



SUSITNA-WATANA HYDRO

Meeting Notes Fish and Aquatic Resources Technical Workgroup Meeting 09/23/2013

LOCATION: Alaska Energy Authority – Board Room
813 West Northern Lights Blvd.
Anchorage, AK 99503

TIME: 8:30 a.m. – 3:30 p.m. – (AKST)

SUBJECT: 2013 Quarter 3 Update

Goal: 2013 Quarter 3 Update

ATTENDEES: Stormy Haught ADF&G, Jeff Davis ARRI, Joe Klein ADF&G, Mike Buntjer USFWS, Jack Erickson ADF&G, Wayne Dyok AEA, Eric Rothwell NMFS, James Brady HDR, MaryLouise Keefe R2, Michael Link LGL, Betsy McGregor AEA, Dudley Reiser R2, Sue Walker NMFS, Kathryn Peltier McMillen, Steve Padula McMillen, Ken Hogan FERC, Mandy Migura NMFS, Phil Brna USFWS, Marie Steele DNR, Kate Dueber DNR, Dara Glass CIRI, Matt LaCroix EPA, Leslie Cornick APU

ON PHONE: Matt Love VNF, Chris Holmquist-Johnson USGS, Leanne Hansen USGS, Dominique Glass Environ, Gabe Kopp HDR, Jan Konigsberg AK Hydro, Diane Okenick CSDA, Michael Lilly GW Scientific, Tara Moberg Nature Conservancy, Becky Long CSDA, Brian Okenick CSDA, Sara O'Neil Trout Unlimited, Tim Nightengale R2, Eric Schoen UAF, Whitney Wolf CSDA, Greg Aubel USGS, Dave Ward HDR, Jake Soll NRDC, Matt Nemeth LGL, Don Deagon Aquacoustics, Bronwen Lewis Golder

This was the third 2013 quarterly fish and aquatics resources Technical Work Group (TWG) meeting. The quarterly TWG meetings are intended to provide status on study plan progress, communication and discussion regarding any study plan variances that may be required given actual field conditions, and planned next steps.

The following meeting notes are to capture any significant discussion/information in addition to the materials provided on the Project website (<http://www.susitna-watanahydro.org/>). The meeting agenda and materials are available under the “previous meetings” tab (link provided under the meetings tab) on the Project website.

Following introductions a brief overview regarding overall Project status was provided by Steve Padula. He informed attendees that Final Study Plans are being posted on the Project website as they are completed. These Final Study Plans are the FERC approved study plans, incorporating the RSP, FERC’s Study Plan Determination and associated supplemental filings.

Some slides in the presentations were updated since they were posted to the Project website. Updates were provided in handouts at the meeting and will be posted to the Project website.

Fish and Aquatic Resources Presentation

Slide 2 provides an overview of the Q3 2013 activities for the 13 fish and aquatics studies. Subsequent slides detail activity specific to each study.

RSP 9.5 Fish Distribution and Abundance in the Upper River – Gabriel Kopp, Slides 3-9

Slides 3-9 explain the progress in implementing the fish distribution and abundance study for the Upper River as well as summarized data. Variances to the study plan are provided on slide 33.

- These slides reflect data collected during the first of three sampling events (July 15- August 5). The second event was recently completed, and the data are being reviewed currently. The third event is currently underway.
- Slide 3, last paragraph correction: Chinook were actually collected from 6 streams, rather than 7.
- Land access issues primarily influenced data collection efforts in the lower portions of the tributaries. Any inaccessible sample sites were relocated to upstream areas to ensure sufficient habitat sampled.
- Due to electrofishing permit restrictions, methods were unable to be consistent throughout each habitat type. The most effective available method was used at each site, and a CPUE will be determined.

RSP 9.6 Fish Distribution and Abundance in the Middle and Lower River – Gabe Kopp, Slides 10-33

- If a predetermined sample site was unavailable due to access, or if it was unavailable due to being dry, an oversample site was chosen. If an oversample site was not available for that specific habitat type due to rarity, the desired number of repetitions was not completed.

Early Life History, Middle River – MaryLouise Keefe, Slides 16-21

- Since April 2013, early life history sampling has been conducted every other week in the Middle River.
- The data summaries provided in slides 17-20 are preliminary and have not been fully QC'd.
- Sites are repeated between sampling events.

Middle River FDA at Focus Areas and Screw Traps– MaryLouise Keefe, Slide 22-26

- Seining and fyke nets proved successful methods in lateral habitats.
- Screw trap catch has varied by site. Some traps like Talkeetna and Indian River have caught quite a few species and good numbers. The Curry screw trap information was not available to present, but generally has had less catch than Talkeetna and Indian River. When the Indian River screw trap was destroyed by debris, the Curry trap was used to replace it. A new trap at Curry may be installed in 2014; possibly at a new location.
- The Montana Creek screw trap was damaged by debris in mid-August.
- Efficiency tests were performed on the traps but results are not yet available.

Electrofishing- Bronwen Lewis, Slides 27-32

- Original transects did not encompass rarer habitats so they were widened to 1km on each side of the transect centerline.
- The same sample sites were sampled in each sampling session.

Variances – MaryLouise Keefe, Slide 33

- Variances to both FDA studies are provided on slide 33.
- Sampling within accessible areas and at oversampling sites is believed to be sufficient sampling to achieve objectives.
- MaryLouise Keefe mentioned the possibility of moving the Kosina Creek screw trap into the main stem of the upper river to make up for no access at the dam site. Further discussion will occur on this topic.

- Logistic constraints prevented teams in the Upper and Lower River from sampling sites at the lengths recommended in the SPD.
- Permitting and/or logistic constraints prevented multi-pass sampling by electrofishing and snorkeling.

RSP 9.7-Salmon Escapement – Michael Link and Jack Erickson, Slides 34-58

- Gillnets were used at the Lower River fishwheel sites in the deepest part of the river to capture and tag fish not vulnerable to capture in the fishwheels.
- A decision was made in-season to tag Chinook salmon below 50 cm (MEF) because there were going to be a sufficient number of tags across all species, these small fish were abundant, and the fish could provide information on spawning distribution, which was the goal of the study.
- Three radio-tagged Chinook salmon moved above Impediment 3 of Devils Canyon in 2013.
- The horizontal line in the graphs on slide 51 represents the average river discharge at Gold Creek when fish passed the third impediment in Devils Canyon in 2012. The discharge ranged from 17K to 19K cfs.
- Aerial telemetry surveys were conducted twice a day when Chinook salmon were above the second impediment in Devils Canyon in 2013. These surveys provided a higher spatial and temporal resolution of fish in and above Devils Canyon than three fixed stations and periodic surveys provided in 2012.
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- The feasibility of using ARIS sonar at and near the dam site was studied from 20-23 July. Fish were observed but whether fish can be “counted accurately” as per FERC request will be examined in the ISR based on the results from the feasibility study. Minimum counts of Chinook appear possible..
- Aerial counts are not able to decipher between individuals in multiple events. Stream life of Chinook salmon in some streams may be available from the telemetry study.

RSP 9.8 River Productivity – Tim Nightengale, Slides 59-77

- The upland slough portion of the Stephan Lake Complex Focus Area was unable to be accessed due to permitting.
- The H-D samplers are being extracted during the last week of September.
- The samples indicated on slides 63 and 64 are being processed.
- Slide 65 provides a list of the collected fish samples. Although the study’s goal is to collect 8 of each species/life stage in each sampling location, it is currently not anticipated that species/lifestages are prevalent enough to collect 8 samples in all locations.
- After initial bear attacks and gaining an understanding that emergence traps are not compatible with fast water and boat wakes, these traps are functioning properly.
- H-D samplers in the two main channel locations were found dry during the last deployment visit (Sept 20), so the one week exposure set was abandoned at those locations and all samplers at those two locations were pulled to process.
- Late August storm event samples were captured at Whiskers Slough and side slough within Stephan Lake Complex Focus Area using the summer season sampling event, and a follow-up sampling one week after the storm event.
- 5 samples were collected at every site. Some were discarded due to drying out.
- Snag samples may be low due to low occurrence of LWD in the water, and few pieces meeting the necessary dimensions per FERC’s SPD recommendation.
- Algae samples were taken from rocks at multiple depths, not exceeding about 2.5 feet.
- Slides 74-77 provide variances from the River Productivity Study plan.

RSP 9.9 Habitat Characterization and Mapping Study – MaryLouise Keefe, Slide 78

- The surveys are intended to be conducted at low flow to match the 2012 mapping.
- Focus Area mapping has been completed to the mesohabitat level.
- Based on 2013 data, there are no additional criteria anticipated for the implementation plan.

RSP 9.11 Fish Passage Feasibility Study, Slide 79

- A recent site visit was held to introduce the Technical Team to the local conditions.
- In March, the brainstorming session will be hosted.

RSP 9.14 Genetic Baseline Study– Slide 80-81

- Slides 80-81 provide a summary of the field activities from Q3 2013.

RSP 9.17 Cook Inlet Beluga Whale Study – Dave Ward, Slides 82-85

- Aerial surveys are conducted with two trained observers and the plane is piloted by a trained observer. Still cameras are used during the aerial surveys to photograph seal haul outs; seal counts are made at the haul outs from the camera images.
- Three independent counts of the largest seal haul out, resulted in estimates of 689-722 seals.
- When counting belugas, the plane circles until the two observers are comfortable with the final count. If observers' counts are inconsistent, then the highest count for each color class is documented.
- Mandy Migura cautioned using a 0 in the data sheets when dark grey whales are not identified. This is because it has not been proven possible to accurately detect dark grey belugas (associated with calves) at the altitude of the aerial surveys. Leslie agreed to caveat the data explaining that it is difficult to spot newborn calves from the altitude of the surveys.
- To avoid the need for an LOA for incidental harassment, the flights cannot be made at a lower altitude than 1,000 ft elevation.
- Although this study was unable to survey during the eulachon run time due to logistic complications, Apache had surveyed and will be sharing their data. It is noted that Apache flies a different flight path. Apache data will be used to supplement, not replace data for this study.
- In 2014 aerial surveys will be scheduled to ensure that at least the peak of the eulachon run is covered.
- Mandy Migura requested that calving times (late July/early August) also be targeted in 2014.
- Live feed cameras are not yet fully functional. A technician will be working on them by September 24 2013. Hard drives have been installed to record the video and still cameras have been positioned to survey 180° taking one photo every 5 seconds.
- Mandy Migura requested that the study retain the added still cameras and hard drives as back up for 2014. Dave Ward agreed that this would be a good measure to take.
- Variances for this study are summarized in slide 85.

RSP 9.12 Fish Passage Barrier Assessment

- No slides were provided for the barriers study update; MaryLouise Keefe informed the TWG that the barrier study team is currently collecting field data. A more detailed update will be provided in the Q4 2013 TWG.

RSP 9.16 Eulachon Study Presentation – Dave Ward

- The orange line in the graph on slide 4 represents the estimated count from split beam sonar.
- To ensure the early component of the run was not missed, dipnets were deployed on May 9, 20, 22, and 25, 2013. The first eulachon was netted on May 25.
- Because the dipnet and sonar site was discovered to be a eulachon spawning site, other dip net sites were established.
- Spawning sites were determined using radio telemetry and ground surveys. These are identified in slides 7 and 9. Some spawning sites determined by radio telemetry results were based on movement of the fish because ground truthing was not possible at all sites.
- The need to confirm potential spawning sites will drive some of the 2014 efforts.
- Surveys were not able to be performed downstream of PRM 10 because it is considered beluga whale habitat and a permit would be necessary for incidental harassment of the whales.

- Side scan sonar and visual surveys were both useful in determining substrate composition at spawning sites. Although visual surveys provided the same information as sonar, sonar may prove useful if fish are detected spawning in deeper water.
- Slide 11 summarizes the substrate classification for spawning sites. Matt LaCroix questioned if the spawning substrate was characterized for a discrete area within complex substrate. Dave Ward stated that more detail would be provided in the ISR.
- Environmental conditions in 2013 seemed to have compressed the run time with more eulachon running in a shorter amount of time.
- Due to the shifting of the season and the compressed run timing, some TWG members questioned if a second peak was not sampled. Dave Ward will confirm with other sources that a second run was not missed.
- Flow will be added to the graphs to see if it corresponds with eulachon run. This may help indicate the likelihood of a second run.

FDA Winter Studies Presentation – MaryLouise Keefe

- Pilot studies were performed during the winter of 2012-13 throughout three Focus Areas; Whiskers Slough, Slough 8A, and Gold Creek.
- Questions were raised about electrofishing under ice; it was clarified that electrofishing was limited to open water leads.
- A meeting may be scheduled to discuss studies for the winter of 2013-14.
- The logistics and safety concerns for winter field work limit the accessible sampling areas. The three Focus Areas may act as base camps with field crew being able to venture out from there to other areas of the river.

RSP 9.8 River Productivity Stable Isotope Sampling Presentation

- In accordance with the April 1, 2013 FERC Study Plan Determination, this presentation provides a description of stable isotope sampling for consultation. The presentation was posted two weeks in advance of the meeting for licensing participants' and agencies' review.
- When determining feasible sites, only two were available and both were chosen for sampling.
- Ken Hogan questioned if the TWG had concerns as to what was conducted and where. Sue Walker and others requested more information and further consultation. AEA indicated that it had not consulted prior to implementing this work due to scheduling constraints with the agencies' contractors.
- Jeff Davis asked if algal samples could be easily taken from spawning areas and other sites. Eric Schoen said that he could discuss this for future planning.
- Sue Walker requested that data be provided as soon as possible to provide her and other TWG members sufficient time to review.
- Jeff Davis asked if dye tagging was conducted. Eric Schoen said that almost all fish captured were above the size limit. PIT tagging proved more effective on the collected sizes.

General Discussion

Dara Glass informed the TWG of two cases of access violations by field crews in 2013. Betsy McGregor explained that the landowners received comprehensive incident reports for each event and summarized that there were two cases of crews inadvertently accessing the submerged lands (below ordinary high water mark) within non-navigable tributaries. In both instances the crews self-reported the situations when they were discovered.

The ISR will provide further detail for each study. Quarterly TWG updates are intended to provide a brief overview of the activities for the previous quarter. Sue Walker and AEA have discussed the level of detail to be provided in the quarterly TWGs. AEA will follow up separately.

In response to a question regarding the ISR schedule, Ken summarized the following dates:

- ISR filing deadline is February 3, 2014,
- the ISR review meeting(s) must commence no later than February 18,
- the meeting summary deadline is March 5,
- disputes and requests to amend studies are due by April 4,
- reply comments are due by May 4, and
- FERC's study determination is due no later than June 4.

Ken said that FERC would be willing to consider an agreement among AEA and the participants to accelerate aspects of this schedule. Ken elaborated that the ISR review meeting(s) are intended for AEA to describe whether studies had been pursued as intended, what if any changes from study plans had occurred, and whether the goals and objectives of studies were being met. Based on the ISRs, the meeting(s) and the meeting summaries, agencies and other participants should have the basis for filing their disputes and requests to amend studies. He also stated that there will be another opportunity for determining whether additional information is needed after the USR is filed in February 2015.

Action Item**Responsibility**

Post updated slides and materials.	AEA
Clarify ISR schedule- completed by FERC.	Ken Hogan
Determine proportion of macroinvertebrate sampling that was affected by flow fluctuations and report in ISR.	AEA
Provide photographic documentation of harbor seal counts to NMFS.	AEA
Confirm through other sources (ADFG fishwheels) the likelihood of a second run of eulachon after June 15, 2013.	AEA
Schedule and hold technical team meeting to discuss disposition of Kosina RST.	AEA and TWG
Schedule and hold technical team meeting to discuss winter fish sampling plan for 2013/14 and 2015.	AEA and TWG
Schedule and hold follow up meeting for isotope consultation.	AEA and TWG