

General Assumptions		
Model Configuration		
Model Scenario:	Base Case	RP111413
Water Balance/Operations Model Version:	1.18	1.19
Scenario Run Date:	10/11/2013	12/10/2013
Level of Development?	Present Level of Development	Present Level of Development
Narrows 1/2 Preference?	Narrows 1	Narrows 1
Slate Creek Operations?	Historical Flows	Historical Flows
Basis of Hydrologic Index Calculation?	Perfect Foresight	Perfect Foresight
Groundwater Substitution Transfers?	No	No
Use Weekly Power Generation Factors?	No	No
Temperature Model Run Date?	4/10/2014	
Date printed:	10/10/2014	10/10/2014

Minimum Flow Requirement Assumptions		
Water-Year Classification below Our House Dam:	Existing FERC License	Smartsville Index
Water-Year Classification below Log Cabin Dam:	Existing FERC License	Smartsville Index
Water-Year Classification below New Bullards Bar Dam:	Existing FERC License	Smartsville Index
Water-Year Classification below Englebright Dam:	North Yuba Index	North Yuba Index
Flow Requirements below Our House Dam:	Existing FERC License	RP111413
Flow Requirements below Log Cabin Dam:	Existing FERC License	RP111413
Flow Requirements below New Bullards Bar Dam:	Existing FERC License	RP092413
Flow Requirements below Englebright Dam:	Yuba River Accord	Yuba River Accord
Our House Dam Release Buffer:	3 cfs	3 cfs
Log Cabin Dam Release Buffer:	1 cfs	1 cfs
Minimum Flow Powerhouse Release Buffer:	2 cfs	2 cfs

New Bullards Bar Reservoir Storage Assumptions		
New Bullards Bar Reservoir Target Operating Line:	Yuba River Accord	Yuba River Accord
New Bullards Bar Reservoir Carryover Storage Protection Level:	99% Exceedance Drought (294,000 AF)	99% Exceedance Drought (294,000 AF)
Agricultural Delivery Deficiency for Carryover Storage Calculation:	50%	50%
Maximum Agricultural Delivery Deficiency for Carryover Storage:	50%	50%

Other Operational Requirements		
Englebright Release Flow Fluctuation Criteria:	Existing FERC License	Existing FERC License
New Bullards Bar Reservoir Flood Operations:	1972 Flood Control Manual	1972 Flood Control Manual
Englebright Reservoir Low-Storage Restriction:	PG&E Agreement with Marina Operator	PG&E Agreement with Marina Operator

Notes:	
	Includes a pulse flow of 3,000 cfs for 10 days on the Middle Yuba and 1,000 cfs on Oregon Creek. Also includes WYT dependant recreational flows of 800-2000 cfs in October through April

Timeseries Assumptions														
Flow Requirements below Our House Dam (cfs)														
Base Case														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr 1-Apr 15	Apr 16-30	May	Jun 1-15	Jun 16-30	July	August	Sep
100% Unimp	30	30	30	30	30	30	30	50	50	50	30	30	30	30
50% Unimp	25.5	25.5	25.5	25.5	25.5	25.5	25.5	42.5	42.5	42.5	25.5	25.5	25.5	25.5
45% Unimp	24	24	24	24	24	24	24	40	40	40	24	24	24	24
40% Unimp	21	21	21	21	21	21	21	35	35	35	21	21	21	21

  

RP111413														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Extremely Critical	50	50	50	50	50	50	50	1500	1500	1500	50	50		
Critical	50	50	50	50	50	50	60	1500	1500	1500	50	50		
Dry	50	50	50	50	50	50	70	1500	1500	1500	50	50		
Below Normal	50	50	70	70	70	70	120	1500	1500	1500	70	60		
Above Normal	60	60	100	100	100	100	140	1500	1500	1500	100	80		
Wet	60	60	120	120	120	120	140	1500	1500	1500	120	80		

Flow Requirements below Log Cabin Dam (cfs)														
Base Case														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr 1-Apr 15	Apr 16-30	May	Jun 1-15	Jun 16-30	July	August	Sep
100% Unimp	8	8	8	8	8	8	8	12	12	12	8	8	8	8
50% Unimp	6.8	6.8	6.8	6.8	6.8	6.8	6.8	10.2	10.2	10.2	6.8	6.8	6.8	6.8
45% Unimp	6.4	6.4	6.4	6.4	6.4	6.4	6.4	9.6	9.6	9.6	6.4	6.4	6.4	6.4
40% Unimp	5.6	5.6	5.6	5.6	5.6	5.6	5.6	8.4	8.4	8.4	5.6	5.6	5.6	5.6

  

RP111413														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar 1-Mar 15	Mar 15-Mar 31	Apr	May	Jun	Jul	Aug	Sep	
Extremely Critical	6	6	6	6	6	12	1000	1000	1000	1000	6	6	6	
Critical	6	6	6	6	6	12	1000	1000	1000	1000	6	6	6	
Dry	6	6	10	10	10	16	1000	1000	1000	1000	10	10	6	
Below Normal	6	6	15	15	15	20	1000	1000	1000	1000	15	15	6	
Above Normal	8	8	20	20	20	30	1000	1000	1000	1000	20	20	8	
Wet	8	8	25	25	25	40	1000	1000	1000	1000	25	25	8	

Flow Requirements below New Bullards Bar Dam (cfs)														
Base Case														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr 1-Apr 15	Apr 16-30	May	Jun 1-15	Jun 16-30	July	August	Sep
100% Unimp	5	5	5	5	5	5	5	5	5	5	5	5	5	5
50% Unimp	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25	4.25
45% Unimp	4	4	4	4	4	4	4	4	4	4	4	4	4	4
40% Unimp	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5

  

RP092413														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Extremely Critical	90	90	90	90	100	120	140	120	120	100	90	90		
Critical	90	90	90	90	100	120	140	120	120	100	90	90		
Dry	90	90	90	90	100	120	140	120	120	100	90	90		
Below Normal	90	90	90	90	100	120	140	120	120	100	90	90		
Above Normal	90	90	90	90	100	120	220	220	220	100	90	90		
Wet	90	90	90	90	100	250	300	300	300	150	90	90		

**Timeseries Assumptions**  
**Flow Requirements at Smartsville (cfs)**

<b>Base Case</b>																
WY Classification	Oct 1-15	Oct 16-31	Nov	Dec	Jan	Feb	Mar	Apr 1-15	Apr 16-30	May 1-15	May 16-31	June 1-15	June 16-30	Jul	Aug	Sep
1	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
2	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
3	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
4	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
5	600	600	600	550	550	550	550	600	0	0	0	0	0	0	0	500
6	600	600	600	550	550	550	550	600	0	0	0	0	0	0	0	500
Conference	600	600	600	600	600	600	600	0	0	0	0	0	0	0	0	0
<b>Yuba River Accord</b>																
WY Classification	Oct 1-15	Oct 16-31	Nov	Dec	Jan	Feb	Mar	Apr 1-15	Apr 16-30	May 1-15	May 16-31	June 1-15	June 16-30	Jul	Aug	Sep
1	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
2	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
3	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
4	700	700	700	700	700	700	700	700	0	0	0	0	0	0	0	700
5	600	600	600	550	550	550	550	600	0	0	0	0	0	0	0	500
6	600	600	600	550	550	550	550	600	0	0	0	0	0	0	0	500
Conference	600	600	600	600	600	600	600	0	0	0	0	0	0	0	0	0

**Yuba Accord Flow Requirements at Marysville (cfs)**

<b>Base Case</b>																
WY Classification	Oct 1-15	Oct 16-31	Nov	Dec	Jan	Feb	Mar	Apr 1-15	Apr 16-30	May 1-15	May 16-31	June 1-15	June 16-30	Jul	Aug	Sep
1	500	500	500	500	500	500	700	1000	1000	2000	2000	1500	1500	700	600	500
2	500	500	500	500	500	500	700	700	800	1000	1000	800	500	500	500	500
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350
Conference	400	400	400	400	245	245	245	245	245	245	245	245	245	70	70	70
<b>Yuba River Accord</b>																
WY Classification	Oct 1-15	Oct 16-31	Nov	Dec	Jan	Feb	Mar	Apr 1-15	Apr 16-30	May 1-15	May 16-31	June 1-15	June 16-30	Jul	Aug	Sep
1	500	500	500	500	500	500	700	1000	1000	2000	2000	1500	1500	700	600	500
2	500	500	500	500	500	500	700	700	800	1000	1000	800	500	500	500	500
3	500	500	500	500	500	500	500	700	700	900	900	500	500	500	500	500
4	400	400	500	500	500	500	500	600	900	900	600	400	400	400	400	400
5	400	400	500	500	500	500	500	500	600	600	400	400	400	400	400	400
6	350	350	350	350	350	350	350	350	500	500	400	300	150	150	150	350
Conference	400	400	400	400	245	245	245	245	245	245	245	245	245	70	70	70

**New Bullards Bar Reservoir Storage Targets**

<b>Base Case</b>																
Operating Line	31-Oct	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr	31-May	30-Jun	15-Jul	31-Jul	15-Aug	31-Aug	15-Sep	30-Sep	
Upper Buffer	20,000	30,000	30,000	80,000	30,000	30,000	30,000	26,000	0	5,000	10,000	10,000	10,000	90,000	200,000	
Target Line	660,000	660,000	650,000	600,000	650,000	750,000	850,000	940,000	920,000	875,000	825,000	770,000	715,000	682,500	650,000	
Lower Buffer	10,000	30,000	30,000	30,000	30,000	30,000	30,000	100,000	80,000	60,000	40,000	35,000	15,000	5,000	2,000	
<b>RP111413</b>																
Operating Line	31-Oct	30-Nov	31-Dec	31-Jan	28-Feb	31-Mar	30-Apr	31-May	30-Jun	15-Jul	31-Jul	15-Aug	31-Aug	15-Sep	30-Sep	
Upper Buffer	20,000	30,000	30,000	80,000	30,000	30,000	30,000	26,000	0	5,000	10,000	10,000	10,000	90,000	200,000	
Target Line	660,000	660,000	650,000	600,000	650,000	750,000	850,000	940,000	920,000	875,000	825,000	770,000	715,000	682,500	650,000	
Lower Buffer	10,000	30,000	30,000	30,000	30,000	30,000	30,000	100,000	80,000	60,000	40,000	35,000	15,000	5,000	2,000	

Overview - Model Output Generation Summary																						
Water Year Classification:	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years			
Model case:	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	
New Colgate Powerhouse Generation (Average MWh/yr)	1,716,467	1,489,561	-13.2%	1,333,210	1,093,710	-18.0%	1,190,516	991,569	-16.7%	846,098	691,948	-18.2%	782,656	633,012	-19.1%	490,345	435,849	-11.1%	1,232,465	1,031,086	-201,379	-16.3%
Narrows 2 Powerhouse Generation (Average MWh/yr)	263,335	258,374	-1.9%	191,248	190,443	-0.4%	162,909	163,129	0.1%	100,537	102,029	1.5%	75,640	77,045	1.9%	83,846	90,341	0.0%	172,609	171,802	-807	-0.5%
Total YRDP Generation (Average MWh/yr)	1,979,803	1,747,934	-11.7%	1,524,458	1,284,153	-15.8%	1,353,425	1,154,699	-14.7%	946,635	793,976	-16.1%	858,296	710,057	-17.3%	574,192	526,190	-8.4%	1,405,074	1,202,888	-202,186	-14.4%
Overview - Model Output Flows Summary																						
Water Year Classification:	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years			
Model case:	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	
Middle Yuba River																						
MYR below Our House Dam (Avg. AF/yr)	138,609	242,152	74.7%	50,740	138,266	172.5%	52,080	107,141	105.7%	62,731	89,746	43.1%	51,374	71,248	38.7%	45,922	59,043	28.6%	73,657	140,178	66,521	90.3%
MYR Near Confluence with NYR (Avg. AF/yr)	263,791	446,441	69.2%	115,866	258,413	123.0%	126,012	231,970	84.1%	132,304	203,432	53.8%	105,383	148,068	40.5%	128,102	174,170	36.0%	154,571	275,515	120,943	78.2%
Oregon Creek and North Yuba River																						
Oregon Creek below Log Cabin Dam (Avg. AF/yr)	34,863	113,970	226.9%	12,923	67,943	425.8%	16,522	67,418	308.1%	18,556	62,668	237.7%	15,898	38,708	143.5%	20,328	53,274	162.1%	20,204	74,626	54,422	269.4%
NYR below New Bullards Bar Dam (Avg. AF/yr)	336,871	358,442	6.4%	70,761	135,798	91.9%	84,899	150,053	76.7%	123,896	183,410	48.0%	88,845	147,395	65.9%	3,982	76,225	1814.3%	144,954	198,771	53,817	37.1%
Yuba River																						
Yuba River above New Colgate PH (Avg. AF/yr)	635,983	840,204	32.1%	207,043	414,626	100.3%	233,362	404,474	73.3%	276,152	406,793	47.3%	209,132	310,367	48.4%	156,273	274,583	75.7%	323,267	498,027	174,760	54.1%
Yuba River near Smartsville (Avg. AF/yr)	2,823,795	2,826,632	0.1%	1,702,620	1,704,301	0.1%	1,611,000	1,614,050	0.2%	1,320,190	1,318,862	-0.1%	1,141,016	1,108,245	-2.9%	959,722	1,015,761	5.8%	1,802,221	1,802,233	12	0.0%
Yuba River near Marysville (Avg. AF/yr)	2,755,362	2,758,199	0.1%	1,516,796	1,518,478	0.1%	1,437,193	1,440,243	0.2%	1,133,048	1,131,720	-0.1%	936,949	904,178	-3.5%	937,791	993,115	5.9%	1,647,467	1,647,461	-6	0.0%
Average Agricultural Water Supply																						
Water Year Classification:	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years			
Model case:	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	
Total (% of requested)	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	50%	50%	0%	50%	50%	0%	99%	99%	0%	
End of September Reservoir Storage																						
Water Year Classification:	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years			
Model case:	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	
Reservoir Storage (AF)	652,112	651,864	0.0%	643,501	645,876	0.4%	647,577	655,646	1.2%	574,860	582,361	1.3%	242,087	288,338	19.1%	242,087	288,338	19.1%	610,313	615,584	5,271	0.9%

\*Water Year Classifications based on Smartsville Index

Model Output Summary - Generation

New Colgate Powerhouse Generation (Average Monthly MWh)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	53,699	46,471	-13.5%	51,341	45,287	-11.8%	50,584	45,407	-10.2%	47,223	41,095	-13.0%	45,228	39,431	-12.8%	29,373	25,364	-13.7%	49,937	43,756	-12.4%
November	63,257	55,816	-11.8%	54,636	47,673	-12.7%	40,221	40,782	1.4%	49,262	44,354	-10.0%	43,963	38,059	-13.4%	25,051	21,086	-15.8%	52,298	46,738	-10.6%
December	97,790	88,995	-9.0%	64,272	56,402	-12.2%	56,825	50,179	-11.7%	52,497	46,700	-11.0%	29,228	21,527	-26.3%	13,967	15,459	10.7%	65,163	57,912	-11.1%
January	138,418	129,338	-6.6%	96,941	89,979	-7.2%	128,945	130,511	1.2%	63,792	57,162	-10.4%	59,084	48,443	-18.0%	6,341	4,216	-33.5%	98,704	92,187	-6.6%
February	164,030	160,791	-2.0%	92,795	85,308	-8.1%	140,473	133,649	-4.9%	71,908	66,844	-7.0%	87,407	78,944	-9.7%	79,411	96,788	21.9%	110,647	105,336	-4.8%
March	166,827	137,784	-17.4%	98,130	79,919	-18.6%	110,870	78,678	-29.0%	119,839	108,648	-9.3%	95,111	83,473	-12.2%	207,875	184,918	-11.0%	123,660	103,008	-16.7%
April	189,476	136,205	-28.1%	131,214	77,199	-41.2%	75,228	26,234	-65.1%	41,016	12,081	-70.5%	51,324	22,682	-55.8%	15,345	6,444	-58.0%	107,339	62,684	-41.6%
May	216,626	169,803	-21.6%	198,868	134,143	-32.5%	164,898	105,868	-35.8%	93,426	49,904	-46.6%	91,461	50,322	-45.0%	23,071	12,036	-47.8%	162,502	110,230	-32.2%
June	218,114	194,953	-10.6%	204,488	170,535	-16.6%	150,255	127,192	-15.3%	89,467	70,147	-21.6%	80,396	71,017	-11.7%	33,374	26,537	-20.5%	161,041	136,722	-15.1%
July	192,999	172,853	-10.4%	164,973	148,003	-10.3%	124,222	111,878	-9.9%	94,796	87,306	-7.9%	89,585	82,872	-7.5%	28,767	23,759	-17.4%	140,918	127,052	-9.8%
August	155,434	144,143	-7.3%	120,213	109,283	-9.1%	94,835	91,483	-3.5%	76,726	68,411	-10.8%	68,187	62,380	-8.5%	20,252	15,778	-22.1%	108,440	99,646	-8.1%
September	59,797	52,409	-12.4%	55,339	49,980	-9.7%	53,160	49,708	-6.5%	46,147	39,295	-14.8%	41,684	33,863	-18.8%	7,519	3,464	-53.9%	51,815	45,814	-11.6%
Average MWh/	1,716,467	1,489,561	-13.2%	1,333,210	1,093,710	-18.0%	1,190,516	991,569	-16.7%	846,098	691,948	-18.2%	782,656	633,012	-19.1%	490,345	435,849	-11.1%	1,232,465	1,031,086	-16.3%

Narrows 2 Powerhouse Generation (Average Monthly MWh)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	4,803	4,615	-3.9%	3,674	3,968	8.0%	2,893	3,657	26.4%	1,425	1,395	-2.1%	0	0	0.0%	0	0	0.0%	3,002	3,136	4.5%
November	5,080	5,092	0.2%	4,092	4,221	3.2%	382	1,789	368.1%	2,338	2,395	2.4%	0	0	0.0%	0	273	0.0%	3,096	3,331	7.6%
December	15,428	15,585	1.0%	7,791	7,851	0.8%	7,735	8,732	12.9%	5,572	5,733	2.9%	1,847	1,992	7.8%	4,115	5,205	26.5%	8,635	8,887	2.9%
January	23,957	23,673	-1.2%	15,371	15,683	2.0%	24,880	24,725	-0.6%	10,543	10,723	1.7%	11,525	11,904	3.3%	21,086	22,580	7.1%	17,423	17,537	0.7%
February	28,802	28,654	-0.5%	16,275	16,232	-0.3%	23,340	23,207	-0.6%	14,685	14,606	-0.5%	11,473	11,464	-0.1%	22,726	25,754	13.3%	19,641	19,630	-0.1%
March	30,074	29,874	-0.7%	18,722	20,839	11.3%	20,904	20,768	-0.7%	23,946	24,730	3.3%	13,018	13,200	1.4%	35,919	36,529	1.7%	22,906	23,712	3.5%
April	33,770	33,671	-0.3%	24,219	24,771	2.3%	13,295	12,989	-2.3%	6,553	8,072	23.2%	5,095	6,005	17.9%	0	0	0.0%	18,849	19,358	2.7%
May	36,478	35,193	-3.5%	34,083	32,688	-4.1%	26,259	24,518	-6.6%	9,640	8,865	-8.0%	8,662	8,461	-2.3%	0	0	0.0%	25,407	24,243	-4.6%
June	33,745	33,652	-0.3%	30,823	30,239	-1.9%	18,836	17,988	-4.5%	8,458	8,285	-2.1%	8,188	8,188	0.0%	0	0	0.0%	22,393	22,025	-1.6%
July	26,106	24,865	-4.8%	19,661	17,948	-8.7%	12,131	11,731	-3.3%	8,461	8,461	0.0%	8,461	8,461	0.0%	0	0	0.0%	16,216	15,342	-5.4%
August	18,532	16,977	-8.4%	11,539	10,627	-7.9%	9,206	9,114	-1.0%	7,976	7,976	0.0%	7,369	7,369	0.0%	0	0	0.0%	11,364	10,720	-5.7%
September	6,561	6,523	-0.6%	4,997	5,375	7.6%	3,048	3,912	28.4%	940	788	-16.1%	0	0	0.0%	0	0	0.0%	3,677	3,882	5.6%
Average MWh/	263,335	258,374	-1.9%	191,248	190,443	-0.4%	162,909	163,129	0.1%	100,537	102,029	1.5%	75,640	77,045	1.9%	83,846	90,341	7.7%	172,609	171,802	-0.5%

Model Output Summary - Miscellaneous Values

End of September New Bullards Bar Reservoir Storage (AF)			
WY Classification	Base	Alt	Change
Wet	652,112	651,864	0.0%
Above Normal	643,501	645,876	0.4%
Below Normal	647,577	655,646	1.2%
Dry	574,860	582,361	1.3%
Critical	495,674	504,100	1.7%
Extremely Critical	242,087	288,338	19.1%
Average All Years	610,313	615,584	0.9%

Average Agricultural Water Supply Allocation for April through September (%)			
WY Classification	Base	Alt	Change
Wet	100%	100%	0.0%
Above Normal	100%	100%	0.0%
Below Normal	100%	100%	0.0%
Dry	100%	100%	0.0%
Critical	100%	100%	0.0%
Extremely Critical	50%	50%	0.3%
Average All Years	99%	99%	0.0%

Number of Days Narrows 2 PH Releases Controlled by Flow Fluctuation Criteria			
WY Classification	Base	Alt	Change
Wet	14	22	57.1%
Above Normal	162	79	-51.2%
Below Normal	0	0	0.0%
Dry	147	116	-21.1%
Critical	97	89	-8.2%
Extremely Critical	9	6	-33.3%
Total All Years	429	312	-27.3%

Recurrence of North Yuba Index Year Types (Years)			
Flow Sched.	Base	Alt	Change
Sched. 1	23	21	-2
Sched. 2	8	8	0
Sched. 3	2	4	2
Sched. 4	6	3	-3
Sched. 5	1	4	3
Sched. 6	0	0	0
Conference	1	1	0

Average New Bullards Bar Reservoir Water-Surface Elevation on Sept. 10 (ft)			
WY Classification	Base	Alt	Change
Wet	1,887	1,887	0.0%
Above Normal	1,885	1,886	0.0%
Below Normal	1,887	1,889	0.1%
Dry	1,866	1,868	0.1%
Critical	1,842	1,845	0.1%
Extremely Critical	1,737	1,759	1.3%
Average All Years	1,875	1,877	0.1%

Average Number of Days per Year Dark Day Boat Ramp is Available (Water Level >= 1,758 ft) (days)			
WY Classification	Base	Alt	Change
Wet	365	365	0
Above Normal	365	365	0
Below Normal	365	365	0
Dry	365	365	0
Critical	365	365	0
Extremely Critical	182	277	95
Average All Years	361	363	2

Average Number of Days per Year Cottage Creek Boat Ramp is Available (Water Level >= 1,853 ft) (Days)			
WY Classification	Base	Alt	Change
Wet	347	348	1
Above Normal	355	354	-1
Below Normal	365	365	0
Dry	290	294	4
Critical	188	191	3
Extremely Critical	59	66	7
Average All Years	321	322	1

\*Water Year (WY) Classifications based on Smartsville Index

Model Output Summary - Flows

Middle Yuba River below Our House Dam (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	34	47	38.2%	33	42	29.2%	31	39	26.9%	27	31	14.9%	24	26	9.6%	17	17	0.0%	30	39	27.0%
November	70	100	42.8%	57	85	50.7%	33	48	46.8%	86	112	31.0%	24	37	55.6%	22	31	36.7%	60	86	42.0%
December	259	340	31.3%	106	158	49.0%	48	96	97.7%	142	162	14.3%	32	60	88.8%	38	55	43.1%	137	186	35.7%
January	472	543	15.1%	111	170	52.6%	273	340	24.6%	63	93	47.3%	230	277	20.4%	302	348	15.4%	222	277	24.9%
February	179	302	68.8%	84	165	98.0%	148	208	40.2%	312	333	6.7%	26	49	89.7%	57	83	45.5%	160	230	43.9%
March	157	264	68.8%	98	182	85.7%	48	85	75.7%	222	254	14.4%	336	358	6.4%	173	196	12.9%	153	219	43.6%
April	374	482	28.8%	57	158	177.1%	47	125	169.2%	38	73	92.7%	31	63	103.2%	31	53	70.0%	118	196	65.7%
May	457	1029	125.4%	129	701	441.4%	99	515	418.5%	47	247	426.4%	38	163	329.8%	38	98	158.2%	170	592	248.6%
June	188	607	222.0%	67	437	550.3%	43	192	341.3%	38	99	163.5%	31	54	75.4%	31	47	50.9%	80	327	306.7%
July	38	188	396.6%	33	101	206.8%	33	59	78.5%	29	41	42.9%	24	31	28.2%	17	17	0.4%	32	94	191.7%
August	33	58	76.6%	33	48	45.9%	32	37	15.0%	27	29	6.8%	23	26	12.8%	13	13	0.0%	30	42	38.4%
September	33	47	43.9%	33	41	25.0%	30	32	4.9%	26	27	3.3%	23	25	6.9%	15	16	1.4%	30	36	21.1%
Average AF/yr	138,609	242,152	74.7%	50,740	138,266	172.5%	52,080	107,141	105.7%	62,731	89,746	43.1%	51,374	71,248	38.7%	45,922	59,043	28.6%	73,657	140,178	90.3%

Middle Yuba River Near Confluence with North Yuba River (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	50	59	18.9%	46	53	15.3%	43	50	16.1%	38	41	8.4%	30	30	2.2%	21	21	0.0%	43	49	14.2%
November	135	163	20.8%	117	141	20.1%	64	77	20.2%	141	173	22.3%	37	49	32.2%	38	46	21.5%	113	136	21.2%
December	531	638	20.2%	216	275	27.1%	132	183	38.9%	275	298	8.2%	93	118	26.8%	138	154	11.4%	285	343	20.4%
January	906	1001	10.5%	259	340	31.1%	653	742	13.6%	192	236	23.0%	554	614	10.9%	840	1005	19.6%	486	564	16.0%
February	546	677	24.0%	249	346	39.0%	403	462	14.6%	657	682	3.8%	105	128	22.0%	303	328	8.3%	420	498	18.5%
March	451	825	82.9%	334	687	105.7%	224	552	146.8%	526	885	68.2%	625	830	32.7%	557	973	74.5%	418	765	83.0%
April	721	1510	109.4%	215	839	290.7%	182	713	291.4%	131	518	294.1%	82	297	260.5%	49	87	75.7%	289	839	190.3%
May	645	1442	123.8%	239	887	271.7%	198	689	247.4%	97	321	232.1%	69	205	197.5%	72	146	102.5%	274	788	187.3%
June	244	752	208.5%	109	497	355.3%	76	233	207.5%	64	132	105.7%	46	68	47.9%	44	57	29.7%	118	392	233.1%
July	59	213	258.8%	50	116	133.9%	48	71	47.8%	41	51	24.3%	33	36	9.9%	20	20	-0.4%	48	108	127.0%
August	47	69	46.1%	46	56	22.9%	41	43	5.8%	33	34	1.8%	29	31	6.7%	15	15	-1.3%	41	49	21.4%
September	46	57	23.2%	44	48	9.3%	36	37	1.7%	32	32	1.1%	28	29	2.8%	19	19	0.4%	39	43	10.0%
Average AF/yr	263,791	446,441	69.2%	115,866	258,413	123.0%	126,012	231,970	84.1%	132,304	203,432	53.8%	105,383	148,068	40.5%	128,102	174,170	36.0%	154,571	275,515	78.2%

Oregon Creek below Log Cabin Dam (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	9	5	-41.3%	7	5	-34.4%	6	4	-25.3%	4	4	-18.4%	4	2	-42.7%	2	2	0.0%	6	4	-33.3%
November	19	17	-10.7%	17	12	-29.8%	8	6	-28.6%	18	23	27.0%	6	5	-24.9%	4	4	-0.8%	16	14	-9.0%
December	91	118	29.0%	29	36	23.4%	16	20	25.0%	44	46	5.3%	11	7	-31.5%	11	11	-6.4%	44	53	21.2%
January	153	177	15.5%	32	54	68.3%	118	140	18.2%	25	40	57.6%	103	117	13.3%	157	275	75.4%	79	101	28.5%
February	93	101	8.1%	29	44	52.6%	55	55	-1.2%	108	112	3.9%	7	7	-2.0%	36	36	-1.9%	64	71	11.7%
March	63	329	421.7%	35	304	762.6%	17	309	1713.6%	69	396	472.7%	92	275	198.7%	94	487	415.8%	53	333	530.6%
April	83	764	822.9%	13	536	4042.3%	11	463	4042.1%	10	362	3421.7%	8	191	2284.4%	8	24	195.2%	27	499	1753.6%
May	31	257	722.6%	16	94	468.4%	15	90	495.2%	12	36	208.4%	9	20	114.6%	9	23	148.9%	18	109	514.5%
June	11	101	820.4%	11	29	163.8%	11	20	84.9%	10	16	62.0%	8	7	-16.5%	8	5	-35.2%	10	38	269.5%
July	9	13	40.5%	9	7	-20.4%	9	6	-35.1%	7	5	-34.1%	6	3	-57.4%	2	1	-9.3%	8	7	-12.5%
August	9	5	-40.6%	9	4	-55.0%	5	3	-46.1%	4	2	-34.8%	3	2	-35.3%	1	1	-19.1%	6	3	-46.4%
September	8	4	-45.2%	7	3	-55.0%	3	2	-27.1%	3	2	-19.3%	3	2	-29.4%	2	2	-7.9%	5	3	-44.1%
Average AF/yr	34,863	113,970	226.9%	12,923	67,943	425.8%	16,522	67,418	308.1%	18,556	62,668	237.7%	15,898	38,708	143.5%	20,328	53,274	162.1%	20,204	74,626	269.4%

\*Water Year Classifications based on Smartsville Index

Model Output Summary - Flows

North Yuba River below New Bullards Bar Dam (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	7	92	1214.3%	7	92	1214.3%	7	92	1214.3%	6	92	1352.6%	6	92	1572.7%	6	92	1572.7%	7	92	1271.6%
November	7	92	1214.3%	7	92	1214.3%	7	92	1214.3%	6	92	1352.6%	6	92	1572.7%	6	92	1572.7%	7	92	1271.6%
December	534	578	8.3%	76	136	79.6%	7	92	1214.3%	407	490	20.3%	6	92	1572.7%	6	92	1572.7%	245	312	27.3%
January	1,507	1,563	3.7%	399	447	12.1%	744	799	7.4%	70	152	119.1%	6	92	1572.7%	6	92	1572.7%	601	663	10.4%
February	242	250	3.2%	59	137	132.6%	480	539	12.3%	1,014	1,082	6.6%	33	102	204.6%	6	102	1754.5%	361	417	15.5%
March	622	687	10.4%	235	263	11.9%	119	222	86.7%	572	522	-8.7%	1,360	1,279	-5.9%	6	122	2118.2%	466	489	5.0%
April	681	694	1.9%	31	222	610.9%	7	142	1928.6%	6	142	2142.1%	6	142	2481.8%	6	142	2481.8%	162	289	77.7%
May	1,173	967	-17.6%	189	302	60.0%	7	122	1642.9%	6	122	1826.3%	6	122	2118.2%	6	122	2118.2%	320	365	13.8%
June	733	644	-12.2%	139	266	91.5%	31	122	299.9%	6	122	1826.3%	6	122	2118.2%	6	122	2118.2%	211	282	33.5%
July	27	152	469.2%	7	102	1357.1%	7	102	1357.1%	6	102	1510.5%	6	102	1754.5%	6	102	1754.5%	11	113	924.0%
August	7	92	1214.3%	7	92	1214.3%	7	92	1214.3%	6	92	1352.6%	6	92	1572.7%	6	92	1572.7%	7	92	1271.6%
September	7	92	1214.3%	7	92	1214.3%	7	92	1214.3%	6	92	1352.6%	6	92	1572.7%	6	92	1572.7%	7	92	1271.6%
Average AF/yr	336,871	358,442	6.4%	70,761	135,798	91.9%	84,899	150,053	76.7%	123,896	183,410	48.0%	88,845	147,395	65.9%	3,982	76,225	1814.3%	144,954	198,771	37.1%

Yuba River above New Colgate Power House (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	60	154	158.3%	56	148	164.8%	52	144	175.8%	47	136	188.8%	36	123	241.2%	27	113	323.7%	52	144	174.9%
November	159	272	71.1%	142	250	76.7%	80	178	122.1%	162	279	72.3%	45	143	218.9%	48	143	196.8%	134	243	81.8%
December	1,135	1,287	13.4%	324	443	36.7%	165	301	82.6%	717	822	14.7%	118	230	94.1%	178	281	57.4%	570	695	21.9%
January	2,523	2,674	6.0%	703	832	18.3%	1,500	1,643	9.6%	302	429	42.0%	646	793	22.8%	995	1,246	25.3%	1,159	1,299	12.1%
February	895	1,033	15.5%	361	536	48.5%	961	1,078	12.2%	1,764	1,856	5.2%	166	258	55.1%	391	512	31.1%	858	992	15.6%
March	1,163	1,602	37.7%	647	1,028	58.9%	405	836	106.6%	1,190	1,499	25.9%	2,063	2,186	6.0%	676	1,208	78.7%	967	1,337	38.3%
April	1,506	2,307	53.2%	303	1,118	269.3%	238	903	280.0%	170	693	306.7%	105	456	334.7%	59	233	295.4%	508	1,184	133.2%
May	1,879	2,471	31.5%	464	1,226	164.2%	238	844	254.3%	118	458	288.4%	83	335	305.1%	88	278	217.6%	628	1,186	88.7%
June	995	1,414	42.1%	260	775	197.9%	115	364	216.9%	77	260	238.8%	54	193	255.0%	52	181	251.2%	340	685	101.6%
July	91	370	306.6%	60	221	270.9%	57	175	206.2%	49	155	214.2%	40	139	252.5%	26	123	367.2%	62	224	263.9%
August	56	163	189.3%	54	150	176.1%	49	136	179.3%	41	127	211.7%	35	124	251.7%	21	108	402.7%	49	143	192.9%
September	56	151	172.2%	52	141	170.2%	44	130	193.0%	39	125	220.8%	34	121	255.9%	25	112	343.1%	47	136	189.9%
Average AF/yr	635,983	840,204	32.1%	207,043	414,626	100.3%	233,362	404,474	73.3%	276,152	406,793	47.3%	209,132	310,367	48.4%	156,273	274,583	75.7%	323,267	498,027	54.1%

Yuba River near Smartsville (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	914	906	-0.9%	873	878	0.6%	859	875	1.8%	805	802	-0.3%	769	765	-0.4%	588	588	0.0%	852	853	0.1%
November	1,437	1,439	0.2%	1,229	1,233	0.3%	852	956	12.2%	1,205	1,245	3.3%	841	841	0.0%	607	613	1.0%	1,185	1,208	2.0%
December	3,532	3,559	0.8%	1,756	1,769	0.7%	1,410	1,451	2.9%	2,004	2,024	1.0%	879	872	-0.8%	929	1,048	12.7%	2,117	2,140	1.1%
January	6,194	6,221	0.4%	2,748	2,774	0.9%	4,737	4,921	3.9%	1,838	1,868	1.6%	2,701	2,681	-0.7%	3,048	3,304	8.4%	3,635	3,684	1.3%
February	5,014	5,091	1.5%	2,584	2,639	2.2%	4,270	4,286	0.4%	4,282	4,306	0.6%	2,030	1,975	-2.7%	2,800	3,150	12.5%	3,718	3,766	1.3%
March	4,809	4,838	0.6%	3,017	3,136	3.9%	2,912	2,878	-1.2%	4,317	4,455	3.2%	4,671	4,615	-1.2%	5,101	5,309	4.1%	3,899	3,971	1.8%
April	6,168	6,158	-0.2%	2,990	3,046	1.9%	1,917	1,908	-0.5%	1,172	1,281	9.3%	1,071	1,017	-5.1%	417	424	1.6%	2,928	2,963	1.2%
May	6,893	6,846	-0.7%	4,060	3,941	-2.9%	3,168	2,978	-6.0%	1,610	1,370	-14.9%	1,479	1,166	-21.2%	611	612	0.2%	3,741	3,589	-4.0%
June	5,510	5,564	1.0%	3,867	3,895	0.7%	2,606	2,519	-3.3%	1,441	1,356	-5.9%	1,277	1,277	0.0%	681	681	0.0%	3,243	3,233	-0.3%
July	3,087	3,083	-0.1%	2,420	2,316	-4.3%	1,815	1,758	-3.1%	1,416	1,416	0.0%	1,363	1,363	0.0%	549	549	0.0%	2,135	2,092	-2.0%
August	2,312	2,231	-3.5%	1,769	1,711	-3.3%	1,402	1,438	2.6%	1,168	1,135	-2.8%	1,079	1,079	0.0%	406	406	0.0%	1,619	1,581	-2.4%
September	994	983	-1.1%	918	928	1.1%	866	900	3.8%	774	757	-2.1%	720	688	-4.6%	203	203	0.0%	863	863	0.0%
Average AF/yr	2,823,795	2,826,632	0.1%	1,702,620	1,704,301	0.1%	1,611,000	1,614,050	0.2%	1,320,190	1,318,862	-0.1%	1,141,016	1,108,245	-2.9%	959,722	1,015,761	5.8%	1,802,221	1,802,233	0.0%

\*Water Year Classifications based on Smartsville Index

Model Output Summary - Flows

Yuba River near Marysville (Average monthly flow, cfs)																					
Month	Wet			Above Normal			Below Normal			Dry			Critical			Extremely Critical			Average All Years		
	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change	Base	Alt	Change
October	588	580	-1.4%	539	544	1.0%	516	532	3.1%	469	467	-0.5%	412	408	-0.8%	400	400	0.0%	520	521	0.2%
November	1,147	1,149	0.2%	931	934	0.4%	534	638	19.4%	913	953	4.3%	500	500	0.0%	406	410	1.0%	887	910	2.6%
December	3,573	3,600	0.8%	1,670	1,683	0.8%	1,361	1,402	3.0%	1,927	1,947	1.0%	774	767	-0.9%	877	995	13.5%	2,068	2,090	1.1%
January	6,837	6,864	0.4%	2,919	2,945	0.9%	5,172	5,356	3.6%	2,029	2,058	1.5%	3,115	3,095	-0.6%	4,065	4,321	6.3%	3,996	4,045	1.2%
February	5,884	5,960	1.3%	2,941	2,996	1.9%	4,827	4,844	0.3%	4,872	4,895	0.5%	2,167	2,113	-2.5%	3,172	3,522	11.0%	4,260	4,307	1.1%
March	5,491	5,521	0.5%	3,499	3,618	3.4%	3,428	3,393	-1.0%	4,987	5,125	2.8%	5,383	5,327	-1.0%	5,714	5,922	3.6%	4,495	4,567	1.6%
April	6,885	6,875	-0.1%	3,195	3,251	1.7%	1,738	1,729	-0.6%	895	1,004	12.2%	770	716	-7.0%	256	253	-0.9%	3,038	3,072	1.1%
May	6,512	6,465	-0.7%	3,553	3,434	-3.3%	2,498	2,308	-7.6%	883	643	-27.2%	745	432	-42.0%	245	245	0.0%	3,176	3,024	-4.8%
June	4,722	4,777	1.2%	3,051	3,079	0.9%	1,737	1,650	-5.0%	567	482	-15.0%	400	400	0.0%	245	245	0.0%	2,418	2,407	-0.4%
July	2,074	2,070	-0.2%	1,406	1,302	-7.4%	855	798	-6.7%	456	456	0.0%	400	400	0.0%	70	70	0.0%	1,157	1,115	-3.7%
August	1,425	1,343	-5.7%	897	840	-6.4%	725	761	4.9%	490	457	-6.7%	400	400	0.0%	70	70	0.0%	842	804	-4.5%
September	676	666	-1.6%	604	614	1.7%	598	631	5.6%	505	488	-3.3%	450	417	-7.3%	70	70	0.0%	573	573	0.0%
Average AF/yr	2,755,362	2,758,199	0.1%	1,516,796	1,518,478	0.1%	1,437,193	1,440,243	0.2%	1,133,048	1,131,720	-0.1%	936,949	904,178	-3.5%	937,791	993,115	5.9%	1,647,467	1,647,461	0.0%

\*Water Year Classifications based on Smartsville Index