



# SUSITNA-WATANA HYDRO

## Meeting Notes Wildlife Program Technical Meeting April 9, 2014

- LOCATION:** Alaska Energy Authority Main Office  
813 West Northern Lights Blvd., Anchorage, AK 99503
- TIME:** 1:00–2:30 PM (AKDT)
- SUBJECT:** Status Updates on Bird Study Plans and Modifications  
Proposed for 2014
- GOAL:** To review and discuss proposed modifications of bird study plans and updates on action items from Wildlife Technical Meetings in March 2014
- ATTENDEES:** **Mark Burch** (ADF&G), **Dave Tessler** (ADF), **Mike Petrula** (ADF&G), **Kimberly King Jones** (ADF&G), **Rick Merizon** (ADF&G), **Betsy McGregor** (AEA), **Jeff Randall** (Solstice)
- ON PHONE:** **Maureen de Zeeuw** (USFWS), **Sarah Bullock** (BLM), **Brian Lawhead** (ABR), **Terry Schick** (ABR), **Alan Mitchnick** (FERC), **Alynda Foreman** (Louis Berger Group), **Tyler Rychener** (Louis Berger Group), **Lauren McClure** (Stillwater Sciences)

### **MAJOR TOPICS AND DISCUSSION POINTS**

*(SEE PRESENTATION ON PROJECT WEB SITE FOR DETAILS: <http://www.susitna-watanahydro.org>)*

#### ***INTRODUCTION***

- The revised schedule for the Integrated Licensing Process (ILP) that was presented at the Wildlife Technical Meetings on March 6 and 7, 2014 was reviewed again.
- AEA was granted an additional 120 days to submit the Initial Study Reports (ISRs). The extension was requested in light of capital budget uncertainty and the need to identify proposed changes from the FERC-approved Study Plans and allow for collaboration with licensing participants on proposed modifications.

#### ***Population Ecology of Willow Ptarmigan in GMU 13 (Study 10.17)***

- Rick Merizon, Small Game Biologist (ADF&G), reviewed the four objectives of this study. ADF&G has partnered with the University of Alaska Fairbanks (UAF) to complete this study. Graham Frye is a Ph.D. student conducting the research under the advisement of Dr. Mark Lindberg.
- The Revised Study Plan (RSP) included the use of aerial transects by a fixed-wing airplane, which relies on detecting ptarmigan flocks when they flush in response to the airplane. This technique has been successfully used by Katie Christie, a Ph.D. candidate at UAF, in her research north of the Brooks Range.
- The data expected to be obtained from these flights were to be used to achieve the study's third objective, estimating abundance.
- The flights were originally scheduled to be flown in September and March each year within GMU subunits 13A and 13E. Due to weather delays, the fall flight was not flown until January 21, 2014. The spring flight took place on March 27, 2014, as scheduled.
- Only ten flushing events were recorded using this method, however, which was not enough to complete the abundance estimation.
- The flights were conducted in areas where radio-tagged individuals were known to be and yielded only a 10 percent flushing rate.
- ADF&G and UAF conferred and proposed modifying the study plan to obtain abundance data by walking transects and recording flushing events. The transects would be located at the male ptarmigan capture sites.
- Discussion included potential reasons to explain why ptarmigan were not flushing. Different low-altitude test flights did not yield different flushing rates. It is possible that the ptarmigan in the Study Area are habituated to more frequent air traffic than occurs in the northern Brooks Range.
- The capture location and subsequent survey transect would be chosen based on ease of access. The capture and radio-tagging effort takes place during the spring when males are more territorial and therefore more likely to flush. Accessing the backcountry during this time is more difficult due to snow.
- The estimates from walking transects would provide an abundance estimation within a small area. The goal of the study was never to estimate abundance for the entire study area (which is very large), but rather abundance within a particular block.
- Dave Tessler (ADF&G) asked if any harvest data could be used to help estimate relative abundance within the area. Rick Merizon (ADF&G) explained that a permit is not required to hunt small game within GMU 13. A small game harvest survey questionnaire will be mailed within the next few weeks, but this would only allow for relative abundance estimation at the State level, not within GMU 13.
- ADF&G and UAF suggested adding telemetry flights in place of the transects. Ten flights were originally planned for telemetry. Reallocation of these funds would allow for an additional 1 to 2 flights.
- These additional flights would also be beneficial because some of the tagged individuals have moved farther than expected; e.g., 2–3 individuals have traveled more than 50 miles from the capture location. Due to the relatively weak signals

from the radio transmitter, a grid pattern had to be flown in some instances to locate the birds, requiring more hours in the air than expected.

- It was agreed that no one had any objection to modifying the study plan to include walking transects and conducting 1–2 additional telemetry flights. There were no recommendations for an alternative approach. The proposed modifications will be included in the June 3 ISR filing along with the rationale for the change.
- Alan Mitchnik (FERC) asked if this modification would be implemented for 2015. Betsy McGregor (AEA) explained that all studies with a telemetry component initiated in 2013 were continuing in 2014 because animals are already fitted with transmitters. The study will proceed in 2014 with this modification in light of the fact that there were no objections.

### ***Follow-up on Action Items from March 6 Technical Meeting***

- Three action items from the March 6, 2014, Wildlife Technical Meeting were requests for feedback from ADF&G and USFWS:
  - Provide feedback to AEA on the raptor migration survey study area, based on the 2013 data, in time to be included in the June 3, 2014 filing of ISR 10.14 (Eagles & Other Raptors).
  - Provide feedback to AEA on the type of data that should be collected for the raptor nest characterization component of RSP Section 10.14 (Eagles & Other Raptors).
  - Provide feedback regarding proposed modification of the woodland raptor surveys (RSP Section 10.14) by modifying transects or using quadrats to increase detectability in time to be included in the June 3, 2014 ISR filing. The nest characterization component will take place in 2014. The other two study components have been deferred until 2015. Maureen de Zeeuw (USFWS) asked if the agencies could have additional time to provide comments for the two study components that have been deferred to 2015. USFWS's priority is providing comments on the nest characterization data because it is taking place in 2014. Betsy McGregor (AEA) explained that the proposed modifications would be included in the June 3 filing. Meetings to review the ISRs will take place in October 2014. FERC will issue a determination on new and modified studies on January 29, 2015.
  - Maureen de Zeeuw (USFWS) requested a written description of the proposed modification for the woodland raptor survey, including the size of the quadrats and rationale for the modification. ABR will provide this.
- The next action item from the March 6, meeting was for ABR to “Review the 2013 data for the Harlequin Duck pre-nesting and brood surveys to look for correlation between the two” to determine whether both surveys were necessary. After further statistical analysis, no correlation was found between the results of the two surveys (see summary below), indicating that the pre-

nesting and brood surveys provide complementary information about this species of conservation concern.

- Rivers and streams surveyed for Harlequin Ducks were divided into river segments and were surveyed twice during June (pre-nesting) and twice during August (brood-rearing). There were some minor discrepancies in which portions of rivers were surveyed during pre-nesting, but almost all river segments were surveyed at least once during both periods (one stretch of river was not surveyed during pre-nesting but no Harlequin Ducks were observed on it during brood-rearing). We removed all stream segments without any Harlequin Duck observations from subsequent analyses. We determined the maximum number of males, females, and broods observed on each segment during either of the two surveys for each period. The maximum number of males, females, and total duck per river km during pre-nesting were used individually as covariates in the analyses. We ran Poisson regression models, adjusted for overdispersion, to examine whether these pre-nesting covariates were significantly related to the maximum number of broods or number of females observed during brood rearing. We ran separate models with all combinations of each of the three covariates and each of the two response variables (broods and females). All analyses were adjusted for differing river lengths by using the natural logarithm of river length as an offset term. We also ran the models at three different spatial scales: individual river segments; aggregated by river; and aggregated by major river code. In all analyses, the pre-nesting metrics were not significantly related to the brood-rearing numbers (all  $P > 0.10$ ). Based on this preliminary analysis, it does not appear that there is a strong correlation between the distribution of Harlequin Ducks observed in June and the distribution of females or broods during August.
- ABR's next action item was to "Synthesize the 2013 data from all migration survey tasks, as well as other radar surveys conducted in Alaska, to provide more context regarding whether an additional year of radar data collection would yield useful information." This synthesis is currently underway and is expected to be available by mid-April. The analysis will be provided to the agencies once it is completed.
  - The migration summary will not include any new data from the 2013 field season beyond what was already filed in the draft ISRs (Sections 1–6 of ISRs 10.14 and 10.15).
  - Maureen de Zeeuw (USFWS) explained that reviewing the migration data and radar survey is another top priority for USFWS. Maureen will speak with her colleagues to determine if any additional meetings would be helpful prior to filing the final ISR; however, USFWS is not planning to offer any official agency comments until October 2014.
  - RSP Section 10.15 (Waterbirds) included a decision point regarding continuation of the radar/visual migration survey task. This study component will not be conducted in 2014.

- Clarifications for various ISRs will be included in the June 3 filing. These additions will be included in addenda because no changes will be made to Sections 1–6, which have already been filed:
  - ISR 10.16 (Landbirds & Shorebirds)—Additional details regarding the selection of the point-count locations.
  - ISR 10.16—More details regarding density estimation from the point-count survey data, including any assumptions made.
  - ISR 10.16—Indicate which density estimates were based on assumed pairs or males only.
  - ISR 10.14 (Eagles & Other Raptors)—Additional details regarding the criteria for occupied nests vs. nests having signs of occupancy as it relates to.
  - ISR 10.10 (Terrestrial Furbearers)—Add a map showing hair-snag stations for lynx and marten.
- Two clarifications related to Study 10.16 (Landbirds & Shorebirds) will be included in the Updated Study Report (USR):
  - Convert the metric used for the riverine transect data from birds/hour to linear densities (birds/km).
  - For the lacustrine transect data, revise the metric to indicate the total number of birds recorded on each waterbody surveyed.
- Terry Schick (ABR) proposed a modification to include in the June 3 filing. The RSP called for point-count transects throughout the study area as well transects specifically within riverine environments. The study team proposes eliminating the transects that occur specifically within riverine environments as they found it was generally too noisy to identify birds. If the riverine-specific allocations were eliminated, a longer stretch of the river could be sampled.
  - Discussion ensued about the proposed modification. The data from 2013 would be separated out and reported differently. Linear densities would be reported for subsequent years. In the ISR, the 2013 data were reported as birds/hour. The team is going to eventually convert the 2013 data to be reported as birds/km, but this will be an intensive process involving looking at GPS track logs, which could not be completed before the draft ISR filing. Dave Tessler (ADF&G) asked if there would be things that would be missed by not sampling the riverine habitat specifically. Based on the 2013 data, Terry Schick (ABR) did not think that eliminating the riverine portion would fail to capture any unique types of information, but he will do a simple check to be sure. This proposed change will appear in Section 7 of the final ISR as a modification.
- The final action item from the March 6 meeting was for ABR to speak with Tara Chestnut (USGS) regarding the feasibility of testing environmental DNA to assess the possible presence of chytrid fungus, a potential pathogen to frogs. Opportunistic capture and swabbing of wood frogs was done in 2013 for Study 10.18 (Wood Frog), but only seven individuals were sampled. All individuals tested negative for the fungus, but the sample size was considered too small to be conclusive. ABR has contacted Tara Chestnut for further consultation. The

conversation with her is ongoing, but her initial thought was that environmental DNA sampling of water would likely not be informative. ABR will complete this consultation and include the information in Section 7 of the final ISR.

***Follow-up on Action Items from March 7 Technical Meeting***

- The first action item from the March 7, 2014 meeting was for agencies to send contact information of individuals who may be interested in collaborating on the Project to obtain bird tissue samples for the Mercury Assessment and Potential for Bioaccumulation study (RSP Section 5.7) to AEA.
  - Lori Verbrugge (USFWS) provided the contact information for Bill Bowerman of the University of Maryland.
  - Dave Tessler (ADF&G) provided the information for Dave Evers of the Biodiversity Research Institute in Maine.
  - Brian Lawhead (ABR) contacted both Dr. Bowerman and Dr. Evers, who are interested in conducting tissue sampling for Bald Eagles and waterbirds, respectively. ABR is continuing conversations with each of them to obtain cost estimates and to narrow the scope of work evaluate the feasibility of conducting this work.
  - Bill Bowerman and his team could sample blood and feathers of Bald Eagle nestlings to assess the level of methylmercury in the study area. The best time to sample nestlings is when they are 6 to 9 weeks old. Nesting success and productivity were not high in 2012 and 2013, so sample size may not be large, but the team could also collect feathers shed by adults at other nests. Shed adult feathers will reflect mercury levels at the time the feathers were grown in the previous summer.
  - Dave Evers is being consulted about the possibility of capturing and sampling waterbirds, potentially including Common Loons, mergansers, and possibly Red-necked Grebes. ABR is continuing consultation with him to focus the scope of work and develop a cost estimate.
  - Both Dave Evers and Bill Bowerman are highly experienced at tissue sampling for mercury analysis and have access to abundant data for comparison.
- The next action item was to speak with Travis Booms (ADF&G, Fairbanks) regarding his potential interest and availability to expanding his current eagle telemetry study to include the study area. In a discussion with Dave Tessler, Travis did not see that expansion as a good fit for his study plan. The coordination with Dr. Bowerman should provide sufficient information to complete the eagle tissue sampling for the Mercury Study (RSP Section 5.7), if deemed necessary to meet the mercury study objectives.
- The next action item was for Dara Glass (CIRI) to provide the names of shareholders who may be interested in trapping river otters and mink in the study area to support tissue sampling for the Mercury Study (RSP Section 5.7). Dara provided this information to Paul Dworjan (URS). Paul has already obtained pelts of one otter and two mink that were trapped near the Indian River. It appears that having a designated trapper is going to be the best

approach to obtain hair samples from otters and mink. It is difficult to anticipate where otters and mink will be and only a small hair sample would be obtained using snagging. Modified hair snags were deployed after a track survey in early March, but only caribou hair had been obtained thus far.

- The next action item was for ABR to speak with John Pearce (USGS) to discuss techniques for capturing waterbirds to sample blood and tissue. However, this action item would be unnecessary if Dave Evers and his team conduct the work.

### **Meeting Wrap-up**

- The next meeting has not been scheduled. Maureen de Zeeuw (USFWS) will contact Brian Lawhead (ABR) after consulting with her colleagues to see whether additional meetings are needed.
- Maureen de Zeeuw (USFWS) mentioned that throughout her involvement with the project she has been concerned about the potential impacts of the Project on Rock Sandpipers that winter in upper Cook Inlet and feed on mudflats there, including those at the mouth of the Susitna River. Maureen wanted to reconfirm that this concern was being addressed. Betsy McGregor (AEA) explained that several studies are modeling Project effects on the river. The Fluvial Geomorphology study (RSP Section 6.6), Open-water Flow Routing Model study (RSP Section 8.5), Water Quality Modeling (RSP Section 5.6) are looking downriver as far as Project River Mile (PRM) 29.9. Several large tributaries feed into the Susitna River below the dam site and their influence is likely to attenuate Project effects to the point that they would have a negligible effect at the mouth of the river. The mollusk species on which the sandpipers feed on does not live in the river, but rather in intertidal mudflats. If the modeling shows that the Project effects are more significant in the lower reaches than expected, then additional effort will be given to studying the potential effects on the mollusks. The timing of this update to the RSP would potentially be in 2015 after the modeling is available.
- Dave Tessler (ADF&G) said that ADF&G is conducting a bat virus survey and would like to work with the bat radio-tagging study team to obtain genetic and swab samples. Brian Lawhead (ABR) said that the study lead is agreeable to this collaboration. Dave will provide ABR with further details about the request. ADF&G would provide all the necessary material. Betsy McGregor (AEA) clarified that AEA is open to assisting with this collaboration, but this portion of the work would remain outside of the FERC-approved study plan.

### **Action Items**

<b>Action Items</b>	<b>Responsibility</b>
Provide USFWS and ADF&G with a written description of the proposed modifications regarding the woodland raptor survey (Study 10.14).	ABR
Provide USFWS and ADF&G with a written summary of the migration information presented in ISRs 10.14 and 10.15.	ABR

