

3. Comment Summaries and Responses

Introduction

This chapter responds to comments the Surface Transportation Board (STB or the Board) Section of Environmental Analysis (SEA) received on the Draft Environmental Impact Statement (EIS) and describes how and where those comments led to changes in the Draft EIS. Although the comment responses refer to SEA, the cooperating agencies participated in reviewing, summarizing, and responding to comments. SEA's responses to comments clarify or correct information in the Draft EIS, explain and communicate government policy or regulations, direct commenters to information in the Draft EIS, or answer technical questions.

Appendix A of this Final EIS provides a catalog of oral comments SEA received during the public meetings on the Draft EIS. Appendix B provides a catalog of written comments SEA received. Tables in this chapter provide two versions of an index that allow readers to find their comment excerpts and the associated responses. Table 3-1 provides the index in chronological order by comment document number and excerpt number separated by a dash (e.g., 42-3) assigned to each oral or written comment. The comment document and excerpt numbers assigned to the oral and written comments can be traced back to the original comment via Appendices A and B. Table 3-2 provides the index in order by commenter category (e.g., elected officials, Federal agencies, private citizens) and then alphabetically by commenter name.

To find a comment document excerpt and SEA's response to the comment, find the commenter's name or organization in either Table 3-1 or 3-2 and note the comment number (the comment document number and excerpt number separated by a dash). Then, go to the appropriate section of Chapter 3 (also identified in the tables) to find the comment number its associated comment and response text. Turn to Appendix A or B (in index see the Appendix Location column) to see how SEA split the comment into comment excerpts.

Methodology

SEA prepared the comment responses in accordance with Council on Environmental Quality (CEQ) guidance at 40 Code of Federal Regulations (CFR) 1501.6, which states "an agency is not under an obligation to issue a lengthy reiteration of its methodology for any portion of an EIS if the only comment addressing the methodology is a simple complaint that the EIS methodology is inadequate. But agencies must respond to comments, however brief, which are specific in their criticism of agency methodology." The CEQ guidance goes on to state that "if a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group. Comments may be summarized if they are especially voluminous."

The following paragraphs describe the methodology SEA used to capture, track, and respond to public comments on the Draft EIS:

- SEA read all comment documents and their attachments to identify and extract comments. As a part of this process, SEA reviewed technical attachments (for example, reports) for potential applicability. After comment identification, SEA grouped individual comments by categories and assigned each comment to a subject matter expert in the appropriate discipline to prepare a response. SEA's subject matter experts reviewed each response to

ensure technical and scientific accuracy, clarity, and consistency, and to ensure that the response addressed the comment.

- Frequently, more than one commenter submitted identical or similar comments. SEA grouped such similar comments together and for each issue, either provided a summary of the comment, or a series of verbatim comments to illustrate the commenters' concerns. If SEA summarized two or more comments, this chapter presents the summary as a "Summary Comment." If SEA extracted a comment taken verbatim, this chapter presents it as a "Comment." If SEA grouped more than one verbatim comment for a single response, this chapter presents the group as "Comments." SEA's response follows each summary comment, verbatim comment, or group of verbatim comments. If the comment resulted in a change to the Draft EIS, SEA's response describes the change.
- To the extent practicable, SEA presented the comments in this document by topic. Each comment-response pair, individual or summary, consists of three parts: (1) the comment, (2) the assigned comment identification number, and (3) the SEA response.
- In some cases, SEA paraphrased individual comments to capture their meaning if they were general in nature (for example, the commenter supports or opposes an activity or action), if they indicated something was incomplete or insufficient but did not provide specific examples (for example, "cumulative impacts are inadequate"), or if they indicated something was not safe (for example, transportation of hazardous materials) but provided no specific information. Summarized comments are, of necessity, paraphrased, but SEA made every effort to capture the essence of every comment included in a summary comment.
- SEA did not modify certified transcripts of public hearings. However, some transcripts (and also some letters, e-mails, and faxes) contained obvious errors (for example, misspelled names or words). For this chapter, SEA corrected such errors in the extracted comments. Similarly, SEA deleted extraneous material (such as repeated words) from extracted comments whenever such a deletion would not alter the meaning of the comment. Appendix A of this Final EIS contains an image of the text of each hearing transcript as certified by the court reporter.
- If the meaning of a comment was not clear, SEA made a reasonable attempt to interpret the comment and respond based on that interpretation.
- When a comment resulted in a revision (addition, deletion, correction, etc.) to the Draft EIS text, the response states that SEA made a change and directs the reader to the location of the edited text. In general, edits to the Draft EIS can be found in Chapter 4, Errata and Other Changes, of this Final EIS. In some unique cases, where a change to the Draft EIS text is more substantive, the edit will be found in a stand-alone chapter or appendix of this Final EIS.

The methodology described herein enabled SEA to efficiently consider, individually and collectively, all comments it received on the Draft EIS and to respond to those comments. The remainder of this chapter is organized so that each section corresponds to the associated Draft EIS chapter.

**Table 3-1
Comment Index Organized by Comment Number**

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
1-1	3.6 Cultural Resources	Organization	Salcha's Neighborly Organization	Appendix B
2-1	3.4.2 Surface Water	Private Citizen	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-2	3.5.2 Fisheries	Private Citizen	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-3	3.12 Navigation	Private Citizen	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-4	3.4.2 Surface Water	Private Citizen	Schuhmann and Groseclose, Barbara and Bob	Appendix B
3-1	3.2.5 General Support	Private Citizen	Richard, Ryan	Appendix B
4-1	3.15 Socioeconomics	Private Citizen	Parrish, April M.	Appendix B
4-2	3.2.1 Proposed Action and Alternatives	Private Citizen	Parrish, April M.	Appendix B
4-3	3.13.2 Recreation Resources	Private Citizen	Parrish, April M.	Appendix B
4-4	3.4.1 General Water Resources	Private Citizen	Parrish, April M.	Appendix B
4-5	3.4.3 Groundwater	Private Citizen	Parrish, April M.	Appendix B
4-6	3.2.1 Proposed Action and Alternatives	Private Citizen	Parrish, April M.	Appendix B
4-7	3.2.1 Proposed Action and Alternatives	Private Citizen	Parrish, April M.	Appendix B
5-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Stuart M.	Appendix B
6-1	3.5 Biological Resources	Private Citizen	Haines, Megan	Appendix B
6-2	3.3.5 Seismic Hazards	Private Citizen	Haines, Megan	Appendix B
7-1	3.1.6 Presentation	Private Citizen	Willcox-Healey, Vanessa	Appendix B
7-2	3.5.1 Vegetation	Private Citizen	Willcox-Healey, Vanessa	Appendix B
7-3	3.3.4 Permafrost	Private Citizen	Willcox-Healey, Vanessa	Appendix B
7-4	3.4.5 Wetlands	Private Citizen	Willcox-Healey, Vanessa	Appendix B
8-1	3.3.4 Permafrost	Private Citizen	Williams, David J.	Appendix B
8-2	3.2.1 Proposed Action and Alternatives	Private Citizen	Williams, David J.	Appendix B
9-1	3.4.2 Surface Water	Private Citizen	Trifone, Katie	Appendix B
9-2	3.5.2 Fisheries	Private Citizen	Trifone, Katie	Appendix B
9-3	3.4.2 Surface Water	Private Citizen	Trifone, Katie	Appendix B
10-1	3.3.1 Topography	Private Citizen	Gouwens, Sarah	Appendix B
10-2	3.4.6 Floodplain Resources	Private Citizen	Gouwens, Sarah	Appendix B
10-3	3.5.1 Vegetation	Private Citizen	Gouwens, Sarah	Appendix B
11-1	3.2.4 General Opposition	Private Citizen	Jewkes, Leonard	Appendix B
12-1	3.2.5 General Support	Organization	Whitestone Community Association	Appendix B
12-2	3.2.5 General Support	Organization	Whitestone Community Association	Appendix B
12-3	3.7 Subsistence	Organization	Whitestone Community Association	Appendix B
12-4	3.2.5 General Support	Organization	Whitestone Community Association	Appendix B
13-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Stenberg, Eric	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
13-2	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Stenberg, Eric	Appendix B
14-1	3.1.1 Purpose and Need	Private Citizen	Curtis, Rochel	Appendix B
14-2	3.13.1 Land Use Resources	Private Citizen	Curtis, Rochel	Appendix B
14-3	3.2.1 Proposed Action and Alternatives	Private Citizen	Curtis, Rochel	Appendix B
14-4	3.5.2 Fisheries	Private Citizen	Curtis, Rochel	Appendix B
14-5	3.5.3 Game Mammals	Private Citizen	Curtis, Rochel	Appendix B
14-6	3.9 Noise and Vibration	Private Citizen	Curtis, Rochel	Appendix B
15-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Howk, Kristy	Appendix B
16-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Howk, Murray E.	Appendix B
17-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Brannan, James H.	Appendix B
17-2	3.5 Biological Resources	Private Citizen	Brannan, James H.	Appendix B
17-3	3.15 Socioeconomics	Private Citizen	Brannan, James H.	Appendix B
18-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Gavin, Michael D.	Appendix B
18-2	3.1.1 Purpose and Need	Private Citizen	Gavin, Michael D.	Appendix B
18-3	3.4.2 Surface Water	Private Citizen	Gavin, Michael D.	Appendix B
18-4	3.5.3 Game Mammals	Private Citizen	Gavin, Michael D.	Appendix B
18-5	3.12 Navigation	Private Citizen	Gavin, Michael D.	Appendix B
18-6	3.1.1 Purpose and Need	Private Citizen	Gavin, Michael D.	Appendix B
19-1	3.9 Noise and Vibration	Private Citizen	Bless, Ronald	Appendix B
20-1	3.2.5 General Support	Organization	Alaska Miners Association, Inc.	Appendix B
20-2	3.2.1 Proposed Action and Alternatives	Organization	Alaska Miners Association, Inc.	Appendix B
21-1	3.2.5 General Support	Private Citizen	Jenkins, Michael E.	Appendix B
22-1	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-2	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-3	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-4	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-5	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-6	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
22-7	3.13.4 Section 4(f) Resources	State Agency	Alaska Railroad Corporation	Appendix B
23-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Jeffries, Steven C.	Appendix B
24-1	3.4.6 Floodplain Resources	Private Citizen	Schwartz, Margaret D.	Appendix B
25-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Severin, Ken	Appendix B
26-1	3.1.1 Purpose and Need	Private Citizen	Parsons, Joshua R.	Appendix B
27-1	3.1.6 Presentation	Private Citizen	Jacobson, Jeff	Appendix B
27-2	3.2.1 Proposed Action and Alternatives	Private Citizen	Jacobson, Jeff	Appendix B
28-1	3.13.3 Hazardous	Private Citizen	Griffin Jr., Herbert L.	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
	Materials/Waste Sites			
29-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Etcheverry, Darcy	Appendix B
30-1	3.2.1.2 Eielson Alternative Segments	Organization	Eielson Farm Community	Appendix B
31-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Robyn	Appendix B
32-1	3.12 Navigation	Private Citizen	Vincent, Steve	Appendix B
32-2	3.5.2 Fisheries	Private Citizen	Vincent, Steve	Appendix B
32-3	3.13.1 Land Use Resources	Private Citizen	Vincent, Steve	Appendix B
32-4	3.13.1 Land Use Resources	Private Citizen	Vincent, Steve	Appendix B
32-5	3.12 Navigation	Private Citizen	Vincent, Steve	Appendix B
32-6	3.2.1 Proposed Action and Alternatives	Private Citizen	Vincent, Steve	Appendix B
32-7	3.13.2 Recreation Resources	Private Citizen	Vincent, Steve	Appendix B
32-8	3.9 Noise and Vibration	Private Citizen	Vincent, Steve	Appendix B
32-9	3.5.2 Fisheries	Private Citizen	Vincent, Steve	Appendix B
33-1	3.2.3 Alternatives Suggested By Commenters	Organization	Railroad Safety and Development Group	Appendix B
33-2	3.2.1 Proposed Action and Alternatives	Organization	Railroad Safety and Development Group	Appendix B
33-3	3.8 Climate and Air Quality	Organization	Railroad Safety and Development Group	Appendix B
33-4	3.11 Transportation Safety and Delay	Organization	Railroad Safety and Development Group, Bob	Appendix B
33-5	3.8 Climate and Air Quality	Organization	Railroad Safety and Development Group, Bob	Appendix B
34-1	3.5.2 Fisheries	Federal Agency	U.S. Department of the Interior	Appendix B
34-2	3.20 Mitigation	Federal Agency	U.S. Department of the Interior	Appendix B
34-3	3.5.4 Birds	Federal Agency	U.S. Department of the Interior	Appendix B
34-4	3.20 Mitigation	Federal Agency	U.S. Department of the Interior	Appendix B
34-5	3.17 Cumulative Impacts	Federal Agency	U.S. Department of the Interior	Appendix B
35-1	3.13.1 Land Use Resources	Private Citizen	Dietrich, Brad	Appendix B
35-2	3.13.1 Land Use Resources	Private Citizen	Dietrich, Brad	Appendix B
35-3	3.12 Navigation	Private Citizen	Dietrich, Brad	Appendix B
35-4	3.9 Noise and Vibration	Private Citizen	Dietrich, Brad	Appendix B
35-5	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Dietrich, Brad	Appendix B
36-1	3.13.1 Land Use Resources	Private Citizen	Dalrymple, Larry	Appendix B
36-2	3.5.3 Game Mammals	Private Citizen	Dalrymple, Larry	Appendix B
37-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Parker, James	Appendix B
37-2	3.2.1.8 South Common Segment	Private Citizen	Parker, James	Appendix B
37-3	3.2.1.9 Delta Alternative Segment	Private Citizen	Parker, James	Appendix B
38-1	3.13.1 Land Use Resources	Organization	Delta Fish and Game Advisory Committee	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
38-2	3.5 Biological Resources	Organization	Delta Fish and Game Advisory Committee	Appendix B
39-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Vroman, Patricia	Appendix B
40-1	3.1.4 NEPA Process	Private Citizen	Allen, Bill and Nancy	Appendix B
40-2	3.4.1 General Water Resources	Private Citizen	Allen, Bill and Nancy	Appendix B
40-3	3.5.2 Fisheries	Private Citizen	Allen, Bill and Nancy	Appendix B
40-4	3.4.3 Groundwater	Private Citizen	Allen, Bill and Nancy	Appendix B
40-5	3.4.1 General Water Resources	Private Citizen	Allen, Bill and Nancy	Appendix B
40-6	3.13.1 Land Use Resources	Private Citizen	Allen, Bill and Nancy	Appendix B
40-7	3.5.2 Fisheries	Private Citizen	Allen, Bill and Nancy	Appendix B
40-8	3.4.4 Water Quality	Private Citizen	Allen, Bill and Nancy	Appendix B
40-9	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Allen, Bill and Nancy	Appendix B
41	Duplicate of 77	Private Citizen	Halvarson, Ivar	Appendix B
42-1	3.11 Transportation Safety and Delay	Private Citizen	Hopkins, Luke	Appendix B
42-2	3.13.1 Land Use Resources	Private Citizen	Hopkins, Luke	Appendix B
42-3	3.2.1.2 Eielson Alternative Segments	Private Citizen	Hopkins, Luke	Appendix B
43-1	3.13.1 Land Use Resources	Private Citizen	Corcoran, Mary	Appendix B
44-1	3.4.1 General Water Resources	Organization	Shaw Creek Boat Owners LLC	Appendix B
44-2	3.4.4 Water Quality	Organization	Shaw Creek Boat Owners LLC	Appendix B
44-3	3.5.2 Fisheries	Organization	Shaw Creek Boat Owners LLC	Appendix B
44-4	3.4.2 Surface Water	Organization	Shaw Creek Boat Owners LLC	Appendix B
44-5	3.2.3 Alternatives Suggested By Commenters	Organization	Shaw Creek Boat Owners LLC	Appendix B
45-1	3.12 Navigation	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-2	3.5.2 Fisheries	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-3	3.13.1 Land Use Resources	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-4	3.13.1 Land Use Resources	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-5	3.13.1 Land Use Resources	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-6	3.12 Navigation	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-7	3.2.1 Proposed Action and Alternatives	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-8	3.13.2 Recreation Resources	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-9	3.9 Noise and Vibration	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-10	3.4.2 Surface Water	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-11	3.5.3 Game Mammals	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-12	3.1.4 NEPA Process	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-13	3.2.1 Proposed Action and Alternatives	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-14	3.1.5 Public Involvement	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-15	3.13.3 Hazardous Materials/Waste Sites	Private Citizen	Vincent, Steven and Kathleen	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
45-16	3.5.4 Birds	Private Citizen	Vincent, Steven and Kathleen	Appendix B
45-17	3.13.2 Recreation Resources	Private Citizen	Vincent, Steven and Kathleen	Appendix B
46-1	3.13.1 Land Use Resources	Private Citizen	Fletcher, Randall	Appendix B
47-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Boone, Courtney	Appendix B
47-2	3.13.1 Land Use Resources	Private Citizen	Boone, Courtney	Appendix B
47-3	3.9 Noise and Vibration	Private Citizen	Boone, Courtney	Appendix B
47-4	3.5.2 Fisheries	Private Citizen	Boone, Courtney	Appendix B
47-5	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Boone, Courtney	Appendix B
47-6	3.1.4 NEPA Process	Private Citizen	Boone, Courtney	Appendix B
48-1	3.2.5 General Support	Organization	Resource Development Council	Appendix B
49-1	3.1.4 NEPA Process	Organization	Citizens' Advisory Commission on Federal Areas	Appendix B
49-2	3.13.1 Land Use Resources	Organization	Citizens' Advisory Commission on Federal Areas	Appendix B
49-3	3.1.4 NEPA Process	Organization	Citizens' Advisory Commission on Federal Areas	Appendix B
50-1	3.1.4 NEPA Process	Private Citizen	Morphis, Ted and Tracy	Appendix B
50-2	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Morphis, Ted and Tracy	Appendix B
50-3	3.1.4 NEPA Process	Private Citizen	Morphis, Ted and Tracy	Appendix B
50-4	3.2.1 Proposed Action and Alternatives	Private Citizen	Morphis, Ted and Tracy	Appendix B
50-5	3.2.1 Proposed Action and Alternatives	Private Citizen	Morphis, Ted and Tracy	Appendix B
50-6	3.1.4 NEPA Process	Private Citizen	Morphis, Ted and Tracy	Appendix B
51-1	3.1.1 Purpose and Need	Private Citizen	Claxton, Toni	Appendix B
51-2	3.9 Noise and Vibration	Private Citizen	Claxton, Toni	Appendix B
51-3	3.13.1 Land Use Resources	Private Citizen	Claxton, Toni	Appendix B
51-4	3.11 Transportation Safety and Delay	Private Citizen	Claxton, Toni	Appendix B
51-5	3.5.2 Fisheries	Private Citizen	Claxton, Toni	Appendix B
51-6	3.2.1 Proposed Action and Alternatives	Private Citizen	Claxton, Toni	Appendix B
51-7	3.1.4 NEPA Process	Private Citizen	Claxton, Toni	Appendix B
52-1	3.1.4 NEPA Process	Organization	Citizens' Advisory Commission on Federal Areas	Appendix B
52-2	3.13.1 Land Use Resources	Organization	Citizens' Advisory Commission on Federal Areas	Appendix B
53-1	3.1.4 NEPA Process	Organization	Alaska Outdoor Council	Appendix B
53-2	3.13.1 Land Use Resources	Organization	Alaska Outdoor Council	Appendix B
54-1	3.2.1.3 Salcha Alternative Segments	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-2	3.6 Cultural Resources	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-3	3.20 Mitigation	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-4	3.20 Mitigation	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
54-5	3.4.6 Floodplain Resources	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-6	3.11 Transportation Safety and Delay	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-7	3.11 Transportation Safety and Delay	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-8	3.13.1 Land Use Resources	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-9	3.20 Mitigation	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-10	3.20 Mitigation	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-11	3.13.1 Land Use Resources	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
54-12	3.13.1 Land Use Resources	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
55-1	3.13.1 Land Use Resources	Organization	Alaska Fish Game Advisory Board	Appendix B
56-1	3.2.4 General Opposition	Organization	A and W Wholesale Co., Inc.	Appendix B
56-2	3.4.1 General Water Resources	Organization	A and W Wholesale Co., Inc.	Appendix B
56-3	3.1.1 Purpose and Need	Organization	A and W Wholesale Co., Inc.	Appendix B
56-4	3.1.4 NEPA Process	Organization	A and W Wholesale Co., Inc.	Appendix B
57-1	3.5.2 Fisheries	Private Citizen	Pope, Philip	Appendix B
57-2	3.4.1 General Water Resources	Private Citizen	Pope, Philip	Appendix B
57-3	3.4.2 Surface Water	Private Citizen	Pope, Philip	Appendix B
57-4	3.11 Transportation Safety and Delay	Private Citizen	Pope, Philip	Appendix B
57-5	3.9 Noise and Vibration	Private Citizen	Pope, Philip	Appendix B
57-6	3.13.1 Land Use Resources	Private Citizen	Pope, Philip	Appendix B
57-7	3.4.2 Surface Water	Private Citizen	Pope, Philip	Appendix B
57-8	3.4.2 Surface Water	Private Citizen	Pope, Philip	Appendix B
57-9	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Pope, Philip	Appendix B
57-10	3.4.5 Wetlands	Private Citizen	Pope, Philip	Appendix B
58-1	3.13.3 Hazardous materials/Waste Sites	Private Citizen	Hill, Jimmie W.	Appendix B
58-2	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Hill, Jimmie W.	Appendix B
59-1	3.13.1 Land Use Resources	Organization	Alaska Trappers Association	Appendix B
59-2	3.13.2 Recreation Resources	Organization	Alaska Trappers Association	Appendix B
59-3	3.5.5 BLM Alaska Special Status Species	Organization	Alaska Trappers Association	Appendix B
60-1	3.1.4 NEPA Process	Federal Agency	Environmental Protection Agency	Appendix B
60-2	3.1.1 Purpose and Need	Federal Agency	Environmental Protection Agency	Appendix B
60-3	3.2.1 Proposed Action and Alternatives	Federal Agency	Environmental Protection Agency	Appendix B
60-4	3.2.1.3 Salcha Alternative Segments	Federal Agency	Environmental Protection Agency	Appendix B
60-5	3.2.1 Proposed Action and Alternatives	Federal Agency	Environmental Protection Agency	Appendix B
60-6	3.8 Climate and Air Quality	Federal Agency	Environmental Protection Agency	Appendix B
60-7	3.11 Transportation Safety and Delay	Federal Agency	Environmental Protection Agency	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
60-8	3.4.4 Water Quality	Federal Agency	Environmental Protection Agency	Appendix B
60-9	3.4.1 General Water Resources	Federal Agency	Environmental Protection Agency	Appendix B
60-10	3.8 Climate and Air Quality	Federal Agency	Environmental Protection Agency	Appendix B
60-11	3.20 Mitigation	Federal Agency	Environmental Protection Agency	Appendix B
61-1	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-2	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-3	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-4	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-5	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-6	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-7	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-8	3.6 Cultural Resources	State Agency	Alaska Railroad Corporation	Appendix B
61-9	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-10	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-11	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-12	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-13	3.6 Cultural Resources	State Agency	Alaska Railroad Corporation	Appendix B
61-14	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-15	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-16	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-17	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-18	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-19	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-20	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-21	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-22	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-23	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-24	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-25	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-26	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-27	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-28	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-29	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-30	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-31	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-32	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-33	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
61-34	3.6 Cultural Resources	Organization	Alaska Railroad Corporation	Appendix B
62-1	3.2.5 General Support	Local Agency	Fairbanks Metropolitan Area Transportation System	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
62-2	3.11 Transportation Safety and Delay	Local Agency	Fairbanks Metropolitan Area Transportation System	Appendix B
62-3	3.2.5 General Support	Local Agency	Fairbanks Metropolitan Area Transportation System	Appendix B
63-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Claxton, David	Appendix B
63-2	3.5.3 Game Mammals	Private Citizen	Claxton, David	Appendix B
63-3	3.13.2 Recreation Resources	Private Citizen	Claxton, David	Appendix B
63-4	3.2.1 Proposed Action and Alternatives	Private Citizen	Claxton, David	Appendix B
63-5	3.4.2 Surface Water	Private Citizen	Claxton, David	Appendix B
64-1	3.2.5 General Support	Organization	Alaska Farm Bureau, Inc.	Appendix B
64-2	3.13.1 Land Use Resources	Organization	Alaska Farm Bureau, Inc.	Appendix B
65-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Schikora, Rick	Appendix B
65-2	3.13.1 Land Use Resources	Private Citizen	Schikora, Rick	Appendix B
65-3	3.9 Noise and Vibration	Private Citizen	Schikora, Rick	Appendix B
65-4	3.5.2 Fisheries	Private Citizen	Schikora, Rick	Appendix B
65-5	3.9 Noise and Vibration	Private Citizen	Schikora, Rick	Appendix B
65-6	3.5.2 Fisheries	Private Citizen	Schikora, Rick	Appendix B
65-7	3.11 Transportation Safety and Delay	Private Citizen	Schikora, Rick	Appendix B
65-8	3.5.4 Birds	Private Citizen	Schikora, Rick	Appendix B
65-9	3.2.1 Proposed Action and Alternatives	Private Citizen	Schikora, Rick	Appendix B
65-10	3.13.2 Recreation Resources	Private Citizen	Schikora, Rick	Appendix B
65-11	3.2.1 Proposed Action and Alternatives	Private Citizen	Schikora, Rick	Appendix B
66-1	3.13.2 Recreation Resources	Private Citizen	Richards, Gerald A.	Appendix B
66-2	3.13.1 Land Use Resources	Private Citizen	Richards, Gerald A.	Appendix B
66-3	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Richards, Gerald A.	Appendix B
66-4	3.13.2 Recreation Resources	Private Citizen	Richards, Gerald A.	Appendix B
66-5	3.13.1 Land Use Resources	Private Citizen	Richards, Gerald A.	Appendix B
67-1	3.2.1 Proposed Action and Alternatives	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
67-2	3.2.1 Proposed Action and Alternatives	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
67-3	3.11 Transportation Safety and Delay	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
67-4	3.11 Transportation Safety and Delay	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
67-5	3.11 Transportation Safety and Delay	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
67-6	3.13.2 Recreation Resources	State Agency	Alaska Department of Transportation and Public Facilities	Appendix B
68-1	3.13.1 Land Use Resources	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-2	3.13.1 Land Use Resources	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
68-3	3.13.1 Land Use Resources	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-4	3.2.1 Proposed Action and Alternatives	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-5	3.2.1 Proposed Action and Alternatives	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-6	3.1.6 Presentation	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-7	3.2.3 Alternatives Suggested By Commenters	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-8	3.2.2 Alternatives Eliminated from Consideration	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
68-9	3.13.1 Land Use Resources	Organization	Fairbanks Fish and Game Advisory Committee	Appendix B
69-1	3.4.1 General Water Resources	Private Citizen	Gregory, Jeff	Appendix B
69-2	3.9 Noise and Vibration	Private Citizen	Gregory, Jeff	Appendix B
69-3	3.5.2 Fisheries	Private Citizen	Gregory, Jeff	Appendix B
69-4	3.11 Transportation Safety and Delay	Private Citizen	Gregory, Jeff	Appendix B
69-5	3.2.1 Proposed Action and Alternatives	Private Citizen	Gregory, Jeff	Appendix B
69-6	3.12 Navigation	Private Citizen	Gregory, Jeff	Appendix B
69-7	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Gregory, Jeff	Appendix B
69-8	3.13.2 Recreation Resources	Private Citizen	Gregory, Jeff	Appendix B
69-9	3.13.1 Land Use Resources	Private Citizen	Gregory, Jeff	Appendix B
69-10	3.4.3 Groundwater	Private Citizen	Gregory, Jeff	Appendix B
69-11	3.9 Noise and Vibration	Private Citizen	Gregory, Jeff	Appendix B
69-12	3.9 Noise and Vibration	Private Citizen	Gregory, Jeff	Appendix B
69-13	3.5.3 Game Mammals	Private Citizen	Gregory, Jeff	Appendix B
69-14	3.11 Transportation Safety and Delay	Private Citizen	Gregory, Jeff	Appendix B
69-15	3.4.1 General Water Resources	Private Citizen	Gregory, Jeff	Appendix B
69-16	3.2.1 Proposed Action and Alternatives	Private Citizen	Gregory, Jeff	Appendix B
69-17	3.2.1 Proposed Action and Alternatives	Private Citizen	Gregory, Jeff	Appendix B
69-18	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Gregory, Jeff	Appendix B
69-19	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Gregory, Jeff	Appendix B
70-1	3.1.4 NEPA Process	Private Citizen	Whipple, William C. and Joyce A.	Appendix B
70-2	3.13.1 Land Use Resources	Private Citizen	Whipple, William C. and Joyce A.	Appendix B
71-1	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-2	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-3	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-4	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-5	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-6	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
71-7	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-8	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-9	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-10	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-11	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-12	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-13	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-14	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-15	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-16	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-17	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-18	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-19	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-20	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-21	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-22	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-23	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-24	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-25	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-26	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-27	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-28	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
71-29	3.20 Mitigation	Organization	Alaska Railroad Corporation	Appendix B
72-1	3.13.1 Land Use Resources	Private Citizen	Curnow, Christopher and Debra	Appendix B
73-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Schikora, Cheryl	Appendix B
73-2	3.9 Noise and Vibration	Private Citizen	Schikora, Cheryl	Appendix B
73-3	3.5.2 Fisheries	Private Citizen	Schikora, Cheryl	Appendix B
73-4	3.5.2 Fisheries	Private Citizen	Schikora, Cheryl	Appendix B
73-5	3.11 Transportation Safety and Delay	Private Citizen	Schikora, Cheryl	Appendix B
73-6	3.5.4 Birds	Private Citizen	Schikora, Cheryl	Appendix B
73-7	3.1.4 NEPA Process	Private Citizen	Schikora, Cheryl	Appendix B
74-1	3.2.1 Proposed Action and Alternatives	Organization	Alyeska Pipeline Service Company	Appendix B
75-1	3.2.5 General Support	Private Citizen	Blockolsky, W.E.	Appendix B
76-1	3.5.2 Fisheries	Federal Agency	National Marine Fisheries Service	Appendix B
76-2	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B
76-3	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B
76-4	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B
76-5	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B
76-6	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
76-7	3.20 Mitigation	Federal Agency	National Marine Fisheries Service	Appendix B
76-8	3.5.2 Fisheries	Federal Agency	National Marine Fisheries Service	Appendix B
77-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Halvarson, Ivar	Appendix B
77-2	3.4.6 Floodplain Resources	Private Citizen	Halvarson, Ivar	Appendix B
77-3	3.9 Noise and Vibration	Private Citizen	Halvarson, Ivar	Appendix B
77-4	3.3.2 Geology	Private Citizen	Halvarson, Ivar	Appendix B
77-5	3.4.6 Floodplain Resources	Private Citizen	Halvarson, Ivar	Appendix B
77-6	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Halvarson, Ivar	Appendix B
78-1	3.13.1 Land Use Resources	Private Citizen	Vincent, Steve	Appendix A
78-2	3.2.1 Proposed Action and Alternatives	Private Citizen	Vincent, Steve	Appendix A
78-3	3.12 Navigation	Private Citizen	Vincent, Steve	Appendix A
78-4	3.9 Noise and Vibration	Private Citizen	Vincent, Steve	Appendix A
78-5	3.5.2 Fisheries	Private Citizen	Vincent, Steve	Appendix A
79-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Severin, Ken	Appendix A
79-2	3.5.2 Fisheries	Private Citizen	Severin, Ken	Appendix A
80-1	3.13.1 Land Use Resources	Organization	Fairbanks Fish and Game Advisory Committee	Appendix A
80-2	3.2.3 Alternatives Suggested By Commenters	Organization	Fairbanks Fish and Game Advisory Committee	Appendix A
80-3	3.5.3 Game Mammals	Organization	Fairbanks Fish and Game Advisory Committee	Appendix A
81-1	3.13.1 Land Use Resources	Private Citizen	Hamsley, Willie	Appendix A
82-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Beget, Jim	Appendix A
83-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Wilbur, Roy	Appendix A
84-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Etcheverry, Jacques E.	Appendix A
85-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Smith, Warren	Appendix A
86-1	3.1.4 NEPA Process	Private Citizen	Davies, Stu	Appendix A
86-2	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Stu	Appendix A
86-3	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Stu	Appendix A
87	Non-substantive	Private Citizen	Etcheverry, Darcy	Appendix A, (Not Bracketed)
88-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Robyn	Appendix A
88-2	3.13.3 Hazardous Materials/Waste Sites	Private Citizen	Davies, Robyn	Appendix A
88-3	3.4.5 Wetlands	Private Citizen	Davies, Robyn	Appendix A
88-4	3.5.3 Game Mammals	Private Citizen	Davies, Robyn	Appendix A
88-5	3.9 Noise and Vibration	Private Citizen	Davies, Robyn	Appendix A
88-6	3.2.1 Proposed Action and Alternatives	Private Citizen	Davies, Robyn	Appendix A

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
88-7	3.13.1 Land Use Resources	Private Citizen	Davies, Robyn	Appendix A
89-1	3.13.1 Land Use Resources	Private Citizen	Woldstad, Bonnie	Appendix A
89-2	3.13.1 Land Use Resources	Private Citizen	Woldstad, Bonnie	Appendix A
90-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Halvarson, Ivar	Appendix A
91-1	3.11 Transportation Safety and Delay	Private Citizen	Whipple, William	Appendix A
91-2	3.11 Transportation Safety and Delay	Private Citizen	Whipple, William	Appendix A
92	Non-substantive	Private Citizen	Study, Don	Appendix A, (Not Bracketed)
93-1	3.13.3 Hazardous Materials/Waste Sites	Private Citizen	Griffin, Lee	Appendix A
94-1	3.1.4 NEPA Process	Private Citizen	Drake, Harvey	Appendix A
94-2	3.2.1 Proposed Action and Alternatives	Private Citizen	Drake, Harvey	Appendix A
94-3	3.4.6 Floodplain Resources	Private Citizen	Drake, Harvey	Appendix A
95-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Curtis, Shelly	Appendix A
95-2	3.13.1 Land Use Resources	Private Citizen	Curtis, Shelly	Appendix A
95-3	3.13.1 Land Use Resources	Private Citizen	Curtis, Shelly	Appendix A
96-1	3.5.2 Fisheries	Private Citizen	Lincoln, Carolyn	Appendix A
96-2	3.5.3 Game Mammals	Private Citizen	Lincoln, Carolyn	Appendix A
96-3	3.4.6 Floodplain Resources	Private Citizen	Lincoln, Carolyn	Appendix A
97-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Wills-Markgraf, Melissa	Appendix A
98	Non-substantive	Private Citizen	Bradbury, Terry	Appendix A, (Not Bracketed)
99-1	3.1.4 NEPA Process	Private Citizen	Parsons, Josh	Appendix A
100-1	3.2.3 Alternatives Suggested By Commenters	Private Citizen	Drake, Harvey	Appendix A
101-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Peterson, Dave	Appendix A
102-1	3.1.4 NEPA Process	Private Citizen	Martin, Terrence	Appendix A
103-1	3.13.1 Land Use Resources	Private Citizen	Werner, Jeff	Appendix A
104	Non-substantive	Private Citizen	Private Citizens	Appendix A, (Not Bracketed)
105-1	3.2.1.2 Eielson Alternative Segments	Private Citizen	Davies, Stu	Appendix A
106	Non-substantive	Private Citizen	Lincoln, Carolyn	Appendix A, (Not Bracketed)
107	Non-substantive	Private Citizen	Curtis, Shelly	Appendix A, (Not Bracketed)
108	Non-substantive	Private Citizen	Mills, Morrie	Appendix A, (Not Bracketed)
109	Non-substantive	Private Citizen	Private Citizens	Appendix A, (Not Bracketed)
110-1	3.4.6 Floodplain Resources	Private Citizen	Lynne, Victor	Appendix A
111	Non-substantive	Private Citizen	Howard, Will	Appendix A, (Not Bracketed)

Table 3-1 (continued)
Comment Index Organized by Comment Number

Final EIS Comment Number	Final EIS Section	Category	Commenter	Appendix Location
112-1	3.1.6 Presentation	Private Citizen	Howard, Carie	Appendix A
113-1	3.2.1.3 Salcha Alternative Segments	Private Citizen	Peterson, Dave	Appendix A
114-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Rees, Dan	Appendix A
114-2	3.2.1.5 Central Alternative Segments	Private Citizen	Rees, Dan	Appendix A
114-3	3.13.1 Land Use Resources	Private Citizen	Rees, Dan	Appendix A
114-4	3.13.1 Land Use Resources	Private Citizen	Rees, Dan	Appendix A
115-1	3.2.1.9 Delta Alternative Segment	Private Citizen	Hallgren, Peter	Appendix A
115-2	3.11 Transportation Safety and Delay	Private Citizen	Hallgren, Peter	Appendix A
115-3	3.2.1.9 Delta Alternative Segment	Private Citizen	Hallgren, Peter	Appendix A
115-4	3.1.1 Purpose and Need	Private Citizen	Hallgren, Peter	Appendix A
115-5	3.13.1 Land Use Resources	Private Citizen	Hallgren, Peter	Appendix A
116-1	3.2.5 General Support	Private Citizen	Leith-Dowling, Mary	Appendix A
117-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Joslin, Steve	Appendix A
118-1	3.2.1 Proposed Action and Alternatives	Private Citizen	Morris, Jack	Appendix A
119-1	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-2	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-3	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-4	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-5	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-6	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-7	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-8	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-9	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-10	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
119-11	3.13.4 Section 4(f) Resources	Federal Agency	U.S. Department of the Interior	Appendix B
120-1	3.13.1 Land Use Resources	Private Citizen	Vincent, Steve	Appendix A
121	Duplicate of 70	Private Citizen	Whipple, William C. and Joyce A.	Appendix B
122	Duplicate of 40	Private Citizen	Allen, Bill and Nancy	Appendix B
123	Duplicate of 44	Organization	Shaw Creek Boat Owners LLC, John	Appendix B
124	Duplicate of 50	Private Citizen	Morphis, Ted and Tracy	Appendix B
125	Duplicate of 54	Elected Official	Mayor, Fairbanks North Star Borough	Appendix B
126	Duplicate of 38	Organization	Delta Fish and Game Advisory Committee	Appendix B
127-1	3.13.1 Land Use Resources	Private Citizen	Woldstad, Bonnie	Appendix A

**Table 3-2
Comment Index Organized by Commenter**

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
Elected Officials			
54-1	3.2.1.3 Salcha Alternative Segments	Mayor, Fairbanks North Star Borough	Appendix B
54-2	3.6 Cultural Resources	Mayor, Fairbanks North Star Borough	Appendix B
54-3	3.20 Mitigation	Mayor, Fairbanks North Star Borough	Appendix B
54-4	3.20 Mitigation	Mayor, Fairbanks North Star Borough	Appendix B
54-5	3.4.6 Floodplain Resources	Mayor, Fairbanks North Star Borough	Appendix B
54-6	3.11 Transportation Safety and Delay	Mayor, Fairbanks North Star Borough	Appendix B
54-7	3.11 Transportation Safety and Delay	Mayor, Fairbanks North Star Borough	Appendix B
54-8	3.13.1 Land Use Resources	Mayor, Fairbanks North Star Borough	Appendix B
54-9	3.20 Mitigation	Mayor, Fairbanks North Star Borough	Appendix B
54-10	3.20 Mitigation	Mayor, Fairbanks North Star Borough	Appendix B
54-11	3.13.1 Land Use Resources	Mayor, Fairbanks North Star Borough	Appendix B
54-12	3.13.1 Land Use Resources	Mayor, Fairbanks North Star Borough	Appendix B
125	Duplicate of 54	Mayor, Fairbanks North Star Borough	Appendix B
Federal Agencies			
34-1	3.5.2 Fisheries	U.S. Department of the Interior	Appendix B
34-2	3.20 Mitigation	U.S. Department of the Interior	Appendix B
34-3	3.5.4 Birds	U.S. Department of the Interior	Appendix B
34-4	3.20 Mitigation	U.S. Department of the Interior	Appendix B
34-5	3.17 Cumulative Impacts	U.S. Department of the Interior	Appendix B
60-1	3.1.4 NEPA Process	Environmental Protection Agency	Appendix B
60-2	3.1.1 Purpose and Need	Environmental Protection Agency	Appendix B
60-3	3.2.1 Proposed Action and Alternatives	Environmental Protection Agency	Appendix B
60-4	3.2.1.3 Salcha Alternative Segments	Environmental Protection Agency	Appendix B
60-5	3.2.1 Proposed Action and Alternatives	Environmental Protection Agency	Appendix B
60-6	3.8 Climate and Air Quality	Environmental Protection Agency	Appendix B
60-7	3.11 Transportation Safety and Delay	Environmental Protection Agency	Appendix B
60-8	3.4.4 Water Quality	Environmental Protection Agency	Appendix B
60-9	3.4.1 General Water Resources	Environmental Protection Agency	Appendix B
60-10	3.8 Climate and Air Quality	Environmental Protection Agency	Appendix B
60-11	3.20 Mitigation	Environmental Protection Agency	Appendix B
76-1	3.5.2 Fisheries	National Marine Fisheries Service	Appendix B
76-2	3.20 Mitigation	National Marine Fisheries Service	Appendix B
76-3	3.20 Mitigation	National Marine Fisheries Service	Appendix B
76-4	3.20 Mitigation	National Marine Fisheries Service	Appendix B
76-5	3.20 Mitigation	National Marine Fisheries Service	Appendix B
76-6	3.20 Mitigation	National Marine Fisheries Service	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
76-7	3.20 Mitigation	National Marine Fisheries Service	Appendix B
76-8	3.5.2 Fisheries	National Marine Fisheries Service	Appendix B
119-1	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-2	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-3	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-4	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-5	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-6	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-7	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-8	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-9	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-10	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
119-11	3.13.4 Section 4(f) Resources	U.S. Department of the Interior	Appendix B
State Agencies			
67-1	3.2.1 Proposed Action and Alternatives	Alaska Department of Transportation and Public Facilities	Appendix B
67-2	3.2.1 Proposed Action and Alternatives	Alaska Department of Transportation and Public Facilities	Appendix B
67-3	3.11 Transportation Safety and Delay	Alaska Department of Transportation and Public Facilities	Appendix B
67-4	3.11 Transportation Safety and Delay	Alaska Department of Transportation and Public Facilities	Appendix B
67-5	3.11 Transportation Safety and Delay	Alaska Department of Transportation and Public Facilities	Appendix B
67-6	3.13.2 Recreation Resources	Alaska Department of Transportation and Public Facilities	Appendix B
Local Agencies			
62-1	3.2.5 General Support	Fairbanks Metropolitan Area Transportation System	Appendix B
62-2	3.11 Transportation Safety and Delay	Fairbanks Metropolitan Area Transportation System	Appendix B
62-3	3.2.5 General Support	Fairbanks Metropolitan Area Transportation System	Appendix B
68-1	3.13.1 Land Use Resources	Fairbanks Fish and Game Advisory Committee	Appendix B
68-2	3.13.1 Land Use Resources	Fairbanks Fish and Game Advisory Committee	Appendix B
68-3	3.13.1 Land Use Resources	Fairbanks Fish and Game Advisory Committee	Appendix B
68-4	3.2.1 Proposed Action and Alternatives	Fairbanks Fish and Game Advisory Committee	Appendix B
68-5	3.2.1 Proposed Action and Alternatives	Fairbanks Fish and Game Advisory Committee	Appendix B
68-6	3.1.6 Presentation	Fairbanks Fish and Game Advisory Committee	Appendix B
68-7	3.2.3 Alternatives Suggested By Commenters	Fairbanks Fish and Game Advisory Committee	Appendix B
68-8	3.2.2 Alternatives Eliminated from Consideration	Fairbanks Fish and Game Advisory Committee	Appendix B
68-9	3.13.1 Land Use Resources	Fairbanks Fish and Game Advisory Committee	Appendix B
80-1	3.13.1 Land Use Resources	Fairbanks Fish and Game Advisory Committee	Appendix A

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
80-2	3.2.3 Alternatives Suggested By Commenters	Fairbanks Fish and Game Advisory Committee	Appendix A
80-3	3.5.3 Game Mammals	Fairbanks Fish and Game Advisory Committee	Appendix A
Organizations			
1-1	3.6 Cultural Resources	Salcha's Neighborly Organization	Appendix B
12-1	3.2.5 General Support	Whitestone Community Association	Appendix B
12-2	3.2.5 General Support	Whitestone Community Association	Appendix B
12-3	3.7 Subsistence	Whitestone Community Association	Appendix B
12-4	3.2.5 General Support	Whitestone Community Association	Appendix B
20-1	3.2.5 General Support	Alaska Miners Association, Inc.	Appendix B
20-2	3.2.1 Proposed Action and Alternatives	Alaska Miners Association, Inc.	Appendix B
30-1	3.2.1.2 Eielson Alternative Segments	Eielson Farm Community	Appendix B
33-1	3.2.3 Alternatives Suggested By Commenters	Railroad Safety and Development Group	Appendix B
33-2	3.2.1 Proposed Action and Alternatives	Railroad Safety and Development Group	Appendix B
33-3	3.8 Climate and Air Quality	Railroad Safety and Development Group	Appendix B
33-4	3.11 Transportation Safety and Delay	Railroad Safety and Development Group, Bob	Appendix B
33-5	3.8 Climate and Air Quality	Railroad Safety and Development Group, Bob	Appendix B
38-1	3.13.1 Land Use Resources	Delta Fish and Game Advisory Committee	Appendix B
38-2	3.5 Biological Resources	Delta Fish and Game Advisory Committee	Appendix B
126	Duplicate of 38	Delta Fish and Game Advisory Committee	Appendix B
44-1	3.4.1 General Water Resources	Shaw Creek Boat Owners LLC	Appendix B
44-2	3.4.4 Water Quality	Shaw Creek Boat Owners LLC	Appendix B
44-3	3.5.2 Fisheries	Shaw Creek Boat Owners LLC	Appendix B
44-4	3.4.2 Surface Water	Shaw Creek Boat Owners LLC	Appendix B
44-5	3.2.3 Alternatives Suggested By Commenters	Shaw Creek Boat Owners LLC	Appendix B
48-1	3.2.5 General Support	Resource Development Council	Appendix B
49-1	3.1.4 NEPA Process	Citizens' Advisory Commission on Federal Areas	Appendix B
49-2	3.13.1 Land Use Resources	Citizens' Advisory Commission on Federal Areas	Appendix B
49-3	3.1.4 NEPA Process	Citizens' Advisory Commission on Federal Areas	Appendix B
52-1	3.1.4 NEPA Process	Citizens' Advisory Commission on Federal Areas	Appendix B
53-1	3.1.4 NEPA Process	Alaska Outdoor Council	Appendix B
53-2	3.13.1 Land Use Resources	Alaska Outdoor Council	Appendix B
52-2	3.13.1 Land Use Resources	Citizens' Advisory Commission on Federal Areas	Appendix B
55-1	3.13.1 Land Use Resources	Alaska Fish Game Advisory Board	Appendix B
56-1	3.2.4 General Opposition	A and W Wholesale Co., Inc.	Appendix B
56-2	3.4.1 General Water Resources	A and W Wholesale Co., Inc.	Appendix B
56-3	3.1.1 Purpose and Need	A and W Wholesale Co., Inc.	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
56-4	3.1.4 NEPA Process	A and W Wholesale Co., Inc.	Appendix B
59-1	3.13.1 Land Use Resources	Alaska Trappers Association	Appendix B
59-2	3.13.2 Recreation Resources	Alaska Trappers Association	Appendix B
59-3	3.5.5 BLM Alaska Special Status Species	Alaska Trappers Association	Appendix B
64-1	3.2.5 General Support	Alaska Farm Bureau, Inc.	Appendix B
64-2	3.13.1 Land Use Resources	Alaska Farm Bureau, Inc.	Appendix B
74-1	3.2.1 Proposed Action and Alternatives	Alyeska Pipeline Service Company	Appendix B
123	Duplicate of 44	Shaw Creek Boat Owners LLC, John	Appendix B
22-1	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-2	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-3	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-4	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-5	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-6	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
22-7	3.13.4 Section 4(f) Resources	Alaska Railroad Corporation	Appendix B
61-8	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-13	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-2	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-3	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-4	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-5	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-6	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-7	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-9	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-10	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-11	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-12	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-14	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-15	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-16	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-17	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-18	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-19	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-20	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-21	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-22	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-23	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-24	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-25	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
61-26	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-27	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-28	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-29	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-30	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-31	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-32	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-33	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
61-34	3.6 Cultural Resources	Alaska Railroad Corporation	Appendix B
71-1	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-2	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-3	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-4	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-5	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-6	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-7	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-8	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-9	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-10	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-11	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-12	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-13	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-14	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-15	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-16	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-17	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-18	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-19	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-20	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-21	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-22	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-23	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-24	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-25	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-26	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-27	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-28	3.20 Mitigation	Alaska Railroad Corporation	Appendix B
71-29	3.20 Mitigation	Alaska Railroad Corporation	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
Private Citizens			
2-1	3.4.2 Surface Water	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-2	3.5.2 Fisheries	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-3	3.12 Navigation	Schuhmann and Groseclose, Barbara and Bob	Appendix B
2-4	3.4.2 Surface Water	Schuhmann and Groseclose, Barbara and Bob	Appendix B
3-1	3.2.5 General Support	Richard, Ryan	Appendix B
4-1	3.15 Socioeconomics	Parrish, April M.	Appendix B
4-2	3.2.1 Proposed Action and Alternatives	Parrish, April M.	Appendix B
4-3	3.13.2 Recreation Resources	Parrish, April M.	Appendix B
4-4	3.4.1 General Water Resources	Parrish, April M.	Appendix B
4-5	3.4.3 Groundwater	Parrish, April M.	Appendix B
4-6	3.2.1 Proposed Action and Alternatives	Parrish, April M.	Appendix B
4-7	3.2.1 Proposed Action and Alternatives	Parrish, April M.	Appendix B
5-1	3.2.1.2 Eielson Alternative Segments	Davies, Stuart M.	Appendix B
6-1	3.5 Biological Resources	Haines, Megan	Appendix B
6-2	3.3.5 Seismic Hazards	Haines, Megan	Appendix B
7-1	3.1.6 Presentation	Willcox-Healey, Vanessa	Appendix B
7-2	3.5.1 Vegetation	Willcox-Healey, Vanessa	Appendix B
7-3	3.3.4 Permafrost	Willcox-Healey, Vanessa	Appendix B
7-4	3.4.5 Wetlands	Willcox-Healey, Vanessa	Appendix B
8-1	3.3.4 Permafrost	Williams, David J.	Appendix B
8-2	3.2.1 Proposed Action and Alternatives	Williams, David J.	Appendix B
9-1	3.4.2 Surface Water	Trifone, Katie	Appendix B
9-2	3.5.2 Fisheries	Trifone, Katie	Appendix B
9-3	3.4.2 Surface Water	Trifone, Katie	Appendix B
10-1	3.3.1 Topography	Gouwens, Sarah	Appendix B
10-2	3.4.6 Floodplain Resources	Gouwens, Sarah	Appendix B
10-3	3.5.1 Vegetation	Gouwens, Sarah	Appendix B
11-1	3.2.4 General Opposition	Jewkes, Leonard	Appendix B
13-1	3.2.3 Alternatives Suggested By Commenters	Stenberg, Eric	Appendix B
13-2	3.2.3 Alternatives Suggested By Commenters	Stenberg, Eric	Appendix B
14-1	3.1.1 Purpose and Need	Curtis, Rochel	Appendix B
14-2	3.13.1 Land Use Resources	Curtis, Rochel	Appendix B
14-3	3.2.1 Proposed Action and Alternatives	Curtis, Rochel	Appendix B
14-4	3.5.2 Fisheries	Curtis, Rochel	Appendix B
14-5	3.5.3 Game Mammals	Curtis, Rochel	Appendix B
14-6	3.9 Noise and Vibration	Curtis, Rochel	Appendix B
15-1	3.2.1.2 Eielson Alternative Segments	Howk, Kristy	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
16-1	3.2.1.2 Eielson Alternative Segments	Howk, Murray E.	Appendix B
17-1	3.2.3 Alternatives Suggested By Commenters	Brannan, James H.	Appendix B
17-2	3.5 Biological Resources	Brannan, James H.	Appendix B
17-3	3.15 Socioeconomics	Brannan, James H.	Appendix B
18-1	3.2.3 Alternatives Suggested By Commenters	Gavin, Michael D.	Appendix B
18-2	3.1.1 Purpose and Need	Gavin, Michael D.	Appendix B
18-3	3.4.2 Surface Water	Gavin, Michael D.	Appendix B
18-4	3.5.3 Game Mammals	Gavin, Michael D.	Appendix B
18-5	3.12 Navigation	Gavin, Michael D.	Appendix B
18-6	3.1.1 Purpose and Need	Gavin, Michael D.	Appendix B
19-1	3.9 Noise and Vibration	Bless, Ronald	Appendix B
21-1	3.2.5 General Support	Jenkins, Michael E.	Appendix B
23-1	3.2.1 Proposed Action and Alternatives	Jeffries, Steven C.	Appendix B
24-1	3.4.6 Floodplain Resources	Schwartz, Margaret D.	Appendix B
25-1	3.2.1.3 Salcha Alternative Segments	Severin, Ken	Appendix B
26-1	3.1.1 Purpose and Need	Parsons, Joshua R.	Appendix B
27-1	3.1.6 Presentation	Jacobson, Jeff	Appendix B
27-2	3.2.1 Proposed Action and Alternatives	Jacobson, Jeff	Appendix B
28-1	3.13.3 Hazardous Materials/Waste Sites	Griffin Jr., Herbert L.	Appendix B
29-1	3.2.1.2 Eielson Alternative Segments	Etcheverry, Darcy	Appendix B
31-1	3.2.1.2 Eielson Alternative Segments	Davies, Robyn	Appendix B
32-1	3.12 Navigation	Vincent, Steve	Appendix B
32-2	3.5.2 Fisheries	Vincent, Steve	Appendix B
32-3	3.13.1 Land Use Resources	Vincent, Steve	Appendix B
32-4	3.13.1 Land Use Resources	Vincent, Steve	Appendix B
32-5	3.12 Navigation	Vincent, Steve	Appendix B
32-6	3.2.1 Proposed Action and Alternatives	Vincent, Steve	Appendix B
32-7	3.13.2 Recreation Resources	Vincent, Steve	Appendix B
32-8	3.9 Noise and Vibration	Vincent, Steve	Appendix B
32-9	3.5.2 Fisheries	Vincent, Steve	Appendix B
35-1	3.13.1 Land Use Resources	Dietrich, Brad	Appendix B
35-2	3.13.1 Land Use Resources	Dietrich, Brad	Appendix B
35-3	3.12 Navigation	Dietrich, Brad	Appendix B
35-4	3.9 Noise and Vibration	Dietrich, Brad	Appendix B
35-5	3.2.3 Alternatives Suggested By Commenters	Dietrich, Brad	Appendix B
36-1	3.13.1 Land Use Resources	Dalrymple, Larry	Appendix B
36-2	3.5.3 Game Mammals	Dalrymple, Larry	Appendix B
37-1	3.2.3 Alternatives Suggested By	Parker, James	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
	Commenters		
37-2	3.2.1.8 South Common Segment	Parker, James	Appendix B
37-3	3.2.1.9 Delta Alternative Segment	Parker, James	Appendix B
39-1	3.2.1.3 Salcha Alternative Segments	Vroman, Patricia	Appendix B
40-1	3.1.4 NEPA Process	Allen, Bill and Nancy	Appendix B
40-2	3.4.1 General Water Resources	Allen, Bill and Nancy	Appendix B
40-3	3.5.2 Fisheries	Allen, Bill and Nancy	Appendix B
40-4	3.4.3 Groundwater	Allen, Bill and Nancy	Appendix B
40-5	3.4.1 General Water Resources	Allen, Bill and Nancy	Appendix B
40-6	3.13.1 Land Use Resources	Allen, Bill and Nancy	Appendix B
40-7	3.5.2 Fisheries	Allen, Bill and Nancy	Appendix B
40-8	3.4.4 Water Quality	Allen, Bill and Nancy	Appendix B
40-9	3.2.3 Alternatives Suggested By Commenters	Allen, Bill and Nancy	Appendix B
41	Duplicate of 77	Halvarson, Ivar	Appendix B
42-1	3.11 Transportation Safety and Delay	Hopkins, Luke	Appendix B
42-2	3.13.1 Land Use Resources	Hopkins, Luke	Appendix B
42-3	3.2.1.2 Eielson Alternative Segments	Hopkins, Luke	Appendix B
43-1	3.13.1 Land Use Resources	Corcoran, Mary	Appendix B
45-1	3.12 Navigation	Vincent, Steven and Kathleen	Appendix B
45-2	3.5.2 Fisheries	Vincent, Steven and Kathleen	Appendix B
45-3	3.13.1 Land Use Resources	Vincent, Steven and Kathleen	Appendix B
45-4	3.13.1 Land Use Resources	Vincent, Steven and Kathleen	Appendix B
45-5	3.13.1 Land Use Resources	Vincent, Steven and Kathleen	Appendix B
45-6	3.12 Navigation	Vincent, Steven and Kathleen	Appendix B
45-7	3.2.1 Proposed Action and Alternatives	Vincent, Steven and Kathleen	Appendix B
45-8	3.13.2 Recreation Resources	Vincent, Steven and Kathleen	Appendix B
45-9	3.9 Noise and Vibration	Vincent, Steven and Kathleen	Appendix B
45-10	3.4.2 Surface Water	Vincent, Steven and Kathleen	Appendix B
45-11	3.5.3 Game Mammals	Vincent, Steven and Kathleen	Appendix B
45-12	3.1.4 NEPA Process	Vincent, Steven and Kathleen	Appendix B
45-13	3.2.1 Proposed Action and Alternatives	Vincent, Steven and Kathleen	Appendix B
45-14	3.1.5 Public Involvement	Vincent, Steven and Kathleen	Appendix B
45-15	3.13.3 Hazardous Materials/Waste Sites	Vincent, Steven and Kathleen	Appendix B
45-16	3.5.4 Birds	Vincent, Steven and Kathleen	Appendix B
45-17	3.13.2 Recreation Resources	Vincent, Steven and Kathleen	Appendix B
46-1	3.13.1 Land Use Resources	Fletcher, Randall	Appendix B
47-1	3.2.3 Alternatives Suggested By Commenters	Boone, Courtney	Appendix B
47-2	3.13.1 Land Use Resources	Boone, Courtney	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
47-3	3.9 Noise and Vibration	Boone, Courtney	Appendix B
47-4	3.5.2 Fisheries	Boone, Courtney	Appendix B
47-5	3.2.3 Alternatives Suggested By Commenters	Boone, Courtney	Appendix B
47-6	3.1.4 NEPA Process	Boone, Courtney	Appendix B
50-1	3.1.4 NEPA Process	Morphis, Ted and Tracy	Appendix B
50-2	3.2.3 Alternatives Suggested By Commenters	Morphis, Ted and Tracy	Appendix B
50-3	3.1.4 NEPA Process	Morphis, Ted and Tracy	Appendix B
50-4	3.2.1 Proposed Action and Alternatives	Morphis, Ted and Tracy	Appendix B
50-5	3.2.1 Proposed Action and Alternatives	Morphis, Ted and Tracy	Appendix B
50-6	3.1.4 NEPA Process	Morphis, Ted and Tracy	Appendix B
51-1	3.1.1 Purpose and Need	Claxton, Toni	Appendix B
51-2	3.9 Noise and Vibration	Claxton, Toni	Appendix B
51-3	3.13.1 Land Use Resources	Claxton, Toni	Appendix B
51-4	3.11 Transportation Safety and Delay	Claxton, Toni	Appendix B
51-5	3.5.2 Fisheries	Claxton, Toni	Appendix B
51-6	3.2.1 Proposed Action and Alternatives	Claxton, Toni	Appendix B
51-7	3.1.4 NEPA Process	Claxton, Toni	Appendix B
57-1	3.5.2 Fisheries	Pope, Philip	Appendix B
57-2	3.4.1 General Water Resources	Pope, Philip	Appendix B
57-3	3.4.2 Surface Water	Pope, Philip	Appendix B
57-4	3.11 Transportation Safety and Delay	Pope, Philip	Appendix B
57-5	3.9 Noise and Vibration	Pope, Philip	Appendix B
57-6	3.13.1 Land Use Resources	Pope, Philip	Appendix B
57-7	3.4.2 Surface Water	Pope, Philip	Appendix B
57-8	3.4.2 Surface Water	Pope, Philip	Appendix B
57-9	3.2.3 Alternatives Suggested By Commenters	Pope, Philip	Appendix B
57-10	3.4.5 Wetlands	Pope, Philip	Appendix B
58-1	3.13.3 Hazardous materials/Waste Sites	Hill, Jimmie W.	Appendix B
58-2	3.2.3 Alternatives Suggested By Commenters	Hill, Jimmie W.	Appendix B
63-1	3.2.3 Alternatives Suggested By Commenters	Claxton, David	Appendix B
63-2	3.5.3 Game Mammals	Claxton, David	Appendix B
63-3	3.13.2 Recreation Resources	Claxton, David	Appendix B
63-4	3.2.1 Proposed Action and Alternatives	Claxton, David	Appendix B
63-5	3.4.2 Surface Water	Claxton, David	Appendix B
65-1	3.2.3 Alternatives Suggested By Commenters	Schikora, Rick	Appendix B
65-2	3.13.1 Land Use Resources	Schikora, Rick	Appendix B
65-3	3.9 Noise and Vibration	Schikora, Rick	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
65-4	3.5.2 Fisheries	Schikora, Rick	Appendix B
65-5	3.9 Noise and Vibration	Schikora, Rick	Appendix B
65-6	3.5.2 Fisheries	Schikora, Rick	Appendix B
65-7	3.11 Transportation Safety and Delay	Schikora, Rick	Appendix B
65-8	3.5.4 Birds	Schikora, Rick	Appendix B
65-9	3.2.1 Proposed Action and Alternatives	Schikora, Rick	Appendix B
65-10	3.13.2 Recreation Resources	Schikora, Rick	Appendix B
65-11	3.2.1 Proposed Action and Alternatives	Schikora, Rick	Appendix B
66-1	3.13.2 Recreation Resources	Richards, Gerald A.	Appendix B
66-2	3.13.1 Land Use Resources	Richards, Gerald A.	Appendix B
66-3	3.2.3 Alternatives Suggested By Commenters	Richards, Gerald A.	Appendix B
66-4	3.13.2 Recreation Resources	Richards, Gerald A.	Appendix B
66-5	3.13.1 Land Use Resources	Richards, Gerald A.	Appendix B
69-1	3.4.1 General Water Resources	Gregory, Jeff	Appendix B
69-2	3.9 Noise and Vibration	Gregory, Jeff	Appendix B
69-3	3.5.2 Fisheries	Gregory, Jeff	Appendix B
69-4	3.11 Transportation Safety and Delay	Gregory, Jeff	Appendix B
69-5	3.2.1 Proposed Action and Alternatives	Gregory, Jeff	Appendix B
69-6	3.12 Navigation	Gregory, Jeff	Appendix B
69-7	3.2.3 Alternatives Suggested By Commenters	Gregory, Jeff	Appendix B
69-8	3.13.2 Recreation Resources	Gregory, Jeff	Appendix B
69-9	3.13.1 Land Use Resources	Gregory, Jeff	Appendix B
69-10	3.4.3 Groundwater	Gregory, Jeff	Appendix B
69-11	3.9 Noise and Vibration	Gregory, Jeff	Appendix B
69-12	3.9 Noise and Vibration	Gregory, Jeff	Appendix B
69-13	3.5.3 Game Mammals	Gregory, Jeff	Appendix B
69-14	3.11 Transportation Safety and Delay	Gregory, Jeff	Appendix B
69-15	3.4.1 General Water Resources	Gregory, Jeff	Appendix B
69-16	3.2.1 Proposed Action and Alternatives	Gregory, Jeff	Appendix B
69-17	3.2.1 Proposed Action and Alternatives	Gregory, Jeff	Appendix B
69-18	3.2.3 Alternatives Suggested By Commenters	Gregory, Jeff	Appendix B
69-19	3.2.3 Alternatives Suggested By Commenters	Gregory, Jeff	Appendix B
70-1	3.1.4 NEPA Process	Whipple, William C. and Joyce A.	Appendix B
70-2	3.13.1 Land Use Resources	Whipple, William C. and Joyce A.	Appendix B
72-1	3.13.1 Land Use Resources	Curnow, Christopher and Debra	Appendix B
73-1	3.2.3 Alternatives Suggested By Commenters	Schikora, Cheryl	Appendix B
73-2	3.9 Noise and Vibration	Schikora, Cheryl	Appendix B

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
73-3	3.5.2 Fisheries	Schikora, Cheryl	Appendix B
73-4	3.5.2 Fisheries	Schikora, Cheryl	Appendix B
73-5	3.11 Transportation Safety and Delay	Schikora, Cheryl	Appendix B
73-6	3.5.4 Birds	Schikora, Cheryl	Appendix B
73-7	3.1.4 NEPA Process	Schikora, Cheryl	Appendix B
75-1	3.2.5 General Support	Blockolsky, W.E.	Appendix B
77-1	3.2.3 Alternatives Suggested By Commenters	Halvarson, Ivar	Appendix B
77-2	3.4.6 Floodplain Resources	Halvarson, Ivar	Appendix B
77-3	3.9 Noise and Vibration	Halvarson, Ivar	Appendix B
77-4	3.3.2 Geology	Halvarson, Ivar	Appendix B
77-5	3.4.6 Floodplain Resources	Halvarson, Ivar	Appendix B
77-6	3.2.3 Alternatives Suggested By Commenters	Halvarson, Ivar	Appendix B
78-1	3.13.1 Land Use Resources	Vincent, Steve	Appendix A
78-2	3.2.1 Proposed Action and Alternatives	Vincent, Steve	Appendix A
78-3	3.12 Navigation	Vincent, Steve	Appendix A
78-4	3.9 Noise and Vibration	Vincent, Steve	Appendix A
78-5	3.5.2 Fisheries	Vincent, Steve	Appendix A
79-1	3.2.1.3 Salcha Alternative Segments	Severin, Ken	Appendix A
79-2	3.5.2 Fisheries	Severin, Ken	Appendix A
81-1	3.13.1 Land Use Resources	Hamsley, Willie	Appendix A
82-1	3.2.1.3 Salcha Alternative Segments	Beget, Jim	Appendix A
83-1	3.2.1.3 Salcha Alternative Segments	Wilbur, Roy	Appendix A
84-1	3.2.1.2 Eielson Alternative Segments	Etcheverry, Jacques E.	Appendix A
85-1	3.2.1.2 Eielson Alternative Segments	Smith, Warren	Appendix A
86-1	3.1.4 NEPA Process	Davies, Stu	Appendix A
86-2	3.2.1.2 Eielson Alternative Segments	Davies, Stu	Appendix A
86-3	3.2.1.2 Eielson Alternative Segments	Davies, Stu	Appendix A
87	Non-substantive	Etcheverry, Darcy	Appendix A, (Not Bracketed)
88-1	3.2.1.2 Eielson Alternative Segments	Davies, Robyn	Appendix A
88-2	3.13.3 Hazardous Materials/Waste Sites	Davies, Robyn	Appendix A
88-3	3.4.5 Wetlands	Davies, Robyn	Appendix A
88-4	3.5.3 Game Mammals	Davies, Robyn	Appendix A
88-5	3.9 Noise and Vibration	Davies, Robyn	Appendix A
88-6	3.2.1 Proposed Action and Alternatives	Davies, Robyn	Appendix A
88-7	3.13.1 Land Use Resources	Davies, Robyn	Appendix A
89-1	3.13.1 Land Use Resources	Woldstad, Bonnie	Appendix A
89-2	3.13.1 Land Use Resources	Woldstad, Bonnie	Appendix A
90-1	3.2.3 Alternatives Suggested By	Halvarson, Ivar	Appendix A

Table 3-2 (continued)
Comment Index Organized by Commenter

Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
	Commenters		
91-1	3.11 Transportation Safety and Delay	Whipple, William	Appendix A
91-2	3.11 Transportation Safety and Delay	Whipple, William	Appendix A
92	Non-substantive	Study, Don	Appendix A, (Not Bracketed)
93-1	3.13.3 Hazardous Materials/Waste Sites	Griffin, Lee	Appendix A
127-1	3.13.1 Land Use Resources	Woldstad, Bonnie	Appendix A
94-1	3.1.4 NEPA Process	Drake, Harvey	Appendix A
94-2	3.2.1 Proposed Action and Alternatives	Drake, Harvey	Appendix A
94-3	3.4.6 Floodplain Resources	Drake, Harvey	Appendix A
95-1	3.2.1 Proposed Action and Alternatives	Curtis, Shelly	Appendix A
95-2	3.13.1 Land Use Resources	Curtis, Shelly	Appendix A
95-3	3.13.1 Land Use Resources	Curtis, Shelly	Appendix A
96-1	3.5.2 Fisheries	Lincoln, Carolyn	Appendix A
96-2	3.5.3 Game Mammals	Lincoln, Carolyn	Appendix A
96-3	3.4.6 Floodplain Resources	Lincoln, Carolyn	Appendix A
97-1	3.2.1 Proposed Action and Alternatives	Wills-Markgraf, Melissa	Appendix A
98	Non-substantive	Bradbury, Terry	Appendix A, (Not Bracketed)
99-1	3.1.4 NEPA Process	Parsons, Josh	Appendix A
100-1	3.2.3 Alternatives Suggested By Commenters	Drake, Harvey	Appendix A
101-1	3.2.1.3 Salcha Alternative Segments	Peterson, Dave	Appendix A
102-1	3.1.4 NEPA Process	Martin, Terrence	Appendix A
103-1	3.13.1 Land Use Resources	Werner, Jeff	Appendix A
104	Non-substantive	Private Citizens	Appendix A, (Not Bracketed)
105-1	3.2.1.2 Eielson Alternative Segments	Davies, Stu	Appendix A
106	Non-substantive	Lincoln, Carolyn	Appendix A, (Not Bracketed)
107	Non-substantive	Curtis, Shelly	Appendix A, (Not Bracketed)
108	Non-substantive	Mills, Morrie	Appendix A, (Not Bracketed)
109	Non-substantive	Private Citizens	Appendix A, (Not Bracketed)
110-1	3.4.6 Floodplain Resources	Lynne, Victor	Appendix A
111	Non-substantive	Howard, Will	Appendix A, (Not Bracketed)
112-1	3.1.6 Presentation	Howard, Carie	Appendix A
113-1	3.2.1.3 Salcha Alternative Segments	Peterson, Dave	Appendix A
114-1	3.2.1 Proposed Action and Alternatives	Rees, Dan	Appendix A
114-2	3.2.1.5 Central Alternative Segments	Rees, Dan	Appendix A
114-3	3.13.1 Land Use Resources	Rees, Dan	Appendix A

Table 3-2 (continued)			
Comment Index Organized by Commenter			
Final EIS Comment Number	Final EIS Section	Commenter	Appendix Location
114-4	3.13.1 Land Use Resources	Rees, Dan	Appendix A
115-1	3.2.1.9 Delta Alternative Segment	Hallgren, Peter	Appendix A
115-2	3.11 Transportation Safety and Delay	Hallgren, Peter	Appendix A
115-3	3.2.1.9 Delta Alternative Segment	Hallgren, Peter	Appendix A
115-4	3.1.1 Purpose and Need	Hallgren, Peter	Appendix A
115-5	3.13.1 Land Use Resources	Hallgren, Peter	Appendix A
116-1	3.2.5 General Support	Leith-Dowling, Mary	Appendix A
117-1	3.2.1 Proposed Action and Alternatives	Joslin, Steve	Appendix A
118-1	3.2.1 Proposed Action and Alternatives	Morris, Jack	Appendix A
120-1	3.13.1 Land Use Resources	Vincent, Steve	Appendix A
121	Duplicate of 70	Whipple, William C. and Joyce A.	Appendix B
122	Duplicate of 40	Allen, Bill and Nancy	Appendix B
124	Duplicate of 50	Morphis, Ted and Tracy	Appendix B

3.1 Purpose and Need for Action

3.1.1 Purpose and Need

Summary Comment

Commenters requested clarification of the purpose and need for the project, asked questions, and made recommendations. Commenters questioned the economic feasibility of the project and recommended preparation of an overall cost-benefit analysis; stated that the Draft EIS does not provide any data to support the utility of the project and the need identified; requested that if there is data regarding the interest of residents, the military, or private industry to utilize the proposed service or an economic analysis of comparable passenger and freight costs, that this information be included in this Final EIS to support the purpose and need; stated that it seems inexplicable to promote a likely billion-dollar project to provide public transit where the demand is essentially nonexistent or increase tourism where there is really no attraction; and suggested a reevaluation of the need for the project and a revision in this Final EIS.

Commenters also questioned whether rail transportation of agricultural products would be economically competitive with truck transportation, and raised similar questions regarding military transport. Commenters expressed concern that the cost of construction and maintenance would make the use of such facilities cost prohibitive for transporting agricultural products and for military transport. Commenters also questioned whether the military would be financially responsible for a portion of the railroad or the bridge over the Tanana River. Other commenters asked whether they would be allowed to use the bridge over the Tanana River. Commenters expressed concern that if the military bases closed, the cost of maintaining the rail line would rest solely on the citizens of Alaska.

One commenter suggested that it is much more likely that the purpose of the project is either as a necessity for national defense by providing better access to the military training grounds of the Tanana Flats and the Donnelly training areas and a more secure route for missile transport to Fort Greely, or in expectation of a connection with an eventual Alaska-Canada rail line with a possible connection to an Alaska-Canada gas line.

Commenters questioned the need for an alternative to Richardson Highway, citing low traffic volumes with no congestion on the highway within the rail project boundaries. Commenters requested that if information concerning closure or inaccessibility of Richardson Highway is available, this be included in this Final EIS to support the explanation of a needed alternative to road travel. They stated that if this information is not available, there should be surveys or other data-collection efforts to obtain the information and the results included in this Final EIS.

Commenters also questioned the implication in the Draft EIS that the highway is not dependable year-round and is affected by inclement weather, one stating that he was not aware of the highway being closed due to weather in the last 25 years.

Commenters stated that the primary commercial freight generators, like the coal fields and oil refinery, are 'south' of the project, and the primary users, like Eielson Air Force Base (AFB), Fort Wainwright, Anchorage, and Fairbanks already have an adequate rail connection. Commenters requested information on the tonnage of freight that would be moved between Delta Junction and Fairbanks. One commenter suggested that all that is really required at this time is a bridge across the Tanana River for military access to their training grounds.

Commenters questioned whether commuter trains are needed along this route, asked for an

estimate of the number of passenger and freight trips, and asked how many commuters are expected to ride the line each day and questioned the cost per person per ride. Commenters also stated that different commuter resources along this same route have come and gone, went out of business for lack of business, and that most of the time the commuter vans that serviced the route came by empty or with just a couple of passengers. One commenter stated that for many years there has been a public van that goes up every weekday and this service continues. Another commenter asked how the rail line could offer a maximum of five round trips per day between Fairbanks and Delta Junction, a community of approximately 1,000 people. Commenters questioned what would draw tourists to Delta Junction compared to the existing rail line to Denali National Park and on to Southcentral Alaska. Commenters requested data regarding the number of tourists expected to use the passenger service.

Commenters questioned whether in the current state of the economy, this is really the best way to spend government funds. They mentioned the “Bridge to Nowhere” and called this project the “Rail to Nowhere.” One commenter stated that she felt equally ashamed of the wastefulness of this project. (14-1, 18-2, 18-6, 26-1, 56-3, 60-2, 51-1, 115-4)

Response

The proposed Northern Rail Extension involves a petition by a common carrier, the Alaska Railroad Corporation (ARRC or the Applicant), for a license or approval. It is not a government-proposed or -sponsored project. In cases like this, courts have held that project goals are to be determined by applicants, not the regulatory agency preparing the EIS. In this case, ARRC has stated that the purpose of the project is to provide freight and passenger rail service to the region south of North Pole, Alaska. The Applicant provided the purpose and need for the proposed project to the STB in the petition for authority to construct and operate the proposed rail line, and other Applicant-supplied filings. SEA reviewed those filings and presented the purpose and need for context in the Draft EIS.

There has been no cost-benefit analysis for the proposed rail line extension, and according to CEQ regulations (see 40 CFR 1502.23) that implement the requirements of the National Environmental Policy Act (NEPA), none is required:

For the purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations.

As part of its review of the application, the Board will consider the transportation-related merits of ARRC’s proposal along with the environmental record. The Board does not require that economic feasibility be demonstrated. Indeed, the Board’s founding statute (the ICC [Interstate Commerce Commission] Termination Act of 1995) sets railroad policy and states that it is the policy of the U.S. Government to (49 United States Code [U.S.C.] 10101(4)):

...ensure the development and continuation of a sound rail transportation system with effective competition among rail carriers and with other modes, to meet the needs of the public and national defense.

Under 49 U.S.C. 10901(c), the Board must authorize a rail line construction project “unless the Board finds that such activities are inconsistent with the public convenience and necessity.” This permissive licensing policy establishes a clear presumption in favor of rail construction proposals and conforms to the broader congressional policies mentioned above.

ARRC has not provided commuter or tourist ridership data for its proposed passenger service, but has indicated that it anticipates operating an average of four round-trip passenger trains per day between Fairbanks Intermodal Center and Delta Junction. ARRC has not indicated differences in the level of service between summer and winter. The daily traffic predictions are an annual average and allow for seasonal fluctuations and changes in demand. ARRC has indicated likely freight operations would consist of an average of one round-trip freight train per day with approximately 13,000 loaded freight cars per year. Products that could be transported by the common-carrier service include fuel, military equipment, agricultural products and equipment, mineral resource equipment, and consumer goods. The Applicant has stated that the rail line would provide an alternative to Richardson Highway as a means of transportation.

In response to comments, SEA has revised Section S.1 of the Draft EIS to remove a statement about no public transportation between Delta Junction and Fairbanks. SEA also revised Sections 1.2 and 2.1 of the Draft EIS to state that the City of Delta Junction operates a public coach service that operates between Delta Junction and Fairbanks with one round-trip per day, Monday through Friday. This coach service is funded by the City of Delta Junction. See Chapter 4 of this Final EIS.

3.1.2 Lead Agency

SEA did not receive comments on this topic.

3.1.3 Cooperating Agencies

SEA did not receive comments on this topic.

3.1.4 NEPA Process

Summary Comment

Commenters requested a 60-day extension of the public comment period for the Draft EIS. Commenters stated that an extension would serve the public interest because the initial 52-day public comment period is inadequate for the public to review and comment on an EIS more than 1,100 pages long. Other commenters noted the major holidays during the comment period.

Commenters noted that Federal land management agencies in Alaska routinely provide a minimum 60-day review and comment period for planning documents, EISs, and proposed revisions to regulations and policies, and that, more often, comment periods of 90 or 120 days are provided. Commenters also asked the STB to consider holding additional public meetings that focus primarily on access to state and Federal lands.

Commenters expressed concern that the public might not be fully aware of the potential impacts or restrictions on access across any lands or right-of-way conveyed to ARRC for the proposed rail line extension. (40-1, 45-12, 47-6, 49-1, 49-3, 50-1, 50-6, 51-7, 52-1, 53-1, 56-4, 73-7, 86-1)

Response

The CEQ NEPA implementing regulations require a minimum 45-day comment period on a Draft EIS (40 CFR 1506.10(c)). Based on the Draft EIS comments SEA received and attendance at and nature of comments received during the four public meetings held in the project area, SEA has determined that the 45-day comment period and four public meetings convened the week of

January 12, 2009, were appropriate, adequate, and consistent with the Board's NEPA implementing regulations (49 CFR 1105.10(4)).

SEA widely distributed the Draft EIS Summary (approximately 1,500 copies), which contained a CD-ROM with the entire Draft EIS. Section 23.6 of the Draft EIS includes a list of the organizations that received copies of the Draft EIS. The list includes many organizations related to hunting, fishing, and recreation. In addition, as described in Section 1.4 of the Draft EIS, SEA conducted broad public outreach to inform the public and agencies about the proposed action and facilitate public participation. Early in its environmental review process, SEA also sponsored three public scoping meetings in December 2005, and distributed a draft and final scope of study for the EIS. SEA received a number of comments from the public concerning access restrictions, which indicates that many people are aware of the issue. Sections 1.4 and 3.13 of this Final EIS provide SEA's responses to comments and a general discussion on access.

Comment

"If the STB is not able to implement the 'Good Neighbor' policy in regards to this request by considering moving then we would suggest the next step.

"More studies should be initiated to ensure the sustainability of the water quality, [anadromous] fish species, wildlife habitat and possible catastrophic effects on Critical Habitat Areas. Studies should also be done that are more current than those referred to in the EIS as mother nature has changed many characteristics of the Richardson Clearwater if not other streams subject to the impacts of the railroad implementation.

"More studies of the noise and vibration impact the rail line this close to a populated recreational stream will have on seasonal (summer) residents and retirees in this area as well as the wildlife that frequent the Richardson Clearwater and areas surrounding this area." (50-3)

Response

The Draft EIS complies with NEPA requirements. The level of information and analysis, the analytical methods and assumptions SEA used to characterize the reasonably foreseeable impacts, and the assessment of the potential environmental impacts of the Proposed Action and Alternatives comply with those required by NEPA. SEA's analysis allows the decisionmaker and the public to compare potential impacts of the alternatives, including a No-Action Alternative, and provides a clear basis for choice among the alternatives. In addition, SEA performed extensive fieldwork to obtain data on the environmental resources analyzed in the Draft EIS and has developed recommended mitigation measures (see Chapter 2 this Final EIS) to supplement the voluntary mitigation measures the Applicant offered to address potential impacts. To the extent other commenters provided greater detail in their comments about the analyses, those comments are addressed elsewhere in this chapter of the EIS.

Summary Comment

Commenters questioned whether the routes have been decided already. One commenter asked whether the rail line would cross at Bradbury or Flag Hill. Another commenter asked if the STB's final decision would pick the route or whether that would be decided by the railroad. (94-1, 102-1)

Response

The Board will decide whether to grant the Applicant's request for authority to construct and operate the proposed rail line. If the Board grants a license, it would specify which route the Applicant could construct and operate. The Board could also authorize more than one route, but the Applicant could only proceed with construction and operation of one of the authorized routes.

Comment

I've missed quite a bit, so I don't know what's been covered as far as the whole railroad extension. I know that the railroad is proposed to go 900 feet from my house, and I haven't received anything in the mail whatsoever, except for what I've been able to track on my own accord.

So I'm at a real loss in the railroad's going right by my house, so I'd like to know what the heck is going on and why meetings are during working hours instead of later on like at 7:00 or later in the evenings when people can have the time to come here. (99-1)

Response

As described in Section 1.4 of the Draft EIS, SEA conducted broad public outreach to inform the public and agencies about the proposed action and facilitate public participation. The mailing list used to distribute project information has approximately 1,500 names and addresses. The mailing list was generated over the course of more than 3 years, beginning with the Applicant's initial public meetings on the proposal and SEA's scoping meetings in December 2005. The mailing list included property owners along the proposed rail line right-of-way (ROW). Everyone on the mailing list received notice of the public meetings. SEA sponsored four public meetings on the Draft EIS in January 2009 in Fairbanks, North Pole, Salcha, and Delta Junction. The meetings were scheduled for 5:00 p.m. to 8:00 p.m. For those unable to attend the formal part of the meetings, SEA staff were available to discuss issues and a court reporter was available to take oral comments.

Comment

"The EPA [U.S. Environmental Protection Agency] commends the STB for its approach in establishing segments and associated alternatives for evaluation; a thorough discussion of mitigation measures; tribal involvement and consultation efforts; the inclusion of a greenhouse gas emissions analysis; and finally, the sponsorship of a public transportation project. Based on our review, we have rated the proposed action EC-2 (Environmental Concerns, Insufficient Information). This rating and a summary of our comments will be published in the *Federal Register*. A summary of the rating system we used in conducting our review of the draft EIS is enclosed for your reference.

"EPA has concerns regarding impacts to water quality, open-water habitats, wetlands, stream channels, and riparian areas. We are also concerned about ecological connectivity from rail line and road construction and operations, as well as river crossings as proposed. We believe that there is insufficient information regarding the purpose and need for the project, as well as impacts related to potential material sites and construction camps and staging areas. The draft EIS also does not reflect the recent EPA decision to designate a portion of the Fairbanks North Star Borough as non-attainment for PM_{2.5} [particulate matter with an aerodynamic diameter

equal to or less than 2.5 microns] or the delegation of the National Pollution Discharge Elimination System (NPDES) program to the State of Alaska. Finally, EPA questions the need for a maintenance road to run the length of the line given that the ARRC rail line is operated and maintained without such a road in other areas. We encourage STB to continue to refine segment alternatives for the final EIS in order to minimize these impacts in final preferred route development.” (60-1)

Response

Each of the detailed comments is addressed in the appropriate sections of this chapter.

Comment

“We appreciate you sending us copies of the Environmental Impact Statement for referenced project, and can see that a lot of thought and research went into preparing it. It appears that you did a thorough job, and are trying to restrict the impact on the environment with the least amount of negativity. We do thank you for all of the work that is going into this project. However, whenever you go into a populated neighborhood with a project of this magnitude, there are going to be adverse results for many of the people living in the area.” (70-1)

Response

SEA endeavors to clearly present project information and the potential environmental impacts of the project so the public and agency decisionmakers can readily consider and compare the Proposed Action and Alternatives.

3.1.5 Public Involvement

Comment

“The railroad project website is not being updated and when I last checked did not include mention of release of this Draft EIS—an attempt to minimize comments by not making a good effort to get the word out?” (45-14)

Response

The Board does not maintain a project Web site devoted to the Northern Rail Extension, and SEA assumes the Web site to which the commenter referred is maintained by the Applicant. The Board does not control the content of that Web site, but does post relevant project information in a timely manner to its own Web site, http://www.stb.dot.gov/stb/environment/key_cases_alaska.html.

3.1.6 Presentation

Summary Comment

Commenters commended the STB for writing an EIS that is easy to read and understandable to the general public. Commenters appreciated that most of the more technical terms were explained in context. Commenters noted that it would help readers better understand the proposed rail extension if maps showing alternatives identified the preferred alternative. (7-1, 27-1)

Response

The preferred alternative identified in the Draft EIS is the Applicant's preferred alternative. Draft EIS figures did not highlight ARRC's preferred alternative because NEPA requires equal consideration of all alternatives. SEA has identified its preferred alternative in this Final EIS.

Comment

These maps are done horribly. They were very, very, very poorly done. When I'm asking people here to show me where an item is and they're going well, let me see if I can find it, that shows how poorly done the mapping system is for people who want to know how much it's going to affect them in one way or another. When even your own people here couldn't find items for me on the map. They had to go find another book and drag it out to try and locate something because they couldn't show it to me on the map, it was too small.

And if they're wanting comments about individual items that affect individual people like a trail system or a – where a hunting line is and they don't have pictures to be able to show it, how can someone then properly identify something that's going to affect them? The only world that's important to us is our little bitty world, and my little bitty world isn't showing on there. So I wanted to get that in there. And I'm really unhappy. (112-1)

Response

SEA endeavors to clearly present project information and data so the public and agency decisionmakers can readily consider and compare the potential environmental impacts of a proposed action and alternatives. The Draft EIS includes a variety of maps and aerial photographs at different scales to illustrate the proposed rail extension and to assist readers by visually displaying spatial information in descriptions of the affected environment and environmental consequences.

Comment

“The abstract in the DEIS is misleading because it lacks a description of social impacts to developed property, the effects of being a linear barrier to recreational uses and the proximity impacts to a few developed remote areas that are just glossed over in the document.” (68-6)

Response

The abstract is a brief one-paragraph overview of the EIS that is part of the cover sheet mandated by CEQ regulations (40 CFR 1502.11(e)). It does not provide detail on potential impacts other than to highlight environmental resources that could be adversely affected. The impacts of concern to the commenter are covered in the land use analysis (see Chapter 13 of the Draft EIS and the responses to comments in this chapter of this Final EIS).

3.2 Proposed Action and Alternatives

3.2.1 Alternatives Analyzed in the Draft EIS

Comment

“Another issue related to the workforce is the section regarding ‘construction worker housing’. Specifically, what are the environmental impacts regarding the building of 33,000 housing units? Has the impact of this independent construction project been evaluated? Also, what happens

when the rail line is complete, what is to become of these units? I would be interested to see what the city of Fairbanks has to say about the influx of such a large workforce population and any issues they see arising from the proposed action.” (4-2)

Response

Draft EIS Section 15.3.2 explains that anticipated effects of project construction on the demand for housing would be minimal because most of the construction workers would be housed in construction camps. Moreover, a portion of the workforce would be comprised of people who already live in the area and would place no additional demands on local housing. The Draft EIS does not state that there would be a need for an additional 33,000 housing units due to the proposed action. Rather, this number refers to the number of existing and available units in the Fairbanks North Star Borough (FNSB). As described in Draft EIS Section 15.3.2, the construction phase of the project would be anticipated to generate 3,200 to 3,600 direct, full-time jobs over the 3- to 4-year construction period. The geographic distribution of employment created would depend on the location of firms supplying the labor and materials needed for the project. Draft EIS Section 2.3.3 addresses the anticipated locations of construction camps, and various sections throughout the Draft EIS address the potential environmental impacts of the camps.

Summary Comment

Commenters expressed concern regarding a power line along the proposed rail line. Specific concerns included the lack of detailed discussion on why a power line running the length of the rail line would necessary, how many towers would be needed, where the towers would be placed and how they would be constructed, what district the power would be supplied from, and the likelihood of a rate increase on local residents. One commenter expressed concern that all but one member of the Golden Valley Electric Association board of directors were unaware that the NRE was going to include a power line from Eielson to Delta. (4-6, 65-11)

Response

As stated in Draft EIS Section 2.3.4, permanent ancillary structures that are part of the proposed action include a passenger facility, section facilities, communications towers, and track sidings. The proposed passenger and section facilities would be in areas with available electrical service. As stated in Draft EIS Section 2.3.1, the Applicant’s proposed action would include construction of a power line within the proposed rail line ROW (see Figure 2-4). This new power line would provide power for such railroad equipment as signals and switches. During final design, the Applicant would develop the design of the power line, including poles, and identify the point(s) at which electrical service would tie into the existing electrical grid. The Applicant also would determine the method for supplying electrical service to new communications towers during final design. The commenter does not provide, and SEA is not aware of, information indicating that the proposed rail extension would affect energy rates.

Comment

“I would like to see a discussion on possible environmental effects from the leakage of train lubricants, diesel fuel etc.” (4-7)

Response

Draft EIS Sections 5.4.2, 5.5.2, and 5.6.2 describe potential impacts of spills and leaks of fuels and lubricants. Draft EIS Section 20.2.2 includes an Applicant voluntary mitigation measure (VM-3) to mitigate the potential impact of spills and leaks of fuel and lubricants. SEA has included this mitigation measure as recommended mitigation measure VM-3 in Chapter 2 of this Final EIS.

Comment

“I did not see anything dealing with the human waste from the temporary camps. The number to be employed was upwards of five thousand. Will the waste be disposed of onsite – and if so, what effect will that have on the wetlands? If it is taken offsite, how will it be transported, will that require heavy-duty roads, and what effect will that have on the permafrost and wetlands?”
(8-2)

Response

Specific decisions related to the methods for treatment and disposal of human waste generated in the temporary construction camps, if required, would be determined during final design and permitting. Draft EIS Section 20.2.3 includes SEA’s preliminary mitigation measure 44, which relates to the most appropriate methods to achieve proper handling, storage, and disposal of human wastes. In Draft EIS Section 20.2.10, the Applicant’s voluntary mitigation measure VM-49 would require that contractors dispose of construction-generated wastes in accordance with applicable Federal, state, and local regulations. SEA has included both measures as recommended mitigation measures 45 and VM-48 in Chapter 2 of this Final EIS. Draft EIS Sections 3.5.2 and 4.5.2 described potential impacts to permafrost and wetlands from proposed rail line construction activities, including equipment.

Comment

“If I had to choose an existing proposed route, the following would be my comments.

1. North Common Segment - No comment or concerns
2. Eielson Alternative Segment - No comment or concerns
3. Salcha Alternative Segment #1 - I feel that Salcha Alternative Segment #2 would adversely affect the citizens of Salcha, through increased noise, adverse aesthetics, the loss of personal property and the adverse affects on Salcha School, Salcha Ski Trails and the Historic Salchaket Indian burial site.
4. Connector B - This route directly affects my family’s access to our privately owned recreational cabin on Five-Mile Clear Creek and I am seeking confirmation that this access will be available to all forms of watercraft at all times. I am also concerned that small streams are going to be blocked or dammed, resulting in a lack of adequate water flow into Five-Mile Clear Creek.
5. Central Alternative #2 - Central Alternative #1 runs between our recreational cabin on Fivemile Clear Creek and our moose hunting area. According to your maps, it actually runs right through our moose hunting area, and is affecting an existing trail system that we have cleared and maintained for over 25 years. These trails are not only used for

hunting, but for extensive recreational use 6 months out of the year, by not only me and my family, but also by many other users as well. In addition to this, these trails have been traditionally used for trapping during the winter months. Access to these trails and beyond are a prime concern for those of us who use this vast trail system.

6. Donnelly #2 - No comment or concerns
7. South Common Segment - No comment or concerns
8. Delta Segments - I feel that the Delta #2 segment would have an adverse affect on the Delta Junction area by way of increased noise, adverse aesthetics and the loss of personal property.” (14-3)

Response

As described in Draft EIS Section 12.2.7, the rail line would cross Fivemile Clearwater River via bridges that would facilitate the movement of jet boats. This requirement is addressed by SEA’s preliminary mitigation measure 60 (see Draft EIS Chapter 20), which is included as recommended mitigation measure 60 in this Final EIS. As shown in Draft EIS Figure 4-5, ARRC would use bridges and culverts near Fivemile Clearwater River (and elsewhere) to allow water to flow under the rail line where it would cross streams. Draft EIS Sections 9.3.2 and 14.3.2 describe the potential noise and visual impacts of Salcha Alternative Segment 2. Draft EIS Section 13.1.3 describes potential impacts to land use, including private property, associated with Salcha Alternative Segment 2. Draft EIS Section 13.2.3 describes potential impacts to hunting and recreational use from Central Alternative Segment 1. Draft EIS Section 4.5.2 describes potential impacts to wetlands from Connector Segment B.

Section 2.4.13 of the Draft EIS states that construction of Salcha Alternative Segment 2 would require that ARRC relocate the Salcha Elementary School. SEA’s preliminary mitigation measure 57 (see Draft EIS Chapter 20), which is included as recommended mitigation measure 58 in this Final EIS, includes measures to determine the precise extent of potential impacts to the Salcha School and Ski Area and develop and implement measures that would minimize disturbance to recreational activities at the school and ski area. Draft EIS Section 6.3 addresses potential impacts to cultural resources from the proposed rail extension, including the Salchaket Village.

SEA’s preliminary mitigation measure 61 (see Draft EIS Chapter 20), which is included as a recommended mitigation measure 61 in this Final EIS, would require the Applicant to consult with resource management agencies and appropriate trail user groups regarding provision, access, and design of crossings for trail easements that would intersect the proposed rail line. In addition, SEA’s preliminary mitigation measure 64 (see Draft EIS Chapter 20), which is included as recommended mitigation measure 64 in this Final EIS, states that the Applicant shall consult with appropriate agencies and user groups to determine a construction period of least disturbance to recreation activities associated with waterways and the trail system. See Chapter 2 of this Final EIS for measures designed to mitigate visual impacts. As discussed in Draft EIS Section 9.3, SEA did not identify any adverse noise impacts from the proposed rail extension.

Comment

“AMA [Alaska Miners Association] strongly supports the proposed project and generally agrees with the applicants’ preferred segments as identified in Table S-1 with two important exceptions.

We do not support Connector B or Central Alternative 2. Unless these segments are significantly lower cost alternatives, they should be replaced with Connector A and Central Alternative 1.

“Connector B and Central 2 are much closer to the Tanana River. These segments just barely skirt the various braids of the Tanana. The Tanana River is known for flooding and for being a major braided river system. From one year to the next the river can move to new areas within the floodplain and over longer time it can make major changes. By locating the railroad so close to the river it is almost certain that over time the railroad will be threatened by the movement of the river. The result will be significant cost to protect the railroad. The Richardson Highway is the prime example of the problems this river creates. Following Connector A and Central 1 would effectively eliminate this hazard.

“Another benefit of following Connector A and Central 1 would be improved access for military. Rail sidings and unloading areas would be farther from the river and on higher ground.” (20-2)

Response

Consistent with CEQ regulations, SEA considered the potential environmental impacts of a reasonable range of feasible alternative segments. Draft EIS Section 4.6.2 describes potential impacts to floodplains. If in the future the military decided to construct off-loading facilities, the location of such facilities would be determined at that time. Such facilities might or might not be constructed on Central Alternative 1 or 2; there are many options for the facility to be located.

Comment

“Will there be provisions for the public to cross the river via your bridges with four wheelers for recreation, hunting, fishing, etc?” (23-1)

Response

As indicated in Draft EIS Section 2.3.3, the Applicant has stated that vehicle access roads, including bridges, would not be available for public use.

Comment

“All culverts should be large enough for the passage of canoes, dogsleds, snow machines, fish passage etc. for year round access and travel.” (27-2)

Response

The Applicant’s voluntary mitigation measure VM-9 (see Draft EIS Section 20.2.2), which SEA has included in Chapter 2 of this Final EIS as recommended mitigation measure VM-9, provides details on culvert design for fish passage. SEA’s preliminary mitigation measures 54 and 60 (see Draft EIS Sections 20.2.9 and 2.2.10), which are included in this Final EIS as recommended mitigation measures 54 and 60, would establish requirements for passage of boats and other equipment through stream culverts. Draft EIS Section 13.2.3 describes recreational-trail crossings; Figure 13-1 illustrates the design features of grade-separated recreational-trail crossings. Details concerning trail crossings that would involve culverts would be determined in consultation with resource agencies, as indicated in SEA’s preliminary mitigation measure 61 (see Draft EIS Section 2.2.10). SEA has included this mitigation measure as recommended mitigation measure 61 in Chapter 2 of this Final EIS.

Summary Comment

Commenters stated that they could not find a description of the exact location of the construction camp or construction storage area across the bridge on the south side of the Tanana River in the Fivemile Clear Creek area. They stated that this should be included in the EIS. (32-6, 45-7, 78-2)

Response

Specific decisions related to the locations of temporary construction camps and construction storage areas would be determined during project final design and permitting. Draft EIS Sections 4.2.2, 4.3.2, 4.4.2, 4.5.2 and 4.6.2 describe potential impacts to water resources from the Tanana/Donnelly temporary construction facilities.

Comment

“[I]nformation regarding the existing alignment through Fort Wainwright and Fairbanks suggests the anticipated added railroad traffic will exacerbate existing air quality, noise, traffic problems, and of utmost importance, more safety concerns. The documented impacts make it clear that continuing routing rail traffic through these communities is highly undesirable.

“We noted from the report that while the number of trains will increase, the average lengths will decrease. This may be misleading to reviewers, as well as introduced analytical errors if only average lengths are considered. Passenger service will be limited to very short trains – perhaps as short as one motorized car. Would it be more accurate to say that freight trains, especially fuel will remain at current lengths and more frequent? It is these long trains that cause serious air quality, noise and traffic impacts.” (33-2)

Response

Draft EIS Sections 8.3, 9.3, and 11.3 describe potential impacts to air quality, noise, and traffic and safety from passenger and freight trains. Use of average train length to identify potential environmental impacts is appropriate and did not result in misleading results. Analyses of potential impacts to air quality and traffic delays considered total emissions and total delay, respectively, and would have produced the same conclusions if passenger and freight train lengths had not been averaged. Potential noise impacts were evaluated based on the day-night average noise level (DNL); analysis using different lengths for passenger and freight trains would yield the same average noise level. Potential safety impacts depend on train frequency (number of trains per day); use of different lengths for passenger and freight trains would not change the estimated impacts. No change in the frequency or length of trains transporting fuel from the North Pole refinery on the existing rail line is anticipated as a result of the proposed rail line extension.

Comment

“Where are proposed borrow pit sites? Their impacts should be evaluated and addressed.” (45-13)

Response

Specific decisions related to the locations of borrow areas would be determined during final design and permitting. Draft EIS Sections 5.3.2, 5.5.2, and 13.3.3 describe potential

environmental impacts to vegetation resources, game mammals, and land use from borrow areas. SEA's preliminary mitigation measure 4 (see Draft EIS Section 20.2.2) addresses siting of borrow areas. This mitigation measure is also included as recommended mitigation measure 4 in Chapter 2 of this Final EIS.

Comment

“Please consider our suggestions and those from all who are concerned about the effects of the construction and continued use of the railroad. We certainly do not oppose the construction of the railroad but we do object to the proposed location especially of the ‘South Common Segment.’” (50-4)

Response

SEA acknowledges the comment.

Comment

“We do object firmly to the construction of a road along side or in conjunction with the railroad.” (50-5)

Response

SEA acknowledges the comment.

Comment

“EPA [U.S. Environmental Protection Agency] recognizes that the STB did not identify a preferred alternative for each of the project segments, and that this is standard practice for many agencies or projects. As such, EPA reviewed and evaluated each of the proposed alternatives for each segment, focusing on ARRC's preferred segments, which were identified in the draft EIS as the Proposed Action. Overall, EPA believes that the ARRC preferred routes represent the alternatives which cause the least impact to a variety of environmental resources, and supports the selection of these alternatives by STB as its preferred alternative(s). There are, however, adjustments that can be made within each ARRC preferred alternative to provide better protection or further minimize impacts to various resources, particularly impacts to water quality, open water habitats, wetlands, stream channels, and riparian areas. One such adjustment is the consideration of full span bridges for stream, river and wetland crossings. Another is reducing the footprint of the road, or eliminating road segments as possible, as well as construction camps and staging areas.

“EPA recommends that any preferred alternative identified by the STB in the final EIS be further refined to further reduce project impacts, particularly to water quality, surface waterbodies and wetlands. This refinement will also help to ensure compliance with Clean Water Act (CWA) 404(b)(1) guidelines. When preferred alternatives are identified, EPA encourages the designation and complete description of material sites, construction camps, and staging areas, and a thorough analysis of the anticipated impacts associated with each of these locations.” (60-3)

Response

The Draft EIS provides a thorough and comparable analysis of each of the route alternatives analyzed in detail, as required by CEQ regulations. Final decisions regarding exact bridge dimensions and location of the material sites, constructions camps, and staging areas would be made during final design and permitting. Minor route adjustments could also be made during final design and permitting.

Summary Comment

Commenters expressed concern about the access road along the rail line and questioned the need for such an access road. Commenters noted that there are other existing rail lines in Alaska that do not require such a road because maintenance of the track can be conducted by hi-rail equipment and if the proposed NRE cannot be serviced by hi-rail equipment, the reasons for this and any other purposes for the road should be stated in the Final EIS. Commenters also questioned why the military would need the access road in addition to the rail line and expressed concern that the access road would lead to increased unauthorized use of the Tanana flats hunting grounds by the general public. (51-6, 60-5, 63-4, 65-9)

Response

As explained in Draft EIS Section 2.3.3, the Applicant plans to construct an access road in the rail line ROW to enable them to move equipment and materials along the long linear ROW during rail line construction. Following construction, the Applicant plans to use the road to support rail line maintenance activities, and the military could use the road to move personnel and equipment between the Tanana Flats Training Area and the Donnelly Training Area. Under Alaska law, the ROW on state-managed lands would be available for use as a utility corridor and non-railroad vehicles could use the road to move along the ROW for utility inspection and maintenance activities. See Chapter 4 of this Final EIS for additional discussion of the anticipated use of the access road.

Comment

The commenter stated that they would like to see accommodations for increased access to support timber sales, and specifically cited a vehicle bridge across Delta River and Delta Creek. (117-1)

Response

As discussed in Draft EIS Section 2.3.3, the Applicant does not propose to construct a vehicle bridge over Delta River because it would not be necessary based on the purpose and need for the project. The Applicant proposes to construct a vehicle bridge across Delta Creek as part of the planned access road. The Applicant has indicated that it would grant permission for use of the access road for certain state business, including timber harvest, subject to specific conditions, including approval from the military where the rail line and road would cross Federal lands reserved for military use. The military has not currently decided whether or not to permit such uses.

Comment

The commenter stated their preference that all the roads constructed for the project be off limits to public use. (118-1)

Response

As discussed in Draft EIS Section 2.3.3, the Applicant does not plan to maintain the unpaved access road paralleling the rail line as a public road.

Comment

The commenter questioned how the Draft EIS arrived at the amount of land affected by the project, and requested clarification of the width of the ROW. (88-6)

Response

Draft EIS Section 2.3.1 explains that the Applicant estimated the land required for ancillary facilities and proposed a 200-foot-wide ROW for the rail line and notes that the width of the ROW might be reduced, as necessary, to minimize impacts to sensitive resources or accommodate the terrain. Under Alaska Statute (AS) 42.40.460, Extension of the Alaska Railroad (2005), ARRC would need to obtain a 500-foot reserved corridor from the Alaska Department of Natural Resources (ADNR) for rail line construction on state-managed lands. Upon completion of the project, the corridor width would be reduced to 200 feet and the area conveyed to ARRC for rail line operations; ADNR would continue to administer the remainder of the initially reserved corridor.

Comment

Will the railroad build the bridge, even though they don't have funding for the rest of the railroad? (94-2)

Response

Draft EIS Section 2.3.3 describes the bridges ARRC would construct as part of the project, including the possibility that ARRC would build the bridge over Tanana River before the rail line.

Comment

A commenter asked who would be responsible for relocating Salcha Elementary School and whether the school would be moved or rebuilt. The commenter also asked who would pay for the relocation of the school and what would happen to the ski trails near the school. (95-1)

Response

Draft EIS Section 2.4.13 states that Salcha Alternative Segment 2 would require that ARRC relocate Salcha Elementary School. Section 2.3.2 describes Salcha Alternative Segment 2 and its effects on the Salcha Elementary School and Richardson Highway. Figure 13-5 illustrates the proposed relocation of Salcha Elementary School and Richardson Highway and the nearby ski trails. SEA's preliminary mitigation measure 57 (see Draft EIS Chapter 20) includes measures to determine the precise extent of potential impacts to Salcha School and Ski Area and develop mitigation measures to minimize disturbance to recreational activities at the school and ski area.

SEA has included this mitigation measure as recommended mitigation measure 58 in Chapter 2 of this Final EIS.

Comment

A commenter asked if the public would be able to utilize the bridges to access hunting and recreational areas. The commenter also asked if the road upgrades could include turn lanes and merge lanes, and if their community could get a whistle stop to assist with local transit and shipping. (97-1)

Response

As explained in Draft EIS Section 2.3.3, the Applicant does not plan to allow public use of vehicular bridges, including the dual-modal bridge over Tanana River constructed as part of the proposed rail line extension. The Applicant has not proposed to provide enhancements to existing roads, except for improvements required to support rail line construction, or to provide for passenger facilities in locations other than Fairbanks and Delta Junction. The Applicant would operate as a common carrier and would be obligated to provide freight service to a shipper that requests such service. Draft EIS Section 11.3 describes potential impacts to road safety and delay from the proposed rail line extension. Based on the information available, SEA found that the potential impacts would be temporary and localized during construction and minimal during operations and would not warrant mitigation, such as a requirement for upgrades of turn and merge lanes.

Comment

A commenter expressed concern about Eielson Alternatives 1 and 2, specifically the loss of private agricultural lands and the crossing of the trail network. The commenter expressed a preference for Eielson Alternative 3. (114-1)

Response

Draft EIS Section 13.1.3 describes potential impacts to private land. Section 13.2.3 describes the potential impacts to recreation resources resulting from the Proposed Action and Alternatives, including the Twentythreemile Slough Dog Sledding Trails and other multiuse trails in the vicinity of the Eielson Alternative Segments. Draft EIS Figures 13-2 and 13-3 show where along the Eielson Alternative Segments the Applicant has proposed to provide trail crossings as part of the Proposed Action and Alternatives. SEA's preliminary mitigation measure 63 (see Draft EIS Section 20.2.10) would require that the Applicant consider, in collaboration with applicable resource management agencies, such as the Fairbanks North Star Borough Department of Parks and Recreation, the Alaska Department of Natural Resources, and the Alaska Department of Fish and Game, the provision of trail crossings for the Twentythreemile Slough Dog Sledding Trails. SEA has revised this mitigation measure to require that the Applicant provide between zero and five crossings, depending on the Eielson alternative segment, for the Twentythreemile Slough Dog Sledding Trails and included this revision in recommended mitigation measure 63 in Chapter 2 of this Final EIS.

Comment

“DOT&PF [Alaska Department of Transportation and Public Facilities] prefers a right turn pocket for the access to Tom Bear Trail from the Richardson Highway.” (67-1)

Response

SEA acknowledges the comment.

Comment

“DOT&PF [Alaska Department of Transportation and Public Facilities] prefers the route with the least amount of roadway crossings. Of those crossings proposed in the various alternatives, what is the plan for maintaining them if they are constructed?” (67-2)

Response

SEA acknowledges the comment. Responsibility for maintenance of grade crossings would be determined by the Applicant and the road owner during establishment of the rail line right-of-way.

Comment

“The DEIS should not assume that the railroad would be a better all weather alternative transportation route between Eielson and Delta Junction unless it contains the basis of the assumptions. For example, if you were to research how many days the Richardson Highway between these termini has been closed to public traffic in the past 30 years AND compare that to the number of days the Alaska Railroad track between, say, Talkeetna and Nenana has been closed during the same period, the highway will look like a very good alternative indeed. With no use levels forecast in the DEIS except ‘trains per day’ how is it possible to compare train usage to highway usage?” (68-4)

Response

As stated in Draft EIS Section 1.2, the proposed rail line would provide an alternative to Richardson Highway for freight and passenger service between Fairbanks and Delta Junction, Alaska. SEA has deleted the Draft EIS Summary reference to inclement weather. See Chapter 4 of this Final EIS.

Comment

“The applicant should not rely on the general concept of ‘poor soils’ to not consider other minor reroutes to the alternatives. The present track system between Seward and Fairbanks crosses some very poor soils and has crossed them for all the years of operation. Soil conditions are one of the issues influencing alignment selection but there is too much history of the successful use of poor soils to qualify, for example, permafrost as a high priority.” (68-5)

Response

Draft EIS Section 2.2 and Appendix D summarize development of the route alternatives; further details are available in documents cited therein. As described in these sources, route alternatives were developed considering a host of factors, not limited to or focused on soil quality. Draft EIS Table 2-1 lists the reasons some of the initial alternative alignments were eliminated from

consideration and shows that poor soils was not a factor in the elimination of most of those alignments. Draft EIS Section D.1.2 describes the alignment development process and the protocol used to evaluate potential alignments. In addition, AS 42.40.460, Extension of the Alaska Railroad (2005), specifies factors that ARRC must consider in identifying the proposed rail line ROW.

Comment

“EIS states a year round road along the Railroad bed to open after and during construction. What impact will this have from an environmental concern?” (69-16)

Response

The Draft EIS resource chapters (3 through 16) describe potential impacts resulting from construction and use of the proposed access road (see the Environmental Consequences section in each of those chapters).

Comment

“Department of Natural Resources Don Perrin stated to us that if there is going to be a road it should be open to the public. What impact will this have on the wildlife and environment?” (69-17)

Response

As indicated in Draft EIS Section 2.3.3, the Applicant does not intend to allow public use of the access road to be constructed in the ROW.

Comment

“[Are] there any construction camps or gravel pits planned for the ‘South Common Segment’?” (69-5)

Response

Draft EIS Section 2.3.3 describes the proposed construction camps and acquisition of materials for rail line construction and indicates that there could be a construction camp and borrow areas along the South Common Segment.

Comment

“Thank you for the opportunity to comment on the subject Draft Environmental Impact Statement, issued on December 12, 2008 on behalf of the Applicant, the Alaska Railroad Corporation. Alyeska Pipeline Service Company (Alyeska) provides these comments on behalf of the owners of the Trans Alaska Pipeline System (TAPS) as their agent.

“The DEIS describes a project that may run adjacent to TAPS for a segment and states that a) the project will cross TAPS, b) the project’s construction would have to be closely coordinated with Alyeska and c) the project would meet all industry standards to ensure safety and minimal disruption to pipeline operations. We add that the project must be compatible with TAPS safety and integrity, including environmental impacts and that due to several factors, including

variations in pipeline construction, further analysis is required to determine the best location for a TAPS crossing. If any TAPS compatibility concerns cannot be resolved, Alyeska reserves the right to object, on a site- or detail-specific basis, to the proposed design and construction of the rail extension project.” (74-1)

Response

Draft EIS Section 10.2.3 states that ARRC would have to closely coordinate all construction activities with the Alyeska Pipeline Service Company and would adhere to all industry standards to ensure safety and minimal disruption to pipeline operations. Development of the details of the TAPS crossing would be part of the final design process.

3.2.1.1 North Common Segment

SEA did not receive comments on this topic.

3.2.1.2 Eielson Alternative Segments

Summary Comment

Commenters expressed opposition to Eielson Alternative Segments 1 and 2 due to a perceived decline in property values, loss of farming income, loss of agricultural land, restricted access to recreation opportunities, creation of safety hazards, increased noise and vibration, loss of visual aesthetics, and reduction in wildlife habitat. They expressed their preference for Eielson Alternative Segment 3. (5-1, 31-1, 42-3, 85-1, 86-2, 86-3)

Response

SEA acknowledges the commenters’ opposition to Eielson Alternative Segments 1 and 2 and support for Eielson Alternative Segment 3. The Draft EIS identifies and discloses the potential environmental impacts of the Proposed Action and Alternatives, including those the commenters mention, for consideration by agency decisionmakers and the public. The STB will consider the entire environmental record, including potential impacts and the mitigation measures in Chapter 2 of this Final EIS in deciding whether to license the proposed rail line.

Summary Comment

Commenters expressed a preference for Eielson Alternative Segment 3 based on its proximity to Richardson Highway and Eielson Air Force Base. They stated their belief that it would have fewer impacts on the residents of the Eielson Farm area. (15-1, 16-1, 30-1)

Response

SEA acknowledges the comments. Draft EIS Sections 9.3 and 13.1.3 address potential impacts to homes near the Eielson alternative segments from the proposed rail extension.

Summary Comment

Commenters expressed concern that Eielson Alternatives 1 and 2 would impact their property and indicated that the project would disrupt agricultural lands and biological resources, including species such as lynx, marten, otters, wolves, and grayling. (29-1, 84-1)

Response

SEA acknowledges the comments. Draft EIS Sections 5.5 and 5.6 describe potential impacts to wildlife habitat. Draft EIS Section 5.4 and Appendix G, Essential Fish Habitat, and Final EIS Appendix E, Essential Fish Habitat, describe potential impacts to grayling and other fish habitat. Draft EIS Section 13.1.3 addresses potential impacts to agricultural lands.

Comment

The commenter expressed concern about the amount of wetlands Eielson Alternative Segment 3 would impact. (88-1)

Response

SEA acknowledges the comment. Draft EIS Section 4.5.2 describes potential impacts to wetlands, including potential impacts from the Eielson alternative segments.

Comment

The commenter stated that they represent the Fairbanks Soil and Water Conservation District and expressed support for Eielson Alternative Segment 3 because it would have less impact on wildlife than either Eielson Alternative Segments 1 or 2. (105-1)

Response

SEA acknowledges the comment. Draft EIS Sections 5.3.2, 5.4.2, 5.5.2, and 5.6.2 describe potential impacts to biological resources from the Eielson alternative segments.

3.2.1.3 Salcha Alternative Segments

Summary Comment

Commenters expressed favor for Salcha Alternative Segment 1 over Salcha Alternative Segment 2 because of the perceived negative impact to private property and salmon spawning that could result from Salcha Alternative Segment 2. One commenter identified impacts to salmon spawning as their primary concern. (25-1, 79-1)

Response

SEA acknowledges the comments. Draft EIS Section 5.4.2 describes potential impacts to fisheries resources resulting from the Salcha alternative segments. The Draft EIS identifies fish and fish habitats at the 12 locations where the Salcha alternative segments would cross fish-bearing waterbodies (see Draft EIS Table 5-20 and Figure 5-12). Appendix D, Essential Fish Habitat, of this Final EIS also addresses potential impacts to fish habitat.

Comment

“I wish to submit that the Salcha Alternative 2 is detrimental to the life of the Salcha community since it impacts so many people and residences. Losing Salcha School for even a short time would be a major inconvenience involving busing children to Eielson or North Pole. The school would lose a major section of its grounds without the room to rebuild. The Salcha Ski Trails would be decimated. They were built and maintained with volunteer labor and serve both the

local and borough residents and more for ski races. Please do not go ahead with Salcha 2. Residents are concerned about flooding whichever plan is chosen; we hope that the STB/Alaska Railroad will do the best they can to remedy this problem if or when they construct the railroad in the Tanana River area.” (39-1)

Response

SEA acknowledges the comment. Draft EIS Section 2.4.13 states that Salcha Alternative Segment 2 would require ARRC to relocate the Salcha Elementary School. SEA’s preliminary mitigation measure 57 (see Draft EIS Chapter 20) includes measures to determine the precise extent of potential impacts to the Salcha School and Ski Area and develop mitigation measures to minimize disturbance to recreational activities at the school and ski area. SEA has included this mitigation measure as recommended mitigation measure 58 in Chapter 2 of this Final EIS.

Comment

“FNSB [Fairbanks-North Star Borough] opposes the Salcha 2 Alignment, which would require the relocation of Salcha Elementary School. This would be a severe hardship for the Salcha Community, as this is the only elementary school in the area.” (54-1)

Response

SEA acknowledges the comment. Draft EIS Section 15.3.3 describes the socioeconomic impacts of relocating the Salcha Elementary School. SEA’s preliminary mitigation measure 57 (see Draft EIS Chapter 20) includes measures to determine, in consultation with state and local groups, the precise extent of potential impacts to the Salcha School. In addition, SEA has revised the preliminary mitigation measure to ensure availability of a school facility during the relocation. SEA has included this revised mitigation measure as recommended mitigation measure 58 in Chapter 2 of this Final EIS. Draft EIS Figure 2-12 depicts the existing and proposed location for Richardson Highway and Salcha Elementary School under Salcha Alternative Segment 2. Draft EIS Figure 13-5 illustrates the proposed relocation of Salcha Elementary School, Richardson Highway, and nearby ski trails. These figures indicate that the school would remain close to its original location and would continue to be accessible from Richardson Highway.

Comment

“In general, EPA supports the selection of Option 1 for the Salcha Alternative Segment 1 due to what appears to be the need for the placement of less fill than Option 2. The angle or approach of the proposed levee, however, does not appear to be consistent with the upstream hydrology of the Tanana River, and appears to be designed in such a manner that will require continual maintenance and dredging.

“EPA recommends that the STB further explain the design of the levee or, if not practical, reconsider the design of the levee to ensure that it aligns with the hydrological dynamics of the Tanana River in order to avoid or reduce regular maintenance and repair.” (60-4)

Response

SEA acknowledges the comment. The Applicant would be responsible for final design and permitting of in-water structures, subject to the guidance and requirements of agencies with

jurisdiction, consistent with the Applicant's voluntary mitigation measure VM-4 (see Draft EIS Chapter 20). SEA has included this mitigation measure as recommended mitigation measure VM-4 in Chapter 2 of this Final EIS.

Summary Comment

Commenters stated that they prefer the first option for crossing the Tanana River. They believe there would be less impact associated with this crossing because it would avoid a crossing of the Salcha River and the associated impacts to the watershed and salmon. (82-1, 83-1)

Response

SEA acknowledges the comments. Draft EIS Chapter 4 and Section 5.4.2 describe potential impacts to water resources and fisheries, including the potential impacts of crossing Salcha River.

Comment

The commenter expressed a preference for Salcha Alternative Segment 2 so long as there is sufficient research, especially regarding traffic impacts. (101-1)

Response

SEA acknowledges the comment. Draft EIS Section 11.2 describes existing safety and delay conditions on roads and rail facilities in the study area and potential impacts from the proposed rail extension.

Comment

The commenter expressed a preference for Salcha Alternative Segment 1 with Tanana River crossing Option 1. (113-1)

Response

SEA acknowledges the comment.

3.2.1.4 Connector Segments A, B, C, D

SEA did not receive comments on this topic.

3.2.1.5 Central Alternative Segments

Comment

The commenter expressed concern that Central Alternative Segment 2 would impact Fivemile Clearwater Creek and the salmon and grayling in that area. The commenter also expressed concern about the reappearing white spruce in that area and stated a preference for Central Alternative Segment 1. (114-2)

Response

Draft EIS Sections 5.3 and 5.4 describe potential impacts to vegetation and fisheries resources from the proposed rail line extension.

3.2.1.6 Connector Segment E

SEA did not receive comments on this topic.

3.2.1.7 Donnelly Alternative Segments

SEA did not receive comments on this topic.

3.2.1.8 South Common Segment

Comment

“Part of [South Common Segment] goes into the upwelling springs of the upper Richardson Clearwater River. There is no need to put a rail into these wetlands when a straighter, more southerly route can be taken. The upwelling springs should not be disturbed for all the water here is potential Coho juvenile rearing habitat and over winter habitat for many animals.

“It appears this wetland area can be easily avoided, would make the rail straighter, save some mileage, and keep the rail on the bench.” (37-2)

Response

Draft EIS Section 2.2 and Draft EIS Appendix D describe the development and selection of route alternatives for detailed analysis. The Applicant has subsequently elaborated on the geotechnical and topographic factors that limit movement of the South Common Segment further to the south in Section 3.2.2 of this chapter. Draft EIS Chapter 4 describes potential impacts to water resources from the South Common Segment. Draft EIS Section 5.4.2 and Final EIS Appendix D, Essential Fish Habitat, describe potential impacts to fisheries resources and measures to mitigate those impacts. The Draft EIS recognizes that the South Common Segment would cross several tributaries of Richardson Clearwater River, which support coho spawning and rearing, and explains that ARRC would construct road and rail bridges or culverts at these crossings. The Applicant’s voluntary mitigation measures VM-8 and VM-18 (see Draft EIS Chapter 20), which SEA has included in Chapter 2 of this Final EIS as recommended mitigation measures VM-8 and VM-17, provide that stream crossings be designed and constructed to maintain existing water patterns and flow conditions as practicable and so as not to impede fish passage or impair the hydrologic functioning of the waterbody.

3.2.1.9 Delta Alternative Segments

Comment

“I definitively concur with the Delta 1 alternative. There [are] many reasons not to have the rail through Delta Junction. It would eliminate many conflicts with land and people. I could not think of a better crossing than what is proposed. This crossing is lined up well for future continuance of the line into Canada. It would also appear to have fewer conflicts being on the South Side of the Alaska Highway.” (37-3)

Response

SEA acknowledges the comment. Draft EIS Section 13.1.3 describes potential impacts to land use, including potential impacts associated with the Delta alternative segments.

Comment

The commenter expressed a preference for Delta Alternative Segment 1 rather than Delta Alternative Segment 2 based on concerns about safety, noise, and vibration irritants to Deltans from Delta Alternative Segment 2 that would be avoided by Delta Alternative Segment 1. (115-1)

Response

Draft EIS Sections 9.3 and 11.3 describe potential impacts from noise and vibration and impacts to safety from the proposed rail extension, including Delta Alternative Segments 1 and 2. The Applicant's voluntary mitigation measure VM-28 (see Draft EIS Chapter 20) would minimize potential noise impacts from construction and maintenance vehicles and disturbances in residential areas during construction, while SEA's preliminary mitigation measure 52 would provide for a community liaison to assist with establishing quiet zones, if requested.

The Applicant's voluntary mitigation measures VM-29 and VM-30 provide for determination of appropriate safety measures for grade crossings and hazardous materials emergency response. SEA has included these mitigation measures as recommended mitigation measures VM-27, VM-2, VM-29, and 53 in Chapter 2 of this Final EIS.

Comment

The commenter expressed a preference for Delta Alternative Segment 1 because they believe this alternative would benefit military access to training areas. (115-3)

Response

SEA acknowledges the comment.

3.2.2 Alternatives Not Analyzed in the Draft EIS

Comment

"The 'eliminated alternatives', again very general in nature, is a weak concept in the DEIS. The examples don't serve the stated purpose and need so how can they be reasonable alternatives?" (68-8)

Response

The alignments eliminated from consideration in the Draft EIS included alignments suggested by agencies and the public during scoping, and were not "examples." The commenter has identified one of the reasons – failure to address the purpose and need for the project – for eliminating an alternative alignment. However, this was not the only criterion used to evaluate alternatives; others were eliminated due to their potential impacts or design considerations. Draft EIS Section 2.2.1 describes the alignment development process. Draft EIS Table 2-1 lists the reasons why some of the initial alternative alignments were eliminated from consideration, including alignments eliminated for reasons other than failure to meet purpose and need. Draft EIS Section D.1.2 provides additional detail on the alignment development process and the protocol used to evaluate potential rail alignments.

3.2.3 Alternatives Suggested by Commenters

Comment

“I think that it is important to extend the rail to Big Delta to improve the [country’s] ability to move men and materials for our National Defense System.” (13-1)

Response

None of the proposed rail line alternatives would go through Big Delta, Alaska, because the hilly topography on the east side of Tanana River, particularly south of Flag Hill, is considerably less favorable for rail line construction. There are also a larger number of private land holdings along the east side of the river that could be affected. Any of the alternatives analyzed would be available for carrying military equipment and personnel.

Comment

“Long term the rail line should be continued to the Canadian [border] and connected to the Canadian Rail System.” (13-2)

Response

A rail line continuing to the Canadian border and connecting to the Canadian rail system is not within the scope of the Applicant’s proposal, which is to extend freight and passenger rail service to Delta Junction, Alaska. SEA notes that the Canada-US Rail Advisory Committee has been created to research the feasibility of a rail corridor through Canada to Alaska and to foster future Canada/Alaska cooperation in trans-border corridor projects.

Comment

“Recommended changes in alignment. 1. North Common Segment and Eielson 3 should be incorporated into the existing rail line serving Eielson Air Force Base. This existing line then should be extended into Eielson 2 and 3 segments just before they join Salcha 1 segment prior to crossing the Tanana River.

“The reasoning for this change is to move the railroad line away from watercourses as much as possible. Wildlife live mostly along running streams and sloughs and this change would reduce the impact on existing wildlife.

“I strongly feel that the Airbase should cooperate in helping save as much wildlife habitat and manage the wildlife along this segment of the project. The rail line already exists and would have a very small impact on Eielson Air Force Base and security can be managed whereas the impact on wildlife cannot be fully mitigated. It is an arrogant no-brainer to locate the rail line along waterways when an existing rail line can be utilized that would greatly reduce the impact on wildlife.

“Should the Air Force refuse to allow the use of the existing rail line, then a new route should cross the Tanana River just south of North Pole and run through the Tanana Flats Training Area. The rail line should be constructed so as to cross flowing rivers and not run alongside flowing rivers and sloughs as much as possible.” (17-1)

Response

Draft EIS Appendix D discusses the alignments suggested by the commenter and the reasons why SEA did not analyze these alignments in detail in the Draft EIS.

Comment

“The document should look at other alternative routes which would have less impact on the residents. For example, on the Fairbanks end place the line in the existing transportation corridor and move the line south of the river just after leaving Eielson. Or better yet, move the line to the south of the Tanana River immediately before the Chena River Overflow. This would provide for far fewer impacts on the public and ‘human’ environment. The government ground on the north and south side of the river is a perfect place for a government railroad as it would require no private land ‘taking.’” (18-1)

Response

Draft EIS Appendix D discusses the alignments suggested by the commenter and the reasons why SEA did not analyze these alignments in detail in the Draft EIS.

Comment

“[I]t was our understanding that the project limits would include the community of North Pole thus allowing timely relocation of the track between Moose Creek to approximately 9 mile on the Richardson Highway. It appears not to be the case. This is somewhat disappointing since the track is now causing concern for the safety of our children, especially near the schools adjacent to the track. Could this be addressed in the Final EIS?” (33-1)

Response

Realignment of the existing Eielson Branch is not within the scope of the rail extension proposed by the Applicant. As a result, such a realignment is not within the scope of this EIS.

Comment

“First crossing the river to the [s]outh side is in the best interest of all stakeholders especially the US Army. It opens viable opportunity for the Army to expand training opportunities for the future.

“Secondly, my main concern is that once the rail is on the south side of the Tanana, is to place it away from waterways especially the spring-fed systems and associated wetlands.

“There is a bench of slightly higher land that avoids most of the resource rich wetlands. These springs contain extensive fish habitat and should be left undisturbed. For the most part Salcha 1, Central [Alternative] 1, South Common Segment, and Delta 1 seem to take the higher ground (Bench land).” (37-1)

Response

SEA acknowledges the comment. Draft EIS Section 2.2 and Appendix D describe the development of alternative alignments and the selection of alternatives for detailed analysis in the Draft EIS.

Summary Comment

Commenters expressed their preference for an alternative route that would take the railroad south of Fivemile Clearwater Creek. They stated that the current route negatively affects many property owners on Fivemile Clearwater Creek and that building the rail line to the south of the creek would decrease crossings and the noise level. (35-5, 66-3)

Response

Draft EIS Appendix D describes the development of alignments and explains why certain alignments were not retained for detailed analysis. As discussed, alignments that traversed more of the Tanana Flats Training Area were not analyzed in detail because of military concerns that they would interfere with training activities.

Summary Comment

Commenters expressed opposition to the South Common Segment as it is described in the Draft EIS and suggested that it be moved farther south to locations ranging from approximately 0.5 mile farther south to a logging road, to approximately 1 mile farther south to a route along the boundary between the Donnelly Training Area and ADNR land. Commenters suggested that this revision to the South Common Segment could mitigate unnecessary and irreversible impacts in the subject areas of noise, vibration, permafrost, potential hazardous spills, water siltation, and aquifer and water quality of Richardson Clearwater River, fish and wildlife habitat, wetlands, and state land access to hunting, fishing and camping areas. Commenters stated that moving the segment would negate the need for environmentally damaging bridges and culverts which, if built, would add to the detrimental environmental changes brought on by the Carla Lake fire in 1998. Commenters also stated that moving the line farther south would maintain access to the area that would otherwise be sandwiched between the proposed rail line and the current military restricted area.

Commenters stated that the alternative route they suggest would fulfill the project's need statement of military access. The alternative railroad corridor would also serve as an identifiable boundary between the public and publicly used land and the military land and would improve safety by reducing recreational traffic.

Commenters stated that the alternative route would be shorter, more direct, and less disputed and would likely create more costs but would minimize the impacts. Commenters recognize the financial impact and feel it is minimal in comparison to the adverse affect the current route would create. (40-9, 44-5, 47-1, 47-5, 50-2, 63-1, 65-1, 68-7, 69-7, 69-18, 69-19, 73-1, 77-6, 80-2, 90-1)

Response

As discussed in Draft EIS Appendix D, ARRC initially identified a route farther south than the South Common Segment presently included as an alternative in the Draft EIS. The S4 alignment was later eliminated from consideration as it would not provide access to the Whitestone Farm District, which expressed a desire for access to rail line service. Additionally, the S4 alignment would have required construction in areas with poor geotechnical conditions. Specifically, the glacial outwash plain, which the proposed location for the South Common Segment would largely avoid, contains many "Kettles"(small, shallow bodies of water formed by a retreating glacier) that should be avoided and is an area that has experienced recent slope failures. In addition, traversing the outwash plain would require the rail line to climb and descend an

additional 200 feet in elevation with a curvaceous alignment. Draft EIS Section 1.2 describes the purpose and need for the proposed rail extension and indicates that access to military areas is only one of the purposes and needs that are balanced by the proposed alternatives. There were other considerations in ARRC's development of alignments and SEA's selection of EIS alternatives, as explained in Draft EIS Chapter 2 and Appendix D.

As discussed in Draft EIS Section 4.2.2, SEA found that the potential impacts to water resources in the vicinity of Richardson Clearwater River would be low to moderate depending on the specific location and whether the potential impact would be associated with rail line construction or rail line operations. Draft EIS Sections 4.2.2, 4.3.2, 4.4.2, 4.5.2, and 4.6.2 describe bridge and culvert impacts of the South Common Segment on water resources. Draft EIS Section 5.4 describes the affected fisheries and the environmental consequences associated with the alternatives. Draft EIS Section 20.2.2 describes preliminary mitigation measures for water resources and fisheries and Final EIS Chapter 2 includes recommended mitigation measures.

Final EIS Section 3.13, SEA's responses to comments on land use, addresses the commenters' concerns related to recreational access. Briefly, potential impacts to recreational access would be addressed by several mitigation measures, including SEA's preliminary mitigation measures 54, 55, 60, and 61 in the Draft EIS, which are included with some modifications as recommended mitigation measures 54, 56, 60 and 61 in Chapter 2 of this Final EIS.

As discussed in Draft EIS Section 9.3, SEA found that the proposed rail line would not cause adverse noise and vibration impacts. As discussed further in Final EIS Section 3.9, SEA's responses to comments on noise and vibration, SEA estimates that a DNL of 65 A-weighted decibels (dBA) would be exceeded only within approximately 115 feet of the alternatives closest to Richardson Clearwater River, and as indicated in Section 9.3.2 of the Draft EIS, no adverse noise or vibration impacts would be expected.

As discussed in Draft EIS Section 11.3, SEA found that potential impacts from hazardous materials transportation on the proposed rail line would be minimal.

Comment

“The comment is if they followed the Richardson Highway, wouldn't that be the least intrusive on everything, as far as DNR [Department of Natural Resources], people hunting and fishing across the river and so on? If they just followed the highway.” (100-1)

Response

Draft EIS Section 2.2 and Appendix D discuss alignments that were considered but not analyzed in detail, including a route that would generally follow Richardson Highway from the vicinity of North Pole to Delta Junction, Alaska. At SEA's request, ARRC considered an alignment that would follow Richardson Highway, but ARRC determined such an alignment would not be reasonable or feasible. The hilly topography on the east side of Tanana River is considerably less favorable to rail line construction south of Flag Hill. There are also a large number of private land holdings along the highway, which could have required potentially significant mitigation to maintain vehicle access. In general, the potential impacts to private property could have been large. In addition, such an alignment would not achieve one of the purposes of the proposed project – to provide safe and dependable access to Tanana Flats and Donnelly Training Areas. SEA concurred with these determinations, and for these reasons did not retain this alignment as an alternative for detailed analysis in the Draft EIS.

Summary Comment

If the railroad is to be built it should be located south of Rainbow Lake, south of Koole Lake, then parallel to the north boundary of the training area to a point due south of Big Delta then north to Big Delta. One of its advertised purposes is to serve the military training area. It does not need an access road and it should be reconsidered as to the cost to the taxpayer. This would avoid a lot of environmentally fragile areas. (57-9, 58-2)

Response

SEA acknowledges the comments. Draft EIS Section 2.2 and Appendix D describe the development of alternative alignments and the selection of alternatives for detailed analysis in the Draft EIS.

Comment

“The following are my comments about the Draft Environmental Impact Statement for the Alaska Railroads proposed line extension between Fairbanks and Fort Greely Alaska. First I would like to state that I'm not anti-development and that I believe a future rail route to the lower 48 states through Canada is a positive thing, and in the long run will serve the best interests of the State of Alaska, however I hope that it is completed with good intent and respect for property owners, public land users and fish and wildlife habitat along its route.” (77-1)

Response

SEA acknowledges the comment.

3.2.4 General Opposition

Comment

“Additional studies of this project should be completed before any decision is made. It's affect on the fish and game resources in the area will be enormous. The ROW that's proposed is a main migration route for moose that travel to and from the foothills on the north side of the Tanana and the Tanana Flats, thus creating numerous encounters with railroad equipment. The ROW would also run alongside and cross many streams and rivers that are local fish habitat, salmon spawning and water fowl areas. Because of the popularity of the Tanana Flats as a hunting, fishing and recreational area there will be may ROW issues. The ROW will span 100 miles of the Tanana Flats. Additional issues such as private land ownership, safety, and hazardous materials and waste should be addressed. I am opposed to this project.” (11-1)

Response

Draft EIS Chapters 5 and 13 and Section 11.3 describe potential impacts to biological resources, land use, including recreation, and hazardous materials, respectively. Draft EIS Chapter 20 presents the Applicant's voluntary and SEA's preliminary mitigation measures designed to reduce the potential impacts to these resources. Chapter 2 of this Final EIS presents SEA's recommended mitigation measures.

Comment

“In early to mid December everyone was notified of a public hearing that was to take place on January 12, 2009. Most of our group, except those that leave for the winter, attended the hearing. Upon arrival we were informed that the railroad had basically discarded 2 of the 3 routes and were focusing their efforts on one. The one they picked was the least desirable of the original 3. The railroad’s choice would not just have a detrimental effect on a large group of citizens but also on the environmental health of the area which would have to be torn apart for construction purposes.

“Before going any further I would like to state that neither myself nor any of our group is against the expansion sought by the railroad. We are opposed to a project that will threaten current recreational properties, animal habitats, existing rivers and streams, fisheries, and the underlying aquifers that feed this entire environmental haven.” (56-1)

Response

Draft EIS Chapter 5, Section 13.2, and Chapter 4 discuss the potential impact from the Proposed Action and Alternatives on wildlife habitat, recreation, and water resources, respectively. Additionally, Chapter 20 of the Draft EIS presents the Applicant’s voluntary and SEA’s preliminary mitigation measures designed to reduce the potential impacts to these resources. Chapter 2 of this Final EIS presents SEA’s recommended mitigation measures. The alternatives in the Draft EIS are the result of a process that identified and considered a range of potential routes and led to the selection of a reasonable range of alternatives for analysis in the Draft EIS along with the Applicant’s preferred route. Draft EIS Section 2.2 describes the alternatives development process and lists the alternatives eliminated from detailed study. Draft EIS Table 2-1 lists reasons for eliminating certain alternatives and Draft EIS Appendix D provides additional discussion of the process.

3.2.5 General Support

Summary Comment

Commenters expressed general support for the project, and mentioned that the project would benefit Fort Greely and the Delta Junction area. (3-1, 21-1)

Response

SEA acknowledges the commenters’ support for the proposed rail extension. SEA notes that Fort Greely has not expressed a desire to use the proposed rail line extension.

Comment

“The Fairbanks Metropolitan Area Transportation System (FMATS) Policy Committee appreciates the opportunity to comment on the Northern Rail Extension Draft EIS in an effort to encourage development of a coordinated, intermodal transportation system in the Metropolitan Planning Organization.

“The FMATS Policy Committee supports the development of the Northern Rail Extension and views it as a critical economic development project as well as a nationally significant transportation project.” (62-1)

Response

SEA acknowledges the comment.

Comment

“The FMATS Policy Committee strongly urges the funding and the development of the Northern Rail Extension as well as the immediate funding to pursue the Fairbanks-North Pole Rail Realignment to eliminate the over 50 at-grade railroad crossings.” (62-3)

Response

SEA acknowledges the comment. The Fairbanks-North Pole Rail Realignment is outside the scope of the Applicant’s proposed action and therefore outside the scope of this EIS.

Comment

“Whitestone Community Association [WCA] represents the rural community of Whitestone which is comprised of roughly 200 individuals and located on the south-western corner where the Delta River joins the Tanana. As depicted on Map Area 5 (Figure S-6 in the Draft EIS) the South Common Segment passes directly through the corner of WCA’s territory and across land owned by Whitestone Farms, a local business. Whitestone Community Association has always been isolated from the current highway system by two rivers, and would stand to reap considerable benefits from an accessible year-round transportation system. Regardless of the obvious advantages to the community, members have given considerable thought to all the potential ramifications of this project and are still in favor of it.” (12-1)

Response

SEA acknowledges the comment. As stated in Draft EIS Section 2.3.4, ARRC has indicated that commercial freight could include agricultural products.

Comment

“Currently these materials [such as heavy equipment, building supplies, food stuffs, cattle, fuels, etc.] are hauled to and from the [Whitestone] community in boats (summertime) and on ice bridges across the Delta River (wintertime). WCA and its members are committed to protecting the environment at all times including during material transport. However, certain aspects of the current modes of transportation elevate the potential for damage to the environment. WCA believes that if these same materials could be moved via rail on more permanent infrastructure, the potential for environmental damage could be mitigated.

“Comment has been presented about civilian travel to and from Fairbanks and Anchorage as a way to reduce travel expenses. The local school has inquired about commuter service to and from Anchorage in order to compete in forensics tournaments held in Anchorage several times during the school season, as well as field trips to Fairbanks and Anchorage.” (12-2)

Response

SEA acknowledges the comment. ARRC has stated that one of the purposes and needs for the project is to provide freight and passenger rail service to the region south of North Pole, Alaska.

Comment

“The beef and dairy farmers in the WCA area commented on the need for transporting cattle by rail to and from slaughter houses. In the last three years, Whitestone Farms has constructed for and completed a herd expansion from roughly 30 head of cattle to the present 150 head. Since local slaughter facilities are not capable of handling the current load, they would benefit from a reliable mode of transporting cattle to and from slaughter houses.

“Local crops of hay and silage are currently trucked between November and March across the Delta River on the ice road. The farmers selling these crops commented that they are excluded from important sales opportunities in Fairbanks, Palmer, Wasilla, Seward and Anchorage between the months of April and September because there is no safe, economical way to transport them over the rivers during this period.

“Local community leaders and business people have stated their support for the NRE and share the common view that rail hauling and transportation would have a positive impact on the economic status and environmental friendliness of our community. The NRE could have a favorable environmental impact on WCA and the surrounding communities as fewer hazardous products would need to be transported on the Tanana and Delta Rivers.” (12-4)

Response

SEA acknowledges the comment. ARRC has stated that one of the purposes and needs for the project is to provide freight and passenger rail service to the region south of North Pole, Alaska.

Comment

“Thank you for the opportunity to provide comments on the DEIS for the proposed ARR[C] extension between North Pole and Delta Junction, Alaska. The Alaska Miners Association strongly supports this project which we believe will have positive impacts upon the economic viability of existing and proposed mineral resource development projects in portions of interior Alaska.” (20-1)

Response

SEA acknowledges the comment.

Comment

“The Resource Development Council [RDC] writes to express support for the construction and operation of a rail line by Alaska Railroad Corporation between North Pole, Alaska, and Delta Junction, Alaska, referred to as the Northern Rail Extension (NRE).

“RDC is a statewide, non-profit, membership-funded organization founded in 1975. The RDC membership is comprised of individuals and companies from Alaska’s oil and gas, mining, timber, tourism, and fisheries industries, as well as Alaska Native corporations, local communities, organized labor, and industry support firms. RDC’s purpose is to link these diverse interests together to encourage a strong, diversified private sector in Alaska and expand the state’s economic base through the responsible development of our natural resources.

“The Alaska Railroad network begins in Seward, Alaska and travels north through Anchorage, continues to Fairbanks and ends at Eielson Air Force Base. The purpose of the NRE is to extend the Railroad’s existing service, both freight and passenger, to areas southeast of the Fairbanks

area. Expansion of this service would provide an alternative route to the Richardson Highway, for travelers and commercial freight between Fairbanks and Delta Junction. Rail lines are less susceptible to severe weather conditions than highways, increasing the ability to deliver goods and services at all times. Additionally, an expanded rail line would promote tourism to areas not currently part of the Railroad grid. Thousands of tourists travel from Seward to Fairbanks on the Alaska Railroad during summer months, and could continue their travels even farther given the availability of appropriate infrastructure.

“The Alaska Railroad has always been a good corporate citizen, strongly protecting Alaska’s environment and supporting its economy and residents. It is for these reasons that construction and operation of the Northern Rail Expansion [should] be allowed to proceed.” (48-1)

Response

SEA acknowledges the comment.

Comment

“I’m mayor of Delta Junction. The council has taken the stand that we are in favor of this. We think it would have a very positive effect to our community.

“It would hopefully keep some of the convoys off the road when you’re driving to Fairbanks, which is something that we would love to see. Most of this part of the world would like to see that you don’t have to get caught behind convoys.

“And there is some concern about how many passenger transports per day and what possible negative effects, even though we all like the positives of it that you could get on a passenger transport and leave your car in Delta Junction and go to Fairbanks and catch a plane and know that your car is in the garage and catch the ride back, we’re all pretty positive about that. So that’s a real plus.

“And as to the access to the other side of the river, I’ve had several people ask me about the possibility of major access issues to our land across the bridge.

“And so I just want to confirm that the City of Delta Junction is in favor, and we really would rather not have number 2 and having you crossing all of the major paved roads. And, you know, we’ve taken a stand that number 1 is the only one we’re in favor of.” (116-1)

Response

SEA acknowledges the comment.

Comment

“The Alaska Railroad Corporation is proposing a Northern Region Expansion to the Ft. Greely/Delta Junction area in Alaska. We support the railroad’s efforts to provide additional transportation to the state. Expansion to the Delta Junction area will have a positive impact on the farm community located in and around Delta Junction. There are several routes this expansion may take.” (64-1)

Response

SEA acknowledges the comment.

Comment

“After receiving the EIS, let me suggest that cognizant persons consider utilizing a 22 acre on the surface source of large gravel (state owned non-renewable mineral) located under my mostly unbroken farm ground, Section 6, T3S, R3E, F.D. East ½ 320 acres.

“This gravel location is within 2 miles of Eielson AFB property near where the rail line segment 1 and 2 is proposed. This 2 mile designated public section line access could be a railroad spur or a heavy truck access to a tippel or/and concrete batch plant on the eastern Eielson road property West half Section 4, T3S, R3E, F.M. etc. consisting of 240 acres.

“A railroad spur could travel down the eastern edge of Section 4, etc., property to access the tippel and concrete batch plant.

“The central location appears to be nearly ideal, meeting the needs of concrete and gravel for the segments 1, 2, 3 and bridge construction.” (75-1)

Response

SEA acknowledges the comment. Selection of material sources would occur during final design and permitting.

3.3 Topography, Geology, and Soils

3.3.1 Topography

Comment

“One of the topics I would have liked to have seen covered was the angles of the bedding (be it bedrock, sediments or soil) and how parallel the bedding is in relation to the slope angle. The reason this is a concern is because if bedding materials are parallel and the angle of the bedding is close to the angle of the slope then there is an inherent risk of a slump (a mud, earth or rock slide). A slump could be caused by numerous factors including water between the sediments, extra weight, lack of vegetation to anchor the sediments and earthquakes or a combination of these factors. Slumps could damage the track and in turn could harm passengers or at least put the passengers at risk.” (10-1)

Response

If the Board approved construction and operation of the proposed Northern Rail Extension, ARRC would commence final design of the track and structures. As part of the final design process, ARRC would perform additional soil foundation studies and geotechnical borings. The results of these studies would be used to determine engineering techniques and features for rail line construction that would reduce the potential for slumping. ARRC has indicated that they would follow standards and methods approved by the American Railway Engineering and Maintenance-of-Way Association (AREMA).

3.3.2 Geology

Comment

“While the potential for noise, vibration, and accidental spills are inherent with railroads, the added impact from the construction and daily railroad operations could have an even larger affect on the geology of the area.” (77-4)

Response

Section 3.3.2 of the Draft EIS describes potential environmental impacts to geology from proposed rail line construction and operations.

3.3.3 Soils

SEA did not receive comments on this topic.

3.3.4 Permafrost

Comment

“While the possible impacts of the temporary construction camps on permafrost were discussed, mitigation measures were not. If mitigation measures are not feasible, that was not mentioned.” (8-1)

Response

The Applicant’s voluntary mitigation measure VM-2 in Draft EIS Section 20.1.2 would require that project facilities be designed in accordance with engineering criteria and comply with applicable design codes related to permafrost, seismic events, and other geologic hazards. Additionally, SEA’s preliminary mitigation measure 2 (listed in the same section of the Draft EIS) would require that features of the project that occupy areas of permafrost be constructed to minimize thaw and subsidence. Both measures are included as recommended mitigation measures VM-2 and 2 in Chapter 2 of this Final EIS.

Comment

“There is some discussion in the DEIS about permafrost, but I wanted to know if there are going to be any issues with the rail tracks themselves melting the permafrost. Also will there be any problems associated with the settling of the tracks due to melting permafrost? This may lead to the need for repairs in the future and further damage done to the surrounding environment.” (7-3)

Response

Draft EIS Section 3.5.2 describes potential impacts to permafrost from proposed rail line construction and operations. It states that construction methods in areas of permafrost would depend highly on site-specific conditions. SEA has developed a recommended mitigation measure that the rail line be constructed to minimize thaw and subsidence. This measure could include using insulate or fill material in areas of permafrost that could not be avoided. (See SEA preliminary mitigation measure 2 in Draft EIS Section 20.2.1. This measure is included as recommended mitigation measure 2 in Chapter 2 of this Final EIS.)

3.3.5 Seismic Hazards

Comment

“What construction and maintenance techniques will be implemented to prevent train derailment and potential spills and/or injury to people (on the train) in the event of seismic activity? I am very concerned about derailment.” (6-2)

Response

ARRC has stated in its voluntary mitigation measures (see Draft EIS Section 20.2.1) that the rail line would be designed in accordance with engineering criteria related to seismic events and other geological hazards to comply with applicable design codes. ARRC has stated that the project would be designed in accordance with the latest applicable seismic codes, taking into account the region’s potential earthquake activity, and to mitigate potential damage to bridges and tracks.

3.4 Water Resources

3.4.1 General Water Resources

Comment

What steps will be taken to ensure erosion of stream banks will not affect the rail line, especially where the rail line runs along the Tanana River? Also, what is the basis for the statement that 17 crossings of the Tanana River along Eielson Alternative Segment 3 result in low impacts? “I feel this is a biased statement in support of the easiest or most suitable option for the ARRC [Alaska Railroad Corporation] and not for our environment.” (4-4)

Response

The Applicant has stated that construction features of the rail line would follow current standards and methods approved by the AREMA for “heavy axle loading” unit train operations. The final design of the rail line and access road located in 100-year floodplains along the Tanana River and side channels would allow for the flow of floodwaters to floodplain storage areas by incorporating a sufficient number and size of culverts or bridges. This would ensure floodplain connectivity and maintain the structural integrity of the rail line and access road. To minimize erosion at water crossings, bridges and culverts would be designed and constructed to maintain natural water flow, drainage patterns, and flow conditions to the extent practicable. This would include installing equalization culverts through the embankment as necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains. Waterbody crossings would also be aligned perpendicular or near perpendicular, where practicable, to watercourses to minimize bank disturbance. The Applicant would perform site-specific analyses that incorporate flood conveyance and hydraulics and flood storage requirements of the 100-year flood as part of the final design. Recommended mitigation measure 11 in Chapter 2 of this Final EIS would require that the Applicant design culverts and bridges to pass a 100-year flood and comply with all relevant Federal Emergency Management Agency (FEMA) guidance, regulations, and procedures.

The low impact ranking for the 17 crossings recognizes that each crossing was evaluated individually based on crossing type (i.e., small bridges or culverts); proposed construction

methods and sediment control plans; stream type; and geomorphic and hydrogeologic characteristics of the Eielson Flats physiographic sub-region.

Summary Comment

Water Quality Study of Richardson Clearwater Creek Near Big Delta, Alaska (Public Data File 99-21) describes the Richardson Clearwater as “a pristine spring-fed stream” that “is an unusual Interior Alaska stream.” The area is sensitive habitat for fish, including spawning and rearing for anadromous fisheries. In addition, the Richardson Clearwater area, according to the Tanana Basin Area Plan, has been proposed for legislative designation as a Critical Habitat Area. Commenters expressed great concern with the South Common Segment crossing headwater streams of Richardson Clearwater River because this area is important for water quality and fish habitat. Commenters also expressed concern that the rail line would impact this ecosystem and result in “disastrous effects.” (40-2, 44-1, 40-5, 56-2, 69-1)

Response

Potential impacts to surface waters and fisheries resources on the tributaries to the Richardson Clearwater are discussed in Draft EIS Chapter 4 (under the headings Surface Water, Water Quality, and Wetlands) and in Draft EIS Chapter 5 (under the heading Fisheries). In addition, potential impacts to Essential Fish Habitat (EFH), including the Richardson Clearwater and its tributaries, are discussed in Appendix G of the Draft EIS (Appendix D of this Final EIS). At three of the headwater tributary crossings, single-span bridges would be constructed over fish-bearing streams (crossings identified as 136, 103, and 104 in the Draft EIS). Two of these bridges would completely span the channel, which would minimize impacts to water quality and fisheries habitat during rail line construction and operations. Some riparian vegetation could be removed. The third bridge would not span the channel and could require some fill or placement of bridge abutments at the edge of the stream bank. Impacts to water quality would be expected to be temporary, short term, and localized during construction of this bridge. The Draft EIS characterized impacts to tributary waters of Richardson Clearwater River from culvert installations across wetland flowways and drainageways as “high” because of the amount of fill that could be required in the waterbody. Bridges and culverts would be designed, constructed, and operated to maintain existing water patterns and flow conditions as practicable, and all crossings over fish-bearing streams would not impede fish migration, in accordance with all reasonable requirements of Alaska Department of Fish and Game (ADF&G) fish passage permits. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to reduce and minimize impacts at these crossings. The Applicant would abide by all reasonable requirements of Federal and state permits that would be required for these crossings. Draft EIS Sections 20.2.2 and 20.2.3, and Final EIS Chapter 2 identify recommended mitigation measures to protect water quality and fisheries resources.

Comment

“NPDES Program Delegation: On October 31, 2008, EPA [Environmental Protection Agency] approved the State of Alaska’s National Pollutant Discharge Elimination System (NPDES) Program application. The State’s program is called the Alaska Pollutant Discharge Elimination System (APDES) Program. Authority over the federal permitting and compliance and enforcement programs is being transferred to ADEC [Alaska Department of Environmental Conservation] over three years, beginning at program approval. EPA will retain oversight of the

program. Given the project schedule, EPA anticipates that all program components, including domestic wastewater and stormwater, will be delegated to the State before project construction begins. The draft EIS does not currently reflect this recent change to NPDES program administration and oversight.

“EPA recommends that the final EIS reflect the change in permitting authority for point source and stormwater discharges where appropriate.” (60-9)

Response

SEA has revised the Draft EIS to reflect program delegation. See Chapter 4 of this Final EIS.

Comment

“Since the Carla Lake fire removed most of the vegetation from the head waters area of the Richardson Clearwater, the soil does not hold ground water and the Richardson Clearwater has flooded twice in the last three years during periods of the heavy rain. The soil is very unstable in the area of the burn.” (57-2)

Response

The rail line, bridges, and culverts in this area would be designed, constructed, and operated to maintain existing water patterns and flow conditions as much as practicable, and would not alter the existing flood conditions created by the Carla Lake fire of 1998. Soil stability and erosion potential in this area would be accounted for during rail line final design to ensure safe construction and operation. Impacts to water quality during construction that could result from unstable soils and lack of vegetation in this area would be expected to be temporary, short term, and localized, and, with mitigation measures, would not alter existing turbidity conditions the fire might have created. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to reduce and minimize, to the extent practicable, impacts to water patterns, flow conditions, and sedimentation in this area and to account for existing conditions the Carla Lake fire might have created. Draft EIS Sections 20.2.1 and 20.2.2, and Final EIS Chapter 2 identify recommended mitigation measures to control erosion and protect water quality.

Comment

“The bridge crossings are located near thriving beaver communities and other wildlife including river otters, minks, eagles, falcons, hawks, owls, ducks and seagulls. What is the environmental risk of this project being built over the top of the [aquifer] and wetlands of the Richardson Clearwater?” (69-15)

Response

Wetland fill would be unavoidable along all alternative segments. Draft EIS Section 4.5.2 describes common impacts to wetlands that would result from constructing any of the alternative segments. The South Common Segment discussion in Draft EIS Section 4.5.2 describes potential impacts specific to Richardson Clearwater River headwater wetlands. During the Clean Water Act Section 404 permitting process, the Applicant would follow the standard mitigation sequence of first avoiding, then minimizing, and finally compensating for impacts to wetlands, and other waters of the U.S., that would result from rail line construction. For wetlands filled

and lost as a result of the project, in accordance with Clean Water Action Section 404, the Applicant would have to mitigate to ensure “no net loss” of wetlands.

Draft EIS Section 4.2.2 describes common impacts to headwater streams and other surface waters that drain to Richardson Clearwater River. That section includes potential impacts to surface water from rail line construction and operations, including bridge construction and culvert installation. As discussed in Draft EIS Section 5.4.2 and Appendix G, water crossings could affect fisheries resources. Draft EIS Section 4.3.2 describes potential impacts to aquifers and groundwater. Before beginning construction, ARRC would obtain Federal and state permits, which would include provisions for protecting wetlands, streams, and other waters. ARRC would work with Federal and state agencies to develop measures to avoid or minimize impacts to these resources. Draft EIS Sections 20.2.2 and 20.2.3, and Final EIS Chapter 2 identify recommended mitigation measures to protect water and biological resources.

3.4.2 Surface Water

Summary Comment

We cannot tell from the DEIS whether you have considered the impacts to Fivemile Clear Creek. It does not appear to be featured on any of the maps and we are afraid it is not being taken into consideration. We wanted to be sure you are aware of this creek because we are concerned the rail will cross it and the cabins along it.

The Clear Creek parallels the Tanana River, about one mile west of the Tanana. It empties into a slough of the Tanana opposite Flag Hill. It flows from southeast to the northwest and should be clearly visible in any aerial photos of this area. It starts south of the TFTA [Tanana Flats Training Area] and flows into and across the TFTA, emptying into the Tanana to the north. It would probably run in between your Central Alternatives 1 and 2. It looks like Connector E would cross it, and possibly all of Connectors A, B and C. (2-1, 2-4)

Response

Draft EIS Figures 4-5 and 5-13 identify Fivemile Clear Creek as Fivemile Clearwater River. Connectors B, C, and E would cross this waterbody. Draft EIS figures identify these as crossings 86, 345, and 351, respectively. Draft EIS Chapters 4 and 5 consider potential impacts to Fivemile Clearwater River. Draft EIS Section 20.2.2 and Chapter 2 of this Final EIS describe recommended mitigation measures to avoid, minimize, or compensate for potential adverse impacts to water resources, including Fivemile Clearwater River.

Comment

When building the bridges, the location of piers in the river should be considered for potential to cause bank erosion or increased bank erosion. The document considers the impact piers would have on sediment erosion rates, but considering pier locations could decrease erosion. (9-1)

Response

Draft EIS Section 4.2.2 describes potential impacts from sloughing and erosion of streambanks and increased channel scour from bridge construction. Bridges and bridge piers would be designed, constructed, and operated to maintain existing water patterns and flow conditions to the extent practicable, including the 100-year flood flow. ARRC would obtain permits from the U.S. Army Corps of Engineers (USACE), the U.S. Coast Guard (USCG), the ADF&G, and

ADNR; these permits would contain provisions to protect water quality and to ensure navigability, as appropriate. The exact locations of bridge pier placement would be determined during the final design and permitting process.

Comment

Have you considered the possibility that the presence of a new culvert or bridge could cause significant erosion creating a higher potential for the stream to change course or move? (9-3)

Response

With changes in channel hydraulics due to a culvert or bridge, channel scour and erosion processes (lateral migration, avulsion [the sudden change in the course of a stream], bank undercutting) can increase, which can lead to an increase in sediment transfer loads and downstream sedimentation. The Draft EIS describes these potential impacts in Section 4.2.2. During the project's final design and permitting phase, bridge and culvert crossings would be designed and constructed so as to maintain natural water flow, drainage patterns, and flow conditions to the extent practicable. This would include installing equalization culverts through the embankment as necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands. All bridges and culverts would be designed for the 100-year flood flow. Crossings of waterbodies would be aligned perpendicular or near perpendicular to waterbodies, where practicable, to minimize crossing length and potential bank disturbance. These design measures and conditions in Federal and state permits would minimize potential changes in stream courses. Draft EIS Section 20.2.2 and Final EIS Chapter 2 identify recommended mitigation measures to protect water resources.

Comment

“The clear creek just upstream from Flag Hill on the south of the Tanana River is not appropriately depicted. I feel that this stream flows as much water as the Little Salcha, yet it doesn't even show up on the plates in the summary; see ... page S-7, [F]igure S-4. This stream is ground water fed. It runs year round, builds shelf ice but doesn't freeze up. I am concerned that the connections shown, namely 'Connector E' or 'Donnelly 2' will cause irreparable, immitigable damage to this water body. The lines go directly through the area responsible for the flow of this stream. This stream supports silver salmon, grayling and white fish, many fowl and terrestrial creatures. If the rail bed disrupts the flow of ground water to the stream, the impacts will be dramatic: it could dry up this stream. The rail bed could create a freeze bulb which could act as a subterranean dam cutting off the flow to the stream. This resource needs to be protected. There are so few accessible clear water streams south of the Tanana [that] to adversely impact one should be avoided. A more southern route could eliminate this impact. A bridge constructed over the head waters should minimize the flow impacts.” (18-3)

Response

It appears that the commenter is describing Fivemile Clearwater. While SEA inadvertently omitted this waterbody in Draft EIS Figure S-4, it is identified in Draft EIS Figures 4-5 and 5-13. See Chapter 4 of this Final EIS for changes to the Draft EIS Summary, including changes to Figure S-4, and changes to Draft EIS Chapter 2, Proposed Action and Alternatives. Connector Segments B, C, and E would cross Fivemile Clearwater, and the Draft EIS figures identify these as crossings 86, 345, and 351, respectively. Draft EIS Chapters 4 and 5 consider surface water

and fisheries impacts to Fivemile Clearwater. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe recommended mitigation measures to avoid, minimize, or compensate for potential adverse impacts to water and fisheries resources, including Fivemile Clearwater. Regarding the potential development of freeze bulbs under the rail bed, this would not be likely based on proposed rail bed and crossing designs and the characteristics of the predominantly fluvial sediments in the area.

Comment

“Between Fivemile Clear Creek and the Tanana, behind the private properties, is a clear-running stream that sustains a salmon population and likely other fish. I cannot tell from maps provided if Alternative 2 affects this stream, but it should be considered. This is the area off of BLM managed military land.” (45-10)

Response

There is no stream readily apparent, other than Fivemile Clearwater, in the area described in this comment. While SEA inadvertently omitted this waterbody in Draft EIS Figure S-4, it is identified in Draft EIS Figures 4-5 and 5-13. See Chapter 4 of this Final EIS for changes to the Draft EIS Summary, including changes to Figure S-4, and changes to Draft EIS Chapter 2, Proposed Action and Alternatives. Connectors Segments B, C, and E would cross Fivemile Clearwater, and the Draft EIS figures identify these as crossings 86, 345, and 351, respectively. Draft EIS Chapters 4 and 5 consider surface water and fisheries impacts to Fivemile Clearwater. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe recommended mitigation measures to avoid, minimize, or compensate for potential adverse impacts to water and fisheries resources, including Fivemile Clearwater.

Comment

“The Richardson Clearwater is composed of several underground sources. Their depth, direction of flow, etc., is unknown. Penetration into one or more of these during construction would have disastrous results possibly changing the route of the creek.” (57-3)

Response

It is very unlikely that rail line construction, specifically pile driving for bridge supports, would damage underground aquifers. During final design, the Applicant would conduct geotechnical surveys to verify the suitability of subsurface conditions for bridge structural support. A site with a shallow aquifer that could be significantly damaged by pile driving would not be suitable as a bridge location from a structural point of view; therefore, piles would not be installed at such a location. The three proposed bridges across Richardson Clearwater headwater streams would consist of single spans and would not require pilings in the channel. Voluntary mitigation measure VM-6 in the Draft EIS and recommended mitigation measure VM-6 in Chapter 2 of this Final EIS would require that the Applicant design, construct, and operate the rail line to maintain existing water patterns and flow conditions as practicable.

Comment

“There is an area west of the Delta Creek and north of Koole Lake that is formed by springs which create a small lake that then flows as a small creek into the Tanana. This has become a

summer feeding area for grayling. It appears that Donnelly 2 would run through this area of wetland.” (57-8)

Response

Donnelly Alternative Segment 2 would cross two small streams within a broad flat area just west of Delta Creek. These streams join a few thousand feet downstream and form a small pond. From there the stream flows into Delta Creek (not the Tanana). Both streams would be crossed using culverts. Draft EIS voluntary mitigation measure VM-17 and recommended mitigation measure VM-16 in Chapter 2 of this Final EIS would require the Applicant to obtain authority under Title 16, Fish and Game, of the Alaska Statutes for a fish habitat permit.

Summary Comment

Commenters note that the rail line would be crossing two tributaries of Richardson Clearwater River. These are main incoming feeder streams for the level and clarity for this river and there are spawning salmon and grayling beds up both of these streams. There is concern about toxic spills this close to streams and wetlands. This would cause irreparable damage to the environment and the wildlife, fisheries, birds, ecology, landscape, and watershed for this river. Commenters defer to the Alaska Department of Fish and Wildlife on the damage that could be caused by a spill to any of the regions along the corridor ARRC proposes. (57-7, 63-5)

Response

Several Federal agencies, including the U.S. Department of Transportation (USDOT), the U.S. Environmental Protection Agency (USEPA), and the Occupational Safety and Health Administration (OSHA), have established requirements for hazardous materials transportation on rail lines, and for emergency planning and spill response for hazardous materials. ARRC would follow standard protocols for transporting hazardous substances and other deleterious compounds to minimize the potential for a spill occurrence near or adjacent to waterbodies. The potential consequences of a release would depend on the accident location, the type and amount of material released, and weather conditions at the time of the release. As discussed in Draft EIS Section 11.3.2, Hazardous Materials Transportation Safety, for rail traffic associated with the propose rail line extension, the likelihood of a release would be low because railcars used for transporting hazardous materials are designed to withstand various types of impacts. Further, potential releases would likely be small because of the railcars’ design standards. The Applicant’s voluntary mitigation measure VM-30 in Draft EIS Section 20.2.8, as revised in accordance with the Applicant’s comments and included in Chapter 2 of this Final EIS as VM-29, would require the Applicant to incorporate the new rail line into its existing emergency response process and Oil Spill Contingency Plan.

Comment

“The aquifers and headwaters of the Richardson Clearwater produce the constant flow for the river. Any interruption of this flow by blockage of bore holes, bank erosion, and downstream sedimentation will certainly affect the water quality of the Richardson Clearwater as well as the fish habitat for the four species of fish that inhabit that area. There is no question under these conditions which are especially fragile after the Carla Lake fire that the south common segment of the Northern Rail Extension should be placed further south and out of the headwaters of the Richardson Clearwater River. Placing it closer to Rainbow Lake or to the south of Rainbow

Lake would give the railroad almost a straight shot into the Donnelly [T]raining [A]rea and Fort Greeley using the Delta one alternative segment. There is no reason for the Northern Rail Extension to take the chance of drastically injuring the headwaters of the Richardson Clearwater.” (44-4)

Response

The rail line alternative segments would not cross Richardson Clearwater River; rather, they would cross several Richardson Clearwater River headwater streams. Draft EIS Chapter 4 (see headings Surface Water and Water Quality) and Chapter 5 (see heading Fisheries) describe existing conditions and potential impacts to surface waters and fisheries resources in those headwater streams. During bridge construction, impacts would be expected to be temporary and short term, localized around each crossing, and with implementation of mitigation measures, not expected to adversely affect water quality. ARRC would design, construct, and operate crossings to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of ADF&G fish passage permits, would not impede fish migration. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to these headwater streams. The Applicant would abide by all reasonable conditions of required Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe recommended measures to mitigate potential impacts to these resources.

According to the Applicant, the factors limiting the movement of the proposed alignment of the South Common Segment farther south to avoid the Richardson Clearwater are geotechnical conditions, topography, and service to potential customers in the Whitestone Farm District. Sea concurs with the Applicant’s assessment.

From a geotechnical perspective, the proposed alignment circumnavigates the edge of a glacial outwash plain comprised of gravels, silts and other materials. The geotechnical investigation in 2007 indicates this outwash plain also contains many kettles, some of which appear as ponds or lakes on the surface, which should be avoided. Also, a recent fire in the area has removed vegetation, which has resulted in a number of slope failures through the area, including failures along the existing ADNR road. The proposed alignment has been located as close as is reasonable to the edge of the outwash zone to stay clear of the Richardson Clearwater headwaters area to the extent practicable.

Topographically, the glacial outwash presents itself as a large hill face rising over 200 feet above the Tanana basin. It would not be practicable for the railroad to climb the additional hill, likely requiring a rather curvy alignment, and then return to the basin floor to cross the Delta River. The poor geotechnical conditions in the area could significantly increase the project footprint and associated environmental impacts.

Further, the alignment as presently conceived would be immediately adjacent to the Whitestone Farm District, which is one of the communities that the project intends to serve. Aligning the railroad along the existing Alaska District of Natural Resources road or the Donnelly Range would require development of 3 to 7 miles of additional all-weather road to connect the Whitestone area with the proposed railroad. This also would increase environmental impacts.

3.4.3 Groundwater

Comment

How will ARRC ensure that potable groundwater for neighboring communities is not affected? (4-5)

Response

Draft EIS Section 4.3.2 describes potential impacts to groundwater from the proposed rail line. Draft EIS Section 20.2.2 presents the Applicant's voluntary mitigation measures and SEA's preliminary mitigation measures for impacts to water resources, and Chapter 2 of this Final EIS presents recommended mitigation measures. The Applicant would be required to obtain necessary Federal and state permits and authorizations, including for groundwater withdrawal, if required.

Comment

"Descriptions of the proposed bridges are not readily available, but if they use the same construction methods as the bridges proposed to cross the Tanana River, it seems that there can be catastrophic consequences to the headwaters of the [Richardson Clearwater]. Assuming use of pilings for the bridge supports, the process of pounding the pilings into the gravel and substrate could damage the aquifers, limiting or changing the flow and output of the springs. Additionally, the compression of the initial pilings and vibration of train use of the trestles could continue to compress the aquifers feeding the springs and changing the rate and/or quality of the water output. If another type of bridge system is to be used for crossing the headwaters, we would like to know more about the design and placement that might be used." (40-4)

Response

The type, length and design of all rail line and access road bridges would be determined during the final design and permitting process. It is very unlikely that pile driving for bridge support would damage underground aquifers. During final design, the Applicant would conduct geotechnical surveys to verify the suitability of subsurface conditions for bridge structural support. A site with a shallow aquifer that could be significantly damaged by pile driving would not be suitable as a bridge location from a structural point of view; therefore, piles would not be installed at such a location.

Regarding bridge structural vibration caused by trains, it is also very unlikely that this would damage underground aquifers for several fundamental reasons. First, train-induced vibrational forces into the ground are relatively low compared to forces that would be required to disturb underground structures. For example, fragile historic buildings (as defined by the Federal Transit Administration [FTA]) would have to be within a few feet of the tracks to experience even tiny cosmetic cracking in plaster as a result of train-induced vibration. Underground rock and soil structures are orders of magnitude higher in structural integrity than fragile historic buildings. Second, the AREMA rail standards upon which the design and construction of the rail bed, rail ties, and bridge would be based require adequate soil stability, which would be determined based on geotechnical surveys and reflect the stability characteristics and the locations of underground aquifers. In other words, the weakest structural element involved would be the rail and bridge structure itself, which is more than capable of withstanding train

dynamic forces. Therefore, it is very unlikely that there would be train-induced vibration impacts to aquifers.

Comment

“When construction is done to cross major wetlands and the aquifers of the ‘Richardson Clearwater’ will the construction of rail bed and the bridge pilings negatively affect the water flow from the [aquifer]?” (69-10)

Response

The type, length, and design of all rail line and access road bridges would be determined during the final design and permitting process. It is very unlikely that pile driving for bridge support would damage underground aquifers. During final design, the Applicant would conduct geotechnical surveys to verify the suitability of subsurface conditions for bridge structural support. A site with a shallow aquifer that could be significantly damaged by pile driving would not be suitable as a bridge location from a structural point of view; therefore, piles would not be installed at such a location.

3.4.4 Water Quality

Comment

“While the EIS proposes that there will be very little hazardous materials shipped, they will be shipped none-the-less. Additionally, it can be assumed that, as with Fort Wainwright and Eielson, there will be shipments of oil and fuel. Any derailment of hazardous materials and fuels could be disastrous for the RCW [Richardson Clearwater], it[s] tributaries, and drainages. The EIS proposes mitigations, but those obviously must take place after the fact. While linings and absorbing materials may be of great use as an end result, they would not be deployed quickly enough to prevent serious damage.” (40-8)

Response

Several Federal agencies, including USDOT, USEPA, and OSHA, have established requirements for hazardous materials transportation on rail lines, and for emergency planning and spill response for hazardous materials. ARRC would follow standard protocols for transporting hazardous substances and other deleterious compounds to minimize the potential for a spill near or adjacent to waterbodies. The potential consequences of a release would depend on the accident location, the type and amount of material released, and weather conditions at the time of the release. As discussed in Draft EIS Section 11.3.2, for rail traffic associated with the proposed rail line extension, the likelihood of a release would be low because railcars used for transporting hazardous materials are designed to withstand various types of impacts. Further, potential releases would likely be small because of the railcars’ design standards. The Applicant’s voluntary mitigation measure VM-30 in Draft EIS Section 20.2.8, as revised in accordance with the Applicant’s comments and included in Chapter 2 of this Final EIS as VM-29, would require the Applicant to incorporate the new rail line into its existing emergency response process and Oil Spill Contingency Plan.

Comment

“The water quality will be impacted by the construction and installation of bridges and culverts in the aquifer and wetlands of the Richardson Clearwater. Sluffing and erosion of the stream banks is a given. There will undoubtedly be increased channel scour, bank erosion and down stream sedimentation. It is unclear what effect thermal erosion of cuts made into the permafrost soils will have but one only has to look at the effect of the Carla Lake fires to see what effect the lack of vegetation in the wetland areas in the headwaters of the Richardson Clearwater has already had.

“The fear of all of the residents of the Richardson Clearwater Creek is that three bridges, and numerous culverts that are planned, will destroy the aquifers and interrupt the flow of a totally spring fed river that houses numerous species of fish. We have already had one disaster at the headwaters of this river which was the Carla Lake Fire in the summer of 1998. That fire burned approximately 54,000 acres and its effects on the Richardson Clearwater Creek have been annual floods in which the stream flow, organic matter content, turbidity, and color have been affected. The loss of vegetation due to the forest fire has produced an inability of the vegetation (in the headwaters) to contain the waters at times of heavy rains. Complicating this problem with [three] to four bridges and numerous culverts will very likely produce a complete disaster with regards to water stability, flow and turbidity.

“Obviously geotechnical bore holes will provide direct communication between surface water and ground water but no one knows the effect it will have on the aquifers if they are drilled into. The proposed clearing of 251 acres in the south common segment at a time when the vegetation is trying to rebuild itself can only increase the turbidity and sediment loads associated with that action and with the installation of culverts and bridges.” (44-2)

Response

Draft EIS Chapter 4 (see headings Surface Water, Water Quality, and Wetlands) discloses potential impacts to surface waters on the tributaries to Richardson Clearwater River. Draft EIS Chapter 5 (see heading Fisheries) discloses potential impacts to fisheries. At three of the headwater tributary crossings, ARRC would construct single-span bridges over fish-bearing streams (crossings identified as 136, 103, and 104 in the Draft EIS). Two of these bridges would completely span the channel, which would minimize impacts to water quality and fisheries habitat during rail line construction and operations. The third bridge might require some fill or placement of bridge abutments at the edge of the stream bank. Potential impacts to water quality would be expected to be temporary, short term, and localized during construction. The Draft EIS reports potential impacts as “high” from culvert installations across wetland flowways and drainageways to Richardson Clearwater River because of the amount of fill that might be required in the waterbody. ARRC would design, construct, and operate bridges and culverts to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of ADF&G fish passage permits, no crossing over a fish-bearing stream would impede fish migration. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts at these crossings. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings.

Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe recommended measures to mitigate impacts to these resources. SEA’s recommended mitigation measure VM-2, and recommended mitigation measure 2 in Chapter 2 of this Final EIS would require that the Applicant avoid placing bridge piers or abutments in known areas of permafrost, when

practicable, and would obtain all necessary permits to ensure that features of the rail line that would occupy areas of permafrost would be constructed to minimize thaw and subsidence. SEA's preliminary mitigation measure 25 in the Draft EIS, as revised in Chapter 2 of this Final EIS as recommended mitigation measure 23, would require the Applicant to abandon geotechnical boreholes in compliance with the requirements of Alaska Department of Environmental Conservation (ADEC) 18 Alaska Administrative Code (AAC) 80.015(e).

Comment

“The Chena Slough is a Category 5 CWA [Clean Water Act] Section 303(d) waterbody (AK Id. No. 40506-002) listed for non-attainment of the petroleum hydrocarbons, oil and grease sediment standards for petroleum products and sediment in 1994. Project components of the North Common Segment appear to be within the Chena Slough watershed. ADEC [Alaska Department of Environmental Conservation] records indicate nonpoint source problems result from surface water run-off, road construction, site clearing, and de-watering activities from gravel operations. According to the Alaska's Final 2008 Integrated Water Quality Monitoring and Assessment Report published by ADEC on April 1, 2008, the State is currently reviewing water quality assessment data collected in 2005 and 2007 to determine if a Total Maximum Daily Load Limit (TMDL) is needed on this waterbody. This information is currently not included in the draft EIS.

“EPA [Environmental Protection Agency] recommends that STB [Surface Transportation Board] include information concerning the 303(d) listing of the Chena Slough if the project has the potential to contribute to the pollutant loading of the slough. EPA also recommends that STB and ARRC [Alaska Railroad Corporation] work closely with ADEC if a TMDL is developed in order to meet the pollutant limits during construction and operation.” (60-8)

Response

Project components of the North Common Segment are not in the Chena Slough watershed, but in the Piledriver Slough watershed. Piledriver Slough drains directly into the Tanana River. The Chena Floodway separates the Chena Slough watershed from the Piledriver Slough watershed.

3.4.5 Wetlands

Comment

My concern is about the amount of unavoidable wetland fill that will result from the project. Wetlands are valuable resources and I hope that a lot of thought goes into deciding which alternative damages the least amount of wetland. (7-4)

Response

Wetland fill would be unavoidable along all alternative segments. The STB will consider impacts to wetlands when making its final decision on the project. During the Clean Water Action Section 404 permitting process, the Applicant would follow the standard mitigation sequence of first avoiding, then minimizing, and finally compensating for impacts to wetlands that would result from rail line construction. For wetlands filled and lost as a result of the project, in accordance with Clean Water Action Section 404, the Applicant would have to mitigate to ensure “no net loss” of wetlands.

Comment

It appears that many wetlands in the project area around the Richardson Highway were created by the construction of the highway where the presence of the highway has altered wetland hydrology and created wetlands. In addition, there appears to be several gravel pits that were used for highway construction that turned into lakes. Is there a jurisdictional difference between natural wetlands and potential man made wetlands under federal and state wetland regulations? (88-3)

Response

During final design and permitting, USACE would make a final jurisdictional wetland determination for all wetlands the proposed rail line could affect. This determination would account for wetlands that might not meet the USACE Wetland Delineation Manual definition of a jurisdictional wetland, including manmade wetlands.

Comment

“The idea of an access road parallel to the rail line is not environmentally friendly to this area let alone the cost to build and maintain a road. The wash of road soils into the wetlands would destroy much of the area.” (57-10)

Response

Draft EIS Section 4.5.2 describes potential impacts to water quality in wetlands and other waters adjacent to the rail line and access road. The Applicant would work with Federal and state agencies during the Clean Water Act Section 401 water quality certification process to develop measures to minimize the effects of sedimentation in wetlands and other waters affected by the rail line and access road. In addition, the Applicant would return temporarily disturbed areas to their preconstruction contours to the extent practicable, and reseed and replant native vegetation to provide permanent stabilization and to minimize the potential for soil erosion.

3.4.6 Floodplain Resources

Comment

“Another aspect I would like to see covered is the averages for the floodplains that are parts of the proposed segments; meaning, are they five year floodplains, ten year or one hundred year floodplains. Personally I would not like anything to be built on [them] because there are so many risks involved. Silts and clays simply don’t make a good base for ballasts because they are prone to compressing, holding water and many other things.” (10-2)

Response

The FEMA 100-year flood is the standard most Federal and state agencies use for floodplain management and to analyze project impacts to floodplains. The 100-year flood is not the flood that would occur once every 100 years; rather it is the flood elevation that has a 1-percent chance of being equaled or exceeded each year. For rail line operations safety, the Applicant would use appropriate ballast and subballast to ensure a stable base for construction in floodplains. During design and construction, if an area in the footprint of the rail line and access road was determined to have unsuitable soils, the Applicant would remove the soil and replace it with suitable material upon which to build the rail line and access road.

Comment

We are concerned that the proposed levees associated with the bridge crossing of the Tanana River will further exacerbate flooding, to the point of abandonment, in the Starkeyville area. The Starkeyville area flooded in May and July of 2008. Who would be involved if property is abandoned and compensation if claims are sought? (24-1)

Response

The purpose of the levees would be to reduce surface flooding risk, not increase risk. The Applicant would design the Tanana River crossing to pass the 100-year flood event. SEA's recommended mitigation measure 11 in Chapter 2 of this Final EIS would require that the Applicant comply with all relevant FEMA guidance, regulations, and procedures in the design and permitting of the Tanana River crossing and floodplains with established floodway models maintained by FEMA. Designing, constructing, and operating the bridge crossing in accordance with FEMA regulations and standards would not create property abandonment or flood compensation issues.

Comment

"Is it anticipated the construction of the new rail corridor will either positively or negatively impact flooding in the Salcha area?" (54-5)

Response

The extension of the levee and increased height of a levee associated with the new rail line road would reduce the potential for flooding in the Salcha area.

Comment

The commenter expressed concern that diking on both sides of the river at the Bradbury Crossing would narrow the river and create problems that would make it difficult to control water flows in the area. The commenter expressed concern about water backup and runoff problems. (96-3)

Response

The floodplain areas downstream of the levees would not receive this protection, but this area is not developed land and there is considerable floodplain storage capacity in this area. There has been no detailed modeling of the conveyance of surface flood flows through the bridge area, but such modeling would be performed if the STB authorized Salcha Alternative Segment 1. The Applicant would design the Tanana River crossing to pass the 100-year flood event. SEA's recommended mitigation measure 11 in Chapter 2 of this Final EIS would require that the Applicant comply with all relevant FEMA guidance, regulations, and procedures in the design and permitting of the Tanana River crossing and floodplains with established floodway models maintained by FEMA.

Comment

There are several dams on Piledriver Slough and severe flooding occurred in this area around 2001. The construction of a rail crossing in this area should consider the existing flood conditions and how the rail crossing could affect this area. (110-1)

Response

The Applicant would coordinate with the FNSB Floodplain Administrator to ensure the design of the Piledriver Slough crossing accounts for the existing flood conditions and is appropriately designed to pass the 100-year flood flow.

Comment

The commenter expressed concerns about floodwaters that reach Nenana, and asked if there is any way of relieving these waters or if they would be channeled back to Salcha. (94-3)

Response

Nenana would not be expected to be affected by surface flood flows because Nenana is far downstream of the project area and the Applicant would design the Tanana River crossing to pass the 100-year flood event. SEA's recommended mitigation measure 11 in Chapter 2 of this Final EIS would require that the Applicant comply with all relevant FEMA guidance, regulations, and procedures in the design and permitting of the Tanana River crossing and floodplains with established floodway models maintained by FEMA.

Comment

The commenter stated that the impact from construction and railroad operations "could significant[ly] alter the fragile aquifer that feeds this beautiful spring fed clearwater stream [Richardson Clearwater]." (77-5)

Response

Draft EIS Sections 4.2.2, 4.3.2, and 4.4.2 describe potential impacts to Richardson Clearwater River headwater streams and groundwater. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to these waters. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings to protect water quality and maintain water flow. Draft EIS Section 20.2.2 and Chapter 2 of this Final EIS describe recommended measures to mitigate potential impacts to water resources.

Comment

"In particular though, I am concerned with the route that has been proposed within Map Area 5 known as the 'South Common Segment'. My family and I are property owners on the Richardson Clearwater which is a very important recreational stream located less than a mile north of the proposed route. The Richardson Clearwater is an approximately 10 mile long spring fed stream that supports a diverse habitat for spanning Salmon, Arctic Grayling, Whitefish and Burbot, as well as Moose, Bears, Eagles, Peregrine falcons, an occasional Caribou and many of Alaska's fur [bearer] species. In addition to these year round critters, the Clearwater also is a cherished recreational area for over 25 families, some of whom live their retirement here May through September of each year. Because the Richardson Clearwater is a spring fed stream, its headwaters consist of a series of marshes and smaller streams that work as a natural filter and catch basin for the drainage. It is this area that appears will be most adversely affected by the proposed route. As proposed, the rail line will be laid right through this critical wetlands, and will span two of the primary streams that feed the Clearwater. Believe me when I say that

having a train operating in such a critical area is at best undesirable, however the thought that a single mishap with a train carrying hazardous material that could quickly destroy this beautiful area is considered irresponsible and unacceptable to the private property owners in the area.” (77-2)

Response

Draft EIS Chapters 4 and Chapter 5 describe existing conditions and potential impacts to surface waters, wetlands, fisheries, vegetation, and wildlife resources, including in the headwater area of Richardson Clearwater River. During construction of water crossings, impacts would be expected to be temporary and short term, localized around each crossing, and with implementation of recommended mitigation measures, not expected to adversely affect water quality. ARRC would design, construct, and operate crossings to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of ADF&G fish passage permits, would not impede fish migration. The rail line would displace some wildlife and habitat would be lost. Wildlife migration across the rail line would be expected, and there would be a risk of rail strikes to moose and other mammals. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to these headwater streams. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe recommended measures to mitigate potential impacts to water and biological resources.

Several Federal agencies, including USDOT, USEPA, and OSHA, have established requirements for hazardous materials transportation on rail lines, and for emergency planning and spill response for hazardous materials. ARRC would follow standard protocols for transporting hazardous substances and other deleterious compounds to minimize the potential for a spill occurrence near or adjacent to waterbodies. The potential consequences of a release would depend on the accident location, the type and amount of material released, and weather conditions at the time of the release. As discussed in Draft EIS Section 11.3.2, for rail traffic associated with the proposed rail line extension, the likelihood of a release would be low because railcars used for transporting hazardous materials are designed to withstand various types of impacts. Further, potential releases would likely be small because of the railcars’ design standards. The Applicant’s voluntary mitigation measure VM-30 in Draft EIS Section 20.2.8, as revised in accordance with the Applicant’s comments and included in Chapter 2 of this Final EIS as recommended mitigation measure VM-29, would require the Applicant to incorporate the new rail line into its existing emergency response process and Oil Spill Contingency Plan.

3.5 Biological Resources

Comment

How will you address “the possible disruption of migration patterns for different species within the proposed project area?” (6-1)

Response

All bridge and culvert crossings of fish-bearing waters and water withdrawals would be designed, constructed, and operated to maintain existing water patterns and flow conditions to the extent practicable. The Applicant would comply with all reasonable requirements of the

ADF&G fish passage permits. In general, all large mammals and birds would be expected to successfully cross the rail line unless they were hit by a train or collided with a power line (Draft EIS Sections 5.5.2 and 5.6.2). Some small mammals could be blocked from crossing the rail line, but movements of small mammals through culverts and under bridges across streams would be expected. Draft EIS Section 20.2.3 describes SEA's preliminary mitigation measures to minimize potential impacts to animal movements, including a measure within preliminary measure 32 (use marking techniques such as balls or flappers to increase the visibility of transmission lines, especially in areas where sandhill cranes and bald eagles would be likely to roost, forage, or nest) and a measure within preliminary measure 43 (designing, constructing, and operating all aspects of the rail line to minimize significant alteration of moose and other wildlife movement and migration patterns). SEA has included these measures in Chapter 2 of this Final EIS within recommended mitigation measures 34 and 44.

Comment

“Where the rail line crosses waterways that have running water or sloughs that have standing water, trusses/bridges should be constructed wide enough and tall enough so wildlife can pass under the rail line. It will be necessary to maintain the trees and vegetation as much as possible and not clear a [right-of-way] on both sides of the rail line at these trusses/bridges. As these areas will constrain the wildlife at these points, hunting, trapping and other human activities must be controlled so as not to impede the wildlife movements. The rail line [right-of-way] should be fenced and game passageways provided at least every 1/4 mile intervals. Passageways under the rail line would greatly reduce train-moose collisions mentioned in Section S.6.5.” (17-2)

Response

While most wildlife would be able to cross the rail line ROW, the Draft EIS does acknowledge the potential for mortality due to train collisions. In Draft EIS Section 20.2.3, SEA's preliminary mitigation measure 44 would require the Applicant to work with ADNR and ADF&G in designing, constructing, and operating all aspects of the rail line to minimize significant alteration of moose and other wildlife movement and migration patterns. The measure also would require that vegetation in the ROW be preserved and maintained where practicable to reduce moose-train mortalities. SEA has included this measure as recommended mitigation measure 44 in Chapter 2 of this Final EIS.

Comment

“Newly pioneered rights-of-way expose unwary wildlife to abuse by construction and RR [railroad] crews. Possession of firearms by construction crews should be strictly prohibited with severe penalties for contractors violating the prohibition.

“No portion of the proposed right-of-way should be vegetated with any plant life that attracts wildlife and exposes the wildlife to construction and train traffic.” (38-2)

Response

To protect wildlife from contractors during rail line construction, the Applicant has volunteered and SEA identified the following preliminary mitigation measures in Draft EIS Chapter 20:

The Applicant would restrict workers from hunting or fishing while stationed at work camps (voluntary mitigation measure VM-15).

Harassment of wildlife, including winter or calving concentrations of moose and known occupied bear dens by construction workers would be prohibited, and workers would be instructed not to feed wildlife (SEA preliminary mitigation measure 47).

A bear interaction plan to minimize conflicts between bears and humans would be prepared and implemented, and the ADF&G would assist the Applicant in developing education programs and camp layout and management plans as the Applicant prepares its construction and operations plans (SEA preliminary mitigation measure 45).

SEA has included these mitigation measures as recommended mitigation measures VM-15, 48, and 46 in Chapter 2 of this Final EIS.

The Applicant would also minimize the removal of vegetation, sensitive vegetation communities, and wildlife habitat in the 200-foot ROW to protect those resources to the extent practicable (see recommended mitigation measure 35 in Chapter 2 of this Final EIS). The Applicant would also clear and maintain vegetation in a way that would ensure safe rail line operations, which would include minimizing wildlife attraction to the ROW. For example, the Applicant would work with the ADF&G and ADNR to clear and maintain vegetation in a way that would reduce and minimize moose browsing in the ROW and potential rail strikes (see the first bullet under SEA's preliminary mitigation measure 43 in Draft EIS Section 20.2.3). SEA has included this measure as recommended mitigation measure 44 in Chapter 2 of this Final EIS.

3.5.1 Vegetation

Comment

“[A]fter reviewing the DEIS I was left with some questions I felt the current document did not cover. In section two, Proposed Action and Alternatives, section 2.3.4 about vegetation resources there is the statement that vegetation would be impacted “through the spread of noxious and invasive plants.” I feel that this statement should have better language; it leaves me with the feeling that the Alaska Railroad Corporation is going to be intentionally bringing invasive species into the area. I think this could be fixed with a small amount of rewording.” (7-2)

Response

Rail line construction could introduce and increase the spread of invasive species by allowing entry through the following pathways:

- Construction equipment used on the site could carry seeds from other construction projects or other infested portions of this project area.
- Removal of overburden and cut materials to offsite locations could spread invasive species, and placement of fill from borrow sites could introduce invasive plants.
- Seed mixtures used in revegetation of slopes and exposed soils could contain invasive plants.

To minimize these potential impacts, the Applicant would develop and implement aggressive management programs during rail line construction and operations to limit the introduction and spread of invasive species (see recommended mitigation measure 37 in Chapter 2 of this Final EIS).

Comment

“I would like to see covered or at least proof that it has been considered the amount of vegetation on all slopes and how AR[R]C plans to replace any vegetation that is uprooted. Vegetation is vitally important to slope stability, proper run-off and drainage patterns as well as important to wildlife in the area.” (10-3)

Response

In the Draft EIS, the Applicant’s voluntary mitigation measure VM-1 states that the Applicant would restore temporarily disturbed areas as soon as practicable after construction ended. The goal of restoration would be the rapid and permanent reestablishment of native groundcover on these disturbed areas to maintain soil stability, prevent soil erosion, and maintain proper runoff. SEA has included this measure as recommended mitigation measure VM-1 in Chapter 2 of this Final EIS.

3.5.2 Fisheries

Summary Comment

It is difficult to tell from the Draft EIS if impacts to Clear Creek have been considered. Before any alternative is approved, please make sure that impacts on salmon, whitefish, and grayling in Clear Creek are studied, presented and taken into account. (2-2, 32-2)

Response

Draft EIS Figures 4-5 and 5-13 identify Fivemile Clear Creek as Fivemile Clearwater River. Connector Segments B, C, and E would cross this waterbody; these are identified as crossing numbers 86, 345, and 351, respectively. Draft EIS Chapter 5 discloses potential impacts to fisheries resources in this waterbody. Before beginning construction, ARRC would obtain and comply with reasonable requirements of state permits and authorizations, such as the ADF&G fish habitat permit, and would design and construct crossings of this waterbody so as not to impede fish passage or impair hydrologic functioning of the waterbody (see recommended mitigation measures VM-8, VM-9, VM-16, VM-17 in Chapter 2 of this Final EIS).

Comment

Consideration should be given to the downstream effects of sedimentation during construction. Sedimentation could temporarily change water clarity, or in the case of larger bridges, permanently change water clarity, which could affect downstream fish spawning. (9-2)

Response

Draft EIS Sections 4.4 and 5.4 disclose potential impacts from sedimentation. Sediment and turbidity at the work site would be contained by installing diversion or containment structures. Impacts to water quality would be expected to be temporary, short term, and localized during construction. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize sedimentation and impacts to water quality at waterbody crossings. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to water quality and fisheries.

Comment

How will potential adverse impacts to salmon and grayling migration and spawning streams be addressed? Please confirm that this issue will be addressed before approval is granted for the project. (14-4)

Response

Draft EIS Section 5.4.2 discloses potential impacts to fisheries resources, including migration and spawning streams. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, and would comply with reasonable requirements of those permits. ARRC would design and construct stream crossings so as not to impede fish passage or impair hydrologic functioning of the stream. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to fisheries at waterbody crossings. ARRC would incorporate permit stipulations protecting fisheries into the construction specifications.

Comment

“Between Clear Creek and the Tanana, behind the private properties, is a clear-running stream that sustains a salmon population and likely other fish. I cannot tell from maps provided if Alternative 2 affects this stream, but it should be considered. This is the area off military land.” (32-9)

Response

Assuming that the commenter is referring to Connector Segment D-Central Alternative Segment 2, the “Clear Creek” referenced is the Fivemile Clearwater River, and the “military land” referenced is the Tanana Flats Training Area. As shown on Draft EIS Figure 5-13, the rail line would cross several waterbodies along the Connector Segment D-Central Alternative Segment 2, which would include crossings 501, 502, 503, 504, 35 and 38. Most of these locations were visited during field surveys and habitats were assessed. The hydrologic mapping shown at the scale of Draft EIS Figure 5-13 shows limited detail for the area between Fivemile Clearwater River and Tanana River. Field surveys indicated that crossings 501, 502, 503, 504, 35, and 38 likely support anadromous or resident fish. All crossings except 502 would be by bridges (Draft EIS Table 5-21), which would minimize impacts from crossings. Draft EIS Table 5-21 lists Central Alternative Segment 2 crossings of fish-bearing streams. In addition, Draft EIS Appendix G and Final EIS Appendix D, Essential Fish Habitat, describe impacts to anadromous fish streams. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to streams, including resident and anadromous fish streams.

Comment

“Much of the preferred placement of the new rail line appears to be within the immediate Tanana River floodplain in order to take advantage of dryer, ice-free soils. While this approach has the benefit of more stable rail/road beds, it may result in adverse impacts to fisheries. We believe further investigation is necessary to identify and address the potential impacts of the rail/road beds on groundwater transport. This is important since a number of fisheries in this area, including anadromous and resident species, depend on upwellings of groundwater for spawning and overwintering habitat. It is important that flow of subsurface water to streams all along the

proposed route not be disrupted. This additional investigation needs to include general groundwater flow and an examination of spring-fed streams. For example, it may be important to locate the rail/road beds further away from spring-fed streams, such as Fivemile Clear Creek, and streams with known or suspected spawning and over-wintering habitat, than is currently proposed. We recommend that additional studies of hydrology and instream habitat to address these questions be completed and the results included in the final EIS. We further recommend that additional proposed routes be identified and analyzed in the final EIS, if necessary, based on the results of these additional investigations.” (34-1)

Response

As stated in Draft EIS Chapter 2 and Draft EIS Appendix D, the locations of potential alignments were identified by ARRC based on a variety of technical and practical considerations, including natural barriers such as rivers and topography; engineering design; cost-effectiveness; geological considerations; and general land use patterns. This is consistent with the requirements of AS 42.40.460 (b), Extension of the Alaska Railroad (2005), including the requirement to consider avoidance of possibly unstable ground due to thawing of frozen soils. From the alignments, SEA selected the alternatives to carry forward in the EIS for detailed analysis.

Draft EIS Section 4.3.2, describes potential project-related impacts to groundwater; Draft EIS Appendix E provides additional information. Field investigations, including hydrologic evaluations, were completed during 2005 to 2007, and results of these investigations were used in assessment of impacts. The Central alternative segments and connectors were evaluated at or near six crossings using ground-based observations and 11 crossings using low-level aerial helicopter-based observations. The roadbed and gravel pits for the Applicant’s preferred segments – Connector Segment B and Central Alternative Segment 2 – were evaluated as having a moderate potential for impacts to groundwater during construction through changes in recharge potential, low impacts to dewatering of aquifers, and low impacts to stresses on the natural water balance; and during operations as having low impacts to groundwater and natural water balance. Instream fish habitats were also assessed at or near the proposed crossings of Fivemile Clearwater River (see Draft EIS Sections 5.4.2, F.2.4, and G.3.4). These assessments were completed based on the available information. In addition, Draft EIS Section 20.2.2 lists the Applicant’s voluntary mitigation measures and SEA preliminary mitigation measures for the protection of water resources; Section 20.2.3 lists mitigation measures for impacts to biological resources. Recommended mitigation measures are presented in Chapter 2 of this Final EIS.

Comment

The Richardson Clearwater hosts a high number of benthic invertebrates that are important food sources for fish. Will impacts from the Southern Common Segment crossing of two headwater streams of Richardson Clearwater be addressed for this food source and fish? (40-3)

Response

Draft EIS Sections 4.2, 4.4, and 5.4 disclose potential impacts to surface waters and fisheries resources on headwater streams to Richardson Clearwater River. The three South Common Segment crossings of Richardson Clearwater River headwater streams would consist of single-span bridges, which would minimize impacts to water quality and fisheries habitat and food sources during rail line construction and operations. During bridge construction, impacts would be expected to be temporary and short term, localized around each bridge, and with

implementation of mitigation measures, not expected to affect water quality or benthic invertebrates as far away as Richardson Clearwater River. ARRC would design, construct, and operate bridges to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of the ADF&G fish passage permits, would not impede fish migration. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to at these crossings. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to surface water, water quality, and fisheries.

Comment

The Draft EIS does not analyze the disruption of spring flow, continued compression due to vibration, and downstream sedimentation damage to Richardson Clearwater from construction of crossings of several tributaries along the South Common Segment. (40-7)

Response

For potential downstream construction sedimentation impacts to Richardson Clearwater, impacts are expected to be temporary and short term, localized around each crossing structure, and with implementation of mitigation measures, not expected to affect water quality as far away as Richardson Clearwater River. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize potential impacts at these crossings. The Applicant would abide by all reasonable requirements of Federal and state permits to protect water quality and fisheries resources at these crossings. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to these resources.

Regarding ground-borne vibration from trains, for several fundamental reasons, it is very unlikely that this would damage underground aquifers. First, train-induced vibrational forces into the ground are relatively low compared to forces that would be required to disturb underground structures. For example, fragile historic buildings (as defined by the FTA) would have to be within a few feet of the tracks to experience even tiny cosmetic cracking in plaster as a result of train-induced vibration. Underground rock and soil structures are orders of magnitude higher in structural integrity than fragile historic buildings. Second, AREMA rail standards, upon which the design and construction of the rail bed, sleepers, and ballast would be based, require adequate soil stability, which would be determined based on geotechnical surveys and reflect the stability characteristics and the locations of underground aquifers. In other words, the weakest structural element involved would be the rail line and rail bed structure itself, which is more than capable of withstanding train dynamic forces. Therefore, it is very unlikely that there would be train-induced vibration impacts to aquifers.

Summary Comment

Noise and vibration caused by pile driving and culvert installation would most certainly impact egg mortality and hatching time in areas near stream crossings. Vibrations could negatively impact development of salmonid eggs and at certain times disrupt egg membranes, leading to egg death. The most devastating thing that could occur in the Coho run is avoidance behavior,

which would result in abandonment of their winter spawning grounds. Vibrations and pile driving activities and sediment would impact the Grayling population, which also could change their natural pattern and abandon the upper portions of the Richardson Clearwater. Please explain how these vibrations would impact fisheries and your mitigation efforts to reduce this impact. (44-3, 47-4)

Response

Draft EIS Section 5.4 discloses potential impacts to salmon eggs from exposure to noise and vibration and sedimentation during rail line construction. Construction in anadromous fish streams would be timed to minimize adverse effects to salmon during critical life stages (see Draft EIS Section 20.2.3, voluntary mitigation measure VM-18, and recommended mitigation measure VM-17 in Chapter 2 of this Final EIS). Pile driving and culvert installation would be short in duration and temporary. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, and would comply with reasonable requirements of those permits and would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications (see Draft EIS Section 20.2.3 voluntary mitigation measure VM-17 and recommended mitigation measure VM-16 in Chapter 2 of this Final EIS.)

Comment

“I guess there could possibly be some problems in the salmon spawning streams. Fivemile Clear Creek was identified as a salmon spawning stream. There are several little connecting streams that come off of a slough that’s about probably half way up of what’s considered to be Fivemile Clear Creek on the map. It’s actually a slough of the Tanana. Those clear streams also have salmon runs in them, and that isn’t identified in the Draft EIS.” (78-5)

Response

Draft EIS Section 5.4 discloses potential impacts to fisheries resources in Fivemile Clearwater River. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, would comply with reasonable requirements of those permits, and would design and construct crossings of fish-bearing streams so as not to impede fish passage or impair hydrologic functioning of the stream. ARRC would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications (see Draft EIS Section 20.2.3 voluntary mitigation measures VM-17 and VM-18 and recommended mitigation measures VM-16 and VM-17 in Chapter 2 of this Final EIS).

Comment

“Salcha 2 is going to impact a lot of salmon spawning grounds in the Tanana River at the Flag Hill crossing. It’s certainly easy to say that we got lots of salmon resources and disturbing a bit of habitat isn’t going to make a lot of difference, but it’s exactly that kind of thinking that’s led to the destruction of salmon habitat in Europe, in England, New England, the Pacific Northwest. And we got a chance to do it right, so I think it’s something that needs to be considered.” (79-2)

Response

Draft EIS Section 5.4 discloses potential impacts to fisheries resources in the Tanana River. Before beginning construction, ARRC would obtain state permits and authorizations, such as the

ADF&G fish habitat permit, and would design and construct crossings of fish-bearing streams so as not to impede fish passage or impair hydrologic functioning of the stream. ARRC would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications (see Draft EIS Section 20.2.3 voluntary mitigation measures VM-17 and VM-18 and recommended mitigation measures VM-16 and VM-17 in Chapter 2 of this Final EIS).

Comment

The abutments or dikes across the Tanana River crossings should be analyzed to ensure salmon migration is not impeded. The same comment for crossings of all the little tributaries. (96-1)

Response

Draft EIS Section 5.4 Fisheries Resources discloses potential impacts to fisheries resources in the Tanana River and other fish-bearing streams. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, and would design and construct crossings of fish-bearing streams, including the Tanana River, so as not to impede fish passage or impair hydrologic functioning of the stream. ARRC would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications (see Draft EIS Section 20.2.3 voluntary mitigation measures VM-17 and VM-18 and recommended mitigation measures VM-16 and VM-17 in Chapter 2 of this Final EIS).

Comment

“The Draft EIS has identified several anadromous streams from the Anadromous Fish Catalog (ADF&G Sport Fish Division). However, I have learned from discussions with Jim Durst that because anadromous fish seek out upwelling and spring-fed waterways, it is very likely that the dozens of other clearwater streams along the south bank of the Tanana are also critical spawning and/or rearing habitat for several species of salmon that Fish & Game just hasn’t yet surveyed. ... This most concerns me in regards to the 2 tributaries of the Richardson Clearwater that the proposed route would cross. ... The Clearwater is a truly unique stream, even in a state full of unprecedented beauty. A clear, spring-fed, navigable stream in the interior of Alaska. Very rare. A stream that has also been documented as important spawning and rearing habitat for both Coho and Chum salmon. Why is it necessary to risk screwing that up?” (51-5)

Response

The South Common Segment would cross two tributaries of Richardson Clearwater River (crossings 135 and 104 on Draft EIS Figure 5-15) cataloged as anadromous fish streams. ARRC would construct bridges to cross these streams and the bridges would be designed and constructed to minimize potential impacts to fisheries resources. In addition, the South Common Segment would cross an unmarked drainage (crossing 103 on Draft EIS Figure 5-15), which although uncataloged, was identified during field investigations supporting EIS development as probably providing fish habitat. ARRC would construct a bridge to cross this stream. During field surveys (from 2005 to 2007), SEA evaluated streams likely to support anadromous fish and fish habitat. Information from these field studies was submitted to ADF&G. Draft EIS Section 5.4.2 discloses potential impacts to anadromous and resident fish-bearing streams and Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe mitigation measures developed to minimize impacts. Draft EIS Appendix G describes the analysis of potential impacts to Essential Fish Habitat (EFH), which in the project area includes cataloged

anadromous waters and additional sites where anadromous fish habitat was documented in association with SEA field investigations for the EIS. An updated version of the EFH assessment incorporating the recommended mitigation measures in Chapter 2 of this Final EIS is included as Appendix D of this Final EIS.

Summary Comment

The Richardson Clearwater is a unique ecosystem with its summer population of feeding grayling, whitefish, chum and king salmon and large run of silver salmon on late fall. This unique ecosystem needs protections from development projects such as the proposed railroad. (57-1, 69-3)

Response

The rail line would not cross Richardson Clearwater River; rather, it would cross several Richardson Clearwater River headwater streams, which were identified during field studies. Draft EIS Sections 4.2, 4.4, and 5.4 describe existing conditions and potential impacts to surface waters and fisheries resources in those headwater streams. During bridge construction, impacts would be expected to be temporary and short term, localized around each crossing, and with implementation of mitigation measures, not expected to adversely affect water quality. ARRC would design, construct, and operate crossings to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of the ADF&G fish passage permits, would not impede fish migration. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop measures to reduce and minimize impacts to these headwater streams. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate potential impacts to these resources.

Comment

“Just how much damage to salmon eggs is expected due to vibration during the construction process and what affects will there be on the aquifer? I am significantly concerned about damage to the aquifer for a variety of reasons. The returning salmon, all pretty and red, are great fun to watch in the fall. Damage to their eggs could eliminate this run, which would be a significant problem. If you study the comments made during a recent timber sale in the area, you will note that people are significantly worried about the salmon runs and the potential damage to the up-wellings and springs in the area.” (73-3)

Response

Draft EIS Section 5.4 discloses potential impacts to salmon eggs from exposure to noise and vibration during rail line construction. Construction in anadromous fish streams would be timed to minimize adverse impacts to salmon during critical life stages. Pile driving and culvert installation would be short in duration and temporary. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, would comply with reasonable requirements of those permits, and would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications.

Draft EIS Sections 5.4.2 and G.3.2 disclose the alteration and potential impacts to stream hydrology, hyporheic flow from the aquifer, and salmon. ARRC would design, construct, and operate rail line waterbody crossings to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of the ADF&G fish passage permits, would not impede fish migration. During the permitting and design phase, the Applicant would work with Federal and state regulatory agencies to develop measures to minimize impacts to streams that support anadromous and resident fish. The Applicant would comply with reasonable requirements of Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to these resources.

Comment

“Your document indicates that there may be damage to salmon eggs due to vibration during the construction process and that there may be damage to the aquifer. I am significantly concerned about damage to the aquifer for a variety of reasons. Your document doesn’t adequately acknowledge the importance of the Richardson Clearwater (and the Five[m]ile Clear Creek, or other [c]learwater streams along the NRE) as salmon spawning grounds and important habitat for grayling and other fish species. As to the salmon, I am most concerned that their habitat not be damaged because the salmon are used as a subsistence food for the down-river users. We need to take great efforts to protect this habitat from damage. The amount of effort needed to move the rail line south a few miles is minimal. Wouldn’t it be better to move the rail line south to where the impacts to this watershed from vibration were significantly lessened? From my flying over the area to the south, the wetlands that would be crossed by the rail line are not as valuable as the wetlands in and around the Richardson Clearwater. The same goes for the streams to the west. Your document recognizes that these areas are designated as important fish and wildlife habitat by the Tanana Basin Plan.” (65-4)

Response

Draft EIS Section 5.4 discloses potential impacts to salmon eggs from exposure to vibration during rail line construction. Regarding potential impacts to aquifers from ground-borne vibration from trains, for several fundamental reasons, it is very unlikely that this would damage underground aquifers. First, train-induced vibrational forces into the ground are relatively low compared to forces that would be required to disturb underground structures. For example, fragile historic buildings (as defined by the FTA) would have to be within a few feet of the tracks to experience even tiny cosmetic cracking in plaster as a result of train-induced vibration. Underground rock and soil structures are orders of magnitude higher in structural integrity than fragile historic buildings. Second, the AREMA rail standards upon which the design and construction of the rail bed, cross ties, and ballast would be based, require adequate soil stability, which would be determined based on geotechnical surveys and reflect the stability characteristics and the locations of underground aquifers. In other words, the weakest structural element involved would be the rail line and rail bed structure itself, which is more than capable of withstanding train dynamic forces. Therefore, it is very unlikely that there would be train-induced vibration impacts to aquifers.

Construction in anadromous fish streams would be timed to minimize adverse impacts to salmon during critical life stages. Pile driving and culvert installation would be short in duration and temporary. Before beginning construction, ARRC would obtain state permits and authorizations,

such as the ADF&G fish habitat permit, would comply with reasonable requirements of those permits, and would incorporate permit stipulations protecting fisheries during critical life stages into construction specifications.

Draft EIS Section 4.3.2 discloses potential impacts to groundwater; Draft EIS Appendix E provides additional information. SEA performed field investigations, including hydrologic evaluations, from 2005 to 2007, and used the results of these investigations in the assessment of impacts.

Draft EIS Figures 4-5 and 5-13 identify Fivemile Clear Creek as Fivemile Clearwater River. Connectors Segments B, C, and E would cross this waterbody and are identified as crossings 86, 345, and 351, respectively. This stream is identified as having important fish habitat for Chinook and coho salmon migration and rearing, and spawning, migration, and foraging habitats for resident fish (see Draft EIS Sections 5.4.2, F.2.4, and G.3.4). The rail line alternative segments would not cross Richardson Clearwater River; rather, they would cross several Richardson Clearwater River headwater streams. The Draft EIS identifies these headwater streams as having important spawning and rearing habitat for coho salmon. Draft EIS Section 5.4 and Appendix G disclose potential impacts to fisheries resources on Fivemile Clearwater River and its headwater streams. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, and would comply with reasonable requirements of those permits. During construction, impacts would be expected to be temporary and short term, localized around each crossing, and with the implementation of mitigation measures, not expected to adversely affect water quality. ARRC would design and construct crossings of these waterbodies so as not to impede fish passage or impair hydrologic functioning. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to minimize impacts to these streams and other clearwater streams, and would comply with all reasonable permit requirements protecting fisheries. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to these resources.

Summary Comment

Your document indicates that there could be damage to the aquifer related to construction activities and due to sediment flow from constructed facilities after construction. My comments about the salmon should be considered repeated here. In addition to salmon though, this area and the clear streams south of the Tanana are important grayling and other fish species rearing grounds. These clear streams provide recreation to a multitude of people. Since the Carla Lake fire in 1998, we have noted a significant decrease in the ability of the ground in the upper Richardson Clearwater area to hold rainfalls. The Clearwater never used to change in its depth. Since the fire, several times when we endure heavy rains, the Clearwater has raised and the waters have become turbid. I am significantly concerned about the additional sediment runoff possibilities by the railroad and road construction in the area of the South Common Segment. Of similar concern is the runoff from the Big Delta Construction Camp and Staging area and the two 17-acre borrow areas along the South Common Segment. If this area is damaged by sediment or the water is discolored, fish species and recreation would be impacted. I believe these impacts could be lessened or eliminated by moving the rail line to the south a few miles. (65-6, 73-4)

Response

Draft EIS Sections 4.2, 4.4, Section 5.4 disclose potential impacts to surface waters and fisheries resources on headwater streams to Richardson Clearwater River. Draft EIS Chapter 2 and Draft

EIS Appendix D describe the processes for developing alignments and selecting alternatives for detailed analysis in the Draft EIS. Impacts to water quality would be expected to be temporary, short term, and localized during construction, and would not exacerbate the existing turbidity conditions created by the Carla Lake fire. In addition, ARRC would design, construct, and operate bridges and culverts to maintain existing water patterns and flow conditions to the extent practicable, and would not exacerbate the existing flood conditions created by the Carla Lake fire of 1998. In accordance with reasonable requirements of the ADF&G fish passage permits, no crossing over a fish-bearing stream would impede fish migration. During final design and permitting, the Applicant would work with Federal and state regulatory agencies to develop mitigation methods to minimize impacts to these crossings. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to these resources.

Comment

“Additionally, in reference to Figure 2-17, are concerns about what impact the “fill” on the west side of the Tanana River will have to the fish population on the creek. The grayling migrate annually, and there are annual salmon runs. The Salcha Alternative Segment 2 crossing could be detrimental to both, thereby leading to serious environmental concerns further up the food chain.” (45-2)

Response

Draft EIS Section 5.4.2 discloses potential impacts to fisheries resources from the Tanana River crossings. The fill would be placed in a side channel of the Tanana River. Fish habitat would be lost in the footprint of the fill and fish would not be able to migrate through this Tanana River side channel. However, fish would still be expected to migrate in and out of the Tanana River basin via the main channel of the Tanana River. Before beginning construction, ARRC would obtain state permits and authorizations, such as the ADF&G fish habitat permit, would comply with reasonable requirements of those permits, and would not construct the crossing or place the fill in the side channel until the ADF&G granted authority to do so. ARRC would incorporate permit stipulations protecting fisheries into construction specifications as agreed upon between the Applicant and the ADF&G (see Draft EIS Section 20.2.3 voluntary mitigation measures VM-17 and VM-18 and recommended mitigation measures VM-16 and VM-17 in Chapter 2 of this Final EIS).

Comment

“Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires federal agencies to consult with the Secretary of Commerce on any action that may adversely affect EFH [Essential Fish Habitat]. The Act defines ‘EFH’ as ‘those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity’ (16 U.S.C. 1802(10)). In Alaska, EFH has been designated for anadromous salmon and certain life stages of marine species of groundfish and crab under NMFS’ [National Marine Fisheries Service] jurisdiction.

“The proposed rail alignment would transect main tributaries of the Tanana, Salcha, and Delta rivers, as well as secondary and un-named tributaries, sloughs, channels and wetlands. This very

complex ecologically connected series of terrestrial land forms and tributary systems supports habitat for aquatic resources, including EFH for anadromous salmon. EFH for salmon consists of the aquatic habitat, fresh and marine waters, necessary to support a long-term sustainable salmon fishery and salmon contributions to healthy ecosystems. Please visit our web site at <http://www.alaskafisheries.noaa.gov/habitat/default.htm> for additional information on EFH.

“The STB has determined the proposed project would adversely affect EFH and associated ecological processes. NMFS concurs with this determination. Specifically, NMFS is concerned the proposed rail alignments would fragment wetland and hydro-geomorphic processes, disrupting the riparian and hyporheic functions necessary to support salmon EFH.

“Ideally, rail alignments would be located in upland areas rather than in the watershed floodplain to avoid, minimize or mitigate adverse impacts to rivers, streams and the associated ecosystem processes provided by wetlands, riparian and hyporheic zones. Upland alignments also would eliminate future cumulative effects to EFH resulting from the transient lateral movement of rivers and streams, and eliminate the need for subsequent emergency remediation using riprap and bank armoring to stabilize threatened rail infrastructure during high water events. However, we understand the alternative alignments retained for detailed analysis also are based on technical and practical considerations including natural barriers, engineering design, cost-effectiveness, geological considerations and general land use patterns.” (76-1)

Response

As discussed in Draft EIS Chapter 2 and Appendix D, the locations of potential alignments were identified by ARRC based a variety of technical and practical considerations, including natural barriers such as rivers and topography; engineering design; cost-effectiveness; geological considerations; and general land use patterns. This is consistent with the requirements of AS 42.40.460, Extension of the Alaska Railroad (2005), which requires ARRC to consider 10 factors when proposing to extend the Alaska Railroad. From these alignments, SEA selected the alternatives to carry forward in the EIS for detailed analysis. Wetland fill and fragmentation and floodplains are unavoidable for all alternative segments. The STB will consider the economic and legal merits of the proposed rail line extension project, and the entire environmental record, including potential impacts to wetlands, when making the final decision whether to authorize the project. During the Clean Water Act Section 404 permitting process, the Applicant would follow the standard mitigation sequence of first avoiding, then minimizing, and finally compensating for impacts to wetlands that would result from proposed rail line construction. For wetlands filled and lost as a result of the project, under Clean Water Act Section 404, the Applicant would have to mitigate to ensure “no net loss” of wetlands.

Draft EIS Sections 5.4.2 and G.3.2 disclose the alteration and potential impacts to stream hydrology, hyporheic flow from the aquifer, and salmon. ARRC would design, construct, and operate rail line waterbody crossings to maintain existing water patterns and flow conditions to the extent practicable, and in accordance with reasonable requirements of the Alaska Fish and Game fish passage permits, would not impede fish migration. This would include installing equalization culverts through the embankment where necessary, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands. The rail line and access road located in floodplains along the Tanana River and other waterbodies would allow for the flow of floodwaters to floodplain storage areas, and ARRC would design culverts and bridges to pass the 100-year flood event and would comply with all FEMA guidance, regulations, and procedures in the design and permitting of the crossing of waterbodies and floodplains with established floodway models maintained by FEMA. During the permitting

and design phase, the Applicant would work with Federal and state regulatory agencies to develop measures to minimize impacts to streams that support anadromous and resident fish. The Applicant would abide by all reasonable requirements of Federal and state permits for these crossings to protect fisheries resources. Draft EIS Sections 20.2.2 and 20.2.3, and Chapter 2 of this Final EIS describe measures to mitigate impacts to these resources.

Comment

“Under section 305(b)(4)(B) of the Magnuson-Stevens Act, the STB is required to respond to NMFS’ EFH Conservation Recommendations in writing within 30 days. If the STB will not make a decision within 30 days, then the STB should provide NMFS with a letter within 30 days to that effect and indicate when a full response will be provided.

“The STB and ARRC have an opportunity to set an example by considering the sensitive nature, relationship and connectivity of aquatic ecosystems and incorporating new technologies into rail construction to minimize adverse impacts to anadromous fish populations and their EFH.”
(76-8)

Response

SEA responded to National Marine Fisheries Service (NMFS) EFH conservation recommendations, consistent with requirements as outlined in the comment. See Section 3.20 of this Final EIS for further details.

3.5.3 Game Mammals

Comment

For “moose calving areas, what studies have been done to minimize the affects of the rail line on these animals during this critical point in their lives?” This is a major concern because moose is a primary meat source in the area. (14-5)

Response

In general, moose would be expected to calve throughout the project area (see Draft EIS Appendix F, Figure F-20), although calving moose are generally more concentrated in the interior of the Tanana Flats Training Area. The Applicant has agreed that vegetation clearing would generally not be scheduled during the migratory bird nesting seasons, May 1 to July 15, which would also reduce potential disturbance impacts from this activity to newborn moose (see Draft EIS Section 20.2.3). In addition, the Applicant would work with the ADF&G and ADNR to review and discuss methods to reduce moose-train mortality (see recommended mitigation measure 44 in Chapter 2 of this Final EIS).

Comment

I am concerned with moose strikes by trains during migration, and that the number killed will exceed what hunters take from the Game Management Unit every year. Regardless of the mitigation being proposed, I estimate there will be 300 to 500 moose killed per year on the track.
(36-2)

Response

While most moose would be able to cross the rail line ROW, the Draft EIS does acknowledge the potential for mortality due to train collisions. Before beginning construction, the Applicant would work with ADNR and ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns (see recommended mitigation measure 44 in Chapter 2 Mitigation of this Final EIS).

Summary Comment

The proposed rail lines on the south side of the river need to accommodate the migration of moose. Tanana Flats contains the highest density of moose in Alaska. Many people subsist and depend on the protein provided by the Flats. Moose crossing areas need to be identified, much like the signed moose crossing areas along our highways. Crossing “tubes” or “overcrossings” should be provided to reduce the number of moose kills along the corridor. (18-4, 96-2, 69-13)

Response

Before beginning construction, the Applicant would work with ADNR and the ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns. In addition, a list of rail design and warning system methods to reduce moose-train mortality are listed under SEA’s preliminary mitigation measure 43 of the Draft EIS. SEA has revised this mitigation measure and included it as recommended mitigation measure 44 in Chapter 2 of this Final EIS.

Comment

“We believe it is essential to have a 3rd-party analysis of impacts [from] the proposed railroad on migratory and resident moose populations in Tanana flats. The draft EIS is vague on the impact of the construction and operation of the proposed railroad on this State Intensive Management moose population and according to the ADF&G moose biologist, ARRC has provided no specific plan or data regarding this issue.” (45-11)

Response

While most moose would be able to cross the rail line ROW, the Draft EIS acknowledges the potential for mortality due to train collisions during rail line operations. Draft EIS Section 5.5.2 discloses potential construction and operations impacts to moose. SEA used the best available data to estimate the magnitude of impacts to moose. No information on current moose movements or local densities was available from the ADF&G for the project area. Recommended mitigation measure 44 in Chapter 2 of this Final EIS lists rail design and warning system methods to reduce moose-train mortality. In addition, before beginning construction, the Applicant would work with ADNR and ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns (see recommended mitigation measure 44 in Chapter 2 Mitigation of this Final EIS).

Comment

“So now you’re putting a railroad in between where the moose like to graze and go down to the slough and eat, too. So even though the numbers sound the same, I don’t think the impact would

be the same. I think we have probably more moose walking back and forth to the slough on the side of Eielson 1 and 2.” (88-4)

Response

While most moose would be able to cross the rail line ROW, the Draft EIS acknowledges the potential for mortality due to train collisions. Before beginning construction, the Applicant would work with ADNR and ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns. Recommended mitigation measure 44 in Chapter 2 of this Final EIS lists rail design and warning system methods to reduce moose-train mortality.

Comment

“I would also like to know what the railroad is prepared to do to keep the moose population that is going to be traveling this “new trail” from getting hit, on the railroad, like the problem you have down by Anchorage? I would like to see a trail in the 200-foot easement that is kept open for the moose to walk down to keep them off of the tracks.” (63-2)

Response

While most moose would be able to cross the rail line ROW, the Draft EIS acknowledges the potential for mortality due to train collisions. Recommended mitigation measure 44 in Chapter 2 of this Final EIS lists rail design and warning system methods to reduce moose-train mortality. The Applicant would review and discuss these methods with ADNR and ADF&G. In addition, before beginning construction, the Applicant would work with ADNR and ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns.

Comment

“I’d like to say that we’d like to make a pitch that you encourage in the typical exception something rather than a linear clearing. In other words, that you use some sinuosity, that you push back off the tracks things that were not done on the original Alaska Highway or Alaska Railroad that now kill us thousands of moose because of the fact that they are crammed up in the better vegetation that grows in the vegetation control along the railroad.

“And that could easily be changed by having some sinuosity to the right of way pushing back to the full 200 feet or 100 feet, or whatever it is in some areas, and leaving it closer in others so that this particular use of the railroad over time does not become a serious wildlife problem for them getting across too.” (80-3)

Response

The Draft EIS acknowledges the potential for mortality due to train collisions. Before beginning construction, the Applicant would work with ADNR and ADF&G to design, construct, and operate the rail line to minimize significant alteration of moose movement and migration patterns. Recommended mitigation measure 44 in Chapter 2 of this Final EIS lists rail design and warning system methods to reduce moose-train mortality.

3.5.4 Birds

Comment

“We believe the potential for impacts to birds may be more significant than is currently described in the Summary and Environmental Consequences. We recommend that the information on potential impacts be reassessed and revised in the Final EIS, focusing on and incorporating the following information:

“- The Tanana River Valley is one of Alaska’s major corridors for migratory bird migration. Hundreds of thousands of waterbirds, passerines, and raptors move along this corridor seasonally. Significant changes within this corridor have the potential of affecting large numbers of birds. As climate change alters wildlife habitat in North America, this corridor may become even more important for species whose ranges are shifted northward.

“- The linear nature of the project bisects large areas of undeveloped habitat, thus fragmenting that habitat and creating a great deal more ‘edge’ than would occur with a comparably sized project that is ‘concentrated.’ While this would impact species using both aquatic and upland habitats, it is of particular concern for forest dwelling species that need large unaltered blocks of habitat. Some of these species, such as the gray-cheeked thrush and Townsend’s warbler, are already in decline and are listed by the USFWS [U.S. Fish and Wildlife Service] as Birds of Conservation Concern.

“- In much of the area, the proposed rail line follows, and stays in close proximity to, the Tanana River, an area that supports sizable stands of mature floodplain forests. These well-drained stands of large timber are not abundant on the landscape. As a result, the stands are critically important for a number of raptors such as northern goshawks and bald eagles, cavity nesters such as three-toed woodpeckers, and forest nesting passerines.” (34-3)

Response

SEA has revised Draft EIS Section 5.2 to clarify that the Tanana River Valley is one of Alaska’s major corridors for bird migration and that hundreds of thousands of waterbirds, landbirds, and raptors move along this corridor on their way to and from nesting habitats to the north and west (see Chapter 4 of this Final EIS).

SEA evaluated habitat fragmentation and identified large continuous stands of closed canopy needleleaf, closed canopy broadleaf, and open canopy needleleaf forests for each alternative (see Draft EIS Figures 5-18 through 5-20). Draft EIS Section 5.5.2 describes the method used to analyze fragmentation. Draft EIS Section 5.5.2 includes figures showing relevant habitat information and this information was considered in the assessment of potential impacts to birds in Draft EIS Sections 5.6.2 and F.4. The gray-cheeked thrush primarily uses riparian shrub habitats, but will use forested habitats if sufficient shrub habitats are available beneath the canopy. Draft EIS Table 5-31 lists potential impacts, including quantification of impacts to habitat, for this species and the Townsend’s warbler. Although these species are noted to occur within the project area, available information does not support a quantitative assessment of impacts to nesting individuals. Draft EIS Sections 5.6 and F.4.4 address birds of conservation concern.

Aerial surveys that identified nests of large raptors and owls such as bald eagles, northern goshawks, and great horned owls were completed for all alternatives and SEA used the results of these surveys to develop the assessment of potential project-related impacts to these species (see Draft EIS Sections 5.6.2 and F.4.2). SEA has revised Draft EIS Section 5.6.3 to clarify that

alternative segments passing through late-succession, floodplain forest habitats would have the greatest potential impact to bird resources by fragmenting patches of forest and creating edge habitat. These alterations in habitat could decrease the reproductive potential for raptors, such as northern goshawks and bald eagles; cavity nesters, such as three-toed woodpeckers; and forest nesting landbirds (see Chapter 4 of this Final EIS). Draft EIS Section 20.2.3 describes measures to mitigate impacts to biological resources, including a measure that would allow for minor refinements of proposed alternatives to avoid destruction or fragmentation of sensitive vegetation communities, which includes late-succession forest habitats; see SEA's preliminary mitigation measure 31 in the Draft EIS. SEA has revised this mitigation measure included it as recommended mitigation measure 33 in Chapter 2 of this Final EIS.

Comment

“Bald eagles and great horned owls are seen regularly and annually near our cabin located at Lat 64° 19.359' Long 146° 55.712'. Are the nesting sites surveyed and protected?” (45-16)

Response

SEA considered the findings from bald eagle nest surveys conducted during 2005, 2006, and 2007 along all alternatives. During bald eagle nesting season (typically March through August), the Applicant and its contractor(s) would use their best efforts to avoid disturbing bald eagles during rail line construction. Nests must be protected in accordance with the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c) and U.S. Fish and Wildlife Service (USFWS) guidelines. In addition, great horned owls and bald eagles are protected under the Migratory Bird Treaty Act. ARRC would clear vegetation in preparation for construction before or after the typical migratory bird nesting season, as identified by the USFWS, typically May 1 to July 15, to the extent possible to ensure compliance with the Bald Eagle and Golden Eagle Protection Act and Migratory Bird Treaty Act. If clearing would be required during the nesting season, there would be an additional nest survey(s) and consultation with the USFWS, as necessary, to identify additional compliance measures.

Summary Comment

Your document states that construction of the South Common Segment would result in the destruction or disturbance of two red-tailed hawk nests, two great gray owl nests, and one great horned owl nest. I am not sure when you surveyed the area to determine the population of these birds, but recently they have increased in number and have been joined by a few bald eagles. Construction of the South Common Segment a few miles to the south of your proposed route could eliminate the disturbance and certainly the destruction of these birds. I realize that moving the rail line south might disturb other birds, but you will not be disturbing these birds, which are used to the Richardson Clearwater area. (65-8, 73-6)

Response

As stated in Draft EIS Chapter 2 and Draft EIS Appendix D, the locations of potential alignments were identified by ARRC based on a variety of technical and practical considerations, including natural barriers such as rivers and topography; engineering design; cost-effectiveness; geological considerations; and general land use patterns. From these alignments, SEA selected the alternatives to carry forward in the EIS for detailed analysis. SEA also considered raptor surveys conducted during 2005, 2006, and 2007, which included the identification and location

of red-tailed hawk, great gray owl, and great horned owl nests. Red-tailed hawks, great gray owls, bald eagles, and great horned owls are protected under the Migratory Bird Treaty Act. Bald eagles are also protected under the Bald and Golden Eagle Protection Act. ARRC would clear vegetation in preparation for construction before or after the typical migratory bird nesting season, as identified by the USFWS, typically May 1 to July 15, to the extent practicable to ensure compliance with the Migratory Bird Treaty Act. If clearing would be required during the nesting season, there would be an additional nest survey(s) and consultation with the USFWS, as necessary, to identify additional compliance measures. (See voluntary mitigation measure VM-21 in the Draft EIS and recommended mitigation measure VM-20 in Chapter 2 of this Final EIS.)

3.5.5 BLM Alaska Special Status Species

Comment

“We also question the statement on page S-16 of the Draft EIS that the lynx is a ‘BLM-listed ... Special Status Species.’ It took hours to track down the origin and meaning of this phrase. Nobody with the local BLM office or the Alaska Dept of Fish & Game was able to explain it. As close as we can determine this “Special Status” designation was assigned by some group from the lower 48 and adopted by some new organization affiliated with the university in Anchorage.”

“This designation has no basis in fact. The lynx is a common furbearer in Alaska. Populations increase and decrease in a predictable manner (based on the availability of their primary prey) as they have since time immemorial and will continue to do so into the indefinite future. They deserve no special designation from BLM or any other governmental agency. By including this phrase in your EIS, you given credence to this unjustified status. We hereby request that the section pertaining to lynx as a ‘Special Status Species’ be deleted from the EIS.” (59-3)

Response

The Bureau of Land Management (BLM) Alaska State Office maintains a list of special status species with objectives to conserve listed species and the ecosystems upon which they depend and ensure that BLM actions do not contribute to the need to list or perpetuate listings under the Federal Endangered Species Act or BLM special status species policies. The BLM list of special status species includes the Canada lynx. The BLM authority to designate and manage special status species comes from the Federal Land Policy and Management Act of 1976, the Endangered Species Act of 1973, the Department of Interior Manual Endangered Species Management, and the BLM Special Status Species Policy 6840 Manual. See Draft EIS Section 5.7 and Draft EIS Table 5-31 for information on BLM Alaska special status species in the project area.

3.6 Cultural Resources

Summary Comment

Commenters expressed concern about the presence of a native cemetery for the Salchaket Band of Athabascan Indians and an archaeological site on the south end of the ridge. (1-1, 54-2)

Response

As noted in Draft EIS Section 6.3.4, Salcha Alternative Segment 2 could result in direct and indirect impacts to historic properties related to Salchaket Village. As noted in Draft EIS Table 6-2, “sites related to Salchaket Village require more data for a determination of eligibility for inclusion on the National Register, and would likely be eligible.” The native cemetery is part of the larger Salchaket Village site, and is therefore relevant to the overall significance of the site. If the Board authorized Salcha Alternative Segment 2, then the stipulations of the Programmatic Agreement would be applied; all sites related to Salchaket Village within the Area of Potential Effects (APE) would be evaluated as part of a historic district by applying the National Register criteria, and the potential effects of the project on sites eligible for inclusion on the National Register would be evaluated and addressed (see mitigation measure 50 in Chapter 2 of this Final EIS).

In addition to protections afforded under the Programmatic Agreement, other legislation, including U.S. Department of Transportation Act Section 4(f), would ensure that sites eligible for inclusion on the National Register would be avoided or that harm would be minimized. Draft EIS Section 20.2.4 also identifies ARRC voluntary mitigation measure VM-24, which states that the Applicant would develop protocols to inform and prepare construction supervisors of the importance of protecting archaeological resources, graves, and other cultural resources and how to recognize and treat the resources. Chapter 2 of this Final EIS includes this mitigation measure as recommended mitigation measure VM-24.

Comment

“We observe that the definitions of ‘historic property’ and ‘cultural resource’ are inconsistently used in the DEIS, particularly comparing the use of the terms in the Glossary and Appendix H Glossary, and throughout Section 6.0. We suggest a uniform adoption of the definitions of ‘historic property’ and ‘cultural resource’ as was provided in the glossary to Appendix H, Programmatic Agreement (PA) with one recommended change to the definition of ‘cultural resource.’ For purposes of that definition, we suggest that the final clause regarding meeting the National Register criteria for ‘cultural resource’ be deleted. With these definitional clarifications, we further suggest that throughout Section 6.0, ‘historic property’ be changed to ‘cultural resource’ unless specifically referring to a cultural resource that is listed on the National Register or that has been determined eligible for the National Register with SHPO [State Historic Preservation Officer] concurrence.” (61-1)

Response

SEA has made the suggested changes, providing a definition for cultural resource and revising the definition of historic property to be more consistent with the definition in the National Historic Preservation Act (NHPA) Section 106 guidelines (36 CFR 800.16(l)(1)) (see Chapter 4 of this Final EIS). The Draft EIS made clear that a historic property is a cultural resource included on or eligible for inclusion on the *National Register of Historic Places*.

Comment

“Page 6-1. The predictive model identifies areas of low, moderate and high potential for having cultural resources. This seems to be interpreted as low, moderate and high potential for impacting cultural resources. It would helpful if the FEIS could include an explanation of the

connection between the identification of areas with low, moderate, and high potential for the presence of cultural resources in the predictive model and identification of low, medium, and high potential for impacting cultural resources as identified by alternative segment in Section 6.3.4 and Table S-2.” (61-2)

Response

SEA used the model to identify areas as having higher or lower potential for the presence of cultural resources. This translates to higher or lower potential for impacts if the APE bisected those areas. Therefore, both conclusions follow from the premise and no revisions to the Draft EIS are necessary.

Comment

“Page 6-6, Section 6.2.3. The heading for this section suggests there will be a discussion of previously documented cultural resources. However, this section only discusses previous surveys. This leads to a series of questions to the reader of the DEIS such as the following: Were any cultural resources identified during the surveys? If so, how many cultural resources have been previously identified in the project area? What are those cultural resources (prehistoric, historic, archaeological, buildings)? Was there any pattern to the distribution of these resources? Are any of the previously known cultural resources listed on or eligible for the National Register? Any additional information on these points would be helpful to provide further clarification to the reader of the FEIS.” (61-3)

Response

To clarify, SEA has revised the heading for Draft EIS Section 6.2.3 to “Previous Cultural Resource Surveys in the Region.” SEA added an explanation at the end of Draft EIS Section 6.2.3 that FAI sites with numbers lower than 1750 and XBD sites with numbers lower than 281 were recorded prior to the studies undertaken for this project (see Chapter 4 of this Final EIS). Previous surveys were only conducted in the extreme northwestern and southeastern portions of the proposed Northern Rail Extension, and there was little overlap with the project APE. Draft EIS Section 6.3.2 provides the information on cultural resources identified during the field surveys undertaken for the proposed project, and they have site numbers higher than those previously recorded.

Comment

“Page 6-6, Section 6.3.1, Paragraph 1. We believe that the first sentence is incorrect per 36 C.F.R. Section 800.16(1)(1) and suggest its deletion from or modification in the FEIS.” (61-4)

Response

SEA has revised the definition of historic property to be consistent with the definition in NHPA Section 106 guidelines 36 CFR 800.16(1)(1)), including the sentence referenced in the comment (see Chapter 4 of this Final EIS).

Comment

“Page 6-7, Section 6.3.1, Paragraph 2 (1st full paragraph). The text indicates that a complete field survey of the overall APE [Area of Potential Effects] was not feasible (328 feet on either

side of the centerline). However, based on our limited understanding of the locations of the sites listed in Table 6-1, many cultural resource sites identified during the 2006 and 2007 surveys are well over 328 feet from the centerline, outside the APE. We believe that it would be appropriate to recognize that fact in Section 6.0.” (61-5)

Response

Information about sites just outside the APE is important for development and verification of the predictive model, even though the proposed rail line would not disturb those sites. Sites outside the APE are also included to account for (1) the fact that site boundaries have not been delineated and (2) inherent error in uncorrected Global Positioning System measurements in the field (plus or minus 10 meters). SEA has added this clarification (see Chapter 4 of this Final EIS).

Comment

“Page 6-7, Section 6.3.1, Paragraph 5. The text states Type B surveys were conducted in high probability areas. The NLUR [Northern Land Use Research] reports (2005, 2006, and 2007) indicate that Type B surveys were conducted in high and moderate probability areas. The text also states testing was discretionary and based on a number of factors. We believe that it would be helpful in the FEIS to provide the reader with more detail on the factors that led to discretionary testing. It is our understanding those factors included site conditions and observations from the pedestrian walkover; in other words, cultural resource professionals selected the areas most likely to contain cultural artifacts to test.” (61-6)

Response

SEA has revised the referenced text to be consistent with the text in the Northern Land Use Research report (see Chapter 4 of this Final EIS). As the commenter suggested, SEA has also revised Draft EIS Section 6.3.1 to provide more detail on the factors that led to discretionary testing (see Chapter 4 of this Final EIS).

Supporting technical documentation (Potter *et al.*, 2006; 2007a; 2007b) provides more detail on the factors that led to discretionary testing, as summarized below.

The model is biased in certain and specific ways, and cannot be used to “clear” lands from survey (i.e., it cannot provide archaeological “clearance,” thus obviating the need for ground-based survey and subsurface testing).

The modeling study has shown that the current survey coverage within the Model Area is insufficient to warrant over-application of the observed patterns into unsurveyed lands. It is project specific and its use beyond the particular project area is not appropriate.

The model was designed to be iterative, with ground truthing through surface and subsurface survey in 2006-2007 incorporated into further iterations of the model (see Potter *et al.*, 2007b Appendix A). The goals of the model were to (1) optimize survey strategies and (2) test intuitive search images (involving microtopography invisible at most remote sensing scales) with a replicable model useful for prediction and extension into new unsurveyed areas (Potter *et al.*, 2007b). The model allowed for delineation of appropriate and cost-effective survey methods that fulfill regulatory requirements, but could not be used for designating areas that did not need survey.

Model resolution is very coarse grained, certainly not high enough to be used for delineating site extent or for identifying specific locales for site occurrence. The model performed very well in assessing general densities of local areas of higher potential, but not for identifying individual sites (nor was it intended to do this).

Among the conclusions reached regarding this modeling effort (from Potter *et al.*, 2007b: Appendix A) were:

- Large-scale surveys in this region should optimize survey strategies. This means no areas would be arbitrarily excluded from survey, just examined via different methods. Sampling of “negative” areas should continue. Global Positioning System locational data on localized high potential areas (regardless of site discovery) provide a useful dataset for examining relationships of microtopography with remote sensed data.
- Ground truthing indicates that for large areas, localized high probability areas are captured very generally by remote sensing data on Geographic Information System layers, but specific individual areas [read, individual sites] are not.

Comment

“Pages 6-7 to 6-8, Section 6.3.2, Paragraphs 1 and 2. The numbers for survey and sites do not appear to match the summary numbers provided in NLUR’s [Northern Land Use Research] 2007 report: 226 miles of track alignments, 241 km [kilometers] Type A, 122 km Type B, 195 high potential areas for testing, 63 sites, 51 prehistoric subsurface and 12 historic, 47 recommended eligible, 7 recommended not eligible, 4 require more data.” (61-7)

Response

Regarding mileage of track alignment, the number in the Draft EIS is correct. This number represents the sum of the mileage surveyed in 2006 and 2007. The number in the Executive Summary of Potter *et al.* (2007b) represents an earlier reckoning of survey mileage.

Regarding high-potential areas, the number in the Draft EIS is correct (198). This coincides with the number reported in Appendix A of Potter *et al.* (2007b); Appendix A is the most recently written portion of the 2007 report and represents the most up-to-date information. It is likely that the number in the Potter *et al.* (2007b) Executive Summary represents an earlier reckoning, before changes in alignments were considered.

The number of sites in the Draft EIS is correct. The number in the Potter *et al.* (2007b) Executive Summary should have been changed to 62. This was written as 63 because site XBD-298 was investigated that year and added into the site total; however, it was actually discovered in 2006, and therefore counted twice. The number is reduced to 61 for the purposes of the Draft EIS because one site, XBD-310 (Washburn), is a great distance (1.8 kilometers [1.2 miles]) outside the APE. The important early Twentieth Century Washburn townsite was re-located during the survey (in accordance with the project scope of work), but was not near the APE. Likewise, the numbers reported in the Draft EIS regarding eligibility for inclusion on the National Register are correct because they reflect the accurate number (61) of sites located as part of the project.

Comment

“Page 6-8, Section 6.3.2, Paragraphs 1 and 2. Per the explanation in item 1 [Comment (61-1)] above, we suggest that all references to ‘historic properties’ be changed to ‘cultural resources.’ Of the 61 cultural resources documented, seven were recommended not eligible [for inclusion on the *National Register of Historic Places*] and three have not had recommendations regarding eligibility because more information is needed. In addition, in a November 21, 2008 letter, it appears that SHPO [State Historic Preservation Office] did not concur with the eligibility findings for three of the 10 sites recommended as eligible in the 2007 report.” (61-8)

Response

SEA has revised the definition of historic property to be consistent with the definition in NHPA Section 106 guidelines 36 CFR 800.16(l)(1) and the definition of cultural resource (see Chapter 4 of this Final EIS). The State Historic Preservation Office (SHPO) concurred with eligibility on seven sites (XBD-298, XBD-335, XBD-337, XBD-338, XBD-339, XBD-341, and XBD-343) in the letter dated November 21, 2008; therefore the term “historic property” is more accurate than “cultural resource” for those seven sites.

Comment

“Pages 6-8 to 6-10, Table 6-1. We suggest that the title of the table be changed to ‘Cultural Resource Site Summary Data’ as it includes several cabins of recent origin that are not archaeological sites. In the last column on this table entitled ‘Eligibility for National Register Listing,’ it appears that the information in this table is from an NLUR report, and represents only NLUR’s recommendations on eligibility. A more precise heading for the last column might be ‘Recommended Eligibility for National Register Listing.’ This would reflect that the STB has not yet made determinations of eligibility (and/or obtained SHPO concurrence). Further, as previously indicated in item 1 [Comment 61-1] we suggest that text references in Section 6.0 to historic properties be changed to cultural resources (except for those specific properties that have received SHPO concurrence with STB’s determination of eligibility). Notably, determinations of eligibility are only needed for sites within the APE [Area of Potential Effects], and many sites listed in Table 6-1 are over 328 feet from the centerline, well outside the APE, for which DOEs [determinations of eligibility] do not appear to be necessary.” (61-9)

Response

SEA has made the suggested changes to the titles in Draft EIS Table 6-1 (see Chapter 4 of this Final EIS). Final determinations of eligibility would be made as a result of the Programmatic Agreement if the Board authorized an alternative, and no further analysis or formal determinations of eligibility would be made on sites outside the APE for any authorized alternative.

Comment

“Page 6-10, Section 6.3.3, Paragraphs 1 and 2. We observe that the discussion of possible types of impacts on cultural resources is a bit confusing and inconsistent with other sections of the DEIS. Some sentences say impacts would occur and others say impacts could occur. ‘Could’ seems more accurate for the possible types of impacts discussed. The statements about watershed modifications and “the project would likely alter the watershed” are not consistent with Section 4.3, Groundwater and Appendix E, Water Resources. We suggest for your

consideration deleting references to watershed and groundwater changes. Also, since the majority of cultural resources in the project area are lithic sites, it is unlikely these factors would have much of an impact. In Paragraph 1, we recommend deleting sentence 4 (vegetation removal and erosion) and sentence 5 (aesthetics and visual site setting) because these are potential indirect effects and this paragraph addresses direct effects. Overall, impacts other than direct impacts within 100 feet of the centerline appear to be highly speculative and are unlikely to be significant. Further, we do not agree with the language that there is a potential for impacts to aesthetics and visual site setting for buried prehistoric properties.” (61-10)

Response

SEA has revised the use of the words “could” and “would,” as appropriate (see Chapter 4 of this Final EIS).

Regarding “The statements about watershed modifications and ‘the project would likely alter the watershed’ are not consistent with Draft EIS Section 4.3, Groundwater and Appendix E, Water Resources. We suggest for your consideration deleting references to watershed and groundwater changes.”: SEA disagrees. The potential for changes in watershed and groundwater due to the project need to be considered in relation to potential impacts to archaeological sites. While changes to the flow of groundwater would not damage the stone that comprises the lithic site, it could damage its context and setting, and could impact organic artifacts, animal bones, and charcoal associated with artifacts.

SEA has changed “The project would likely alter the watershed in the area.” to “The project could alter the watershed in the area.” (see Chapter 4 of this Final EIS).

Regarding “Also, since the majority of cultural resources in the project area are lithic sites, it is unlikely these factors would have much of an impact.”: SEA disagrees. Draft EIS “6.3.3 Common Impacts” is a generalized discussion on the potential “common” impacts to all potential archaeological sites within the project area, buried and otherwise. These potential impacts need to be identified and addressed.

Regarding “In Paragraph 1, we recommend deleting sentence 4 (vegetation removal and erosion) and sentence 5 (aesthetics and visual site setting) because these are potential indirect impacts effects and this paragraph addresses direct effects.”: Sentence four, SEA disagrees. The removal of vegetation and subsequent erosion is a real and direct impact to archaeological sites and needs to be addressed. Regarding sentence five: This sentence addresses the historic built environment. To avoid confusion with archaeological sites, SEA has revised the sentence in question to clarify that for historic buildings, structures, objects, and districts eligible for inclusion on the National Register, rail line construction could impact the aesthetics and visual site setting, depending on proximity.

Comment

“Page 6-10, Section 3.3.4, Paragraph 2 and Table 6-2. This paragraph indicates there are 16 historic sites within 328 feet of proposed project alternative segments. This appears to be inaccurate for at least some of the sites listed in the middle column of Table 6-2. For example, XBD-281 appears to be over 400 feet from the centerline of Delta 2. We recommend that the information in Table 6-2 be checked for accuracy.” (61-11)

Response

SEA has rechecked all tables, and determined that changes to Draft EIS Table 6-1 are not warranted. SEA has revised Draft EIS Table 6-2 as follows: added XBD-067 to column 3, moved XBD-129 from column 2 to column 3, moved XBD-091 from column 2 to column 3, and added FAI-1607 to column 3. SEA has revised Draft EIS Table 6-3 as follows: (1) XBD-327-330 in column 2 now reads XBD-325-328, (2) moved XBD-323 from column 2 to column 3, and (3) moved XBD-128 from column 3 to column 2 (see Chapter 4 of this Final EIS).

Comment

“Page 6-11, Tables 6-2 and 6-3. All sites, except for those specific properties for which SHPO has concurred with STB’s determination of eligibility, we recommend be marked with an asterisk (*) or identified as potentially eligible. As mentioned above [Comment 61-11], we do not believe that there is a basis to address potential eligibility for any property that is not within the APE [Area of Potential Effects]. On both tables, we suggest that the column heading ‘Historic Properties’ be changed to ‘Cultural Resources.’ We recommend that the last column be deleted as this category appears superfluous.” (61-12)

Response

Draft EIS Table 6-2 included asterisks that clearly indicated sites that have not undergone evaluation and sites in Salkachet Village that need more information. To address the comment, SEA has added the word “final” to the explanation for a single asterisk (see Chapter 4 of this Final EIS). These sites would be fully evaluated through the Programmatic Agreement process if the Board authorizes an alternative. Some would not be further evaluated because they are in the APE for an alternative that is dropped. In a letter dated November 21, 2008, the Alaska SHPO concurred with the eligibility of 7 of the 10 prehistoric lithic sites SEA determined eligible for inclusion on the National Register under criterion D (XBD-298, XBD-335, XBD-337, XBD-338, XBD-339, XBD-341, and XBD-343), but did not concur with SEA’s findings on 3 of the individual sites (XBD-336, XBD-340, and XBD-342), recommending instead that they be evaluated as a historic district. SEA has included this updated finding (see Chapter 4 of this Final EIS).

SEA changed the column headings in Draft EIS Tables 6-2 and 6-3 from historic properties to cultural resources to better reflect the revised definitions of these terms provided in Chapter 4 of this Final EIS. This change also eliminates the need to provide asterisks for each site in Draft EIS Table 6-3, because they are now all termed cultural resources and not historic properties.

As noted in the response to comment 61-5, information about sites just outside the APE is important for development of the predictive model and testing its performance, even though the proposed rail line might not disturb those sites. Any properties outside the APE for any authorized alternative would not be further considered in the analyses completed under the Programmatic Agreement.

Comment

“Page 6-11, 1st partial paragraph. Per DEIS page 6-7, the APE [Area of Potential Effects] was expanded to 328 feet on either side of the rail centerline to account for the proposed mainline track and ancillary support facilities and the potential indirect impacts that could result from construction and operation of the rail line. Page 6-11 states that (potentially) historic properties

up to 1,312 feet (400 meters) from the APE would not likely be affected by the ROW [right-of-way], but could be affected by the final design of ancillary features and their access roads. We suggest that the ‘buffer area’ is generally excessive and unjustified. While it may be appropriate in some very limited areas where certain ancillary facilities are sited (e.g., material sites, tower sites or access roads) some distance from the centerline, it is not the case along the entire corridor. Also, we note that neither the ROW nor final design will impact historic properties – any potential impact would be a result of construction and operation of the rail line within the ROW.” (61-13)

Response

The presence of these sites within or near the APE is important to know so that their location can be considered during planning and design of the proposed project, and to test the model (see responses to comments 61-5 and 61-12). However, if the Board authorized a specific alternative and the design of ancillary features and access roads were finalized, any cultural resources outside the APE would not be subject to further analysis under the Programmatic Agreement.

Comment

“Page 6-11, Tables 6-2 and 6-3. Why is FAI-1750 included on Table 6-3? It is a cabin of recent origin, and is not an historic property. Also, Tables 6-2 and 6-3 include many sites/site numbers that are not listed on Table 6-1, and no information is provided about these sites in the DEIS: XBD-027, XBD-091, XBD-128, XBD-129, XBD-188, XBD-189; FAI-071, FAI-156. We recommend adding a table of known cultural resource sites to Section 6.” (61-14)

Response

The additional sites in Draft EIS Tables 6-2 and 6-3 are sites previously known in the area, and listed in the Alaska Heritage Resources Survey files prior to the project survey. Draft EIS Table 6-1 does not list these sites because it is a table of sites SEA located during the 2006-2007 surveys. SEA has revised the title of Draft EIS Table 6-1 to “Cultural Resources Field Survey Summary Data.” SEA has added footnotes to the tables to reinforce this point (see Chapter 4 of this Final EIS).

Comment

“Page 6-12, Section 6.3.4, Paragraph 4 (1st paragraph on page). We don’t agree with the statement that all buried prehistoric sites are eligible for the National Register, and per SHPO [State Historic Preservation Office], not all buried prehistoric sites have been found eligible for the National Register. We suggest that it would be more appropriate to state that they are potentially eligible, except for those specific properties for which SHPO has concurred with STB’s determination of eligibility. We recommend changing the 3rd sentence to ‘Buried prehistoric sites are potentially eligible for listing on the NRHP...’ Also, the statement that these sites consisted of buried cultural materials including features, artifacts, and faunal remains may be misleading to readers of the DEIS. Some sites included only artifacts (chert flakes) with no features or faunal remains.” (61-15)

Response

SEA has clarified the text at the end of this paragraph to explain that the sites are all potentially eligible for inclusion on the National Register under Criterion D for their potential to yield

information important in prehistory or history (see Chapter 4 of this Final EIS). These sites typically consist of buried cultural materials: lithic flakes, with some sites including cultural features (e.g., hearths), formal artifacts (e.g., projectile points, scraping tools), and associated faunal remains.

Comment

“Pages 6-12 to 6-15, Section 6.3.4. We suggest that definitions for low, moderate, and high sensitivity/potential could be provided for clarity. Also, for clarity, if there is no direct effect, and there have been no cultural resources identified in the APE [Area of Potential Effects] (nor are there likely to be any), why would the indirect effect be minimal instead of ‘none?’” (61-16)

Response

See the response 61-2 for sensitivity definitions. The Draft EIS states that effects are “minimal” instead of “none” because site evaluations have not been completed. Determining site boundaries was specifically excluded from the 2006-2007 field survey scopes of work. There are dozens of high-potential areas that would require additional sampling if those areas fell within any authorized alternative. Therefore, it is premature to categorically state that impacts would be “none.” Additional resources identified under the Programmatic Agreement, if the Board authorized an alternative, would be evaluated for National Register eligibility, and any potential direct or indirect effects would be addressed under the provisions of the Programmatic Agreement.

Comment

“Page 6-13, Section 6.3.4, Connectors. The reference to the trapper’s cabin (site #?) is confusing to the reader of the DEIS. Table 6-1 does not identify a trapper’s cabin along Connector B.” (61-17)

Response

Site FAI-1607 is a trapper’s cabin, and is listed as a “cabin” in Draft EIS Table 6-1 (see also Potter, 2007b, p. 97). To clarify this, SEA has inserted the word “trapper’s” in Draft EIS Table 6-1 (see Chapter 4 of this Final EIS).

Comment

“Page 6-13, Section 6.3.4, 3rd full paragraph. With regard to Donnelly Alternative 1, the DEIS addresses sites between 328 and 1,640 feet of the APE [Area of Potential Effects], yet Donnelly 2 addresses sites within 1,312 feet of the APE. It is unclear why the basis for comparison of the alignment alternatives is not the same.” (61-18)

Response

The sites in this area are primarily prehistoric sites where the boundaries have not been established, and the more conservative 1,640-foot distance is appropriate. If the Board authorized an alternative, any sites outside the final APE would not be further evaluated under the Programmatic Agreement. No revisions to the Draft EIS are necessary.

Comment

“Page 6-13, Donnelly Alternative Segments. We submit that there is insufficient information presented in the text to form the basis for a conclusion about impacts to historic resources along the Donnelly segments. For example, the mere presence of a site within the APE [Area of Potential Effects] (328 feet on either side of the rail centerline) does not mean there will be an adverse effect. Direct effects may occur within the 200-foot ROW, and indirect impacts may occur out to 328 feet. To our knowledge, there have been no determinations of effect submitted to SHPO [State Historic Preservation Office] for concurrence. Also, please note that based on the information we have seen, XBD-298 would not be affected by the Donnelly 1 alignment, and this is likely the case with some of the other sites identified as within the APE.” (61-19)

Response

SEA has provided additional information and clarification about the number of sites identified within and near the APE (see Chapter 4 of this Final EIS). If the Board authorized the Donnelly Alternative Segment 1, the Programmatic Agreement would provide stipulations to complete the identification and evaluation effort and to address effects to historic properties within the APE for the selected alternative.

Comment

“Page 6-14, Delta Alternative Segments. Please explain the basis for the conclusion that the Delta alternative segments have moderate potential to affect historic properties, since no cultural resources were found along Delta 1 and only one site was found near the APE [Area of Potential Effects] along Delta 2. The Delta 1 site appears to be 130 meters from the main track centerline and 343 meters from microwave tower 5. Based on the information we have been provided, Delta 1 appears to be in an area of low to moderate potential for prehistoric and historic sites (not moderate as stated in the text). The text indicates the segment is situated in abandoned and active floodplain alluvium. As such, the potential for impact appears to be minimal, except in the unlikely event the site cannot be avoided in siting an access road to the tower.” (61-20)

Response

The Delta 1 site is clearly in a moderate potential area (as revealed by the model) and by the fact that it is on the edge of a terminal glacial moraine. The boundaries are unknown; therefore, interpreting site extent by a point on a map would be incorrect. The text clearly states that it refers to the segment as a whole. Individual sites might not reflect the geomorphology of the entire area, nor should they be expected to.

Comment

“Page H-2, Preamble, 2nd Whereas clause. We recommend clarifying this clause to indicate whether the Invited Signatories and Concurring Parties do or do not have the right to amend or terminate the PA [Programmatic Agreement].

“Page H-2, Preamble, 5th Whereas clause. The numbers in the PA do not match the numbers in the DEIS section regarding acres and number of sites identified.

“Page H-4, Section II.B. The numbers of sites do not match numbers in DEIS. Further, we recommend deleting the percentages and including a reference to SHPO’s [State Historic

Preservation Office] letter dated 11/21/08 and consider including the correspondence between STB and SHPO be included in an appendix[.]

“Page H-4, Section II.C. What are ‘determinations of APE’? Should this be ‘determinations of eligibility’ or ‘delineation of APE’?”

“Page H-6, Section V.B. Change ‘scared’ to ‘sacred’ in last sentence.

“Page H-6, Section V.B.II. The section should be clarified to acknowledge that the significance of the Salchaket Village sites have yet to be determined (per NLUR [Northern Land Use Research] and SHPO).

“Page H-7, Sections VII.D and page H-10, Section X.B. Human remains policy is Appendix A.I.

"Page H-21, Appendix A.I. NAGPRA [Native American Graves Protection and Repatriation Act] only applies to Native American human remains and cultural items found on Federal lands. Perhaps a reference to State regulations might be included.

“Page H-23, Appendix A.I. We recommend specifically identifying the appropriate qualification standards-Secretary of Interior’s Professional Qualification Standards (48 FR 44734-44737).

“Page H-2, Preamble, 6th Whereas clause. Based on the documents we have reviewed, the STB appears to have made only a few determinations of eligibility and received SHPO concurrence with those determinations. As previously indicated, ARRC does not believe formal determinations of eligibility for all cultural resources identified are necessary at this time. Such determinations will only be needed for cultural resources within the APE associated with the selected alignment.

“Page H-4, Section II.A. It is not clear to the reader what is meant by the term “components.” Perhaps this paragraph could be clarified, as we do not believe the PA is intended to apply to operations, once construction is complete.

“Page H-4, Sections II.B and C. What is a ‘consensus agreement’? It does not appear that STB’s letters of 8/22/07 and 1/16/08 to SHPO provided STB’s determinations of eligibility, nor does it appear that the 9/24/07 or the 7/16/08 letters from SHPO concur with any STB determinations of eligibility. We recommend that Paragraph II.B be reworded, as it appears to reflect NLUR’s preliminary determinations of eligibility or recommendations regarding eligibility, and not STB determinations that have received SHPO concurrence.

“Page H-5, Section IV.A. In addition to identifying areas that may require additional investigation, it would be useful to identify areas that do not require further investigation. These areas may include existing access roads/trails, provided disturbance remains within the previously disturbed area. As recommended by NLUR (see Potter 2007, pages 113 and 246), this section should also exclude from further investigation areas where the alignment shifts less than 100 meters from the APE surveyed in 2006 and 2007.

“Page H-5, Section IV.A.I. We agree that the APE should be the 200-foot ROW, plus ancillary facilities that may extend outside the ROW [right-of-way]. However, this does not appear to be consistent within the DEIS, which indicates the APE is 328 feet on either side of the centerline.

"Page H-5, Section IV.A.3. We are unable to evaluate this stipulation without more information on the specific sites that require additional information to establish boundaries or determine the effects of the Undertaking.

“Page H-6, Section V.A. Refer to ‘historic properties’ rather than ‘cultural resources.’ Also, add ‘to the extent practicable’ to the sentence. ARRC must also consider impacts to other resources and engineering constraints in determining the final alignment.

“Page H-6, Section V.B. We recommend that this section apply only to properties determined by the STB to be eligible for the National Register, that would be adversely affected, and that have received SHPO concurrence with both the eligibility determination and the finding of effect.

“Page H-6, Section V.C. We are pleased to see that this section includes alternatives to the standard mitigation approach for archaeological sites (data recovery). In addition to the alternatives mentioned, other mitigation approaches might also be recognized, including avoiding, minimizing, rectifying, preserving in place, and compensation. Finally, this section should recognize that destruction without data recovery may be the appropriate treatment at some archaeological sites, which is specifically acknowledged in the ACHP’s [Advisory Council on Historic Preservation] Recommended Approach for Consultation on Recovery of Significant Information from Archeological Sites (<http://www.achp.gov/archguide.html>).

“Pages H-11 to H-12. A statement could be added to the stipulations regarding disputes about eligibility determinations. For example, ‘Disputes concerning eligibility will be resolved by the Keeper of the National Register (Keeper) pursuant to 36 CFR Part 63 and 36 CFR Part 800.4(c)(2).’ Also, we believe the PA could also address disputes regarding additional identification and evaluation efforts, and findings of effect.” (61-21)

Response

Thank you for these comments on the Draft Programmatic Agreement. They will be considered during consultation among the signatories.

Comment

“DEIS Glossary, Definition of NHPA. Add a clause at the end, as follows: ‘... and give the Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to the undertaking.’” (61-22)

Response

SEA has added this clause (see Chapter 4 of this Final EIS).

Comment

“Page 6-1, Section 6.2. Define prehistoric and historic.” (61-23)

Response

SEA has included definitions of prehistoric and historic (see Chapter 4 of this Final EIS).

Comment

“Page 6-6, Section 6.2.3, 4th line. ‘has’ should be ‘have.’” (61-24)

Response

SEA has made this change (see Chapter 4 of this Final EIS).

Comment

“Page 6-7, Section 6.3.1, Paragraph 2 (1st full paragraph). Consider revising the first paragraph as follows for clarification. ‘In general, the purpose of a cultural resource survey is to identify NRHP [*National Register of Historic Places*] eligible cultural resources, or historic properties, that could potentially be affected by construction and operation of the proposed project. For the purposes of the NRE [Northern Rail Extension] cultural resources surveys, the Area of Potential Effect (APE) for direct effects was considered to be 100 feet on either side of the track centerline. ...To accommodate the proposed mainline track, any proposed ancillary support facilities, and an area of indirect effects, the APE was expanded to 328 feet (100 meters) on either side of the rail centerline. The survey was conducted as a systematic sampling survey.’” (61-25)

Response

SEA revised the paragraph in response to this comment (see Chapter 4 of this Final EIS).

Comment

“Page 6-7, Section 6.3.1, Paragraph 4. The first sentence should be clarified to indicate that the predictive model is for prehistoric sites.” (61-26)

Response

SEA changed the term “cultural resources” to “prehistoric sites” in this sentence (see Chapter 4 of this Final EIS).

Comment

“Page 6-8, Section 6.3.2, Paragraph 2. Under which criteri[a] are the Salchaket Village sites likely eligible?” (61-27)

Response

This site has not been evaluated regarding its National Register status. Based on limited data, it appears to qualify as a Traditional Cultural Property (see National Park Service Bulletin 38). It could be eligible under Criterion A (events), B (people), or D (importance to history or prehistory).

Comment

“Page 6-8, Section 6.3.2. For clarification, consider changing the 3rd sentence as follows and deleting the 4th sentence. ‘A total of 51 cultural resource sites were recommended eligible under NRHP [*National Register of Historic Places*] Significance Criterion D because of their potential to yield information regarding prehistoric technology, subsistence, and/or settlement patterns important to the cultural history of Interior Alaska.’” (61-28)

Response

SEA has revised the paragraph in response to this comment (see Chapter 4 of this Final EIS).

Comment

“Pages 6-8 to 6-10, Table 6-1. In note (a) for Site (column 1), are these Alaska Heritage Resources Survey (AHRs) numbers? If so, that could be stated.” (61-29)

Response

SEA revised the column heading to indicate that these are Alaska Heritage Resources Survey numbers (see Chapter 4 of this Final EIS).

Comment

“Page 6-8 to 6-10, Table 6-1. Change eligibility on XBD 336, XBD 340, and XBD 342 to ‘Not Eligible.’” (61-30)

Response

The proposed changes would not be accurate. SHPO recommended sites XBD-336 -340 and -342 be evaluated as a historic district. They are still potentially eligible for inclusion on the National Register, but the Federal agency and SHPO have not reached final concurrence. SEA added text to reflect the language in the November 21, 2008, letter from SHPO (see Chapter 4 of this Final EIS).

Comment

“Page 6-10, Section 3.3.4, Paragraph 1. This paragraph states ‘The limits of disturbance for the mainline track extend 100 feet on either side of the track centerline. These areas [are] subject to direct impacts. The overall project APE is considered 328 feet (100 meters) from the centerline. These areas, outside the limits of direct disturbance, are subject to indirect impacts from the build alternatives.’ The last sentence would be more clear if revised as follows: ‘The areas outside the 200 foot ROW to 328 feet from the centerline may be subject to indirect impacts.’” (61-31)

Response

SEA has added this clarification (see Chapter 4 of this Final EIS).

Comment

“Page 6-12, Section 6.3.4, Paragraph 5. This paragraph states there are two historic Salchaket Village sites, but previous discussion states there are three (see page 6-8, XBD 295 is missing). Also, consider using consistent terminology throughout document – either ‘National Register’ or ‘NR[HP].’” (61-32)

Response

SEA has changed references to the *National Register of Historic Places* to National Register, not NRHP (see Chapter 4 of this Final EIS). Salchaket Village is a potential historic district and Traditional Cultural Property, and might be eligible under Criterion A, B, or D. Based on limited investigations to date, at least three sites (XBD-293, XBD-294, and XBD-295) could be represented in the area (four sites if the general Alaska Heritage Resources Survey designation for XBD-067 is included); however, it is important to recognize that boundaries have not been established for the site. Of these three sites, XBD-293 and XBD-294 are within or near the APE,

while XBD-295 is well outside the APE. Consequently, XBD-295 is included in the general field results discussion (Section 6.3.2), but is excluded from the later discussion of impacts by alternative segment (Section 6.3.4), which deals only with sites within the APE or within 1,312 feet of the APE. Draft EIS Table 6-1 correctly lists sites.

Comment

“Page 6-13, Section 6.3.4, Salcha Alternative Segments, Paragraph 2. Further explanation of the numerous archaeological resources encountered would be useful. Are they all within the 328 foot APE [Area of Potential Effects]?” (61-33)

Response

SEA has updated the Draft EIS to enumerate the number of sites and specify that they are within 1,312 feet of the APE (see Chapter 4 of this Final EIS).

Comment

“Page 6-13, Section 6.3.4, Donnelly Alternative Segments, Paragraph 1. Please explain the relevance of the Donnelly-Washburn Trail. Is it a cultural resource that could be eligible for the NRHP [*National Register of Historic Places*], and if so, what effect would the alternative have on the trail? If the prehistoric sites will not be listed, consider referring the reader to the appropriate table.” (61-34)

Response

SEA edited this text to indicate that both alternative segments would cross the trail. The trail has not been formally evaluated as National Register eligible, and SEA has added text to explain that the trail would be evaluated as part of the Programmatic Agreement process if either of these alternatives were selected. In addition, SEA has added a reference to Draft EIS Table 6-1 (see Chapter 4 of this Final EIS).

3.7 Subsistence

Comment

“The area around WCA [Whitestone Community Association] has always been a prime subsistence hunting destination. There is some concern within the community that the rail bridge across the Delta River will make access to this region easier and potentially overwhelm the area with more hunters than there is game to support. However, since there are no current plans for a vehicle-accessible bridge over the Delta River, we believe that there will not be a large enough increase in hunting to warrant concern.” (12-3)

Response

The commenter is correct that the bridge over the Delta River would not be accessible to the public. Therefore, the Draft EIS estimated that there would be only negligible increases in hunting.

3.8 Climate and Air Quality

Summary Comment

Commenters, including USEPA, stated the Draft EIS did not analytically address the December 2008 designation of a PM_{2.5} (particulate matter equal to or less than 2.5 micrometers in aerodynamic diameter) nonattainment area that includes the City of Fairbanks and the City of North Pole. One commenter stated that omission of the PM_{2.5} nonattainment area discussion is a serious concern because Federal highway funding could be jeopardized as a result of the designation. USEPA stated:

“A small portion of the Fairbanks North Star Borough, including the City of Fairbanks and the City of North Pole, has recently been designated as a PM_{2.5} non-attainment area. The designation is based on the 2005-2007 data from the Fairbanks PM_{2.5} monitor. Based on EPA’s analysis, local heating emissions from woodstoves, distillate oil, industrial sources and mobile emissions contribute to primary and secondarily formed PM_{2.5} that violate the standard during stable weather events associated with extremely strong temperature inversions. Currently the draft EIS does not contain discussion regarding this designation or its potential impact on the project.

“EPA recommends that STB work with EPA and the ADEC [Alaska Department of Environmental Conservation] to determine what effect this recent designation may have on this project, and to revise the air quality analysis in the final EIS as needed.” (33-3, 33-5, 60-6)

Response

Although the notice that would establish PM_{2.5} non-attainment area designations was signed on December 22, 2008, after publication of the Draft EIS, it was not published in the *Federal Register* and is currently under review by USEPA. Designation of a portion of FNSB as a PM_{2.5} non-attainment area, if such a designation occurs, would require that the area take action to improve PM_{2.5} concentration levels with the goal of attaining and maintaining the PM_{2.5} air quality standards. As presented in Section 8.3.2 of the Draft EIS, estimated PM_{2.5} emissions from construction and operation of the proposed rail line extension would be below the general conformity *de minimis* level for PM_{2.5} of 100 tons per year. When anticipated PM_{2.5} emissions from a project are found to be less than *de minimis*, the project is deemed not to interfere with the goal of attaining the PM_{2.5} air quality standards.

Because the proposed rail line extension would provide public transport, designation of a portion of FNSB as a PM_{2.5} non-attainment area could potentially make the project subject to “transportation conformity,” which would require that the Fairbanks Metropolitan Area Transportation System and ADEC coordinate planning to ensure that transportation-related emissions from projects would not interfere with the area reaching attainment of the PM_{2.5} air quality standards. However, as presented in Draft EIS Section 8.3.2, the estimated increase in PM_{2.5} emissions from the proposed rail would be less than the *de minimis* level for PM_{2.5} of 100 tons per year. Therefore, the proposed rail line would not be subject to transportation conformity because when anticipated PM_{2.5} emissions from a project are found to be less than *de minimis*, the project is deemed not to interfere with the goal of attaining the PM_{2.5} air quality standards. Similarly, the proposed rail line was not found to create a localized air quality concern for PM_{2.5} and did not require a PM_{2.5} hot-spot analysis.

Comment

“EPA appreciates the STB’s consideration of the greenhouse gas emissions and subsequent analysis of the project’s potential contribution to climate change. EPA believes, however, that the draft EIS does not adequately consider the effects of climate change on the project, particularly given the anticipated rates of change to permafrost thaw as well as water quantity and availability. Given that the current estimates of permafrost temperature change is approximately 2°C, and the depth of thaw has increased in many areas in Interior Alaska, this could have significant impacts on project design, maintenance and route development. There currently exist several reports and resources through entities such as the Intergovernmental Panel on Climate Change (IPCC) and the Arctic Impact Climate Assessment initiative that discuss the range of changes that are anticipated for permafrost and water availability in interior Alaska.

“EPA recommends that the STB consider direct, indirect and cumulative impacts to the project due to climate change, particularly impacts due to the anticipated loss of permafrost and changes in water availability, and discuss these impacts in the final EIS. EPA also recommends that potential project adaptation measures be proposed in the final EIS as needed.” (60-10)

Response

SEA has revised Draft EIS Section 17.5.6 to include a discussion of the potential effects to the project of climate change-induced permafrost thaw and changes in water availability (see Chapter 4 of this Final EIS). As discussed in Draft EIS Section 1.3, AS 42.40.460, Extension of the Alaska Railroad (2005), authorizes ARRC to designate a transportation corridor to include the proposed rail line. AS 42.40.460(b)(9) requires that ARRC consider “avoidance of unsuitable and frozen ground subject to thawing” as a factor in identifying the transportation corridor. As indicated by the Applicant in their request to formally initiate transfer of ADNIR lands for the proposed rail line as authorized by AS 42.40.460, “the preferred route represents the route alternative with the lowest amount of unsuitable/frozen soils” (ARRC, December 5, 2008). Thus, the Applicant developed the alternative rail alignments with a goal of avoiding frozen soils and minimizing the potential impacts associated with thawing of frozen soils. In the same letter, the Applicant indicated that it would address permafrost and thawing ground concerns during final design and implement reasonable mitigation measures as necessary during construction.

3.9 Noise and Vibration

Comment

“It is my understanding that the train will have to blow its whistle for each legal rail crossing, including trail crossings. If the rail line Central Alternative #1 is chosen, I foresee the line crossing our trail system a minimum of 4 times in as little as a mile stretch. If even as little as 5 trains a day use this rail line, that is 20 train whistles within a mile each day. If you have ever stood outside all alone, in the wilds of Alaska, you would know that sounds travel a great distance, and this amount of sound would indeed be a huge amount of noise pollution that is not being taken into consideration.” (14-6)

Response

Draft EIS Section 9.3.2 describes potential impacts that would result from proposed rail line construction and operations. As explained in Section 9.3.2, SEA did not identify any receptors that would be close enough to Central Alternative Segment 1 for which the noise level would increase by 3 dBA or greater and the day-noise average noise level (DNL) would equal or exceed

65 dBA. Thus, SEA found that Central Alternative Segment 1 would not result in adverse noise impacts. Further, the applicant has indicated that most trail crossings would be grade separated and horn sounding is not required at grade separated crossings.

Summary Comment

Commenters stated that the EIS does not include noise and vibration analysis for the Fivemile Clear Creek area because "...no receptors were identified near the proposed rail line." Commenters noted that there are 40 privately owned properties on the creek, about half of which have regularly used cabins. Commenters expressed similar concerns over the lack of noise analysis in the Richardson Clearwater area. Commenters asked for a noise and vibration analysis for these areas. (19-1, 32-8, 35-4, 45-9, 47-3, 69-2, 77-3, 78-4)

Response

As indicated in Draft EIS Section 9.3.2, SEA found that construction noise and vibration levels would not exceed FTA guidelines; therefore, no adverse noise or vibration impacts from construction would be expected. Tables 9-7 and 9-8 in Section 9.3.2 of the Draft EIS list the estimated construction noise and vibration levels at identified receptors within approximately 0.5 mile of the proposed rail line. As shown, adverse construction noise and vibration levels would not be expected even for receptors as close as 105 feet from the rail line. SEA is not aware of any receptors anywhere near this close to any of the alternative segments in the vicinity of Fivemile Clear Creek or Richardson Clearwater River.

Regarding train operations, a noise level of 65 DNL or greater due to wayside noise would extend approximately 115 feet from the tracks in this area. If ARRC constructed an at-grade crossing of a trail on the South Common Segment, a noise level of 65 DNL, or greater, due to horn noise would extend approximately 630 feet from the tracks at the point of the grade crossing. SEA is not aware of any receptors or residences within these distances of the South Common Segment. Train horn noise would likely be audible in the vicinity of any at-grade trail crossings on the South Common Segment, but as indicated in the Draft EIS, no adverse noise impacts would be anticipated.

Comment

"The definition of 'sensitive receptors' in Title 49 includes "retirement communities" The Richardson Clearwater runs parallel to and within 0.5 to 2 miles of the south end of Donnelly 1 and 2, and the north end of the South Common Segments. There are currently 7 retired couples who make their summer homes on the Clearwater for 5 to 6 months during the year, 7 days a week, 24 hours a day. Most of them have owned their property for 20+ years, and some, like my parents, for over 50 years. In addition, I know of at least 8 other couples who plan to one day do the same. One of many reasons they chose these cabins as their retirement homes, or in anticipation of such, is because of the quiet and solitude of the area. That would be shattered by 5 roundtrips per day from a locomotive running through their "backyards," especially if whistlestops are allowed.

"Additionally, I don't believe from the information contained in the Draft EIS that the consequences of the continual vibration from railroad operations on the underlying groundwater system and spring-fed aquifer that feeds this river has been definitively determined. Much of the line in this area is proposed to be built on ground decimated of vegetation by the 1998 Carla

Lake fire, and is subsequently experiencing sloughing of slopes in the area due to excessive rainwater runoff. How stable is that going to be with tons of locomotive criss-crossing it up to 5 times a day?” (51-2)

Response

Draft EIS Section 9.3.2 describes potential impacts from noise and vibration as a result of the proposed rail line. No locomotive warning horn sounding is planned for the area described in the comment; no whistlestops are planned. Therefore, noise associated with train traffic on the proposed rail line would be wayside noise (diesel engine and wheel/rail noise without horn noise). SEA estimates that a wayside noise level of 65 DNL or greater would extend approximately 115 feet from the tracks in this area. SEA is not aware of any receptors or residences within that distance of the tracks. Train noise might be audible in this area, but no adverse noise impacts are expected.

Regarding stability, ARRC has stated that construction of the rail bed, ballast, sleepers, etc., would follow the standards and methods approved by AREMA rail standards, which account for local soils and soil stability.

Comment

“The noise receptors, I don’t completely understand that, but what I do understand is that there’s a lot of noise in that area [Eielson]. You know, we’ve got the military jets flying back and forth. So yes, the recreation area is going to be impacted by noise. But to me, it’s like it’s already impacted by noise. The jets are really loud there. So I don’t see why that makes a difference.” (88-5)

Response

As discussed in Draft EIS Section 9.2, SEA acknowledges that ongoing noise from military aircraft and activity affect the existing noise environment for many of the proposed rail line alternative segments. In general, the audibility of train noise would be reduced where existing ambient noise levels are elevated due to military activities or other reasons. This effect is called “masking noise.”

Summary Comment

Commenters asked about the impact of vibration and noise on the aquifer and fish spawning. (57-5, 69-11)

Response

Noise from trains would not impact aquifers or fish because airborne noise effectively does not propagate underground. Regarding ground-borne vibration from trains, it is very unlikely that this would damage underground aquifers for several fundamental reasons. First, train-induced vibrational forces into the ground are relatively low compared to forces that would be required to disturb underground structures. For example, fragile historic buildings (as defined by the FTA) would have to be within a few feet of the tracks to experience even tiny cosmetic cracking in plaster as a result of train-induced vibration. Underground rock and soil structures are orders of magnitude higher in structural integrity than fragile historic buildings. Second, the AREMA rail standards upon which the design and construction of the rail bed, sleepers, and ballast would be

based, require adequate soil stability, which would be determined based on geotechnical surveys and reflect the stability characteristics and the locations of underground aquifers. In other words, the weakest structural element involved would be the rail and rail bed structure itself, which is more than capable of withstanding train dynamic forces. Therefore, it is very unlikely that there would be train-induced vibration impacts to aquifers.

The potential impacts on fish spawning are addressed in Draft EIS Section 5.4.2.

Summary Comment

Commenters stated concern over new train-noise which would be generated in the Richardson Clearwater area, and suggested shifting the rail line to the south along the border of the Donnelly Training Area to avoid noise impacts. Commenters questioned if baseline studies were performed along the South Common Route and if noise level estimates were developed for the Richardson Clearwater Area. (65-3, 73-2)

Response

As discussed in Draft EIS Section 9.3.2, SEA did not identify any receptors in the vicinity of the Richardson Clearwater that would be close enough to the proposed rail line to experience an adverse noise impact because they would not experience a noise level of 65 DNL or greater with a 3 dBA or greater increase in noise level.

SEA measured baseline ambient noise levels in populated areas near the proposed alternatives at representative receptor locations as defined by SEA. The nearest noise monitor to the area mentioned in the comment was noise monitor five, where the measured ambient noise level was 54 DNL, which is between the levels typical in small residential and urban residential areas, as indicated in Figure 9-1 in Section 9.2 of the Draft EIS. Ambient noise levels vary, as indicated by measurements taken at other locations and summarized in Draft EIS Table 9-1, and can be affected by local weather conditions including wind-induced noise through trees and vegetation. Ambient noise levels tend to be lower in unpopulated or low-density population areas.

Comment

“Since your document acknowledges that there could be damage during construction and operations related to vibration, I ask if you have done any baseline studies of the present level of vibration in the area?” (65-5)

Response

As discussed in Draft EIS Section 9.3.2, no damage related to vibration would be anticipated as a result of either construction or operation of the proposed rail line. Vibration is evaluated on the basis of maximum level. So if there is an existing vibration source and a new source would produce higher vibration levels, the source with the higher vibration level would control whether or not criteria would be exceeded. There are very few sources (trains are one) which physically are capable of producing substantial ground-borne vibration and the resulting ground-borne vibration is generally very localized (i.e., produce vibration restricted to very near the rail). For vibration sources to be additive, they would need to occur simultaneously within the same restricted area and the vibration signals would have to be nearly identical in waveform and phase to be additive. SEA is not aware any substantial non-rail vibration sources that would be in the

immediate vicinity of the rail line, so SEA determined that baseline vibration levels were not required for the analysis of potential building damage impacts.

Comment

“To reduce noise level along the track the EIS has not addressed brush clearing or narrowing to reduce noise.” (69-12)

Response

Brush clearing during construction of the rail line, access road and other rail facilities would be a temporary source of noise. The Draft EIS (see Section 9.3.2) employed the construction noise assessment methods of the FTA, which include numerous pieces of construction equipment typically used to construct railroad beds and track facilities. The EIS conservatively used the noisiest representative pieces of construction equipment to estimate construction noise levels. The FTA method does not require an exhaustive evaluation of all equipment to be used, but rather the range of possible noisier equipment and time span of use, to establish the range of construction noise levels in the community. In other words, the construction noise analysis results in the Draft EIS include consideration of noise from all types of construction equipment, including brush clearing equipment.

With respect to periodic brush clearing during ROW maintenance following rail construction, the brush clearing activity would be very infrequent compared with train operations, so DNL of train operations would dominate the DNL by a wide margin. Therefore the rail operations noise analysis already conservatively presents the highest DNL values that would be anticipated in the vicinity of the rail line.

3.10 Energy Resources

SEA did not receive comments on this topic.

3.11 Transportation Safety and Delay

Comment

“The report [Environmental Impact Statement (EIS)] also noted that crossings on Fort Wainwright, Richardson Highway, and the Old and New Steese Highways would be impacted. We urge you to include College Road and to a lesser degree, University Avenue... Including them in the EIS will document the urgency to address track realignment through Fairbanks and North Pole.” (33-4)

Response

Draft EIS Section 11.3 describes potential impacts to public highway/rail at-grade crossings on the existing ARRC rail line over which additional rail traffic associated with the proposed rail extension would cross. The Draft EIS analysis included potential impacts at the College Road crossing (see, for example, Table K-4 in Appendix K of the Draft EIS). The Draft EIS analysis did not include the grade crossing at University Avenue because that crossing is not on the portion of the Eielson Branch over which rail traffic between Delta Junction and Fairbanks would travel.

Comment

“The rail corridor must provide for future additional at-grade or separated-grade public crossings to the soon to be established federal ROW [right-of-way]. This project will need to account for population growth and increases in public recreational uses that will need to cross this rail corridor.

“Once the rail corridor is established any ‘new’ crossing or trail that is proposed would be extremely costly to provide based on past occurrences of public need driving an additional legal crossing through an existing corridor. The RR [railroad] has a nearly exclusive right to restrict access over the ROW.” (42-1)

Response

AS 42.40.460, Extension of the Alaska Railroad (2005), provides a mechanism for establishing future crossings of the ROW that the Applicant would obtain from ADNR. This mechanism is now included in a revised version of preliminary mitigation measure 55 from the Draft EIS, which is included as recommended mitigation measure 56 in this Final EIS. In addition, SEA’s preliminary mitigation measure 61 in Draft EIS Section 20.2.10, which is included with revisions in Chapter 2 of this Final EIS as recommended mitigation measure 61, would require the Applicant to consult with resource management agencies and trail users regarding crossing location and design. SEA notes that one of the stated purposes for considering a realignment of portions of the existing Eielson Branch would be to reduce rather than increase the number of highway/rail at-grade crossings in the future.

Comment

“As part of the anticipated freight service, I would expect the railroad would be transporting fuel. It is also mentioned that transportation of other hazardous materials would be anticipated. While the ARRC [Alaska Railroad Corporation] over the last ... 6 to 8 years has a great record for spills (only one), and extensive and up-to-date spill response plans, accidents happen. Why risk the potential of even one spill, with the potential to contaminate, damage, and possibly destroy some aspects, of so many waterways that are so important to the anadromous fish population of the Interior, as well as the hundreds of lower Tanana and Yukon personal and commercial harvesters? And the potential contamination of potable water sources for hundreds of users of these clearwater streams? Moving the line farther away from all of these streams would help minimize, if not eliminate, that possible damage.” (51-4)

Response

Draft EIS Section 2.2 describes the development of alignment and alternative routes for the proposed rail line extension. As indicated, a wide range of factors were considered in the development of the alternatives. Draft EIS Section 11.3.2 describes the potential impacts of hazardous materials transportation over the proposed rail line. There would be a very low probability of train derailments and subsequent spills. SEA found that the risk of a spill due to a derailment would be extremely low due to a variety of factors, including the limited amount of hazardous material shipments (including fuel) anticipated and the fact that railcars used for transportation of hazardous materials are designed to resist puncture in the event of an accident. Even if there were releases, most would be small as a result of the railcars’ design standards. As specified in the Applicant’s voluntary mitigation measure VM-30 in Draft EIS Section 20.2.8, which is included with revisions in Chapter 2 of this Final EIS as recommended mitigation

measure VM-29, the Applicant must provide public emergency response teams with hazardous-materials training, upon request, and provide them with information on proposed operations for incorporation into local response plans.

Comment

“The existing crossing of the Richardson Highway to serve Eielson AFB [Air Force Base] does not seem to be addressed. Would this project modify the existing crossing? Is a grade separation proposed as part of this project?” (54-6)

Response

The commenter is correct that Draft EIS Chapter 11 does not include in its analysis the existing crossing of the Eielson Branch and Richardson Highway near Eielson AFB. There would be no modification to the existing crossing of Richardson Highway as part of the proposed rail extension. The proposed rail extension would connect to the Eielson Branch on the west side of Richardson Highway, as shown in Figure 2-6 in Draft EIS Section 2.3.2. Rail traffic between Fairbanks and Delta Junction would travel on the existing Eielson Branch to approximately Mile Post 20, where the proposed new line would connect and carry rail traffic to Delta Junction. Thus, rail traffic over the new line to Delta Junction would not use the rail crossing of Richardson Highway near Eielson AFB, which is at approximately Mile Post 20.7 on the Eielson Branch.

Comment

“While there is discussion on access to trails, the Draft does not really deal with preserving existing legal access for local roads. There are no diagrams depicting land ownership and local dedicated roads. It is our understanding that crossings will be limited by the anticipated speed of the trains, thus presenting a significant impact to the people who will either be separated from their property by the right[-]of[-]way acquisitions or forced to travel great distances to get to their farms or homes, depending upon the circumstances. The railroad has a number of crossing tools to allow and control access, from elevated crossings to gates and lights, and culverts. The assessment needs to more specifically identify how they can deal with existing crossings and allow for future access where none presently exists. Public road rights-of-way need to be protected by the process.” (54-7)

Response

Draft EIS Table K-2 lists the roads where ARRC would install grade crossings as part of the proposed rail line extension; ARRC would maintain access or would purchase private property if the proposed rail line would prevent access. The Applicant has volunteered to maintain connectivity of major roadways (voluntary mitigation measure 41 in Draft EIS Section 20.2.10, which is included in Chapter 2 of this Final EIS as recommended mitigation measure VM-40). ARRC would determine potential future road/rail crossing locations in conjunction with the local jurisdiction, the Alaska Department of Transportation and Public Facilities, and ADNR under the provisions of AS 42.40.460, Extension of the Alaska Railroad (2005), as applicable.

Comment

“If you’re going to put a railroad right through the middle of town, you’re going to have three main grade crossings, all three of the paved exits to the town area [of Delta Junction, Alaska] from the Richardson Highway. It appears that you would be crossing Tanana Loop Extension, Jack Warren, and Nistler Road. Those are the three main paved roads that we’ve got. If you go through there, you’re going to be having warning horns.

“And I don’t think it would probably be too bad right now, but we look and see the problems that the city of Fairbanks has. And not to say that Delta ever would or would want to become the size of the city of Fairbanks, ultimately a lot of people hope to connect to the continental rail system. In which case, we would likely see long freight trains coming up going through Delta. They would have to slow down, they would have to cross those three grades.

“If you ended up with a freight train with 100 or 200 or 300 cars going through, you would be greatly hindering the ambulance, fire, commuters to work in town, and school busses, depending on when they would come through. And it would be adding a lot of noise.

“There are no easy ways to go if one of those three roads is blocked. If Jack Warren is blocked, you have to go miles out of your way to get around. If Nistler is blocked, you have to go miles out of your way to get around. And if Tanana Loop Extension is blocked, you have to go miles out of your way to get around. So those would be major worries for us for a good number of reasons.” (115-2)

Response

As shown in Draft EIS Table K-2, Delta Alternative Segment 2 would cross Jack Warren Road and Nistler Road at grade. As stated in Draft EIS Section 11.3.5, the Applicant proposes to avoid a crossing of Tanana Loop Road by moving the road where it connects to Richardson Highway. As stated in Draft EIS Section 2.3.4, the Applicant anticipates operating an average of one round trip freight train per day, each with an average length of 2,200 feet. The Applicant has indicated that it expects trains would be operating at 30 miles per hour as they cross Jack Warren Road and Nistler Road. Therefore, these crossings would be blocked for an average of about 90 seconds twice a day when a freight train would cross these roads. Thus, potential impacts to emergency vehicles would be very low, as stated Draft EIS Section 11.3.4.

Draft EIS Section 9.3 describes potential impacts from noise as a result of proposed rail line construction and operations. SEA found that the noise levels would not equal or exceed 65 DNL and would not increase by 3 dBA or more for any noise-sensitive receptors along the Delta Alternative Segments. Therefore, SEA concluded that rail line operations along these segments would not result in adverse noise impacts. SEA also found that construction noise would not cause adverse noise impacts.

Comment

“We own a parcel on the Eielson Farm Road. We farm somewhat. But one thing I haven’t heard addressed as a concern would be if there’s an accident, especially on the bridge going across that [the] Salcha. What’s the railroad have in mind for a quick-response maintenance?

“And I’m thinking of possibly tank cars loaded with oil and an Exxon Valdez-type scenario where it’s all running down the Tanana River and getting into the 36-mile slough that’s adjacent to our property. Has there been anything presented in the way of a maintenance facility there by the crossing bridge?” (91-1)

Response

Draft EIS Section 11.3.2 describes potential impacts of hazardous materials transportation over the proposed rail line. Train derailments and subsequent spills would be events of very low probability. SEA found that the risk of a spill due to a derailment would be extremely low due to a variety of factors, including the limited amount of hazardous material shipments (including fuel) anticipated and the fact that railcars used for transportation of hazardous materials are designed to resist puncture in the event of an accident. Even if a release were to occur, most spills would be small because of the railcars' design standards. As specified in voluntary mitigation measure VM-30 in Draft EIS Section 20.2.8, which is included with revisions in Chapter 2 Mitigation of this Final EIS as recommended mitigation measure VM-29, the Applicant must provide public emergency response teams with hazardous-materials training, upon request, and provide them with information on proposed operations for incorporation into local response plans.

Draft EIS Section 2.3.4 states that the Applicant plans to construct a maintenance facility, referred to in the Draft EIS as a "section facility," on the north side of the Tanana River near the bridge over the river.

Comment

"Well, there's several things that happen in this country. If you've been around here long enough, you'd know about them. And number one is earthquakes. When you have an earthquake of any magnitude, and the last one was only a 5, 6, 7, something like that, it wiped out the highway down the line here, and up about five, six years ago. If that happens and somebody is going across that bridge and there's an accident and the line is disrupted downstream, or the roads, then you can't get to it. It's not accessible unless you're going to go in with a helicopter." (91-2)

Response

Draft EIS Section 3.6 describes potential impacts associated with seismic hazards for the proposed rail extension. As stated in Draft EIS Chapter 11, the probability of an accident that would result in a derailment, including an accident caused by an earthquake, would be very low. In addition, ARRC is involved in emergency response training with local communities.

Comment

"The STB [Surface Transportation Board] has determined that the potential for hazardous material spills from leaks, derailment or collisions is low, and the occurrence is infrequent, and thus will have low impacts. Past ARRC [Alaska Railroad Corporation] fuel spills have demonstrated, however, that when a major spill does occur, such as the December 1999, Gold Creek spill, response is often slowed or complicated by remoteness of the site, as well as limitations in spill response resource availability, and the resulting impacts can be substantial. Given that ARRC trains contain up to 125 cars, and fuel tanker cars contain up to 23,000 gallons of fuel per car, a worst case scenario derailment or collision could result in hundreds of thousands of gallons of product being released into the environment, which could immediately contaminate a major surface water body.

“EPA [U.S. Environmental Protection Agency] requests that STB reconsider the assumption that a hazardous material spill will result in low impacts given that low frequency and probability does not affect magnitude of the impact should such a spill occur.” (60-7)

Response

As stated in Draft EIS Section 11.3.2, the Applicant anticipates transporting approximately 63 railcars containing hazardous materials annually (not per train) on the proposed rail extension and SEA considered the potential environmental impacts associated with these anticipated shipments of fuel and other hazardous materials. The fuel trains to which the USEPA refers travel from the refinery in North Pole to Anchorage and would not travel on the proposed rail extension. In addition, SEA notes that CEQ regulations do not require a worst-case analysis (51 *Federal Register* 15618, April 25, 1986).

Comment

“Hazardous material spills of any kind from the eastern confluence of proposed Donnelly 1 and Donnelly 2 to a point past the headwaters of the Richardson Clearwater on the South Common Segment would drain into the Richardson Clearwater due to the slope of terrain in that area. It is a burned over area with nothing to hold a spill.” The Donnelly 1 routing is close to Koole Lake and would allow for the potential hazardous spills and contamination of the lake. (57-4)

Response

Draft EIS Sections 4.2.2 and 5.4.2 describe potential impacts to surface waters from spills of hazardous materials. Draft EIS Section 11.3.2 discusses hazardous materials transportation safety and states the conclusion that a release of hazardous material would be unlikely and the potential impacts of hazardous materials transport along the proposed rail line would be minimal.

Comment

“[A]lthough the Northern Rail Extension falls outside FMATS’[Fairbanks Metropolitan Area Transportation System] MPO [Metropolitan Planning Organization] boundaries, it is contiguous to its boundaries, and therefore has some impact within the intermodal transportation system. Chapter 11 of the Draft EIS on Transportation Safety and Delay and the related data presented in Draft EIS Table K-4 support our conclusion that an increase in rail traffic (10 round-trips daily), as a result of the proposed action, would result in an increase of 35 [percent] in the number of cars affected by a 20 [percent] longer delay. At-grade crossings of primary FMATS concern are those that experience the highest average annual daily traffic, such as University Avenue (data not shown in Draft EIS Table K-4), College Road, Old Steese and New Steese Highways. Coordination of the rail schedule at periods that experience lower highway traffic volumes, when possible, will minimize potential delays and accidents.” (62-2)

Response

Draft EIS Sections 11.3 and K.4 describe potential impacts to public highway/rail at-grade crossings that rail traffic associated with the proposed rail extension would cross along the existing ARRC rail line. The proposed rail line is anticipated to result in a small increase in the average delay per vehicle delay ranging from 0.24 to 0.30 second and no change in the level of service at the grade crossings at College Road, Old Steese and New Steese highways. The Draft EIS analysis did not include the grade crossing at University Avenue because that crossing is not

on the portion of the Eielson Branch over which rail traffic between Delta Junction and Fairbanks would travel.

Comments

Comments specifically addressing potential hazardous materials spills along the South Common Segment included:

“Of particular concern are spills of hazardous materials being carried by the ARR[C] [Alaska Railroad Corporation] in the South Common Segment. If any kind of spill were to occur, it could be particularly damaging to the fish species, wildlife species and habitat of the South Common Segment. These concerns also could be lessened by moving the rail line south a few miles to be adjacent to the boundaries of the Donnelley Training [A]rea.” (65-7)

“Of particular concern are spills of hazardous materials being carried by the ARR[C] [Alaska Railroad Corporation] in the South Common Segment. The ARR[C] doesn’t have a good history when it comes to derailments and spills. Ask the folks north of Talkeetna about a mid-winter spill that occurred there. It was impossible to clean up. If any kind of spill of toxic or hazardous material, including but not limited to diesel, gasoline, fertilizers, cement or other construction materials were to occur, it could be particularly damaging to the fish species, wildlife species and habitat of the South Common Segment. These concerns also could be lessened by moving the rail line south a few miles, wouldn’t they? How much extra would that cost in comparison to the priceless area that would be ruined by a spill?” (73-5)

Response

Draft EIS Sections 4.2.2, 5.3.2, 5.4.2, and 5.5.2 describe potential impacts to surface waters, habitat, fish, and wildlife from hazardous materials spills. Draft EIS Section 11.2.2 discusses the frequency of rail accidents on the Applicant’s existing rail lines. Draft EIS Section 11.3.2 discusses hazardous materials transportation safety and states the conclusion that a release of hazardous material would be unlikely and the potential impacts of hazardous materials transport along the proposed rail line would be minimal. Draft EIS Section 2.2 describes the development of alternative routes for the proposed rail line extension. The Applicant considered a wide range of factors in developing alternatives, as required by AS 42.40.460, Extension of the Alaska Railroad (2005). SEA is not aware of information indicating whether a different location of the South Common Segment would be more or less expensive to construct and operate.

Comment

“S.6.9 Transportation – ‘For new at-grade crossings, predicted accident frequency would be expected to be much lower than for the existing grade crossings, because total estimated vehicle traffic at the new crossings would be less than 2 percent of that for the existing crossings for any of the alternative routes from North Pole to Delta Junction.’ ...

“While traffic volume is lower at new crossings due to location and community size, the local community may be less educated regarding roadway/railroad crossings. Has this been taken into account, or is traffic volume the only criteria for evaluation?” (67-3)

Response

Highway/rail grade crossings are common in communities near the proposed rail line, including North Pole and Fairbanks, and SEA expects that most, if not all, drivers are familiar with grade crossings. Nevertheless, the Federal Railroad Administration (FRA), ARRC, and others have recognized that grade-crossing safety can be improved. One initiative intended to reduce grade-crossing accidents is “Operation Lifesaver.” ARRC participates in this program, which offers presenters and training materials, with particular emphasis on new drivers and school bus drivers. Draft EIS Section 11.3.4 does not consider education programs explicitly because they are available throughout the ARRC system.

Comment

S.6.9 Transportation – “The section mentions ‘... to Delta Junction.’ There are two potential crossings [s]outh of Delta Junction (one on the Alaska Highway and one on the Richardson Highway), are these included in the impact analysis?” (67-4)

Response

As stated in Draft EIS Section 11.3.4, new rail line crossings of Richardson Highway and Alaska Highway would be grade separated, and SEA would not expect safety or delay impacts from the proposed rail line at these crossings.

Comment

“[T]he location of all potential roadway crossings (either at-grade or elevated) have not been identified. In accordance with the Alaska Traffic Manual, Section 8A.02, an engineering study involving both the highway authority and the railroad company should be conducted to determine what actions should be taken to enhance safety at the crossings.” (67-5)

Response

Draft EIS Table K-2 lists the roads the proposed rail line would cross at grade. As stated in Draft EIS Section 11.3.5, all other crossings would be grade separated. As indicated in the Applicant’s voluntary mitigation measure VM-29 in Draft EIS Section 20.2.8, which is included in Chapter 2 of this Final EIS as recommended mitigation measure VM-28, a diagnostic team, including ARRC staff, community members, Alaska Department of Transportation and Public Facilities, and others, in consultation with the FRA, would establish appropriate safety measures for every new highway/rail grade crossing.

Comment

“What types of cargo will the railroad be hauling in the future? Any petro chemical or other hazardous materials? How would this affect the Richardson Clearwater environmentally if there was a spill?” (69-14)

Response

As stated in Draft EIS Section 11.3.2, the Applicant anticipates hauling approximately 63 rail cars per year containing hazardous materials, including fuel, on the proposed rail extension. Draft EIS Section 11.3.2 also discusses hazardous materials transportation safety and states the conclusion that a release of hazardous material would be unlikely and, thus, the potential impacts

of hazardous materials transport along the proposed rail line would be minimal. Draft EIS Sections 4.2.2 and 5.4.2 describe potential impacts to surface waters and fish of hazardous materials spills.

Comment

“What study has been done about risk assessments if an incident or major spill occurred in the wetlands and streams on the Richardson Clearwater? Has there been an approved spill response and contingency plan for the area of the South Common Segment?” (69-4)

Response

Draft EIS Section 11.3.2 discusses the risk of a potential release of hazardous materials from the proposed rail extension. The Applicant’s oil spill contingency plan and emergency response plan would apply to all of the proposed rail extension, as indicated in voluntary mitigation measure VM-30 of the Draft EIS, which is included in Chapter 2 of this Final EIS as voluntary mitigation measure VM-29.

3.12 Navigation

Summary Comment

Commenters noted that Fivemile Clearwater River is used by jetboats and airboats. They requested that bridges be built with adequate clearance for the taller airboats and access should not be restricted from the upper reaches of the streams. Commenters asked about construction closures on the river and how people would be notified. (2-3, 32-5, 45-6, 35-3, 78-3, 69-6)

Response

Draft EIS Section 12.2.7 includes a discussion of navigability of Fivemile Clearwater River under the heading Other Small Waterbodies. As indicated in the Draft EIS, bridge clearances (small bridges) along the rail line would accommodate the movement of small jet boats. The Applicant has proposed coordination with the USCG to provide adequate clearances for navigation of recreational boats on navigable rivers as mitigation for the proposed project (voluntary mitigation measure VM-37; see Chapter 20 of the Draft EIS). Further, SEA’s preliminary mitigation measure 54, also in Chapter 20, indicates the Applicant must ensure that bridges and culverts are placed in compliance with all reasonable terms and conditions established by ADNR pursuant to AS 38.05.127, Access to Navigable or Public Water. SEA preliminary mitigation measure 60 specifically identifies Fivemile Clearwater River to accommodate passage of winter modes of transportation. The Applicant has volunteered to maintain a Web site about the project throughout the construction period, and provide a Community Liaison for 1 year after the start of construction (VM-38 and VM-39) to provide information to the public about the construction process. There could be temporary restrictions of watercraft traffic for safety reasons; however, the Applicant would provide warning devices and signage to notify boaters of project-related bridge construction activities (VM-45). These mitigation measures have been carried forward in this Final EIS as recommended mitigation measures VM-36, 54, 60, VM-37, VM-38, and VM-44 (see Chapter 2 of this Final EIS).

Summary Comment

Tanana bridge option 2 shows a channel blocked with fill on the west side of the river. This channel is used to access the mouth of Fivemile Clearwater River, and the placement of this fill would likely reduce flows to the point of not being able to maintain navigability. Blocking this flow would cut off summer access to the creek and the 40 properties along it. Please address this issue. Also, if this is chosen as the preferred alternative, the railroad should be required to create and maintain a navigable channel. (18-5, 32-1, 45-1)

Response

SEA's recommended mitigation measure 55 in this Final EIS requires the Applicant to maintain water flows along the Tanana River to ensure recreational access to Fivemile Clearwater River if the Board authorized Salcha Alternative Segment 2 (see Chapter 2 of this Final EIS).

3.13 Land Use

3.13.1 Land Use Resources

Summary Comment

Commenters expressed concerns about access to private and public properties along the Northern Rail Extension via trails and waterways. Commenters stated that the Board should require additional crossings along the proposed rail line to facilitate access for recreational use (including hunting and trapping) and property owners. Commenters explained that trail-crossing structures should accommodate multi-modal access to trails (watercraft, wheeled vehicles, dog teams, and snow machines), should not cause major detours for trail users, and that access might need to vary depending on water levels and ice flows in waterways. Commenters raised issues related to the river training structures associated with the bridge over the Tanana River and potential water quantity (flow) in relation to boat access to private cabins and hunting areas in the vicinity of Fivemile Clearwater River, and general access to the west side of the rail line. According to commenters, other specific trails requiring access include trails along Little Delta River and trails leading to Koole, Bull, and Rainbow lakes. Commenters also stated that the inventory of trails considered in the Draft EIS was not inclusive and did not consider historic-use of trails, and noted the existence of trails in and around Fivemile Clearwater River that were not analyzed. Commenters suggested that "undercrossings" of the rail line for trails and drainages be considered to mitigate the effects of the linear transportation facility. (14-2, 46-1, 35-1, 78-1, 81-1, 95-2, 89-1, 95-3, 89-2, 114-3, 114-4, 45-4, 45-3, 32-3, 51-3, 53-2, 55-1, 57-6, 59-1, 43-1, 66-5, 68-2, 68-9, 69-9, 66-2)

Response

Draft EIS Chapter 20 includes measures that direct the Applicant to consult with affected agencies and user groups regarding provision, access, and design of rail line/trail crossings. SEA's preliminary mitigation measures 62 and 63 in the Draft EIS detail provisions for specific crossings, and preliminary mitigation measure 60 specifies mitigation for bridge clearance for recreational access along Fivemile Clearwater River and other rivers frequently used for recreation and access. Further, consultation with resource management agencies and appropriate trail user groups regarding informal public trails on state land and blazed section lines would occur as part of the conditions for approval of the proposed rail line (preliminary mitigation measure 61). The type of crossing would be determined during this consultation process;

however, preliminary mitigation measure 65 requires that crossings preserve access for a variety of motorized and non-motorized uses. This Final EIS includes SEA preliminary mitigation measures 60, 61, 62, and 63 as recommended mitigation measures 60, 61, 62, and 63. SEA deleted preliminary mitigation measure 65 and incorporated it into recommended mitigation measure 56 in this Final EIS. The options to bridge the Tanana River at the proposed Salcha Alternative Segment 1 crossings would avoid water quantity (flow) issues on Fivemile Clearwater River, because the crossings would be north and downstream of the confluence of Fivemile Clearwater River and Tanana River. SEA's recommended mitigation measure 55 in Chapter 2 of this Final EIS requires the Applicant to maintain water flows along the Tanana to ensure recreational access to Fivemile Clearwater River if the Board authorized Salcha Alternative Segment 2.

Comment

One commenter suggested trail crossings at the locations listed below to accommodate hunters, trappers, and other recreationalists, and to maintain the railroad bed to prevent erosion. The commenter also suggested that all bridges allow adequate under-passage for watercraft and land vehicles.

- Trail across from Delta BLM Airstrip 64*05' 02" approximate.
- Section Line E/W 64*05' 02" approximate
- Section Line N/S 64*07' 37" approximate
- Rainbow Lake/ Forestry Road 64* 08' 33" N 145* 57' 40" approximate
- West End Winter Forestry Road
- Dry Channel of Delta Creek [access to full flood plain]
- Delta Creek [access to full flood plain]
- Koole Lake Trail
- Donnelly Washburn Trail
- Little Delta River [access to full flood plain]
- DNR Winter Trail (38-1)

Response

Draft EIS Chapter 20 includes SEA's preliminary mitigation measures 62 and 63, as revised and included as recommended mitigation measures 62 and 63 in this Final EIS, would require that the Applicant provide crossings for access to the Blair Lakes area, Silver Fox Lodge Trail, ADNR Winter Trail (the Applicant has included two crossings of this trail as part of the proposed action), Koole Lake Trail, Donnelly-Washburn Trail, ADNR Forestry Winter Road, Rainbow Lake Trail, Twentythreemile Slough Dog Sledding Trails, Phillips Road/Delta Junction Area Trail Network, and trails to be identified from the List of Important Trails in the Tanana Basin Area Plan. Further, the Applicant must consult with appropriate land management agencies regarding provision, access, and design of crossings for trail easements that would intersect with the proposed rail line.

As described in Draft EIS Section 13.2.3, not all small bridges would be passable by boats or vehicles. However, SEA has adopted preliminary mitigation measures 54 and 60 (recommended mitigation measures 54 and 60 in this Final EIS), which would require the Applicant to ensure that bridges and culverts are placed in compliance with the state's navigable waters provision,

AS 38.05.127, and to consult with the appropriate management agencies to accommodate travel by winter modes of transportation on recreation access streams and rivers.

Summary Comment

Commenters expressed concern about the language in the Draft EIS explaining prohibited access to the rail line ROW not designated as public crossing locations. The commenters state that there would be use of the prohibited ROW and this should be accommodated due to the potential to isolate areas that are currently used for hunting and other recreational activities. Specifically, commenters stated that the location of the South Common Segment would cut off access to land between the rail line and the Donnelly Training Area, including Game Management Unit 20A; prime hunting, fishing, and trapping areas. One commenter noted frequent use of the Blair Lakes Trail, and the need for public access across the Tanana River bridge because it is inevitable that all-terrain vehicles would use the bridge, which would pose a safety hazard. Commenters stated that the Final EIS should resolve these conflicts, and that trails the rail line would cross should remain open to public use through the project design phase. (45-5, 32-4, 35-2, 36-1, 47-2, 52-2, 80-1, 115-5, 65-2, 68-1, 68-3)

Response

Access to the rail line ROW would be prohibited by the Applicant in areas not designated for public crossing. Mitigation measures have been developed to address access concerns for recreational activities, including hunting, fishing, and trapping. SEA's preliminary mitigation measure 65 (see Chapter 20 of the Draft EIS) and Final EIS recommended mitigation measure 56 instructs the Applicant to designate temporary access points if main routes must be obstructed during construction, and that permanent crossings preserve access for both motorized and nonmotorized uses. Further, SEA's preliminary mitigation measure 62 in the Draft EIS and recommended mitigation measure 62 in this Final EIS would require the Applicant to provide a crossing for the trail to the Blair Lakes Area, among others. As proposed, the Tanana River dual-modal bridge would be restricted to use by military and rail personnel in accordance with a Memorandum of Agreement between Alaskan Command and ARRC. Unauthorized use of the bridge would be subject to legal action.

Summary Comment

Commenters expressed concern that plans for vehicular and nonvehicular crossings of the railroad are at odds with ADNR mandates for access, and asked why the EIS does not discuss resolution of this issue. Commenters expressed concern about the location of future crossings along the rail line to access hunting, fishing, and other recreational resources in the study area. Commenters requested that the Board consider planning for crossings in the future that allow additional areas to be developed for recreational use and access to private property. Commenters requested consideration of legal crossings of waterways and land trails beyond those considered in the Draft EIS. Further, commenters stated that requiring the Applicant to "consult" with agencies regarding the locations of crossings should be strengthened and expanded to require legal crossings at intervals along the rail line to provide for general access across the rail corridor. (127-1, 42-2, 103-1, 40-6, 54-11, 54-12, 120-1, 49-2)

Response

SEA’s preliminary mitigation measures (see Chapter 20 of the Draft EIS) would require the Applicant to consult with appropriate land management agencies and trail user groups regarding provision, access, and design of crossings for trail easements the proposed rail line would intersect, including the issues related to long stretches of rail line without designated public crossings (SEA’S preliminary mitigation measure 61 in the Draft EIS, and recommended mitigation measure 61 in this Final EIS). The proposed rail line would be subject to AS 42.40.460, Extension of the Alaska Railroad (2005), which charges ADNR with identifying and reserving ROWs for potential future crossings on state-managed lands.

Comment

“Adequate crossing locations need to be provided to ensure that the proposed rail corridor will not eliminate existing recreational opportunities on the other side of the corridor. The EIS states: ‘Many of the alternative segments west and south of the Tanana River would include long stretches with no designated public crossing points. Without creation or trail crossings along these long stretches, public access across the rail line ROW [right-of-way] would be significantly restricted or prohibited.’ We are in agreement with this statement and support the concepts regarding crossings that were recommended in SEA’s Preliminary Mitigation Measures for 20.2.10 Land Use. We would, however, like to see some of the required mitigation measures strengthened.” (54-8)

Response

SEA acknowledges the comment.

Comment

“Eielson Alternative Segment 3 would not impact any farms or farmers currently on Eielson Ag Road. This is the only alternative route that does not negatively impact agriculture. The Alaska Farm Bureau’s 2009 Resolution Platform, approved by the voting delegates at our Annual Meeting on November 14, 2008 addresses this: ‘The Alaska Farm Bureau opposes any action by the Alaska Railroad that would impede agriculture in the Eielson Agricultural Project.’ Although Alaska is fortunate to have so much acreage that makes up our state, there are very few farms or farmland statewide. We oppose any route that would dissect, disrupt or negatively impact the farms currently located on Eielson Ag Road. Therefore, we can only support Eielson Alternative Segment 3. We urge the Transportation Board to consider the positive impacts of a railroad expansion via Eielson Alternative Segment 3.” (64-2)

Response

SEA acknowledges the comment.

Summary Comment

Commenters indicated that most of the land in the Eielson Farm Road area is designated as “agricultural land” and has restrictions on the title. The land with these restrictions, according to State law, can only be subdivided one time and cannot be subdivided into more than 4 pieces. All of the pieces must be at least 40 acres or more. Commenters also questioned the estimate of impacted farmland from the Eielson Farm District of 2 acres in the DEIS, expressing concern

that it should be more acreage impacted that is analyzed in the DEIS. Commenters strongly urged the Board to select a route that has the least impact on the people living in the area and instead could take state or federal land in the area. (88-7, 70-2)

Response

Estimates of affected agricultural land in the Eielson Farm Community area were based on land cover data in the Geographic Information System and the preliminary location of the rail line within a 200-foot ROW. Final design would yield more accurate estimates of acreage; however, the effect on land used for farming surface area would not be expected to adversely affect agricultural output, the livelihoods of the affected farmers, or the economy of the Eielson Farm Community as a whole.

Comment

“We are property owners in the Salcha area with six (6) parcels of land and a recreational cabin which would be directly and negatively impacted by the implementation of the proposed rail line route ‘Salcha 2’ for the Northern Rail Extension. We strongly oppose the proposed Salcha 2 route because this route runs through and/or adjacent to our prime recreational property and would severely and adversely affect our intended use and value for this property. The alternate route ‘Salcha 1’ is much more favorable to property owners in the area including us. Additionally Salcha 2 would create hazards and safety issues for property owners and trail users in the area.

“We originally purchased this property because of the remote character and ability to recreate on the Salcha River, Tanana slough and trails in the area such as the old Valdez trail. The wilderness nature along with use of the land in the area would be inhibited by the construction, operation and noise of the rail line. The Salcha River and Tanana slough are prime recreational parcels for the Fairbanks community and outlying areas. We purchased the property and cabin for both personal use and as an Investment. The intrinsic value would be severely diminished by the railroad transected this property via the Salcha 2 route, while the impacts of the Salcha 1 route would be minimal.

“Additionally, our 30 acre parcel next to the Tanana slough (Property #1 – see list attached) appears to either be transected by the proposed Salcha 2 rail line or in very close proximity to this route. In either case this property would no longer hold any value to us and our investment would also likely become a complete loss.

“We respectfully request that Salcha 1 Route be the adopted route for the Northern Rail Extension in the Salcha Area. If you have any questions regarding our comments and concerns, please feel free to contact us.” (72-1)

Response

SEA acknowledges the comment.

3.13.2 Recreation Resources

Comment

“In the DEIS it is stated that the rail line could possibly increase ‘tourism’ between the proposed area. How much traffic for recreational purposes is going in between North Pole and Delta

Junction? I am unaware of any tourism resources or opportunities in this area and doubt any would be created as a result of the proposed rail line. Also, if tourism were to increase in these areas it would be beneficial and necessary to review the socioeconomic impacts of increased consumerism in North Pole and Delta Junction.” (4-3)

Response

ARRC has not provided commuter or tourist ridership data for its proposed passenger service, but has indicated that it anticipates operating an average of four round-trip passenger trains per day between the Fairbanks Intermodal Center and Delta Junction. Draft EIS Chapter 15 explains that the proposed rail line was evaluated in terms of its potential to affect regional development trends, specifically in the agriculture, mining, and tourism sectors. The rail extension could provide an alternative travel experience for tourists, thereby possibly enhancing Delta Junction’s position as a tourism destination. However, it would be difficult to predict whether the visitor services, tours, and accommodations required for expansion of Delta Junction’s tourism industry would materialize.

Summary Comment

Commenters expressed concern about the access road that would be constructed parallel to the proposed rail line, asking whether access would be publicly available. If the public could use the rail line access road, it would address concerns about isolating areas south of the rail line, such as Game Management Unit 20A, and address concerns that access to hunting and trapping in this area would conflict with ARRC’s trespass policy. One commenter asked why permanent access roads and other rail support facilities that would be constructed outside of the 200-foot-wide rail line ROW are not included in the ROW acquisition process, and requested the EIS reveal the location of the permanent rail support facilities. Another commenter asked whether whistle stops would be allowed along the proposed rail line, because they would likely affect the moose population by facilitating access to the area. (63-3, 65-10, 67-6)

Response

The Applicant has indicated it would not maintain the rail line access road as a public road. The access road would be used for construction of the rail line and subsequent railroad maintenance activity, and the military could use the road, subject to agreement with the Applicant. Access to state lands south of the rail line would be established as provided for by AS 42.40.460, Extension of the Alaska Railroad (2005), and access to Federal lands would be subject to specific conditions, including approval from the military where the rail line and access road would cross Federal land reserved for military use. At present, the military has not decided whether to permit such uses. Rail facilities, such as terminal, station, and other facilities, in addition to the transportation corridor, could be designated by ARRC under AS 42.40.460 and would be included in the ROW acquisition process. The precise location of many ARRC-proposed rail support facilities would be determined during final design. The Draft EIS identifies specific locations for material handling sites and the passenger depot in Delta Junction. Potential shippers, such as the military, might decide in the future to construct additional rail facilities to meet their needs, but such facilities are not part of the Applicant’s proposal. The Applicant has not proposed to provide whistle stops, which would be inconsistent with the stated objective of providing a transit time for passengers between the Fairbanks Intermodal Center and the Delta Junction passenger depot that would be competitive with the drive time on Richardson Highway.

Summary Comment

Three commenters stated that during rail line construction, closures of recreational areas used for hunting should be outside the hunting season and not close access to popular hunting or fishing areas, including the Richardson Clearwater and Rainbow Lake trail system. In addition, commenters suggest property owners be notified of any closures of access due to construction activities prior to the start of construction. One of the commenters asked if closures are expected. (32-7, 45-8, 69-8)

Response

There would likely be temporary trail and access closures during construction; however, the Applicant has proposed a voluntary mitigation measure (VM-38; see Chapter 20 of the Draft EIS) that would establish a Community Liaison to consult with affected communities, businesses, and agencies to address local concerns such as these. This liaison would be in place before the start of construction activities and for 1 year following the start of rail line operations. In addition, the Applicant has indicated it would maintain connectivity of major roadways (voluntary mitigation measure VM-41), and address project-related construction activity issues (voluntary mitigation measure VM-42). SEA has included these voluntary mitigation measures as recommended mitigation measures VM-37, VM-40, and VM-41 in Chapter 2 of this Final EIS. In the Draft EIS, SEA proposed preliminary mitigation measures to ensure construction activities would occur during the most appropriate timeframe (mitigation measure 55 in the Draft EIS and recommended mitigation measure 56 in this Final EIS) to limit potential impacts to recreational activities. The Applicant would be required to develop a plan, in consultation with affected agencies and user groups that would identify the time of use and location of the most popular recreation areas, and designate temporary access points if main access routes must be obstructed during construction activities.

Summary Comment

Commenters stated that the rail line would affect the remote characteristics and general solitude of private cabins and recreation areas close to the rail line. Commenters specifically mentioned the Fivemile Clearwater River area. Commenters listed potential effects to recreational activities from the rail line as increased noise, vibration, a decrease in general solitude and water quality, and an increase in the potential for accidental spills. One commenter suggested moving the rail line away from recreation areas and private land. (45-17, 66-1)

Response

As indicated in the Draft EIS, construction noise and vibration levels would not exceed applicable guidelines established by FTA (or similar guidelines established by the FRA); therefore no adverse impacts would be expected. Regarding train operations, the area that would experience wayside noise levels at or above 65 DNL and an increase in noise level of 3 dBA or greater would be 115 feet from the tracks in the vicinity of Fivemile Clearwater River, and SEA is not aware of any receptors or residences that would be within that distance of the tracks. As a result, SEA concluded that the noise impacts from train operations would not be adverse, although train noise might be audible in this area.

Draft EIS Section 20.2.2 and Final EIS Section 2.2 detail mitigation measures for impacts to water quality; Draft EIS Chapter 11 addresses the potential for accidental spills related to rail line operations.

SEA considered, but dismissed from further evaluation, several alignments due to potential impacts to private property in the areas of the Donnelly alternative segments, Delta alternative segments, and along Richardson Highway (see Draft EIS Chapter 2 and Appendix D). SEA evaluated alternatives by considering the effects on private property in conjunction with design constraints and other resource impacts.

Comment

“The current preferred route looks like it goes right through the middle of my property that I own on the Fivemile Clearwater. If that is the case, I would probably end up losing my property to some form of eminent domain or something. I do not want to sell or have my property taken from me. I value my property very highly and it just simply cannot be replaced with anything comparable. I have looked for many years in the Interior and have plans to build a summer retirement home on the property that I own on the Fivemile Clearwater. The Railroads preferred route would take away a dream of mine.” (66-4)

Response

SEA acknowledges the comment.

Comment

“We’ve also been informed that the proposed railbed could be elevated a substantial height above existing terrain. Sides of the railbed would be steep. This situation would present a danger to any snowmachines which attempt to cross the proposed elevated railbed. We recommend that the railbed be constructed in such a manner to allow safe crossing by snow-machines.” (59-2)

Response

The elevation of the rail bed would vary depending on topographic conditions and other factors. Draft EIS, Chapters 13 and 20, and Final EIS, Chapter 1 address recreational access and trail crossing concerns.

3.13.3 Hazardous Materials/Waste Sites

Summary Comment

There are unexploded ordnance and military munitions reserve hazards on all areas of the Word Ward II Blair Lakes Bombing/Strafing Range. This area encompassed all areas south of the Tanana River from Ladd Field (now Fort Wainwright) and the west bank of the Delta River. Currently this area comprises Donnelly Training Area and Tanana Flats Training Area and the State of Alaska lands between the two training areas.

During a wildfire a couple of years ago near the area of Fivemile Clearwater River, fire crews said they would not fight fire on the ground if cabins were endangered due to the risk of unexploded ordnance in the area. Unexploded ordnance is not addressed in the section on hazardous materials. At that time, ADNR revealed that the whole area south of Tanana River from Delta to Nenana was considered by the military to have a high probability of unexploded ordnance scattered throughout. As the fire spread toward Fivemile Clearwater River in 2007, the U.S. Army sent a patrol to sweep a 100-foot swath around each cabin should it have become

necessary to put smoke jumpers on the ground. The Draft EIS does not address this eminent danger to human life during the construction or operational phases of the railroad. (28-1, 45-15, 93-1)

Response

The Applicant would coordinate with the U.S. Department of Defense concerning proposed construction activities and would follow standard and established procedures for unexploded ordnance. An unexploded ordnance specialist would develop a plan, including evaluation of types of unexploded ordnance possible, depths, etc. Unexploded ordnance technicians would be present and screen ahead of the construction crew in areas where there is potential for unexploded ordnance.

Comment

“This green dot [Site number 58, Figure 13-13 of the Draft EIS] is a hazardous site. I read last night where they talk about hazardous sites, and you didn’t say anywhere in the Eielson section. I don’t know if you knew about that one. It’s supposed to be cleaned up next summer, but I don’t know what that means. It’s an old military site.” (88-2)

Response

SEA’s analysis of hazardous materials/waste sites included review of Federal, state, and local databases to identify potential sites of concern. These database searches did not identify any known sites of concern that present a potential for environmental consequences resulting from construction activities along Eielson Alternative Segment 1. The only known sites of concern along Eielson Alternative Segments 2 and 3 are the orphan sites (a contaminated site with inadequate information regarding its exact location) associated with ALCAN Highway construction camps, as described in the Draft EIS, Section 13.3.3, in the discussion of North Common Segment.

Comment

“I have fished and hunted the Richardson Clearwater since 1969 and own property there. I feel that the proposed railroad route has a very good chance to destroy the life style we want to keep for our children and grand-children. There are too many unknown factors such as penetration into underground water sources, unstable grounds and the Carla Lake Fire [and hazardous materials spills].” (58-1)

Response

While nearby residents could hear train or construction noise if the proposed rail line were constructed, SEA has not identified any adverse noise impacts to receptors along the Richardson Clearwater River. Fire management of vegetation along the proposed rail line is addressed in Section 5.3.2 of the Draft EIS. The potential to encounter hazardous materials/waste sites are addressed in Section 13.3.3 of the Draft EIS, and hazardous materials transportation safety is addressed in Section 11.3.2 of the Draft EIS. Seismic hazards along the proposed rail line are addressed in Section 3.6.2 of the Draft EIS.

3.13.4 Section 4(f) Resources

Comments

Commenters questioned the inclusion of certain properties as qualifying Section 4(f) resources in the Section 4(f) Evaluation (Appendix M of the Draft EIS), as follows:

“...our specific concerns in this instance involve the application of Section 4(f) to Alaska Department of Natural Resources (ADNR) Dispersed Use Areas, the Chena Lakes Flood Control Project, the Eielson Air Force Base (AFB) Outdoor Recreation Area, and certain trails (ADNR Forestry Winter Road, U.S. Army Permit Route, Koole Lake Trail and Donnelly-Washburn trails, and Silver Fox Lodge Trail).” (22-1)

“The Department’s concern is that the properties identified in the Section 4(f) Evaluation do not meet the criteria to be deemed Section 4(f) resources. Based on information in the Section 4(f) property descriptions, it is unclear how certain properties can be classified as Section 4(f) resources. These properties include the Chena River Lakes Flood Control Project, Twentythreemile Slough Area Trails, Eielson Air Force Base (AFB) Outdoor Recreation Area, Silver Fox Lodge Trail, Koole Lake Trail (Donnelly-Washburn Trail), ADNR Forestry Winter Road, Phillips Road/Delta Junction Area Trail Network, and Dispersed Use areas.” (119-1)

Response

SEA has coordinated with appropriate agencies to verify whether they consider these resources as Section 4(f) resources. ADNR indicated in their comments on the Draft EIS that the Section 4(f) resources listed in the Draft EIS on their land would not be considered Section 4(f) resources because of the multiple-use nature of the resources, including their use for economic purposes. Coordination with Eielson AFB regarding the applicability of Section 4(f) to the Eielson Outdoor Recreation Area revealed the Air Force has designated these lands for military purposes although the area is managed for recreational use. At any time the Air Force could convert these lands to military use and therefore, they are not considered a significant recreational resource and are not protected under Section 4(f) of the U.S. Department of Transportation Act. Given that the owning agencies do not consider these resources eligible under Section 4(f) of the U.S. Department of Transportation Act, SEA has deleted these resources from the final Section 4(f) Evaluation, included as Appendix F in this Final EIS. For resources within U.S. Army training areas, such as portions of the Donnelly-Washburn Trail, the Koole Lake Trail, and the U.S. Army Permit Route, military purposes would supersede recreational purposes; therefore, these resources would not be considered for protection under Section 4(f). Appendix C includes the results of coordination with these agencies and the USACE regarding the Chena River Lakes Flood Control Project. Appendix F also considers the Applicant’s proposal to grade separate crossings, and evaluates potential *de minimis* and other effects to Section 4(f) resources.

Comments

Two commenters indicated the Dispersed Use Areas referenced in the Appendix M of the Draft EIS do not qualify as Section 4(f) resources because they are managed for multiple uses. One commenter referenced the 2005 *FHWA Section 4(f) Policy Paper*, Questions and Answers, regarding when to consider public lands a public park, public recreation area, and wildlife and waterfowl refuge, and when multiple-use land holdings are subject to Section 4(f) requirements. Specifically, commenters provided the following comments regarding management units 7F, 7G, and 7I:

“The Dispersed Use Areas discussed in DEIS [Draft Environmental Impact Statement] Appendix M are owned and managed by ADNR [Alaska Department of Natural Resources]. They are located within an area covered by the Tanana Basin Area Plan, which was adopted by ADNR in 1985 and last updated in 1991, 18 years ago. Our position is that these areas’ management plan is ‘out-of-date,’ and, therefore, that Section 4(f) applies only to the extent those areas ‘*function primarily* for 4(f) purposes.’ Id. at 17 (emphasis added). The DEIS notes that the specific management subunits at issue here are 7FI, 702, 703, and 712 within Delta-Salcha Subregion. In our view, the following information from the Tanana Basin Area Plan verifies that these lands do not ‘function primarily for Section 4(f) purposes,’ rather, recreation is merely one of a variety of uses....

“We believe it is more consistent with the plan—and with Section 4(f)—to protect specific recreational trails within these Dispersed Use Areas. Section 4(f) regulations require a closer inspection of the function of the particular affected portion of the lands at issue. Indeed, it would be inconsistent with the Plan to consider vast swaths of land as a Section 4(f) simply because recreational use is designated as one of several primary uses in these areas.” (22-2)

“Dispersed Use Areas: It is unclear how the vast majority of lands under ADNR ownership can be considered Section 4(f) properties. The lands in question have been designated for a number of uses including forestry, wildlife habitat, agriculture, watershed and public recreation. The Section 4(f) does not apply to multiple-use lands that function primarily for purposes other than park, recreation and refuges.” (119-9)

Response

SEA has coordinated with ADNR to verify whether it considers certain management units of the Dispersed Use Areas as Section 4(f) resources. ADNR indicated in their comments on the Draft EIS that the Section 4(f) resources listed in the Draft EIS on their land would not be considered Section 4(f) resources because of the multiple-use nature of the resources, including their use for economic purposes. Given that the owning agency does not consider these resources eligible under Section 4(f) of the U.S. Department of Transportation Act, SEA has deleted these resources from the final Section 4(f) Evaluation, included as Appendix F of this Final EIS. This evaluation incorporates the results of the coordination with owning agencies, the Applicant’s proposal to grade separate crossings, and potential *de minimis* and other effects to these resources.

Comments

Commenters questioned inclusion of the Chena River Lakes Flood Control Project management units as a qualifying Section 4(f) resource, as follows:

“According to DEIS [Draft Environmental Impact Statement] Appendix M, the project would affect just 14.3 of these 20,000 acres.

“In non-flood periods, portions of the Chena Lakes Flood Control Project area are used for public recreation, accommodating a variety of trail-based recreation activities. These areas include a portion of the Fairbanks North Star Borough (FNSB) 100-mile Loop Trail that follows a braided path through the floodway area. There are also specific areas designated for recreational use within the Chena Lakes Flood Control Project, including the FNSB Chena Lake Recreation Area and the Moose Creek Dam Bikeway. We do not disagree that these specific recreational areas within the Chena Lakes Flood Control Project warrant protection under

Section 4(f). But we do not believe the entire area should be considered a Section 4(f) resource, because its primary use is not recreational.” (22-3)

“Chena River Lakes Flood Control Project: It is unclear why the entire Flood Control Project (about 20,000 acres) is designated as a Section 4(f) property. The text indicates that the area is used for public recreation during the non-flood periods, and a portion of the Fairbanks North Star Borough’s 100-mile Loop Trail is in the floodway. Because the entire flood control project does not appear to be used for public recreation, only those areas specifically designated for recreation (i.e., 100-mile Loop Trail) should be given Section 4(f) status. In addition, the Section 4(f) Evaluation should include a map showing the location of the 100-mile Loop Trail to determine if it intersects potential northern rail extension routes.” (119-2)

Response

SEA did not consider the entire Chena River Lakes Flood Control Project as a Section 4(f) resource in the Draft EIS; rather, SEA evaluated Management Units I2 and I4 because of their primary use for recreation. SEA has coordinated with the USACE, Alaska District, to verify whether they consider Management Units I2 and I4 of the Chena River Lakes Flood Control Project as Section 4(f) resources. The Chena River Lakes Master Plan for Resource Use indicates one of the primary uses of Flood Management Units I2 and I4 is recreation. Flood management unit I2 crosses the Diverson Dike Access Road (Chena Flood Road) and is managed to provide public recreation access to Piledriver Slough and the Tanana River and low density uses including canoeing, wildlife viewing and fishing. Flood Management Unit I4 does not maintain a permanent pool of water and flooding events in this area are infrequent (the last flooding event that inundated this area occurred in 1992). Flooding events in this area typically cause pool impoundment for a short time. These characteristics allow Flood Management Unit I4 to be used extensively for recreational purposes. Between periods of the year known as “break up to freeze up,” roughly May to September, all lands within the Federal boundary are off limits to motorized vehicles and motorized recreational vehicles. During the remainder of the year, these lands are open and frequently used for snowmachining and some all-terrain-vehicle traffic, dog sledding, skiing, and skijoring. Summer recreational activities in Flood Management Unit I4 include running, walking, and hiking. Hunting for in-season game is allowed in this management unit. Other uses for the management unit include cross-country meets, fun runs, marathons, and access to Piledriver Slough for fishing, hunting, hiking, float trips, and other recreational activities. For these reasons, and pursuant to 49 U.S.C. 303 and 23 CFR 774, Flood Management Units I2 and I4 within the Chena River Lakes Flood Control Project are considered qualifying Section 4(f) resource.

The 100-Mile Loop Trail is a concept developed by the FNSB that consists of pieces of existing trails and future trail links near Fairbanks and North Pole that could total 160 or 170 miles in length when complete and would provide a connecting loop of trails to users and visitors. The FNSB is currently completing a survey of trails that could be included in the 100-Mile Loop Trail on FNSB, state, and BLM lands. When the survey is complete, FNSB would proceed with acquiring easements and non-objections to proceed, prior to acquiring property for the project. Actual trail development would depend on a cost-sharing sponsor, such as the FNSB. The portion of the 100-Mile Loop Trail within resources protected under Section 4(f) includes the future development of a trail link through the Chena River Lakes Flood Control Project. SEA did not evaluate the 100-Mile Loop Trail as a Section 4(f) resource because it would be redundant of the evaluation of individual trails that make up the 100-Mile Loop Trail, and in cases of “planned” Section 4(f) resources, the regulations only apply when the planned facility is

presently publicly owned, formally designated, and significant. Further, the FNSB indicated that in any given segment of the trail there could be several existing trails that could provide the necessary link in the 100-Mile Loop.

Comments

Commenters provided their understanding of the primary uses and function of ADNR Forestry Winter Road, U.S. Army Permit Route, Koole Lake Trail, Donnelly-Washburn Trails, Silver Fox Lodge Trail, and the Phillips Road/Delta Junction Area Trail Network. Commenters indicated that some trails are used for public access rather than recreational activities. Commenters suggested additional research was warranted to determine whether the resources should be protected under Section 4(f), as described below:

- “The U.S. Army Permit Route crosses the Little Delta River with the Koole Lake/Donnelly-Washburn Trail and collocates with all trails on the river’s western bank for a stretch of approximately 1.5 miles, then diverges west across ADNR [Alaska Department of Natural Resources] land toward the Tanana Flats Training Area (TA). It is not designated for public access, although public access is a generally-allowed use across ADNR-owned lands.
- “The ADNR Forestry Winter Road, a multi-use road established by the Division of Forestry located entirely on ADNR land, is approximately 14.8 miles long, and connects the Delta River and Delta Creek across the benchlands above the Richardson Clearwater River. The road provides public access to a number of public and commercial timber sales in the Tanana Flats, and is also used for recreational vehicle activity....
- “Located on both ADNR and U.S. Army land, the [Donnelly-Washburn and Koole Lake] trails are multi-use, but primarily receive winter use. ADNR land in this area is managed primarily for forestry and wildlife habitat according to the Tanana Basin Area Plan (ADNR 1991), while military land is primarily for military use, but is provisionally open to recreation activities.
- “The approximately 6.1-mile long Silver Fox Lodge Trail leads south from the Silver Lake Lodge historical site along Richardson Highway and crosses the Tanana River. It is located on ADNR land south of the river, where it provides access to state land along the Fivemile Clearwater River, although portions of the trail may intersect some land in private ownership. The trail is established and recognized by the ADNR (lease assignment, or ADL [Alaska Division of Lands] lease number 409488). This multi-use trail provides public access across the Tanana River to areas surrounding the Fivemile Clearwater River. The trail also provides public access to ADNR lands further west, which may otherwise be inaccessible due to the military lands to the north and south. ADNR land surrounding the trail is designated for forestry and wildlife habitat uses in the Tanana Basin Area Plan. One management subunit contains accessible white spruce stands, and forestry activity has been ongoing. Appendix M states ‘... no other trail or road provides access to the private forestry lands adjacent to the trail.’” (22-5)

“Koole Lake Trail (Donnelly-Washburn Trail): These trails are located on both ADNR and U.S. Army land and receive primarily winter use. ADNR land is managed primarily for forestry and wildlife habitat (Tanana Basin Area Plan, 1991). Military lands are primarily used for military use and are provisionally open to recreational use. The Army Permit route is primarily used to

move vehicles and equipment between the Donnelly and Tanana Flats Training Areas but is open for public recreational use. Additional analysis is necessary to determine Section 4(f) status.” (119-6)

“ADNR Forestry Winter Road: It is unclear why this trail is deemed a Section 4(f) property. This multi-use trail, established by ADNR Forestry Division, provides public access to a number of public and commercial timber sales in the Tanana Flats. The Tanana Basin Area Plan designates land surrounding the trail for forestry, wildlife habitat, agriculture, public recreation, and watershed uses. The primary purpose of this trail does not appear to be recreational.” (119-7)

“Silver Fox Lodge Trail: It is unclear why this trail is deemed a Section 4(f) property. The description indicates that this multi-use trail, located on ADNR land, provides access to State land disposals along the Fivemile Clearwater River. In addition, the area surrounding the trail is designated for forestry and wildlife habitat uses in the Tanana Basin Area Plan. Forestry activity in this area is ongoing. The details provided in the text do not lead one to the conclusion that the Silver Fox Trail is a Section 4(f) property.” (119-5)

“Phillips Road/Delta Junction Area Trail Network: The Section 4(f) description for this trail indicates that it is multi-use in nature. The trail passes through ADNR lands that are interspersed with many private agricultural landholdings. While the trail is used for recreational purposes, it is not clear if recreation is the primary purpose.” (119-8)

Response

SEA has coordinated with appropriate agencies to verify whether they consider these resources as Section 4(f) resources. ADNR indicated in their comments on the Draft EIS that the Section 4(f) resources listed in the Draft EIS on their land would not be considered Section 4(f) resources because of the multiple-use nature of the resources, including their use for economic purposes. Given that the owning agency does not consider these resources eligible under Section 4(f) of the U.S. Department of Transportation Act, SEA has deleted these resources from the final Section 4(f) Evaluation, included as Appendix F of this Final EIS. For resources within U.S. Army training areas, such as portions of the Donnelly-Washburn Trail, the Koole Lake Trail, and the U.S. Army Permit Route, military purposes would supersede recreational purposes; therefore, these resources would not be considered for protection under Section 4(f). This evaluation incorporates the results of the coordination with owning agencies, the Applicant’s proposal to grade separate crossings, and potential *de minimis* and other effects to these resources.

Comments

Commenters questioned the inclusion of the Eielson AFB Outdoor Recreation Area and Twentythreemile Slough Area Trails as qualifying Section 4(f) resources for the following reasons:

“[T]he [Twentythreemile Slough Area] trails, maintained by the Salcha Dog Musher Association, are largely located throughout the Eielson Farm District, with one trail entering Eielson AFB [Air Force Base] on a slough. The maintenance and use of the slough for trails purposes is subject to permit by Eielson AFB and must be renewed on an annual basis.

“The Eielson Recreation Area is located amongst several old gravel extraction areas that have since filled with water. Recreational improvements are limited to several picnic tables and some tire pits. Public access and use of the area is by permit only, and may be denied if use of the area

is deemed to be in conflict with the greater designation of the land for military purposes. Additionally, camping is limited to military purposes only.”(22-4)

“Eielson AFB Outdoor Recreation Area: While being designated for outdoor recreation use in the Eielson AFB Integrated Natural Resources Management Plan, it is unclear if the Outdoor Recreation Area permits visitation by the general public at any time during normal operating hours of the facility. The FHWA’s [Federal Highway Administration] 2005 policy paper provides useful guidance in its response to Question C, which indicates that Section 4(f) would not apply when visitation is permitted to only a select group and not the entire public. Public access and use of the area is by permit only. Further investigation is necessary as to permitted visitation at the military recreation area.” (119-4)

“Twentythreemile Slough Area Trails: This multi-use trail system is located on land with multiple owners. The majority of trails are located on Eielson AFB, which functions first and foremost for military use; the area also includes a variety of recreational uses. Surrounding public lands are managed for general land use, including recreation. Section 4(f) does not apply to multiple-use lands that function primarily for purposes other than park, recreation, and refuges.” (119-3)

One commenter referenced FHWA’s 2005 Policy Paper [Federal Highway Administration, 2005. *FHWA Section 4(f) Policy Paper*. Office of Planning, Environment and Realty Project Development and Environmental Review. March 1, 2005].] for guidance on when to include public lands as public parks, public recreation areas, and wildlife and waterfowl refuges protected under Section 4(f).

“*FHWA Section 4(f) Policy Paper* at 12. Because the Eielson AFB Recreational Area and the crossings of the Twentythreemile Slough Trails where they are located on Eielson AFB are not accessible to the general public, we submit that those areas do not qualify for Section 4(f) protection under FHWA guidance.” (22-4)

Response

SEA has coordinated with Eielson AFB to verify whether they consider these resources as Section 4(f) resources. The Eielson Outdoor Recreation Area and portions of Twentythreemile Slough Dog Sledding Trails located on Eielson AFB on the west side of Richardson Highway would not qualify for protection under Section 4(f) of the U.S. Department of Transportation Act because military purposes would supersede recreational purposes on these lands¹. The final Section 4(f) Evaluation (Appendix F of this Final EIS) incorporates the results of this coordination with the owning agency.

Comment

“De minimis Impacts

Section 6009 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) amended existing Section 4(f) statutory requirements to include an exception for uses of protected land that had a ‘de minimis’ impact on that land. With respect to parks and recreation areas, SAFETEA-LU specifically authorized the Secretary of Transportation to find ‘that the transportation program or project will not adversely affect the

¹ Written confirmation has been requested from the US Air Force, 354th Fighter Wing Command from Eielson Air Force Base.

activities, features, and attributes of the park, recreation area, or wildlife or waterfowl refuge eligible for protection under this section.’ 49 U.S.C. [Section] 303(d)(3). Importantly, this finding of no adverse effect may include consideration of impact avoidance, minimization and mitigation or enhancement measures. *See id.* [Section] 303(d)(1)(C).

“FHWA [Federal Highway Administration] has developed a set of questions and answers that reinforce the importance of applying SAFETEA-LU’s ‘de minimis’ impact rules. *See FHWA, Questions and Answers on the Application of the Section 4(f) De Minimis Impacts Criteria.* That document makes clear that FTA [Federal Transit Administration] applies the Section 4(f) de minimis rules. *See id.*, Question 1A. FRA [Federal Railroad Administration] has also applied the Section 4(f) de minimis rules in prior environmental reviews. *See, e.g., Draft Section 4(f)/303, Statement for the Dakota, Minnesota & Eastern Railroad Application for Railroad Rehabilitation and Improvement Financing (RRIF) Relating to the Powder River Basin Project (August 2006).*

“To date, it is our understanding that neither the Department of Transportation, FRA or FTA have weighed in on the Section 4(f) findings contained in DEIS [Draft Environmental Impact Statement] Appendix M, including the possibility that any impacts to Section 4(f) properties are de minimis. As the Board proceeds with the Section 4(f) process, we believe it would be appropriate for the agencies to consider whether the impacts described in Appendix M are de minimis. If FRA and FTA conclude the project’s impacts on a Section 4(f) property is indeed de minimis, the substantive requirements of Section 4(f) should not apply to that property.

“As part of the project, ARRC [Alaska Railroad Corporation] plans to provide continuity of trails to ensure continued access to public lands. Please note the following statement regarding the proposed action from DEIS page 2-38:

“To maintain access to existing public and private roads and trails across the rail line, ARRC would install grade crossings where the rail line would cross a roadway. ... Where the rail line would cross legally authorized trails and FNSB [Fairbanks North Star Borough] trail easements, ARRC has indicated that the crossings would likely be grade separated. (DEIS page 2-38)

“Also, the STB [Surface Transportation Board] has included in the DEIS a mitigation measure (No. 62) requiring ARRC to provide a number of trail crossings, including crossings for the trail to the Blair Lakes Area; Silver Fox Lodge Trail; ADNR [Alaska Department of Natural Resources] Winter Trail; Koole Lake Trail; Donnelly-Washburn Trail; ADNR Forestry Winter Road; and Rainbow Lake Trail. Notably, ARRC included two crossings of the ADNR Winter Trail as part of the proposed action. Implementation of ARRC’s voluntary mitigation included as part of the project and STB measure 62 should make Section 4(f) impacts on these trails de minimis, assuming the agency with jurisdiction concurs.” (22-6)

Response

SEA has coordinated with appropriate agencies to determine whether the proposed rail line with SEA’s recommended mitigation measures and ARRC’s proposal to grade separate trail crossings would result in no adverse effects to Section 4(f) resources. Specifically, the *de minimis* impact finding can only be made where the transportation use would not adversely affect the activities, features, and attributes that qualify a property for protection under Section 4(f). The Section 4(f) Evaluation, which is included as Appendix F of this Final EIS, summarizes the results of coordination with owning agencies.

Comment

“Archaeological Sites

Page M-21 page states ‘In the case of archaeological sites, Section 4(f) applies to those sites that are on or eligible for inclusion on the *National Register of Historic Places* and that warrant preservation in place. It does not apply to sites that are eligible only for their research potential.’ We understand that this applies to FTA [Federal Transit Administration] funded projects. Although we believe it will also apply to FRA [Federal Railroad Administration] funded projects, we urge STB [Surface Transportation Board] to confirm this with FRA.” (22-7)

Response

SEA acknowledges the comment and has confirmed this information with FRA.

Summary Comment

Commenters suggested the Board continue coordination with ADNR, USACE, Eielson AFB, and FNSB to determine whether the resources analyzed in the Draft EIS should be considered for protection under Section 4(f), and indicated the Department of the Interior could not concur with the findings of the Section 4(f) Evaluation prior to completing the additional coordination and research on the properties identified in Appendix M of the Draft EIS and selection of a Preferred Alternative. (119-10, 119-11)

Response

SEA has coordinated with appropriate agencies to verify whether they consider these resources as Section 4(f) resources. The results are included in the final Section 4(f) Evaluation (Appendix F of this Final EIS). This evaluation incorporates the results of the coordination with owning agencies, the Applicant’s proposal to grade separate crossings, and potential *de minimis* and other effects to these resources. SEA has selected a Preferred Alternative, as indicated in Chapter 1 of this Final EIS.

3.14 Visual Resources

SEA did not receive comments on this topic.

3.15 Socioeconomics

Comment

“Firstly, I would like to discuss the socioeconomic impacts that would result if the rail line were to be extended. I am concerned that many of the jobs created from this major construction project would be filled with persons from outside of our state. It is vital to Alaska’s economy to keep our young workforce employed with in-state jobs for two reasons; it costs the state considerably less time and money to use local job resources and second our local workforce is more educated about our landscape, economy and lifestyle. Because they have lived and worked here local employees can provide valuable insight and suggestion to state projects. I would urge the ARRC to use local resources whenever possible as it will impede younger generations from migrating to the lower 48.” (4-1)

Response

The Applicant would make specific decisions related to hiring during the construction phase. The Draft EIS states that most of the workforce would likely come from within the state and that some workers from outside Alaska might also be employed, but this number would likely be low because the size and diverse skill set of Alaska's workforce is sufficient to minimize the need for workers from outside the state.

Comment

"I have been visiting Alaska over the last 15 or so years during the summer. The pristine Alaska I first visited has greatly been commercialized and Fairbanks, Salcha and Delta Junction have greatly increased its human population. Therefore, please clearly understand that when this project is started every modification to existing roads, pipelines, trucking routes, power lines storage facilities will have an enormous negative effect on air quality, water quality and will further decrease wildlife and fish habitat. The impact on the construction site is small compared with the entire human impact that follows each and every stage of the project that is developed.

"Another area of impact that needs to be discussed is the impact that occurs when these developments bring an influx of people into the state to construct this project. It will impact the entire state road system, rail system, airlines and increase auto and truck traffic. These additional people cause further degrading of the environment. These new people require homes to live in, which must be built, new sewer and water systems and new power and phone lines. Because the old roads will not be adequate to handle the increased traffic, they must be rebuilt or new ones constructed. New schools, new business, more policemen, more county employees and the entire infrastructure must be enlarged to meet the new demand. The increase in service and industrial industries that is necessary brings more demands on the environment. Also, the local population will be hit with a large tax increase to fund all these amenities.

"Also, you have not discussed or taken into account that this enlarged population demands more areas for recreation, which means they operate snow machines, all terrain vehicles, motorcycles, boats, campers motor homes, pickup trucks plus most of these new workers and their families all will want to fish and hunt in Alaska. These impacts will not occur on the construction site but the gasoline and diesel they utilize will pollute the air and water and have an enormous negative effect on Alaska's big game wildlife, fish, small game and upland birds

"There is a simple rule of thumb that must be taken into account, which states that for every permanent job that is created there are thirteen service and industrial jobs that must be planned for and the impact on the environment mitigated.

"I could not find one paragraph in the draft environmental impact statement where these concerns were discussed or measures were outlined to mitigate the damages that will occur from the overall human impact should this project be approved and constructed." (17-3)

Response

Chapters 8, 4, and 5 of the Draft EIS describe impacts to air quality, water quality, and wildlife and fish habitat, respectively. As stated in Draft EIS Chapter 15, most rail line construction and operations workers would come from within Alaska. Therefore, negligible effects would be expected from the very minor level of immigration that might occur. Chapter 15 also states that most construction workers would be housed in temporary housing in the vicinity of the project site, so no tax increases or permanent infrastructure impacts would be expected. While there

could be a temporary increase in the numbers of people participating in recreational activities such as fishing, hunting, and recreational-vehicle use, there would be negligible permanent population growth and therefore no long-term increases in the numbers of people participating in these activities. Draft EIS Chapter 20 explains that no mitigation measures are proposed for socioeconomic resources given the potential minor adverse impacts.

3.16 Environmental Justice

SEA did not receive comments on this topic.

3.17 Cumulative Impacts

Comment

“On page 17-3, the Draft EIS notes the interest in securing year-round access to the Tanana Flats and the potential for expansion of training and the system of roads and facilities. We believe the Final EIS needs to include additional evaluation of the potential cumulative [effects] from the possible expansion of military training facilities in the Tanana Flats Training Area once the proposed bridge is constructed across the Tanana River. On page 17-4, the Draft EIS describes the TransCanada Alaska and Denali gas pipeline projects in the context of the railroad expansion. We also believe that the Final EIS needs to include updated information on the status of these two pipeline proposals, in addition to a description of the proposal by the Alaska Natural Gas Development Authority for a pipeline, which would generally parallel the railroad extension.” (34-5)

Response

The military has not determined whether or how military training activities in the Tanana Flats Training Area would change if year-round access became available. Therefore, it is not feasible to analyze potential effects of resulting changes, if any, in training activities. SEA has reviewed the status of the TransCanada Alaska and Denali pipeline projects and determined that the proposals have not changed in any way that would affect the results of the cumulative impacts analysis. SEA has added a description of the Alaska Natural Gas Development Authority proposal. See Chapter 4 of this Final EIS.

3.18 Short-Term Use Versus Long-Term Productivity of the Environment

SEA did not receive comments on this topic.

3.19 Irreversible and Irretrievable Commitment of Resources

SEA did not receive comments on this topic.

3.20 Mitigation

Comment

“Due to the unavoidable loss of both aquatic and upland habitat associated with the proposed action, we recommend that a mutually-acceptable agreement between the applicant, the U.S. Fish and Wildlife Service (USFWS), and the Army Corps of Engineers, be developed that specifically identifies how the loss of these habitats will be compensated, and that the agreement be included in the Mitigation chapter of the Final EIS [Environmental Impact Statement]. Having such an agreement in place would ensure compliance with the Clean Water Act, Executive Order 11990 (Protection of Wetlands), the Migratory Bird Treaty Act, and Executive Order 13186 (The Responsibilities of Federal Agencies to Protect Migratory Birds). In addition, we believe the agreement would streamline the compensation process for wetlands and migratory bird and habitat resources for both the applicant and all involved agencies.” (34-2)

Response

SEA is not aware of a requirement for upland habitat compensation that would apply to the Applicant. Wetland compensation is addressed in ARRC voluntary measure VM-5 and SEA preliminary mitigation measure 12 in the Draft EIS and recommended mitigation measures VM-5 and 12 in this Final EIS. Voluntary mitigation measures VM-21 and VM-22 in the Draft EIS and recommended mitigation measures VM-20 and VM-21 in this Final EIS address compliance with the Migratory Bird Treaty Act.

Comment

“Chapter 20, Section 20.2.2, pages 20-4 to 20-5. The applicant’s preferred alternative would cross 27 fish-bearing streams. A number of these streams are critically important to anadromous fish populations in the Tanana and Yukon River Basins. While this issue is addressed in the Affected Environment and Environmental Consequences sections of the document, we believe there is need for additional standards for the placement of culverts and bridges in the Mitigation chapter. For example, the applicant’s voluntary mitigation includes a standard (VM-9) for culverts to meet or exceed 125 percent of stream width at Ordinary High Water. However, according to the Mitigation chapter, this standard is not applicable if the stream is equal to or greater than 15 feet in width. The Mitigation chapter in the Final EIS [Environmental Impact Statement] needs to provide specific standards for crossing streams of all sizes, including those greater than 15 feet in width. Prior to revising information on those standards in the Final EIS, we recommend that the applicant sponsor a fish passage mitigation workshop for all involved agencies to review existing standards as they relate to the proposed rail line and to develop a consensus on a single, comprehensive approach. Furthermore, it should be noted that the USFWS is drafting guidelines for culvert placement in fish-bearing streams and is available for further collaboration on fish passage.” (34-4)

Response

The Applicant has revised voluntary mitigation measure VM-9 from the Draft EIS and SEA has included it as recommended mitigation measure VM-9 in this Final EIS. The measure would require the Applicant to design crossings for anadromous waters in accordance with the NMFS 2008 publication Anadromous Salmonid Passage Facility Design.

Comment

“[SEA preliminary mitigation measure] 60) Requires the applicant ‘consult’ with agencies to provide enough bridge clearance for passage of recreation watercraft. This should include the provision that any crossings of waterways will be constructed with at least the minimum clearances recommended by the agencies.” (54-10)

Response

SEA preliminary mitigation measure 54 in the Draft EIS addresses navigation. SEA has revised that preliminary mitigation measure and included it as recommended mitigation measure 54 in this Final EIS. The revised mitigation measure states that the Applicant shall ensure that bridges and culverts placed on navigable or public waters, as determined by ADNR, are designed and installed to accommodate navigation by recreational boat users in a manner that shall not impede existing uses, to the extent practicable.

Comment

“4.2 Surface Water

The subsection on Excavation of Gravel Pits discusses material sources for this project. Later in Section 4.5 the draft EIS [Environmental Impact Statement] elaborates on what is proposed. It discusses 560 acres of borrow pits, one 17 acre pit every 2.5 miles, for a total of 33 borrow pits. There is no discussion on any reclamation of the pits. Certainly a number of these pits could be in locations where they could be reclaimed for recreational uses. Many pits originally dug for road projects are now very popular roadside fishing ponds: this project seems to offer similar potential. Perhaps a centralized larger pit could be provided to ultimately be developed into a Chena Lakes type facility for Delta Junction. Reuse of these material sites should be addressed by the plan and included in the mitigation measures.” (54-3)

Response

Voluntary mitigation measure VM-14 in the Draft EIS (recommended mitigation measure VM-13 in this Final EIS) addresses returning areas of disturbance to preconstruction contours when practicable and SEA’s preliminary mitigation measure 4 in the Draft EIS (recommended measure 4 in this Final EIS) addresses siting of borrow areas. Preliminary mitigation measure 24 in the Draft EIS, included with revisions as recommended mitigation measure 22 in this Final EIS, addresses development of borrow areas within active river channels. As indicated by recommended mitigation measure 27, reasonable conditions of other applicable permits could apply.

Comment

“4.5.2 Environmental Consequences

On page 4-55 of the EIS [Environmental Impact Statement] states ‘Construction of the rail line would require that the 200 foot ROW be cleared of surface vegetation.’ While it is understandable that much of the corridor would be cleared to provide visibility to avoid moose strikes etc. there should be some sensitivity to adjacent land uses. One area of particular concern is the proposed alignment adjacent to Piledriver Slough. Hopefully some buffers will be mandated for well used recreational sites like this, that would supersede a blanket 200 foot clear-cut. This should be addressed by a mitigation measure.” (54-4)

Response

SEA has revised the text in Section 4.5.2 of the Draft EIS to more accurately describe the environmental consequences of ROW clearing. As a component of the proposed action, the extent of ROW clearing is discussed in Section 2.3.1 of the Draft EIS (see Chapter 4 of this Final EIS). SEA has modified the text to clarify that, to be conservative, SEA has assumed that construction of the rail line would require that the 200-foot ROW be cleared of surface vegetation. The width of the ROW could be reduced, as necessary, to minimize impacts to sensitive resources or accommodate the terrain. The area in the ROW cleared of vegetation for construction but not needed for permanent structures would be restored to natural conditions, to the extent possible, consistent with rail line operating requirements. Recommended mitigation measure 35 in this Final EIS, which SEA has revised from preliminary measure 33 in the Draft EIS, would require the Applicant to minimize clearing of established vegetation and ground disturbance.

Comment

“[SEA preliminary mitigation measure] 56) Recommends the applicant ‘consult’ with U.S. Army Corps of Engineers and other agencies regarding impacts and mitigation regarding a planned project associated with the Moose Creek, grade separation. We would like to see stronger wording requiring incorporation of the project into Northern Rail Extension project.” (54-9)

Response

It is beyond the Board’s jurisdiction to require the grade separation for the project referenced by the commenter, and it is not a component of the Applicant’s proposed action.

Comment

“Compensatory Mitigation for Losses of Aquatic Resources; Final Rule

The ‘Compensatory Mitigation for Losses of Aquatic Resources; Final Rule’ (commonly referred to as the Final Mitigation Rule), was published in the *Federal Register* on April 10, 2008 and became effective on June 9, 2008. The regulations establish performance standards and criteria for the use of permittee-responsible compensatory mitigation, mitigation banks, and in-lieu programs to improve the quality and success of compensatory mitigation projects for activities authorized by Department of the Army permits. The draft EIS [Environmental Impact Statement] currently includes a statement that compensatory mitigation for unavoidable impacts to wetlands shall be implemented as part of the U.S. Army Corps of Engineers Section 404 permit.

“EPA notes that compensatory mitigation is not restricted to just wetlands, but to all waters of the U.S., and recommends that the final EIS acknowledge compliance with this Final Mitigation Rule.” (60-11)

Response

SEA has revised preliminary mitigation measure 16 in the Draft EIS to address this comment. Recommended mitigation measure 14 in this Final EIS states that compensatory mitigation shall be provided for all waters of the U.S.

Preliminary mitigation measure 12 (included in this Final EIS as recommended mitigation measure 12) also addresses impacts to waters of the U.S.

Comment

“[SEA preliminary mitigation measure] 1. The Applicant shall not place bridge piers or abutments in known areas of permafrost.

“Comment: Nearly every ARRC [Alaska Railroad Corporation] railroad bridge north of Denali Park is located on permafrost. This mitigation measure is impracticable and unreasonable for the Applicant to implement. It would require the elimination of virtually all bridge structures in the project area. It is ARRC’s practice to avoid permafrost areas when practicable. ARRC therefore requests that this measure be deleted in the FEIS.” (71-1)

Response

SEA modified preliminary mitigation measure 1 to state that the placement of bridge piers and abutments in permafrost would be avoided to the extent practicable, and included it in this Final EIS as recommended mitigation measure 1.

Comment

“[SEA preliminary mitigation measure] 2. Features of the rail line project that would occupy areas of permafrost shall be constructed to minimize thaw and subsidence. Construction methods might include insulate/fill methods in permafrost areas that could not be avoided during excavation.

“Comment: ARRC [Alaska Railroad Corporation] continues to work with geotechnical experts and regulatory agencies to minimize thaw and subsidence impacts to frozen ground from project construction to the extent practicable and reasonable. ARRC notes that insulate/fill techniques were state-of-the art over the past 30 years or so. ARRC suggests that this measure be rephrased to recognize the possibility that more modern, less invasive techniques in managing frozen soils might be implemented as follows:

“Features of the rail line project that would occupy areas of permafrost shall be constructed to minimize thaw and subsidence as practicable and reasonable, taking into account currently proven techniques.” (71-2)

Response

SEA has revised preliminary mitigation measure 2 in response to this comment and included it in this Final EIS as recommended mitigation measure 2.

Comment

“[SEA preliminary mitigation measure] 3. Any material source development and rehabilitation within floodplains shall follow the general procedures and guidelines outlined in North Slope gravel pit performance guidelines (McLean, 1993).

“Comment: The North Slope Gravel Pit Performance Guidelines referenced in the DEIS [Draft Environmental Impact Statement] are commonly incorporated in permit conditions set by DNR [Alaska Department of Natural Resources] and ADF&G [Alaska Department of Fish and Game]

for material mining within flood plains throughout Northern Alaska. These guidelines are incorporated due to the geotechnical conditions in rivers on the North Slope which are frequently frozen throughout the year.

“This project is located in a discontinuous permafrost zone of central Alaska. As a result, certain techniques, conditions, and requirements outlined in the referenced guidelines may not be applicable or practicable in the project area. ARRC [Alaska Railroad Corporation] therefore suggests that the language of the mitigation measure be rephrased in the FEIS [Final Environmental Impact Statement] to include ‘where applicable’ as follows:

“Any material source development and rehabilitation within floodplains shall follow the general procedures and guidelines, where practicable, outlined in North Slope gravel pit performance guidelines (McLean, 1993).” (71-3)

Response

SEA has revised preliminary mitigation measure 3 in response to this comment and included it in this Final EIS as recommended mitigation measure 3.

Comment

“VM-9. Culverts shall be designed and constructed for new fish-stream crossings with a width greater than or equal to 125 percent of the width of the stream at the ordinary high water stage. The culvert grade shall approximate the surrounding slope of the stream channel. Whenever possible, new culverts shall be buried to approximately 40 percent of their diameter with substrate material that would remain stable at expected flood discharge rates. This shall not apply to any water crossing more than 15 feet in bank-to-bank width due to span length limitations. Alternative design measures shall be required to meet the same design goals on streams more than 15 feet wide at ordinary high water.

“Comment: ARRC [Alaska Railroad Corporation] is continuing its work with regulatory agencies in the design and selection of the most practicable means for the crossing of waterbodies. ARRC has learned of an existing Memorandum of Agreement (‘MOA’) between ADOT [Alaska Department of Transportation and Public Facilities] and ADF&G [Alaska Department of Fish and Game] that treats the issue of fish passage in a more thorough and comprehensive manner than that proposed in VM-9 by Applicant. (See attached MOA). In light of this MOA, ARRC believes it appropriate to request that VM-9 be re-phrased in the FEIS [Final Environmental Impact Statement] as follows:

“For all proposed crossings of anadromous waters incorporating culverts, Applicant shall design said structures in accordance with the Memorandum of Agreement between ADOT and ADF&G dated August 3, 2001 which is entitled ‘DESIGN, PERMITTING, AND CONSTRUCTION OF CULVERTS FOR FISH PASSAGE.’” (71-3)

Response

SEA has elected to include this Applicant-supplied revision to voluntary mitigation measure VM-9, which was included in the Draft EIS, as recommended mitigation measure VM-9 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 4. During the final design process and facility siting, the Applicant shall conduct pre-siting investigations of potential borrow areas, staging areas, camps, and access roads to:

“Identify the highly sensitive areas within the project area (in consultation with U.S. Fish and Wildlife Service and Alaska Department of Fish and Game) and locate facilities in previously disturbed sites and not in sensitive habitat areas, to the extent practicable.

“Avoid to the extent practicable areas that could affect or be affected by flooding (especially with frequent recurrence intervals during the construction window); areas that have moderate to high densities of fine-grained permafrost soils, especially if the permafrost area is adjacent to or nearby a waterbody; and areas that are otherwise sensitive.

“Minimize to the extent practicable the total number and footprint area of facilities (e.g., for borrow areas, by hauling material longer distances to avoid environmentally sensitive areas adjacent to water bodies; and for access roads, by minimizing width).

“During construction, minimize the duration and extent of activity to develop the facilities and provide surface treatments to minimize soil compaction (e.g., scarify compacted soils through the compacted zone during reclamation to promote infiltration) and promote vegetation regrowth, including a reclamation plan that addresses rehabilitating recharge characteristics to maintain long-term hydrologic stability, habitat, and final usage (e.g., recreation, aquatic habitat). Plans for excavation depths shall be developed in cooperation with appropriate agency staff to both minimize areal extent (by maximizing depth) and maximize post-project function (through such measures as leaving shelves or gently sloping littoral areas).

“Comment: This mitigation measure does not lend itself easily to implementation due to its numerous subparts and complexity of language. To clarify and enhance the implementation of this proposed mitigation measure, ARRC [Alaska Railroad Corporation] suggests the following rephrasing in the FEIS [Final Environmental Impact Statement]:

“In consultation with US Fish & Wildlife and the Alaska Department of Fish and Game, the Applicant shall locate ancillary facilities (construction camps, borrow areas, and railroad facilities located off the proposed right-of-way and the access roads thereto) to minimize size and impacts to sensitive habitat areas when practicable. Off-right-of-way areas will be restored in accordance with a reclamation plan developed in cooperation with appropriate agency staff.”
(71-4)

Response

SEA has revised preliminary mitigation measure 4 in response to this comment and included it in this Final EIS as recommended mitigation measure 4.

Comment

“[SEA preliminary mitigation measure] 6. The Applicant shall avoid potential ice-jam locations and permafrost areas, fine-grained sediments, and steep, high streambanks when locating ice bridges and approaches. Specially adapted best management practices shall be applied for construction activities within these types of areas. For example, the Applicant shall slot ice bridges in several areas to accommodate faster disintegration of the bridge during the spring breakup period.

“Comment: Ice bridges are subject to permit requirements for the location, construction, maintenance, and ultimate disposition of ice bridges. Although regulatory agencies generally take all of the above-referenced measures into account in the granting of such permits, these agencies may or may not desire to have the bridges slotted after their usefulness has waned. Based on this practice, ARRC [Alaska Railroad Corporation] suggests the last sentence of this measure be deleted in the FEIS [Final Environmental Impact Statement] in order to provide the agencies with greater flexibility in their regulatory responsibilities and best management of the site specific conditions and resources. As modified, the mitigation measure would read as follows in the FEIS:

“The Applicant shall avoid potential ice-jam locations and permafrost areas, fine-grained sediments, and steep, high streambanks when locating ice bridges and approaches to the extent practicable. Specially adapted best management practices, or specific requirements of appropriate authorizing agencies, shall be applied for construction activities within these types of areas.” (71-5)

Response

SEA has revised preliminary mitigation measure 6 in response to this comment and included it in this Final EIS as recommended mitigation measure 6.

Comment

“[SEA preliminary mitigation measure] 10. As previously discussed, bridges and culverts shall be designed, constructed, and operated to maintain existing water patterns and flow conditions as practicable. At a minimum, large rail bridges shall be designed for a 100-year flood to pass through with less than 1 foot of rise in the tail-water elevation. The designs shall also consider local and broad backwater effects associated with large flood events on major tributaries, including potential flooding scenarios associated with the Chena River Flood Control project.

“Comment: ARRC [Alaska Railroad Corporation] has consulted with local, state and federal regulatory agencies to address issues associated with seasonal flooding of the Tanana River and has developed a design solution that yields an estimated 100-year flood elevation immediately upstream of the proposed Tanana Crossing locations in excess of one foot. This design conforms with FEMA’s [Federal Emergency Management Agency] specific and rigorous design and regulatory procedures to provide for project impacts resulting in changes in floodwaters in excess of one-foot.

“Crossing the Tanana River with less than an estimated headwater elevation of less than one foot is not practicable. The lack of presently available information on other waterbodies makes full analysis of consequences difficult at this time. In recognition of the project conditions and the regulatory framework, ARRC suggests that this mitigation measure be rephrased in the FEIS [Final Environmental Impact Statement] as follows:

“All bridge structures shall be designed to pass the 100-year flood event. Applicant shall further comply with all relevant FEMA guidance, regulations, and procedures in the design and permitting of the crossings of waterbodies and floodplains with established floodway models maintained by FEMA.” (71-6)

Response

In response to this comment and the subsequent comment regarding SEA's preliminary mitigation measure 11, SEA revised preliminary mitigation measure 10 to address maintaining natural water patterns and flows and included it in this Final EIS as recommended mitigation measure 10.

Comment

“[SEA preliminary mitigation measure] 11. During final design, rail line and access roads located in floodplains shall allow for the flow of floodwaters to floodplain storage areas by incorporating a sufficient number and size of culverts or bridges. The Applicant shall conduct site-specific analyses that incorporate flood conveyance and hydraulics and flood storage requirements of the 100-year flood as part of the design. For crossings within the mapped 100-year floodplain, the Applicant shall design drainage crossing structures to pass a 100-year flood without increasing the surface water elevation of the base flood by more than 1 foot, consistent with Federal Emergency Management Agency regulations (44 Code of Federal Regulations Part 9).

“Comment: For the reasons described in ARRC's [Alaska Railroad Corporation] Comments to Mitigation Measure #10 above, ARRC suggests that Mitigation Measure #11 be deleted in the FEIS [Final Environmental Impact Statement].” (71-7)

Response

In response to this and the previous comment, SEA revised preliminary mitigation measure 11 to address design for 100-year flood flow conditions and included it in this Final EIS as recommended mitigation measure 11.

Comment

“[SEA preliminary mitigation measure] 14. As suggested in the U.S. Environmental Protection Agency 1996 report on the functional profile of black spruce wetlands in Alaska, the Applicant shall protect water quality functions of adjacent wetlands by using calcareous fill to buffer acid deposition; manipulating warm, aerobic fill surfaces to degrade organic contaminants; and creating constructed wetlands for uptake of metals (Post, 1996).

“Comment: Although the above-referenced report discusses that water quality functions of adjacent wetlands may be protected through the use of calcareous fill, such discussion was not presented by the EPA [U.S. Environmental Protection Agency] in the context of generally required mitigation for projects. ARRC [Alaska Railroad Corporation] also notes that inasmuch as black spruce wetlands represent the most sizable amount of wetlands in the project area, there would appear to be no need to impose a specific mitigation measure based on the anticipated potential impacts. ARRC therefore suggests that this mitigation measure be deleted in the FEIS [Final Environmental Impact Statement].” (71-8)

Response

SEA reconsidered preliminary mitigation measure 14 and concluded potential impacts to wetlands would be adequately addressed by other recommended mitigation measures and permit conditions. Therefore, SEA has not included preliminary mitigation measure 14 as a recommended mitigation measure in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 16. As specified in the U.S. Army Corps of Engineers Alaska District’s Nationwide Permits General Best Management Practice guide (USACE, 2007b):

“Sediment and turbidity at the work site shall be contained by installing diversion or containment structures.

“Dredge spoils or unusable excavated material not used as backfill at upland disposal sites shall be disposed of in a manner that minimizes impacts to wetlands.

“Wetlands shall be revegetated as soon as possible, preferably in the same growing season, by systematically removing vegetation, storing it in a manner to retain viability, and replacing it after construction to restore the site.

“Stream banks shall be restored and revegetated using techniques such as brush layering, brush matting, and use of jute matting and coir logs to stabilize soil and reestablish native vegetation.

“Topsoil and organic surface material, such as root mats, shall be stockpiled separately from overburden and returned to the surface of the restored site.

“Fill materials that are free from fine material shall be used.

“The load of heavy equipment shall be dispersed such that the bearing strength of the soil shall not be exceeded, either by using mats when working in wetlands or by using tracked rather than wheeled vehicles.

“Comment: This project requires a permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. Assuming that such permit is issued after USACE [U.S. Army Corps of Engineers] review, it will contain its own mitigation or minimization conditions which the agency will tailor as part of its regulatory process under the 404 (b)(1) guidelines and public interest review. It can be anticipated that the permits conditions for this project will be more specific than those contained in the above-cited guidance document, and may, in fact, vary from the language in the proposed in this mitigation condition. In addition, BMPs [best management practices] for sediment and erosion control would be determined by the construction contractor(s) and included in their SWPPPs [Stormwater Pollution Prevention Plans] prepared in accordance with the NPDES [National Pollutant Discharge Elimination System] Construction General Permit. It is possible that implementation of the mitigation requirements set forth in the DEIS [Draft Environmental Impact Statement] may not represent the most prudent or best management practices for the conditions. Therefore, ARRC [Alaska Railroad Corporation] suggests that this mitigation measure be replaced in the FEIS with the following:

““The Applicant shall obtain a federal permit under the Clean Water Act Section 404 required by the USACE for project-related encroachment of jurisdictional waters of the U.S. and a National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit from EPA [U.S. Environmental Protection Agency] for project-related construction activities.”” (71-9)

Response

Applicant voluntary mitigation measure VM-4 in the Draft EIS, which SEA has included as recommended mitigation measure VM-4 in this Final EIS, would require the Applicant to obtain a Clean Water Act Section 404 permit. SEA has revised preliminary mitigation measure 16 in the Draft EIS and included it as recommended mitigation measure 14 in this Final EIS. SEA

revised preliminary mitigation measure 16 in the Draft EIS to address comments on voluntary mitigation measure VM-5 regarding the 2008 Final Mitigation Rule (73 FR 19594, April 10, 2008) and included it in this Final EIS as recommended mitigation 14.

Comment

“[SEA preliminary mitigation measure] 18. Road and track crossings of water bodies shall be aligned perpendicular or near perpendicular to watercourses to minimize crossing length and potential bank disturbance.

“Comment: Due to geometry constraints and the meandering nature of the waterbodies in the area, it is not possible to cross all proposed waterbodies in a perpendicular fashion. To accommodate these circumstances, ARRC [Alaska Railroad Corporation] suggests that ‘where practicable’ be inserted into the mitigation measure in the FEIS [Final Environmental Impact Statement] as follows:

“‘Road and track crossings of water bodies shall be aligned perpendicular or near perpendicular to watercourses, where practicable, to minimize crossing length and potential bank disturbance.’” (71-10)

Response

SEA has added “where practicable” to recommended mitigation measure 16 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 21. Construction of temporary crossings shall be minimized by installing bridge piers during the winter and initially constructing permanent crossing structures when practical.

“Comment: Although ARRC [Alaska Railroad Corporation] recognizes that the preferred timeframe for bridge pier construction is the winter months, the extreme winter climate of the project area (with temperatures significantly below zero degrees Fahrenheit for much of the winter) makes construction ‘during the winter’ extremely costly, difficult to manage and unpredictable. Certain construction operations are not feasible at these temperatures. Although the recommended language appears to acknowledge this issue, ARRC suggests the following revision so that the measure is clearer:

“‘Temporary crossing structures shall be constructed in a manner that minimizes disturbances to stream bed, banks, and flow where practicable. The Applicant shall take into consideration the construction of bridge structures during the winter where practicable.’” (71-11)

Response

SEA has incorporated the suggested text into recommended mitigation measure 19 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 24. Gravel mining required for construction or operations shall be restricted to the minimum necessary to develop and operate the rail line efficiently and with minimal environmental damage. Gravel mine sites shall not be located

within the active floodplain of a watercourse unless the Alaska Department of Natural Resources Division of Mining, Land, and Water, after consultation with Alaska Department of Fish and Game, determines that there would be no feasible and prudent alternative, or that a floodplain mine site would enhance fish and/or wildlife habitat after mining operations were completed and the site was appropriately closed. Mine site development and rehabilitation within floodplains shall follow the general procedures and guidelines outlined in North Slope gravel pit performance guidelines (McLean, 1993).

“Comment: Gravel mining within braided waterbodies is a relatively common occurrence within the project area, and is strictly regulated by DNR [Alaska Department of Natural Resources]. However, as the wording of this mitigation measure would seem to severely restrict the Applicant’s ability to undertake this practice, ARRC [Alaska Railroad Corporation] suggests the following rewording in the FEIS [Final Environmental Impact Statement]:

“Gravel mining required for construction will not be permitted within the established active channel of a watercourse unless otherwise authorized by the Alaska Department of Natural Resources Division of Mining, Land, and Water, after consultation with Alaska Department of Fish and Game. Mine site development and rehabilitation within active channels of rivers shall follow the general procedures and guidelines as required by DNR and ADF&G [Alaska Department of Fish and Game].” (71-12)

Response

SEA has incorporated the suggested text into recommended mitigation measure 22 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 25. Geotechnical boreholes can allow communication or commingling of waters between surface water and groundwater and between subsurface aquifers if the boreholes are deep enough, which could result in the contamination of groundwater. Geotechnical boreholes shall be abandoned in compliance with the requirements of Alaska Department of Environmental Conservation 18 Alaska Administrative Code 80.015(e).

“Comment: This mitigation measure should be revised to remove extraneous information. ARRC recommends deleting the first sentence, so the mitigation measure would read as follows:

“Geotechnical boreholes shall be abandoned in compliance with the requirements of Alaska Department of Environmental Conservation 18 Alaska Administrative Code 80.015(e).” (71-13)

Response

SEA has revised preliminary mitigation measure 25 from the Draft EIS and included it as recommended mitigation measure 23 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 26. Spill barriers or absorbent material shall be provided at the down-gradient ends of staging areas and camp sites to contain any potentially contaminated surface runoff. Erosion and sediment controls shall also be required as needed at these locations.

“Comment: All surface runoff from the construction site will be subject to NPDES [National Pollutant Discharge Elimination System] permitting requirements. ARRC [Alaska Railroad Corporation] intends to work with regulatory agencies to incorporate the most appropriate means for the containment of spills and pollutants. Because these issues will be comprehensively address in the NPDES permitting requirements and it is premature to set means and methods, ARRC recommends replacing this mitigation measure in the FEIS [Final Environmental Impact Statement] with the following:

“The Applicant shall obtain a National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit from EPA [U.S. Environmental Protection Agency] for project-related construction activities.” (71-14)

Response

SEA has deleted this mitigation measure. Voluntary mitigation measures VM-1 and VM-14 in the Draft EIS and recommended mitigation measures VM-1 and VM-13 in this Final EIS state that the Applicant would obtain a National Pollutant Discharge Elimination System permit and implement a Storm Water Pollution Prevention Plan. Voluntary measure VM-3 in the Draft EIS, included as recommended mitigation measure VM-3 in this Final EIS, states that the Applicant shall develop and implement a Spill Prevention Control and Countermeasures Plan.

Comment

“[SEA preliminary mitigation measure] 28. Tank storage facilities shall be placed at the farthest practical locations away from any streams or rivers, and standard protocols (i.e., lined and bermed pits for secondary containment) for storing chemical and petroleum products shall be implemented. The Applicant shall consult with Alaska Department of Environmental Conservation to determine appropriate measures and distances.

“Comment: ARRC [Alaska Railroad Corporation] notes that regulatory requirements for the storage and handling of tank facilities will likely be under the purview of other agencies in addition to ADEC [Alaska Department of Environmental Conservation]. ARRC also believes that the language of the measure in the DEIS [Draft Environmental Impact Statement] predetermines measures and distances. Those aspects of construction should be deferred until consultation by the Applicant with appropriate regulatory agencies. ARRC therefore suggests that the language be rephrased in the FEIS [Final Environmental Impact Statement] to read as follows:

“Tank storage facilities shall be placed as far as practical from streams or rivers, and applicable regulatory requirements (i.e., lined and bermed pits for secondary containment) for storing chemical and petroleum products shall be implemented. The Applicant shall consult regulatory agencies to determine appropriate regulations and associated requirements.” (71-15)

Response

SEA has revised preliminary mitigation measure 28 from the Draft EIS and included it as recommended mitigation measure 25 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 30. The proposed rock revetment of the Salcha Alternative Segment 1 crossing would restrict or eliminate the current flushing flows that reduce beaver dams along Piledriver and Twentythreemile Sloughs. To mitigate for permanent habitat alteration, the Applicant shall provide for removal of large beaver dams that would otherwise become permanent.

“Comment: ARRC [Alaska Railroad Corporation] continues to have discussions with the regulatory agencies regarding the need for mitigation of beaver dams on Piledriver Slough. ARRC recommends the language to be changed in the FEIS [Final Environmental Impact Statement] to reflect these discussions as follows:

“The proposed levee along the north bank of the Tanana River as required for Salcha Alternative Segment 1 crossing would restrict or eliminate the current flushing flows that reduce beaver dams along Piledriver and Twentythreemile Sloughs. The Applicant shall consult with ADF&G [Alaska Department of Fish and Game] for the development of appropriate mitigation of beaver dams on the upper Piledriver Slough to be carried out during construction.” (71-16)

Response

SEA generally agrees with the commenter’s suggested change but believes that mitigation following construction would also be appropriate. SEA has revised the mitigation measure accordingly. The measure indicates that appropriate mitigation would be developed in consultation with ADF&G. It is included as recommended mitigation measure 32 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 31. Where practicable, the Applicant shall make minor refinements to the proposed alternatives to avoid destruction or fragmentation of sensitive vegetation communities if they are encountered during surveying and preconstruction activities. Sensitive habitats include high-functioning wetland communities, fens, and late-succession forests.

“Comment: This mitigation measure appears to be inconsistent with DEIS [Draft Environmental Impact Statement] Section 4.5, Unique or Sensitive Wetlands section (pg 4-52). Fens are the only wetland type identified as ‘Unique or Sensitive’ and none appear to be present within the project area. Other than fens, sensitive habitats were not clearly defined in the resources sections of the DEIS. Because no fens, high-functioning or late-succession forests appear to be present within the project area, ARRC [Alaska Railroad Corporation] recommends this mitigation measure be re-phrased as follows:

“Where practicable, the Applicant shall make minor refinements to the proposed alternatives to avoid destruction or fragmentation of sensitive vegetation communities if they are encountered during surveying and preconstruction activities.” (71-17)

Response

SEA has revised this mitigation measure to indicate that the Applicant, in consultation with the USFWS, must identify highly sensitive areas and avoid them. This mitigation measure (recommended mitigation measure 33 in this Final EIS) also states that the Applicant must make minor refinements to the proposed alternatives to avoid impacting highly sensitive areas.

Comment

“[SEA preliminary mitigation measure] 32. To reduce collision and electrocution impacts to birds resulting from powerlines and communication towers, the Applicant shall:

“Consult with the U.S. Fish and Wildlife Service for current guidelines on tower siting, marking, and guy lines.

“Incorporate standard, safe designs, as outlined in Suggested Practice for Avian Protection on Power Lines (APLIC, 2006), into the design of electrical distribution lines in areas of identified bird concerns to avoid electrocution of eagles, owls, and other smaller raptors, including:

“Design communication towers without guy lines.

“Use marking techniques such as balls or flappers to increase transmission line visibility, especially in areas where sandhill cranes and bald eagles are likely to roost, forage, or nest.

“Maintain a minimum 60-inch separation between conductors and/or grounded hardware and potentially use insulation materials and other applicable measures, depending on line configuration, to avoid electrocution of eagles, owls, and other smaller raptors.

“Incorporate standard raptor-proof designs as outlined in Avian Protection Plan Guidelines (APLIC and USFWS, 2005) into the design of the electrical distribution lines to reduce bird collisions.

“Comment: The use of guy wires for communication tower structures is the only practicable means to provide for structural stability given the differential settlement common to soils in the project area. Because the design of communication towers without guys is not practicable or feasible, ARRC [Alaska Railroad Corporation] therefore suggests that the restriction in the first bullet be deleted in the FEIS [Final Environmental Impact Statement].

“In addition, certain aspects of this mitigation measure requiring high-visibility balls and flappers appears to contradict Mitigation Measure #70 that requires the towers to be designed to blend in with the landscape. ARRC requests that these issues be clarified in the FEIS.” (71-18)

Response

SEA has revised preliminary mitigation measure 32 to remove the provision for design of communication towers without guy lines (recommended mitigation measure 34 in this Final EIS). SEA has also revised Draft EIS preliminary mitigation measure 70 in response to this comment (recommended mitigation measure 71 in this Final EIS).

Comment

“[SEA preliminary mitigation measure] 33. The Applicant shall locate the access road immediately adjacent to the railbed to the extent feasible and prudent to minimize the project footprint, amount of ground disturbance, clearing of established vegetation, removal of wildlife habitats and riparian vegetation, and establishment of vegetation near the railbed that is attractive to moose.

“Comment: The access road on the south side of the Tanana River is proposed to be physically separated from the railroad embankment where possible. There are a number of reasons why this is the case.

“First, to minimize the number of material borrow pits, additional trucks will be required due to the longer distances traveled. The size of the trucks (estimated to be 18-20 feet wide) makes their passage on a single embankment difficult unless it is made wider than would otherwise be necessary for the long-term serviceability of the railroad (in excess of 46-48 feet). Further, the need to move all traffic over a long linear corridor from a single access point at one end (the crossing of the Tanana River near Salcha) will add additional construction-related traffic such that the only safe course is to separate the traffic into two separate one-way lanes. East-bound traffic would utilize the proposed separate access road, and west-bound traffic would utilize the proposed railroad grade.

“Second, by the terms of Alaska state law, ARRC [Alaska Railroad Corporation] is required to make its right-of-way available for use as a utility corridor. Thus, non-railroad vehicles occasionally move along the railroad right-of-way for inspection and maintenance activities of the utilities. Further, to mitigate for what would ultimately be multiple crossings of the military’s access roads on Tanana Flats, and between Tanana Flats and Donnelley, the access road is intended to replace the existing roadway that the military uses, as well as provide safe, year-round access to potential utility providers which would result in a minimal amount of over-land travel of vehicles.

“Third, movement of vehicular traffic along the railroad right-of-way concurrent with train operations is governed by federal law and railroad operating rules. It is simply not feasible to provide for the other required uses of the corridor without providing for a separation between the railroad embankment and the access road.

“Fourth, there are safety considerations to consider. The project has been designed for train traffic to move at 79-miles per hour. The sight distance required for a train to stop due to a violation of the vehicular envelope resulting from a conjoined access road, or due to other uses or trespassers in the corridor, is well in excess of two-miles; a distance which cannot be consistently relied upon for railroad operations.

“Due to the availability of alternate access to the proposed right-of-way on the north side of the Tanana, ARRC has only proposed a separated embankment on the south side of the Tanana River. Furthermore, the proposed separated embankments are expected to fall within the proposed 200-foot corridor throughout most of the alignment. As the DEIS [Draft Environmental Impact Statement] has calculates potential impacts based upon a footprint comprising the entire right-of-way corridor, any impacts resulting from this area of separation have already been taken into account.

“Based on these reasons, ARRC suggests that this measure be deleted in the FEIS.” (71-19)

Response

SEA has revised the mitigation measure to remove the phrase “locate the access road immediately adjacent to the railbed” because it would generally not be feasible to do so. See recommended mitigation measure 35 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 34. As part of the National Pollutant Discharge Elimination System Stormwater Construction Permit and Stormwater Pollution Prevention Plan, standard best management practices that minimize impacts to vegetation shall include:

“Minimizing the removal or disturbance of vegetation within the right-of-way (ROW);

“Minimizing contact with roadside sources of weed seed that could be transported to other areas;

Using low ground pressure equipment to minimize disruption to vegetation and soil;

“Developing and implementing aggressive management programs to limit colonization by invasive species plants and eradicate any invasive species within the rail ROW and support facilities;

“Using only certified weed-free straw and mulch for erosion control;

“Ensuring that adequate topsoil depth (minimum 4 inches) and textures are in place and promptly reseeded or revegetated using only plant species native to Interior Alaska;

“Using only seed meeting certified standards pursuant to 11 Alaska Administrative Code 34.075;

“Implementing dust control measures to stabilize soils from wind erosion and to reduce dust from construction activities; and

“Restoring temporarily cleared construction areas to previous conditions, including topography and vegetation communities.

“Comment: BMPs [best management practices] for erosion control are typically determined by the construction contactor(s) and included in their SWPPPs [Stormwater Pollution Prevention Plans] prepared in accordance with the NPDES [National Pollutant Discharge Elimination System] Construction General Permit. It is possible that implementation of these detailed mitigation requirements may not represent the most prudent form of mitigation. ARRC [Alaska Railroad Corporation] suggests deletion of this measure in the FEIS [Final Environmental Impact Statement] or revision of the language to indicate ‘. . . standard best management practices that minimize impacts to vegetation may include: . . .’” (71-20)

Response

SEA incorporated the best management practices outlined in preliminary mitigation measure 34 into revised recommended mitigation measure 37, which discusses the development and implementation of a monitoring and control plan for nonnative invasive plant species. Because the best management practices listed in the mitigation measure might not apply to all situations, SEA revised mitigation measure 37 to state that such a plan “could” include the suggested best management practices rather than “shall” or “may” include the suggested best management practices.

Comment

“[SEA preliminary mitigation measure] 38. Under Title 16 of the Alaska Statutes, the measures listed below shall be imposed by the Alaska Department of Fish and Game for all activities below the ordinary high water mark in specified anadromous water bodies and in fish-bearing waters that could block fish passage. Exceptions to these requirements, including the use of spill containment and recovery equipment or material source development, may be allowed on a case-by-case basis.

“All ice crossings shall be drilled before equipment crossing to determine the ice thickness.

“Alteration of river, stream, or lake banks or beds, except for approved permanent crossings, shall be prohibited.

“The operation of equipment, excluding boats, in open water areas of rivers and streams shall be prohibited. Exceptions for water withdrawal shall be permitted on a site-specific basis.

“Ice or snow bridges and approach ramps constructed at river, slough, or stream crossings shall be substantially free of extraneous materials (for example, soil, rock, wood, or vegetation) and shall be removed or breached before spring breakup.

“Bridges are the preferred watercourse crossings in fish spawning and important rearing habitats. In areas where culverts are used, they shall be designed, installed, and maintained to provide efficient passage of fish.

“Comment: ADF&G [Alaska Department of Fish and Game] has authority to issue Title 16 Fish Habitat Permits and generally includes detailed conditions in such permits. It is possible that implementation of these mitigation requirements may not represent the most prudent form of mitigation. ARRC [Alaska Railroad Corporation] therefore suggests deletion of this measure in the FEIS [Final Environmental Impact Statement] or revision of the language to indicate ‘. . . the measures listed below may be imposed . . .’” (71-20)

Response

SEA revised the mitigation measure to state that the ADF&G could impose the measures. See recommended mitigation measure 39 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 39. Detonation of explosives within, beneath, or in proximity to fish-bearing waters shall not result in overpressures exceeding 2.7 pounds per square inch unless the water body, including its substrate, was frozen solid. Peak particle velocity stemming from explosive detonation shall not exceed 0.5 inch per second during the early stages of egg incubation.

“Comment: The specific conditions concerning detonation of explosives should be left to the discretion of ADF&G [Alaska Department of Fish and Game] in issuance of a permit. It is possible that implementation of these mitigation requirements may not represent the most prudent form of mitigation. ARRC [Alaska Railroad Corporation] suggests deletion of this measure in the FEIS [Final Environmental Impact Statement] or modification of the language to include ‘unless otherwise approved by ADF&G’ or ‘to the extent practicable.’” (71-21)

Response

SEA agrees with this comment and revised the mitigation measure accordingly. See recommended mitigation measure 40 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 43. The Applicant, Alaska Department of Fish and Game, and Alaska Department of Natural Resources shall review and discuss potential methods of both rail design and warning systems to reduce moose-train mortality, such as:

“Maintaining vegetation along the right-of-way (ROW) in primary (e.g., grasses/sedges) or late (e.g., old-growth spruce) successional stages. If vegetation was allowed to progress to the secondary successional stage (i.e., shrubs), it shall be maintained at the shortest possible height, not to exceed 0.5 meter. Preferably, shrubs shall be of non-preferred moose browse species (e.g.,

alder, dwarf birch). Every effort shall be made to minimize re-growth of willow, paper birch, and aspen. Vegetation shall be mowed in late summer prior to energy stores being sent to the root systems.

“In winter, plowing snow back from the track to the outer edge of the trackside clearing to allow moose easy access away from the tracks when a train approaches.

“Not seeding grasses after approximately July 15, because fresh green growth has been noted to attract moose to ROWs during early fall, resulting in high rates of moose/train collisions.

“Developing a plan in conjunction with Alaska Department of Fish and Game to catalog all strikes (not just confirmed or suspected deaths) in a timely manner that shall include, but is not necessarily limited to: precise location (latitude and longitude), date and time, sex and age of moose; weather and other environmental conditions at time and location of strike; and attributes associated with the train, such as horn use, speed, and track characteristics.

“Designing, constructing, and operating all aspects of the rail line to minimize significant alteration of moose and other wildlife movement and migration patterns.

“Comment: ARRC [Alaska Railroad Corporation] already has a program in place with ADF&G [Alaska Department of Fish and Game] whereby it provides specific and timely data regarding all animal strikes, not just moose. While the data outlined in this mitigation measure (specifically, the fourth bullet) is similar to existing ARRC procedures and guidelines, it is different enough to represent a departure from the system presently implemented on the remainder of ARRC’s system. Therefore, because this measure would not be practicable to implement without changing the reporting program in place on the rest of ARRC’s system, we therefore suggest that this section should either be deleted or re-written in the FEIS [Final Environmental Impact Statement] as follows:

““The Applicant shall continue to record, maintain and dispose of animal strikes consistent with practices presently in place on the remainder of the railroad, including the annual documentation of moose strikes. Further, the ARRC shall implement existing maintenance practices currently employed on the rest of the system designed to deter or mitigate for potential strikes of game animals. If the number of moose killed by railroad traffic through the project area exceeds the number documented in the EIS on an annual basis, the Applicant will consult with ADF&G on additional means and methods which may be implemented to reduce moose mortality.”” (71-22)

Response

SEA retained this mitigation measure and edited the introductory text to state that the Applicant, in consultation with the ADF&G and ADNR, shall evaluate, implement, and monitor aspects of rail design, maintenance, and operations to document and reduce moose-train mortality. See recommended mitigation measure 44 in Chapter 2 of this Final EIS.

Comment

“[SEA preliminary mitigation measure] 50. The Applicant shall schedule certain construction activities that could temporarily block access trails and waterways to occur during the winter to the extent practicable, especially activities related to bridge construction and near access points in the right-of-way, because travel is less restricted and use of the area is at lower levels during this season.

“Comment: It is possible that implementation of this mitigation requirements may not represent the most prudent form of mitigation. ARRC [Alaska Railroad Corporation] therefore suggests rewording as follows:

“The Applicant shall schedule certain construction activities that could temporarily block access trails and waterways to occur during time of limited use or when alternate routes are most available to the extent practicable.” (71-23)

Response

SEA agrees with this suggestion and has revised preliminary mitigation measure 50 (see recommended mitigation measure 51 in this Final EIS).

Comment

“VM-25. The Programmatic Agreement (PA) being developed by SEA, the Alaska State Historic Preservation Office, cooperating agencies, and consulting parties requires that areas within the limits of project disturbance that have not been surveyed be surveyed. Potential stipulations include:

“The PA shall detail procedures and methodologies for identification of resources and reporting, reviewing, and implementing appropriate treatment measures for any cultural resources found within the project area.

“The PA shall identify appropriate actions should previously undiscovered archaeological or cultural resource sites be unearthed during construction activities.

“Comment: As it would appear that this mitigation measure will be superseded by the execution of the proposed programmatic agreement and Mitigation Measure #49, ARRC [Alaska Railroad Corporation] suggests that it be deleted from the FEIS [Final Environmental Impact Statement].” (71-23)

Response

SEA has not included mitigation measure VM-25 as suggested by the commenter.

Comment

“VM-30. The Applicant shall continue its ongoing efforts with community officials to identify the public emergency response teams in the project area and shall provide, upon request, hazardous-materials training. Before the start of operations, the Applicant shall contact the appropriate departments and agencies to provide them with information concerning the proposed operations to allow the departments and agencies to incorporate the information into local response plans.

“Comment: ARRC [Alaska Railroad Corporation] recommends rewording this measure for clarification, and to address what would happen in the event of a derailment or hazardous material release.

“The Applicant shall coordinate with federal, state, and local emergency management officials in the project area. The Applicant shall provide, upon request, applicable hazardous-materials training and/or project related information to enhance readiness. The Applicant shall incorporate

the new rail line into its existing Emergency Response process and shall update its Oil Spill Contingency Plan to include the new rail line.” (71-23)

Response

SEA has revised this voluntary mitigation measure as recommended by the Applicant (see recommended mitigation measure VM-29 in this Final EIS).

Comment

“VM-35. For each of the public grade crossings on the new and existing rail line, permanent signs prominently displaying both a toll-free telephone number and a unique grade crossing identification number in compliance with Federal Highway Administration (23 Code of Federal Regulations Part 655) shall be provided. Applicant’s personnel shall answer the toll-free number 24 hours a day.

“Comment: This voluntary mitigation measure inappropriately refers to ‘existing’ rail line. That reference should be deleted and the measure be modified in the FEIS [Final Environmental Impact Statement] to read:

“For each of the public grade crossings on the new rail line, permanent signs prominently displaying both a toll-free telephone number and a unique grade crossing identification number in compliance with Federal Highway Administration (23 Code of Federal Regulations Part 655) shall be provided. Applicant’s personnel shall answer the toll-free number 24 hours a day.” (71-23)

Response

SEA has revised the voluntary mitigation measure VM-35 (see recommended mitigation measure VM-34 in this Final EIS).

Comment

“[SEA preliminary mitigation measure] 53. The Applicant shall set bridge foundations and operate construction equipment during the winter when practicable.

“Comment: Per ARRC’s [Alaska Railroad Corporation] comment on Mitigation Measure #21, the extreme winter environment will substantially limit construction activity in the winter. Accordingly, ARRC suggests the addition of the following sentence to this measure:

“The Applicant shall take into consideration the construction of bridge foundations during the winter where practicable.” (71-24)

Response

SEA has determined that Draft EIS voluntary mitigation measure VM-10 and preliminary mitigation measure 21, as revised, would adequately meet the objectives of SEA preliminary mitigation measure 53 (see recommendation mitigation measures VM-10 and 19 in this Final EIS). Therefore, SEA has not included preliminary mitigation measure 53 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 54. The Applicant shall coordinate with Alaska Department of Natural Resources to ensure that bridges and culverts on secondary streams (those not within the jurisdiction of U.S. Coast Guard) are designed to accommodate navigation by recreational boat users in a manner that shall not impede existing ongoing uses, to the extent possible.

“Comment: ARRC [Alaska Railroad Corporation] suggests that the last word in this measure should read ‘practicable’, not ‘possible,’ and that the measure be modified to address winter modes of transportation:

“‘The Applicant shall coordinate with Alaska Department of Natural Resources to ensure that bridges and culverts on secondary streams (those not within the jurisdiction of U.S. Coast Guard) are designed to accommodate navigation by recreational boat users and winter modes of transportation in a manner that shall not impede existing ongoing uses, to the extent practicable.’” (71-25)

Response

SEA has changed “possible” to “practicable” in recommended mitigation measure 54 of this Final EIS. SEA also revised the measure to address ensuring continued use for navigation. Recommended mitigation measure 60 now addresses winter modes of transportation.

Comment

“[SEA preliminary mitigation measure] 59. If Eielson Alternative Segment 3 is included in any license issued by the Board, the Applicant shall consult with Eielson Air Force Base and Alaska Department of Fish and Game to determine the degree of impact on the parking area west of Grayling Lake. If the parking area would be reduced in size as a result of its proximity to the proposed rail centerline, the Applicant shall ensure adequate parking space outside of the right-of-way, which could include expansion of the parking area at its eastern end.

“Combined Comments on [SEA preliminary mitigation measures] 58 and 59: Both measures 58 and 59 address the same potential impacts to military lands which are authorized for specified recreational use by permit only. It is the military that owns and manages these lands, not ADF&G[Alaska Department of Fish and Game]. For clarity, ARRC [Alaska Railroad Corporation] believes that the measures 58 and 59 could be combined into one measure in the FEIS [Final Environmental Impact Statement] as follows:

“‘If Eielson Alternative Segment 3 is included in any license issued by the Board, the Applicant shall consult with Eielson Air Force Base and other agencies as appropriate to determine the degree of impact to existing uses between the Richardson Highway and the slough which bounds Eielson Air Force Base to the southwest. Mitigation could include, but is not limited to, construction of alternative access roads to existing campsites, creating grade-separated crossings (thus negating the necessity of using locomotive horns for at-grade crossings), expansion of parking areas, or moving campsites to locations outside the affected area.’” (71-26)

Response

SEA agrees with the commenter that a combination of preliminary mitigation measures 58 and 59 would improve clarity. However, agencies in addition to the military could be involved in managing resources on Eielson AFB. Therefore, SEA has retained a reference to other agencies

in recommended mitigation measure 59, which is included in this Final EIS. Recommended mitigation measure 59 now encompasses Draft EIS preliminary mitigation measure 59.

Comment

“[SEA preliminary mitigation measure] 62. The Applicant shall provide crossings for the following: the trail to the Blair Lakes Area; Silver Fox Lodge Trail; Alaska Department of Natural Resources (ADNR) Winter Trail (ARRC [Alaska Railroad Corporation] has included two crossings of this trail as part of the proposed action); Koole Lake Trail; Donnelly-Washburn Trail; ADNR Forestry Winter Road; and Rainbow Lake Trail.

“Comment: Several of these trails are crossed several times, and may be better served through re-location rather than a series of multiple crossings in the trail’s present location. Further, additional trail crossings may be required in the future. As there is a state law concerning the transfer of right-of-way for this project, ARRC recommends that the mitigation measure be re-written in the FEIS [Final Environmental Impact Statement] as follows:

““The Applicant shall work with [A]DNR for the provision of crossings to maintain the connectivity of trails and other access as may be appropriate pursuant to Alaska Sate Law AS 42.40.460.” (71-27)

Response

In response to this comment, SEA has revised the Draft EIS preliminary mitigation measure 62 to indicate that relocation of the trails could provide an alternative to multiple crossings of the same trail. SEA has also revised this mitigation measure to indicate that the Applicant would collaborate with applicable resource management agencies (see recommended mitigation measure 62). Based on the information available on trail use, SEA believes it would be appropriate to require that crossings be provided for the named trails. SEA has revised Draft EIS preliminary mitigation measure 55 to reference AS 42.40.460, Extension of the Alaska Railroad (2005); see recommended mitigation measure 56 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 69. To minimize the visual impact of the cleared right-of-way:

“Structures (excluding safety-related devices) associated with the build alternatives shall be located as far from crossings as practicable to avoid attracting visual attention and, in heavily vegetated areas, shall be painted to blend with the surrounding vegetation to the extent consistent with safety considerations.

“Clearing at road crossings shall be minimized, which could be accomplished by leaving a few larger trees and some smaller trees and shrubs untouched, to reduce visual contrast and mimic natural clearings in the landscape, where consistent with safety measures.

“Native trees and bushes shall be planted densely around the base of bridge supports located on land to break up the uniform lines, colors, and smooth textures of the bridge supports.

“Bridges shall be painted a color to match the surrounding landscape. Where these bridges continue into the vegetation and for bridges over small streams and rivers, structures shall be painted a uniform dark color, such as dark green or black, to match the existing landscape.

“Comment: As a general matter, the structures proposed will be constructed from materials that are relatively neutral in color. The extreme climate of the project area prevents the application of coatings or ‘paint’ (which are more readily used in the lower 48 states) and due to various environmental considerations. Further, the application of any specific hue would only be effective for less than half of any given year as the landscape is generally shades of white in the winter, green in the summer, and shades of brown in the shoulder seasons.

“The second bullet requires that road crossing areas retain significant vegetation. This presents a safety concern as the sight-triangles required for a person or vehicle to adequately discern if it is safe to cross the tracks would be impaired.

“Regarding bullet three, the planting of vegetation around bridge piers is inconsistent with the present environment, and would likely require non-native species to survive. Further, the vegetation would likely encourage the accumulation of debris frequently transported by waterbodies throughout the project area. This represents a safety risk associated with the possible compromise of the structure, a safety hazard to water craft moving under the structure, and an unacceptable maintenance hazard. It would also interfere with bridge inspections, which are critical to ensuring safety.

“In light of the variety of safety, limited effectiveness and practical issues presented by the mitigation measure, ARRC [Alaska Railroad Corporation] suggest that the measure be deleted in the FEIS [Final Environmental Impact Statement].” (71-28)

Response

SEA agrees that safety is a primary priority, but has not modified the second provision (bullet) of the preliminary mitigation measure from the Draft EIS because it includes the qualifier “where consistent with safety measures.” SEA has revised the third provision to clarify that the requirement for planting around bridges would only apply under appropriate safety, access, and natural vegetation conditions. SEA also revised the measure to remove the painting requirement. With these revisions, the measure is included as recommended mitigation measure 70 in this Final EIS.

Comment

“[SEA preliminary mitigation measure] 70. To reduce visual impact in areas of high visibility (such as residential areas):

“Native vegetation shall be planted along the right-of-way to reduce the contrast with line, color, and texture.

“In areas with hillcuts, slopes shall be shaped to reflect the natural landscape, where practicable, and planted with native materials to provide an amorphous and irregular form and rough texture.

“Excess material shall be disposed of in a suitable fill location and not cast on downhill slopes.

“To the extent consistent with safety considerations, structures shall be painted a color that blends with the existing vegetation, or self-weathering steel shall be used.

“Comment: ARRC [Alaska Railroad Corporation] believes that implementation of the first three bullets can only be achieved by expansion of the overall footprint of the project. In other words, as it would not be possible to implement the first three bullets in the area of the project right-of-way, these measures would be contrary to the overall desire to minimize the project footprint.

The last bullet appears to be inconsistent with Mitigation Measure #32 (i.e., towers should be made clearly visible to birds, but also should blend into the landscape so people cannot see them). Based on these considerations, ARRC suggests that this measure be deleted from the FEIS [Final Environmental Impact Statement].” (71-29)

Response

SEA has revised the measure to indicate that it would only apply to the extent that it would not increase the project footprint. SEA acknowledges the inconsistency with preliminary mitigation measure 32 and has removed the requirement for painting structures. With these revisions, the measure is included as recommended mitigation measure 71 in this Final EIS.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line:

(1): “Construct bridges to span large rivers and arched or box culverts to cross smaller streams (>10 feet FBW). Free span structures, such as bridges over rivers and streams, provide migratory corridors for anadromous fish species and aquatic organisms, while maintaining ecosystem connectivity and natural substrate function in EFH.” (76-2)

Response

The Applicant submitted voluntary mitigation measures and SEA developed preliminary mitigation measures in the Draft EIS intended to provide for anadromous fish passage and migration, including voluntary mitigation measures VM-4, VM-8, and VM-9, and SEA preliminary mitigation measures 10 and 41. The Applicant has revised voluntary mitigation measure VM-9 and SEA has revised preliminary mitigation 10, and has included all five measures as recommended mitigation measures VM-4, VM-8, VM-9, 10 and 42 in this Final EIS. It is SEA’s understanding that these mitigation measures, as revised, are consistent with and adequately address the NMFS recommendation; therefore, SEA has not added a recommended mitigation measure to this Final EIS to incorporate the specific language the NMFS provided.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line”

(2): “Use stream simulation modeling to site tributary crossings with traditional corrugated large culverts (round or oval, 10 feet and 60 inches in diameter). Stream simulation methods consider natural environmental variables and incorporate habitat substrate within the structure, providing EFH and migratory corridors for anadromous fish species and aquatic organisms.” (76-3)

Response

The Applicant submitted voluntary mitigation measures and SEA developed preliminary mitigation measures that address culvert design, including voluntary mitigation measures VM-9 and VM-10 and SEA preliminary mitigation measure 18 in the Draft EIS. The Applicant has revised voluntary mitigation measure VM-9 and SEA has revised preliminary mitigation measure 18, and has included all three measures as recommended mitigation measures VM-9,

VM-10, and 16 in this Final EIS. Siting of crossings is controlled largely by track geometry (maximum curve radius and slope) in combination with other factors such as stream characteristics and soil conditions. To address modeling to design crossings, the Applicant has revised VM-9 from the Draft EIS to specify design of culverts in anadromous waters in accordance with the NMFS 2008 publication Anadromous Salmonid Passage Facility Design. It is SEA's understanding that these mitigation measures are consistent with and adequately address the NMFS recommendation. Therefore, SEA has not added a recommended mitigation measure to this Final EIS to incorporate the specific language the NMFS provided.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line:

(3): "Use stream simulation modeling to site tributary crossings with traditional corrugated small culverts (round or oval, < 60 inches in diameter) to help maintain water quality and tributary connectivity while minimizing impacts from head cut, perched culverts and velocity barriers." (76-4)

Response

See the previous response regarding EFH Conservation Recommendation 2.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line:

(4): "Conduct fish surveys for all tributaries transected by the rail alignment to characterize the range and life histories of species within these watersheds, fill in data gaps in the Alaska Department of Fish and Game's anadromous waters catalogue, and improve information on appropriate mitigation measures." (76-5)

Response

As indicated by voluntary mitigation measure VM-17 and preliminary mitigation measure 38 from the Draft EIS, the Applicant would be required to comply with the reasonable stipulations and conditions of Federal, state, and local permits, including the Fish Habitat Permit authorized by the ADF&G. SEA has revised preliminary mitigation measure 38 and included both measures as recommended mitigation measures VM-16 and 39 in this Final EIS. It is SEA's understanding that these recommended mitigation measures, and in particular the required permits, would provide appropriate protection for fisheries resources. In addition, SEA would not be in a position to change mitigation measures following issuance of a Board decision; therefore, SEA has not added a recommended mitigation measure to this Final EIS to incorporate the specific language the NMFS provided.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line:

(5): “Elevate the rail line in wetland areas adjacent to and known to support anadromous spawning habitat to maintain connectivity of the groundwater hydrology and related hyporheic function (up and down welling water) that is critical to spawning site selection, egg and larval survival.” (76-6)

Response

The Applicant and SEA have identified several mitigation measures to maintain natural flow conditions, including voluntary mitigation measures VM-6 and VM-15 and preliminary mitigation measures 10 and 12 from the Draft EIS. SEA has revised preliminary mitigation measure 10 and included all four measures as recommended mitigation measures VM-6, VM-14, 10 and 12 in this Final EIS. The Applicant could choose to elevate the rail line as a means of complying with these recommended mitigation measures, but the Applicant has indicated that doing so would result in an approximately ten-fold increase in cost for the affected portions of the rail line and would not be economically feasible. SEA believes these recommended mitigation measures are consistent with and adequately address the NMFS recommendation. Therefore, SEA has not added a recommended mitigation measure to incorporate the specific language the NMFS provided.

Comment

The commenter offered the following Essential Fish Habitat (EFH) Conservation Recommendation to avoid, minimize, and mitigate the effects of the proposed rail line:

(6): “Employ Best Management Practices when constructing and placing artificial structures to promote natural hydrology and instream flows. Structures built over naturally occurring waters should conform to the natural stream gradients and stream channel alignment. Supporting structures should be designed to prevent scour and velocity barriers to anadromous species.” (76-7)

Response

The Applicant and SEA have developed several mitigation measures that would require the Applicant to implement best management practices and specific permit requirements so that natural flow conditions would be maintained. These measures include voluntary mitigation measures VM-4, VM-8, VM-9, VM-17, and VM-18, and preliminary mitigation measures 10 and 16 from the Draft EIS. SEA has revised Preliminary mitigation measures 10 and 16 and the Applicant revised voluntary mitigation measure VM-9, and these six measures are included as recommended mitigation measures VM-4, VM-8, VM-9, VM-17, 10 and 14 in this Final EIS. SEA has revised preliminary mitigation measure 10 from the Draft EIS to further compliment the other mitigation measures and address the NMFS recommendation. SEA believes these recommended mitigation measures are consistent with and adequately address the NMFS recommendation. Therefore, SEA has not added a recommended mitigation measure to incorporate the specific language the NMFS provided.