



March 24, 2014

Ms. Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: Susitna-Watana Hydroelectric Project, Project No. 14241-000

Update Regarding Study Plan Implementation During 2014 Field Season

Dear Secretary Bose:

The purpose of this letter is to update the Federal Energy Regulatory Commission (Commission) on Alaska Energy Authority's (AEA) plans for implementation of the Study Plan for AEA's proposed Susitna-Watana Hydroelectric Project No. 14241 (Project) during the 2014 field season.

AEA recognizes that the somewhat fluid circumstances regarding the Project's budget have raised questions regarding the schedule for implementing the Commission-approved Study Plan. Several resource agencies and other licensing participants understandably have sought guidance from AEA as to its specific plans for the 2014 field season.

As discussed in our January 6, 2014 letter to the Commission, the proposed Project budget for the next state fiscal year allows AEA to move forward with the Project, although it does so at a reduced level and requires us to limit work in 2014 to high-priority activities and shift much of the fieldwork to 2015. In subsequent communications with Commission staff and licensing participants, AEA clarified that the high-priority fieldwork in 2014 includes studies or study components in which: (1) AEA, federal and state resource agencies, and other licensing participants generally agreed on study methodologies and scopes during the development and 2013 implementation of the Study Plan; or (2) limited data collection efforts would fill critical data gaps going into the 2015 study season.

While AEA's plans for 2014 fieldwork cannot be finalized until after the Project budget is approved, AEA has prioritized its 2014 fieldwork plans based on the following key factors: (1) seasonal requirements; (2) installed equipment; (3) modeling; (4) filling critical data gaps from the 2013 field season; (5) low level of controversy associated with

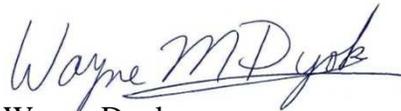
study methodology; and (6) field logistics. By focusing its efforts in this manner, AEA is confident that its 2014 fieldwork will be consistent with the Commission-approved Study Plan.

AEA has prepared the attached 2014 Field Season Data Collection Table, which provides a concise summary of AEA's current 2014 fieldwork projection. The Table identifies, for each of the Study Plan's 58 individual studies, whether components of the study's field data collection may be implemented during the 2014 field season. To provide context as to the status of the study's overall implementation, the Table also indicates whether field data collection occurred during the 2013 field season and whether field data collection is anticipated to occur during the 2015 field season.

The Table also provides information related to the anticipated methods for the 2014 fieldwork. It describes the portions of the study that AEA may implement during the 2014 field season (and tentatively anticipated for the 2015 field season), explains whether the 2014 field season data collection methods will be modified from the Commission-approved Study Plan, and identifies whether any such modifications were made or will be made in collaboration with resource agencies and other licensing participants.

AEA looks forward to working with Commission staff, federal and state resource agencies, and other licensing participants in implementing the 2014 field season for the Study Plan. If you have any questions related to this matter or need additional information, please do not hesitate to contact the undersigned at wdyok@aidea.org or (907) 771-3955.

Sincerely,



Wayne Dyok
Project Manager
Alaska Energy Authority

Attachment
cc: Distribution List

Susitna-Watana Hydroelectric Project No. 14241
Field Season Data Collection Table

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
4 GEOLOGY AND SOILS					
4.5 Geology and Soils Characterization Study					
X		X	X	2014: Limited 2014 field data collection pursuant to FERC-approved Study Plan, dependent upon funding (based upon approval of Governor’s supplemental budget request) and land access. 2015: Limited field data collection effort dependent on scope of 2014 field data collection.	No modifications to the methods proposed for 2014.
5 WATER QUALITY					
5.5 Baseline Water Quality Study					
X	X		X	2014: Study Plan requires one year of data collection for water quality parameters other than temperature. 2014 field data collection will focus on filling in 2013 data gaps, specifically for the parameters TP, TKN, total metals, and inaccessible sites. Specific scope of 2014 field data collection is dependent on funding (based upon approval of Governor’s supplemental budget request) and land access. 2015: Limited field data collection effort dependent on scope and adequacy of 2014 field data collection.	No modifications to the methods proposed for 2014.
5.6 Water Quality Modeling Study					
X	X		X	2014: Modeling efforts (parameterization, calibration, validation, POC, and initial model runs) will continue. 2015: Modeling will continue.	No modifications to the methods proposed for 2014.

¹ Denotes studies in which AEA projects to continue work during the 2014 field season, regardless of whether Governor’s supplemental budget request is approved. For modeling and desktop studies (such as Studies 5.6, 6.6, 9.10, and 9.15) that do not include field data collection, X indicates study implementation efforts.

² 2014 data collection is contingent upon approval of Governor’s supplemental budget request and/or land access.

³ 2015 data collection is contingent upon FERC Study Plan approval, state funding, and/or land access.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
5.7 Mercury Assessment and Potential for Bioaccumulation Study					
X	X		X	<p>2014: Field data collection will continue; the scope is dependent on budget and land access.</p> <p>2015: Limited field data collection effort dependent on adequacy of 2014 field data collection. Modeling will continue.</p>	<p>In 2014, AEA will implement the methods as described in the Study Plan except for methods for collecting piscivorous bird samples. Tissue sampling for mercury analysis is being modified after consultation with USFWS, ADF&G, and other licensing participants (March 7, 2014) to collect blood and feather samples from nestlings (using a highly experienced subcontractor), rather than collecting shed feathers and unhatched eggs at nests.</p>
6 GEOMORPHOLOGY					
6.5 Geomorphology Study					
X	X		X	<p>2014: Field data collection in support of Study 6.6 on geomorphic processes and development of information such as: sediment transport data (USGS), sediment rating curves, effective discharge, bed material mobilization, LWD and floodplain turnover analyses will continue. LWD surveys in the Lower River will be completed. Overall scope of 2014 field data collection will be dependent on funding and land access. With funding (based upon approval of Governor's supplemental budget request) and land access, LWD surveys above PRM 146 and tributary surveys within the reservoir inundation zone may be completed in 2014.</p> <p>2015: Limited field data collection effort dependent on 2014 scope.</p>	<p>In 2014, AEA will implement the methods as described in the Study Plan with the exception of continuing minor variances to methods described in Section 4 of the Draft ISR. These variances include: 1) minor modifications to the USGS sediment data collection (ISR Section 4.2.3); 2) hydrologic analysis conducted as part of Study 8.5 rather than 6.5 (ISR Section 4.6.3); and 3) addition of analysis of LWD movement between 2012 and 2013, which was not part of the FERC-approved Study Plan (ISR Section 4.9.3).</p>

Field Season Data Collection			Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods	
2013	2014				2015 ³
	Confirmed ¹	Tentative ²			
6.6 Fluvial Geomorphology Modeling below Watana Dam Study					
X	X		X	<p>2014: Modeling efforts (parameterization, calibration, validation, POC, and initial model runs) will continue. 2014 field data collection efforts include additional water surface elevations for model calibration/verification; Sheep and Caswell Creek cross section surveys and bed sampling; Susitna River mainstem bed material sampling during winter. Overall scope of 2014 field data collection will be dependent on funding (based upon approval of Governor’s supplemental budget request) and land access. With funding and land access, data collection may include bed and bank material sampling above PRM 146, the 3 upper Focus Areas, and Middle River tributaries above PRM 146. AEA anticipates collaboration with agencies and licensing participants on: 1) final selection of the 1-D model and 2-D model; 2) downstream extent of the 1-D model; and 3) selection of the tributaries to study in the reservoir zone in conjunction with the Fish Barriers (Study 9.12) which occurred on March 19, 2014.</p> <p>2015: In addition to limited field data collection effort dependent on the 2014 scope, data will be collected at the access corridor stream crossings and bed material sampling will continue. Modeling will continue as well.</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
7 WATER RESOURCES					
7.5 Groundwater Study					
X	X		X	<p>2014: Modeling efforts (parameterization, calibration, validation, POC, and initial model runs) will continue. 2014 field data collection efforts include remote collection of data from groundwater and surface water stations that will allow integration of current data with modeling efforts; field verification of water level data and maintenance of data collection equipment; and maintenance and field validation of remote data acquisition stations. Overall scope of 2014 field data collection will be dependent on funding and land access. With funding (based upon approval of Governor's supplemental budget request) and land access, data collection may include: installation of supplemental non-instrumented groundwater monitoring wells where needed; continuation of data synthesis including completion of the annotated bibliography and literature review; mapping and analysis of geohydrologic units; and evaluation of shallow groundwater users.</p> <p>2015: In addition to limited field data collection effort dependent on the 2014 scope, modeling will continue.</p>	In 2014, AEA will implement the methods as described in the Study Plan.
7.6 Ice Processes in the Susitna River Study					
X	X			<p>2014: Data collection will be completed in 2014 without modifications if land access is granted.</p> <p>2015: Modeling will continue.</p>	In 2014, AEA will implement the methods as described in the Study Plan, dependent on obtaining land access.
7.7 Glacier and Runoff Changes Study					
X				Data collection for FERC-approved study is complete.	Not applicable; FERC-approved Study Plan has been completed.

Field Season Data Collection			Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods	
2013	2014				2015 ³
	Confirmed ¹	Tentative ²			
8 INSTREAM FLOW					
8.5 Fish and Aquatics Instream Flow Study					
X	X		X	<p>2014: Modeling efforts (parameterization, calibration, validation, POC, initial model runs, and collaboration on specified Study Plan tasks) will continue. 2014 field data collection will focus on: winter studies; HSC/HSI data collection (Upper, Middle and Lower River segments); tributary gaging within accessible areas; collection of breaching flow data; and collection of supplemental mainstem PHABSIM survey data in selected Focus Areas in the Middle River segment. Overall scope of 2014 field data collection will be dependent on funding (based upon approval of Governor’s supplemental budget request) and land access. With funding and land access, data collection may include: mainstem bathymetric surveys; substrate mapping in upper three Focus Areas (FA-151, FA-173, and FA-184); tributary gaging in Portage, Fog, Devils and Tsusena creeks; and surveying and collection of data at remaining Lower River PHABSIM transects.</p> <p>2015: In addition to limited field data collection effort dependent on the 2014 scope, modeling will continue.</p>	<p>No major modifications to the methods are anticipated in 2014. However, some of the methods associated with specific study elements have been modified slightly based primarily on field conditions and access issues (see Section 4 of Draft ISR).</p> <p>In 2014, AEA will implement the methods as described in the Study Plan, including collaboration on IHA metrics and HSC/HSI target species selection (March 21, 2014); Riverine Modeling Proof of Concept and representative years (April 15-17, 2014); and Open-Water Flow Routing Model, habitat modeling, and extrapolation methods.</p>

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
8.6 Riparian Instream Flow Study					
X	X		X	<p>2014: Modeling efforts (parameterization, calibration, validation, POC, initial model runs, and collaboration on specified Study Plan tasks) will continue. 2014 field data collection efforts include: sap-flow measurements; second year of seedling survival study; and riparian vegetation Ice break-up observations. Overall scope of 2014 field data collection will be dependent on funding (based upon approval of Governor’s supplemental budget request) and land access. With funding and land access, data collection may include completion of tree ice-scar mapping and dendrology sampling; soil, plant, water isotope sampling; evapotranspiration porometer measurements; and sediment isotope core sampling.</p> <p>2015: In addition to limited field data collection effort dependent on the 2014 scope, data collection will include dendrology (riparian vegetation plots, spruce and birch recruitment surveys) and seed dispersal sampling. Modeling will continue.</p>	<p>In 2014, AEA will implement the methods as described in the Study Plan with the exception of one minor variance to methods described in Section 4.3.2 (seedling recruitment study) of the Draft ISR. First year (0+) balsam poplar and willow establishment study was restricted to documenting current cohort of seedlings less than 1 year old rather than to all woody plants less than 1 meter in height due to observations of sexual and asexual reproduction. In response to field conditions, AEA will conduct a clonal reproduction study to characterize asexual recruitment patterns in 2015. Collaboration on modeling (Riparian Proof of Concept) is scheduled for April 29-30, 2014.</p>
9 FISH AND AQUATIC RESOURCES					
9.5 Study of Fish Distribution and Abundance in the Upper Susitna River					
X		X	X	<p>2014: Overall scope of 2014 field data collection will be dependent upon funding (based upon approval of Governor’s supplemental budget request) and land access. Field data collection may include: 1) ELH sampling; 2) operation of downstream migrant traps; 3) continuation of radio-telemetry for resident fishes; and 4) fish sites not sampled in 2013. Majority of the data collection may be deferred to 2015.</p> <p>2015: Field data collection will be completed.</p>	<p>Minor modifications to the methods proposed for 2014 include the location of rotary screw traps and use of a fyke trap in Kosina Creek. Modifications were presented to licensing participants on March 20, 2014.</p>

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
9.6 Study of Fish Distribution and Abundance in the Middle and Lower Susitna River					
X		X	X	<p>2014: Overall scope of 2014 field data collection will be dependent upon funding (based upon approval of Governor’s supplemental budget request) and land access. Field data collection may include: 1) winter sampling; 2) ELH sampling; 3) operation of downstream migrant traps; 4) radio-telemetry for resident fishes; and 5) fish sites not sampled in 2013. Majority of the data collection to be deferred to 2015.</p> <p>2015: Field data collection will be completed.</p>	<p>Minor methods modifications including locations screw traps were presented to licensing participants on March 20, 2014.</p>
9.7 Salmon Escapement Study					
X	X			<p>2014: Second year of field data collection will be completed.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2012, 2013, and 2014 study seasons meet the objectives of the study.</p>	<p>In 2014, AEA will implement the methods as described in the Study Plan with the exception of continuing the five variances to methods described in Section 4 of the Draft ISR and proposed modifications based on the 2013 season. The five 2013 variances are: 1) Indian River weir in lieu of spawning ground surveys (ISR Section 4.1.8, 4.8.1); 2) increased fishing effort at Curry and increased number of Chinook tagged at Curry instead of Devils Canyon fishwheel (ISR Section 4.1.8); 3) aerial surveys in lieu of fixed arrays in Devils Canyon (ISR Section 4.2.4 and 4.3.5); 4) use of sonar near the proposed dam site); and 5) use of ARIS sonar and telemetry on Chulitna to count Chinook in lieu of weir (ISR Section 4.8.1). In addition, several modifications are being proposed based on the outcome of the 2013 study: 1) use of seines to catch salmon at Curry beginning in early September to increase catch efficiency; 2) change in frequency of turbid water sonar surveys; and 3) fishwheel-to-fishwheel mark-recapture for Chinook salmon abundance on Yentna drainage using dart tags in lieu of fishwheel-to-weir and radio-tagging 300 Chinook salmon at Yentna. AEA discussed these proposed modifications with the agencies and licensing participants during the March 20, 2014 technical meeting.</p>

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
9.8 River Productivity Study					
X	X		X	<p>2014: Field data collection is being deferred until 2015 except to support: 1) pilot study; and 2) isotope analysis and growth models. Pilot study involves data collection of water quality parameters, algae, and macroinvertebrates in the Upper River at select tributaries and lakes to assess habitat productivity.</p> <p>2015: Field data collection will be completed.</p>	In 2014, AEA will implement the methods as described in the Study Plan with the exception of the proposed pilot study which is not part of the FERC-approved Study Plan and the following proposed modifications: 1) a directed effort to collect fish for stomach content analysis; 2) new methods to accommodate river fluctuation and collect Hess samples at greater depth; and 3) new configuration for colonization (Hester-Dendy) samples to accommodate river fluctuation. AEA discussed these proposed modifications with the agencies and licensing participants during the March 21, 2014 technical meeting.
9.9 Characterization and Mapping of Aquatic Habitats					
X	X			<p>2014: Second full year of data collection will be completed, contingent upon land access.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons is sufficient to meet the objectives of the study.</p>	No modifications to the methods proposed for 2014.
9.10 The Future Watana Reservoir Fish Community and Risk of Entrainment Study					
X			X	This desktop study will be completed in either 2014 or 2015.	No modifications to the methods proposed for 2014.
9.11 Study of Fish Passage Feasibility at Watana Dam					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015.	No modifications to the methods proposed for 2014.
9.12 Study of Fish Passage Barriers in the Middle and Upper Susitna River and Susitna Tributaries					
X	X			<p>2014: Second full year of data collection will be completed, contingent upon land access.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	In 2014, AEA will implement the methods as described in the Study Plan, including collaboration on target/priority species, species-specific passage criteria to be used in analysis, application of passage criteria, and selection of tributaries to be studied and the geomorphological assessment and modeling (meeting held on March 19, 2014).

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
9.13 Aquatic Resources Study within the Access Alignment, Transmission Alignment, and Construction Area					
			X	2013 Study effort was rescheduled for implementation during the next study season. 2014: No data collection. 2015: Data collection will be completed.	Not applicable; no data will be collected in 2014.
9.14 Genetic Baseline Study for Selected Fish Species					
X	X		X	2014: Data collection effort will focus on achieving target samples for Chinook salmon within the Susitna basin as stated in Study Plan. Specific scope of 2014 field data collection will be dependent on land access. 2015: Limited field data collection effort dependent on scope of 2014 field data collection.	In 2014, AEA will implement the methods as described in the Study Plan. Consistent with the Study Plan and FERC Study Plan Determination, AEA will continue to collaborate with USFWS and NMFS and file an Implementation Plan for 2014.
9.15 Analysis of Fish Harvest in and Downstream of the Susitna-Watana Hydroelectric Project Area					
			X	2013 Study effort was rescheduled for implementation during the next study season. 2014: No data collection. 2015: Desktop study will be completed.	Not applicable; implementation is not planned for 2014.
9.16 Eulachon Run Timing, Distribution, and Spawning in the Susitna River					
X			X	2014: No data collection. 2015: Second year of data collection will be completed.	Not applicable; no data collection is planned for 2014.
9.17 Cook Inlet Beluga Whale Study					
X		X	X	2014: Overall scope of 2014 field data collection will be dependent upon funding (based upon approval of Governor's supplemental budget request). 2015: Field data collection will be completed.	Method modifications for 2014 will be addressed in collaboration with NMFS. Date of collaboration to be determined.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
10 WILDLIFE RESOURCES					
10.5 Moose Distribution, Abundance, Movements, Productivity, and Survival					
X	X		X	<p>2014: Second year of field data collection of radio and GPS-collared animals will be completed; browse survey will be deferred until 2015 contingent upon land access.</p> <p>2015: Field data collection will be limited to browse surveys, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	ADF&G will implement methods as described in the Study Plan, except for a reduction in aerial surveys of VHF-collared moose during the winter, when little movement has been observed.
10.6 Caribou Distribution, Abundance, Movements, Productivity, and Survival					
X	X			<p>2014: Second year of field data of radio and GPS-collared animals will be completed.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	No modifications to the methods proposed for 2014.
10.7 Dall's Sheep Distribution and Abundance					
X	X			<p>2014: Second year of field data collection will be completed.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	No modifications to the methods proposed for 2014.
10.8 Distribution, Abundance, and Habitat Use by Large Carnivores					
X		X		<p>2014: Bear density modeling has been completed; analysis of bear hair samples from 2013 is nearing completion. Implementation of 2014 field data collection is dependent on funding (based upon approval of Governor's supplemental budget request) and land access. With funding and land access, field data collection may be completed in 2014.</p> <p>2015: Limited field data collection effort dependent on 2014 scope.</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
10.9 Wolverine Distribution, Abundance, and Habitat Occupancy					
X	X			<p>2014: Field data collection (SUPE survey) will be completed, pending suitable environmental conditions; otherwise, occupancy survey will be done.</p> <p>2015: Limited field data collection effort dependent on 2014 outcome.</p>	No modifications to the methods proposed for 2014.
10.10 Terrestrial Furbearer Abundance and Habitat Use					
X	X			<p>2014: The second year of field surveys is currently in progress.</p> <p>2015: Field data collection will depend on the adequacy of the field data collected during the 2013 and 2014 study seasons to meet the objectives of the study.</p>	<p>Methods described in the Study Plan will be implemented, with the addition of continuing variances to methods described in Section 4 of the Draft ISR. These variances are: (1) modification of the study area due to logistical difficulty of access in parts of the area and to lack of access to CIRWG lands (ISR Section 4.1.1); (2) modification of the deployment array of lynx hair snags to more closely match canid scat sampling (ISR Section 4.1.1); (3) modification of hare and vole plot grids to increase sampling effort (ISR Section 4.1.1); and (4) addition of ground-based track surveys in grids cells for species occupancy and habitat use (ISR Section 4.3.1).</p>
10.11 Aquatic Furbearer Abundance and Habitat Use					
X	X		X	<p>2014: First year of field data collection for winter track surveys of otter/mink; over winter survival of beaver colonies surveyed in fall 2013; and second year of fall beaver surveys.</p> <p>2015: Second year of winter track surveys of otter/mink, and spring muskrat survey will be completed.</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
10.12 Small Mammal Species Composition and Habitat Use					
		X		<p>2013 Study effort was rescheduled for implementation during the next study season.</p> <p>This desktop study may be completed in 2014, contingent upon funding (based upon approval of Governor's supplemental budget request). Otherwise, the study will be deferred for completion in 2015.</p>	No modifications to the methods proposed for 2014.
10.13 Bat Distribution and Habitat Use					
X	X			<p>2014: Second year of field data collection, with proposed modifications, will be completed. Although the Study Plan anticipated CIRWG land access, it may not be necessary, depending on the results obtained in 2014.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	Methods described in the Study Plan will be implemented, except for methods for acoustic monitoring (number of detectors will be reduced) and roost searches (radio telemetry will be added), which have been modified through collaboration with USFWS, ADF&G, and other licensing participants (March 6, 2014).
10.14 Surveys of Eagles and Other Raptors					
X	X		X	<p>2014: Second year of nest occupancy and productivity surveys; coordination of tissue sample collection for mercury analysis (see Study 5.7).</p> <p>2015: Third year of nest occupancy and productivity surveys; and second year of spring and fall migration surveys, woodland raptor nest survey, roosting/staging surveys, and nest habitat delineation.</p>	No modifications to nest survey methods proposed for 2014. Tissue sampling for mercury analysis is being modified after consultation with USFWS, ADF&G, and other licensing participants (March 7, 2014) to collect blood and feather samples from nestlings (using a highly experienced subcontractor), rather than collecting shed feathers and unhatched eggs at nests.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
10.15 Waterbird Migration, Breeding, and Habitat Use					
X		X	X	<p>2014: Second year of aerial survey tasks, contingent on funding (based upon approval of Governor’s supplemental budget request) (for logistical costs); and consultation with USFWS and ADF&G on Study Plan decision point regarding need for second year of radar/visual surveys of migration.</p> <p>2015: Conduct second year of radar/visual migration surveys, if first year’s effort does not meet study objectives.</p>	No modifications to aerial survey methods are proposed for 2014, but some minor modification of Harlequin Duck survey methods may result from continuing consultation with USFWS and ADF&G before Final ISR filing. Tissue sampling for mercury analysis is being modified after consultation with USFWS, ADF&G, and other licensing participants (March 7, 2014) to collect blood and feather samples from captured birds (using highly experienced subcontractors, if possible), rather than collecting shed feathers or unhatched eggs at nests.
10.16 Landbird and Shorebird Migration, Breeding, and Habitat Use					
X	X		X	<p>2014: Conduct second year of point-counts and riverine/lacustrine transect surveys on lands sampled in 2013; possibly complete entire study, contingent on land access and funding (based upon approval of Governor’s supplemental budget request); consult with USFWS and ADF&G about need for second year of colonially nesting swallow surveys.</p> <p>2015: Complete second year of study on CIRWG lands, if access is not granted in 2014; and conduct second year of swallow colony survey, if determined to be necessary to meet study objectives.</p>	No modifications to methods proposed for 2014. Tissue sampling of piscivorous species of landbirds and shorebirds for mercury analysis is being dropped after consultation with USFWS, ADF&G, and other licensing participants (March 7, 2014) because of the scarcity of the primary target species in the study area (Belted Kingfisher).
10.17 Population Ecology of Willow Ptarmigan in Game Management Unit 13					
X	X			<p>2014: Second year of field data collection will be completed.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	Implement methods described in Study Plan, with possible exception of methods for aerial transect and telemetry surveys, which were discussed further with ADF&G on March 17, 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
10.18 Wood Frog Occupancy and Habitat Use					
X	X			<p>2014: Second year of field data collection will be completed, contingent on land access.</p> <p>2015: Field data collection will not be necessary, assuming that field data collected during 2013 and 2014 study seasons meets the objectives of the study.</p>	No modifications to methods proposed for 2014.
10.19 Evaluation of Wildlife Habitat Use					
			X	<p>2013 Study effort was rescheduled for implementation during the next study season.</p> <p>2014: No implementation.</p> <p>2015: Desktop study will be completed.</p>	Not applicable; implementation is not planned for 2014.
10.20 Wildlife Harvest Analysis					
			X	<p>2013 Study effort was rescheduled for implementation during the next study season.</p> <p>2014: No implementation.</p> <p>2015: Desktop study will be completed.</p>	Not applicable; no field data implementation is planned for 2014.
11 BOTANICAL RESOURCES					
11.5 Vegetation and Wildlife Habitat Mapping Study in the Upper and Middle Susitna Basin					
X			X	<p>2014: Field data collection is being deferred until 2015. Initial mapping will be completed in 2014 from 2012 and 2013 data and high-resolution aerial imagery interpretation.</p> <p>2015: Field data collection and refinement of mapping will be completed.</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
11.6 Riparian Vegetation Study Downstream of the Proposed Susitna-Watana Dam					
X			X	<p>2014: Field data collection is being deferred until 2015. Initial mapping will be completed in 2014 from 2012 and 2013 data and high-resolution aerial imagery interpretation.</p> <p>2015: Field data collection and refinement of mapping will be completed.</p>	No modifications to the methods proposed for 2014.
11.7 Wetland Mapping Study in the Upper and Middle Susitna Basin					
X			X	<p>2014: Field data collection is being deferred until 2015. Initial mapping will be completed in 2014 from 2012 and 2013 data and high-resolution aerial imagery interpretation.</p> <p>2015: Field data collection and refinement of mapping will be completed.</p>	No modifications to the methods proposed for 2014.
11.8 Rare Plant Study					
X		X		Study Plan requires one year of data collection which will be completed in 2014 contingent upon funding (based upon approval of Governor's supplemental budget request) and land access. Otherwise, field data collection will be deferred to 2015.	No modifications to the methods proposed for 2014.
11.9 Invasive Plant Study					
X		X		Study Plan requires one year of data collection which will be completed in 2014 contingent upon funding (based upon approval of Governor's supplemental budget request) and land access. Otherwise, field data collection will be deferred to 2015.	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
12 RECREATION RESOURCES					
12.5 Recreation Resources Study					
X	X		X	<p>2014: Completion of intercept and mail survey field data collection and analysis.</p> <p>2015: Data collection will be completed.</p>	In 2014, AEA will implement the methods as described in the Study Plan with the exception of continuing the variances to methods described in Section 4 of the Draft ISR that include adjustments made to intercept survey and observational tally locations (RSP Section 12.5.4) and the phased two mailings of the regional household mail survey (instead of one, see RSP Section 12.5.4). No other modifications to the methods proposed for 2014 are anticipated. Proposed modifications will be discussed with Licensing Participants on May 1, 2014.
12.6 Aesthetics Resources Study					
X	X		X	<p>2014: Activities include processing of data and photography collected during the fall season and some processing of photomosaics and collaboration on proposed locations of VRI and variations in locations used in 2013.</p> <p>2015: Field data collection completed. Completion of VRI analysis to identify expected change to scenic quality, visual sensitivity, and/or distance zones that may result from operation of the proposed Project, and completion of Project-specific visual sensitivity analysis.</p>	No modifications to the methods proposed for 2014.
12.7 Recreation River Flow and Access Study					
X	X		X	<p>2014: Activities include: 1) completing internet survey; 2) complete executive interviews to further define the frequency and timing of respective recreation opportunities; and 3) complete literature review. Consult on downstream extent of study.</p> <p>2015: Focus groups on whitewater boating and winter ice and snow travel in the river corridor.</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
13 CULTURAL AND PALEONTOLOGICAL RESOURCES					
13.5 Cultural Resources Study					
X	X		X	<p>2014: Activities include: 1) predictive model iterations; 2) historic properties inventory; 3) continued curation and analysis of archeological samples collected in 2013; 4) lake bed coring; and 5) completion of Ahtna ethnogeography study. Archeological field data collection is largely being deferred until 2015; the scope of 2014 field data collection will be dependent on funding (based upon approval of Governor’s supplemental budget request) and land access.</p> <p>2015: Dena’ina ethnogeography study and the majority of the archeological field investigations will be completed.</p>	No modifications to the methods proposed for 2014.
13.6 Paleontological Resources Study					
		X	X	<p>2013 Study effort was rescheduled for implementation during the next study season.</p> <p>Study Plan requires one year of data collection which will be completed in 2014 contingent upon funding (based upon approval of Governor’s supplemental budget request) and land access. Otherwise, field data collection will be deferred to 2015.</p>	No modifications to the methods proposed for 2014.
14 SUBSISTENCE					
14.5 Subsistence Resources					
X	X		X	<p>Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Household surveys will be completed in 2014.</p> <p>The scope of subsistence mapping interviews in selected study communities to document last 10-year subsistence use areas as well as related baseline indicators and completion of traditional and local knowledge workshops is contingent upon funding (based upon approval of Governor’s supplemental budget request).</p>	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
15 SOCIOECONOMICS, AIR AND TRANSPORTATION					
15.5 Regional Economic Evaluation Study					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Specific scope of 2014 is contingent upon funding (based upon approval of Governor's supplemental budget request).	No modifications to the methods proposed for 2014.
15.6 Social Conditions and Public Goods and Services Study					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Specific scope of 2014 is contingent upon funding (based upon approval of Governor's supplemental budget request).	No modifications to the methods proposed for 2014.
15.7 Transportation Resources Study					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Specific scope of 2014 is contingent upon funding (based upon approval of Governor's supplemental budget request).	No modifications to the methods proposed for 2014.
15.8 Health Impact Assessment Study					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Household surveys will be completed in 2014, in coordination with Study 14.5.	No modifications to the methods proposed for 2014.
15.9 Air Quality Study					
X	X		X	Schedule for the Study Plan has been modified to be completed over the period of 2013 through 2015. Specific scope of 2014 is contingent upon funding (based upon approval of Governor's supplemental budget request).	No modifications to the methods proposed for 2014.
16 PROJECT SAFETY					
16.5 Probable Maximum Flood (PMF) Study					
X				All data collection for study completed in 2013. 2014: No data collection.	No modifications to the methods proposed for 2014.

Field Season Data Collection				Explanation	2014 Anticipated Modifications to FERC-Approved Study Plan Methods
2013	2014		2015 ³		
	Confirmed ¹	Tentative ²			
16.6 Site-Specific Seismic Hazard Study					
X		X	X	<p>2014: Overall scope of 2014 field data collection dependent on funding (based upon approval of Governor’s supplemental budget request) and land access.</p> <p>2015: Limited field data collection effort dependent on scope of 2014 field data collection.</p>	No modifications to the methods proposed for 2014.