

General Assumptions		
Model Configuration		
Model Scenario:	Base Case	RP090914
Water Balance/Operations Model Version:	1.22	1.22
Scenario Run Date:	9/17/2014	9/17/2014
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?		
Date printed:	9/19/2014	9/19/2014

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	RP081513
Flow Requirements below Log Cabin Dam:	Existing FERC License	RP081513
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:
- Spill Cessation at LCD and OHD: Close the tunnels when NBB storage is greater than 780 TAF or according to a table of recession flows.
 - FLA NBB spill recession
 - 1000 cfs (OC)/3000 cfs(MYR) sediment transport flow
 - 800-2000 cfs weekend recreation flow

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
RP081513														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Extremely Critical	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Critical	50	50	50	50	50	50	60	60	60	60	60	50	50	50
Dry	50	50	50	50	50	50	70	70	70	70	70	50	50	50
Below Normal	50	50	70	70	70	70	120	120	120	120	120	70	70	60
Above Normal	60	60	100	100	100	100	140	140	140	140	140	100	100	80
Wet	60	60	120	120	120	120	140	140	140	140	140	120	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
RP081513														
WY Classification	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Extremely Critical	6	6	6	6	6	12	18	18	18	18	18	6	6	6
Critical	6	6	6	6	6	12	18	18	18	18	18	6	6	6
Dry	6	6	10	10	10	16	18	18	18	18	18	10	10	6
Below Normal	6	6	15	15	15	20	32	32	32	32	32	15	15	6
Above Normal	8	8	20	20	20	30	55	55	55	55	55	20	20	8
Wet	8	8	25	25	25	40	55	55	55	55	55	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	140	120	120	120	100	90	90
Critical	90	90	90	90	100	120	140	140	120	120	120	100	90	90
Dry	90	90	90	90	100	120	140	140	120	120	120	100	90	90
Below Normal	90	90	90	90	100	120	140	140	120	120	120	100	90	90
Above Normal	90	90	90	90	100	120	220	220	220	220	220	100	90	90
Wet	90	90	90	90	100	250	300	300	300	300	300	150	90	90

Timeseries Assumptions																
Flow Requirements at Smartsville (cfs)																
Base Case																
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 River Accord																
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)																
Base Case																
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
Yuba River Accord																
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																
Yuba River Accord																
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	
Yuba River Accord																
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)	1,693,098	1,474,656	-12.9%	1,340,403	1,158,450	-13.6%	1,187,932	1,074,594	-9.5%	838,770	738,299	-12.0%	759,266	668,580	-11.9%	468,112	381,413	-18.5%	1,224,946	1,071,404	-153,542	-12.5%
Narrows 2 Powerhouse Generation (Average MWh/yr)	266,250	262,939	-1.2%	196,118	194,873	-0.6%	166,736	167,201	0.3%	100,300	100,313	0.0%	77,684	78,319	0.8%	84,053	84,222	0.0%	175,437	174,387	-1,051	-0.6%
Total YRDP Generation (Average MWh/yr)	1,959,348	1,737,595	-11.3%	1,536,521	1,353,323	-11.9%	1,354,668	1,241,795	-8.3%	939,070	838,612	-10.7%	836,951	746,898	-10.8%	552,165	465,635	-15.7%	1,400,383	1,245,791	-154,592	-11.0%
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	288,956	108.5%	50,740	119,084	134.7%	52,080	81,010	55.6%	62,731	77,463	23.5%	51,374	64,075	24.7%	45,922	54,285	18.2%	73,657	137,220	63,563	86.3%
MYR Near Confluence with NYR (Avg. AF/yr)	263,912	438,242	66.1%	115,869	196,854	69.9%	126,047	160,143	27.1%	132,387	150,720	13.8%	105,383	119,778	13.7%	128,062	145,200	13.4%	154,620	229,412	74,791	48.4%
Oregon Creek and North Yuba River																						
Oregon Creek below Log Cabin Dam (Avg. AF/yr)	34,863	58,966	69.1%	12,923	25,567	97.8%	16,522	21,722	31.5%	18,554	22,239	19.9%	15,898	17,591	10.7%	20,309	29,063	43.1%	20,204	31,482	11,278	55.8%
NYR below New Bullards Bar Dam (Avg. AF/yr)	361,914	384,962	6.4%	73,318	151,885	107.2%	86,652	152,706	76.2%	135,128	200,281	48.2%	92,916	159,846	72.0%	3,982	76,225	1814.3%	154,774	215,276	60,501	39.1%
Yuba River																						
Yuba River above New Colgate PH (Avg. AF/yr)	661,193	858,525	29.8%	209,603	369,155	76.1%	235,164	335,301	42.6%	287,500	370,953	29.0%	213,203	294,529	38.1%	156,224	245,613	57.2%	333,156	468,429	135,273	40.6%
Yuba River near Smartsville (Avg. AF/yr)	2,823,038	2,825,273	0.1%	1,709,879	1,709,904	0.0%	1,607,244	1,608,998	0.1%	1,321,203	1,318,166	-0.2%	1,124,056	1,124,693	0.1%	934,102	937,133	0.3%	1,802,229	1,802,250	21	0.0%
Yuba River near Marysville (Avg. AF/yr)	2,754,605	2,756,840	0.1%	1,524,055	1,524,081	0.0%	1,433,436	1,435,190	0.1%	1,134,061	1,131,024	-0.3%	919,990	920,626	0.1%	912,170	914,824	0.3%	1,647,475	1,647,486	12	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)	653,722	651,947	-0.3%	644,498	647,037	0.4%	649,472	655,769	1.0%	582,985	583,990	0.2%	240,747	238,830	-0.8%	240,747	238,830	-0.8%	613,024	614,165	1,141	0.2%

*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	53,731	46,475	-13.5%	51,398	45,367	-11.7%	50,676	45,422	-10.4%	47,405	41,087	-13.3%	45,232	39,368	-13.0%	29,336	24,292	-17.2%	50,013	43,751	-12.5%
November	60,434	53,295	-11.8%	54,763	48,188	-12.0%	40,866	40,785	-0.2%	46,294	41,575	-10.2%	43,968	37,746	-14.2%	25,016	20,016	-20.0%	51,077	45,628	-10.7%
December	92,113	82,406	-10.5%	62,413	53,440	-14.4%	57,060	49,088	-14.0%	49,221	42,516	-13.6%	24,744	18,480	-25.3%	13,153	9,874	-24.9%	62,150	53,955	-13.2%
January	132,765	123,715	-6.8%	97,209	90,162	-7.2%	128,360	121,327	-5.5%	65,508	58,814	-10.2%	58,871	51,671	-12.2%	1,438	1,564	8.8%	97,580	90,287	-7.5%
February	158,941	151,153	-4.9%	90,473	82,195	-9.1%	132,394	125,152	-5.5%	72,724	67,154	-7.7%	84,410	78,496	-7.0%	83,213	58,565	-29.6%	107,737	100,076	-7.1%
March	167,301	148,351	-11.3%	100,990	87,639	-13.2%	117,434	106,068	-9.7%	119,312	112,058	-6.1%	88,638	82,152	-7.3%	187,743	178,948	-4.7%	124,403	111,880	-10.1%
April	187,702	135,360	-27.9%	145,166	106,845	-26.4%	80,599	60,134	-25.4%	46,245	32,443	-29.8%	60,299	47,370	-21.4%	15,329	6,651	-56.6%	113,964	83,141	-27.0%
May	212,696	169,395	-20.4%	190,181	152,981	-19.6%	153,341	134,546	-12.3%	81,519	68,339	-16.2%	73,233	62,127	-15.2%	23,048	14,417	-37.4%	153,246	125,279	-18.2%
June	218,814	194,580	-11.1%	205,226	177,351	-13.6%	153,527	136,511	-11.1%	91,408	77,359	-15.4%	80,401	70,819	-11.9%	33,341	25,722	-22.9%	162,333	141,714	-12.7%
July	193,193	173,299	-10.3%	166,588	153,020	-8.1%	124,486	113,686	-8.7%	95,198	87,510	-8.1%	89,591	82,461	-8.0%	28,741	22,880	-20.4%	141,600	128,998	-9.9%
August	155,573	144,300	-7.2%	120,555	111,133	-7.8%	95,806	92,111	-3.9%	77,599	70,124	-9.6%	68,192	62,049	-9.0%	20,241	15,158	-25.1%	108,913	100,696	-7.5%
September	59,835	52,327	-12.5%	55,442	50,130	-9.6%	53,380	49,764	-6.8%	46,337	39,321	-15.1%	41,687	35,841	-14.0%	7,513	3,326	-55.7%	51,930	45,999	-11.4%
Average MWh	1,693,098	1,474,656	-12.9%	1,340,403	1,158,450	-13.6%	1,187,932	1,074,594	-9.5%	838,770	738,299	-12.0%	759,266	668,580	-11.9%	468,112	381,413	-18.5%	1,224,946	1,071,404	-12.5%

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%	3,695	4,031	9.1%	2,893	3,657	26.4%	1,425	1,395	-2.1%	0	0	0.0%	0	0	0.0%	3,009	3,156	4.9%
November	5,205	5,214	0.2%	4,100	4,251	3.7%	764	1,789	134.1%	2,138	2,292	7.2%	0	0	0.0%	0	273	0.0%	3,132	3,347	6.9%
December	15,737	15,948	1.3%	7,877	8,092	2.7%	8,624	8,785	1.9%	4,971	5,133	3.3%	1,355	1,402	3.5%	4,091	4,225	3.3%	8,678	8,859	2.1%
January	24,365	24,247	-0.5%	15,352	15,671	2.1%	25,096	25,244	0.6%	10,754	11,040	2.7%	11,442	11,838	3.5%	19,019	21,254	11.7%	17,532	17,769	1.4%
February	29,554	29,365	-0.6%	16,502	16,463	-0.2%	23,877	23,764	-0.5%	15,135	15,148	0.1%	11,478	11,479	0.0%	23,274	20,784	-10.7%	20,074	19,944	-0.6%
March	31,172	31,371	0.6%	21,160	21,201	0.2%	22,301	22,345	0.2%	23,175	23,487	1.3%	13,197	13,386	1.4%	37,669	37,687	0.0%	24,004	24,153	0.6%
April	34,485	34,298	-0.5%	26,749	26,494	-1.0%	14,090	13,458	-4.5%	7,471	7,041	-5.7%	7,733	7,733	0.0%	0	0	0.0%	20,319	20,010	-1.5%
May	35,811	35,632	-0.5%	32,973	32,762	-0.6%	25,271	24,631	-2.5%	9,188	9,157	-0.3%	8,461	8,461	0.0%	0	0	0.0%	24,650	24,443	-0.8%
June	33,859	33,682	-0.5%	31,157	30,634	-1.7%	19,396	18,452	-4.9%	8,666	8,393	-3.1%	8,188	8,188	0.0%	0	0	0.0%	22,651	22,249	-1.8%
July	26,153	24,987	-4.5%	19,962	18,900	-5.3%	12,162	11,991	-1.4%	8,461	8,461	0.0%	8,461	8,461	0.0%	0	0	0.0%	16,327	15,709	-3.8%
August	18,545	17,027	-8.2%	11,593	10,999	-5.1%	9,214	9,173	-0.4%	7,976	7,976	0.0%	7,369	7,369	0.0%	0	0	0.0%	11,385	10,858	-4.6%
September	6,561	6,553	-0.1%	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	3,888	5.7%
Average MWh	266,250	262,939	-1.2%	196,118	194,873	-0.6%	166,736	167,201	0.3%	100,300	100,313	0.0%	77,684	78,319	0.8%	84,053	84,222	0.2%	175,437	174,387	-0.6%

Model Output Summary - Miscellaneous Values

End of September New Bullsards Bar Reservoir Storage (AF)			
WY Classification	Base	Alt	Change
Wet	653,722	651,947	-0.3%
Above Normal	644,498	647,037	0.4%
Below Normal	649,472	655,769	1.0%
Dry	582,985	583,990	0.2%
Critical	495,854	490,793	-1.0%
Extremely Critical	240,747	238,830	-0.8%
Average All Years	613,024	614,165	0.2%

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%	0.2%
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	13	12	-7.7%
Above Normal	96	96	0.0%
Below Normal	8	0	-100.0%
Dry	26	35	34.6%
Critical	0	0	0.0%
Extremely Critical	0	0	0.0%
Total All Years	143	143	0.0%

Recurrence of North Yuba Index Year Types (Years)			
Flow Sched.	Base	Alt	Change
Sched. 1	23	21	-2
Sched. 2	8	10	2
Sched. 3	2	2	0
Sched. 4	6	5	-1
Sched. 5	1	2	1
Sched. 6	0	0	0
Conference	1	1	0

*Water Year 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	29.3%	31	39	26.9%	27	31	14.9%	24	26	9.6%	17	17	0.0%	30	39	27.1%
November	70	103	47.1%	57	82	45.4%	33	48	46.8%	86	110	28.5%	24	37	55.6%	22	31	36.7%	60	85	40.9%
December	259	339	30.9%	106	159	50.5%	48	100	107.6%	142	162	14.3%	32	53	67.6%	38	55	43.1%	137	186	35.9%
January	472	544	15.5%	111	171	53.4%	273	336	23.3%	63	91	45.3%	230	270	17.6%	302	321	6.2%	222	276	24.4%
February	179	307	71.3%	84	161	92.6%	148	193	30.4%	312	339	8.8%	26	49	89.7%	57	83	45.5%	160	229	43.5%
March	157	255	63.1%	98	178	80.9%	48	88	82.8%	222	259	16.6%	336	358	6.4%	173	196	12.9%	153	217	42.1%
April	374	1084	189.4%	57	341	498.0%	47	130	179.9%	38	73	93.1%	31	63	103.2%	31	53	70.0%	118	387	226.8%
May	457	1151	152.2%	129	382	195.1%	99	181	82.2%	47	73	56.0%	38	63	65.8%	38	53	39.5%	170	422	148.7%
June	188	665	252.9%	67	282	320.4%	43	108	147.7%	38	66	75.8%	31	51	64.8%	31	42	35.5%	80	271	236.9%
July	38	188	396.6%	33	89	171.0%	33	53	61.5%	29	40	37.5%	24	31	28.2%	17	17	0.4%	32	89	176.4%
August	33	58	76.7%	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	49	48.8%	33	41	25.8%	30	32	4.9%	26	27	3.3%	23	25	6.9%	15	16	1.4%	30	37	22.6%
Average AF/yr	138,609	288,956	108.5%	50,740	119,084	134.7%	52,080	81,010	55.6%	62,731	77,463	23.5%	51,374	64,075	24.7%	45,922	54,285	18.2%	73,657	137,220	86.3%

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	15.4%	43	50	15.8%	38	41	8.5%	30	30	2.2%	21	21	0.0%	43	49	14.3%
November	135	165	22.6%	117	139	18.7%	64	77	20.2%	141	171	20.6%	37	49	32.2%	38	46	21.5%	113	136	20.8%
December	531	639	20.3%	216	276	27.5%	132	188	42.6%	275	298	8.2%	93	112	20.4%	138	154	11.4%	285	344	20.7%
January	906	1005	10.9%	259	343	32.2%	654	740	13.2%	192	235	22.5%	554	608	9.8%	840	979	16.6%	486	564	16.1%
February	546	682	25.0%	249	341	37.1%	403	450	11.7%	657	688	4.7%	105	128	22.0%	303	328	8.3%	420	498	18.4%
March	451	577	27.8%	334	434	30.0%	224	274	22.6%	526	580	10.2%	625	651	4.2%	557	585	4.9%	418	501	19.8%
April	721	1598	121.6%	215	584	171.8%	182	288	58.1%	132	178	34.5%	82	125	52.2%	49	80	62.4%	289	628	117.1%
May	645	1458	126.3%	239	539	126.0%	198	303	52.8%	97	130	34.3%	69	103	50.2%	72	97	34.0%	274	574	109.3%
June	245	752	207.2%	109	351	221.5%	76	150	97.2%	64	97	51.9%	46	66	43.9%	44	55	25.6%	118	326	176.2%
July	60	213	253.1%	50	105	112.0%	48	66	37.9%	41	50	20.8%	33	36	9.9%	20	20	0.4%	48	104	116.8%
August	47	69	46.1%	46	56	22.9%	41	43	5.8%	33	34	1.8%	29	31	6.7%	15	15	1.4%	41	49	21.5%
September	46	60	28.1%	44	48	10.1%	36	37	1.7%	32	32	1.2%	28	29	2.8%	19	19	0.8%	39	43	11.6%
Average AF/yr	263,912	438,242	66.1%	115,869	196,854	69.9%	126,047	160,143	27.1%	132,387	150,720	13.8%	105,383	119,778	13.7%	128,062	145,200	13.4%	154,620	229,412	48.4%

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	-25.4%	4	4	-18.3%	4	2	-42.7%	2	2	0.0%	6	4	-33.3%
November	19	17	-13.8%	17	13	-21.4%	8	6	-28.6%	18	23	25.3%	6	5	-24.9%	4	4	-0.8%	16	15	-7.5%
December	91	119	30.7%	29	35	21.4%	16	20	25.0%	44	46	5.3%	11	8	-24.4%	11	11	-6.4%	44	54	21.8%
January	153	179	17.1%	32	56	74.5%	118	141	19.7%	25	40	58.7%	103	117	13.6%	157	277	76.7%	79	103	30.4%
February	93	102	9.6%	29	44	52.3%	55	58	4.0%	108	111	3.3%	7	7	-2.0%	36	36	-1.9%	64	72	12.6%
March	63	90	42.5%	35	56	59.1%	17	28	62.7%	69	86	24.7%	92	96	4.7%	94	99	5.2%	53	72	35.2%
April	83	250	202.1%	13	98	659.8%	11	33	196.3%	10	22	110.4%	8	19	137.5%	8	17	113.3%	27	97	261.8%
May	31	150	381.1%	16	65	291.8%	15	38	152.3%	12	19	62.1%	9	19	101.9%	9	19	102.1%	18	65	266.0%
June	11	43	290.1%	11	37	240.2%	11	21	91.0%	10	14	49.7%	8	8	1.7%	8	8	3.5%	10	28	172.2%
July	9	13	40.5%	9	8	-8.7%	9	7	-25.1%	7	5	-32.2%	6	3	-57.4%	1	1	-4.6%	8	8	-6.5%
August	9	5	-40.7%	9	4	-55.0%	5	3	-46.1%	4	2	-34.6%	3	2	-35.3%	1	1	0.0%	6	3	-46.3%
September	8	5	-36.5%	7	3	-54.0%	3	2	-27.0%	3	2	-18.8%	3	2	-29.4%	2	2	-5.7%	5	3	-40.8%
Average AF/yr	34,863	58,966	69.1%	12,923	25,567	97.8%	16,522	21,722	31.5%	18,554	22,239	19.9%	15,898	17,591	10.7%	20,309	29,063	43.1%	20,204	31,482	55.8%

*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	646	698	8.0%	110	184	68.0%	7	92	1214.3%	482	569	18.1%	6	92	1572.7%	6	92	1572.7%	299	374	24.7%
January	1,521	1,572	3.4%	401	457	13.7%	757	812	7.4%	70	152	119.1%	6	92	1572.7%	6	92	1572.7%	606	670	10.5%
February	444	408	-8.2%	59	140	138.6%	494	563	13.9%	1,061	1,137	7.1%	34	102	201.0%	6	102	1754.5%	423	472	11.7%
March	671	840	25.2%	247	336	35.8%	119	222	86.7%	638	668	4.7%	1,426	1,482	3.9%	6	122	2118.2%	501	596	19.0%
April	681	637	-6.5%	31	222	610.9%	7	142	1928.6%	6	142	2142.1%	6	142	2481.8%	6	142	2481.8%	162	276	70.0%
May	1,230	976	-20.7%	190	393	106.6%	7	122	1642.9%	6	122	1826.3%	6	122	2118.2%	6	122	2118.2%	333	395	18.6%
June	726	698	-3.8%	130	305	134.3%	33	130	291.3%	6	122	1826.3%	6	122	2118.2%	6	122	2118.2%	207	308	48.3%
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	361,914	384,962	6.4%	73,318	151,885	107.2%	86,652	152,706	76.2%	135,128	200,281	48.2%	92,916	159,846	72.0%	3,982	76,225	1814.3%	154,774	215,276	39.1%

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	164.9%	52	144	175.2%	47	136	188.9%	36	123	241.2%	27	113	323.7%	52	144	174.9%
November	159	275	72.6%	142	249	75.5%	80	178	122.0%	162	277	70.7%	45	143	218.9%	48	143	196.8%	134	242	81.4%
December	1,248	1,407	12.8%	358	492	37.5%	165	306	85.5%	792	901	13.9%	118	224	89.0%	178	281	57.4%	625	758	21.3%
January	2,536	2,687	5.9%	706	844	19.6%	1,513	1,655	9.4%	302	428	41.7%	646	787	21.8%	995	1,220	22.7%	1,165	1,306	12.1%
February	1,097	1,197	9.1%	361	535	48.2%	975	1,091	11.9%	1,811	1,917	5.9%	167	258	54.7%	391	512	31.1%	920	1,046	13.8%
March	1,212	1,507	24.3%	660	849	28.6%	405	558	37.9%	1,256	1,339	6.7%	2,129	2,210	3.8%	676	820	21.3%	1,002	1,181	17.8%
April	1,506	2,338	55.3%	303	862	185.0%	238	478	101.3%	172	353	105.4%	105	284	171.1%	59	226	284.3%	508	960	89.0%
May	1,936	2,496	28.9%	465	968	108.2%	238	458	92.2%	118	267	125.7%	83	234	182.4%	88	229	161.1%	642	1,003	56.4%
June	989	1,468	48.5%	251	668	165.7%	118	288	144.9%	77	226	193.6%	54	191	251.6%	52	179	247.7%	336	644	91.7%
July	92	370	300.8%	60	210	252.5%	57	170	197.9%	49	154	211.3%	40	139	252.5%	26	123	370.5%	62	220	254.9%
August	56	163	189.3%	54	150	176.1%	49	136	179.3%	41	127	211.8%	35	124	251.7%	21	108	414.7%	49	143	193.0%
September	56	154	176.3%	52	142	170.9%	44	130	193.1%	39	125	221.1%	34	121	255.9%	25	112	344.9%	47	137	191.3%
Average AF/yr	661,193	858,525	29.8%	209,603	369,155	76.1%	235,164	335,301	42.6%	287,500	370,953	29.0%	213,203	294,529	38.1%	156,224	245,613	57.2%	333,156	468,429	40.6%

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	879	0.7%	860	875	1.8%	805	802	-0.4%	769	769	0.0%	588	588	0.0%	852	853	0.1%
November	1,381	1,390	0.6%	1,229	1,236	0.6%	861	956	11.0%	1,147	1,182	3.0%	841	841	0.0%	607	611	0.6%	1,160	1,183	2.1%
December	3,550	3,562	0.3%	1,757	1,763	0.4%	1,409	1,436	2.0%	2,030	2,047	0.9%	812	823	1.4%	915	956	4.5%	2,122	2,136	0.7%
January	6,087	6,114	0.4%	2,753	2,789	1.3%	4,733	4,773	0.8%	1,857	1,886	1.6%	2,698	2,726	1.0%	2,923	3,187	9.0%	3,611	3,649	1.0%
February	5,124	5,084	-0.8%	2,520	2,559	1.5%	4,101	4,100	0.0%	4,333	4,342	0.2%	1,979	1,965	-0.7%	2,903	2,590	-10.8%	3,714	3,710	-0.1%
March	4,860	4,881	0.4%	3,075	3,072	-0.1%	3,020	3,000	-0.7%	4,360	4,347	-0.3%	4,634	4,618	-0.3%	4,730	4,744	0.3%	3,940	3,938	-0.1%
April	6,103	6,168	1.1%	3,195	3,203	0.3%	1,993	1,950	-2.1%	1,245	1,229	-1.3%	1,201	1,201	0.0%	417	426	2.1%	3,015	3,023	0.3%
May	6,935	6,890	-0.6%	3,944	3,932	-0.3%	3,015	2,977	-1.3%	1,448	1,422	-1.8%	1,230	1,230	0.0%	611	611	0.0%	3,637	3,612	-0.7%
June	5,510	5,596	1.6%	3,869	3,870	0.0%	2,650	2,578	-2.7%	1,463	1,418	-3.1%	1,277	1,277	0.0%	681	681	0.0%	3,255	3,254	0.0%
July	3,088	3,088	0.0%	2,443	2,386	-2.3%	1,817	1,779	-2.1%	1,417	1,416	-0.1%	1,363	1,363	0.0%	549	549	0.0%	2,143	2,119	-1.1%
August	2,313	2,233	-3.4%	1,773	1,736	-2.1%	1,414	1,446	2.3%	1,176	1,158	-1.6%	1,079	1,079	0.0%	406	406	0.0%	1,624	1,595	-1.8%
September	994	984	-1.0%	919	930	1.3%	869	900	3.6%	774	757	-2.2%	720	720	0.0%	203	203	0.0%	864	867	0.3%
Average AF/yr	2,823,038	2,825,273	0.1%	1,709,879	1,709,904	0.0%	1,607,244	1,608,998	0.1%	1,321,203	1,318,166	-0.2%	1,124,056	1,124,693	0.1%	934,102	937,133	0.3%	1,802,229	1,802,250	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%	540	545	1.1%	517	532	3.0%	469	466	-0.7%	412	412	0.0%	400	400	0.0%	521	522	0.2%
November	1,091	1,100	0.8%	930	938	0.8%	543	638	17.4%	854	889	4.1%	500	500	0.0%	406	410	1.0%	861	885	2.8%
December	3,591	3,603	0.3%	1,671	1,677	0.4%	1,359	1,387	2.0%	1,952	1,970	0.9%	706	718	1.6%	862	904	4.8%	2,073	2,087	0.7%
January	6,730	6,757	0.4%	2,923	2,959	1.2%	5,168	5,208	0.8%	2,047	2,077	1.4%	3,112	3,139	0.9%	3,941	4,204	6.7%	3,972	4,009	0.9%
February	5,994	5,954	-0.7%	2,878	2,916	1.3%	4,658	4,657	0.0%	4,923	4,931	0.2%	2,116	2,102	-0.7%	3,276	2,963	-9.5%	4,256	4,251	-0.1%
March	5,542	5,563	0.4%	3,557	3,553	-0.1%	3,536	3,515	-0.6%	5,030	5,017	-0.3%	5,347	5,331	-0.3%	5,343	5,357	0.3%	4,537	4,534	-0.1%
April	6,820	6,885	1.0%	3,399	3,408	0.3%	1,814	1,772	-2.3%	967	951	-1.7%	900	900	0.0%	256	258	1.0%	3,125	3,132	0.2%
May	6,553	6,508	-0.7%	3,437	3,425	-0.3%	2,345	2,307	-1.6%	721	695	-3.6%	497	497	0.0%	245	245	0.0%	3,072	3,047	-0.8%
June	4,723	4,809	1.8%	3,053	3,053	0.0%	1,781	1,709	-4.0%	589	544	-7.7%	400	400	0.0%	245	245	0.0%	2,430	2,428	-0.1%
July	2,074	2,075	0.0%	1,429	1,372	-4.0%	857	819	-4.4%	457	456	-0.2%	400	400	0.0%	70	70	0.0%	1,165	1,142	-2.0%
August	1,426	1,346	-5.6%	901	864	-4.1%	737	769	4.3%	498	480	-3.8%	400	400	0.0%	70	70	0.0%	847	818	-3.4%
September	676	667	-1.4%	605	616	1.9%	601	632	5.2%	505	488	-3.4%	450	450	0.0%	70	70	0.0%	574	576	0.4%
Average AF/yr	2,754,605	2,756,840	0.1%	1,524,055	1,524,081	0.0%	1,433,436	1,435,190	0.1%	1,134,061	1,131,024	-0.3%	919,990	920,626	0.1%	912,170	914,824	0.3%	1,647,475	1,647,486	0.0%

*Water Year Classifications based on Smartsville Index