



April 2, 2015

Jeffrey Parks
Water Quality Certification Program
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
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Sent via e-mail to: jeff.parks@waterboards.ca.gov

Re: Middle Fork Stanislaus River Supplemental Flows Variance (part of the Spring Gap-Stanislaus and the Beardsley/Donnells Hydroelectric Projects)

Dear Mr. Parks:

American Whitewater, the California Sportfishing Protection Alliance and Trout Unlimited (Conservation Groups) write to comment on the State Water Resources Control Board's (SWRCB) March 25, 2015 notice of PG&E and Tri-Dam Project's (licensees) request for a variance from providing supplemental spring and recreational boating flows in the Middle Fork Stanislaus River (MFSR), as required by the 401 Water Quality Certification for PG&E's Spring Gap-Stanislaus (FERC # P-2130) and Tri-Dam Project's Beardsley-Donnells (FERC # P-2005) hydroelectric projects. The licensees' request provides insufficient information to determine whether cancellation of supplemental and recreational flows is warranted. Additionally, licensees raise issues regarding Foothill Yellow-legged Frogs (FYLFs) that are inappropriate for a variance request and are better suited for a license amendment. Conservation Groups note that licensees submitted a similarly deficient request in 2014 (see attached April 22, 2014 comments from Conservation Groups).

The Variance Request Provides Insufficient Hydrologic Information

In a March 11, 2014 letter to the Federal Energy Regulatory Commission (FERC), the SWRCB outlined its criteria for information requirements in drought-related amendments to hydropower licenses. This information includes: 1) the quantity of water that is expected to be saved for later use that would not be available without the change; 2) the location where the saved water will ultimately be used; and 3) the purpose for which the saved water will be used. Licensees state that the variance is needed to continue to provide instream flows for the 2015 water year and manage benefits to the FYLF. However, licensees fail to provide relevant hydrologic information to support their request.

The variance request fails to describe the key components of the hydrologic situation that require a variance from the license requirements such as: how much water is in storage; how much water is required to meet all license flow requirements over the next nine months; and what if any consumptive demand there is in this system. Additionally, the licensees should clarify what type of water year it is and clearly describe the flow pulse schedule from which they seek a variance. The variance request describes only the supplemental flow schedule for a Dry year, had that schedule been implemented. While it is our understanding that this is a Dry water year, the licensees should provide the threshold requirements used to determine water year type for the affected projects and should describe the latest projections of runoff in the affected waterways in order to confirm the water year type.

The SWRCB's March 25, 2015 notice states that PG&E and Tri-Dam have requested that supplemental flows be cancelled in 2015 because of the magnitude and volume of water that would be required. Licensees state in their variance request that all "conserved water will be utilized for instream flow releases in the MFSR and for power generation purposes in the future." If the supplemental flows are to be cancelled in 2015 because there is not enough water, as cited by the SWRCB, then the variance request must provide an analysis of the amount of water that is required to meet minimum instream flows and power generation during the remainder of the water year, show why there is not sufficient water to meet these flows, and describe how much of the conserved water is needed to maintain instream flows.

Finally, PG&E's February 25th, 2015 letter notes that "providing the recreation flows would require the release of an additional 2,500 ac. ft. of water (approximately)...[and] that inflows to the Sandbar Diversion Dam will not be sufficient to provide this flow. Tri-Dam Project also expects that upstream reservoir levels (Beardsley, Donnell's) will be exceptionally low this year, limiting recreational opportunities at these sites." This information is incomplete. PG&E and Tri-Dam should provide additional information about the current reservoir levels and volume, the level and volume needed for the recreation flows to occur, and the amount of inflow predicted to the Sandbar Diversion Dam.

We attach, as an example of a more appropriate description of hydrologic information for a drought streamflow variance request, two sheets showing projected end-of-month storage levels, streamflow releases including buffer flows, and project diversions under 50% and 90% exceedance scenarios. These sheets were submitted to resource agencies and other stakeholders by El Dorado Irrigation District on March 9, 2015, in support of the District's proposed streamflow variance request for FERC Project 184.

The Variance Request Is Inappropriate for Determining FYLF Flow Triggers

In its February 25, 2015 Notice of Planned Deviation from Supplemental and Recreation Flows, the licensees express concerns that releasing supplemental flows will decrease water temperatures, thereby deferring FYLF breeding by two weeks and decreasing the potential for additional young of year growth before winter. Frankly, we are baffled by the suggestion that FYLF would be negatively affected by spring pulse flows in what is turning out to be another year of record drought. The suggestion that pulse flows

designed to mimic the natural hydrology are “less conducive to successful FYLF breeding and rearing” ignores the Mediterranean climate in which this species evolved.

Additionally, as we stated in 2014, a temporary variance order is an inappropriate venue for addressing licensees’ general concerns about water temperature, supplemental flows, and their potential impact on FYLF. These complex issues should instead be raised in longer-term discussions with resource agencies, licensees and interested stakeholders. Last year, the SWRCB granted PG&E and Tri-Dam a one-time variance for 2014 from the supplemental and recreational flows required in the Spring Gap and Beardsley Project 401 Certifications, with the provision that PG&E and Tri-Dam schedule a meeting by November 1, 2014 with the relevant parties to discuss potential modifications to the supplemental flow triggers. The need for this meeting was supported in correspondence from the Forest Service and PG&E.¹ The SWRCB’s stated goal was for the licensees to secure the necessary agency approvals and license amendment to ensure that the new triggers are in place no later than 2016. The SWRCB required licensees to submit a summary of the meeting and a copy of the proposal to all participating parties and FERC. Conservation Groups note that there is no meeting summary on the FERC docket and that we did not receive notification of this meeting. We request that the SWRCB require that licensees report on the progress of this requirement and promptly convene a meeting.

These conversations are timely, not only to discuss the issues raised in the variance request, but also because of new scientific information that has been published since the new license was implemented.² Conservation Groups have been working with resource agencies to restore the spring snowmelt recession on hydropower projects throughout California. We continue to look forward to working together to ensure that the Spring Gap-Stanislaus and Beardsley-Donnells hydroelectric projects operate in a way that is protective of FYLF’s and other species’ important ecological needs and aquatic resources in the Middle Fork Stanislaus River.

Conclusion

We support cancelling the supplemental and recreational flows on the Spring Gap-Stanislaus Project because of the ongoing drought. In 2014, we supported a variance with the understanding that licensees, agencies and other stakeholders will be developing improved temperature triggers for supplemental flows, and improved ramping rates (and potentially other flow measures) that will be more protective of FYLFs. We do the same in 2015, provided that these actions take place in a timely manner.

However, we propose that the SWRCB stay the variance until such time as licensees provide a complete variance request. There is no excuse for failure to provide clearly required, minimal information in a second request when these licensees were put on notice of deficiency last year. We recommend that the SWRCB require that licensees

¹ See April 30, 2014 letter from Forest Service to PG&E, and May 2, 2014 letter from PG&E to FERC; FERC Accession No. 20140502-5182.

² Yarnell, S.M., Viers, J.H. and Mount, J.F. 2010. Ecology and Management of the Spring Snowmelt Recession. *BioScience* 60: 114-127.

redraft their request in order to describe 1) the quantity of water that is expected to be saved for later use that would not be available without the change; 2) the location where the saved water will ultimately be used; and 3) the purpose for which the saved water will be used (i.e. the terms outlined in the SWRCB's March 11, 2014 letter to FERC). Due to the complex nature of the projects, we also recommend that licensees include an explanation of where the water will be stored during the variance period. A more complete variance request is important not only to provide a clear rationale for the request at hand, but also to provide a clear record of the existing conditions should the SWRCB need to consider variance requests in the future, and to provide consistent and equal application of emergency requirements to everyone.

Sincerely,



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April 22, 2014

Jeffrey Parks
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Re: Middle Fork Stanislaus River Supplemental Flows Variance (part of the Spring Gap-Stanislaus and the Beardsley/Donnells Hydroelectric Projects)

Dear Mr. Parks,

American Whitewater, California Sportfishing Protection Alliance and Trout Unlimited (Conservation Groups) write to provide comment on the State Water Resources Control Board's (SWRCB) April 4, 2014 notice of PG&E and Tri-Dam Project's (Licensees) request for a variance from supplemental spring and recreational boating flow conditions outlined in the 401 Water Quality Certification for PG&E's Spring Gap-Stanislaus (FERC # P-2130) and Tri-Dam Project's Beardsley/Donnells (FERC # P-2005) Hydroelectric Projects. Licensees' variance request is insufficient to determine whether cancelling supplemental and recreational flows is warranted. Additionally, licensees raise issues regarding Foothill Yellow-legged Frogs (FYLFs) that are inappropriate for a variance request and are better suited for a license amendment.

The Variance Request Provides Insufficient Hydrologic Information

In a March 11, 2014 letter to the Federal Energy Regulatory Commission (FERC), the SWRCB outlined their criteria for drought-related amendments to hydropower licenses. This information includes 1) the quantity of water that is expected to be saved for later use that would not be available without the change; 2) the location where the saved water will ultimately be used; and 3) the purpose for which the saved water will be used. Licensees state that the variance is needed to continue to provide instream flows for the 2014 water year, plan for the 2015 water year, and supply benefits to the FYLF. However, licensees fail to provide relevant hydrologic information to support their request.

For example, the variance request fails to describe what type of water year it is and outline the relevant flow schedule. It only outlines the supplemental flow schedule for a Dry year, if it had been implemented. While it is our understanding that this is a Dry

water year, PG&E should provide the threshold requirements and the projected run off to confirm the water year. PG&E's April 23, 2010 *Initial Water Temperature Trigger Recommendation for Implementing Supplemental Flows*¹ describes the conditions for supplemental flows in years that Beardsley Reservoir is not forecast to spill. In Dry years, the supplemental flow period is to last thirteen weeks, with the peak flow in week eight. The document recommends that supplemental flows either be initiated when the mean daily water temperature at Sand Bar Diversion Dam is greater than or equal to 5 °C for six continuous days, or on March 13th if the temperature trigger has not yet been met. The variance request and the SWRCB's notice do not specify whether the temperature threshold (5 °C for six continuous days) was met before the March 13th trigger date, and if it was, when that occurred. Licensees' variance request should contain this information. Further, if the temperature trigger was met before March 13th, we urge the Water Board to question why the supplemental flows were not implemented at this time, or alternatively, why licensees failed to submit a variance request beforehand.

Licensees state that all "conserved water will be utilized for instream flow releases in the MFSR and for power generation purposes in the future." However, the variance request fails to provide any analysis of the amount of water that is required to meet minimum instream flows during the remainder of the water year, and whether there is sufficient water to meet these flows. Licensees fail to provide a description of and breakdown between the two purposes, and a description of how much of the conserved water is needed to maintain instream flows.

At the April 3rd meeting with resource agencies, licensees provided additional reasons for cancelling the recreation flows that were not outlined in their April 9, 2014 variance request. Licensees stated that there was insufficient head in Beardsley Reservoir to produce the minimum recreation streamflow of 500 cfs. The specifics of this inability to meet the recreation streamflow condition should be included in the variance request. Additionally, PG&E mentioned that there is no access to the put-in location to the river at Sand Bar Flat Dam due to construction activities. Although Conservation Groups note that this is not the only means of accessing the reach, and this is not a valid reason to cancel the recreation streamflow event, we believe that this should be part of the public record. Licensees should include it in their variance request.

The Variance Request Provides Insufficient FYLF Information

The SWRCB's April 4, 2014 notice states that PG&E has concerns that the dry conditions and warm water temperatures have allowed the FYLF to begin breeding, and that an increase in flows could scour egg masses. Licensees fail to clearly describe where the FYLF is found in the Project reaches. We note that the DEIS for the Beardsley/Donnells project stated that no FYLFs were observed in the Donnells Reach.² If new information is available and FYLFs have been found in this reach, or alternatively, if there is concern for FYLFs only in the Sand Flat reach, the variance request should

¹ PG&E. 2010. *Initial Water Temperature Trigger Recommendation for Implementing Supplemental Flows*. FERC Accession No. 20100423-5106.

² FERC. Draft Environmental Impact Statement for Hydropower Licenses, Stanislaus River Projects. 2004. At 182. FERC Accession No. 20040930-4017.

specify this. Further, PG&E and Tri-Dam do not contend that there is danger of imminent mortality of FYLF. The primary goal of providing the supplemental flow was to create conditions that mimic the natural hydrograph for the benefit of FYLFs and the entirety of the aquatic ecosystem.

In contrast to the rationale provided in the SWRCB's notice, Licensees' "Notification of Planned Deviation from License Requirements" on April 9th, 2014 states that supplemental flows decrease water temperatures, which can be less conducive to FYLF breeding and rearing. Licensees suggest that the variance will be beneficial for the FYLF because cancelling the supplemental flows will provide a prolonged opportunity for breeding and rearing.

A temporary variance order is an inappropriate venue for addressing Licensees' general concerns about water temperature, supplemental flows and their potential impact on FYLF. These complex issues should instead be raised in longer-term discussions with resource agencies, licensees and interested stakeholders. We believe that these conversations are timely, not only to discuss the issues raised in the variance request, but also because of new scientific information that has been published since the new license was implemented.³ Conservation groups have been working with resource agencies to restore the spring snowmelt recession on hydropower projects throughout California. At the April 3, 2014 Annual Consultation Meeting, we discussed the need to address all of the flow conditions in the Spring Gap-Stanislaus license that could affect FYLFs, and were happy to hear that Licensees are interested in engaging in these discussions this fall. We look forward to working together to ensure that the Spring Gap-Stanislaus and Beardsley/Donnells Hydroelectric Projects operate in a way that is protective of FYLF's and other important ecological needs for the Middle Fork Stanislaus River.

Conclusion

We support cancelling the supplemental and recreational flows on the Spring Gap-Stanislaus Project for the reasons outlined by the SWRCB—i.e. because of the ongoing drought and in order to protect potential FYLF egg masses that may have been prematurely laid during this year's abnormally dry spring. We also support this variance with the understanding that Licensees, agencies and other stakeholders will be developing improved temperature triggers for supplemental flows, and improved ramping rates (and potentially other flow measures) that will be more protective of FYLFs.

We recommend that the SWRCB require that Licensees redraft their request in order to describe 1) the quantity of water that is expected to be saved for later use that would not be available without the change; 2) the location where the saved water will ultimately be used; and 3) the purpose for which the saved water will be used (i.e. the terms outlined in the SWRCB's March 11, 2014 letter to FERC). Due to the complex nature of the projects, we also recommend that Licensees include an explanation of where the water will be stored during the variance period. A more complete variance request is important

³ Yarnell, S.M., Viers, J.H. and Mount, J.F. 2010. Ecology and Management of the Spring Snowmelt Recession. *BioScience* 60: 114-127.

not only to provide a clear rationale for the request at hand, but also to provide a clear record of the existing conditions should the Board need to consider variance requests in the future.

Sincerely,



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TABLE B - Project-184 2015 Forecast Operation 50% PROBABILITY

- March 9 FORECAST -

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Reservoir Storage, Releases and Direct Diversion Available to Meet EID Demands													
Silver Lake: End of Month Storage (af)	3,808	5,978	6,886	8,640	8,640	7,545	6,568	5,766	4,426	4,030	3,786	3,508	
Lake Level Target (af)	-	-	-	-	-	-	-	-	3,756	-	-	-	
Pre-1914 Water Available (af)		1,518	3,336	5,400	5,400	5,143	4,745	3,833	3,833	3,833	3,833	3,833	
Inflow Forecast (af)		1,518	1,819	3,841	1,732	262	3	0	11	160	321	228	9,895
Evaporation (af)		0	0	117	167	205	218	178	366	62	66	41	1,420
Leakage (af)		434	665	864	996	914	758	625	464	334	261	236	6,553
Outlet (Including Leakage, af)		656	911	1,970	1,565	1,152	762	625	984	494	499	465	10,083
Caples Lake: End of Month Storage (af)	14,417	15,837	16,470	18,059	18,804	18,100	17,118	15,128	14,269	13,989	13,808	13,692	
Lake Level Target (af)	-	-	-	-	-	18,704	18,413	14,376	14,376	-	-	-	
Pre-1914 Water Available (af)		785	1,726	4,049	5,864	6,237	5,849	4,937	4,357	4,357	4,357	4,357	
Inflow Forecast (af)		785	941	2,324	1,815	373	10	0	19	111	209	247	6,834
Evaporation (af)		0	0	140	210	244	253	216	581	84	92	56	1,876
Outlet (af)		278	307	595	861	833	738	1,774	298	307	298	307	6,596
Lake Aloha: End of Month Storage (af)	441	1,134	2,133	4,791	5,179	3,270	614	286	78	75	186	236	
Lake Level Minimum (af)	-	-	-	-	-	3,079	0	0	0	-	-	-	
Pre-1914 Water Available (af)		360	360	360	360	360	0	0	0	0	0	0	
Inflow Forecast (af)		936	1,122	2,907	1,714	332	9	0	36	267	388	331	8,042
Evaporation (af)		0	0	70	162	220	61	29	8	8	18	8	584
Outlet (af)		111	123	179	1,165	2,022	2,603	300	236	261	260	273	7,532
Echo Lake: End of Month Storage, Pre-1914 (af)	85	205	463	1,693	1,943	1,818	1,783	1,767	941	0	0	0	
Inflow Forecast (af)		524	627	1,626	959	186	5	0	20	149	217	185	4,498
Evaporation (af)		0	0	40	92	125	35	16	4	4	0	0	316
Diversion in Conduit (af)		0	0	0	0	0	0	0	821	937	0	0	1,758
Outlet to Echo Creek (af)		333	369	357	617	186	5	0	20	149	217	185	2,439
Direct Diversion Accretions at Kyburz (af)		18,630	22,325	29,334	5,703	1,230	18	0	86	697	1,712	2,012	81,747
Minimum Bypass Requirement at Kyburz (cfs)		20	30	60	60	60	40	18	15	15	15	15	
Minimum Bypass Requirement at Kyburz + 5% (af)		1,166	1,937	3,749	3,874	3,749	2,582	1,162	937	968	937	968	22,030
SF American River Flow Below Kyburz (af)		19,674	14,074	22,795	3,874	3,749	2,582	1,162	937	968	937	968	71,721
Total Diversion at Kyburz (af)		0	9,592	9,283	5,420	1,488	1,537	1,537	1,488	1,729	1,831	2,089	35,994
Pre-1914 Deliveries													
Silver Lake: (Maximum per year = 5,400 af)		0	0	0	0	257	762	625	580	0	0	0	2,224
Caples Lake: (Maximum per year = 8,000 af)		0	0	0	0	0	398	912	0	0	0	0	1,310
Lake Aloha: (Maximum per year = 360 af)		0	0	0	0	0	360	0	0	0	0	0	360
Echo Lake: (Maximum per year = 1,943 af)		0	0	0	0	0	0	0	821	0	0	0	821
Direct Diversion from Accretions at Kyburz (af)		0	3,055	4,165	1,811	1,230	18	0	86	0	0	0	10,365
Total Pre-1914 - DEMAND	0	0	3,055	4,165	1,811	1,488	1,537	1,537	1,488	0	0	0	15,080
Total Pre-1914 - DELIVERY	0	0	3,055	4,165	1,811	1,488	1,537	1,537	1,488	0	0	0	15,080
Total Pre-1914 - DELIVERY, cfs	0	0	70	70	29	25	25	25	25	0	0	0	
Pre-1914 Shortage	0	0	0	0	0	0	0	0	0	0	0	0	0

- Reservoirs are operated to release the Natural Flow when allowed.
- Hydropower generation only when direct diversion is available and Critically Dry instream flows at Kyburz are met.
- Minimum Silver Lake, Echo Lake, and Lake Aloha outlet set at minimum or Natural Flow which ever is less.
- Based on March 9, 2015 California Nevada River Forecast Center forecast of South Fork American River Flow at Kyburz.

TABLE A - Project-184 2015 Forecast Operation 90% PROBABILITY

- March 9 FORECAST -		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Reservoir Storage, Releases and Direct Diversion Available to Meet EID Demands														
Silver Lake:	End of Month Storage (af)	3,808	5,978	5,940	6,288	6,675	5,857	5,113	4,512	3,756	3,463	3,194	2,972	
	Lake Level Target (af)	-	-	-	-	-	-	-	-	3,756	-	-	-	
	Pre-1914 Water Available (af)		2,255	3,057	4,362	5,400	5,293	4,279	3,163	2,911	2,911	2,911	2,911	
	Inflow Forecast (af)		1,971	802	1,305	1,465	130	0	0	4	60	97	93	5,928
	Evaporation (af)		0	0	102	159	179	221	179	303	59	64	39	1,305
	Leakage (af)		434	594	617	672	640	523	422	320	233	206	183	4,844
	Outlet (Including Leakage, af)		656	840	855	918	770	523	422	457	293	303	276	6,314
Caples Lake:	End of Month Storage (af)	14,417	15,837	16,097	16,156	16,637	14,308	10,766	8,566	7,025	6,692	6,386	6,138	
	Lake Level Target (af)	-	-	-	-	-	18,704	18,413	14,376	14,376	-	-	-	
	Pre-1914 Water Available (af)		1,020	1,435	2,224	3,763	3,842	2,827	1,712	1,467	1,509	1,572	1,675	
	Inflow Forecast (af)		1,020	415	789	1,539	186	0	0	8	42	63	102	4,164
	Evaporation (af)		0	0	135	197	225	220	198	359	67	72	43	1,516
	Outlet (af)		278	307	595	861	2,290	3,322	2,002	1,190	307	298	307	11,757
Lake Aloha:	End of Month Storage (af)	441	1,134	1,506	2,245	3,230	1,663	1,262	897	599	393	208	66	
	Lake Level Minimum (af)	-	-	-	-	-	3,079	0	0	0	-	-	-	
	Pre-1914 Water Available (af)		360	360	360	360	360	0	0	0	0	0	0	
	Inflow Forecast (af)		1,216	495	988	1,454	166	0	0	14	101	118	137	4,688
	Evaporation (af)		0	0	70	162	166	126	90	41	21	18	7	701
	Outlet (af)		111	123	179	307	1,566	275	275	271	286	285	273	3,951
Echo Lake:	End of Month Storage, Pre-1914 (af)	85	205	205	361	713	619	547	496	0	0	0	0	
	Inflow Forecast (af)		680	277	553	813	93	0	0	8	56	66	77	2,623
	Evaporation (af)		0	0	40	92	94	72	51	23	0	0	0	372
	Diversion in Conduit (af)		0	0	0	0	0	0	0	473	0	0	0	473
	Outlet to Echo Creek (af)		333	277	357	369	93	0	0	8	56	66	77	1,636
	Direct Diversion Accretions at Kyburz (af)		24,197	9,845	9,966	4,771	610	0	0	34	263	515	820	51,022
	Minimum Bypass Requirement at Kyburz (cfs)		20	30	60	60	60	40	18	15	15	15	15	
	Minimum Bypass Requirement at Kyburz + 5% (af)		1,166	1,937	3,749	3,874	3,749	2,582	1,162	937	968	937	968	22,030
	SF American River Flow Below Kyburz (af)		25,242	1,937	3,749	3,874	3,749	2,582	1,162	937	968	937	968	46,106
	Total Diversion at Kyburz (af)		0	9,179	7,846	2,984	1,488	1,537	1,537	1,488	182	483	708	27,411
Pre-1914 Deliveries														
Silver Lake:	(Maximum per year = 5,400 af)	0	0	0	0	770		523	422	457	0	0	0	2,172
Caples Lake:	(Maximum per year = 8,000 af)	0	0	0	0	107		1,014	1,115	252	0	0	0	2,489
Lake Aloha:	(Maximum per year = 360 af)	0	0	0	0	0		0	0	271	0	0	0	271
Echo Lake:	(Maximum per year = 1,943 af)	0	0	0	0	0		0	0	473	0	0	0	473
	Direct Diversion from Accretions at Kyburz (af)	0	3,055	4,165	1,811	610		0	0	34	0	0	0	9,675
	Total Pre-1914 - DEMAND	0	0	3,055	4,165	1,811	1,488	1,537	1,537	1,488	0	0	0	15,080
	Total Pre-1914 - DELIVERY	0	0	3,055	4,165	1,811	1,488	1,537	1,537	1,488	0	0	0	15,080
	Total Pre-1914 - DELIVERY, cfs	0	0	70	70	29	25	25	25	25	0	0	0	
	Pre-1914 Shortage	0	0	0	0	0	0	0	0	0	0	0	0	0

- Reservoirs are operated to release the Natural Flow when allowed
 - Hydropower generation only when direct diversion is available and Critically Dry instream flows at Kyburz are met
 - Minimum Silver Lake, Echo Lake, and Lake Aloha outlet set at minimum or Natural Flow whichever is less
- Based on March 9, 2015 California Nevada River Forecast Center forecast of South Fork American River Flow at Kyburz.