

Table 10.4-1. Summary of consultation on Wildlife Resources study plans.

Comment Format	Comment Date	Licensing Participant Name	Licensing Participant Affiliation	Comment	Response
<u>Moose Distribution, Abundance, Productivity, and Survival (Section 10.5)</u>					
Terrestrial Resources TWG Review Meeting	08/09/2012	Sarah Bullock	BLM	The moose study plan does not need to validate the carrying-capacity model developed for the Susitna Hydro Project in the 1980s because the proposed browse removal study would use a different method and model.	No corresponding change to the moose study plan is needed because the study plan did not propose to validate the 1980s carrying-capacity model. Instead, a newer technique was proposed to evaluate the proportional removal of browse biomass by moose.
Phone Conversation and e-mail	09/24/2012	Mark Burch	ADF&G	The moose study plan needs to be revised to reflect the fact that the GeoSpatial Population Estimator (GSPE) quadrat surveys will be combined into a single-year effort (currently planned for 2012), in which case it would not need to be included in the 2013–2014 study plan. If the survey effort cannot be conducted in 2012 because of unsuitable survey conditions, then the GSPE survey would be retained in the study plan for 2013.	The moose study plan (Section 10.5.4.2) has been revised to clarify that the GSPE survey will be conducted in a single year instead of over two years. The GSPE survey will be conducted in 2013 only if the effort currently being planned for 2012 is unsuccessful due to unsuitable weather or snow conditions. (By the time the RSP is finalized, it will be known whether or not the 2012 effort succeeded.)
<u>Caribou Distribution, Abundance, Movements, and Productivity (Section 10.6)</u>					
Terrestrial Resources TWG Review Meeting	08/09/2012	Sarah Bullock	BLM	The caribou study plan needs to assess whether the Nelchina caribou herd or the Delta caribou herd crosses the proposed reservoir inundation zone.	The caribou study plan (Section 10.6.2 and 10.6.4.1) has been revised to clarify that, although the Nelchina herd is known to cross the proposed reservoir inundation zone, the Delta herd is not expected to cross it because of its more northerly distribution.

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Phone Conversation and e-mail	09/24/2012	Mark Burch	ADF&G	One of the caribou study plan objectives needs to be revised to reflect the likelihood that sample sizes will not be large enough for reliable estimation of calf survival.	The third caribou study objective (Section 10.6.1.1, regarding survival estimation), has been revised accordingly by deleting 'calf.'
Dall's Sheep Distribution, Abundance, and Habitat Use (Section 10.7)					
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Mark Burch, Kimberly King, Earl Becker	ADF&G	A watershed approach was recommended to define the Dall's sheep survey area instead of applying a buffer around the Project area.	ADF&G was consulted subsequently in revising the Dall's sheep study plan and requested that the study area (Section 10.7.3) be revised as suitable sheep habitat in Game Management Unit 13E (a watershed-based management subunit), east of the Parks Highway. The study plan has been revised to describe the study area as the portion of GMU 13E located east of the Parks Highway and south of the Denali Highway.
Phone Conversation	09/24/2012	Mark Burch	ADF&G	ADF&G is potentially interested in conducting the proposed aerial survey of Dall's sheep in the study area. Other tasks being considered by ADF&G are the possibility of genetic sampling to evaluate the degree of isolation of sheep inhabiting the Watana Creek Hills (north of the proposed reservoir inundation zone), as well as the extent of the aerial survey area needed on the south side of the Susitna River.	No changes in the study plan were made at the time in response to this comment. Instead, further consultation is ongoing with ADF&G regarding the study plan approach (see next entry below, for 10/05/2012).

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Phone Conversation	10/05/2012	Mark Burch	ADF&G	ADF&G is interested in conducting aerial surveys of Dall's sheep in Game management Unit 13E (east of the Parks Highway and north of the Denali Highway) and possibly in deploying radio-collars to evaluate the extent of movements and potential geographic isolation by sheep using mineral licks north of the reservoir inundation zone.	ADF&G has suggested further changes in the study plan for Dall's sheep with regard to the number of aerial surveys, camera monitoring of mineral licks, and possible radio telemetry. Consultation on this study plan is continuing between ADF&G and AEA.
<u>Distribution, Abundance, and Habitat Use by Large Carnivores (Section 10.8)</u>					
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Various	ADF&G	ADF&G agrees that fish spawning areas downstream that could be impacted by altered river flow and are important to bears need to be identified. It was recommended that DNA and stable-isotope data be collected from hair samples to enumerate the minimum number of bears and characterize their diet in drainages used for spawning in the middle reach of the Susitna River. Hair traps that capture one individual's hair and then close should be considered instead of wire snags that may sample multiple individuals.	The large-carnivores study plan (Section 10.8.4.1) proposed to investigate bear numbers and diets around spawning streams downstream from the dam by obtaining hair samples for DNA-based mark-recapture analysis and stable-isotope analysis. ADF&G suggested that Laverne Beier (ADF&G DWC, Region I) be consulted about the feasibility of using hair traps that obtain samples from single animals, rather than wire snags that sample hairs from multiple animals. The results of that consultation will be included in the RSP.

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Phone Conversation	09/24/2012	Mark Burch	ADF&G	ADF&G is pursuing the feasibility of conducting spatial modeling of bear density using existing survey data (discussed at the 09/13/2012 meeting) with David Miller of the University of Rhode Island. ADF&G also is considering potential involvement in the DNA and stable-isotope sampling proposed for bears using anadromous fish spawning streams downstream from the dam in the middle reach of the Susitna River drainage.	The study plan for large carnivores (Sections 10.8.3 and 10.8.4.1) has been revised to include a description of the proposed spatial modeling of bear density in the study area, which would use the results of several line-transect surveys conducted by ADF&G since 2001. The study plan (Section 10.8.4.1) has been revised to state that ADF&G biologists will be consulted regarding the sampling design and analysis of hair samples from bears in the downstream study area.
Wolverine Distribution and Abundance (Section 10.9)					
Terrestrial Resources TWG Review Meeting	08/09/2012	Mark Burch	ADF&G	The wolverine study plan describes sampling blocks 25 square miles in size, but they should be 25 square kilometers instead. The proposed study area should be consolidated (“squared up”) to reduce potential problems caused by wolverines moving into and out of the sampling blocks during the survey. A single survey will not be sufficient to obtain habitat-use information, so that objective should be dropped.	The error in sample-block size on the study area map (Figure 10.9-1) has been corrected and the study area (Section 10.9.3) has been revised through further consultation at the follow-up meeting with ADF&G in 09/13/2012; the study area map (Figure 10.9-1) has been revised accordingly. The objective regarding habitat use has been dropped from the study plan (Section 10.9.1.1).

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Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Earl Becker, Howard Golden, Todd Rinaldi	ADF&G	The sampling blocks for the wolverine survey should be 25 square kilometers in size, not 25 square miles. The study area should be “squared up” to avoid problems caused by animals leaving and then reentering the study area. Sample smaller blocks to get finer scale resolution. Stratify and select survey quadrates according to the likelihood of seeing wolverines.	The wolverine study plan has been revised to correct the study area map error (Figure 10.9-1) regarding the size of sampling blocks and to describe the stratification of the study area (Section 10.9.3 and 10.9.4). The study area (Figure 10.9-1) has been reconfigured to consolidate the sampling blocks, thereby reducing potential errors caused by animals moving into and out of the study area.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Howard Golden, Earl Becker, Todd Rinaldi	ADF&G	Aerial surveys of wolverine tracks should be conducted 12–36 hours after a snowfall that covers previous tracks. Surveys should be conducted in February and March because of increasing day length and generally better weather than earlier in winter. Reconnaissance flights should be conducted to determine when and where snow has fallen in the study area.	Additional details of the proposed survey method have been added to Section 10.9.4 of the wolverine study plan, describing the optimal timing of the survey as being in February or March 2013, 12–36 hours after a fresh snowfall, and preceded by a reconnaissance survey, if necessary, to assess the adequacy of snow cover throughout the study area.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Todd Rinaldi, Howard Golden	ADF&G	Assessing habitat associations should be removed from the wolverine study objectives because a single Sample-Unit Probability Estimator (SUPE) survey will not provide suitable habitat-use data. The most effective way to obtain habitat associations for wolverines is by using GPS telemetry.	This objective has been deleted from Section 10.9.1.1 of the wolverine study plan.
Phone Conversation	09/24/2012	Mark Burch	ADF&G	ADF&G is potentially interested in participating in the proposed wolverine survey effort, using the SUPE method. AEA contractors could potentially provide additional observers if ADF&G needs help.	The study plan proposed to use the SUPE method, so no changes were made to the study plan at the time; see entries under 10/05/2012 below.

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Phone Conversation	10/05/2012	Mark Burch	ADF&G	ADF&G is interested in conducting the SUPE survey of wolverines.	ADF&G biologists currently are revising the study plan for wolverine to reflect their involvement; consultation is continuing between ADF&G and AEA. Additional changes to the study plan are expected to be minor.
Terrestrial Furbearer Abundance and Habitat Use (Section 10.10)					
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Earl Becker	ADF&G	The use of standard mark–recapture techniques to develop population estimates of terrestrial furbearers is problematic due to concerns about closure assumptions and differential probability of capture. Instead, cluster-grid sampling and a spatially explicit capture–recapture (SECR) model should be used to estimate population density because it accounts for spatial variability.	The terrestrial furbearer study plan (Sections 10.10.1.1 and 10.10.4) has been revised to incorporate the recommended changes in sampling design and analyses. Specifically, more details have been added describing the proposed sampling design and the accompanying statistical analyses (including population closure and capture heterogeneity) to incorporate the spatially explicit capture–recapture approach recommended by ADF&G.
Aquatic Furbearer Abundance and Habitat Use (Section 10.11)					
Terrestrial Resources TWG Review Meeting	08/09/2012	Mark Burch	ADF&G	The proposed survey methods for aquatic furbearers should be examined in more detail, particularly for mink, and the use of another possible survey method (floating trackbeds) should be considered.	Survey methods for mink were discussed in detail at the follow-up meeting on selected mammals (including aquatic furbearers) on 09/13/2012; see corresponding entries below from that date.

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Terrestrial Resources TWG Review Meeting	08/09/2012	Mark Burch	ADF&G	River otters potentially could be studied by surveying latrine sites and sampling DNA in scats to get an indication of the number of otters using the study area. Hair snares employing roughened wire cables and DNA analysis potentially could be used also to estimate the baseline population without collecting animals.	Survey methods for river otters were discussed in detail at the follow-up meeting on selected mammals (including aquatic furbearers) on 09/13/2012 (see corresponding entries below from that date).
Terrestrial Resources TWG Review Meeting	08/09/2012	Mark Burch	ADF&G	ADF&G supports the USFWS study request interest in assessing the risk of mercury bioaccumulation to aquatic furbearers as a result of filling the proposed reservoir.	Comment noted. In addition to enumerating minimum numbers of animals using the study area, the aquatic furbearer study plan (Section 10.11.4) describes the proposed literature review of the food habits and diets of river otters and mink to inform the mercury risk assessment study.
Terrestrial Resources TWG Review Meeting	08/09/2012	Mark Burch	ADF&G	Spring flooding creates suitable habitat for aquatic furbearers. If furbearers lose habitat because of reduced spring flows during Project operation, furbearers could be affected. The impact of reducing spring flows on aquatic furbearer populations needs to be studied.	Comment is acknowledged and understood. The results of the geomorphology, instream flow, and riparian habitat studies will provide the necessary information to evaluate potential effects on aquatic furbearer habitats downstream. The study plan has been revised to state that the potential effects of flow alterations downstream will be assessed for aquatic furbearers when results become available from those other studies.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Howard Golden	ADF&G	River bank surveys to locate beaver lodges and caches are difficult because of the tree canopy. Helicopter surveys in the fall (after leaf-fall and before freeze-up) are the best way to detect fresh beaver caches. All fresh caches should be noted along with all lodges.	The aquatic furbearer study plan, which proposes to use aerial surveys of beaver food caches before freeze-up in fall, has been clarified further (Section 10.11.4) to state that the optimal timing of these surveys is after leaf fall.

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Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Howard Golden	ADF&G	With regard to aquatic carnivores, focus on river otters and not mink because mink are difficult to study. Recognizing that mink will be difficult to enumerate and appear to be uncommon or rare in the study area, intensive survey methods using floating trackbeds do not appear to be warranted. Consult Dr. Merav Ben-David at the University of Wyoming for further ideas regarding aquatic furbearer survey methods.	The aquatic furbearer study plan has been revised (Section 10.11.4) to deemphasize mink as a focal species, although some mink may be captured in the terrestrial furbearer study and an effort will be made to record mink tracks during winter track surveys of river otters by helicopter. Dr. Ben-David will be consulted for her ideas on survey methods for aquatic carnivores before finalizing the RSP.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	Howard Golden	ADF&G	Obtain relative abundance of river otters by surveying tracks along streams from the air in winter, flying the survey area after fresh snowfall and using GPS to mark tracks (noting single versus multiple tracks). The survey should be flown two or three times during each winter (probably requiring 2–3 days for each survey).	The aquatic furbearer study plan (Section 10.11.4) has been revised accordingly to incorporate 2–3 winter track surveys of river otters along streams in the study area within 2–3 days after fresh snowfalls, recording locations using a GPS receiver and the number of tracks present, if possible. (Mink tracks also will be noted to the extent possible.)
Phone Conversation	09/24/2012	Mark Burch	ADF&G	ADF&G is willing to assist in obtaining hair samples for preconstruction characterization of mercury levels in aquatic furbearers, although the small number of trappers, and the small number of piscivorous furbearers likely harvested, in the reservoir inundation zone and stream drainages immediately downstream from the proposed dam site likely will be problematic for obtaining samples. Hair snags might be a better way to obtain samples.	The aquatic furbearer study plan (Section 10.11.4) has been revised accordingly to include this alternative method of obtaining hair samples from river otter and mink.
Species Composition and Habitat Use of Small Mammals (Section 10.12)					
				(No comments to date)	

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Bat Distribution and Habitat Use (Section 10.13)					
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	Anabat ultrasonic detectors, as proposed in the study plan, are suitable for acoustic detection work. The bat survey should focus on the Project infrastructure area and reservoir inundation zone (not necessary in the access and transmission corridors) where there are suitable geologic features (caves, crevices) and human structures for use as roosts. The bat study should assess habitat suitability, although acoustic sampling is not likely to provide enough data to evaluate bat habitat associations. Hence, an inventory of existing human structures and geological features in the study area should be conducted to identify potential locations of bat roosts and hibernacula.	The bat study plan (Section 10.13.4.1) has been modified to emphasize further that geological and human structures will be a focus of field surveys for bats, as well as acoustic sampling in forest and wetland habitats judged to be suitable for foraging by bats.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	Acoustic surveys for bats should be done throughout the reservoir inundation zone during the first year. In the second year, the acoustic survey should focus on areas where detections occurred during the first year's surveys. The daily sampling period for ultrasound detectors should be adjusted according to night length throughout the sampling season.	Language has been added (Section 10.13.6) to clarify the intent of the bat study plan as a 2-year effort, with the effort in 2014 depending on the results from the first year (2013) of work. The study plan (Section 10.13.4.1) has been revised to clarify the length of the study season as extending from May to October and to describe the seasonal adjustment of acoustic sampling periods to night length.

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<u>Survey of Eagles and Other Raptors (Section 10.14)</u>					
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Various	USFWS	Winter surveys for owls are not necessary, provided that the wildlife habitat evaluation assumes they are present in suitable habitats.	The study plan for eagles and other raptors (Section 10.14.4.1) has been modified accordingly to remove winter surveys for owls.
<u>Waterbird Migration, Breeding, and Habitat Use (Section 10.15)</u>					
Terrestrial Resources TWG Review Meeting	08/09/2012	Catherine Berg	USFWS	The spacing of transects for breeding-pair surveys in the proposed waterbird study plan is 800 meters, but USFWS standard methodology uses 400-meter spacing.	The study plan for waterbirds (Sections 10.15.4.1 and 10.15.4.2) has been revised to eliminate breeding-pair transect surveys in all but the easternmost portion of the study area (lowlands east of the reservoir inundation zone), as discussed at the study plan follow-up meeting on 10/04/2012. In the easternmost portion of the study area, transects will be spaced 400 meters apart and that survey block is depicted on the revised study area map (Figure 10.15-1).
Waterbirds Study Plan Follow-up Meeting	10/04/2012	Maureen de Zeeuw, Bob Platte	USFWS	USFWS requested that minimum waterbody size, spatial extent, and number of waterbodies to be surveyed should be identified in the study plan.	The study plan (Sections 10.15.3 and 10.15.4) has been revised accordingly to specify these details.
Waterbirds Study Plan Follow-up Meeting	10/04/2012	Maureen de Zeeuw, Bob Platte; Mark Burch, Mike Petrusa	USFWS, ADF&G	USFWS and ADF&G requested that the streams to be surveyed for Harlequin Ducks should be specified in the study plan, along with the extent of the streams to be surveyed (i.e., how far outside the proposed 3-mile study area buffer).	The study plan (Sections 10.15.3 and 10.15.4.3) has been revised to clarify that all suitable streams in the study area will be surveyed for Harlequin Ducks and that these surveys will extend outside the 3-mile buffer as far as is necessary to cover suitable habitat.

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Waterbirds Study Plan Follow-up Meeting	10/04/2012	Maureen de Zeeuw, Bob Platte	USFWS	USFWS requested that spring migration surveys should start by the last week of April, to avoid missing birds in a year of early breakup and melt.	The timing of the spring migration surveys (Section 10.15.4.1) has been revised accordingly.
Waterbirds Study Plan Follow-up Meeting	10/04/2012	Maureen de Zeeuw, Bob Platte	USFWS	USFWS suggested that breeding-pair surveys be timed to match seasonal conditions and melting lake ice in each year, based on available weather and breakup data.	The study plan (Section 10.15.4.2) has been revised to state that the timing of breeding surveys will be adjusted each year, based on results of ice breakup monitoring and results from spring migration surveys. (Breeding-pair transects will be conducted only in a survey block in the lowlands in the easternmost portion of the study area.)
Waterbirds Study Plan Follow-up Meeting	10/04/2012	Mike Petrula	ADF&G	ADF&G suggested that the distinction between spring migration and breeding surveys be dropped, so that migration surveys would transition directly into breeding surveys (late April to mid-June). The same survey method (complete waterbody search in lake-to-lake pattern) should be used for both, and surveys should be done every 5 days instead of every 7–10 days, as proposed in the PSP.	The study plan (Sections 10.15.3, 10.15.4.1, 10.15.4.2; Figure 10.15-1) has been revised to incorporate these suggested changes, including lake-to-lake surveys in most of the study area instead of breeding-pair transect surveys, which will be restricted to a survey block in the easternmost portion of the study area.
Waterbirds Study Plan Follow-up Meeting	10/04/2012	Mike Petrula	ADF&G	ADF&G suggested that productivity (brood) surveys be conducted by helicopter, rather than on foot, and that at least two brood surveys be conducted, beginning in mid-July, with a possible third survey based on the results of the second survey.	The study plan (Section 10.15.4.4) has been revised accordingly to replace the single foot survey with multiple helicopter surveys.

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Waterbirds Study Plan Follow-up Meeting	10/04/2012	Maureen de Zeeuw, Bob Platte	USFWS	USFWS wants to understand the volume and composition of birds migrating through the Project area, for assessment of collision risk at power transmission lines and attraction of landbirds to lighting on Project infrastructure.	Consultation on this study plan is continuing between USFWS and AEA.
Landbird and Shorebird Breeding, Migration, and Habitat Use (Section 10.16)					
Terrestrial Resources TWG Review Meeting	08/09/2012	Maureen de Zeeuw	USFWS	Landbird and shorebird densities need to be determined in the Project area. USFWS does not think that measures of relative abundance are adequate to understand the number of breeding birds potentially affected by the Project.	The study plan (Section 10.16.4.1.1) has been revised to incorporate density estimation from point-count surveys, employing distance sampling and removal sampling, as suggested by USFWS at the study plan follow-up meeting on 09/06/2012.
Terrestrial Resources TWG Review Meeting	08/09/2012	Maureen de Zeeuw	USFWS	The landbird and shorebird study plan needs to include a method to study the potential for the potential attraction of landbirds to facility lighting and the risk of subsequent collisions.	Radar monitoring of nocturnal migration by landbirds in the vicinity of the proposed dam, as was discussed at the study plan follow-up meetings on 09/06/2012 (landbirds/shorebirds) and 10/04/2012 (waterbirds) is being considered. Consultation on this study plan is continuing between USFWS and AEA.

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Terrestrial Resources TWG Review Meeting	08/09/2012	Maureen de Zeeuw	USFWS	Most of the population of the Pribilof subspecies of Rock Sandpiper (<i>Calidris ptilocnemis ptilocnemis</i>) overwinters in upper Cook Inlet, where they feed heavily on <i>Macoma balthica</i> , a clam that occurs in intertidal sediments. The potential effects of Project operations on these clams need to be assessed to understand how Rock Sandpipers may be affected by the Project.	The potential for impacts on <i>Macoma</i> will be assessed from the results of other studies of geomorphology, hydrology, sedimentation, and temperature under the Geomorphology and Aquatic Resources programs. The study plan has been revised to state that this assessment will be a desktop exercise based on the predicted or modeled physical effects of Susitna River flow alterations on intertidal mudflats in upper Cook Inlet, in combination with a literature review of the habitat requirements of <i>Macoma</i> .
Landbirds/Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw	USFWS	Habitat characterization of point-count locations should not be conducted at the same time as auditory surveys for landbirds and shorebirds.	Habitat variables at point-count locations will not be characterized at the same time as auditory surveys. The study plan (Section 10.16.4.1) has been revised to clarify that habitat characterization of point-count locations will be derived from the wildlife habitat map geodatabase by using field GPS coordinates.
Landbirds/Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw, Steve Matsuoka	USFWS	Landbird and shorebird surveys should focus on the species of concern listed in Table 2 of the <i>Wildlife Data-Gap Analysis For The Proposed Susitna–Watana Hydroelectric Project</i> , dated August 2011.	All species heard or seen will be recorded during field surveys. The wildlife habitat evaluation study plan (Section 10.19.4.1) identifies the species listed in Table 2 of the wildlife data-gap analysis report (with a couple of minor corrections, as discussed with Steve Matsuoka of USFWS) as focal species for detailed habitat evaluation.

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Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw	USFWS	A survey from a boat should be conducted to search for swallow breeding colonies along the Susitna River within the reservoir inundation zone.	The study plan (Section 10.16.4.2) has been revised to add a survey of colonial-breeding swallows, which are undersampled by standard point-count surveys.
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Steve Matsuoka	USFWS	Surveying within a 2-mile buffer around the project area should adequately sample landbirds and shorebirds by focusing on the habitats most likely to be affected (rather than expending sampling effort in more mountainous areas where impacts are less likely to occur).	The study area description in the landbirds/shorebirds study plan (Section 10.16.3) has been revised to state that point counts will target the area within a 2-mile buffer around the Project area footprint, access/transmission alignments, and reservoir inundation zone. A new study area map (Figure 10.16-1) has been created accordingly.
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Various	USFWS	Additional point-count surveys outside of the Project study area (e.g., in Denali National Park or the Copper River Basin), are not needed for the landbird/shorebird study if suitable detection functions from the literature are used for density estimation of rare species.	No changes to the study plan are needed (see next entry below for relevant study plan revisions regarding detection functions).

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Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Steve Matsuoka	USFWS	Alaska Landbird Monitoring System (ALMS) protocols should be used for the landbird and shorebird study. Double-observer methods are not needed for the landbird and shorebird study, and the ALMS methods with distance analyses and removal analyses should be adequate for landbird and shorebird surveys. Existing detection functions, derived from other landbird and shorebird point-count studies in Alaska, should be used in cases where Project field data are too limited to derive adequate detection functions (e.g., rare or uncommon species).	ALMS protocols were proposed in the original study plan, but additional details have been added (Section 10.16.4.1.1) to describe the analytical approach to density estimation of landbirds and shorebirds by using distance analyses, removal analyses, and detection functions.
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw	USFWS	Mist-netting could potentially be used to determine if the reservoir inundation zone is used as migration stopover habitat for landbirds or shorebirds. A radar study could potentially be conducted to quantify the volume of nocturnal bird migration through the Project area, focusing on the dam site to address the potential for attraction of night-migrating landbirds to lights on the proposed infrastructure around the dam.	Because of the site-specific nature of the information obtained from mist-netting and the risk of injury to captured birds, mist-netting is not proposed in the landbirds/shorebirds study plan. Consultation on this study plan is continuing between USFWS and AEA.
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw, Steve Matsuoka	USFWS	The PSP does not include enough field survey effort to adequately sample the number of birds of different species using the study area and to estimate landbird and shorebird densities. Additional survey effort is needed to sample all species throughout the early portion of the breeding season between mid-May and mid-June.	The field sampling effort for point-counts in the landbirds/shorebirds study plan (Section 10.16.4.1.2) has been extended accordingly to cover the period from mid-May to mid-June.

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Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	Dave Tessler noted that, based on subsequent discussions he had with Maureen de Zeeuw of USFWS, his concerns had largely been addressed during the previous meeting on the landbirds/shorebirds study (September 6, 2012), which he was unable to attend. He emphasized that observers used for point-count surveys should undergo distance estimation training and testing before field surveys are conducted. Although he sees some validity in using double observers, the USFWS recommendation of employing distance and removal analyses based on standard Alaska Landbird Monitoring System (ALMS) field methods would be adequate. He agreed with the USFWS recommendation of conducting point counts over a longer period of time than was stated in the PSP.	Clarifying details have been added to the landbirds/shorebirds study plan (Section 10.16.4.1) with regard to observer training and testing and the length of the field sampling period.
<u>Population Ecology of Willow Ptarmigan in Game Management Unit 13 (Section 10.17)</u>					
(No comments to date)					
<u>Wood Frog Distribution and Habitat Use (Section 10.18)</u>					
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	Examine data on fish presence in waterbodies to determine where frogs may occur, because frogs tend to not occur in waterbodies with fish (which prey on adults and eggs). Frog surveys should concentrate on isolated waterbodies and wetlands not connected to stream systems.	This recommendation has been added to the revised frog study plan (Section 10.18.4.1), using Project-specific fish survey data, where available.

Comment Format	Comment Date	Licensing Participant Name	Licensing Participant Affiliation	Comment	Response
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	USGS’s amphibian monitoring protocol recommends that a second visit be conducted to improve occupancy estimates. Consider two visits in May because the peak calling period can be difficult to identify.	The frog study plan (Section 10.18.4.1) has been revised to incorporate a second sampling visit to a subset of waterbodies in the study area to improve detectability and occupancy estimates.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	Field sampling for chytrid fungus can be conducted readily by collecting swab samples from captured frogs. Meg Perdue or Mari Reeves at USFWS can suggest labs that can analyze frog swabs for chytrid fungus.	Further details regarding field sampling and lab analysis of chytrid fungus samples have been added to the frog study plan (Section 10.18.4.2).
Evaluation of Wildlife Habitat Use (Section 10.19)					
Terrestrial Resources TWG Review Meeting	08/09/2012	Catherine Berg	USFWS	The Wildlife Habitat Evaluation Study should identify the species for which habitat will be mapped.	The wildlife habitat evaluation study plan (Section 10.19.4.1) has been revised to include a preliminary list of species of concern (Table 10.19-1) for which habitat use will be evaluated.
Landbirds/ Shorebirds Study Plan Follow-up Meeting	09/06/2012	Maureen de Zeeuw	USFWS	The rationale and assumptions used in the habitat evaluation study should be clearly documented.	The wildlife habitat evaluation study plan (Section 10.19.4.1) has been revised to provide more detailed description of the proposed analytical approach.
Selected Mammal Study Plans Follow-up Meeting	09/13/2012	David Tessler	ADF&G	The Project should “crosswalk” habitat mapping and evaluation data with the Alaska Gap Analysis Project (GAP) mapping. Contact Keith Boggs and Tracy Gotthardt at the Alaska Natural Heritage Program to discuss how the data might be compared between the Project and Alaska GAP.	The wildlife habitat evaluation study plan (Section 10.19.4.1) has been revised to clarify that the study report will incorporate the suggested crosswalk of habitat types between the two projects. The results of the suggested consultation will be reflected in the revised study plan.

Comment Format	Comment Date	Licensing Participant Name	Licensing Participant Affiliation	Comment	Response
<u>Wildlife Harvest Analysis (Section 10.20)</u>					
				(No comments to date)	

Interim Draft