



# SUSITNA-WATANA HYDRO

## Meeting Notes Wildlife Program Technical Meeting March 6, 2014

- LOCATION:** Alaska Energy Authority Main Office  
813 West Northern Lights Blvd., Anchorage, AK 99503
- TIME:** 1:00 PM–4:30 PM (AKST)
- SUBJECT:** Wildlife Program Study Plans
- GOAL:** To review plans for completing wildlife studies and discuss proposed study plan modifications for selected studies
- ATTENDEES:** **Mark Burch** (ADF&G), **Kim King Jones** (ADF&G), **Maureen de Zeeuw** (USFWS), **Dave Tessler** (ADF&G), **Mike Petrula** (ADF&G), **Betsy McGregor** (AEA), **Brian Lawhead** (ABR), **Terry Schick** (ABR), **Jeff Randall** (Solstice), **Wayne Dyok** (AEA, for part of meeting)
- ON PHONE:** **Alan Michnik** (FERC; left early), **Nick Jayjack** (FERC; left early), **Dave Griffin** (Alaska State Parks), **Sarah Bullock** (BLM), **Kirby Gilbert** (MWH), **Chuck Sensiba** (Van Ness Feldman), **Jon Plissner** (ABR)

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

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

#### ***INTRODUCTION***

- The Integrated Licensing Process (ILP) timeline was reviewed, including the filing of the Revised Study Plans (RSPs) with the Federal Energy Regulatory Commission (FERC) in December 2012, the draft Initial Study Reports (ISRs) submission to FERC on February 3, 2014, and the filing of the final ISRs to occur on June 3, 2014.
- No substantive changes will be made to Sections 1-6 of the draft ISRs that were filed in February 2014. The filing that will take place by June 3, 2014, will include Section 7, which details the plan for completing each study. Additional appendices may also be included to report data that were not available for some studies at the time of the draft filing in February, such as results of laboratory analyses. No data collected during 2014 (e.g., winter surveys) will be included in the June 3 filing, however, unless it's relevant to a decision point. Any decision points and supporting information regarding plans for completing studies will be included in the final ISRs. Hence, the February and June filings should be considered more in terms of "Parts A and B" of the ISR, as opposed to a draft and final version. The 120-day ISR extension requested by AEA and the additional 120-d review period granted by FERC will allow agencies additional time beyond what the original schedule called for to review the documents.

- AEA encourages informal comments from the agencies at any point prior to the submission of the final ISR or the submission of formal comments on the final ISR. Agencies should review and provide comments primarily on adequacy of the results, variances and proposed modifications from the RSP. Any changes made to Sections 1-6 of the draft ISRs will be minor changes made for the sake of correction or clarification and the changes made will be clearly identified. Such changes will be handled on a case-by-case basis. The responses to some comments, depending on how involved the work will be, may not be incorporated into the ISR, but included instead in the Updated Study Report (USR).
- The reason for the delayed filing of Section 7 was to correspond with the end of the current session of the Alaska State Legislature. The Governor's proposed budget allocated \$10 million of the funding requested by AEA for the Project. An additional \$32.7 million was proposed by the Governor in a supplemental request, which is contingent on AEA finalizing a land-access agreement with the Cook Inlet Regional Working Group (CIRWG). The negotiations with CIRWG are ongoing.
- Informal public outreach meetings for the Project will begin at the end of April after the final budget for 2014 is known.
- The first meetings to discuss the final ISRs will begin October 16, 2014. The USRs will be filed on February 1, 2016, and the license application will be filed by December 1, 2016.

#### **Wildlife Study Plans**

- Brian Lawhead provided an overview of the activities planned for the 16 wildlife studies in 2014.
- The density modeling portion of the Large Carnivore Study (10.8) was completed by Earl Becker (ADF&G) and David Miller (University of Rhode Island). Laboratory analyses of stable isotopes and DNA are still in progress at the University of Alaska Fairbanks; these data will be reported in an appendix for the June 3 ISR filing. Further field effort for bear-hair snagging has been deferred to 2015.
- The three wildlife desktop studies—Small Mammals (10.12), Wildlife Habitat Evaluation (10.19), and Wildlife Harvest Analysis (10.20)—have all been deferred to 2015. This deferral will provide an additional year of data to be accumulated for the wildlife harvest analysis, as well as for completion of wildlife habitat mapping.
- Wildlife studies being conducted by ADF&G will continue in 2014 following the plans detailed in the RSP are Moose (10.5), Caribou (10.6), Dall's Sheep (10.7), Wolverine (10.9), and Willow Ptarmigan (10.17). The second year of the moose browse survey has been deferred to 2015, however.

#### **Wolverine (Study 10.9)**

- The snow conditions required to perform a Sample-Unit Probability Estimator (SUPE) survey have not yet occurred in 2014. ADF&G will try to conduct the SUPE this winter if suitable conditions occur; otherwise, the SUPE survey will be attempted again in 2015. ADF&G will attempt to conduct an occupancy survey in late winter 2014 if the SUPE survey cannot be conducted.

#### **Eagles and Other Raptors (Study 10.14)**

- Eagle productivity was low in 2013, possibly as a result of the late breakup and the currently low phase of the snowshoe hare population cycle.
- Nest occupancy and productivity surveys of eagles (and other raptors nesting in eagle habitat) will continue in 2014, constituting the third year of this study component, which was initiated in 2012.
- The following study components have been deferred until 2015: spring and fall migration surveys in the transmission corridors, woodland raptor nest survey, nesting habitat delineation, and Bald Eagle foraging and roosting surveys in late fall and early winter.

- Collection of shed feathers, unhatched eggs, and deceased juveniles of Bald Eagles is desired for the Mercury Assessment and Potential for Bioaccumulation Study (Study 5.7). ABR has a USFWS salvage permit to collect feathers and other material from migratory birds, but that permit does not authorize the collection of eagle parts. ABR must be designated as a subpermittee to the USFWS for the necessary eagle salvage permit, a process that will be resumed in the coming weeks.
- **Per the Study Plan, AEA requested input from the USFWS and ADF&G on the study area for the migration surveys in the transmission corridors. Although that study task will not resume until 2015, this feedback should be provided prior to the June 3 filing so that it can be included as a proposed modification, if necessary. The data collected for this study component in 2013 should be used to guide the suggestion for the study area. In addition, AEA would like feedback from USFWS and ADF&G regarding the types of data they would like to see documented for the nest characterization study (per Study Plan).**
- Access to the Gold Creek corridor is one change from the 2013 effort that will take place once CIRWG land access is negotiated.
- Maureen De Zeeuw suggested that clarification be added to the final ISR, perhaps as a footnote, as to how determination was made between an occupied nest and a nest that showed signs of occupancy (page 12 of the ISR).
- **The current method for surveying woodland raptors did not yield good results in 2013. AEA would like to schedule follow up meetings with USFWS and ADF&G to discuss the possibility of using quadrats for sampling instead of transects. These meetings would take place with enough time to include a proposed modification in the June 3 filing.**
- Brief discussion of owl surveys occurred. Large owls (Great Horned Owl, Great Gray Owl) will be recorded if they are observed during the eagle or woodland raptor surveys (i.e., large stick nests). No large owl nests have been observed to date. For smaller owls (e.g., Hawk Owl, Boreal Owl; cavity nesters), the approach is to acknowledge they are present in the study area and to use modeling to apply density information to suitable habitat types as part of the Evaluation of Wildlife Habitat Use (Study 10.19).

#### **Waterbirds (Study 10.15)**

- Surveys for all species of waterbirds occurred in 2013. Streams were surveyed for the presence of Harlequin Ducks. The study included lake-to-lake surveys in most of the study area, as well as transect surveys for breeding populations in a portion of the study area (Eastern Transect Block).
- Aerial surveys (spring and fall migration, breeding populations, brood-rearing) are planned to continue in 2014. The only ground-based component is collection of tissue samples for mercury analysis for Study 5.7; that task will continue in 2014 if suitable collection opportunities occur.
- The brood surveys revealed that the timing of breeding in 2013 was fairly similar for dabbling and diving ducks. This ‘telescoping’ of timing may have resulted from the late spring. As a result of the late spring, the spring migration surveys transitioned directly into the breeding surveys.
- The stream surveys for Harlequin Ducks were extensive and included all of the suitable streams in the study area, as well as sections outside the study area buffer. The surveys were conducted by helicopter, encompassing entire streams, as opposed to a ground survey which would be a point-count. The streams are generally not navigable, so survey by boat is not a viable option.
- Mike Petruła asked whether both pre-nesting (breeding pair) and brood surveys were needed for Harlequin Ducks. The reasoning was that, because the nests are so cryptic, it could be difficult to determine how many pairs attempted to nest versus how many bred successfully. **Mike suggested that the data be reviewed to examine whether it was necessary to conduct both the pre-nesting and brood surveys; i.e., can the objective be accomplished using a single survey?**

- Radar and visual migration surveys were employed to gather migration data at a site just north of the proposed dam site. Although it was described in the RSP under the Waterbird Study, all bird species were recorded in these surveys. A camp was established to support the radar and visual migration observations. The location of the camp was very well-suited for the radar and visual observations. The survey was conducted between April 20 and June 3, 2013, for spring migration and between August 16 and October 15, 2013, for fall migration. The radar gathered data on movements of small species within 1.5 km and of larger birds out to 6 km. The settings were changed each hour between the two radii.
- Visual/audio observations took place during all daylight and crepuscular hours. Diurnal visual observation allowed for a detection radius of approximately 10 km for larger birds.
- Dave Tessler asked what type of generator was used at the camp and whether or not it was sound-shielded. The generator was a small gasoline-powered generator that ran on batteries for a portion of the time. The generator was not sound-shielded, but it was very quiet and the ABR study lead (Jon Plissner) did not think it was likely to alter bird flight paths through the area.
- Night-vision goggles were used in an attempt to observe birds migrating at night because the radar only gave information on bird size, but could not reveal species identity. The night-vision goggles only had a range of approximately 200 meters and most of the birds flew well above that, as indicated by the elevation data from the radar.
- The radar results indicated that passerines were the primary nocturnal migrants.
- The counts included an unknown proportion of resident birds. The study team believes the eagle count included locally nesting individuals that were counted multiple times. **Dave Tessler suggested that birds traveling in directions different from what would be expected of a migrating individual be excluded to possibly account for resident individuals, which will be considered as a possibility in the future if the radar/visual migration survey task is repeated.**
- Swans came through the area in a large pulse in early May, but then were not observed subsequently. Visibility was poor on the day when most swans were heard. As a result of the poor visibility on that single day, the number of swans was undercounted.
- Sandhill Crane numbers were very low in the spring, mostly pairs or single individuals, but no flocks. During the fall migration all of the cranes came through in a 3-day period.
- The flight direction of scoters in spring was anomalous in that they flew west to east, when all other waterfowl were heading west.
- The number of Sandhill Crane and waterfowl observed was lower than what has been recorded in other migration studies in other parts of central Alaska during other years.
- The number of birds observed in the fall was lower than what was observed in the spring. This difference could be because there was less open water available in the spring, so birds were more concentrated in their flight paths along the river.
- Based on the data collected in 2013, the study team believes it observed the vast majority of spring and fall migrations during the timeframe in which they surveyed. They would not have been able to extend later in the fall based on weather, but the study did end before freeze-up, so it is possible that some birds (swans) may have passed through after the survey ended.
- **ABR will synthesize the data across the multiple migration surveys conducted in 2013 for Studies 10.14 and 10.15, as well as look at surveys conducted elsewhere in Alaska using radar (e.g. Gakona, Tok, etc.) to help frame future discussion over whether or not radar should be employed in a second year of study. Collaboration with USFWS and ADF&G will take place over the next few weeks so that the decision point in the RSP can be addressed in the June 3 filing.**
- USFWS would like to see information on whether or not birds are landing and using habitat in the area or are just flying through. If birds are just flying through, then from an impact minimization

standpoint, the discussion would be focused on collision, light attraction, and as much light reduction as possible. Inter-annual variances are also important for them to know.

- Regarding the transmission corridors, the direction of flight comes into play and may give insight into alternative locations of transmission lines in specific areas.
- Some of the information collected through the radar is interesting to the USFWS but, if it does not help in mitigating effects, then in the end it is not as important.
- Dave Tessler wondered whether the north/south-oriented transmission corridor (Denali) may be of greater concern for migrating birds because it is largely perpendicular to the major directions of migratory movements, rather than parallel, as in the Chulitna and Gold Creek corridors. The Denali Corridor was not sampled because it was outside the range of the radar, but migration observations were conducted as part of Study 10.14 and all bird species observed were documented.

### ***Landbirds and Shorebirds (Study 10.16)***

- Ground-based surveys of point-count plots located randomly by habitat type (using the APA Project 1987 vegetation map to stratify plot locations), as well as habitat-specific sampling in riverine and lacustrine areas, were conducted in 2013.
- The western end of the proposed reservoir inundation zone and the Gold Creek Corridor were not sampled due to a lack of CIRWG land access. The northern portions of the Denali Corridor also were not sampled because the 1987 vegetation map did not cover that area. Once land access is gained and the wildlife habitat mapping is completed, the Gold Creek Corridor and remainder of the Denali Corridor will be sampled.
- Despite the delay caused by the late spring in 2013, the weather was ideal during the point-count surveys, allowing 29 days of surveying with only one weather day. The team completed 1,364 point-count surveys.
- The survey of colonial nesting swallows focused on the proposed inundation zone and a 2-mile buffer around it. The swallow survey was initially planned to be conducted by boat, but was instead conducted via helicopter. The use of the helicopter allowed for increased coverage in a much shorter amount of time. The crew returned to colonies that were accessible on the ground to collect data on occupancy and activity at nest burrows. The majority of the swallows in the colonies observed were Bank Swallows, but there were some Violet-green Swallows in a few mixed colonies.
- In 2014, the Landbird/Shorebird Study will continue and newly selected points will be sampled to further describe occurrence, abundance, distribution, and habitat use throughout the study area. The areas that could not be sampled in 2013 (above) will likely be sampled in 2014 and 2015 so that all portions of the study area will have been surveyed in two years.
- The following study components have been deferred until 2015: final estimates of abundance and breeding population densities, habitat-use analysis (to be completed after vegetation and wildlife habitat mapping is complete), and survey of colonial nesting swallows, if a second season is needed for colonially nesting swallows.
- **Maureen de Zeeuw requested that clarification be added to better describe how the sample points were selected using the combination of a random, stratified selection of the transect starting points and the systematic selection of points along each transect (p. 4 of the ISR).**
- **Maureen also requested that the riverine survey data would be better represented as linear densities (pp. 20 & 21 of the ISR), which ABR intends to do for the USR. For the lacustrine survey data, total bird numbers will be reported for each waterbody surveyed, but the waterbody characteristics by which they will be grouped (e.g., size, type) have not yet been determined.**
- **Maureen asked for more details about the way in which densities were calculated. She requested that details be added describing what assumptions were made in estimating total density based**

**on the point-count data, as well as clarifying whether the detection models used were for pairs or males only.**

- Dave Tessler asked whether or not the estimated observation distances were truncated. They were not in 2013, but this will be considered for 2014. In the future, a new approach using Bayesian statistics to combine removal and distance analyses will be used to calculate densities.
- Discussion ensued regarding how data from 2013 will be included in the USR due to the delayed spring in 2013. The team will have to wait to see how the 2014 season plays out (early, late, or average) before deciding on this.

#### ***Terrestrial Furbearers (Study 10.10)***

- A large number of variances from the RSP in 2013 resulted from difficulties with access to the study area. The team could only work out of the Alpine Creek Lodge off the Denali Highway. The work was conducted to the east of the study area and the Denali Corridor. As a result, the heavily wooded areas of the reservoir inundation zone, which marten inhabit, could not be reached, so marten sampling was not done in 2013.
- Thus far in the 2014 field work (underway since January), the study team has been more successful in accessing more of the study area and marten traps have been deployed.
- The Gold Creek Corridor is not currently being sampled due to a lack of access, but if access can be gained soon, they may be able to do some sampling in the area this year.
- **Dave Tessler requested that the relevant ISR map figure(s) should show the specific locations of hair snags for lynx and marten.**
- The summer component of this study is sampling of snowshoe hares (fecal pellet grids) and voles (live-trapping) for prey population trend analysis.
- Another student of Dr. Laura Prugh's (UAF) is doing similar vole trapping in Denali National Park and Preserve, and those data will be used as companion data to the vole data collected in this study. Based on access to this additional data, the methods varied from the RSP in that vole traps were left out only for a single night, but the number of traps per grid as well as the sampling area increased.

#### ***Aquatic Furbearers (Study 10.11)***

- This study will continue in 2014, although the muskrat survey component will be deferred until 2015.
- In 2013, only incidental information on river otters and mink was collected, obtained from other study groups.
- In October 2013, active and inactive beaver colonies were mapped. The active colonies will be revisited in spring 2014 to assess overwinter survival.
- Two to three aerial track surveys for river otters and mink will be carried out in 2014 if snow conditions allow. It is likely that only tracks from river otters will be observable and distinguishable.
- The study area for mink and river otter is not easily accessible and is not visited by any known trappers. Additional discussion on the study component directed at obtaining tissue samples for mercury analysis (Study 5.7) will occur at the Technical Program meeting on March 7, 2014.

#### ***Bats (Study 10.13)***

- The two purposes of the study were to determine if bats were present in the study area and, if so, where they roost. Bats were located throughout the study area in low levels using Anabat acoustic monitors, with their presence being detected from late May to early October.
- The team was not successful in locating any roosts in 2013, however. **The study team proposes that the number of Anabat detectors be reduced by approximately half and the funds be reallocated to**

**telemetry equipment. The range of the telemetry devices would be approximately 2 miles and the batteries would last approximately 12 days. Mist nets would be used to capture bats. ADF&G concurred with this proposal, as an additional year of acoustic redeployment would likely yield similar results and not add more information on baseline conditions or potential Project impacts, and agreed that it is more important to know where the bats roost.** ADF&G (Dave Tessler) does not expect that the Project will have a significant impact on bat populations.

- ADF&G concurred that no additional follow-up meetings were needed to discuss the Bat Study.

#### **Wood Frog (Study 10.18)**

- Waterbodies were visited in spring 2013 to conduct auditory surveys for calling frogs. Acoustic monitors were deployed at selected waterbodies to monitor frog calling activity and to derive an independent assessment of detectability.
- This study will continue in 2014. The study team plans to conduct sampling in suitable frog habitats on CIRWG lands if access is permitted and at higher elevations in the study area that were undersampled in the late spring of 2013.
- Seven frogs were captured opportunistically by hand and were swabbed for the presence of chytrid fungus (none was detected). The study team will likely not capture and swab for the presence of the fungus in 2014 due to the much more robust sampling design that would be needed to confirm the presence or absence of the fungus. Dave Tessler suggested that consultation be conducted with Tara Chestnut to evaluate whether environmental DNA sampling was feasible to detect evidence of chytrid fungus.
- The survey results in 2013 indicated that detectability of frogs on the first visit to each waterbody was 61% and that detectability increased on the second and third visits.
- The strongest habitat relationship detected was that frogs were more likely to occur in deeper (> 1 m) waterbodies than in shallower ones.
- There was concurrence that no additional follow-up meetings were needed to discuss the Wood Frog Study.

#### **ACTION ITEMS**

<b>Action Items</b>	<b>Responsibility</b>	<b>Timing</b>
Provide feedback to AEA on the study area for the raptor migration surveys, based on the 2013 data, in time to be included in the June 3, 2014 filing for Study 10.14.	USFWS, ADF&G	Technical consultation before Final ISR
Provide feedback to AEA on the type of data that should be collected for the raptor nest characterization component of Study 10.14.	USFWS, ADF&G	Technical consultation before Final ISR
Provide feedback regarding proposed modification of the woodland raptor surveys (Study 10.14) from using transects to quadrats to increase detectability, in time to be included in the June 3, 2014 filing.	USFWS, ADF&G	Technical consultation before Final ISR
Review the 2013 data for the Harlequin Duck pre-nesting and the brood surveys to look for correlation between the two. If so, one or the other may not be necessary.	ABR	Technical consultation before Final ISR
Synthesize the 2013 data from all migration survey tasks, as well as with other radar surveys conducted in Alaska,	ABR	Technical consultation before Final ISR

to provide more context regarding whether an additional year of radar data collection would yield useful information.		
In ISR 10.16 (Landbirds and Shorebirds; p. 4), agencies would like additional detail to clarify how the selection of the point-count locations was performed in an unbiased fashion, using a combination of random and systematic approaches.	ABR	Final ISR (June 3)
In ISR 10.16 (Landbirds and Shorebirds; pp. 20-21), convert the metric used for the riverine transect data from birds/hour to linear densities (birds/km).	ABR	USR
For the lacustrine transect data in the Landbirds/Shorebirds study, revise the metric to indicate the total number of birds recorded on each waterbody surveyed.	ABR	USR
For the landbird/shorebird study, include more details on how densities were estimated from the point-count survey data, including any assumptions made.	ABR	Final ISR (June 3)
For the landbird/shorebird study, indicate which density estimates were made using data for assumed pairs or for males only.	ABR	Final ISR (June 3)
Add clarification to ISR 10.14 regarding the difference between a nest that was occupied vs. having signs of occupancy (page 12)	ABR	Final ISR (June 3)
Submit application to USFWS to salvage eagle feathers and other biological material for mercury analysis. <i>**May not be needed. See action items from March 7, 2014 regarding collaboration with other researchers.**</i>	ABR	Technical consultation before Final ISR
For Terrestrial Furbearers (ISR 10.10), add a map showing hair snag stations by species.	UAF & ABR	Final ISR (June 3)
For Wood Frogs (Study 10.18), consult Tara Chestnut (USGS) regarding the feasibility of testing environmental DNA to assess the possible presence of chytrid fungus.	ABR	Technical consultation before Final ISR