Response to Comments on Revised Katalla EA

These are the responses to the comments received from individuals, organizations, businesses, and government agencies. Many comments and questions listed here were already addressed in the EA. Responses are provided in accordance with 36 CFR 215.6.

Policy Issues

Comment: The EA cannot be said to be consistent with the Forest Plan since the appeal period has not ended.

> **Response:** The appeal period for the Revised Forest Plan ended on October 24, 2002. The revised Forest Plan went into effect on August 26, 2002; 30 days after the Notice of Availability appeared in the Federal Register (Record of Decision, Revised Forest Plan, FEIS, page 45, item VI).

Comment: " ... the Forest Service is fully empowered to restrict or deny this proposal. Adoption of the "no action" alternative would still allow CAC to exercise their rights under the CNI agreement."

> **Response:** The authority to implement the No Action Alternative is described on page 34 of the Revised EA, under the section on Alternative 1, (No Action).

Comment: The issuance of the EA is premature since the permits required by the State of Alaska have not yet been issued, nor have all of the stipulations and mitigations been determined.

> **Response:** Referring to Title III, section 301 in the MOU between the State of Alaska and the USDA Forest Service on Coastal Zone Management Act Consistency Review, the Forest Service may not issue a permit prior to the State completing review.

Comment: The EA states that permits from the EPA and U.S. Coast Guard are required. The EPA contact said that no permits were in process and it was uncertain whether EPA would have a role in the project. We have been informed that the Coast Guard only permits larger vessels, does not concern itself with vessels as small as the proposed barge, and will have no involvement in the project unless there is a spill. What permits are required by federal agencies to "ensure that hazardous materials are handled and stored safely" (page 81)?

> **Response:** The U.S. Department of Transportation regulates hazmat labeling, handling, transportation, and storage. These regulations are found at Title 49 CFR Parts 100-185. In Alaska, the Alaska Department of Environmental Conservation (ADEC) has primary responsibility for the adoption and enforcement of regulations setting standards for the prevention and abatement of

all water, land, subsurface land, and air pollution, and other sources or potential sources of pollution of the environment (AS 44.46.020). Alaska Administrative Code (AAC) Title 18 covers:

Chapter 50. Air Quality Control.
Chapter 52. Emissions Inspection and Maintenance Requirements For Motor Vehicles.
Chapter 60. Solid Waste Management.
Chapter 62. Hazardous Waste**.**
Chapter 63. Siting of Hazardous Waste Management Facilities**.**
Chapter 70. Water Quality Standards.
Chapter 72. Wastewater Disposal.
Chapter 75. Oil and Hazardous Substances Pollution Control.

Approval of the Plan of Operations by the Forest Service carries a requirement with it that applicable laws and regulations are adhered to. The Forest Service will monitor CEC's activities for compliance with the approved plan of operations. The 1982 CNI Settlement Agreement allows the Forest Service (USFS) broad authority to suspend or modify all or some operations.

Comment: Two federal laws pertinent to the proposal are not listed: the Oil Pollution Act of 1990 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). "Cleanup and/or removal of existing contamination, an inseparable aspect of this proposal must be done under the authority of those laws as well as state statutes and regulations (e.g. 18 AAC 60.440, 18 AAC 75, AS 46.03. 758-760, AS46.03.780 etc. "

Response: The section in the EA under EPA permits describes the need for an Oil Spill Prevention and Contingency Plan. This is one of the requirements under the Oil Pollution Act (OPA). The OPA is concerned mainly with oil spills rather than contaminated sites. CERCLA, also known as the Superfund Act, establishes requirements for defining and cleaning up hazardous waste sites and establishes liability for those releasing hazardous wastes. The law authorizes two kinds of response actions: short-term removals where actions may be taken to address releases or threatened releases requiring prompt responses, and long-term remedial response actions. These latter actions can be conducted only at sites listed on EPA's National Priorities List. State regulations, as the commenter noted, do apply to the existing reserve pit and other conditions at the drilling site on private land. The DEC is the responsible state agency.

Comment: An EIS is needed to address the cumulative effects of other development in the area, including the Carbon Mountain Road and roads to Point Martin and Strawberry Point.

Response: The need for an EIS is addressed in the Issues section in Chapter 1, and the section on cumulative effects in Chapter 3 of the Revised EA, and the

Finding of No Significant Impact in the Decision Notice. The Carbon Mountain Road is located 15 miles north of the project area, in a separate drainage and on the North side of a mountain range, the Ragged Mountains. There are no plans at present for the construction of the Carbon Mountain Road, nor are there plans for roads to Point Martin and Strawberry Point.

Comment: The Carbon Mountain road, development of the Bering River coalfields, logging of the Carbon Mountain area, and the development of a road and port at Shepherd Point (near Cordova) would be immediately affected if payable quantities of oil were discovered. The effects of these projects would overlap with the life of the proposed actions and should be analyzed as cumulative effects.

Response: One of the points in the cumulative effects discussion was that CAC has not expressed any intent to build the Carbon Mountain road or roads to Strawberry Point and Point Martin in the foreseeable future. Given the limited time frame of the proposed exploratory drilling activities and their effects, there would be no overlap, and thus no cumulative effects. The commenter feels these other projects would be much more viable if payable quantities of oil are found at Katalla, and the effects would be immediate. The conceptual effects may be immediate, but the physical effects to the environment would all occur well into the future after an EIS is prepared and many other permit processes are conducted. These other projects would only occur well beyond the duration of the proposed Katalla activities and would be analyzed on their own before any action is taken.

Comment: The widespread infrastructure needed for oil production has not been assessed.

Response: This is discussed in Chapter 1 of the EA, pages 21-23. Basically, the effects will be analyzed if payable quantities of gas and oil are found and development is proposed.

Comment: The CNI agreement requires that paying quantities be actually produced, not just found. How would oil or gas be transported out and what would be the impacts?

Response: The 1982 CNI Settlement Agreement states that:

> "C. Reversionary Interest. (1) If a well capable of producing in paying quantities within the Katalla Area has not been completed by midnight (AST), December 31, 2004, then all right, title and interest of CNI under this paragraph shall revert to and vest in the United States. "

Production capabilities of a well can be determined by a pumping test. The Forest Service will consult with the Bureau of Land Management and the Alaska Oil and Gas Conservation Commission regarding whether a well can be considered "capable of producing in paying quantities". Once production ensues, rights to the oil and gas will be retained "so long thereafter as oil and gas is produced in

paying quantities". There must be continual production and the oil produced must be sold. The production must support the costs of the operations (paying). Production may not cease in excess of 180 consecutive days.

How oil and gas would be transported out, is not within the scope of this EA. This is only relevant if the exploratory well is productive. If productive, another plan would be submitted for development. It would include the answer to your question regarding transportation of oil and would be evaluated under an EA.

Comment: "The assumption that a more thorough EIS could be done later, if oil is found, is fundamentally flawed. Per the CNI agreement a delay of over 180 days would cause CAC to lose their subsurface rights. It is unreasonable to suppose an EIS could be completed in that time."

Response: The CNI agreement states that there cannot be stoppages of more than 180 days if the well has gone into production. Activities leading up to proving that payable quantities are present would not be considered production, and so, more than 180 days would be available for an EIS.

Comment: The EA states that finding production quantities of oil is unlikely (p. 105). "How is it possible that this project can be economically justified, because they will discover oil, and simultaneously be environmentally justified because they will not discover oil?"

Response: The statement on page 105 is not justifying the proposed actions environmentally. In its context, it supports the reasons for not conducting an EIS on the effects of oil field production at this time. Since there is thought to be a good chance that no payable quantities are present, it would not be efficient to delay the current proposed activities for another several years while contemplating the effects of full production that may never occur. As explained in Chapter 1 of the EA, if payable quantities are found, an EIS will be prepared at that time.

In another part of his comments, the commenter refers to the section on the Forest Plan, Desired Condition (p. 9), which states, "Development of the Katalla oil and gas zones will be consistent with their economic potential with minimal impact on surface Forest lands and the lands beyond these areas." We believe this is what he is referring to when he talks about economic justification. Since the disturbance of National Forest land would only be a bit more than 1/2 mile of road and 2.0 acres under the most developed alternative, it does not appear that there is excessive development in relation to the project. It should also be noted that the disturbed National Forest lands can and will be restored after the activities are finished. Although the probability of finding payable quantities is thought to be low, the temporary disturbance of the land is being weighed against the immediate economic benefits of exploration and potential benefits of production, as well as the existing rights to explore this area. This is underscored by the fact

that all of the drilling operations and major development will occur on private land, and it is a private expenditure of capital for exploration for oil in the area.

Comment: One commenter asked, "What is the basis for the statement that 'finding these quantities of oil is unlikely' (p.105)?" and in another section stated, "The EA should disclose the findings in the geology report for this project, which outlined extensive exploration done in this area already to no avail."

Response: The basis for the statement was in the specialist report by the Forest Geologist in the Administrative record. The section in the EA on geology in the Existing Conditions also describes some of the formations and states that the potential for oil and gas development in the area is low.

Comment: One commenter stated that the proposed project is not consistent with a number of the Forest Plan's goals, objectives, and standards. These are addressed under the following responses:

Comment: Soil productivity compromised.

Response: The EA explains that rig matting, revegetation, erosion control techniques, and restoration of disturbed areas will be used to protect the soil. The proposed activities are of a temporary nature. The affected area is expected to return to its natural state when activities are finished.

Comment: Water quality not maintained due to inevitable toxic contamination.

Response: The EA includes descriptions of how best management practices, standards for safe storage of hazardous materials, and spill contingency plans and clean-up equipment will be used to minimize the possibility of spills and contamination of water. Human error and other factors make spills a possibility, but the measures that will be taken should minimize the risk to the extent possible.

Comment: Introduction of exotic plants and animals.

Response: The EA states that the most likely mode of introduction is through soil and plant seeds in the tracks and tires of equipment. The EA states that equipment will be cleaned prior to shipping to the Katalla area.

Comment: Fish/wildlife populations would not necessarily remain viable and sustainable.

Response: The EA includes fish and wildlife reports describing the effects to populations, individuals, and habitat. Other than temporary disturbances to individuals and minor amounts of temporary habitat

changes, there should be no effects to fish and wildlife. The populations should not be affected.

Comment: The Forest Plan allows CAC to conduct oil and gas drilling, but the project is being done by a corporate front.

Response: The 1982 CNI agreement allows for operations to be conducted by "successors or assigns."

Comment: Heritage resources would be threatened.

Response: The EA and the Heritage Resources Report cited in the EA describe mitigative measures to protect heritage resources.

Comment: Proposed development is not consistent with economic potential.

Response: The commenter suggests that the low probability of finding gas or oil does not justify the development or alteration of the land. The development of National Forest land is only for access and will be minimal - at most, in Alternative 3, construction of 0.5 mile of temporary road and clearing of a 2-acre staging area, both of which will be restored on the completion of the activities. This amount of temporary development does not appear to be excessive given the past history of resource production in the area.

Comment: 521 MMA limits mining "to the area necessary for their efficient, economic, and orderly development." The commenter feels helicopters would provide a more reasonable method of access than the proposed access methods, and thus would reduce the area affected by the project.

Response: The EA states that helicopters would be uneconomical due to the cost of operation and would be inefficient given that there would be many days when helicopters cannot fly due to weather. Given the inevitable delays, the process would not be orderly.

Comment: Public safety is compromised by the existing toxic contamination.

Response: The area the commenter describes is on private land and is not legally accessible to the public. Mitigation could include posting "No trespassing" signs. There is no indication that public lands are contaminated.

Comment: After the exploration is complete, the Forest Plan land use designation will revert to 501-(b) 1 and 2. The area should be substantially unaffected and not degraded to meet the intent of the Forest Plan. The commenter states that the proposed activities will degrade the land to such an extent that would be unsuitable for this designation.

Response: The only activities that would occur on National Forest land would be the construction of 550 feet of new temporary road, maintenance and use of an existing temporary access road and clearing a staging area. After the activities are completed, these areas will be restored. The EA states that the areas are expected to return to a natural state over time. The actual drilling activity would take place on private land. There is no evidence that National Forest land will be irretrievably degraded. Drilling has taken place on the private land in the past and it was still found suitable for possible recommendation as wilderness in the recently revised Forest Plan.

Comment: The commenter states that Alternatives 3 and 4 appear to violate the standard and guideline that states that, " Road construction should not be authorized for initial prospecting/exploration ...."

Response: The EA contains this quotation and the following section that states that roads are allowed for subsequent evaluations of known mineral, oil, or gas occurrences. Initial prospecting/exploration for oil and gas is done with geophysical methods, including seismic, magneto telluric, and gravity, for which road construction would not be permitted. Drilling is considered second level.

Comment: "Reasonable access" needs to be defined through the NEPA process, Coastal Management Plan review, and other state statutes and regulations. If access is inconsistent with management area direction and the wishes of the public landowners, access needn't be granted.

Response: As the commenter desires, the question of access is being addressed through the federal NEPA and state regulatory processes. The question of reasonable access is essentially whether the barge traffic and the temporary roads pose significant adverse risks to the environment or the public use and enjoyment of the National Forest land. The EA has not found any significant adverse risks. Providing access to the private lands for oil and gas exploration has been a part of the management direction of the 1982 CNI Settlement Agreement. The State of Alaska is conducting a review of the proposal under the Coastal Management Program.

Comment: The described project area is too small. Impacts will certainly extend beyond 1/4 mile and the EA should consider that.

Response: The 1/4-mile designation concerns the proposed temporary roads and their immediate effects in relation to the Roadless Area Determination as used in the Roadless Analysis in the Revised Forest Plan FEIS, Appendix C. The EA has considered effects on watershed level scales or larger for existing environmental conditions, fish, wildlife, recreation, and the effects of oil spills.

Comment: The commenter supports development, but states that it needs to be done responsibly.

Response: The NEPA and State permit processes are the means to ensure that issues are addressed, alternative ideas are considered, the public input is involved, and environmental protection standards and mitigation measures are incorporated in the Plan of Operations. Thus, these processes are the means for responsible decision making.

Comment: Some commenters say that the area is pristine and should be protected for this value. Others say that the area has seen the existence of a small city and oil production and has not been harmed.

Response: The proposed actions are temporary. The EA also states that the proposed roads and staging areas can be restored and revegetated over time without lasting effects.

Alternatives

Comment: All of the alternatives use the Katalla River as a transportation corridor. Two alternatives were inappropriately eliminated from detailed study (not specified which). Other alternatives should have been considered, including a road on the west side of the river.

Response: The reasons were discussed in the revised EA and in the response to comments on the first EA. Additional reasons for not further analyzing a road on the west bank include: need to construct 0.5 mile of road, greater disturbance to private landowners since the road would need to pass directly adjacent or through private lands, greater disturbance to lodge clients seeking a wilderness experience, need to cross two small streams in addition to the Katalla River, need to cross other wetland areas, need to build a 150 to 200 foot bridge – presumably with instream pilings, need to build bridge abutments on unstable banks, economic cost of bridge for temporary access, and prior use of river for access without apparent long-term effects.

Comment: Helicopter access should have been considered in detail. Barges and roads are also expensive. Down time for barges with low tides may be as much as for helicopters because of weather. How does the existing road preclude use of helicopters? Weather also limits access via the river. Why does the weather preclude the use of helicopters for drilling but not for spill response?

Response: Tidal fluctuations are more predictable than weather so scheduling would not be disrupted as often, especially since boats can handle more adverse weather than helicopters. Even the coastal fog during the summer can preclude the use of helicopters for part or all of the day (Ken Hodges personal helicopter experience). The large barges could offload enough equipment at the lower site to keep smaller barges busy for an extended period in the protected waters of the river, while relying on a helicopter could be keep all operations idle for weeks.

Use of the existing road provides a safe, less expensive alternative. Use of helicopters for spill responses is proposed for the unlikely event of a blowout spreading oil beyond the Katalla Slough watershed. As the EA explains, the risk of a major blowout is extremely low. It is most likely that helicopter response would never be needed. Boats could also provide a backup response to those areas in the case of a spill. It seemed very logical to the ID Team to use the existing road that has been used in the past for similar purposes without long-term effects to the Roadless area (Revised Forest Plan, FEIS, Appendix C-157).

Comment: The Alternative 4 description of a 550-foot road does not match the description of a 500-foot bridge in the US Army Corps of Engineers permit. Is this a mistake? How is it being remedied?

Response: It is uncertain how the idea of a 500-foot bridge got introduced, as no bridge of that length is proposed. There was probably some confusion between the use of rig matting over the wetlands and bridges. Small temporary bridges would be used to span some rivulets, but for the most part rig matting or similar material will be used for a road.

Comment: Alternatives 2 and 4 would have a two-acre staging area in a spruce forest. What about soil compaction, blowdown, and disposal of slash?

Response: The EA states that rig matting will be used to protect the soil. Increased chance of blowdown had been mentioned in connection with road building in Alternative 3, but no mitigation was stated. The Alaska Region BMPs and standards and guidelines provide direction for preventing blowdown and disposing of slash.

Oil Spill and Contaminant Comments

Comment: Cassandra Energy Corporation's plans for the closure of the existing reserve pit (a lined pit with drilling cuttings left over from 1986) and the plans for disposal of the new cuttings are different in the State permit applications than described in the EA. These issues need to be reanalyzed.

Response: The existing reserve pit is on private land, not on National Forest lands; the Forest Service has no authority to regulate its closure. ADEC will permit an appropriate closure plan.

The proposed storage site for cuttings is also on private land, but it is within the scope of this EA because drilling operations fall under the 1982 CNI Settlement Agreement. A permit from ADEC is required for its closure as well. The Forest Service typically defers to ADEC's expertise regarding closure of reserve pits and disposal of cuttings.

The new drill cuttings will be stored on site, and then solidified with cement or reinjected into a drilling hole if the results of the exploration make this feasible. If the cuttings were solidified, the cuttings would be disposed of on site, which is on private land. Again, ADEC says this is an approved manner of disposal. Further analysis follows:

Disposal of Drilling Cuttings

The original Plan of Operations submitted to the Forest Service indicated that the cuttings (the rock fragments produced as the well is drilled) would be reinjected into the well, transported to a suitable disposal site, or incinerated to remove any contaminants and stored on site. The proposal has been changed to either reinject the cuttings or "solidify" the cuttings with cement, basically creating a concrete block that would then be stored on site.

According to the State permit applications submitted by CEC, reinjecting the cuttings would be economically feasible if the first well found oil and it appeared that long-term activity, including additional wells, would take place. Otherwise, reinjection would not be cost effective.

Environmentally, Judd Peterson of the Alaska Department of Environment Conservation stated that both reinjection and solidification are acceptable methods of disposal. Reinjection would simply put the rock back where it came from, but in smaller pieces and with some drilling muds and additives used to adjust viscosity and pH. Solidification would leave the cuttings on the surface as large concrete blocks. Mr. Peterson states that this process binds all of the rock, metals, oil, and other substances together and that leaching of contaminants would not be a problem.

Given this information from DEC and the fact that any solidified cuttings would be stored on an area that has already been cleared on private land, there should be no effects from the disposal of cuttings. Some commenters asked about the impacts if more than one well were to be drilled. This would increase the amount of cuttings, but if the cuttings are inert as DEC states and no additional areas are cleared for storage (which could lead to loss of wildlife habitat or perhaps disturbance of historic artifacts), then there would still be no effects.

A related issue is the proposed disposal of water that has collected in a reserve pit left on private land during the last drilling operation in 1986. This reserve pit is a lined open pit where cuttings were stored. Judd Peterson states that water samples show that there is no hydrocarbon contamination of the water and that it is rainwater or flows from surrounding areas. He has stated that the cuttings are from a shallow well that did not strike oil, so the cuttings should only consist of rock, bentonite (a type of natural clay used in drilling muds), and non-toxic polymers used for thickening the muds. He wrote that the federal Environmental Protection Agency would be responsible for regulating the disposal of this water, but in his opinion, it has no contaminants from the cuttings.

Comment: NMFS recommended reinjection of the cuttings. Why isn't this being implemented?

> **Response:** ADEC issues the permits for the disposal of cuttings. The Forest Service recognizes the experience and expertise of ADEC in these matters, but is receptive to input from all agencies.

Comment: There are three reserve pits, not one.

> **Response:** There is only one reserve pit. A reserve pit is a pit in which the rock fragments from the drill hole are placed after they have been shaken over a screen to let the drilling muds drip off for reuse. The idea that there were three pits may have stemmed from a videotape that showed a lined containment pit around some large plastic tanks and a small lined pit of unknown purpose, but apparently without drill cuttings.

Comment: The State application permits say that up to three wells would be drilled, not one as analyzed in the EA. Additional wells will involve longer timeframes and additional drilling wastes that should have been analyzed in the EA.

> **Response:** The commenter is correct in noting the discrepancies. In the general project description CEC proposes up to three wells, while the Drilling Waste Handling permit application calls for the disposal of cuttings from two wells. The Plan of Operations submitted to the Forest Service calls for a single well with two holes drilled to a total depth of 12,500 feet generating 1,958 barrels of cuttings. This is somewhat greater than the estimate in the State permit application of 1,739 barrels for a single well. If CEC wishes to drill two wells, the Plan of Operations will have to be amended and approved by the Forest Service.
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> The timeframe used in the analysis is still the same. The CNI agreement states that CAC has until December 31, 2004 to show that oil and/or gas are present in payable quantities.
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> Although there would be additional amount of cuttings from a second well, they would be disposed of in accordance with State requirements in an environmentally safe manner. We have consulted with Judd Peterson of the Alaska Department of Environmental Conservation, and he stated that solidification of cuttings and reinjection of cuttings are both approved methods of disposal.

Comment: The EA states that no vehicle or equipment fueling and maintenance will be performed adjacent to the river of streams. Where will barges and skiffs refuel?

> **Response:** This restriction is part of standard Forest Service BMPs for projects that generally do not include use of watercraft. As the commenter perceives,

boats that cannot be removed from the water and do not have removable tanks, will have to be fueled near the water.

Comment: The EA states that no fuels will be stored and no servicing of vehicles will occur on National Forest land. Where will this occur during the mobilization period?

Response: At the downstream storage area on State land.

Comment: It is not necessarily true that no pipelines will be constructed as stated in the EA. "A pipeline between the drillpad and the oil burning and waste solidification area has been proposed. The impacts of a pipeline would be significant."

Response: The spill contingency plan states that oil produced by a well blowout could be pumped 700 feet to an oil burning unit located at the storage pad. A hose and suction pump would be used, not a pipe. The hose would be stored at the drill site. Some brush may need to be cleared around the oil burner if deployed, but otherwise no other land or vegetation disturbance would be necessary. The hose would run along an existing roadway. The hose would not have oil in it while not in use and would only be used in the event of a well blowout, which is highly unlikely.

Comment: The EA states that the old camp and drilling equipment will be cleaned up and removed. Has a plan been made? Who will be responsible for seeing that this is done?

Response: The State ADEC and Bill Stevens of CEC have been working on meeting the requirements of cleaning up past operations. Since this is on private land the Forest Service is not involved. The EA mentioned this as part of the overall background description.

Comment: All of the alternatives state that there is no guarantee that there will be no spills or accidents involving hazardous materials. Some reasonable effort at quantification should be made.

Response: Such a calculation would be purely speculative. Spills could range from a can of paint thinner getting knocked over, to a fuel tank leak, or truck accidents along the road. The other point is that some minor spills are inevitable, but adverse effects are not inevitable. As described in the EA, by following BMPs and other standards and guidelines the risks and their effects can be minimized. By handling and storing hazardous materials in lined, diked areas, many minor spills may have no effect at all.

Comment: The EA states that here has never been an oil spill from a platform blowout in Alaska. This is patently untrue. The first well at Katalla resulted in a blowout and a spill.

Response: The EA cited a report from the Alaska Department of Natural Resources. There may be some discrepancy as to the definition of a platform or blowout, or perhaps the DNR did not consider blowouts that occurred before blowout prevention equipment was available or before records were kept. As the EA also cites, there have been gas blowouts in Cook Inlet without the discharge of liquid oil.

Comment: The risk of an oil spill from of an oil spill from a well blowout is considerably higher than the rough guesstimate from another area of 1 in 2,600.

Response: The EA, in its attempt to quantify risk, cites a study by Husky Ltd. that made this estimate. Perhaps the EA should have gone into more detail, but this study was developed using recent worldwide data and is the most recent blowout rate estimate we were able to find. The point to be derived from the last two comments is that the chance of blowouts involving large amounts of oil, as evidenced by two different sources, is low.

Comment: There are no contingency plans for any spills at the upriver barge landing site. Other commenters stated that there are no plans for spills in the Katalla River. The scenarios only address Katalla Slough.

Response: Although the spill contingency plan does not present scenarios on the Katalla River itself, the same procedures would apply. Booms, skiffs, pumps and other equipment at the downstream staging site would be used to contain spills on the Katalla River as well as the Katalla Slough. It should be noted that a spill on the river would involve smaller quantities of materials, at most a tanker truck full of fuel. Oil from a major blowout would not reach the river directly since the platform is 2.5 miles away, and the large storage tanks are also at the drilling site.

Comment: Oil spill containment booms may not be adequate to prevent the spread of spills beyond the Katalla systems. Booms may not be effective in currents greater than two to three knots or when the waters are not calm.

Response: It should be pointed out that two knots is a fairly rapid current - about 3.2 feet per second. The Katalla Slough drainage, where oil from a well blowout or spills from most other operations would end up, is a protected, placid waterway that is often ponded by beaver dams. It is unlikely that currents would be close to two knots, nor would the waters be rough. As the EA mentions, these waters and the waters of the Redwood Creek system, would be easier for containing spills than open areas. The Katalla River is larger, and high winds could make the surface rough in the wider areas. However, currents would generally be less than two knots, except perhaps during floods. Incoming tides also reduce velocities. In addition to booms, skimmers and pumps will also be available. As noted above, smaller amounts of hazardous materials would be handled at the barge site on the river, so it is more likely that these could be adequately contained.

Comment: The EA seems to assume trucking materials is more dangerous than barging. Why?

> **Response:** It was thought that trucks could conceivably run off the road at any point, while barges would not capsize in the calm river. The odds of truck accidents occurring are still considered low given there is no other traffic, only short distances are involved, and the speeds will be relatively low on the dirt roads.

Comment: The EA relies on the oil spill contingency plan, but the plan was found to be grossly insufficient by the State Department of Environmental Conservation.

> **Response:** During the review process, the State works with the applicant so that the final plan meets State standards. Many of the sections have been amended with more detail, rewritten, or added to with new measures. CEC has also submitted those changes to the Forest Service, so the changes have been analyzed in the EA.

Comment: There are no regulations or contingency plans for the boats in the case of shipwrecks. The ocean going barges can carry a lot of fuel and drilling muds.

> **Response:** The contingency plans for fuel spills from tankers, barges bringing supplies from the lower 48, fishing vessels, etc., would apply if there were shipwrecks in the open ocean.

Comment: If oil is found, it will need to be shipped for testing and "to produce a payable quantity." (The point is that this will be another hazardous material being shipped.)

> **Response:** Chemical testing will probably not require extensive amounts of oil to be shipped. Flow rates and other measurements determined on site would be used to estimate whether payable volumes are present.

Financial Responsibility, Past Performance

Comment: Several commenters questioned the adequacy of the $110,000 required for bonds in the EA and what it would cover.

> **Response:** The $10,000 bond required by the Forest Service would cover restoration of disturbed land (staging sites, temporary road) on National Forest land. This is a minimum figure. The $100,000 state bond would cover restoration or clean up as required by state regulations. In addition to these bonds, Lydia Miner of ADEC has written that the applicant " ... must demonstrate financial responsibility to respond in damages for claims in the amount of $1,334,000 per (spill) incident. Proof of responsibility must be submitted 30 to 90 days prior to operations."

Comment: Several comments refer to past operations at Katalla that went bankrupt, to the reserve pit that was not taken care of, and the responsibility of certain individuals.

> **Response:** Past operations are outside the scope of the analysis except as they relate to the existing environmental condition. The State agencies are responsible for enforcing State regulations related to past activities on private land.

Logistics

Comment: Conducting staging operations in the winter is unfeasible because of storms, ice, and low water levels. Spill response would be more difficult.

> **Response:** The activities would certainly need to be timed with weather conditions and other factors in mind. Beginning activities in winter was proposed because of the desire to avoid clearing vegetation for the staging areas and roads during migratory bird nesting season (approximately April 15 to July 15). Written plans for spill responses in cold weather will be included in the Conditions of Approval.

Comment: Mobilization will take longer than the stated two months. If it begins in winter it could extend into spring and the migratory bird nesting season. If brush were cleared at that time this could destroy nests in violation of the Migratory Bird Treaty Act. What would happen if it occurred during the summer when salmon are spawning?

> **Response:** The simple solution would be to start with the vegetation clearing for the staging areas and road while the ground is frozen and before the nesting season begins. It should not take long to clear the areas with heavy equipment. Clearing the vegetation outside of the nesting season is the mitigation the USFWS proposed for migratory birds. The other aspects of the mobilization could then proceed. As for salmon, ADF&G has stated in its CMP consistency review that no river barges shall operate while pink salmon are present and spawning. Unless otherwise stated in writing, the closure will be from August 1 to September 15.

Comment: "Regarding the initial mobilization period, there are many unanswered questions. When they first arrive, for example, where are personnel expected to sleep? Considerable labor … is necessary before the old camp area will be usable. Where will heavy equipment be stored and refueled before the new facilities are operational? In what order would the project elements (spill response equipment staging, site cleanup, road/barge construction, etc.) occur?

> **Response:** The EA states in the section on economic effects to cabin owners/outfitter guide businesses that workers could stay in the cabins used by the guides' clients. There have been no requests for temporary camp sites on National Forest land. The other details have not been spelled out, but logically, heavy equipment would have to be stored and refueled at the downstream staging area on State land until the temporary roads are in place. Spill response

equipment should be available as appropriate for the stage of the project. This can be included among the terms in the Conditions of Approval. Again, the details of the project timeline have not been specified, but logically the clearing of the downstream staging area, preparing the smaller barge/s, preparation of the upstream site, and construction of the roads would need to completed first, although many aspects could be done simultaneously.

Comment: "How many people will be on site? The EA cites two shifts of 66 workers at peak times – or 132 workers in camp. Is this correct? When are peak times."?

Response: CEC President Bill Stevens said there will be 66 workers in camp at one time, but crews will rotate with one crew working for several weeks and then having an equal amount of time off while the other crew works. Peak times will be during mobilization and the setting up of the drilling equipment.

Comment: The commenter asked about how the EA relates to the special use permit (SUP) and to the existing SUP for use of the existing road.

Response: This EA has been prepared to analyze the effects of the various alternatives. Based on this EA, a decision will be made as to which alternative is selected. If an Action Alternative is selected, the issues, effects, mitigation, monitoring, BMPs, standards and guidelines, and other relevant regulations in this document, along with the conditions of the State and other agency permits, will be used to create a SUP for the proposed activities with various Conditions of Approval for the Plan of Operations. The existing road SUP would probably be reissued as part of the overall permit.

Comment: The EA gives the incorrect impression that ADF&G proposed and endorsed the Alternative 4 barge landing when they have not yet issued permits.

Response: We have been in close communication with ADF&G, and their biologists did recommend relocating the landing site to the one described in Alternative 4 and building a temporary road to lead to the existing roadway. The EA does state that ADF&G proposed Alternative 4, but this does not imply approval without mitigative measures. ADF&G has conducted a consistency review of the proposed use of this site that includes stipulations to ensure consistency with the CMP standards.

Comment: The amount of barge traffic appears to have jumped considerably since the first EA, from one or two barges every couple/few weeks to two or three barges per week. Will more trips be needed if the barges are smaller?

Response: The first EA states that one or two barges per week would be needed after mobilization. The revised estimate is what we were told by CEC. If CEC finds that the only available barges are smaller than they had planned on, then it seems logical that more trips would be needed. However, given the short distance

and time the barges would travel on the river, there should not be constant disturbances to fish or wildlife even though trips may be more frequent. ADF&G has also restricted barge traffic during pink salmon spawning season, which will reduce potential effects.

Comment: The tides and the magnitude of their range and changes in the Cordova tide book do not necessarily correspond to the conditions at Katalla. Controller Bay/Wingham Island tide tables should be used.

Response: Controller Bay/Wingham Island tables have also been cited in the EA as well as the fact that water levels will vary with river levels and other factors.

Comment: In Alternative 3, why is it said to be accessible on an 11-foot tide? What surveys have been done? What is the methodology and the accuracy of these surveys?

Response: ADF&G and the Forest Service have conducted separate channel cross-section measurements at various shallow areas of the river from the mouth of the river to the most upstream landing site. The ADF&G had not written up its report at the time of the EA, but communicated the main findings to the Forest Service. The Forest Service report is on file. Access on the 11-foot tide was based on the soundings provided by DALO Marine, but later was contradicted by information from ADF&G that indicates the shallowest area is downstream from the Alternative 3 site. The 11-foot estimate should have been changed to 12 feet in the revised EA.

Comment: "Please disclose the amount and type of hazardous materials proposed to be handled by the operator.

Response: These are listed in the Plan of Operations, available at the Cordova office.

Downstream Staging Area (on State lands)

Comment: One commenter doubted that the 2.5-acre staging area was large enough, since the applicant had talked about needing more, and was concerned that any expansion would adversely affect resources and private land.

Response: The State permits have stipulations for vegetation buffers and other practices to protect fish streams and other resources. The permits are only for the area indicated.

Comment: A commenter identifies a number of adverse effects associated with the downstream staging area including: erosion, compaction of soil, clearing of vegetation (including young Sitka spruce), possible contamination of the area from spills, disturbances to nearby cabin owners, and the loss of subsistence strawberry harvest.

Response: The effects of soil disturbance, possibility of erosion, and disturbance to cabin owners are covered in the EA. The soil has not been examined by a Forest Service soil scientist, but it has been observed to be sandy and well drained, as indicated by the presence of beach strawberries and Sitka spruce. It appears to be similar to soils on the other side of the river that were examined by a soil scientist and were found to have very little silt and clay. Thus, this area may not be as susceptible to compaction and creation of hardened clay surfaces that inhibit revegetation. Stipulations in the State permits minimize the risks of spills and contamination. Revegetation of the area should occur naturally after the project is finished. Strawberry habitat could be increased by the removal of Sitka spruce thickets.

Comment: The clearing of the area will not just be "brush clearing" as described in the EA, but the removal of a young-growth spruce forest with the generation of substantial amounts of slash. It will raise other issues common to logging operations. (not specified)

Response: The Sitka spruce in this area colonized the site in the years after it was uplifted by the 1964 earthquake. The trees are generally 20 to 35 ft tall with up to 4-inch diameter at breast height. Best Management Practices described in the Forest Service Handbook will be used for disposal of slash. Other issues common to logging include erosion, buffer areas along streams, habitat loss, and blowdown of remaining trees. The first three are discussed in the EA and are also covered by BMPs. Blowdown is not generally a problem for small trees.

Comment: The existing airstrip is not usable for the delivery of equipment, personnel, or supplies as stated in the EA.

Response: Consultations with local landowners indicate that they use the airstrip regularly. The area is sufficiently large for helicopter use as well.

Comment: The access from the beach area to the airstrip is not a roadway, it is an ATV trail. Will a road have to be built? What vehicles will drive on it?

Response: The existing access route will need to be upgraded to accommodate large trucks, bulldozers, and other equipment mentioned in the Plan of Operations.

Comment: How long will the large barges remain at the site?

Response: The stipulations in the State review generally indicate that barges can remain there for a tide cycle. The specific language in the documents is available on file.

Comments Related to Fish

Comment: Several commenters wrote that the EA states that there will be no effect on fish, but the Alaska Department of Fish and Game, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service all disagree with this assessment. Another commenter stated that the Forest Service does not provide scientific evidence contrary to the position of the other agencies.

Response: The EA states: "No effects on fish and wildlife populations are anticipated and only minimal effects on individual species are anticipated provided avoidance and mitigation measures are implemented." Actually, this should read " ... and only minimal effects on individuals are anticipated ... ." The EA is not stating that there will be no effects, but rather that the possible effects are thought to be small and limited to individuals, not the populations.

ADF&G, NMFS, and USFWS provided comment on the first EA and stated concern about the proposed barge landing site in Alternative 2. They felt that cutting into the stream bank to make a ramp could destabilize the slope and lead to the erosion of sediments into the stream, which could affect downstream spawning areas. The EA explains in detail the mitigation measures that would be taken to minimize sedimentation, how existing vegetation would be left to the extent possible to hold the bank, the restoration measures that would be implemented, and how the high levels of natural bank erosion and sediment input are flushed from the system by the river flows. The proposed action in Alternative 2 should not lead to excessive sedimentation or any loss of spawning habitat.

Nonetheless, in response to these comments, the ID Team developed Alternative 4 with a barge landing site at a gravel bar as proposed by ADF&G. USFWS also supported this site. We have discussed this matter extensively with Matt LaCroix of ADF&G Habitat Division. He has stated that he cannot say that there will be no sediment input from unloading supplies at the gravel bar, and he cannot say that there will be no disturbance to pink salmon eggs in shallow areas downstream, but he feels that the effects will be minimal and would not preclude issuance of the State permit. The Forest Service agrees that effects are possible, but they will be minimal and will not affect the populations. Mitigation measures proposed in the ADF&G CMP consistency review and those proposed by the Forest Service should minimize effects.

Comment: "There <u>will</u> be serious, population-level impacts to fish." (Emphasis in the original.)

Response: Population-level impacts are unlikely, and are not a certainty as this comment states. For there to be population-level impacts to fish, there would need to be one of several possible scenarios: extirpation of the breeding populations, destruction of the habitat, or genetic alteration (perhaps gene damage from exposure to oil or genetic bottlenecks from reduced populations). We would then have to determine which species could be affected by the proposed actions.

Pink and smaller numbers of chum salmon spawn in the intertidal areas that could be affected by barge traffic and spills in that area. Coho salmon are caught by anglers and could be exposed to the risk of overfishing. Some coho salmon spawn in Arvesta Creek, Katalla Slough, and perhaps Oil Creek (juveniles observed there).

Extirpation of the coho salmon breeding population could occur from excessive sportfishing, however, the EA explains that the fishing guides encourage catch and release fishing and limit the number of fish clients keep. William Stevens, president of CEC, has stated that he will not provide freezer space for sport-caught fish for his employees, which will reduce the number of fish they keep. The EA describes sportfishing monitoring and mitigation measures. ADF&G aerial escapement counts do not indicate any population problems. Overfishing is unlikely.

A major well blowout could kill many fish, as explained in the EA, but the probability of a blowout is extremely low. Fish in the upper Katalla River, where most of the habitat exists, would not be affected.

Habitat destruction would need to be substantial to affect the populations. Best management practices (BMPs) are described in the EA and will be used to prevent sedimentation of spawning areas. Barge traffic could disturb pink and chum salmon spawning gravels in shallow areas of the Katalla River, but it is unlikely that spawning areas would be affected in deeper waters or away from the main channel where the barges would run. In addition, pink and chum salmon spawning is not restricted to the intertidal area. There is a substantial amount of spawning area in upstream areas, in Irish Creek, and to a lesser degree in Katalla Slough. The effects of barge traffic would not extend beyond the length of the project. It should be noted that barge traffic for the 1986 activities did not result in any apparent long-term damage to pink salmon habitat. A blowout or spill could contaminate habitat, but the probability of a blowout or spill are low, spill contingency plans and actions should limit contamination, and most of the habitat used by fish populations in the watershed are actually in the upper Katalla River which would not be affected.

Toxins from spills have the potential to alter genes, but again, BMPs, mitigation measures, and the practices contained in the spill contingency plans will be implemented to minimize the risk of contaminants reaching the streams. Most of the habitat and fish in the watershed are in areas that would not be affected by spills (above the tidally influenced areas) and so would not be at as great a risk from contaminants.

Comment: The danger of overfishing by oil crews is very real. What is the basis for the estimate of 1,752 coho that could be harvested? That alone could be unsustainable pressure. How effective do you think your mitigation measures will be? Have they worked elsewhere?

Response: The EA specifically presents this number as a hypothetical situation where the average number of guided clients and workers all kept two limits of fish. The EA states that this level of harvest could be a cause for concern, but also states that the estimate is high because not all of the workers would be fishermen and not all of the clients keep fish. The guides say that most of their clients practice catch-and-release, and they limit the number of fish they let the clients keep. Obviously the guides have an interest in maintaining healthy populations.

The most effective mitigation for oil worker harvest may be the statement by Bill Stevens, president of CEC, that he will not allow workers to store fish in the camp freezers, since the freezers are needed for camp supplies. Without a place to store fish, workers are unlikely to keep more than they can eat immediately. Other proposed mitigation includes providing educational information on catch-and-release fishing, voluntary harvest reporting, and having a biologist monitor harvests.

Many states are promoting voluntary catch and release fishing on their websites to increase populations and size of fish, including Utah, Minnesota, Wisconsin, and Florida. Radonski (1999) reports high rates of voluntary catch and release fishing in marine fisheries, so it seems likely that anglers would cooperate if the objectives are made clear. In Michigan, areas where catch and release fishing was mandated showed greater numbers of brown trout. Rates of voluntary catch and release fishing also rose in nearby unregulated streams (Clark and Alexander 1992).

Comment: The EA fails to disclose likely effects to salmon species other than pinks. "Don't silvers spawn here also?"

Response: The section on fish states that silvers (coho salmon) do not spawn in the intertidal areas, only pink and chum salmon. The fish section also states that the lower river is only used as a migratory route by other adult salmon and has limited rearing use for juvenile salmon of all species. The EA describes the effects on juvenile salmon or fish in general in a number of areas, such as in the effects of spills and barge traffic.

Comment: "What the EA calls 'temporary disturbance' to migrating fish could have significant, long-term, population-level impacts by effectively blocking and delaying passage upriver." What are the effects of having a barge in the river?

Response: The temporary disturbance that was discussed is the frightening of fish by the barges as they pass by. Salmon are regularly frightened by gulls, eagles, bears, humans and other predators, so this disturbance is not something they are unaccustomed to. Barges or other activity should not block migration. The EA states that if mobilization occurs in the winter and spring, barge traffic will be

infrequent during the coho salmon migration – only two or three times per week. This would apply to other salmon as well. The EA states that barge traffic will not be permitted when pink salmon are present, which overlaps with the coho migration. If Alternative 4 is selected, the barges will be over the gravel bar rather than in the channel most of the time. Given the timing restrictions and the amount of barge traffic likely to occur during the migrations, there should be ample opportunity for fish to migrate. There is also little reason to expect fish to be blocked by a stationary barge in the river, especially at night or during high flows when the darkness or depths provide cover for their upstream passage.

Comment: Commenters disagree with the statement in the EA that the river naturally transports sediments out of the system because spawning areas are not highly sedimented. They maintain that there are areas covered with sediment and introduction of sediment by the proposed actions at the Alternative 4 landing site will affect salmon.

Response: The Katalla River is functioning in an almost completely natural state at this time, and as in any river, there are sections where sediments are being transported, or in the lower velocity areas, deposited. Despite the fact that there are miles of collapsing river bank introducing fine sediments into the river, there is about a one-half mile section of the project area with patches of fair to good spawning gravels (as well as many miles upstream with excellent spawning areas). Obviously these would not exist at all if the river were not transporting the finer sediments farther downstream. As explained in the EA, the amount of sediment that would be dislodged from the gravel bar is negligible compared to natural inputs and would not smother the area in silt. Salmon also clean the gravels with their digging actions, sending excess sediments back into the water column. The effects of sediments on salmon spawning gravels are well documented, but the amount of sediment involved will not overwhelm the natural balance or significantly change the fine sediment composition of the gravels.

Comment: At the Alternative 4 landing site on the gravel bar, compaction, erosion, and the blocking of gravel deposition by barges will destroy the gravel bar.

Response: The gravel bar is probably mobilized and reformed a few times per year during high flows. Barges will not necessarily be present during all of those periods, so the bar should have some opportunity to re-form. Also, comparisons of older and more recent aerial photographs do not show that past use of the gravel bar for a landing site has altered the bar significantly.

Comment: Water withdrawals from Arvesta Creek will significantly impact salmon. The EA shouldn't depend on State permission. Please provide the rationale for the determination that it won't have any impact and supporting evidence.

Response: The section on water use from Arvesta Creek indicates that the average annual flow of the creek is estimated at 1.7 cubic feet per second, while average water use is estimated at 0.05 cfs if spread out evenly over the day. The

Plan of Operations details a storage system that would not dewater the creek during periods of high usage. Forest Service technicians in the area during winter did not measure the flows, but reported good flows. The relatively low use indicated to us that there should be no effect to fish, but as we stated in the EA, the State would be responsible for issuing water use permits. The ADF&G Habitat Division CMP review indicates that there is sufficient flow and has issued a list of stipulations for the use of water from the creek. This document is available at the Cordova Ranger District Office or by request.

Comment: "Crossing the slough with culverts is a crazy idea, which would have huge impacts."

Response: We believe this refers to the proposed route in Alternative 3. The main Katalla Slough would not be crossed, only a minor backwater, tributary slough with little or no flow. The slough is about 40 ft wide. The effects are described in the EA and would amount to a minor loss (800 sq. ft.) of fish habitat. The map in the EA does not show the route crossing the Katalla Slough or other major body of water.

Comment: There is no reason to assume that one foot of clearance above the gravels will protect salmon eggs. The fish report recommends two feet of clearance. Barges will kill salmon and destroy their habitat in large part by disturbing the river bottom.

Response: The fish report discusses two feet of clearance since consultations with the owner of a barge company indicated he would prefer to maintain that much clearance if he were navigating. However, that may not always be possible given the depths of the river. During these discussions, the barge operator felt that most of the propeller thrust is parallel to the substrate, which is more efficient, not down toward the substrate. He said that if he were operating the barges he would be moving slowly with the incoming tide, would not be operating at full power, and would mix heavy items with light bulky items so the barge would ride higher in the water. He felt that disturbance of the substrate would not be a problem. Thus, the EA relies to a degree on his experience and expertise. The EA admits the uncertainty of substrate disturbance and recommends monitoring of the barge traffic as one of the mitigation measures. Previous barge traffic has not destroyed the habitat.

Two other points must be considered. First, river bottoms are not static entities – high flows regularly mobilize the substrate to varying degrees, so gravel disturbance does not necessarily destroy habitat. Also, studies indicate that salmon bury their eggs at depths that will minimize egg loss, i.e. deep enough to withstand the natural movement of gravel during normal high flows. Thus, it is thought that some disturbance of the gravel will not endanger the populations, although eggs that are buried too shallow may die. The EA explains that gravel disturbance, later spawning fish digging up the eggs of others, flow conditions,

etc. can all lead to high natural egg mortalities, which is made up for by the high production of eggs.

Comment: Under the fish section the EA states that barges will not operate at full throttle, while in the section on the effects of noise it says that the throttle level is an uncertainty. What would be the effect to fish if they did run at full power?

Response: This is a contradiction that arises out of two different scenarios. The owner of the barge company indicated that barges would float in with the rising tide at low throttle and go slow in the shallow, narrow areas of the upper river (where most of the fish spawn) simply because the navigation is trickier there. When contemplating the effects of noise, it was thought that barges in the lower river area could be running under more power, so there was no real way of telling how loud a barge would be. Based on the consultation with the barge owner, we expect the barges to be running at lower throttle in the upper reaches. If full power were used in the upper reaches, we would expect more substrate to be disturbed than otherwise, but given the proposed mitigation measures (draft restrictions, tide restrictions) disturbance is still expected to be minimal.

Comment: ADF&G stated that the landing site in Alternative 2 would lead to the introduction of large amounts of sediment into the river and would cause a loss of valuable spawning habitat. Why wasn't this analyzed in the EA?

Response: The consequences and mitigation are discussed on page 78 of the EA, although only ADF&G's opinion that the bank would be destabilized is mentioned (the consequences are assumed to be apparent).

Wildlife Comments

Comment: The effects on marine mammals should be explained.

Response: Effects on Marine Mammals

One of the commenters asked for additional information on the effects of the project on marine mammals. In the general Katalla area there are a number of species of whales and dolphins, as well as Steller sea lions, sea otters, and harbor seals. As stated in the EA there is a sea lion haul-out site at Point Martin, three miles southwest of the Katalla River.

All of these species could be found in the open waters off of the coast of the Katalla area. The only activities related to the project that would occur in this area would be the coming and going of barges bringing equipment and other supplies. The presence of barges could cause the animals to leave the area until the barges have passed. However, there are many other fishing boats, barges, and other vessels that use these same waters, so the animals should be accustomed to boat traffic. Most species simply swim away from boats or dive, although

porpoises often swim alongside boats. The barges would be moving relatively slowly, so there should be no danger of animals being struck. The barges would also stay clear of the rocky islands where sea lions haul out, since the water is relatively shallow and there are submerged rocks. Thus, there may be temporary disturbances of individuals in the open ocean, but there is no indication from existing boat traffic that this causes any adverse effects.

Except for harbor seals, Forest Service wildlife biologists, in consultation with the National Marine Fisheries Service, feel that none of these species would be likely to enter the Katalla River or Katalla Slough, which are relatively small and shallow systems. Harbor seals, however, have been observed in the mouth of the river at high tides, presumably catching salmon entering the river. The most abundant salmon species in the river are pink and coho salmon, whose migrations would presumably attract the highest number of seals. Harbor seals could also be in the river to feed on chinook or sockeye salmon that migrate before the pink salmon, but the populations of these species are thought to be relatively low. Harbor seals could also feed on eulachon, a type of smelt, but this species has not been documented in the Katalla River.

Again, the main activity that would occur in the Katalla River would be barge traffic. Although the river is smaller and seal/barge interactions would be closer, seals should still be able to avoid the boats. Effects would also be mitigated by the restriction on barge traffic in the river when pink salmon are spawning (which overlaps with much of the coho salmon migration). Thus, there would be no barge traffic for most of the time that seals would be in the river. Barge traffic in the river at other seasons would also be limited in time (it would take much less than an hour for barges to move upriver) and frequency (two to three times per week after mobilization). Forest Service wildlife biologists note that harbor seals frequently use Alaganik Slough, a stream of similar size to the Katalla River and with frequent small boat traffic. Apparently the presence of boats does not drive the seals away from their feeding areas.

Commenters also inquired about the effects of spills on marine mammals. Spills of hazardous materials or oil from a well blowout are possible, but the probabilities are quite low. The danger of contaminants affecting marine mammals in the river are limited by the regulations for storage and handling of hazardous materials, spill response plans and containment equipment, and the distance of the main drilling activities from the river. If contaminants reached the river, animals could ingest or be coated with the contaminants, which could have lethal effects, depending on the substance.

Overall, no adverse effects to marine mammals are foreseen from the normal operations. The danger of hazardous material spills affecting the animals is low.

Comment: There could be disturbances to falcon nests at Point Martin from helicopters or other air traffic. Guidelines state that human disturbances should be managed within two miles of nests.

> **Response:** Managing disturbances does not mean that all disturbances will be prohibited, rather, the situation should be considered and analyzed. There is currently a fair amount of small plane and helicopter traffic along the coast that has evidently not precluded falcon nesting. Since the main transportation of supplies will be via barge, additional air traffic for this project is not expected to be frequent and would not change the current situation considerably. Disturbances are also mitigated by Federal Aviation Agency standards that require aircraft to fly at an altitude of 500 feet, and the fact that aircraft are in the area for only a minute or two as they pass by.

Comment: Bald eagle perch trees could be affected by activities and should be protected since they are not particularly abundant in this area.

> **Response:** No removal of tall trees is proposed along streams where bald eagles generally have perch trees (to view fish). The only area where tall trees might be removed is at a staging site along the old roadway. This area has numerous tall trees.

Comment: The failure to find goshawks does not mean they are not present. Old-growth forest along the roadway should be managed for goshawks. The old growth along the road is a particularly valuable corridor since goshawks prefer to travel through big trees.

> **Response:** Two acres of old-growth forest could be cleared for a staging area, but as indicated in the EA, there is a fair amount of similar habitat in the area. Additional observations would be made prior to clearing. Clearing would only occur on one side of the road, so trees on the other side could provide a corridor.

Comment: Bald eagles at the nest tree identified along the existing roadway will be disturbed by traffic. Although a variance to allow truck traffic along the road has been granted, this does not mean that there will not be significant impacts.

> **Response:** A variance was issued because it was felt that construction of a detour around the tree would be more disruptive and would pose greater risks to the nest tree than having trucks traveling on the road. Mitigation measures have been identified in the variance to reduce disturbances.

Comment: Bears are abundant in the area and can be expected to tear up equipment, including spill response equipment stored at the downstream site. Who will deal with problem bears?

> **Response:** The Oil Discharge and Contingency Plan mentions storing spill equipment in large plastic containers (totes). Generally in the State of Alaska,

ADF&G personnel deal with problem bears or issue permits to property owners to take the problem animals. As stated in the EA, the ADF&G area wildlife manager has written that he is satisfied with the bear plan for the camp.

Comment: A two-acre staging area in the old-growth spruce forest would permanently disrupt this wildlife migration corridor. It is a heavily used bear trail now.

Response: Slash deposited along the sides of the clearing could have breaks between piles to allow movement, although the road itself appears to be the main trail. Clearing the forest on only one side of the road will also allow for a continuous forest and migration corridor.

Comment: It is unlikely that barge traffic and other activities will have no effects on swans and geese. Disturbances would not be temporary, they would take place repeatedly and perpetually.

Response: The EA describes how barge and truck traffic will be visually separated from goose and swan nesting areas by vegetation along the river and roads. Noises would be present, but could be muffled by the vegetation and distance. Helicopter and airplane traffic would not be frequent. The truck and barge traffic mentioned in the EA will be temporary – the barges may only take 15 or 20 minutes to move upstream. Trucks unloading barges would not be running around the clock. The project is scheduled for two to three years, not perpetually. The EA does state that wildlife may move from the area, but ample similar habitat is available nearby.

Rare Plants

Comment: The EA says that a road or staging site can be moved if sensitive species are found. What does this mean? Surveys need to be done before any finding or decision.

Response: As stated in the EA, no federally listed threatened or endangered plant species are known to exist on the Chugach National Forest. Sensitive plants are a Forest Service designation that applies only to National Forest land. Sensitive plant surveys have been conducted along the existing roadway, the proposed road routes and barge landing sites on the east bank of the Katalla River, and the downstream staging area proposed in Alternative 3. No sensitive plant species have been found. The only areas not surveyed are the 2-acre staging site proposed in Alternative 2 and 4, and the detour road around the eagle tree proposed in Alternative 3. Given the type of habitat and vegetation community in these areas - mature spruce forest - no sensitive plants are expected to be present. Surveys will be conducted prior to any disturbance, and if any sensitive plants were to be found, the boundaries could be adjusted so that no sensitive plants are affected.

Subsistence Comments

Comment: One commenter reported subsistence use of strawberries in the downstream staging area on State lands, submitted a videotape showing salmonberries (2) being picked, and stated that there is fairly substantial subsistence use of fish there now. Another commenter stated that she uses subsistence resources in the area, but did not specify which resources. The point of these comments was that the EA understates the amount of subsistence use in the area and that the proposed activities will adversely affect subsistence opportunities.

> **Response:** The amount of land that would be disturbed is minimal compared to the amount of similar habitat in the area. The types and amounts are detailed in the section on effects on wildlife in the EA. Much of the land being disturbed would be young Sitka spruce forest at the downstream staging site (as the first commenter states elsewhere in his comments) and at the possible road sites proposed in Alternatives 3 and 4. Young Sitka spruce stands are essentially monocultures, since they develop into dense thickets that preclude sufficient light for other plant species. Thus, the stated subsistence use of strawberries and salmonberries would not be significantly affected by removal of spruce. Consultations with the lodge owners indicate that there are very few anglers present in the area besides their clients, who are there for sportfishing and generally practice catch-and-release fishing, not subsistence fishing. The EA also indicates that the proposed activities will not affect fish populations. Thus, given the minimal land disturbance and lack of effects on fish populations, there would be no effects on subsistence opportunities.

Comment: "Even though subsistence use of the Katalla fish probably isn't high right now, that does not mean that subsistence resources can be squandered. This is a good example of how cumulative impacts need to be considered – as subsistence opportunities decline elsewhere, closer to Cordova, these 'marginal' subsistence opportunities become more important." Healthy intact ecosystems must be maintained.

> **Response:** The proposed activities are of a temporary nature, scheduled to be completed by the end of 2004. The EA and the Revised EA indicate that there will be no effects to fish populations and no fish habitat will be irretrievably altered. Thus, the resources available for subsistence use should not be diminished and there should be no addition to cumulative effects.

Historic Resources

Comment: The finding of the EA that there will be no effect on historic resources is based on the mitigation that workers will be restricted to the existing clearings. It is not realistic to expect workers not to confine themselves to the cleared areas. "Historic resources here are particularly susceptible to damage, … and are delicate to the point that footsteps would compromise their historic value."

Response: The area of concern is around the cleared area where the camp, drillpad, and storage areas would be. If the workers are informed of the situation, it is possible that they would restrict themselves to the cleared areas. The area is also quite brushy with soggy ground, so there is no real reason for people to go walking off into the bushes. People wishing to exercise would probably walk down the road or could hike in other areas that aren't restricted.

Comment: The historic resources in the meadow downhill from the drillpad and reserve pit are particularly susceptible to damage. The reserve pit plan calls for pumping water onto this area and placing more fill on the pad, which could damage resources if the fill expanded only a few feet laterally.

Response: It is not certain where or how the water will be disposed of. The State ADEC says that the Environmental Protection Agency would be responsible for regulating water discharges. The fill would presumably be placed on the reserve pit to cover it. The pit is about 50 feet from the edge of the clearing above the meadow, so the fill would probably not be a problem.

Comment: What is being done about the old well (#36 in the historic report) that is leaking gas and killing vegetation? Why is this not disclosed in the EA?

Response: There are numerous natural seeps, and in this case a well, where oil or gas is killing vegetation for a few feet. We were unaware of this particular well, or at least of the need to do anything. As a historic resource it may be best not to touch it.

Comment: What would be the impact of an oil spill on historic resources?

Response: One would have to assume a spill from a well blowout or tank rupture large enough to breech the containment dikes, which is quite unlikely. Most of the remaining artifacts would have to be metal or some other substance that wouldn't decay. Direct oil contamination may have no lasting effect on metal or ceramics, but this could depend on the nature of the oil, its sulfur content, pH, etc. The main effect could come from containment or clean up procedures that could disturb or break artifacts. If artifacts are moved from their position, some clues about their origin or function could possibly be lost. In the event of a spill, permits from the State Historic Preservation Office would be needed to dig containment trenches. None have been issued at this point in time, but the State is recommending that CEC and the State Historic Preservation Office work to identify sites prior to drilling where containment trenches and berms can be safely dug in case of spills.

Recreation

Comment: The proposed activities are not compatible with wilderness recreation. Lodges have invested in establishing and building their operations. This will be lost.

Response: These issues have been addressed in lengthy discussions in the EA. Mitigation measures have been developed to reduce effects to recreation oriented businesses while honoring the economic rights agreed upon in the 1982 CNI agreement.

Comment: Our communications with one of the fishing guides indicates they have about 80 clients per year. (The EA states there are about 80 clients for two guides.) Where did you get your figures?

Response: The EA mentions in the previous paragraph that we had consulted with the two guide companies operated by Steve Ranney and Todd Rogers. We received the figures from them and Terry Zeznock who owns the land where Rogers has his operations. Rogers had originally told us his company has about 80 clients by itself, but Zeznock said they discussed the number and it is actually somewhat lower.

Comment: What does it mean that oil workers and guided anglers will be encouraged to practice "catch and release?"

Response: Part of the proposed mitigation will be to provide anglers with educational material on the merits of not killing the fish after they have caught the fish, and instead, releasing the fish with as little harm as possible. This would include information on the run size in the Katalla River, concerns about overfishing the system, the benefits of maintaining large adult populations, and how to release the fish to increase its chances of survival.

Comment: The proposed activities would preclude the area from ever being designated wilderness or the Katalla River being designated Wild and Scenic.

Response: The proposed activities on National Forest land are temporary, with ground and vegetation disturbances scheduled to be restored after the activities are over. The EA discusses how the vegetation is expected to re-establish within a few years except for the old-growth forest. If the area in its present state can be considered for wilderness after all of the land clearing, oil drilling, and oil production that has occurred in the past 100 years, the proposed activities should not change the status. The Bering Lake Roadless Area was considered for Wilderness in Alternatives D, E, and F of the FEIS for the recently Revised Forest Plan; however, it was not recommended for Wilderness in the Record of Decision of May 31, 2002. The Katalla River was considered for designation under the Wild and Scenic River Act in Alternatives E, and F of the FEIS for the recently Revised Forest Plan; however, it was not recommended for designation in the Record of Decision of May 31, 2002.

Comments on Other Topics

Comment: Placing prefab bridges over old bridges makes little sense.

> **Response:** This proposal would eliminate the need to renovate or remove the old bridges, which could cause bank disturbances and sedimentation of the streams. Heavy equipment would not have to drive through streams to place new bridges. Culverts would cause sedimentation and passage problems.

Comment: Some stream bank disturbance will be necessary, either for fixing or removing culverts or cleaning roadside ditches. All of the streams along the road are important for fish habitat or water quality.

> **Response:** When the EA stated there would be no stream bank disturbance, we did not consider ditches and culverts for the ditches as streams – minimal disturbance may be a better description. Many of the small streams have no fish habitat and are incapable of transporting significant amounts of sediment to fish habitat. The main point is that none of the major streams will be channeled though culverts, have bridge abutments placed in the channels, or will otherwise be disturbed. There could be one exception. ADF&G has proposed removing an old culvert before placing a bridge over the stream. This could cause some minor sediment introduction, but would solve a long-term problem where the creek is being forced out of its natural channel and is eroding the bank. None of the actions would significantly affect fish habitat.

Comment: The EA states that " … no stream buffer is established …" for the upstream barge landing site. What does this mean? Elsewhere the EA sates that buffers will be maintained including 100-foot buffers and the state will be oversee standards for clearing of the area. Who is responsible?

> **Response:** At the downstream storage area, the consistency review by ADF&G Habitat Division calls for 100-foot buffers along Irish Creek and the Katalla River. At the upstream staging area " ... a 60-foot vegetated buffer will be maintained between the developed staging area and both the Katalla River and the wetted channel of Katalla Slough." These terms are part of the State permit and the State would have the primary responsibility for seeing that the terms are met. The State permits are also part of the Plan of Operations and Special Use Permit that would be approved by the Forest Service, so it also has the responsibility to see that the standards are met and the authority to stop operations for non-compliance.

Comment: A quarry would cause significant impacts, as would shipping in gravel for a road because of the increased number of barge trips.

> **Response:** The EA discusses the impacts, including possible effects to historic resources. These effects and the costs make extensive roading, as proposed in Alternative 3 less attractive.

Comment: In the discussion on economic effects, it is stated that all action alternatives will provide the benefits. Since the actions as described in Alternative 4 are the only ones the State will approve, it is the only one that would bring the economic benefits.

> **Response:** The EA did not speculate as to which alternative the state agencies would favor, but this appears to be a logical viewpoint.

Comment: There are natural oil seeps in the area. It is hard to imagine how the proposed activities will have more of an impact than the oil that is there naturally.

> **Response:** The EA acknowledges the existence of natural oil seeps, but the effects are difficult to assess. The purpose of the spill contingency plans and mitigative measures is not to add any adverse effects to those that may exist already. It is also possible, though the odds are low, that a blowout or other accident could introduce large quantities of oil into the environment.

Comment: Eyak, Tlingit, and other Native people lived in the Katalla area, but the early oil development pushed them out of the area, and the culture and lifestyle they enjoyed in this region were lost. New development will preclude the use of the area for subsistence or other cultural activities.

> **Response:** The proposed activities are temporary and are not expected to cause long-term effects to the environment or subsistence resources. No permanent structures or facilities are proposed on public lands. The commenter also discussed the effects of full oil production in the area, which is beyond the scope of this project and would have more lasting effects. If payable quantities of oil are found and full development is proposed, this topic would be among the issues.

Comment: One commenter expressed concern about the ability of the State to monitor the operations, given the expense and other duties elsewhere, and what would happen if there were permit violations.

> **Response:** Speculation on the ability of the State to perform its duties is beyond the scope of the analysis. If there were unresolved violations, the Forest Service could halt operations involving National Forest lands and drilling beneath the lands, since fulfillment of stipulations in State permits is part of the Conditions of Approval in the Forest Service special use permit.

References

Clark, R.D. and G.R. Alexander. 1992. Evaluation of catch-and-release trout fishing regulations on the south branch of the Au Sable River, Michigan. Michigan Department of Natural Resources Fisheries Research Report no.1987.

Redonski, G.C. 1999. History and application of catch-and-release fishing: the good, the bad, and the ugly. Presented at the National Symposium on Catch-and-Release in Marine Recreational Fisheries, December 5-8, 1999, Virginia Beach, VA.