



February 10, 2014

Filed via Electronic Submittal (E-File)

Kimberly D. Bose, Secretary
FEDERAL ENERGY REGULATORY COMMISSION
888 – 1st Street, N.E.
Washington, D.C. 20426-0001

SUBJECT: Yuba River Development Project
FERC Project No. 2246-058 - California
Study 7.11a, *Radio Telemetry Study of Spring- and Fall-run Chinook Salmon Migratory Behavior Downstream of Narrows 2 Powerhouse*
Telemetry System for Phase 2 of the Study

Dear Secretary Bose:

On September 30, 2011, the Federal Energy Regulatory Commission (FERC) issued a Study Plan Determination for the Yuba County Water Agency's (YCWA) relicensing of its Yuba River Development Project, Federal Energy Regulatory Commission (FERC) Project Number 2246 (Project).

The Determination was modified on March 29, 2013 to include Study 7.11a, *Radio Telemetry Study of Spring- and Fall-run Chinook Salmon Migratory Behavior Downstream of Narrows 2 Powerhouse* (Study), which was modified by FERC on August 22, 2013.

The Study includes two phases: 1) Phase 1, Evaluation of Telemetry Technologies; and 2) Phase 2, Tagging and Tracking Fish. Phase 1 includes an office evaluation of up to six telemetry systems and the field evaluation of up to three of those telemetry systems, both of which were completed in late 2013. The three telemetry systems tested in the field were: 1) Lotek Wireless MAP autonomous acoustic receiver (MAP system); 2) Lotek Wireless Radio SRX cabled underwater antenna (Radio system); and 3) Hydroacoustic Telemetry, Inc. (HTI) acoustic cabled hydrophone (HTI system).

In addition, Phase 1 requires that, following the field testing, YCWA consult with the United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS), the United States Department of Interior, Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (Cal Fish and Wildlife) and the State Water Resources Control Board (SWRCB) to seek agreement on the telemetry system. If collaborative agreement is not reached, the Study requires YCWA refer the matter to FERC for resolution.

NMFS, USFWS, Cal Fish and Wildlife and SWRCB recommend the use of the HTI system. YCWA does not believe that the HTI system is likely to perform as advertised in the aerated part of the study area (i.e., near Narrows 2 Powerhouse), and that since the other parties are nevertheless advocating this system, YCWA should not be required to perform additional fish tracking studies using other technologies or the HTI system deployed in a different manner if the results are less than desired.

To reach collaborative agreement, YCWA proposed as follows:

- YCWA will use the HTI system in Phase 2 of the Study.
- YCWA will deploy the HTI system in a pattern recommended by HTI staff (i.e., 16 hydrophones in the study area, six of which are in the area near Narrows 2 Powerhouse).
- YCWA will retain HTI staff to assist during deployment, testing and calibration of the HTI system.
- YCWA will retain HTI staff to periodically check that the system is operating appropriately, and if it is not, YCWA will modify the deployment as recommended by HTI staff.
- YCWA will deploy up to two additional hydrophones in the Narrows 2 Powerhouse area, if recommended by HTI staff.¹
- Assuming the HTI system is appropriately deployed, tested, calibrated, and adjusted as needed and that no significant equipment malfunctions occur during the Study, NMFS, USFWS, CDFW and SWRCB will not request the Study or any portion of the Study be repeated at a later date using the HTI system or other telemetry system based on the premise that the telemetry system was not deployed or operated appropriately (e.g., *We could get better/more data with more hydrophones or different positioning of hydrophones.*) or another system would yield better results.

The USFWS and Cal Fish and Wildlife agreed to the above as documented in their e-mails attached to this letter.

NMFS, as documented in its e-mail attached to this letter, disagreed with the fifth bullet saying that the cap for additional hydrophones should be eight, not two, and the additional hydrophones should be placed anywhere in the study area, not just near the Narrows 2 Powerhouse. YCWA agrees with NMFS that, if recommended by HTI staff, additional hydrophones may be placed anywhere in the study area. YCWA disagrees with NMFS regarding the cap on additional hydrophones. HTI staff, who NMFS, USFWS, Cal Fish and Wildlife and SWRCB reached out to for expert advice, suggested a reasonable cap on hydrophones is two. Since YCWA and the agencies are relying on HTI staff for expert advice in other areas, YCWA does not see the reason to reject HTI staff's advice in this area.

¹ When asked how many hydrophones may be needed in addition to the 16, HTI staff said two. That is the reason YCWA proposed a cap of two additional hydrophones.

However, YCWA suggests deferring the final decision regarding the cap on additional hydrophones to FERC if and when additional hydrophones are deemed needed, which would likely be considered after the system is deployed, calibrated and tested.

The SWRCB, as documented in its e-mail attached to this letter, deferred concurrence regarding the fifth bullet until a resolution was reached. As discussed above, a difference of opinion remains on this item, and YCWA suggests deferring the decision to FERC. In addition, while the SWRCB generally agreed with the sixth bullet, the SWRCB reserved its *“its independent authority to request additional information at a future date if it is deemed necessary for water quality certification purposes.”* YCWA acknowledges the SWRCB’s independent authority under the Clean Water Act, and can live with that clarification.

If you have any questions regarding this letter, please contact me.

Sincerely,

YUBA COUNTY WATER AGENCY



Curt Aikens
General Manager

Attach: E-mails from NMFS, USFWS, CDFW and SWRCB

cc: Alan Mitchnick – FERC DC
Ken Hogan – FERC DC
Relicensing Participants on YCWA’s Yuba River Development Project’s
Relicensing E-Mail Contact List (via e-mail)

***Study 7.11a, Radio Telemetry Study of Spring- and Fall-run
Chinook Salmon Migratory Behavior Downstream of Narrows
2 Powerhouse
Telemetry System for Phase 2 of the Study***

**Attachment 1: E-mails from
NMFS, USFWS, CDFW and SWRCB**

NMFS

Pitts, Sheila

From: John Wooster - NOAA Federal <john.wooster@noaa.gov>
Sent: Wednesday, January 29, 2014 10:21 AM
To: Lynch, Jim; Kenneth Hogan
Cc: Hoobler, Sean@Wildlife; Willy, Alison; elizabeth_campbell@fws.gov; larry.thompson@noaa.gov; Ewing, Anna@Wildlife; Thaler, Parker@Waterboards; Geoff Rabone (grabone@ycwa.com); Passovoy, Joel; Thompson, Audrey; Steve Edmondson - NOAA Federal; Thomas Holley - NOAA Federal
Subject: Re: Yuba Relicensing: Draft Letter to FERC Regarding Study 7.11a - Use of HTI System - NEED REPLY

Jim and Ken:

In regards to the letter to FERC accepting the HTI technology for deployment in Study 7.11a, NMFS does **not** agree with the following bullet:

- "YCWA will deploy up to two additional hydrophones in the Narrows 2 Powerhouse area, if recommended by HTI, Inc."

There are two aspects of this bullet that NMFS does not agree with :1) limiting the number of additional deployment of hydrophones to **two**, and 2) limiting the geographic placement of additional hydrophones to only the powerhouse area (note, there isn't a bullet allowing for additional hydrophone placement in other areas).

As discussed numerous times over phone calls in the last few weeks, NMFS has expressed the need to be able to adaptively manage the deployment / array of hydrophones following the initial deployment in order to optimize results from the selected technology. This is needed, in part, because HTI would be attempting to design a deployment array prior to heading into the field with very limited baseline data (i.e., no bathymetry of the study area). YCWA has expressed concerns with not being stuck with an open-ended, unlimited check as far purchasing more hydrophones, but YCWA also appeared to agree to some level of adaptively managing the study as needed - and in NMFS view "up to two additional hydrophones" does not meet the flexibility needed to adaptively manage the study design.

NMFS proposes to allow the flexibility to place up to 50% more hydrophones than the originally proposed study by HTI, or more explicitly relative to the current study proposal: 8 more hydrophones (50% of 16). Furthermore, NMFS does not believe there is any reason to constrain the potential geographic placement of additional hydrophones beyond the study area , e.g. roughly the Narrows 2 full bypass pool downstream to Narrows 1 powerhouse (note, hydrophones are already intended to be deployed in this footprint).

Regards,

John

On Tue, Jan 28, 2014 at 3:32 PM, Lynch, Jim <Jim.Lynch@hdrinc.com> wrote:

All – Geoff and I spoke with Sean about the suggested CDFW redlines. We (YCWA and CDFW) agreed to the redlines shown on the attached document. Thanks, Sean.

If anyone has other suggested changes to the letter, please make them to the attached version of the document and email it to everyone (as Sean did). We will try to resolve the difference.

If the attached letter is acceptable to your agency, please email to me a concurrence email. As stated before, when we get all the concurrence emails, YCWA will file the letter with FERC along with the concurrence emails.

FYI – so far no concurrence emails.

Thanks, all.

JAMES LYNCH	HDR Engineering, Inc. Senior Vice President, Hydropower Services
	2379 Gateway Oaks, Suite 200 Sacramento, CA 95833 916.679.8700 d: 916.679.8740 c: 916.802.6247 james.lynch@hdrinc.com hdrinc.com

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From: Hoobler, Sean@Wildlife [mailto:Sean.Hoobler@wildlife.ca.gov]
Sent: Tuesday, January 28, 2014 2:33 PM
To: Lynch, Jim; Willy, Alison; elizabeth_campbell@fws.gov; larry.thompson@noaa.gov; Ewing, Anna@Wildlife; Thaler, Parker@Waterboards; John.Wooster@noaa.gov
Cc: Geoff Rabone (grabone@ycwa.com); Passovoy, Joel; Thompson, Audrey
Subject: RE: Yuba Relicensing: Draft Letter to FERC Regarding Study 7.11a - Use of HTI System - NEED REPLY

Jim,

Thank you for writing up the attached agreement letter. Where I agree with the premise of the letter, especially with the use of HTI technology being the best technology available to properly inform SP 7-11a and not requesting further studies if the requested technology does not meet expectations, I can't accept this letter as written. Please see my suggested revisions and comments.

Best regards,

Sean Michael Hoobler

Fisheries Biologist, ES



1701 Nimbus Road, Ste. A Rancho Cordova, CA 95670

Phone [916-358-4359](tel:916-358-4359)

Fax [916-358-2912](tel:916-358-2912)

Email sean.hoobler@wildlife.ca.gov

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**From:** Lynch, Jim [<mailto:Jim.Lynch@hdrinc.com>]  
**Sent:** Sunday, January 26, 2014 8:13 AM  
**To:** [Daniel.Welsh@fws.gov](mailto:Daniel.Welsh@fws.gov); Willy, Alison; [elizabeth\\_campbell@fws.gov](mailto:elizabeth_campbell@fws.gov); [larry.thompson@noaa.gov](mailto:larry.thompson@noaa.gov); Ewing, Anna@Wildlife; Hoobler, Sean@Wildlife; Thaler, Parker@Waterboards; [John.Wooster@noaa.gov](mailto:John.Wooster@noaa.gov)  
**Cc:** Geoff Rabone ([grabone@ycwa.com](mailto:grabone@ycwa.com)); Thompson, Audrey; Passovoy, Joel; Gabriel Kopp ([gabekopp@fishbio.com](mailto:gabekopp@fishbio.com)); Lind, Amy -FS; Peggy Cranston ([pcransto@blm.gov](mailto:pcransto@blm.gov))  
**Subject:** Yuba Relicensing: Draft Letter to FERC Regarding Study 7.11a - Use of HTI System - NEED REPLY

John, Alison, Anna and Parker – As agreed to during our call last Friday, the attached draft letter is provided for your review. I believe the letter documents our agreement regarding use of the HTI system in Phase 2 of Study 7.11a. Let me know if you have any suggested changes to the letter

YCWA will file this letter with FERC when we receive concurrence emails from NMFS, USFWS, CDFW and SWRCB.

I copied FS and BLM on this email to keep them informed.

As discussed during our call, we are working on a second letter regarding delaying Phase 2 until 2015, and will email that letter to you for review later this week.

Thanks, and call me if you have any questions.

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>JAMES LYNCH</b> | <p>HDR Engineering, Inc.<br/>Senior Vice President, Hydropower Services</p> <p>2379 Gateway Oaks, Suite 200   Sacramento, CA 95833<br/><a href="tel:916.679.8700">916.679.8700</a>   d: <a href="tel:916.679.8740">916.679.8740</a>   c: <a href="tel:916.802.6247">916.802.6247</a><br/><a href="mailto:james.lynych@hdrinc.com">james.lynych@hdrinc.com</a>   <a href="http://hdrinc.com">hdrinc.com</a></p> |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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**John Wooster**  
*Hydrologist*  
*NOAA Fisheries West Coast Region*  
*U.S. Department of Commerce*  
[john.wooster@noaa.gov](mailto:john.wooster@noaa.gov)



# USFWS

**Pitts, Sheila**

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**From:** Welsh, Daniel <daniel\_welsh@fws.gov>  
**Sent:** Wednesday, January 29, 2014 8:30 AM  
**To:** Lynch, Jim  
**Cc:** Alison Willy; Elizabeth\_Campbell@fws.gov; larry.thompson@noaa.gov; Lind, Amy -FS; Anna Ewing (Anna.ewing@wildlife.ca.gov); Hoobler, Sean@Wildlife (Sean.Hoobler@wildlife.ca.gov); Parker Thaler; Gary Reedy; Peggy Cranston (pcransto@blm.gov); John.Wooster@noaa.gov; Geoff Rabone (grabone@ycwa.com); Lionberger, Megan; Pitts, Sheila; Thompson, Audrey; Passovoy, Joel; Curt Aikens  
**Subject:** Re: Yuba Relicensing: NEED REPLY ASAP

Jim,

The USFWS concurs with the letter on Study 7.11a, as edited by CDFW. If you have any questions please contact me or Alison Willy.

Thanks,

Dan Welsh, Assistant Field Supervisor  
U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
Conservation, Restoration, and Contaminants Program  
2800 Cottage Way, W-2605  
Sacramento, CA 95825  
(916) 414-6704  
[Daniel\\_Welsh@fws.gov](mailto:Daniel_Welsh@fws.gov)

On Wed, Jan 29, 2014 at 6:28 AM, Lynch, Jim <[Jim.Lynch@hdrinc.com](mailto:Jim.Lynch@hdrinc.com)> wrote:

I believe there were two letters that YCWA agreed to file with FERC no later than today so Relicensing Participants did not have to address the issues in their comments on the Updated Study Report, which are due to FERC tomorrow.

## STUDY 6.2 – ADDITIONAL ANALYSIS

- The first was the additional information for Study 6.2, *Riparian Habitat Downstream of Englebright Dam*. I received concurrence emails for the letter from USFWS, FS, BLM, CDFW, FWN and SYRCL. I have not received concurrence emails from either NMFS or SWRCB. **Larry/John and Parker – Please let me know asap if YCWA can expect to receive concurrence emails so we can decide how to proceed with this today. Thanks.**

## STUDY 7.11A - HTI

- The second is use of HTI for Study 7.11a, *Radio Telemetry Study of Spring- and Fall-run Chinook Salmon Migratory Behavior Downstream of Narrows 2 Powerhouse*. I received a concurrence email for the letter from

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CDFW, but not from NMFS, USFWS and SWRCB. Note that this study plan specifically identifies NMFS, USFWS, CDFW and SWRCB as those agencies YCWA must consult with. Larry/John, Dan/Alison, and Parker – Please let me know asap if YCWA can expect to receive concurrence emails so we can decide how to proceed with this today. Thanks.

Recall that if we want to file something with FERC to be in the record today, we need to do it before 2 PM CA Time (5 PM DC Time).

Thanks.

|             |                                                                                                                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| JAMES LYNCH | HDR Engineering, Inc.<br>Senior Vice President, Hydropower Services                                                                                                                                                          |
|             | 2379 Gateway Oaks, Suite 200   Sacramento, CA 95833<br>916.679.8700   d: 916.679.8740   c: 916.802.6247<br><a href="mailto:james.lynych@hdrinc.com">james.lynych@hdrinc.com</a>   <a href="http://hdrinc.com">hdrinc.com</a> |

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# CDFW

**Pitts, Sheila**

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**From:** Hoobler, Sean@Wildlife <Sean.Hoobler@wildlife.ca.gov>  
**Sent:** Tuesday, January 28, 2014 4:10 PM  
**To:** Lynch, Jim; Willy, Alison; elizabeth\_campbell@fws.gov; larry.thompson@noaa.gov; Ewing, Anna@Wildlife; Thaler, Parker@Waterboards; John.Wooster@noaa.gov  
**Cc:** Geoff Rabone (grabone@ycwa.com); Passovoy, Joel; Thompson, Audrey  
**Subject:** RE: Yuba Relicensing: Draft Letter to FERC Regarding Study 7.11a - Use of HTI System - NEED REPLY

Jim and Geoff,

Thank you for your consideration of my comments and the Department concurs with this letter and email as revised.

Best regards,

**Sean Michael Hoobler**  
Fisheries Biologist, ES



1701 Nimbus Road, Ste. A Rancho Cordova, CA 95670  
Phone 916-358-4359  
Fax 916-358-2912  
Email [sean.hoobler@wildlife.ca.gov](mailto:sean.hoobler@wildlife.ca.gov)

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From: Lynch, Jim [mailto:Jim.Lynch@hdrinc.com]
Sent: Tuesday, January 28, 2014 3:33 PM
To: Hoobler, Sean@Wildlife; Willy, Alison; elizabeth_campbell@fws.gov; larry.thompson@noaa.gov; Ewing, Anna@Wildlife; Thaler, Parker@Waterboards; John.Wooster@noaa.gov
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If the attached letter is acceptable to your agency, please email to me a concurrence email. As stated before, when we get all the concurrence emails, YCWA will file the letter with FERC along with the concurrence emails.

FYI – so far no concurrence emails.

Thanks, all.

YCWA will file this letter with FERC when we receive concurrence emails from NMFS, USFWS, CDFW and SWRCB.

I copied FS and BLM on this email to keep them informed.

As discussed during our call, we are working on a second letter regarding delaying Phase 2 until 2015, and will email that letter to you for review later this week.

Thanks, and call me if you have any questions.

JAMES LYNCH	HDR Engineering, Inc. Senior Vice President, Hydropower Services 2379 Gateway Oaks, Suite 200 Sacramento, CA 95833 916.679.8700 d: 916.679.8740 c: 916.802.6247 james.lynnch@hdrinc.com hdrinc.com
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SWRCB

Pitts, Sheila

From: Thaler, Parker@Waterboards <parker.thaler@waterboards.ca.gov>
Sent: Wednesday, January 29, 2014 2:02 PM
To: Lynch, Jim
Cc: Monheit, Susan@Waterboards; Ragazzi, Erin@Waterboards
Subject: State Water Board response to Study 7-11(a) concurrence request

Hi Jim,

In response to Study 7-11(a) the State Water Board has the following comments.

State Water Board staff supports:

- YCWA will use the HTI telemetry system in Phase 2 of the Study.
- YCWA will deploy the HTI system in a pattern recommended by HTI, Inc. (i.e., 16 hydrophones in the study area, six of which are in the area near Narrows 2 Powerhouse).
- YCWA will retain HTI, Inc. staff to assist during deployment, testing and calibration of the HTI system.
- YCWA will retain HTI staff to periodically check that the system is operating appropriately, and if it is not, YCWA will modify the deployment as recommended by HTI, Inc. staff.

State Water Board staff await resolution between NMFS and YCWA regarding:

- YCWA will deploy up to two additional hydrophones in the Narrows 2 Powerhouse area, if recommended by HTI, Inc.

State Water Board staff agree:

- If Hydro-acoustic Technology (HTI) is installed and operated correctly, State Water Board staff does not anticipate the need to request additional Wireless Radio Technology studies at the Narrow 2 Powerhouse. The State Water Board reserves its independent authority to request additional information at a future date if it is deemed necessary for water quality certification purposes.

Let me know if you have any questions.

Thanks,

Parker Thaler
916-341-5321
Parker.Thaler@waterboards.ca.gov
Environmental Scientist
Water Quality Certification Program
Division of Water Rights
State Water Resources Control Board

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