590	9.6	21	590	650	1082.67	9997
Jan 2012	950	135	30	684	11.1	20	684	671	1086.61	10327
Feb 2012	900	135	28	669	11.6	21	669	691	1090.10	10624
Mar 2012	900	101	32	1004	16.3	28	1004	687	1089.41	10565
Apr 2012	1050	71	39	1139	19.1	22	1139	679	1087.99	10444
May 2012	1125	73	45	985	16.0	32	985	687	1089.49	10572
Jun 2012	1165	28	55	841	14.1	29	841	703	1092.25	10809
Jul 2012	1225	61	70	888	14.4	31	888	721	1095.45	11087
Aug 2012	1194	106	75	811	13.2	32	811	744	1099.46	11442
Sep 2012	714	71	63	681	11.4	27	681	745	1099.60	11455
WY 2012	11465	946	556	9395		316	9395			
Oct 2012	738	55	46	465	7.6	39	465	759	1102.14	11684
Nov 2012	800	54	46	575	9.7	28	575	772	1104.26	11876

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
 Davis Dam - Lake Mohave

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	Hoover Release 1000 Ac-Ft	Side inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Power Release 1000 Ac-Ft	Spill Release 1000 Ac-Ft	Total Release 1000 Ac-Ft	Total Release 1000 CFS	Reservoir Elevation EOM Feet	EOM Storage 1000 Ac-Ft
* Dec 2009	646	-24	9	532	0	532	8.7	638.68	1582
H Jan 2010	634	-15	10	456	0	456	7.4	644.34	1736
I Feb 2010	400	-4	10	442	0	442	8.0	642.31	1680
S Mar 2010	889	-18	13	862	0	862	14.0	642.17	1676
T Apr 2010	933	-17	17	878	0	878	14.8	642.94	1697
O May 2010	961	-19	22	937	0	937	15.2	642.30	1680
R Jun 2010	1007	-23	25	912	0	912	15.3	643.98	1726
I Jul 2010	941	-14	26	913	0	913	14.8	643.57	1714
C Aug 2010	829	-12	23	838	0	838	13.6	641.95	1670
A Sep 2010	758	-2	18	833	0	833	14.0	638.40	1575
WY 2010	9260	-172	197	8816	0	8816			
L Oct 2010	638	6	15	766	0	766	12.5	633.10	1437
* Nov 2010	800	-29	10	631	0	631	10.6	638.09	1567
Dec 2010	641	-12	9	604	0	604	9.8	638.70	1583
Jan 2011	692	-13	10	580	0	580	9.4	642.00	1671
Feb 2011	619	-5	10	604	0	604	10.9	642.00	1671
Mar 2011	1010	-14	13	954	0	954	15.5	643.05	1700
Apr 2011	1127	-15	17	1097	0	1097	18.4	643.00	1699
May 2011	1006	-10	22	974	0	974	15.8	643.00	1699
Jun 2011	883	-2	25	882	0	882	14.8	642.00	1671
Jul 2011	894	3	25	885	0	885	14.4	641.50	1658
Aug 2011	778	-3	23	752	0	752	12.2	641.50	1658
Sep 2011	660	1	18	737	0	737	12.4	638.00	1564
WY 2011	9747	-93	197	9467	0	9467			
Oct 2011	488	5	15	608	0	608	9.9	633.00	1434
Nov 2011	615	-9	10	544	0	544	9.1	635.00	1486
Dec 2011	590	-12	9	471	0	471	7.7	638.71	1583
Jan 2012	684	-13	10	577	0	577	9.4	641.80	1666
Feb 2012	669	-5	10	655	0	655	11.4	641.80	1666
Mar 2012	1004	-14	13	943	0	943	15.3	643.05	1700
Apr 2012	1139	-15	17	1108	0	1108	18.6	643.00	1699
May 2012	985	-10	22	953	0	953	15.5	643.00	1699
Jun 2012	841	-2	25	841	0	841	14.1	642.00	1671
Jul 2012	888	3	25	880	0	880	14.3	641.50	1658
Aug 2012	811	-3	23	785	0	785	12.8	641.50	1658
Sep 2012	681	1	18	758	0	758	12.7	638.00	1564
WY 2012	9395	-73	197	9124	0	9124			
Oct 2012	465	5	15	585	0	585	9.5	633.00	1434
Nov 2012	575	-9	10	504	0	504	8.5	635.00	1486

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
 Parker Dam - Lake Havasu

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	Davis Release 1000 Ac-Ft	Side Inflow 1000 Ac-Ft	Evap Losses 1000 Ac-Ft	Total Release 1000 Ac-Ft	Total Release 1000 CFS	MWD Diversion 1000 Ac-Ft	CAP diversion 1000 Ac-Ft	Reservoir Elevation EOM Feet	EOM Storage 1000 Ac-Ft	Flow_to Mexico 1000 Ac-Ft	Flow_to Mexico 1000 CFS
* Dec 2009	532	28	7	301	4.9	104	149	447.34	568	135	2.2
H Jan 2010	456	41	6	233	3.8	99	126	448.89	597	174	2.8
I Feb 2010	442	10	8	331	6.0	66	91	446.29	548	141	2.5
S Mar 2010	862	55	9	668	10.9	90	128	447.15	564	233	3.8
T Apr 2010	878	34	11	670	11.3	43	153	448.61	592	210	3.5
O May 2010	937	24	13	662	10.8	102	172	448.83	596	114	1.9
R Jun 2010	912	23	16	650	10.9	91	171	448.64	592	113	1.9
I Jul 2010	913	17	17	743	12.1	107	50	448.61	592	126	2.1
C Aug 2010	838	21	17	646	10.5	108	84	448.20	584	101	1.6
A Sep 2010	833	17	15	583	9.8	98	171	446.95	560	93	1.6
WY 2010	8816	318	140	6300		1043	1572			1618	
L Oct 2010	766	25	12	465	7.6	102	166	449.14	602	106	1.7
* Nov 2010	631	38	9	428	7.2	98	159	447.59	572	115	1.9
Dec 2010	604	20	7	341	5.5	99	184	447.00	561	118	1.9
Jan 2011	580	34	6	363	5.9	99	141	447.00	561	122	2.0
Feb 2011	604	40	8	452	8.1	31	157	446.50	552	153	2.8
Mar 2011	954	45	9	708	11.5	97	174	446.70	555	208	3.4
Apr 2011	1097	15	11	793	13.3	94	167	448.70	593	200	3.4
May 2011	974	11	13	704	11.5	97	159	448.70	593	111	1.8
Jun 2011	882	7	16	675	11.3	94	91	448.70	593	112	1.9
Jul 2011	885	14	17	733	11.9	75	74	448.00	580	118	1.9
Aug 2011	752	20	17	618	10.1	65	69	447.50	571	92	1.5
Sep 2011	737	13	15	526	8.8	64	149	446.81	557	89	1.5
WY 2011	9467	281	140	6806		1016	1690			1545	
Oct 2011	608	20	12	438	7.1	65	114	446.31	548	72	1.2
Nov 2011	544	22	8	372	6.2	64	112	446.50	552	105	1.8
Dec 2011	471	20	6	287	4.7	68	126	446.50	552	118	1.9
Jan 2012	577	34	6	347	5.6	88	165	446.50	552	122	2.0
Feb 2012	655	40	8	444	7.7	80	156	446.50	552	153	2.7
Mar 2012	943	45	9	704	11.4	88	174	446.70	555	208	3.4
Apr 2012	1108	15	11	813	13.7	86	166	448.70	593	200	3.4
May 2012	953	11	13	692	11.3	89	159	448.70	593	111	1.8
Jun 2012	841	7	16	641	10.8	86	90	448.70	593	112	1.9
Jul 2012	880	14	17	715	11.6	88	72	448.00	580	118	1.9
Aug 2012	785	20	17	628	10.2	88	68	447.50	571	92	1.5
Sep 2012	758	13	15	548	9.2	64	148	446.81	557	89	1.5
WY 2012	9124	260	139	6628		957	1551			1500	
Oct 2012	585	20	12	455	7.4	27	113	446.31	548	72	1.2
Nov 2012	504	22	8	371	6.2	26	111	446.50	552	105	1.8

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Hoover Dam - Lake Mead

06-dec-2010 16:29:51

	Power Release 1000 Ac-Ft	Power Release 1000 CFS	EOM Reservoir Elevation Feet	EOM Storage 1000 Ac-Ft	Change_In Storage 1000 Ac-Ft	Hoover Static Head Feet	Hoover Generator Capacity MW	Hoover Gross Energy MKWH	Percent Of Units Available	KWH/AF
* Dec 2009	646	10.5	1096.30	11162	243	451.68	1037.0	248.8	63	385.3
H Jan 2010	634	10.3	1100.02	11493	330	452.24	1050.0	248.9	63	392.4
I Feb 2010	400	7.2	1103.21	11780	288	456.23	1044.0	152.7	63	381.5
S Mar 2010	889	14.5	1100.66	11550	-230	452.57	1272.0	353.9	75	398.0
T Apr 2010	933	15.7	1098.00	11313	-237	451.78	1392.0	370.4	82	397.0
O May 2010	961	15.6	1094.30	10987	-326	449.26	1371.0	378.0	82	393.4
R Jun 2010	1007	16.9	1089.30	10556	-431	442.32	1556.0	390.5	94	387.7
I Jul 2010	941	15.3	1086.97	10357	-198	441.50	1640.0	360.3	100	382.9
C Aug 2010	829	13.5	1086.91	10352	-5	443.45	1617.0	313.3	100	378.0
A Sep 2010	758	12.7	1083.81	10092	-261	439.46	1617.0	285.1	100	375.9
WY 2010	9260							3589.4		
L Oct 2010	638	10.4	1082.36	9971	-121	440.25	1104.0	241.3	68	378.5
* Nov 2010	800	13.4	1081.94	9936	-35	437.87	1185.0	305.1	74	381.4
Dec 2010	641	10.4	1084.39	10140	204	434.02	1388.0	249.2	87	388.6
Jan 2011	692	11.3	1087.26	10382	242	436.09	1305.0	269.2	81	389.1
Feb 2011	619	11.1	1090.46	10655	272	437.31	1428.0	240.2	87	388.4
Mar 2011	1010	16.4	1088.70	10505	-150	438.27	1330.0	399.3	82	395.4
Apr 2011	1127	18.9	1084.27	10130	-375	433.87	1458.0	447.3	91	396.8
May 2011	1006	16.4	1080.91	9851	-279	429.09	1579.0	384.7	100	382.5
Jun 2011	883	14.8	1078.67	9667	-184	426.64	1566.0	337.7	100	382.5
Jul 2011	894	14.5	1077.73	9590	-77	425.55	1561.0	340.3	100	380.6
Aug 2011	778	12.7	1078.91	9686	96	425.83	1567.0	298.3	100	383.3
Sep 2011	660	11.1	1076.68	9505	-181	426.45	1555.0	249.3	100	377.6
WY 2011	9747							3761.7		
Oct 2011	488	7.9	1076.58	9497	-8	428.76	1358.0	187.0	87	383.3
Nov 2011	615	10.3	1078.57	9658	161	434.06	970.0	241.7	62	392.9
Dec 2011	590	9.6	1082.67	9997	338	433.19	1284.0	227.0	81	384.7
Jan 2012	684	11.1	1086.61	10327	330	435.70	1194.0	266.3	74	389.5
Feb 2012	669	11.6	1090.10	10624	297	437.54	1335.0	262.3	82	391.9
Mar 2012	1004	16.3	1089.41	10565	-59	438.60	1320.0	397.0	81	395.6
Apr 2012	1139	19.1	1087.99	10444	-121	437.15	1314.0	459.3	81	403.4
May 2012	985	16.0	1089.49	10572	128	435.18	1620.0	380.8	100	386.6
Jun 2012	841	14.1	1092.25	10809	237	437.62	1620.0	335.1	100	398.3
Jul 2012	888	14.4	1095.45	11087	279	441.07	1620.0	357.3	100	402.2
Aug 2012	811	13.2	1099.46	11442	355	444.81	1620.0	325.4	100	401.3
Sep 2012	681	11.4	1099.60	11455	13	448.01	1620.0	270.2	100	396.7
WY 2012	9395							3709.4		
Oct 2012	465	7.6	1102.14	11684	228	452.84	1415.7	185.3	87	398.7
Nov 2012	575	9.7	1104.26	11876	192	459.57	1003.4	235.3	62	409.4

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
 Davis Dam - Lake Mohave

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	Power Release 1000 Ac-Ft	Power Release 1000 CFS	EOM Reservoir Elevation Feet	EOM Storage 1000 Ac-Ft	Change_In Storage 1000 Ac-Ft	Davis Static Head Feet	Davis Generator Capacity MW	Davis Gross Energy MKWH	Percent Of Units Available	KWH/AF
* Dec 2009	532	8.7	638.68	1582	81	139.08	188.7	65.9	74	123.8
H Jan 2010	456	7.4	644.34	1736	153	144.98	204.0	57.9	80	127.1
I Feb 2010	442	8.0	642.31	1680	-56	138.83	216.8	56.9	85	128.6
S Mar 2010	862	14.0	642.17	1676	-4	138.67	249.9	109.8	98	127.5
T Apr 2010	878	14.8	642.94	1697	21	141.04	255.0	111.0	100	126.4
O May 2010	937	15.2	642.30	1680	-17	140.64	255.0	118.5	100	126.4
R Jun 2010	912	15.3	643.98	1726	46	140.66	255.0	115.5	100	126.6
I Jul 2010	913	14.8	643.57	1714	-11	141.98	242.2	115.3	95	126.4
C Aug 2010	838	13.6	641.95	1670	-44	140.67	255.0	105.9	100	126.4
A Sep 2010	833	14.0	638.40	1575	-95	137.24	255.0	102.6	100	123.1
WY 2010	8816							1104.5		
L Oct 2010	766	12.5	633.10	1437	-138	129.52	209.1	92.1	82	120.2
* Nov 2010	631	10.6	638.09	1567	130	137.83	153.0	77.2	60	122.5
Dec 2010	604	9.8	638.70	1583	16	134.12	160.7	74.2	63	122.9
Jan 2011	580	9.4	642.00	1671	89	136.41	153.0	72.4	60	124.8
Feb 2011	604	10.9	642.00	1671	0	137.97	155.5	76.0	61	125.8
Mar 2011	954	15.5	643.05	1700	29	136.89	206.6	119.0	81	124.7
Apr 2011	1097	18.4	643.00	1699	-2	137.46	204.0	136.3	80	124.3
May 2011	974	15.8	643.00	1699	0	136.04	255.0	121.8	100	125.0
Jun 2011	882	14.8	642.00	1671	-27	135.51	255.0	110.2	100	124.9
Jul 2011	885	14.4	641.50	1658	-14	134.73	255.0	110.1	100	124.3
Aug 2011	752	12.2	641.50	1658	0	134.46	255.0	93.9	100	124.8
Sep 2011	737	12.4	638.00	1564	-94	132.62	255.0	90.8	100	123.2
WY 2011	9467							1174.0		
Oct 2011	608	9.9	633.00	1434	-130	128.65	237.2	73.2	93	120.3
Nov 2011	544	9.1	635.00	1486	51	127.14	234.6	64.9	92	119.2
Dec 2011	471	7.7	638.71	1583	97	130.00	239.7	57.7	94	122.4
Jan 2012	577	9.4	641.80	1666	83	134.16	219.3	72.0	86	124.7
Feb 2012	655	11.4	641.80	1666	0	135.05	244.8	82.1	96	125.4
Mar 2012	943	15.3	643.05	1700	34	135.44	255.0	117.5	100	124.7
Apr 2012	1108	18.6	643.00	1699	-2	136.07	255.0	137.7	100	124.2
May 2012	953	15.5	643.00	1699	0	136.04	255.0	119.3	100	125.1
Jun 2012	841	14.1	642.00	1671	-27	135.51	255.0	105.2	100	125.1
Jul 2012	880	14.3	641.50	1658	-14	134.73	255.0	109.4	100	124.4
Aug 2012	785	12.8	641.50	1658	0	134.46	255.0	97.9	100	124.7
Sep 2012	758	12.7	638.00	1564	-94	132.62	255.0	93.3	100	123.1
WY 2012	9124							1130.1		
Oct 2012	585	9.5	633.00	1434	-130	128.65	237.2	70.5	93	120.4
Nov 2012	504	8.5	635.00	1486	51	127.14	234.6	60.2	92	119.5

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
 Parker Dam - Lake Havasu

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	Power Release 1000 Ac-Ft	Power Release 1000 CFS	EOM Reservoir Elevation Feet	EOM Storage 1000 Ac-Ft	Change_In Storage 1000 Ac-Ft	Parker Static Head Feet	Parker Generator Capacity MW	Parker Gross Energy MKWH	Percent Of Units Available	KWH/AF
* Dec 2009	299	4.9	447.34	568	-5	81.50	76.8	20.2	64	67.4
H Jan 2010	233	3.8	448.89	597	29	82.98	66.0	15.6	55	66.8
I Feb 2010	331	6.0	446.29	548	-49	78.17	90.0	22.8	75	68.8
S Mar 2010	668	10.9	447.15	564	16	81.28	90.0	45.4	75	67.9
T Apr 2010	670	11.3	448.61	592	28	81.42	90.0	46.8	75	69.8
O May 2010	662	10.8	448.83	596	4	81.45	115.2	46.0	96	69.6
R Jun 2010	650	10.9	448.64	592	-4	80.58	120.0	46.4	100	71.3
I Jul 2010	743	12.1	448.61	592	-1	82.51	120.0	50.9	100	68.4
C Aug 2010	646	10.5	448.20	584	-8	81.98	120.0	44.7	100	69.2
A Sep 2010	583	9.8	446.95	560	-24	80.89	103.2	41.6	86	71.4
WY 2010	6298							436.8		
L Oct 2010	465	7.6	449.14	602	42	82.79	90.0	31.4	75	67.4
* Nov 2010	428	7.2	447.59	572	-30	79.41	91.2	30.4	76	71.1
Dec 2010	341	5.5	447.00	561	-11	75.37	104.4	21.8	87	64.0
Jan 2011	363	5.9	447.00	561	-0	75.56	94.8	23.4	79	64.5
Feb 2011	452	8.1	446.50	552	-9	74.96	102.0	29.4	85	65.1
Mar 2011	708	11.5	446.70	555	4	74.01	120.0	46.0	100	64.9
Apr 2011	793	13.3	448.70	593	38	75.08	120.0	52.4	100	66.0
May 2011	704	11.5	448.70	593	0	76.05	120.0	46.8	100	66.5
Jun 2011	675	11.3	448.70	593	0	76.05	120.0	44.8	100	66.5
Jul 2011	733	11.9	448.00	580	-13	75.71	120.0	48.6	100	66.3
Aug 2011	618	10.1	447.50	571	-10	75.13	120.0	40.5	100	65.5
Sep 2011	526	8.8	446.81	557	-13	74.55	120.0	34.1	100	64.8
WY 2011	6806							449.6		
Oct 2011	438	7.1	446.31	548	-9	74.77	102.0	28.3	85	64.5
Nov 2011	372	6.2	446.50	552	3	74.62	102.0	23.8	85	64.0
Dec 2011	287	4.7	446.50	552	0	74.71	102.0	18.0	85	62.9
Jan 2012	347	5.6	446.50	552	0	74.71	102.0	22.1	85	63.7
Feb 2012	444	7.7	446.50	552	0	73.92	120.0	28.5	100	64.0
Mar 2012	704	11.4	446.70	555	4	74.01	120.0	45.7	100	64.9
Apr 2012	813	13.7	448.70	593	38	75.08	120.0	53.7	100	66.1
May 2012	692	11.3	448.70	593	0	76.05	120.0	46.0	100	66.4
Jun 2012	641	10.8	448.70	593	0	76.05	120.0	42.5	100	66.4
Jul 2012	715	11.6	448.00	580	-13	75.71	120.0	47.3	100	66.3
Aug 2012	628	10.2	447.50	571	-10	75.13	120.0	41.2	100	65.6
Sep 2012	548	9.2	446.81	557	-13	74.55	120.0	35.6	100	64.9
WY 2012	6628							432.7		
Oct 2012	455	7.4	446.31	548	-9	74.77	102.0	29.4	85	64.7
Nov 2012	371	6.2	446.50	552	3	74.62	102.0	23.7	85	64.0

OPERATION PLAN FOR COLORADO RIVER SYSTEM RESERVOIRS

Bureau of Reclamation - CRFS 12/2010 Most Prob Water Supply  
Upper Basin Power

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	Glen Canyon 1000 MWHR	Flam Gorge 1000 MWHR	Blue Mesa 1000 MWHR	Morrow Point 1000 MWHR	Crystal Res 1000 MWHR	Font Res 1000 MWHR
* Dec 2009	403	42	13	17	9	0
H Jan 2010	401	43	12	16	8	3
I Feb 2010	279	34	11	14	4	3
S Mar 2010	269	23	9	11	6	3
Winter 2010	1953	194	80	101	50	18
T Apr 2010	265	19	13	19	13	3
O May 2010	267	39	31	45	21	3
R Jun 2010	272	54	15	22	18	4
I Jul 2010	368	38	30	34	20	8
C Aug 2010	366	40	27	33	19	6
A Sep 2010	217	42	25	32	19	2
Summer 2010	1755	231	142	186	109	25
L Oct 2010	226	30	24	29	16	0
* Nov 2010	369	24	7	9	4	4
Dec 2010	353	25	8	10	5	5
Jan 2011	359	25	8	10	5	4
Feb 2011	338	17	6	9	5	4
Mar 2011	330	18	8	12	6	4
Winter 2011	1975	138	61	78	42	21
Apr 2011	293	17	12	18	11	5
May 2011	291	38	27	39	23	7
Jun 2011	309	68	21	31	20	8
Jul 2011	358	29	34	41	21	10
Aug 2011	370	29	38	45	22	10
Sep 2011	201	28	34	41	21	3
Summer 2011	1821	210	166	216	119	43
Oct 2011	208	29	17	22	11	6
Nov 2011	337	28	8	11	6	6
Dec 2011	398	29	22	27	14	5
Jan 2012	395	29	23	29	15	5
Feb 2012	371	27	16	21	11	4
Mar 2012	368	29	10	14	8	4
Winter 2012	2076	173	97	124	65	31
Apr 2012	427	28	14	21	12	5
May 2012	460	38	32	49	23	6
Jun 2012	484	78	19	30	21	9
Jul 2012	514	50	35	42	23	10
Aug 2012	499	50	38	45	23	8
Sep 2012	297	48	35	42	21	6
Summer 2012	2680	292	173	229	124	44
Oct 2012	306	49	18	22	12	6
Nov 2012	330	48	8	11	6	6

model\_run\_id = 2082

FLOOD CONTROL CRITERIA  
 BEGINNING OF MONTH CONDITIONS

MON	YEAR	FLAMING GORGE KAF	BLUE MESA KAF	NAVAJO KAF	LAKE POWELL KAF	UPPER BASIN TOTAL KAF	LAKE MEAD KAF	TOTAL KAF	FLAMING GORGE KAF	BLUE MESA KAF	NAVAJO KAF	TOT OR MAX ALLOW KAF	LAKE POWELL KAF	LAKE MEAD KAF	TOTAL KAF	BOM SPACE REQD KAF	MEAD SCHED REL KAF	MEAD FC REL KAF	SYS CONT MAF	
		* * * * P R E D I C T E D S P A C E * * * *										* * * * C R E D I T A B L E S P A C E * * * *								
DEC	2010	748	274	322	9434	10778	17441	28219	748	274	322	1343	9434	17441	28219	4580	641	0	32.2	
JAN	2011	783	276	338	9867	11264	17237	28501	783	276	338	1397	9867	17237	28501	5350	692	0	32.0	
		* * * * E F F E C T I V E S P A C E * * * *										* * * * C R E D I T A B L E S P A C E * * * *								
JAN	2011	783	276	338	9867	11264	17237	28501	262	255	291	807	9867	17237	27911	5350	692	0	32.0	
FEB	2011	821	279	353	10302	11756	16995	28751	298	260	306	864	10302	16995	28161	1500	619	0	31.8	
MAR	2011	838	279	359	10728	12205	16722	28927	312	263	311	885	10728	16722	28336	1500	1010	0	31.4	
APR	2011	829	278	324	11029	12459	16872	29332	298	264	269	831	11029	16872	28733	1500	1127	0	31.2	
MAY	2011	783	250	257	11077	12367	17247	29614	245	235	184	663	11077	17247	28987	1500	1006	0	32.0	
JUN	2011	732	166	181	10251	11330	17526	28857	185	139	75	399	10251	17526	28176	1500	883	0	33.3	
JUL	2011	637	27	176	8931	9771	17710	27481	79	-19	22	83	8931	17710	26724	1500	894	0	33.3	
		* * * * C R E D I T A B L E S P A C E * * * *										* * * * E F F E C T I V E S P A C E * * * *								
AUG	2011	574	44	205	8817	9640	17787	27427	574	44	205	824	8817	17787	27427	1500	778	0	33.0	
SEP	2011	598	114	244	9094	10050	17691	27741	598	114	244	956	9094	17691	27741	2270	660	0	32.6	
OCT	2011	635	186	257	9053	10131	17872	28003	635	186	257	1078	9053	17872	28003	3040	488	0	32.5	
NOV	2011	668	205	255	9029	10157	17880	28037	668	205	255	1128	9029	17880	28037	3810	615	0	32.4	
DEC	2011	701	202	257	9300	10460	17719	28179	701	202	257	1160	9300	17719	28179	4580	590	0	32.3	
JAN	2012	748	248	266	9733	10995	17380	28375	748	248	266	1262	9733	17380	28375	5350	684	0	32.1	
		* * * * E F F E C T I V E S P A C E * * * *										* * * * C R E D I T A B L E S P A C E * * * *								
JAN	2012	748	248	266	9733	10995	17380	28375	449	248	163	859	9733	17380	27973	5350	684	0	32.1	
FEB	2012	789	301	278	10170	11538	17050	28589	488	301	174	963	10170	17050	28184	1500	669	0	32.0	
MAR	2012	821	333	278	10588	12020	16753	28774	518	333	173	1024	10588	16753	28365	1500	1004	0	31.7	
APR	2012	803	334	251	10906	12294	16812	29106	494	334	140	968	10906	16812	28686	1500	1139	0	31.4	
MAY	2012	746	310	184	11180	12420	16933	29353	430	310	53	794	11180	16933	28907	1500	985	0	32.5	
JUN	2012	597	222	197	10505	11522	16805	28328	270	220	35	524	10505	16805	27835	1500	841	0	34.2	
JUL	2012	427	38	257	9360	10081	16568	26649	83	11	46	139	9360	16568	26068	1500	888	0	34.5	
		* * * * C R E D I T A B L E S P A C E * * * *										* * * * E F F E C T I V E S P A C E * * * *								
AUG	2012	361	27	262	9380	10031	16290	26320	361	27	262	650	9380	16290	26320	1500	811	0	34.2	
SEP	2012	413	77	286	9889	10665	15935	26599	413	77	286	776	9889	15935	26599	2270	681	0	33.8	
OCT	2012	496	146	294	10022	10957	15922	26879	496	146	294	935	10022	15922	26879	3040	465	0	33.6	
NOV	2012	578	165	294	10175	11212	15693	26906	578	165	294	1037	10175	15693	26906	3810	575	0	33.5	