

**ATTACHMENT 1  
TO SSWD'S OCTOBER 13, 2016 LETTER**

**SSWD'S REPLY TO STUDY MODIFICATIONS REQUESTED  
BY RELICENSING PARTICIPANTS**



**Attachment 1 - SSWD's Reply to Study Modifications requested by Relicensing Participants**

Agency	Comment No.	Study	Requested Study Modifications	SSWD's Reply (Adopted, Adopted with Modification or Not Adopted)
<b>REQUESTED STUDY MODIFICATIONS</b>				
CDFW	1	2.1 - Water Temp Monitoring	"The Department recommends Licensee continue to collect water temperature data at all stream and reservoir locations through 2017 in order to overlap with the timing of other relicensing studies and accumulate more data for the proposed Study 2.2 – Water Temperature Modeling Study" (p. 12)	<b>Adopted.</b> Study 2.1 has been modified to reflect this change.
CDFW	2	2.2 - Water Temp Modeling	"The Department requests that water temperature monitoring and meteorological data collected through the end of 2016 is also used in the calibration of this model. The hydrologic year of 2015 came at the end of one of the driest periods on record in California. Conversely, the hydrologic year of 2016 has been wetter than 2015. The Department does not believe one (dry) year of water temperature data presents a wide enough range of hydrologic conditions to develop a robust calibration." (p.13)	<b>Adopted.</b> Study 2.2 has been modified to reflect this change.
CDFW	3	3.1 - Salmonid Redd Monitoring	"The Department believes the goal of this study is too vague and that the salmonid redd survey goals should be: 1) assess spawning of salmonids (Chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) and steelhead) in the lower Bear River; 2) evaluate how flows released from Camp Far West Dam affect salmonid spawning activities and related aquatic habitat conditions in the lower Bear River; and 3) if Project operations and maintenance have an adverse effect on anadromous fish in the lower Bear River." (p. 14)	<b>Adopted with Modification.</b> Study 3.1 has been modified to include CDFW's first objective - assessing spawning of salmonids (Chinook salmon and steelhead) in the Bear River downstream of the non-Project diversion dam. SSWD believes that information related to CDFW's objective 2 - evaluating how flows released from Camp Far West Dam affect salmonid spawning activities and related aquatic habitat conditions in the lower Bear River - will be provided by Study 3.3, <i>Instream Flow</i> . With regards to Project effects, especially CDFW's objective 3 - Project operations and maintenance have an adverse effect on anadromous fish in the lower Bear River - effects are not the purpose or goal of the relicensing studies. The studies are being performed to supplement existing information. Project effects will be discussed in SSWD's DLA and FLA and in FERC's NEPA document once all relevant studies are completed.
CDFW	4	3.1 - Salmonid Redd Monitoring	"Therefore, the Department recommends that redd surveys are conducted less than fourteen days apart throughout the spawning run (Gallagher and Gallagher 2005, Gallagher 2007). Specifically, surveys should begin prior to the onset of spawning of the species of interest and continue at least biweekly until spawning is complete. Redd count surveys should include marking newly made redds and recounting marked redds to estimate observer efficiency and reduce counting errors." (p. 15)	<b>Adopted with Modification.</b> Study 3.1 has been modified to include the following sampling schedule: redd surveys will occur monthly beginning in October. If an anadromous salmonid, carcass or redd is observed during the monthly survey, SSWD will begin biweekly surveys until the end of March. SSWD understands that biweekly redd surveys have been used on nearby rivers, however, these rivers contain more consistent populations of anadromous fish to warrant that level of survey. Given the lack of documented anadromous fish in the Bear River downstream of the non-Project diversion dam, SSWD believes the modified survey schedule is sufficient to meet the goals of Study 3.1.
CDFW	5	3.1 - Salmonid Redd Monitoring	"Therefore the Department recommends Licensee collect physical measurements of the pot area and tail spill of each newly constructed redd. Total area of the redd should be calculated from the field measurements treating the pot as a circle or ellipse and the tail spill as a square, triangle, or rectangle depending on the individual measurements. This data can then be used to conduct a discriminant analysis similar to steelhead redd surveys completed by Yuba County Water Agency (YCWA) in 2015 for the Yuba River Development Project (FERC No. 2246; YCWA 2015)." (pp. 15-16)	<b>Not Adopted.</b> SSWD believes that collection of physical measurements is not needed to meet the goal of Study 3.1, which is to assess spawning of anadromous salmonids in the Bear River downstream of the non-Project diversion dam. An assessment of spawning activity is an evaluation of the nature, ability, or quality of that activity and does not necessitate the quantification or estimation of the number of individuals participating in the activity, which is the goal of taking physical measurements. SSWD believes that the study is adequate to inform requirements in the new license.

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CDFW	6	3.2 - Stream Fish	"The Department recommends stream fish sampling via electrofishing in Reach 1 and snorkel surveys in Reach 2-4 be increased from once during the spring and fall to once per month during April, May, and June, and then October, November, and December. Sampling during three spring months will increase the likelihood of observing juvenile salmonids (salmon and steelhead) and adult sturgeon. Sampling during three fall months will increase the likelihood of observing adult salmonids." (p. 17)	<b>Adopted with Modification.</b> Study 3.2 has been modified to include the following sampling schedule: 1) Reach 1: SSWD will complete a single sampling event in the fall in order to assess stream fish populations in this reach. Since Reach 1 does not contain anadromous fish (i.e. is upstream of the non-Project diversion dam) there is no need for the additional sampling CDFW and others suggest in order to increase the likelihood of observing salmonids and sturgeon; 2) Reaches 2-4: SSWD will complete a single sampling event in the fall, as currently described in Study 3.2. Additional observations of adult salmonids will be made during SSWD's completion of Study 3.1, <i>Salmonid Redd Monitoring</i> . SSWD will complete the three spring sampling events as requested by CDFW and others in order to increase the likelihood of observing juvenile salmonids and adult sturgeon. SSWD believes that this modified sampling schedule is sufficient to meet the goals of Study 3.2 and will provide adequate information regarding stream fish populations to inform requirements in the new license.
CDFW	7	3.2 - Stream Fish	"The Department requests Licensee provide more detail in the study plan to clarify whether the study is intended to be qualitative (i.e., presence/absence) or quantitative (i.e., catch per unit effort)." (p. 17)	<b>Adopted.</b> Study 3.2 has been modified to reflect this change.
CDFW	8	3.2 - Stream Fish	"The Department recommends Licensee supplement snorkel surveys with beach seining once per month during the three spring months and the three fall months. Licensee should utilize a seine net with the appropriate mesh size to capture juvenile and adult special status fish species during the respective sampling periods (spring and fall)." (p.17)	<b>Adopted with Modification.</b> SSWD has modified Study 3.2 to include supplementing snorkel surveys with a beach seine of appropriate size during each event in Reaches 2-4. SSWD will not complete snorkeling or beach seining at the schedule requested by CDFW, but will instead sample based on the schedule described in SSWD's reply to CDFW Comment 6. SSWD provides its justification for the adjusted sampling schedule in its reply to CDFW Comment 6. This work is contingent on SSWD receiving appropriate permits to seine in waters with listed fishes.
CDFW	9	3.2 - Stream Fish	"The Department requests Licensee collect Environmental DNA (eDNA) during Study 3.2 to assist in determining the occurrence of fish species in the lower Bear River. The Department would like to collaboratively determine the locations, timing, and methodology for eDNA sampling with Licensee and other Project relicensing participants during a study plan meeting." (p. 17)	<b>Adopted with Modification.</b> Study 3.2 has been modified to include two eDNA sampling events, one in the fall after the first winter freshet and one in the spring before low flow conditions. Sampling will be conducted according to Bergman et al 2016 including a single sample every 500 meters from the non-Project diversion dam to the confluence of the Feather River or the obvious start of back water effects. While SSWD sees the value in collecting eDNA samples it does not believe it is necessary to collaboratively develop the sampling logistics with CDFW. The methodology for collecting eDNA samples is well documented and the timing will be consistent with other study schedules requested by CDFW in order to increase the chances of observing anadromous fish during various life stages (i.e. fall and spring). As mentioned, the TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. SSWD has gone well beyond TLP requirements by including in its PAD detailed study plans.

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CDFW	10	3.2 - Stream Fish	"Licensee proposes to visually estimate turbidity as low, moderate, or high during electrofishing surveys. The Department believes visual turbidity measurements are too subjective and requests Licensee utilize a sec chi disk to measure turbidity prior to each electrofishing sampling event." (p. 17)	<b>Adopted.</b> Study 3.2 has been modified to reflect this change.
CDFW	11	3.3 - Instream Flow	"The Department requests that site selection for Study 3.3 be performed in consultation with the Department and other interested Project relicensing participants, including, but not limited to NMFS, USFWS, and the State Water Resources Control Board (SWRCB)." (p. 18)	<b>Adopted with Modification.</b> As mentioned, the TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. SSWD has gone well beyond TLP requirements by including in its PAD detailed study plans, including the specific locations of proposed study sites. However, SSWD will host a one-day technical workshop to review the sites already selected by SSWD for Study 3.1 as well as rationale for the selections. On the same day, SSWD will invite interested Relicensing Participants to visit each of the study sites. SSWD will answer any questions in the field regarding the study sites.
CDFW	12	3.3 - Instream Flow	"The Department requests that additional species and life stage habitat modeling is added based on the results of these fisheries studies and in consultation with the Department and other interested Project relicensing participants." (p. 18)	<b>Adopted with Modification.</b> SSWD will host a one-day technical HSC workshop to discuss species to be modeled, if any additional species are identified in Studies 3.1 or 3.2. A regional HSC expert will be in attendance and facilitate the HSC workshop. SSWD will, in good faith try to come to agreement on final HSC during the workshop, but due to schedule requirements, will proceed with modeling if no agreement is made.
CDFW	13	3.3 - Instream Flow	"Based on the study plan implementation schedules provided in the Studies 3.1, 3.2, and 3.3, data collected in the fisheries studies may not be ready in time to facilitate an HSC development discussion. This potential schedule conflict should be discussed with the Project relicensing participants during the "study planning" phase of the relicensing process and/or in a study plan meeting." (p. 18)	<b>Not Adopted.</b> As mentioned, the TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. SSWD has gone well beyond TLP requirements by including in its PAD detailed study plans, including methodology. SSWD believes that Studies 3.1 and 3.2 will be conducted with sufficient time to allow the inclusion of an ESA or Special Status species, if documented during performance of field work. As noted above, SSWD will host a one-day HSC workshop to discuss species modeling.
CDFW	14	3.3 - Instream Flow	"The Department requests that any modifications to the existing HSCs proposed by licensee should be discussed and agreed upon in consultation with technical staff from the Department and other Project relicensing participants." (p. 18)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 12.
CDFW	15	3.3 - Instream Flow	"The Department requests that stage loggers are installed at no less than four locations in the lower Bear River for at least one calendar year. The Department requests the exact locations for stage loggers are selected in consultation with the Department and other interested Project relicensing participants." (p. 19)	<b>Adopted with Modification.</b> As mentioned, the TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. However SSWD sees the value in installing four stage loggers in the Bear River between the non-Project diversion dam and the highway 70 bridge. The locations and methods have been added to Study 3.3. In addition, the rationale for the locations can be discussed at the one day workshop describe is repsonse to CDFW Comment 11.

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CDFW	16	4.1 - SS Plants	"The Department recommends the study area for special status plants be expanded to include the entire FERC Project Boundary plus 100 feet upslope of the shoreline of the reservoir and banks of the Bear River upstream of Camp Far West Reservoir and downstream of Camp Far West Dam, and 100 feet around all Project facilities." (p. 19)	<b>Not Adopted:</b> The proposed study area for special-status plants includes lands with Project activities that have a reasonable potential to impact special-status plants. The additional areas proposed by the CDFW have little or no Project-related impacts, and therefore, do not meet the criteria for a Project nexus. There are no proposed changes in reservoir level or place or magnitude of flow that would impact special-status plants. Additionally, SSWD does not perform any vegetation maintenance outside of the areas proposed for survey in the study plan, and the vast majority of recreational use occurs inside the developed campgrounds. A full survey of the 29 miles of shoreline of the reservoir up to the 315 foot contour was also conducted in 2012, as part of a Biological Assessment for Camp Far West, and two California Rare Plant Rank 4 (the least sensitive ranking) species were located- 2 occurrences of Brandagee's clarkia and one occurrence of Sierra foothills brodiaea. There were also potential occurrences of two other Rank 4 plants - Humboldt's lily and Mexican mosquito fern. No substantive difference in plant species would be anticipated since that time. SSWD believes the proposed study plan and included study area are sufficient to meet the objectives of the study and to allow SSWD and Relicensing Participants the ability to assess potential impacts from the Project.
CDFW	17	4.2 - SS Raptors	"Figure 4.1-1 in the study plan indicates the study area for special-status raptors will include the FERC Project Boundary plus a 0.25-mile buffer, however, this information is not explicitly stated in the text of the study plan. The Department requests that Licensee clearly state the proposed study area for all raptor surveys within the text of the study plan." (p. 20)	<b>Adopted.</b> The study area is clearly stated in Study 4.2.
CDFW	18	4.2 - SS Raptors	"The Department does not agree with conducting concurrent surveys for bald eagle, golden, and Swainson's hawk if surveys are conducted by the same surveyor(s) on the same days. If survey days for two or three of the raptor species overlap, surveys for each species must be conducted by a different surveyor(s) to ensure surveyors are focused on the specific species being surveyed." (p. 20)	<b>Adopted.</b> Study 4.2 has been modified to reflect this change.
CDFW	19	4.2 - SS Raptors	"The Department recommends Licensee conduct January winter bird surveys consistent with the national survey during the first two weeks of January." (p. 21)	<b>Adopted.</b> Study 4.2 has been modified to reflect this change.
CDFW	20	4.2 - SS Raptors	"The Department recommends all bald eagle nesting, as well as winter bird and night roost, surveys be conducted along the entire FERC Project boundary plus the 0.25 mile buffer proposed by Licensee in Figure 4.1-1 of the study plan." (p. 21)	<b>Not Adopted.</b> The study plan states that the study area is the FERC Project Boundary. Surveyors will most likely boat Camp Far West Reservoir and use binoculars and spotting scopes to survey the shoreline to a reasonable distance where species and nests can be readily identified. This is estimated to be up to 0.25 mile with a clear viewing field, however, actual distances will vary. SSWD believes the current study area is sufficient to develop information that can be used to inform requirements in the new license.
CDFW	21	4.2 - SS Raptors	"The Department requests Licensee record bald eagle nesting data for the Project on the Department's California Bald Eagle Nesting Territory Survey Form (CDFG, 2010) and submit this form by September 1 of the survey year to the Department's Wildlife Branch Nongame Wildlife Program located at 1812 Ninth Street, Sacramento, CA 95814 with attention to Carie Battistone." (p. 21)	<b>Adopted.</b> Study 4.2 has been modified to reflect this change.

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CDFW	22	4.2 - SS Raptors	"The Department recommends Licensee survey for nesting golden eagles during four survey periods for a minimum of four hours within all suitable habitats in the FERC Project boundary plus 0.25 mile buffer as described below. The Department is recommending a fourth "Occupancy Survey" in addition to the three surveys proposed by Licensee due to the fact that use of the Project area by nesting golden eagles is unknown and thus there is no historical nest information available to allow Licensee to start with incubation surveys." (p. 21)	<b>Adopted with Modification.</b> Study 4.2 has been modified to include four golden eagle occupancy surveys for the minimum four hours each, per CDFW's request. For the reasons stated in SSWD's reply to CDFW Comment 20, the study area has not been modified.
CDFW	23	4.2 - SS Raptors	"Licensee should conduct the four surveys at least 30 days apart. Licensee shall utilize the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Page, Whittington, and Allen 2010) and Protocol for Golden Eagle Occupancy, Reproduction, and Prey Population Assessment (Driscoll 2010) as references during surveys to determine nesting behavior and assist in implementing the Department-recommended survey periods described above." (p. 22)	<b>Adopted.</b> Study 4.2 has been modified to reflect this change.
CDFW	24	4.2 - SS Raptors	"The Department recommends Licensee instead utilize the protocol, Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (SHTAC 2000). This protocol can be found on the Department's website: <a href="https://www.wildlife.ca.gov/Conservation/Birds/Swainson-Hawks">https://www.wildlife.ca.gov/Conservation/Birds/Swainson-Hawks</a> ." (p. 23)	<b>Adopted.</b> Study 4.2 has been modified to reflect this change.
CDFW	25	4.3 - SS Bats	"The Department agrees to sites located in suitable bat foraging habitat near the powerhouse, Restroom 4 at the NRA, and Restroom 2 at the SRA, but recommends the fourth site be located near the bridge over the dam rather than the storage shed at the NRA." (p. 24)	<b>Not Adopted.</b> SSWD withdraws the proposed <i>Special-Status Bats Study</i> . Upon further consideration, SSWD concluded that data from the reconnaissance surveys of Project buildings will be sufficient for developing a Bat Management Plan, which SSWD will include in its DLA and FLA. Based on the results from bat studies on previous relicensing's (e.g., Yuba River Development Project, Drum-Spaulding Hydroelectric Project, and Don Pedro Project), the additional data from a <i>Special-Status Bat Study</i> would not alter the contents of the Bat Management Plan. Per previous relicensings, the Bat Management Plan will include provisions for the exclusion of bats from Project facilities where they can currently roost on the interior. Exclusionary devices are placed after a sweep of the interiors to ensure that no bats are trapped inside any facility. These measures will not be changed by the data collected during a Special-Status Bats Study. Therefore, the study would not inform license requirements as it will not provide any necessary additional information.
CDFW	26	4.3 - SS Bats	"Long-term acoustic monitoring sites should be located in potential bat foraging habitat adjacent to or downstream of and not directly next to Project facilities that are potential bat roosts. Bats do not always echolocate when they are leaving a roost, however, they echolocate continuously while flying around and hunting for food in the dark." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
CDFW	27	4.3 - SS Bats	"The Department requests Licensee select long term acoustic monitoring sites in cooperation with the Department prior to the commencement of surveys." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.

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CDFW	28	4.3 - SS Bats	"The Department recommends long-term acoustic monitoring is conducted monthly for 5 consecutive days (recording from dusk until dawn each day) at each of the four sites from April through October rather than continuously during these months." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
CDFW	29	4.3 - SS Bats	"Detectors at each long-term acoustic monitoring site should be placed in open areas, in areas less visible to the public to avoid vandalism, and in areas where ambient sounds (e.g., wind, insects, moving water, powerlines, etc.) can be avoided to the greatest extent feasible. Microphones should be elevated (the higher the better) and camouflaged in the surrounding environment, but oriented to avoid clutter (i.e., tree branches, dense vegetation)." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
CDFW	30	4.3 - SS Bats	"The Department requests Licensee provide detailed spectrographs or the original data files for all special-status bat species from the original recordings (prescribed, raw data) collected by the detectors at each long-term monitoring site." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
CDFW	31	4.3 - SS Bats	"The Department recommends Licensee include bat calls below 20 kHz in their analysis of the raw acoustic data as spotted bat, which was identified by Licensee and the Department to have the potential to occur in the Project area, echolocates below 20 kHz." (p. 24)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
CDFW	32	4.3 - SS Bats	"the Department requests Licensee conduct nighttime emergence surveys for two consecutive days in late April or early May and in late July or early August at four locations: the powerhouse, the bridge, Restroom 4 at the NRA, and Restroom 2 at the SRA. Emergence surveys should be conducted one half hour prior to sunset and continue for a minimum of one hour. There should be at least one surveyor per Project facility. The surveyors should be positioned so that emerging bats will be silhouetted against the sky as they exit the facilities. Tallies of emerging bats should be recorded every few minutes or as natural breaks in bat activity allow. Surveyors should be close enough to the facility to observe exiting bats, but not close enough to influence emergence. Surveyors shall not stand in front or underneath the facilities, make noise or carry on a conversation, or shine a light on the facility (the use of lights should be minimized to the greatest extent feasible during the survey). Surveyors should use an infra-red, night vision, or thermal-imaging video camera or spotting scope to assist in emergence counts (USFWS 2013).	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 25.
NMFS	1	2.1 - Water Temp Monitoring	"NMFS recommends the licensee continue to collect water temperature information indefinitely into the next FERC license or until the Licensee and TLP participants agree that a representative set of environmental conditions have been captured, rather than stopping at an arbitrary point in time." (p. 7)	<b>Adopted with Modification.</b> As described in SSWD's reply to CDFW Comment 1, Study 2.1 has been modified to reflect that SSWD will collect water temperature data through 2017. SSWD believes water temperature data collected in 2015, 2016 and 2017 will be sufficient to develop the water temperature model described in Study 2.2, and provide adequate information to inform requirements in the new license. SSWD does not agree to collect water temperature "indefinitely into the next FERC license," and is not aware of other recent relicensings where water temperature data were collected "indefinitely."



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NMFS	2	3.1 - Salmonid Redd Monitoring	"Step 2, outlines procedures for conducting redd surveys. NMFS believes this information would be more appropriate in the "Study 3-2 Stream Fish Populations Study" in a section that synthesizes all information regarding anadromous fish presence in the lower Bear River." (p. 8)	<b>Not Adopted.</b> Study 3.1 is meant to develop additional information regarding anadromous fish spawning in the Bear River downstream of the non-Project diversion dam, and the methods are appropriately described. The results of all applicable studies related to fisheries resources in the Bear River will be included in the DLA and FLA.
NMFS	3	3.1 - Salmonid Redd Monitoring	"The Applicant should also conduct redd surveys by boat at least every two weeks during the spawning season so that no potential redds are missed. Conducting redd surveys every two weeks or more frequently is standard practice, e.g. Pacific States Marine Fisheries Commission redd monitoring on the Yuba River as outlined in Sterman and Massa (2015)." (p. 8)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 4.
NMFS	4	3.1 - Salmonid Redd Monitoring	"Furthermore, redd surveys should measure physical characteristics, including dimensions and total area of each redd, to aid in species identification and population estimates." (p. 8)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 5.
NMFS	5	3.2 - Stream Fish	"This study should synthesize all information regarding historic and current populations of anadromous fish in the Bear River, including sturgeon." (p. 8)	<b>Not Adopted.</b> Study 3.1 is meant to develop additional information regarding fish populations in the Bear River downstream of the non-Project diversion dam, and the methods are appropriately described. The results of all applicable studies related to fisheries resources in the Bear River will be included in SSWD's DLA and FLA.
NMFS	6	3.2 - Stream Fish	"The frequency of snorkeling observations should be increased to once per month from October through June below the diversion dam in order to capture fish that are expected to occur during these months." (p. 8)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 6.
NMFS	7	3.2 - Stream Fish	"If turbidity prevents the licensee from making visual observations by snorkeling, then they should conduct beach seining in conjunction with visual observations." (p. 8)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 8.
NMFS	8	3.2 - Stream Fish	"The licensee should also deploy DIDSON or ARIS underwater video camera systems." (p. 8)	<b>Not Adopted.</b> SSWD is conducting sampling for fishes in the Bear River downstream of the non-Project diversion dam using multiple techniques (e.g. snorkeling, seining, redd surveys and eDNA) during periods when anadromous fish may be present. NMFS provides no further details on the use of this technology. SSWD believes the cost associated with installation and maintenance of DIDSON or ARIS camera systems (~\$120,000) is unwarranted compared to the additional value it will provide in informing future license conditions considering the other methods of fish sampling proposed by SSWD.
NMFS	9	3.2 - Stream Fish	"Exact location and timing of camera deployment would be developed in conjunction with TLP participants." (p. 8)	<b>Not Adopted.</b> Refer to SSWD's reply to NMFS Comment 8.
NMFS	10	3.2 - Stream Fish	"The Licensee should also collect environmental DNA (eDNA) during this study to assist in determining the occurrence of fish species in the lower Bear River. The exact methods would be collaboratively determined with TLP participants including the locations, timing, and methodology for eDNA sampling." (p. 10)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 9.

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FWN	1	3.2 - Stream Fish	"FWN recommends that these licensee-proposed surveys be supplemented by rotary screw-trap surveys in the January-May time period. FWN recommends that a screw-trap be placed in the lower Bear River upstream of Dry Creek-Spenceville and a second screw-trap be placed either in the lower end of Dry Creek-Spenceville or in the lower Bear River downstream of Dry Creek-Spenceville. FWN has included a proposed study plan as an attachment to these comments." (p. 4)	<b>Not Adopted.</b> SSWD is conducting sampling for fishes in the Bear River downstream of the non-Project diversion dam using multiple techniques (e.g. snorkeling, seining, redd surveys and eDNA) during periods when anadromous fish are likely to be present. FWN estimates the cost to install and maintain two rotary screw traps is \$400,000 to \$700,000. SWD believes the cost associated with installation and maintenance of rotary screw traps is unwarranted compared to the additional value it will provide in informing future license conditions. Further discussion of this study request is provided in Attachment 3, Section 2.4 and 2.7.
SWRCB	1	2.1 - Water Temp Monitoring	"State Water Board staff would like clarification on whether the water temperature gages installed for this proposed study are installed temporarily (i.e. for the duration of the proposed study) or for a longer time period. State Water Board staff recommends that SSWD consider maintaining the described water temperature gages for the duration of the relicensing time period." (p.10)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 1.
SWRCB	2	3.1 - Salmonid Redd Monitoring	"State Water Board staff recommends that SSWD consider including a salmonid carcass survey into the proposed salmonid redd survey, in order to collect demographic data on spawning salmonid populations in the lower Bear River. Should SSWD decide not to include a salmonid carcass survey into the proposed salmonid redd survey, please include clear and specific justification for the decision." (p. 11)	<b>Adopted with Modification.</b> Study 3.1 has been modified to include incidental observations of salmonid carcasses during salmonid redd surveys. Carcass surveys are used to build population and escapement estimates neither of which is a goal of Study 3.1. Therefore, SSWD believes that completing full carcass surveys is not needed to meet the goals of Study 3.1 or to inform requirements in the new license.
SWRCB	3	3.3 - Instream Flow	"State Water Board staff determined that it is necessary for SSWD to include data collection on the aquatic macroinvertebrate community into the proposed instream flow study." (pp. 6 - 8)	<b>Not Adopted.</b> The collection of macroinvertebrates does not relate to any of the objectives outlined in Study 3.3. Furthermore, SSWD has not adopted two new study requests regarding aquatic macroinvertebrates and provides more details in their response to those requests. Further discussion of these study requests is provided in Attachment 3, Section 2.5.
USFWS	1	2.1 - Water Temp Monitoring	"recommends that the Applicant continue to collect water temperature data at all stream and reservoir locations through 2017 in order to overlap with the timing of other relicensing studies and accumulate more data for the proposed Study 2.2- Water Temperature Modeling Study. The results of Study 3.1 - Salmonid Redd Study, Study 3.2- Stream Fish Populations Study, and other studies to be conducted during 2017 involving the survey of aquatic resources may need to be compared to the results of Study 2.1." (p. 13)	<b>Adopted.</b> Study 2.1 has been modified to reflect this change.
USFWS	2	2.2 - Water Temp Modeling	"The Service recommends inclusion of additional water temperature modeling data (data collected through the end of 2016) for water temperature model calibration purposes." (p. 13)	<b>Adopted.</b> Study 2.2 has been modified to reflect this change.

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USFWS	3	3.1 - Salmonid Redd Monitoring	"CDFW recommends alternative goals and objectives: 1. assess spawning of salmonids (Chinook salmon ( <i>Oncorhynchus tshawytscha</i> ) and steelhead) in the lower Bear River; 2. evaluate how flows released from Camp Far West Dam affect salmonid spawning activities and related aquatic habitat conditions in the lower Bear River; and 3. determine if Project operations and maintenance have an adverse effect on anadromous fish in the lower Bear River." (p. 14)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 3.
USFWS	4	3.1 - Salmonid Redd Monitoring	"The Service recommends that the Applicant utilize the primary criteria established by Gallagher (2007). Using the protocols included in these criteria, the Applicant would conduct redd surveys less than fourteen days apart throughout the spawning run (Gallagher and Gallagher 2005, Gallagher 2007). Specifically, surveys should begin prior to the onset of spawning of the species of interest and continue at least biweekly until spawning is complete. Redd count surveys should include marking newly made redds and recounting marked redds to estimate observer efficiency and reduce counting errors." (p. 14)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 4.
USFWS	5	3.2 - Stream Fish	"The Service recommends stream fish sampling via electro fishing in Reach 1 and snorkel surveys in Reach 2-4 be increased from once during the spring and fall to once per month during April, May, and June, and then October, November, and December. Sampling during three spring months will increase the likelihood of observing juvenile salmonids (sahnon and steelhead) and adult sturgeon. Sampling during three fall months will increase the likelihood of observing adult salmonids." (p. 15)	<b>Adopted with Modification.</b> Refer to SSWD's Reply to CDFW Comment 6.
USFWS	6	3.2 - Stream Fish	"The Service requests the Applicant provide more detail in the study plan to clarify whether the study is intended to be qualitative (i.e., presence/ absence) or quantitative (i.e., catch per unit effort)." (p. 15)	<b>Adopted.</b> Refer to SSWD's reply to NMFS Comment 8.
USFWS	7	3.2 - Stream Fish	"The Service recommends the Applicant supplement snorkel surveys with beach seining once per month during the three spring . months and the three fall months." (p. 15)	<b>Not Adopted.</b> Refer to SSWD's reply to NMFS Comment 8.
USFWS	8	3.2 - Stream Fish	"The Service requests the Applicant collect Environmental DNA (eDNA) during Study FWS-2 to assist in determining the occurrence of differentiation of sahnnon runs in the lower Bear River." (p. 16)	<b>Adopted with Modification:</b> Refer to SSWD's reply to CDFW Comment 9.

Agency	Comment No.	Study	Requested Study Modifications	SSWD's Reply (Adopted, Adopted with Modification or Not Adopted)
USFWS	9	3.2 - Stream Fish	"The Applicant proposes to visually estimate turbidity as low, moderate, or high during electrofishing surveys. The Service believes visual turbidity measurements are too subjective and requests the Applicant utilize a secchi disk to measure turbidity prior to each electro fishing sampling event." (p. 16)	<b>Adopted.</b> Refer to SSWD's reply to NMFS Comment 10.
USFWS	10	3.3 - Instream Flow	"The Applicant proposes two study sites for preliminary information review and state that they will select final study site locations. The Service requests that site selection for Study 3.3 be performed in consultation with the Service and other interested Project relicensing participants, including, but not limited to NMFS, CDFW, and the State Water Resources Control Board (SWRCB)." (p. 16)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 11.
USFWS	11	3.3 - Instream Flow	"The Service requests that in addition to utilizing results from the Habitat Suitability Criteria (HSCs) for potential modeling for fall-run Chinook salmon and hardhead, the Applicant consult with the Service and other interested Project relicensing participants." (p. 16)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 12.
USFWS	12	3.3 - Instream Flow	"The Applicant indicates that the HSC could require modifications for use in the lower Beat River. The Service recommends that should any modifications be deemed necessary to the existing HSCs, they should be discussed and agreed upon in consultation with technical staff from the Service and other Project relicensing participants." (p. 16)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 12.
USFWS	13	3.3 - Instream Flow	"In their PAD comment letter, CDFW suggests the installation of data loggers at no less than four locations in the lower Bear River for at least one calendar year. The Service concurs with this recommendation and suggests the Applicant implement this measure in consultation with the Service and other interested Project relicensing participants." (p. 16)	<b>Adopted with Modification.</b> Refer to SSWD's reply to CDFW Comment 15.
USFWS	14	4.2 - SS Raptors	"The Service recommends that the Applicant survey for bald eagles and golden eagles that might be nesting or roosting within one mile of Camp Far West reservoir, or within line of sight of the reservoir and facilities. Project activities may affect these species within this footprint, especially if the trees utilized by the eagles are within line-of-sight of the reservoir or Project facilities." (p. 17)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 20.

Agency	Comment No.	Study	Requested Study Modifications	SSWD's Reply (Adopted, Adopted with Modification or Not Adopted)
USFWS	15	4.2 - SS Raptors	"The Service requests that the raptor studies be fully developed in consultation with the Service and other interested Project relicensing participants and that the Service be notified of potential survey dates at least two weeks prior to field work for eagles." (p. 17)	<b>Not Adopted.</b> The TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. SSWD has gone well beyond TLP requirements by including in its PAD detailed study plans, including the specific locations of proposed study areas. SSWD carefully reviewed comments on the PAD and have modified its relicensing studies as described in this reply matrix (see CDFW Comments 17 to 24), and has initiated the studies. However, SSWD agrees to schedule and host a meeting with interested parties to discuss any outstanding differences.
USFWS	16	4.2 - SS Raptors	"the Service recommends that the Applicant extend the bald eagle survey to any suitable habitat within the Project area and any suitable habitat within line-of-sight of Project facilities, up to one mile." (p. 17)	<b>Not Adopted.</b> Refer to SSWD's reply to CDFW Comment 20.
USFWS	17	4.2 - SS Raptors	"The Service requests that further development of the special status raptor surveys be conducted in consultation with the Service and other interested Project relicensing participants at the previously mentioned study plan meetings." (p. 17)	<b>Not Adopted.</b> The TLP, nor the ILP, requires an applicant develop study plans in collaboration with interested parties. SSWD has gone well beyond TLP requirements by including in its PAD detailed study plans, including the specific locations of proposed study areas. SSWD carefully reviewed comments on the PAD and have modified its relicensing studies as described in this reply matrix (see CDFW Comments 17 to 24), and has initiated the studies. However, SSWD agrees to schedule and host a meeting with interested parties to discuss any outstanding differences.

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