
Decision ID No. 47105

Service Date: July 11, 2019
Comment Due Date: August 12, 2019

DRAFT SUPPLEMENTAL
ENVIRONMENTAL ASSESSMENT

SURFACE TRANSPORTATION BOARD
DOCKET NO. FD 34936

Northern Columbia Basin Railroad Project
Grant County, Washington

Lead Agency:



Surface Transportation Board
Office of Environmental Analysis
Victoria Rutson, Director

Project Manager:

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Cooperating Agency:

Federal Railroad Administration



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All comments on this Draft Supplemental Environmental Assessment must be received at the Surface Transportation Board by August 12, 2019. To submit comments electronically:

Comments may be filed electronically on the Surface Transportation Board's website at www.stb.gov by clicking on the "E-Filing" link. A Login Account is not needed; simply click on "Environmental Comments," which will take you to the comment screen. Type in the docket number "FD 34936" then select "Adam Assenza" in the drop-down list under "attention of." Complete the form by adding your name, address, phone, and e-mail, and click "Submit."

Comments can also be faxed to (202) 245-0454. Please reference the docket number "FD 34936" in your cover sheet or comment.

The Surface Transportation Board's Office of Environmental Analysis recommends submitting comments electronically to minimize delays in processing and cost to commenters.

To submit comments by mail, write to:

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For more information, please contact:

Adam Assenza with STB by calling (202) 245-0301, emailing adam.assenza@stb.gov, or mailing the address above.

Lydia Kachadoorian with the FRA by calling (617) 494-3989, by emailing lydia.kachadoorian@dot.gov, or by mail to:

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SURFACE TRANSPORTATION BOARD

Office of Environmental Analysis

Washington, DC 20423

July 11, 2019

Dear Reader:

The Surface Transportation Board's (STB's) Office of Environmental Analysis (OEA) and the Federal Railroad Administration (FRA) are pleased to provide you with the enclosed Draft Supplemental Environmental Assessment (DSEA) for the proposed acquisition and construction of an approximately 11-mile-long railroad route in Grant County, Washington (Project).¹ The Project proponent is the Port of Moses Lake (Port), which would own and construct the rail lines. Columbia Basin Railroad Company (CBRW) would operate over the proposed rail lines. The purpose of the proposed Project is to provide rail service to lands and properties designated for industrial development in the northern area of the City of Moses Lake, as well as to the eastern side of the Grant County International Airport (GCIA), to enhance opportunities for economic development, and to attract new rail-dependent businesses to those areas.

The STB issued a final decision for the Project in 2009 approving the Port's request for acquisition and construction authority. But, according to the Port, a severe economic downturn in the region, along with local land use and business developments, delayed the Project and complicated the Port's efforts at securing the financing necessary for the Project. In 2017, the Port was selected to receive grant funding from the U.S. Department of Transportation (USDOT) under the Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE) Grant Program, which is being administered by FRA, for the Project. In combination with earlier funding sources, the federal funds will enable the Port to proceed with the Project. To minimize impacts on existing land uses, some of which include land development that has occurred in the vicinity of the Project area in the years since the STB's initial authorization, the Port is requesting that STB authorize certain limited route modifications so that the Port can minimize impacts on existing land uses and otherwise fulfill the economic development objectives of the Project. OEA and FRA determined that these circumstances warrant creation of a Supplemental

¹ The proposed Project would involve approximately 10.6 to 11.5 miles of rail line depending on the route selected.

Environmental Assessment (Supplemental EA) in accordance with the National Environmental Policy Act (NEPA).

OEA and FRA prepared this DSEA pursuant to NEPA, Council on Environmental Quality's (CEQ) NEPA regulations, the STB's environmental rules, FRA's NEPA implementing procedures, and other applicable state and federal laws, including the National Historic Preservation Act (NHPA). The DSEA discusses potential environmental impacts that could result from the modifications to the proposed Project and includes preliminary recommendations for mitigating possible environmental effects. The DSEA also considers the views of the public, as well as federal, state, and local agencies.

Availability of the Draft Supplemental Environmental Assessment

OEA is providing copies of this DSEA to all parties of record for this proceeding and the environmental distribution list, as well as to appropriate government agencies and interested parties. In addition, as part of the tribal consultation required under Section 106 of the NHPA, OEA will provide copies of this DSEA to all Native American tribes that may have ancestral connections to the Project area. This DSEA is also available for review at the STB's website and can be accessed by clicking "Decisions" under "Quick Links" on the STB home page and then selecting "search by parameters, and searching for Docket No. "FD 34936." OEA will also make printed copies of this DSEA available for public review at the City of Moses Lake Public Library and at the Port of Moses Lake office.

Public Comment and Review of the Preliminary Environmental Assessment

A Notice to the public will be published in the Federal Register announcing the availability of the DSEA. OEA and FRA invite comments on all aspects of this DSEA, including suggestions for additional mitigation measures. OEA will consider all comments received in response to the DSEA in making its final recommendations to the STB. The STB will consider the entire environmental record, OEA's final recommendations, including final recommended mitigation measures, and the environmental comments in making its final decision in this proceeding.

All comments must be received by August 12, 2019. Please refer to Docket No. FD 34936 in all correspondence. Comments may be filed electronically on the Surface Transportation Board's website at www.stb.gov by clicking on the "E-Filing" link. A Login Account is not needed; simply click on "Environmental Comments," which will take you to the comment screen. Type in the docket number "FD 34936" then select "Adam Assenza" in the drop-down list under "attention of." Complete the form by adding your name, address, phone, and e-mail, and click "Submit." Comments can also be faxed to (202) 245-0454. Please reference the docket number "FD 34936" in your

cover sheet or comment. OEA recommends submitting comments electronically to minimize delays in processing, as well as minimize costs to commenters.

Written comments may also be submitted by mail to:

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395 E Street, SW
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For more information, please contact:

Adam Assenza with STB by calling (202) 245-0301, emailing adam.assenza@stb.gov, or mailing the address above.

Lydia Kachadoorian with the FRA by calling (617) 494-3989, by emailing lydia.kachadoorian@dot.gov, or by mail to:

Federal Railroad Administration
Attn: Lydia Kachadoorian
1200 New Jersey Ave, SE
Washington, DC 20590

Thank you for your interest and participation in the environmental review process. If you have any questions regarding this DSEA or would like additional information about the environmental review process, please contact Adam Assenza by phone at (202) 245-0301 or by email at adam.assenza@stb.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Rutson". The signature is fluid and cursive, with a large initial "V" and a stylized "R".

Victoria Rutson
Director
Office of Environmental Analysis

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Table of Contents

Abbreviations and Acronyms	iv
Executive Summary	ES-1
Chapter 1 Introduction	1-1
1.1 The Proposed Action.....	1-2
1.2 Background/Project History	1-2
1.3 STB, FRA, and WSDOT Roles.....	1-3
1.3.1 Surface Transportation Board	1-3
1.3.2 Federal Railroad Administration	1-4
1.3.3 Washington State Department of Transportation	1-5
1.4 Environmental Review Process.....	1-5
1.5 Environmental Review of the Project	1-5
1.6 Scope and Content of Draft Supplemental EA	1-7
1.7 Request for Comments on the Draft Supplemental EA	1-8
Chapter 2 Purpose and Need.....	2-1
2.1 NCBR Project Purpose and Need	2-1
2.2 Need for Proposed Alignment Modifications	2-2
2.3 Segment 1.....	2-2
2.4 Segment 2.....	2-2
Chapter 3 Proposed Action.....	3-1
3.1 Segment 1 Approved Alignment.....	3-1
3.2 Segment 1 Proposed Alignment Modifications.....	3-1
3.3 Segment 2 Approved Alignment.....	3-4
3.4 Segment 2 Proposed Alignment Modifications.....	3-4
Chapter 4 Affected Environment	4-1
4.1 Physical Setting of Project Area	4-1
4.2 Prior Study Areas and Additional Study Areas Resulting from Proposed Project Modifications	4-2
4.2.1 Air Quality	4-2
4.2.2 Cultural, Historic, and Archaeological Resources.....	4-3
4.2.3 Fish, Wildlife, and Vegetation	4-7
4.2.4 Energy	4-11
4.2.5 Hazardous Materials	4-11

4.2.6	Land Use	4-14
4.2.7	Section 4(f) Properties.....	4-15
4.2.8	Noise and Vibration	4-16
4.2.9	Socioeconomics and Environmental Justice	4-17
4.2.10	Soils and Geology	4-19
4.2.11	Traffic and Transportation	4-20
4.2.12	Visual Quality	4-22
4.2.13	Water Resources.....	4-23
4.2.14	Wetlands	4-24
Chapter 5	Potential Environmental Impacts Resulting from Proposed Modifications.....	5-1
5.1	Air Quality	5-2
5.2	Cultural, Historic, and Archaeological Resources	5-3
5.3	Fish, Wildlife, and Vegetation.....	5-4
5.4	Energy.....	5-6
5.5	Hazardous Materials	5-7
5.6	Land Use.....	5-8
5.7	Section 4(f) Properties	5-8
5.8	Noise and Vibration.....	5-9
5.9	Socioeconomics and Environmental Justice	5-10
5.10	Soils and Geology	5-11
5.11	Traffic and Transportation	5-11
5.12	Visual Quality	5-13
5.13	Water Resources	5-14
5.14	Wetlands	5-15
5.15	Cumulative Effects	5-16
Chapter 6	Mitigation Measures	6-1
Chapter 7	Conclusion	7-1
Chapter 8	References.....	8-1
Chapter 9	List of Preparers.....	9-1
Chapter 10	Public, Agency, and Tribal Involvement.....	10-1

Exhibits

Exhibit ES.1: Project Location	ES-5
Exhibit 3.1: Modification 1B	3-3
Exhibit 3.2: Modifications 2B and 2C.....	3-6
Exhibit 4.1: Segment 1 APE Overview	4-5
Exhibit 4.2: Segment 2 APE Overview	4-6
Exhibit 4.3: Project Wetlands	4-26

Tables

Table ES.1: Summary of Resource and Project Changes Since Prior EA	ES-13
Table 4.1: Listing Status for Fish Species in the Study Area.....	4-8
Table 4.2: Listing Status for Wildlife Species in the Study Area	4-10
Table 4.3: Demographics of the Prior Study Area	4-17
Table 4.4: Demographics of the Additional Study Area	4-18
Table 4.5: Average Daily Traffic (ADT) Volumes within the Prior Study Area	4-20
Table 4.6: Average Daily Traffic (ADT) Volumes within the Additional Study Area	4-21

Appendices

Appendix A: Programmatic Agreement (2019)	
Appendix B: Supplemental Cultural Resources Investigation for Draft Supplemental Environmental Assessment (2019)	
Appendix C: Fish, Wildlife, and Vegetation Technical Memorandum (2018)	
Appendix D: Hazardous Materials Technical Memorandum (2018)	
Appendix E: Section 4(f) Technical Memorandum (2019)	
Appendix F: Wetlands and Waters of the U.S. Delineation Report (2017)	

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Abbreviations and Acronyms

APE	Area of Potential Effects
BA	Biological Assessment
BMP	Best Management Practice
Board	Surface Transportation Board
CAA	Clean Air Act
CBRW	Columbia Basin Railroad Company, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	Code of Federal Regulations
CEQ	Council on Environmental Quality
CWA	Clean Water Act
CY	cubic yard
DAHP	Washington State Department of Archaeological and Historic Preservation
DSEA	Draft Supplemental Environmental Assessment
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EL	East Low (canal)
ESA	Endangered Species Act
FR	Federal Register
FRA	Federal Railroad Administration
GCIA	Grant County International Airport
Jacobs	Jacobs Engineering Group Inc.
MBTA	Migratory Bird Treaty Act
MM	minimization measure
MOA	Memorandum of Agreement
NAAQS	National Ambient Air Quality Standards
NCBRP	Northern Columbia Basin Railroad Project
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory

OEA	Office of Environmental Analysis (see SEA)
OHWM	ordinary high water mark
PA	Programmatic Agreement
PHS	Priority Habitat and Species
PM	particulate matter
PM10	particulate matter 10 micrometers or smaller
Port	Port of Moses Lake
Project	Northern Columbia Basin Railroad Project
R	Range
RCD	Rocky Coulee Diversion
ROW	right-of-way
S	Section
SEA	Section of Environmental Analysis (see OEA)
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control, and Countermeasures (Plan)
SR	State Route
STB	Surface Transportation Board
T	Township
TESC	Temporary Erosion and Sediment Control (Plan)
TMDL	total maximum daily load
TSCA	Toxic Substances Control Act
U.S.	United States
UDP	Unanticipated Discovery Plan
USACE	U.S. Army Corps of Engineers, Seattle District
U.S.C.	U.S. Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife
WDNR	Washington State Department of Natural Resources
WSDOT	Washington State Department of Transportation

Executive Summary

Background

In 2008, the Port of Moses Lake (Port) filed a Petition for Exemption seeking the authority of the Surface Transportation Board (STB or Board) to construct approximately 7.6 miles of new rail line in two separate segments and to acquire approximately 3 miles of an existing rail line in a third segment, all together comprising the Northern Columbia Basin Railroad Project (NCBRP or Project). After environmental review by STB's Office of Environmental Analysis (OEA), STB authorized construction and acquisition of the rail lines in a decision issued August 27, 2009.²

STB's authorization of the NCBRP coincided with a severe economic downturn in the region that was one of several factors that delayed the Project and complicated the Port's efforts to secure necessary financing. In 2017, the Port was selected to receive grant funding from the U.S. Department of Transportation (USDOT) which, in combination with earlier funding sources, is enabling the Port to proceed with the Project. To minimize impacts on existing land uses, including land development that has occurred in the Project vicinity in the years since authorization, the Port is requesting that STB authorize certain limited route modifications (the Modified Alignment) so that the Port can fulfill the economic development objectives of the NCBRP. The Federal Railroad Administration (FRA) is administering USDOT's Fiscal Year 2017 grant to the Port and is therefore participating in this Draft Supplemental Environmental Assessment (DSEA) as a cooperating agency.

This DSEA will: (1) enable STB to evaluate the potential impacts of the Modified Alignment under the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and other applicable environmental laws; and (2) allow FRA, as administrator of the USDOT grant funds awarded to the Port, to similarly meet its obligations under NEPA, NHPA, and other applicable environmental laws. FRA will adopt the relevant analyses from OEA's prior environmental review and will use them in conjunction with the Supplemental Environmental Assessment (Supplemental EA) to inform its NEPA decision making.

Project Description, Purpose and Need

The Port operates the Grant County International Airport (GCIA) and is chartered to foster economic development at GCIA and the surrounding Port district area, which includes the City of Moses Lake.

The Project purpose is to provide rail service to lands and properties designated for industrial development in the northern parts of the City of Moses Lake and east of the GCIA, to enhance opportunities for economic development and to attract new, rail-

² See Port of Moses Lake—Construction Exemption—Moses Lake, Wash., FD 34936 and Port of Moses Lake—Acquisition Exemption—Moses Lake, Wash., FD 34936 (Sub-No. 1) (STB served August 27, 2009) (2009 Authorization Decision).

dependent businesses to those areas. According to the Port, the Project would eliminate a major impediment to retaining and attracting new industries by providing a cost-effective rail connection to the BNSF Railway Company mainline for existing businesses, agricultural producers, and new industries to ship to and from Pacific Northwest ports and the Midwest. According to the Port, the Project would also allow rail traffic to and from the GCIA industrial area to avoid passing through the downtown area of the City of Moses Lake. The Project purpose and need has not changed since the 2009 Authorization Decision.

STB has the authority to approve the transactions proposed by the Port as part of the NCBRP, either through application filed under 49 U.S.C. § 10901, or by granting an exemption from the prior approval requirements of the statutory framework under 49 U.S.C. § 10502. Section 10901(c) is a permissive licensing standard. It directs the Board to grant rail line construction proposals “unless” the Board finds the proposal “inconsistent with the public convenience and necessity.”³ Thus, Congress made a presumption that rail construction projects are in the public interest unless shown otherwise. See Mid States Coalition for Progress v. STB, 345 F.3d 520, 552 (8th Cir. 2003); Alaska R.R. - Constr. and Operation Exemption – Rail line Between North Pole and Delta Junction, Alaska, FD 34658, slip op. at 5 (STB served January 5, 2010) (Alaska R.R.).

Under 49 U.S.C. § 10502, the Board must exempt a proposed rail line construction from the detailed application procedures of 49 U.S.C. § 10901 when it finds that: (1) those procedures are not necessary to carry out the rail transportation policy (RTP) of 49 U.S.C. § 10101; and (2) either (a) the proposal is of limited scope, or (b) the full application procedures are not necessary to protect shippers from an abuse of market power. See Alaska Survival v. STB, 705 F.3d 1073, 1082 (9th Cir. 2013).

The NCBRP has three components:

- Segment 1 will construct approximately 4.5 miles of new track from the Columbia Basin Railroad Company, Inc. (CBRW) rail line in the community of Wheeler east of the City of Moses Lake, to CBRW’s rail line just west of a water crossing at Crab Creek.
- Segment 2 will construct approximately 3.1 miles of new track from the existing CBRW rail line to the east side of the GCIA.
- Segment 3 involves acquisition and rehabilitation of approximately 3 miles of CBRW track that will connect Segments 1 and 2.

³ Although the statute does not define the term “public convenience and necessity,” historically a three-part test has been used to evaluate that term: whether an applicant is financially fit to undertake proposed construction and provide the proposed service; whether there is public demand or need for the proposed service; and whether the proposal is in the public interest and will not unduly harm existing services.

The Port proposes to make minor adjustments to the Segment 1 and 2 alignments from what was originally approved by the STB in 2009, to reduce the impact of the rail line construction on existing land uses and to increase the effectiveness of the rail line as a form of transportation. The location of the proposed Project, including the minor adjustments, is shown on Exhibit ES.1. The Port is not proposing to modify Segment 3 from what was originally approved by the STB in 2009; therefore, discussion of Segment 3 in this DSEA is minimal.

Physical Setting of Project Area

The NCBRP is located in central Washington, approximately 8.5 miles north of Interstate 90 in Grant County. The Project extends west from the community of Wheeler to the Crab Creek water crossing, and then north to the GCIA industrial area. The Project lies primarily in the City of Moses Lake, but also includes unincorporated areas of Grant County.

Grant County is the fourth largest county in Washington State in terms of land area, and the City of Moses Lake is the largest city in the county. Agriculture plays a large role in the economy of the area, and the associated food processing industry provides over 40 percent of the county's manufacturing jobs.

The climate in the Project vicinity is semi-arid. Average temperatures range from a low of 23 degrees Fahrenheit in January to a high of 88 degrees Fahrenheit in July. The average total annual precipitation is 7.69 inches and is commonly associated with summer thunderstorms and winter rains and snowfall.

The Project area is situated on the upland Columbia River Plateau, with elevations ranging from 1,050 feet to 1,240 feet above sea level. Crab Creek originates on the northeastern part of the Columbia River Plateau and flows to the Parker Horn arm of Moses Lake and ultimately to the Columbia River. Local topography consists of relatively flat uplands broken by the Crab Creek and Parker Horn drainages, where the topography slopes downward to the creek.

Approved Alignments (2009) and Proposed Modifications (2019)

Segment 1

The Original Alignment for Segment 1 begins at the existing CBRW rail line at the community of Wheeler (east of the City of Moses Lake), proceeds south of Wheeler Road and continues west paralleling Wheeler Road, crosses Wheeler Road diagonally, proceeds northwest to cross Hamilton Road NE, and then proceeds north and west to cross Crab Creek.

The Port is considering one set of modifications for Segment 1, designated as Modification 1B, which is designed to:

- Avoid crossing primary access driveways to several industrial tenants;
- Avoid the Grant County Public Works facility and adjacent buildings;
- Minimize impacts to an irrigation system and cropland;
- Construct a safer, perpendicular rail crossing at Wheeler Road;
- Minimize property take and avoid newly constructed buildings;
- Avoid crossing Hamilton Road NE and construct a safer, perpendicular crossing at Industrial Street;
- Minimize impacts to utilities along Hamilton Road NE; and
- Minimize wetland impacts and avoid rock outcrops.

Modification 1B would also use culverts instead of bridges to cross historic earthen irrigation and drainage ditches at Rocky Coulee Diversion Canal 180+182 (RCD 180+182) and at East Low Lateral Canal 20 (EL 20).

Segment 2

The Original Alignment for Segment 2 begins near the end of the existing CBRW rail line at the southern end of the GCIA, heads east and turns to the northeast to follow the curve of Randolph Road NE, eventually heads north alongside Randolph Road NE, makes a few slight turns as it crosses both Randolph Road NE and Tyndall Road NE, and eventually terminates in the industrial area on the eastern side of the GCIA.

The Port is considering two different modifications for Segment 2, designated as Modification 2B and Modification 2C. The Port proposes to build either Modification 2B or Modification 2C, not both modifications that are analyzed in this DSEA.

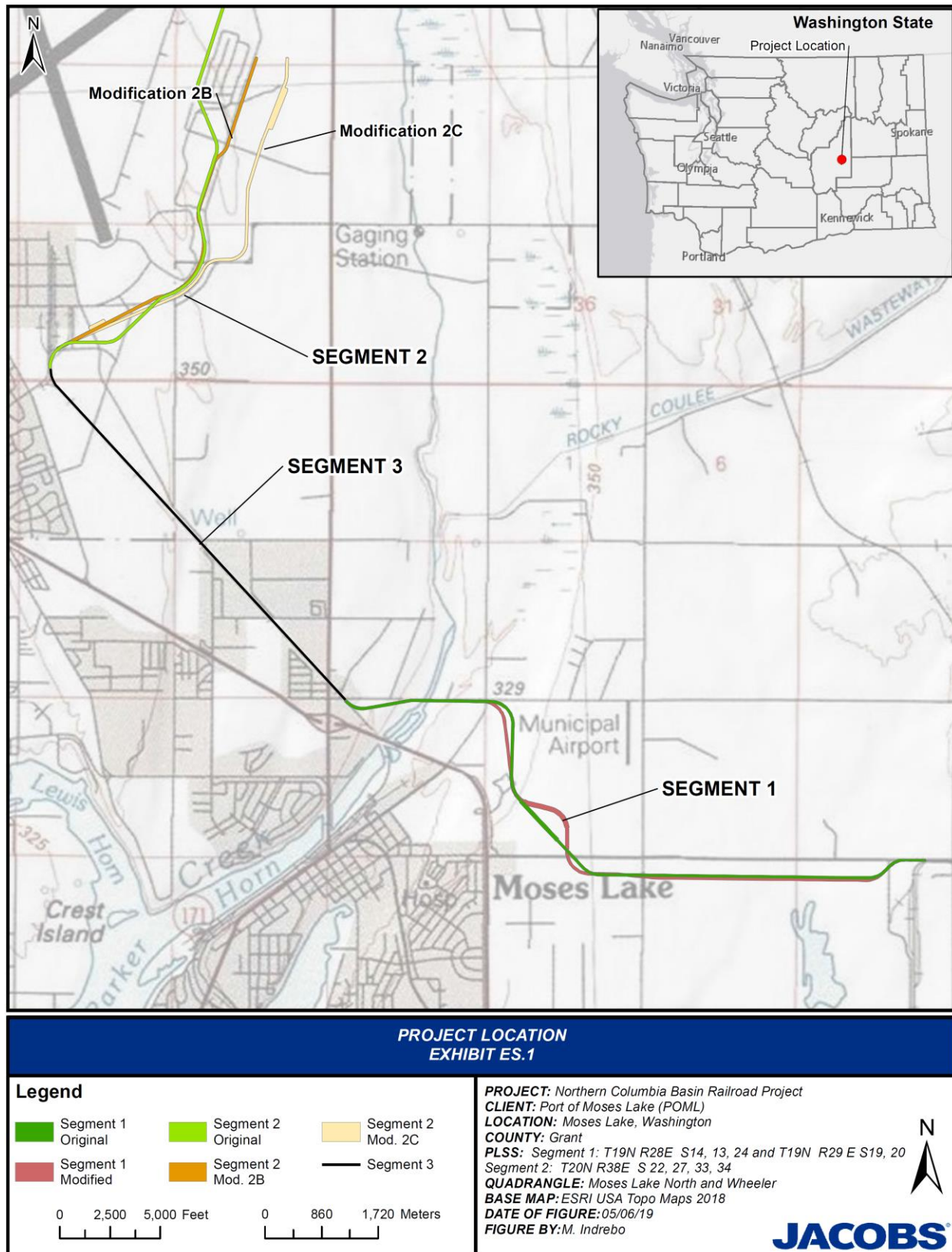
Modification 2B is designed to:

- Straighten a curve and reduce the amount of track construction;
- Better reach existing and future development areas; and
- Avoid a newly constructed building.

Modification 2C is designed to:

- Straighten a curve and reduce the amount of track construction;
- Better reach future development areas;
- Avoid a newly constructed building;
- Avoid crossing Randolph Road and construct safer, perpendicular crossings at lesser-traveled roads;
- Minimize impacts to utilities along Randolph Road; and
- Avoid crossing primary access driveways to several industrial tenants.

Exhibit ES.1: Project Location



Potential Environmental Impacts Resulting from the Proposed Modified Alignment

This DSEA presents the potential environmental impacts that would result from the proposed Modified Alignment as compared to the Original Alignment of the Project authorized by the STB in 2009. As discussed above, the Port's reinitiated design effort for the Project revealed a need to modify aspects of both the Segment 1 and Segment 2 alignments approved by the STB in 2009. This DSEA examines only those impacts arising from the proposed modifications, which are limited adjustments in alignment for Segments 1 and 2, and a change to using culverts instead of bridges to cross two canals within Segment 1. The DSEA does not include a re-evaluation of Project components that are unchanged from those evaluated in the 2008 Preliminary Environmental Assessment (Preliminary EA) and the 2009 Final Environmental Assessment (Final EA) (collectively "Prior EA"), including the potential environmental impacts from the proposed acquisition of Segment 3, and any associated mitigation or conditions imposed in the 2009 Authorization Decision.

Because the proposed modifications to Segments 1 and 2 (Modified Alignment) are limited, the affected environment, impacts, and regulations concerning seven of the thirteen analyzed resources were found to be unchanged by OEA, such that the analysis and description included in the Prior EA and 2009 Authorization Decision are complete and do not require updating.

Chapter 5 contains a more detailed discussion of the potential impacts from the Port's proposed Modified Alignment. OEA and FRA have incorporated mitigation measures that would avoid, reduce, or otherwise mitigate all identified potentially adverse environmental impacts. Mitigation measures are discussed in detail in Chapter 6.

Following is an overview of potential environmental impacts that could result from the proposed Modified Alignment.

Air Quality, Energy, Land Use, Noise and Vibration, Soils and Geology, Visual Quality, and Water Resources

There are no construction process or operational changes, changes to the affected environment, changes to the regulatory environment, or changes to the approved mitigation measures for air quality, energy, land use, noise and vibration, soils and geology, visual quality or water resources since the 2009 Authorization Decision that would impact those resources. Therefore, there are no changes to the minor and/or insignificant impacts to these seven resource areas as analyzed and disclosed in the Prior EA and the 2009 STB Authorization Decision, as summarized below:

- Air Quality – Impacts are not expected to be significant due to a maximum of two trains per day (one round trip), and measures to minimize dust during construction.

- Energy - Impacts are not expected to be significant due to a maximum of two trains per day (one round trip) and a lack of impact to regional energy supplies.
- Land Use – Impacts are not expected to be significant because acquisition of land for the Project ROW would be conducted in conformance with federal law, conversion of land for the Project ROW would be consistent with existing land use plans and policies, and no residences would be affected by land acquisition.
- Noise and Vibration - Impacts are not expected to be significant due to a maximum of two trains per day (one round trip), absence of sensitive receptors within the area of impact, and measures to minimize noise during construction.
- Soils and Geology – Impacts are not expected to be significant due to low potential for soil erosion and a mitigation measure requiring revegetation of disturbed areas following construction.
- Visual Quality – Minimal adverse effects to the visual character of the Project area are expected because construction activities would be localized and temporary, views already include urban, industrial, and transportation elements, and a mitigation measure requiring revegetation of disturbed areas following construction.
- Water Resources – Potential adverse impacts to water quality would be minimized or avoided by mitigation that requires specific design and construction measures for the Crab Creek bridge; implementation of best management practices to control erosion and sedimentation and prevent release of contaminants during Project construction and operation; and coordination with federal, state, and local agencies to obtain all necessary permits for work in and around water resources.

Cultural, Historic, and Archaeological Resources

There are no new or additional cultural, historic, or archaeological resources identified in the Project area since issuance of the 2009 Authorization Decision. However, following issuance of the 2009 Final EA, a Programmatic Agreement (PA) was negotiated and executed in June 2009 by STB, the Washington Department of Archaeology and Historic Preservation (DAHP) (which serves as the State Historic Preservation Office (SHPO)), and the Port, to identify and mitigate effects to cultural and historic sites and structures in accordance with Section 106 of the NHPA and to ensure that archaeological resources and/or historic structures on unevaluated parcels would be assessed prior to initiation of Project construction (2009 PA). The PA included processes for assessing potential effects to any previously unidentified historic properties (under consultation with the affected parties) and an Unanticipated Discovery Plan (UDP). The 2009 PA originally had a term of ten (10) years (until August 27, 2019), but it has been extended in an amendment, executed on July 3, 2019, to remain in effect for ten years after the date of any STB decision authorizing or declining to authorize the proposed modifications to the Project. Given the grant funding from the USDOT, FRA has joined the amended PA as a cooperating agency and signatory. See Appendix A.

Among all properties accessed and surveyed to date, the Columbia Basin East Low Feeder Canals system in Segment 1/Modification 1B remains the only resource identified as eligible for listing in the National Register of Historic Places (NRHP). The Canals system has four features crossed by Segment 1/Modification 1B – RCD 180+182, EL 20, EL20 Extension, and the East Low Canal 20U1 (EL 20U1). Only three of these features--RCD 180+182, EL 20, and EL20U1--are historic properties.

The Section 106 review conducted as part of the Prior EA and 2009 Authorization Decision determined that Project construction and operation would not adversely affect the historic canals, and that bridges spanning RCD 180+182 and EL 20 and a culvert placed in EL 20U1, would have no adverse physical effect on the canals. However, a design change in Modification 1B would replace previously proposed bridges spanning historic canals RCD 180+182 and EL 20 with reverse siphons (a type of culvert). This change required additional study; a field survey of the NRHP-eligible canals was conducted in May 2017 and OEA subsequently consulted with SHPO in 2019 to assess whether there would be an adverse effect from using culverts instead of bridges at the RCD 180+182 and EL20 canal crossings. As a result of these additional efforts, OEA found that the proposed Project would have no adverse effect on historic properties, and SHPO concurred with OEA's finding on June 18, 2019. See Appendix B.

There are no other construction process or operational changes, changes to the regulatory environment for cultural, historic, or archaeological resources, or changes to the mitigation measures (except for revisions and a date extension to the cultural resources PA imposed by the 2009 Authorization Decision) that would impact these resources. Therefore, there are no changes to the insignificant impacts to cultural, historic, or archaeological resources as disclosed in the Prior EA and the 2009 STB Authorization Decision.

Fish, Wildlife, and Vegetation

There are no construction process or operational changes that would affect fish wildlife or vegetation, there are no new vegetation types or habitats, in the Project area since the 2009 Authorization Decision, and there continue to be no federally designated threatened or endangered wildlife species or federally designated critical habitat in the Project area.

However, with one exception, the state-designated protection status of fish and wildlife species in the Project area have either remained the same or have changed to less protective status since 2009. Burrowing owls, Townsend's big-eared bats, northern leopard frogs, and western grebes remain listed by Washington State as candidate or endangered species, and walleye, largemouth and smallmouth bass, and Yuma myotis are no longer state priority species. However, northern leopard frogs and their habitat are no longer present in the Project area, and Clark's grebe is a newly-identified state candidate species near the Crab Creek rail crossing. See Appendix C.

Mitigation measures already imposed by the 2009 Authorization Decision, in addition to revised mitigation measures proposed in this DSEA, would sufficiently mitigate potential impacts to fish, wildlife, and vegetation including Clark's grebe.

Hazardous Materials

Updated environmental regulatory records were obtained from federal, state, local, and tribal databases within one mile of the Segment 1 and Segment 2 Original Alignment and Modified Alignment. Thirteen (13) sites of concern were identified and classified as low, moderate, or high risk. See Appendix D.

Since the 2009 Authorization Decision, several previously identified sites within Segment 2 have changed to lower risks and there are four new sites identified near the Project area; one site is in Segment 1 and three sites are in Segment 2.

The Bernard Cattle Company site (within 100 feet of the Segment 1 Original Alignment where no modification is proposed) has been downgraded from high risk to moderate risk. There are two identified low-risk sites located within 100 feet of the Segment 1 Original Alignment and/or Modification 1B – the Grant County Road District 2 facility previously identified as a moderate-risk site, and a newly identified underground storage tank (UST) site (Francis J Jenny UST).

As with the Segment 2 Original Alignment, Modifications 2B and 2C are located almost entirely within the existing high-risk Moses Lake Wellfield Contamination Superfund Site (Superfund site) at the GCIA. The Superfund site's long-term remedy includes extraction and treatment of contaminated groundwater, excavation of contaminated soil, and land use restrictions. Remedy began by the Port in 2011 and is ongoing. Contaminated groundwater is likely located more than 50 feet below ground surface and would not be disturbed during Project construction.

As with the Segment 2 Original Alignment, Modification 2B is located adjacent to the "3-Place Hangar" and "Paint Hangar Leach Pit" potential source areas associated with the Superfund site and contaminated soil may exist in these areas. Modification 2B is also located adjacent to one newly identified moderate risk site, Moses Lake Industries Inc., where residual contaminated soil may exist.

Modification 2C is located adjacent to one moderate risk site, Grant County Shooting Range, which was identified in the Original Alignment and may contain contaminated soil. Modification 2C is also located within 100 feet of two newly identified sites, the "Dumpster Wash Area" and the "Base Closure Landfill," which could contain contaminated soil.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential risks and adverse impacts associated with encountering, disturbing, handling, disposing, or transporting hazardous materials, and this DSEA proposes to impose these same mitigation measures at the newly identified UST site in Segment 1,

and at the three newly identified sites in Segment 2 associated with Modifications 2B and 2C. Therefore, the mitigation previously disclosed in the Prior EA and the 2009 Authorization Decision, in addition to revised mitigation measures proposed in this DSEA, would sufficiently mitigate potential impacts from hazardous materials.

Section 4(f) Evaluation

The Prior EA did not evaluate potential impacts to properties protected by Section 4(f) of the US Department of Transportation Act because this law is only applicable to USDOT, which did not originally have a role in the Project. Section 4(f) properties are publicly owned public parks, recreation areas and wildlife or waterfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing in the NRHP. Because USDOT/FRA would be providing grant funding for the Project, this DSEA includes a Section 4(f) evaluation. See Appendix E.

Historic canals RCD 180+182, EL 20, and EL 20U1, which contribute to the NRHP-eligible Columbia Basin East Low Feeder Canals system crossed by Modification 1B, are the only Section 4(f) properties associated with the Project. STB determined that the installation of culverts at these canal crossings would result in only minor physical alterations that would not have an adverse effect on the canals and consequently FRA determined, and the SHPO concurred on June 18, 2019 that impacts to historic properties will be *de minimis*.⁴ See Appendix B and Appendix E.

Socioeconomics and Environmental Justice

The population of the City of Moses Lake increased by approximately 30 percent and the median household income increased by 23 percent since the 2009 Final EA. In Grant County, the population has increased by approximately 27 percent and the median household income has increased by 11 percent since the 2009 Final EA.

There has been a slight reduction in poverty levels in the City of Moses Lake and Grant County from 2000 to 2017, while, at the same time, the non-white population has increased by approximately 13 percent in the City of Moses Lake and by approximately 23 percent in Grant County.

There are low-income and minority populations located near in Segment 2. However, there are very few residences in the Segment 2 vicinity and none within 200 feet of the track, air quality or noise impacts would not disproportionately affect these populations, and no residences or businesses would be acquired for the rail line right-of-way.

There are no construction process or operational changes and no changes to mitigation measures relating to socioeconomics and environmental justice proposed under the Modified Alignment. The proposed modifications do not divide or separate any

⁴ For historic properties, a *de minimis* impact determination occurs when FRA determines, with the concurrence of the SHPO, that the project would not result in an adverse effect to historic properties under Section 106.

community or population groups, do not interfere with access to neighborhoods or public services, and do not separate residential areas from retail, service, or employment centers. There would be no significant impacts to local communities during construction, and there would be no significant adverse socioeconomic or community impacts and no disproportionately high or adverse impacts on minority or low-income communities

Therefore, there are no changes to the socioeconomic or community impacts or impacts on minority or low-income populations, as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

Traffic and Transportation

There have been noteworthy changes to existing traffic volumes near Segments 1 and 2 since the Prior EA. In Segment 1, traffic volume on Road L NE has increased approximately 63 percent while traffic volume on Wheeler Road has decreased approximately 12.5 percent. In Segment 2, traffic volumes have increased substantially on both Randolph Road and Tyndall Road NE. Notably, the largest changes have been in Segment 2, with traffic volume increases ranging from approximately 94 percent to nearly 250 percent, which are likely attributable to new industries and expansion of existing industries at the GCIA Employment Center/Port industrial area.

Modification 1B would result in the same temporary and operational traffic delays as the Original Alignment due to the movement of construction equipment on public roads and the construction of new at-grade rail crossings at Road L NE and Wheeler Road. A design change from a diagonal crossing to a perpendicular rail crossing at Wheeler Road would improve vehicular sight distance and driver safety, resulting in a beneficial operational impact.

Modification 2B would also result in the same temporary and operational traffic delays as the Original Alignment due to the movement of construction equipment on public roads and the construction of new at-grade rail crossings. Modification 2B would construct two diagonal crossings at Randolph Road and three additional perpendicular rail crossings at Turner Road, Graham Road and Tyndall Road, respectively. Unlike the Original Alignment, there would be potential for the at-grade rail crossings at Turner, Graham and Randolph Roads to be blocked at the same time due to their proximity (approximately 500 to 1,000 feet apart). However, these would be ungated, at-grade rail crossings and the wait time at each crossing would be under 70 seconds; therefore, this would be an insignificant impact. All at-grade rail crossings would have lights and necessary safety warnings per FRA's design requirements.

Modification 2C would also result in the same temporary and operational traffic delays as the Original Alignment due to the movement of construction equipment on public roads and the construction of at-grade rail crossings at Tyndall Road and Road 7 NE. However, there would be no at-grade rail crossings of Randolph Road, Turner Road or Graham Road, reducing the number of at-grade rail crossings from four to two.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction and operational impacts. This DSEA proposes to impose these same mitigation measures on the Modified Alignment. With the exception of a beneficial impact in Modification 1B associated with redesign to a perpendicular at-grade rail crossing of Wheeler Road and a beneficial impact in Modification 2C associated with a reduced number of at-grade rail crossings, there are no other changes to the impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

Wetlands

There are no wetlands in Segment 2. There are changes to the identified wetlands in Segment 1, changes to wetland delineation and rating methodology, and new wetland mitigation guidance from the U.S. Army Corps of Engineers (USACE) and the Washington State Department of Ecology (Ecology) since the Prior EA and the 2009 Authorization Decision. These changes include an upgraded rating/higher functional value for Wetland C along the east bank of Crab Creek, a newly identified portion of Wetland E along the west bank of Crab Creek, and the disappearance of Wetland D west of Crab Creek. There are no changes to Wetland A or Wetland B, both located east of Crab Creek and north of Wheeler Road. See Appendix F.

Modification 1B would shift the rail line approximately 150 feet to 200 feet westward through Wetland A, limiting the extent of fragmentation and reducing the amount of fill by 1.33 acres. The Port's proposed design refinements at the Crab Creek bridge crossing design would limit the increase of total fill to Wetland C and the newly identified portion of Wetland E to 0.08-acre. Therefore, Modification 1B would result in a net reduction of 1.25 acres of wetland fill.

However, due to changes in Washington state's wetland rating methodology, both Wetlands C and E require slightly more mitigation than was included in the 2009 Authorization Decision. Additionally, USACE's preferred mitigation mechanism is the purchase of mitigation credits at an established wetland mitigation bank rather than the specific types of on-site and/or off-site mitigation outlined in the 2009 Authorization Decision.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction and operational impacts to wetlands. This DSEA proposes to impose applicable STB-approved mitigation measures on the Modified Alignment, along with purchasing wetland mitigation credits at an approved wetland mitigation bank. Once applicable mitigation measures are implemented from the Prior EA, the 2009 Authorization Decision, and those proposed in this DSEA, there would be no significant adverse impacts to wetlands.

Table ES.1: Summary of Resource and Project Changes Since Prior EA

Resource	Segment 1	Segment 2	
	Modification 1B	Modification 2B	Modification 2C
Air Quality	No changes	- New minor to moderate emissions of nitrogen oxide and sulfur dioxide identified - One new minor source of hazardous air pollutants identified	- New minor to moderate emissions of nitrogen oxide and sulfur dioxide identified - One new minor source of hazardous air pollutants identified
Cultural/Historic/Archaeological	Culverts instead of bridges to cross historic canals RCD 180+182 and EL 20	No changes	No changes
Fish/Wildlife/Vegetation	- Walleye, bass, and mink no longer State Priority Species - Bald eagle no longer State threatened species - Burrowing owl no longer Federal species of concern - Townsend's big-eared bat and Yuma myotis no longer Federal species of concern - Clark's grebe new state candidate species - Northern leopard frog and habitat no longer present in Crab Creek area, and no longer a Federal species of concern	- Burrowing owl no longer Federal species of concern - Townsend's big-eared bat and Yuma myotis no longer Federal species of concern	- Burrowing owl no longer Federal species of concern - Townsend's big-eared bat and Yuma myotis no longer Federal species of concern
Energy	No changes	No changes	No changes
Hazardous Materials	- One site downgraded from high risk to moderate risk - One new low-risk site identified	- One new moderate-risk site identified	- Two new low-risk sites identified
Land Use	No changes	No changes	No changes
Section 4(f) Properties	- New analysis (not required in Prior EA) determined <i>de minimis</i> impact to historic canals	- New analysis (not required in Prior EA) found no properties	- New analysis (not required in Prior EA) found no properties
Noise/Vibration	No changes	No changes	No changes
Socioeconomics/Environmental Justice	- 30% population increase in City of Moses Lake; 27% increase in Grant County - 13% increase in non-white population in City of Moses Lake; 23% increase in Grant County - 23% increase in median household income in City of Moses Lake; 11% increase in Grant County		

Table ES.1: Summary of Resource and Project Changes Since Prior EA (Continued)

Resource	Segment 1	Segment 2	
	Modification 1B	Modification 2B	Modification 2C
Soils/Geology	No changes	No changes	No changes
Traffic/Transportation	- Decreased traffic volume on Wheeler Road - Increased traffic volume on Road L NE - Perpendicular at-grade crossing of Wheeler Road (formerly diagonal crossing) - New at-grade crossing at Industrial Street - No at-grade crossing of Hamilton Road NE	- Increased traffic volumes on Randolph and Tyndall Roads - One additional diagonal at-grade crossing at Randolph Road - New perpendicular at-grade crossings of Turner, Graham, and Tyndall Roads	- Increased traffic volumes on Randolph and Tyndall Roads - No crossings at Randolph, Turner or Graham Roads - Perpendicular at-grade crossing at Tyndall Road (formerly diagonal crossing) - New crossing at Road 7 NE
Visual Quality	No changes	No changes	No changes
Water Resources	- Crab Creek no longer impaired by fecal coliform	No changes	No changes
Wetlands	- New wetland rating methodology - Net reduction of 1.25 acres of wetland fill - Higher functional value for Wetland C (east bank of Crab Creek) - Wetland D no longer present (west of Crab Creek) - New portion of Wetland E and higher functional value (west bank of Crab Creek)	No changes	No changes

Request for Comments on the Draft Supplemental EA

A Notice to the public will be published in the Federal Register announcing the availability of the DSEA. OEA and FRA invite comments on all aspects of this DSEA, including suggestions for additional mitigation measures. OEA will consider all comments received in response to the DSEA in making its final recommendations to the STB. The STB will consider the entire environmental record, OEA's final recommendations, including final recommended mitigation measures, and the environmental comments in making its final decision in this proceeding.

All comments must be received by August 12, 2019. Please refer to Docket No. FD 34936 in all correspondence. Comments may be filed electronically on STB's website at www.stb.gov by clicking on the "E-Filing" link. A Login Account is not needed; simply click on "Environmental Comments," which will take you to the comment screen. Type in the docket number "FD 34936" then select "Adam Assenza" in the drop-down list under "attention of." Complete the form by adding your name, address, phone, and e-mail, and click "Submit."

Comments can also be faxed to (202) 245-0454. Please reference the docket number "FD 34936" in your cover sheet or comment. OEA recommends submitting comments electronically to minimize delays in processing, as well as minimize costs to commenters.

Written comments may also be submitted by mail to:

Adam Assenza
Docket No. FD 34936
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

For more information, please contact:

Adam Assenza with STB by calling (202) 245-0301, emailing adam.assenza@stb.gov, or mailing the address above.

Lydia Kachadoorian with FRA by calling (617) 494-3989, by emailing lydia.kachadoorian@dot.gov, or by mail to:

Federal Railroad Administration
Attn: Lydia Kachadoorian
1200 New Jersey Ave, SE
Washington, DC 20590

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Chapter 1 Introduction

The Port is a municipal entity organized under Washington State law for the purpose of economic development. The Port is located in central Washington approximately 100 miles west of Spokane and approximately 180 miles east of Seattle and is governed by a three-member Port Commission and administered by an executive director. Over 3,500 people are employed in 60 industries at the Port.

In 2008, the Port filed a Petition for Exemption seeking the authority of STB to construct approximately 7.6 miles of new rail line in two separate segments and to acquire approximately 3 miles of an existing rail line in a third segment, in a project known as the Northern Columbia Basin Railroad Project.⁵ According to the Port, the NCBRP would provide rail access to land designated for industrial development, enabling existing businesses to access rail service and potentially attracting new rail-dependent businesses. Additionally, according to the Port, by diverting current rail traffic from downtown Moses Lake, the Project would allow that area to be considered for potential waterfront development that may include a park, boardwalk, and a bicycle and pedestrian trail. After environmental review by OEA, the STB authorized construction and acquisition of the rail lines in a decision issued August 27, 2009 in docket numbers FD 34396 and FD 34396 (Sub-No. 1).⁶

STB authorization of the construction and acquisition necessary for the NCBRP coincided with a severe economic downturn which, according to the Port, was one of several factors that delayed the Project and complicated the Port's efforts at securing the financing necessary for the Project. In 2017, the Port was awarded a grant from the USDOT for the Project. In combination with earlier funding sources, the federal funds are enabling the Port to proceed with the Project. To minimize impacts on existing land uses, some of which include land development that has occurred in the Project vicinity since the 2009 Authorization Decision, the Port is requesting that STB authorize certain limited route modifications (the Modified Alignment) so that the Port can fulfill the economic development objectives of the NCBRP.

Given this background, this DSEA will: (1) enable STB to evaluate the potential impacts of the Modified Alignment under NEPA, the NHPA, and other applicable environmental laws; and (2) allow FRA, as administrator of the USDOT grant funds awarded to the

⁵ The Port filed a Petition docketed as Docket No. FD 34396 seeking to construct Segments 1 and 2 and another docketed as Docket No. FD 34396 (Sub-No. 1) to acquire Segment 3. The acquisition has not changed, is not at issue, and is not addressed in this document. The Columbia Basin Railroad Company has indicated that it intends to file a notice of exemption to operate the full line that will be docketed at FD 34936 (Sub-No. 2). The potential environmental effects of construction, acquisition, and operation will have been assessed in the 2008 Preliminary Environmental Assessment (Preliminary EA), the 2009 Final Environmental Assessment (Final EA) (collectively "Prior EA") and this Supplemental EA.

⁶ See 2009 Authorization Decision.

Port, to similarly meet its obligations under NEPA, NHPA, and other applicable environmental laws for the disbursement of federal funding. Information and analysis in this DSEA are based upon Project engineering design plans as of December 2018; design is ongoing.

1.1 The Proposed Action

For the purposes of this DSEA, the proposed action consists of the modifications being made to the rail construction proposal previously authorized by STB in August 2009 in Docket No. FD 34936(the Original Alignment). The Modified Alignment and Original Alignment are shown on Exhibit ES.1. Environmental review of any proposed action includes, among other things, evaluation of the effect of the proposed project on existing land uses. When STB evaluated the Original Alignment in the Prior EA in this docket, only one commercial property needed to be relocated because of the construction.

However, in the ten (10) years since STB's Authorization Decision, land development has occurred within and in the vicinity of the Original Alignment, prompting the Port to request its proposed modifications to the route to avoid relocation of several new commercial enterprises. See Chapter 3. Moreover, new development near the end of Segment 2 also prompted the Port to propose other modifications to ensure that the NCBRP can access the businesses that would make use of rail service, thereby fulfilling one of the objectives of the Project. See Chapter 3.

In conjunction with these modifications, the Port states that additional adjustments would reduce the Project's potential impacts to the environment and to the local community. The Port proposes an adjustment westward to the western end of Segment 1 that would reduce the acreage of wetlands affected. The Port proposes other adjustments to Segment 1 that would enable the rail line to cross local roads at right angles, rather than diagonally, thus improving visibility and increasing safety, and otherwise reducing local impacts. In conjunction with the slight shifts of the Segment 1 right-of-way (ROW), the Port proposes using culverts instead of bridges over two small historic irrigation canals. Lastly, straightening Segment 2 would reduce the land required for the Project. The Modified Alignment is described in more detail in Chapters 2 and 3 below.

1.2 Background/Project History

The Port operates the GCIA and is chartered to foster economic development at GCIA and the surrounding Port district area, which includes the City of Moses Lake. The NCBRP is one of the ways the Port seeks to promote economic development on industrial lands near GCIA and on land zoned for industrial uses along Wheeler Road. Another purpose of the NCBRP is to move rail traffic out of downtown Moses Lake. The NCBRP has three components. Segment 1 involves construction of approximately 4.5 miles of new track from a connection with a rail line of the Columbia Basin Railroad Company, Inc. in the community of Wheeler on the east side of the City of Moses Lake, to a connection with CBRW's rail line just west of the Crab Creek water crossing.

Segment 2 involves construction of approximately 3.1 miles of new track from the existing CBRW line to the eastern side of the GCIA. Segment 3 involves acquisition and rehabilitation of approximately 3 miles of CBRW track that connects Segments 1 and 2. The Port is not proposing to modify Segment 3, therefore discussion of this segment in this DSEA is minimal.

After STB authorization of the NCBRP in August 2009, a severe economic downturn delayed the Port's implementation of the Project and hampered the Port's efforts to obtain funding for the Project. In 2015, the Port received funding from the state of Washington to enable renewed progress on the NCBRP. In fall 2017, the Port was selected to receive a \$9.9 million grant from the USDOT under its FASTLANE program. With this funding, the Port is now able to implement the NCBRP, but a Supplemental EA is warranted for two main reasons.

First, the modifications to the Original Alignment are warranted due primarily to land development that has occurred in the Project area in the 10 years since the 2009 Authorization Decision. The modifications are designed to reduce the impact of the NCBRP on existing land uses and to better enable the Project to serve the businesses that now exist in the Project area. Second, the provision of USDOT FASTLANE grant funding for the Project qualifies as a "major federal action" under NEPA and an "undertaking" pursuant to the NHPA, and the USDOT must conduct the appropriate reviews under federal law.

As mentioned previously, FRA is administering the FASTLANE grant funding awarded to the Port, and discussions between OEA and FRA have resulted in a framework for this DSEA. In particular, OEA and FRA have agreed that a Supplemental EA is appropriate, and that STB would be the lead federal agency for NEPA and NHPA purposes, with FRA acting as a cooperating agency. FRA formally designated STB as lead federal agency in July 2018 for purposes of ensuring compliance with NEPA and Section 106 of the NHPA, a designation that STB accepted shortly thereafter.

1.3 STB, FRA, and WSDOT Roles

1.3.1 Surface Transportation Board

The Interstate Commerce Commission (ICC) Termination Act of 1995 established the STB to assume certain regulatory activities that the ICC had previously administered, particularly those related to the regulation of railroads. STB is a bipartisan, independent adjudicatory body with jurisdiction over transportation matters such as rail line acquisition, rail line construction, and authorization of new common carrier rail operations. STB also has the authority to approve the transactions proposed by the Port as part of the NCBRP, either through application filed under 49 U.S.C. § 10901, or by granting an exemption from the prior approval requirements of the statutory framework under 49 U.S.C. § 10502.

Section 10901(c) is a permissive licensing standard. It directs the Board to grant rail line construction proposals “unless” the Board finds the proposal “inconsistent with the public convenience and necessity.”⁷ Thus, Congress made a presumption that rail construction projects are in the public interest unless shown otherwise. See Mid States, 345 F.3d at 552; Alaska R.R., slip op. at 5.

Under 49 U.S.C. § 10502, the Board must exempt a proposed rail line construction from the detailed application procedures of 49 U.S.C. § 10901 when it finds that: (1) those procedures are not necessary to carry out the rail transportation policy (RTP) of 49 U.S.C. § 10101; and (2) either (a) the proposal is of limited scope, or (b) the full application procedures are not necessary to protect shippers from an abuse of market power.

As explained above, STB is the lead federal agency for the Project and is responsible for ensuring statutory compliance with NEPA. STB’s OEA⁸ is responsible for conducting the environmental review on behalf of STB.

Jacobs Engineering Group Inc. (Jacobs) is a consultant hired by the Port to conduct the environmental review of the proposed alignment modifications and to prepare the DSEA, with oversight and review by STB and FRA.

1.3.2 Federal Railroad Administration

FRA is an agency within USDOT whose regulatory mission is to enable the safe, reliable, and efficient movement of people and goods via rail in the United States. Under delegation from the Secretary of Transportation, FRA primarily engages in safety regulation of rail transportation in the United States. FRA regulatory requirements are found at 49 C.F.R. Parts 200-299.

FRA is administering grant funding awarded to the Port by USDOT pursuant to Section 1105 of the FAST Act. The Port was selected to receive \$9.9 million under the Small Project Fiscal Year 2017 FASTLANE grants, which are authorized by the FAST Act’s Nationally Significant Freight and Highway Projects program. The FASTLANE grant funding is for final design/engineering, construction, and related activities. As a cooperating agency, FRA has assisted in preparation and review of the analyses and documentation in this DSEA.

⁷ Although the statute does not define the term “public convenience and necessity”, historically a three-part test has been used to evaluate that term: whether an applicant is financially fit to undertake proposed construction and provide the proposed service; whether there is public demand or need for the proposed service; and whether the proposal is in the public interest and will not unduly harm existing services.

⁸ Formerly known as the Section of Environmental Analysis (SEA).

1.3.3 Washington State Department of Transportation

The Rail, Freight and Ports Division of the Washington State Department of Transportation (WSDOT) is responsible for managing and directing the state's freight and passenger rail programs, and for working with private and federal railroads to ensure safe, consistent, and efficient rail service across Washington State. Additionally, the Rail, Freight and Ports Division is responsible for environmental compliance for rail projects funded through its office and for projects where WSDOT has been appointed to administer state and federal funding.

WSDOT served as co-lead agency with STB for the Project's Prior EA to ensure statutory compliance with NEPA and the Washington State Environmental Policy Act (SEPA). Besides assisting OEA with preparation of the Prior EA, the Rail, Freight and Ports Division provided technical expertise specific to Washington State, and is currently administering Project funding appropriated by the state legislature. For this DSEA, WSDOT is participating as a consulting agency.

1.4 Environmental Review Process

Pursuant to 49 U.S.C. §§ 10901 and 10502, STB is the federal agency responsible for approving the construction and operation of new rail lines or granting an exemption from the applicable pre-approval requirements. OEA is responsible for ensuring STB's compliance with NEPA, NHPA, and related environmental laws and for preparing this DSEA to identify and evaluate potential environmental impacts. STB consideration of a proposed rail line construction and/or operation project constitutes a "major federal action" for purposes of NEPA and a federal "undertaking" for the purposes of the NHPA.⁹ As noted above, FRA is a cooperating agency in this environmental review process.

1.5 Environmental Review of the Project

In November 2008, OEA and WSDOT prepared a Preliminary EA to ensure that any STB authorization to construct and operate the Original Alignment of the Project complied with statutory NEPA requirements, the Council on Environmental Quality (CEQ) guidelines, STB's environmental regulations, Executive Orders, the statutory requirements of SEPA, WSDOT environmental policy requirements, and other applicable federal and state rules and regulations.

The Preliminary EA analyzed a Build Alternative and a No Build Alternative in depth, along with two alternative water crossings (Parker Horn and Crab Creek) in Segment 1, and two alternative routes in Segment 2. Two additional alternatives were discussed

⁹ See e.g., 42 U.S.C. § 4332(2)(C) (NEPA) and 54 U.S.C. §§ 300320(3) and 306108 (NHPA).

but rejected primarily because they did not meet the purpose and need of the Project.¹⁰ The Preliminary EA was made available to federal and state agencies, Tribes, the public, and other interested parties for a 30-day public comment period. A total of 29 comments were filed by federal and state agencies and other interested parties.

The Final EA, issued in May 2009, responded to comments on the Preliminary EA; developed and analyzed five additional alternatives for Segment 1, including one alignment modification (Ecology Modification); corrected or added to information in the Preliminary EA; modified 10 of 57 mitigation measures contained in the Preliminary EA; and recommended one new mitigation measure. The additional Segment 1 alternatives in the 2009 Final EA, except for the Ecology Modification, were rejected as not meeting the Project purpose and need or were determined to be unfeasible due to economic, technical, or constructability issues. An environmentally preferred alternative was selected in the 2009 Final EA that included the Segment 1 Alternative 1A crossing of Crab Creek and the option to use the Ecology Modification, the standard version of Segment 2 without Alternative 2A, and the acquisition and rehabilitation of Segment 3.¹¹ OEA and WSDOT concluded that preparation of an Environmental Impact Statement (EIS) was unnecessary because there would not be significant environmental impacts if the STB imposed the 2009 Final EA mitigation measures on the Port.¹²

Following issuance of the 2009 Final EA, a Programmatic Agreement (PA) was negotiated and executed in June 2009 by OEA, the Washington State Department of Archaeology and Historic Preservation (DAHP or State Historic Preservation Office (SHPO)), and the Port, to identify and mitigate historic sites and structures in accordance with Section 106 of the NHPA. WSDOT and CBRW were consulting parties to the PA.

In August 2009, STB issued a final decision: (1) granting the construction and acquisition exemptions, subject to the final mitigation measures set forth in Appendix A to the decision; and (2) specifically authorizing construction of Segment 1 with Alternative 1A (with or without the Ecology Modification), construction of Segment 2 (without Alternative 2A), and acquisition of Segment 3.¹³ STB imposed compliance with terms of the PA as a condition of the 2009 Authorization Decision.

The PA originally had a term of ten (10) years (until August 27, 2019), but it has been extended in an amendment to remain in effect for ten years after the date of any STB decision authorizing or declining to authorize the proposed modifications to the

¹⁰ See Preliminary Environmental Assessment, FD 34936, Northern Columbia Basin Railroad Project, at pages ES-3 and ES-5 (Nov. 7, 2008) (Preliminary EA).

¹¹ See e.g., 2009 Authorization Decision, slip op. at 5-7. See also Final Environmental Assessment, FD 34936, Northern Columbia Basin Railroad Project, at pages ES-5 and ES-9 (May 8, 2009) (2009 Final EA) (showing maps of the various alternatives).

¹² 2009 Final EA, at page ES-2. See also 2009 Authorization Decision, slip op. at 6-7.

¹³ See 2009 Authorization Decision, slip op. at 4-7. The STB adopted the environmental preferred alternative described in the 2009 Final EA. See id. at 6-7.

Project.¹⁴ Given USDOT’s award of FASTLANE grant funding for the Project, as well as the directive for federal agencies to coordinate their environmental review, FRA has joined the PA as a cooperating agency and signatory. See Appendix A. As described above, the Project has been awarded federal funding through the FASTLANE program, and the Port has proposed the Modified Alignment to minimize impacts to the built and natural environment and to better fulfill the Project purpose. Considering the FASTLANE grant and the proposed Project modifications described herein, the Port consulted with representatives of STB, FRA, and WSDOT, and all agreed that preparation of a Supplemental EA was appropriate in this case under regulations of the CEQ at 40 C.F.R. § 1502.9(c) and STB’s regulations at 49 C.F.R. § 1105.10(b).

On November 2, 2018, the Port filed a Petition to Re-Open the STB proceeding in Docket No. FD 34936. To ensure STB compliance with NEPA for the proposed modifications, OEA prepared this DSEA to address the changes in the Project since the Board issued its 2009 Authorization Decision.

1.6 Scope and Content of Draft Supplemental EA

This DSEA examines the potential environmental impacts of the Modified Alignment compared to the Original Alignment of the Project authorized by STB. As discussed above, the Project’s reinitiated design effort revealed a need to modify aspects of both the Segment 1 and Segment 2 alignments approved by STB in 2009. The scope of this DSEA focuses only on those impacts arising from the proposed modifications, which are limited adjustments to the alignment for Segments 1 and 2. The DSEA does not include a re-evaluation of Project components that are unchanged from those evaluated in the Prior EA.

The DSEA contains the following chapters:

- Chapter 1 reviews the background and introduces the content of the DSEA.
- Chapter 2 presents the overall purpose and need for the Project and proposed modifications.
- Chapter 3 provides detailed descriptions and maps of the proposed modifications.
- Chapter 4 describes the affected environment organized by resource area. Conditions existing at the time of the Prior EA are summarized under “Prior Study Area” for each resource. Changes to prior environmental conditions associated with the proposed Modified Alignment, and/or changes to environmental regulatory requirements, are summarized under “Additional Study Area” for each resource.

¹⁴ See Appendix A. See also 2009 Programmatic Agreement at Sections VII and X.

- Chapter 5 analyzes potential impacts to each resource area that could result from the proposed modifications.
- Chapter 6 describes previously approved environmental mitigation measures and recommends additional and/or revised mitigation measures that would apply to the proposed modifications.
- Chapter 7 provides preliminary conclusions about whether the proposed modifications would or would not significantly affect the quality of the natural or human environment.

In addition, this DSEA provides a Section 4(f) evaluation, as requested by FRA.¹⁵

Availability of the DSEA

OEA has provided copies of this DSEA to the parties of record for this proceeding and to the environmental distribution list for the Prior EA, as well as to appropriate government agencies and the public. In addition, as part of the tribal consultation required under Section 106 of the NHPA, all Native American tribes that may have ancestral connections to the Project area are being provided copies of this DSEA.

This DSEA is available for review at the STB's website and can be accessed by clicking "Decisions" under "Quick Links" on the STB home page and then selecting "search by parameters, and searching for Docket No. "FD 34936." It is also available for review at the City of Moses Lake Public Library and at the Port of Moses Lake office.

A Notice of Availability of the DSEA was published in the Federal Register on July 11, 2019.

1.7 Request for Comments on the Draft Supplemental EA

OEA invites comments on all aspects of this DSEA, including suggestions for additional mitigation measures. After the close of the comment period, OEA and FRA will prepare a Final Supplemental EA in response to comments on the DSEA. The Final Supplemental EA will also set forth final environmental mitigation recommendations. The Board will then consider the entire environmental record and the record on the transportation merits in making its final decision in this case. FRA will separately

¹⁵ Section 4(f) stipulates that USDOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent avoidance alternative to the use of land, the action includes all possible planning to minimize harm to the property resulting from such use, or the use of the property will have a *de minimis* impact (USDOT 2019). While FRA is a USDOT agency, STB is not and, thus, Section 4(f) does not apply to the Board.

consider the entire environmental record and may, if appropriate, issue a Finding of No Significant Impact (FONSI). The Port will not be able to begin construction of the Project as modified until the Board issues a decision authorizing the proposal and the decision has become effective and, if using FRA funding, FRA has completed its environmental review process and notified the Port that it may proceed under the terms of the 2017 FASTLANE grant.

All comments must be received by August 12, 2019 and must reference Docket No. FD 34936. Please send written comments to:

Adam Assenza
Docket No. FD 34936
Surface Transportation Board
395 E Street, SW
Washington, DC 20423-0001

Comments may also be filed electronically on the STB's website at www.stb.gov by clicking on the "E-Filing" link/tab at the top of the page, and then clicking on the "Environmental Comments" link, which will take you to the comment screen.

You can also access the comment screen directly at: www.stb.gov/Ect1/ecorrespondence.nsf/incoming?OpenForm. Type in the Docket number "FD 34936" then select "Adam Assenza" in the drop down list under "attention of." Complete the form by adding your name, address, phone, email, and comments and click "Submit."

For more information, please contact:

Adam Assenza with STB by calling (202) 245-0301, emailing adam.assenza@stb.gov, or mailing the address above.

Lydia Kachadoorian with FRA by calling (617) 494-3989, by emailing lydia.kachadoorian@dot.gov, or by mail to:

Federal Railroad Administration
Attn: Lydia Kachadoorian
1200 New Jersey Ave, SE
Washington, DC 20590

Chapter 2 Purpose and Need

2.1 NCBR Project Purpose and Need

The Project purpose is to provide rail service to lands designated for industrial development in the northern part of the City of Moses Lake and east of the GCIA, to enhance opportunities for economic development, and to attract new, rail-dependent businesses to those areas. The Project purpose and need has not changed since the 2009 Authorization Decision, in which the Board stated the Port's position that "the Project will allow trains to bypass downtown Moses Lake, leaving that area available for possible future development as a waterfront park, boardwalk, and bicycle/pedestrian trail." The Project will also provide rail service to land and properties designated for industrial development, which will enhance opportunities for economic development and attract new rail-dependent business to the area.¹⁶ According to the Prior EA and depending on the demand for rail service, rail traffic would increase as needed from an estimated demand of one train per month (or less) up to a reasonably foreseeable future maximum demand of two trains per day (one round trip), 365 days per year. Projections are that each train could consist of approximately ten (10) cars.

According to the Port, the Project would restore vital rail service to the City of Moses Lake and adjacent to the GCIA and allow rail traffic to and from the GCIA industrial area to avoid passing through downtown Moses Lake. According to the Port, the Project would eliminate a major impediment to retaining and attracting new industries by providing a cost-effective rail connection to the BNSF Railway Company mainline (via the CBRW track) for existing businesses, agricultural producers, and new industries to ship to and from Pacific Northwest ports and the Midwest.

Under CEQ regulations implementing NEPA, specifically 40 C.F.R. § 1508.9(b), an agency's environmental analysis shall include a brief discussion of the proposed project's purpose and need. OEA notes that the analysis of a project's purpose and need depends on the type of federal action that is involved in the particular project. Here, the proposed action involves an application by the Port for a license or approval. The proposed Project is not a federal government-sponsored project, and, therefore, the Project's purpose and need should be defined by the applicant's goals, in conjunction with the lead agency's enabling statute as discussed in Sections 1.3.1 and 1.4. See Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 196 (D.C. Cir. 1991); Alaska Survival, 705 F.3d at 1084-85; and Nat'l Parks and Conservation Assoc. v. BLM, 606 F.3d 1058, 1070 (9th Cir. 2009). The applicable statute, 49 U.S.C. § 10901(c), is a permissive licensing standard that directs the Board to grant rail line construction proposals "unless" it finds the proposal "inconsistent with the public convenience and necessity." Thus, Congress has established a presumption that rail construction projects are in the public interest unless shown otherwise. See Mid States, 345 F.3d at 552; Alaska R.R., slip op. at 5.

¹⁶ See 2009 Authorization Decision, slip op. at 2.

Under 49 U.S.C. § 10502, the Board must exempt a proposed rail line construction from the detailed application procedures of 49 U.S.C. § 10901 when it finds that: (1) those procedures are not necessary to carry out the rail transportation policy of 49 U.S.C. § 10101; and (2) either (a) the proposal is of limited scope, or (b) the full application procedures are not necessary to protect shippers from an abuse of market power. See Alaska Survival, 705 F.3d at 1082.

2.2 Need for Proposed Alignment Modifications

The Port proposes to make minor adjustments to the Segment 1 and 2 Original Alignment to reduce the impact of the rail line construction and to increase the effectiveness of the rail line as a form of transportation. As originally proposed and approved, the entire route was approximately 11 miles long. The alignment modifications proposed in this DSEA would reduce the route length by approximately 0.5-miles. No changes are proposed to the Segment 3 Original Alignment. Exhibit ES.1 shows the general vicinity of the Project and the Segments. The Modified Alignment is described below.

2.3 Segment 1

The Port is considering one set of modifications for Segment 1, designated as Modification 1B.

Modification 1B is designed to:

- Avoid crossing primary access driveways to several industrial tenants;
- Avoid the Grant County Public Works facility and adjacent buildings;
- Minimize impacts to an irrigation system and cropland;
- Construct a safer, perpendicular rail crossing at Wheeler Road;
- Minimize property needed and to avoid newly constructed buildings;
- Avoid crossing Hamilton Road NE and to construct a safer, perpendicular crossing at Industrial Street;
- Minimize impacts to utilities along Hamilton Road NE; and
- Minimize wetland impacts and avoid rock outcrops.

2.4 Segment 2

The Port is considering two different modifications for Segment 2, designated as Modification 2B and Modification 2C. The Port proposes to build either Modification 2B or Modification 2C for the Project, not both modifications that are reviewed in this DSEA.

Modification 2B is designed to:

- Straighten a curve and reduce the amount of track construction;
- Better reach existing and future development areas; and
- Avoid a newly constructed building.

Modification 2C is designed to:

- Straighten a curve and reduce the amount of track construction;
- Better reach future development areas;
- Avoid a newly constructed building;
- Avoid crossing Randolph Road and to construct safer, perpendicular crossings at lesser-traveled roads;
- Minimize impacts to utilities along Randolph Road; and
- Avoid crossing primary access driveways to several industrial tenants.

Chapter 3 Proposed Action

3.1 Segment 1 Approved Alignment

As shown in Exhibit 3.1, the approved Original Alignment for Segment 1 begins at the existing CBRW rail line¹⁷ at the community of Wheeler (east of the City of Moses Lake), proceeds south of Wheeler Road and continues west paralleling Wheeler Road, crosses Wheeler Road diagonally and proceeds northwest to cross Hamilton Road NE, and proceeds north and west (without the 2009 Ecology Modification) to cross Crab Creek.

3.2 Segment 1 Proposed Alignment Modifications

The Port proposes the following modifications to the approved Segment 1 Original Alignment:

1. Redesign a curve and industrial and other driveway crossings at the beginning/east end to accommodate the existing topography;
2. Shift the rail line approximately 86 feet southward at the eastern end, south of/along Wheeler Road, to avoid the Grant County Public Works facility, a buried gas line, and three buildings;
3. Shift the rail line slightly to the north near EL 20, south of Wheeler Road, to avoid an irrigation pivot and to maximize cropland usability;
4. Add a new curve south of Wheeler Road to make a safer, perpendicular rail crossing at Wheeler Road, and to minimize property needed along the frontage of Wheeler Road;
5. Add a new curve north of Wheeler Road to cross Industrial Street, rather than Hamilton Road NE, to avoid removal of a newly constructed building and impacts to utilities in Hamilton Road NE (Hamilton Road NE and Industrial Street did not exist when the Project was originally designed);
6. Extend Silva Street south to Wheeler Road to maintain access to industrial properties and to provide a utility corridor that would be cut-off with the proposed new crossing of Industrial Street; and
7. Deviate the rail line slightly to the west between Hamilton Road NE and Broadway Avenue to minimize impacts to a wetland, avoid rock outcrops, and enable the rail line to better follow existing topography.

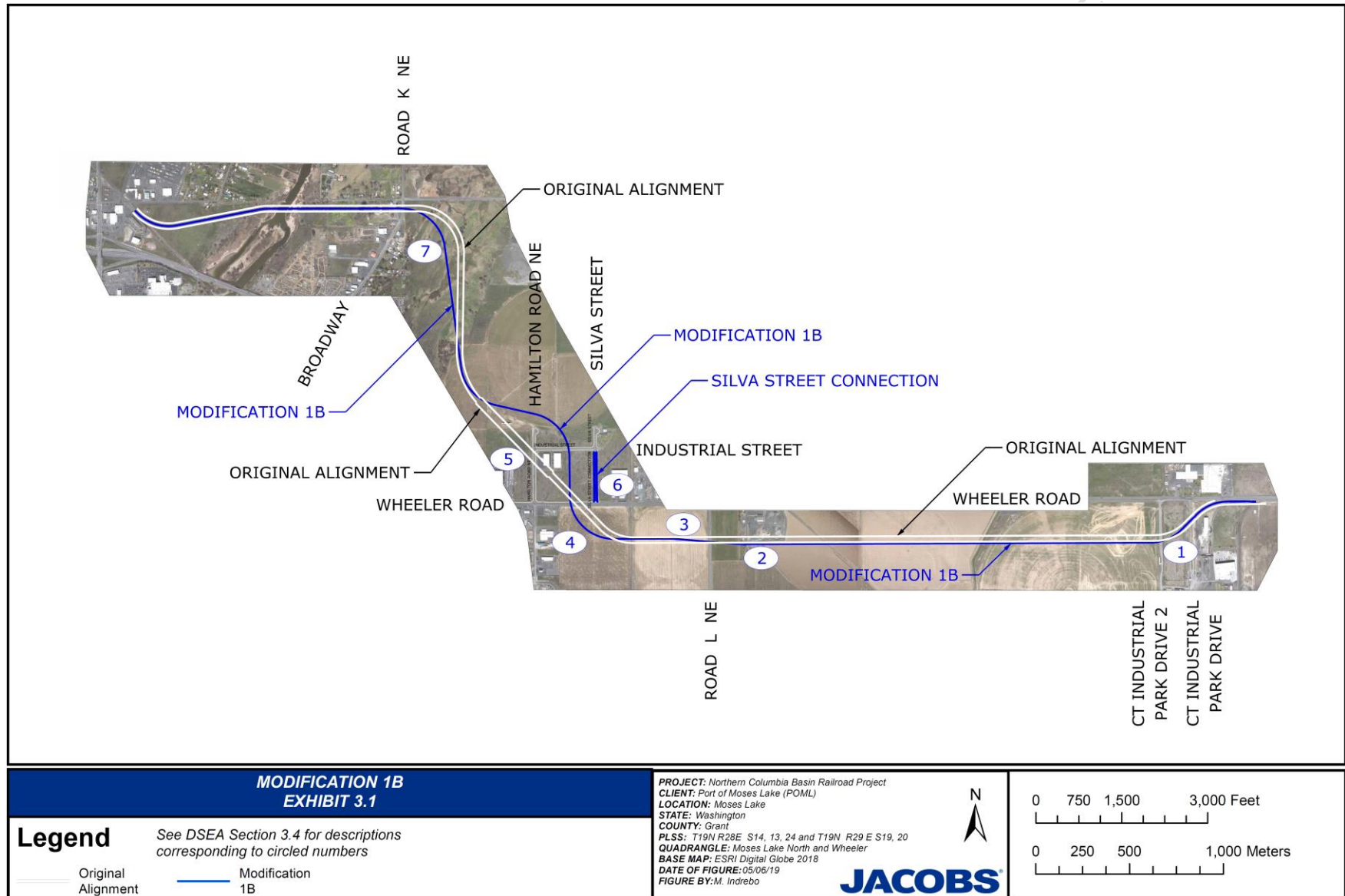
¹⁷ The Port received authorization from STB in FD 34936 (Sub-No. 1) to acquire a section of the CBRW line further to the west, which is known as Segment 3. Segment 3 is located between and used to connect Segment 1 to Segment 2.

Additionally, the Port proposes to use culverts instead of bridges for the Segment 1 crossings of historic, earthen irrigation and drainage ditches at RCD 180+182 and EL 20.¹⁸

Exhibit 3.1 illustrates the Segment 1 previously approved Original Alignment (white line), and the proposed alignment modification (blue line) including the numbers corresponding to the above descriptions.

¹⁸ See Preliminary EA, at page 5-5. Crossings were generally mentioned in the 2009 Authorization Decision, slip op at 19. See also 2009 Final EA, at pages ES-20 and 5-16.

Exhibit 3.1: Modification 1B



3.3 Segment 2 Approved Alignment

As shown in Exhibit 3.2, the approved Original Alignment for Segment 2 begins near the end of the existing CBRW rail line at the southern end of the GCIA. The Port received authorization from STB in FD 34936 (Sub-No. 1) to acquire this portion of the CBRW line, which is known as Segment 3 of the Project. The approved Segment 2 Original Alignment heads east from the end of the existing CBRW line south of the Port's office, turns northeast to follow the curve of Randolph Road NE, eventually heading north alongside Randolph Road NE. The Segment 2 Original Alignment then makes a few slight turns as it crosses both Randolph Road NE and Tyndall Road NE, eventually terminating in the industrial area on the eastern side of the GCIA.

3.4 Segment 2 Proposed Alignment Modifications

As stated earlier, when the Port determined that development, such as construction of new buildings, and other changes to the Project area had occurred over the past decade, the Port reinitiated design for the affected area and identified additional modifications to the Original Alignment that would reduce environmental impacts and improve the engineering efficiency of the Project. The Port proposes the following two alternative modifications to the approved Segment 2 Original Alignment:

Modification 2B

1. Remove a curve and straighten the alignment at the beginning/south end, immediately northeast of the connection with the existing CBRW rail line, to reduce the length of track construction by approximately 2,700 feet;
2. Shift the alignment east at the north end to better reach existing and future development areas and to accommodate emerging rail shipping needs; and
3. Adjust the starting point for the north-end easterly shift to avoid a newly constructed building.

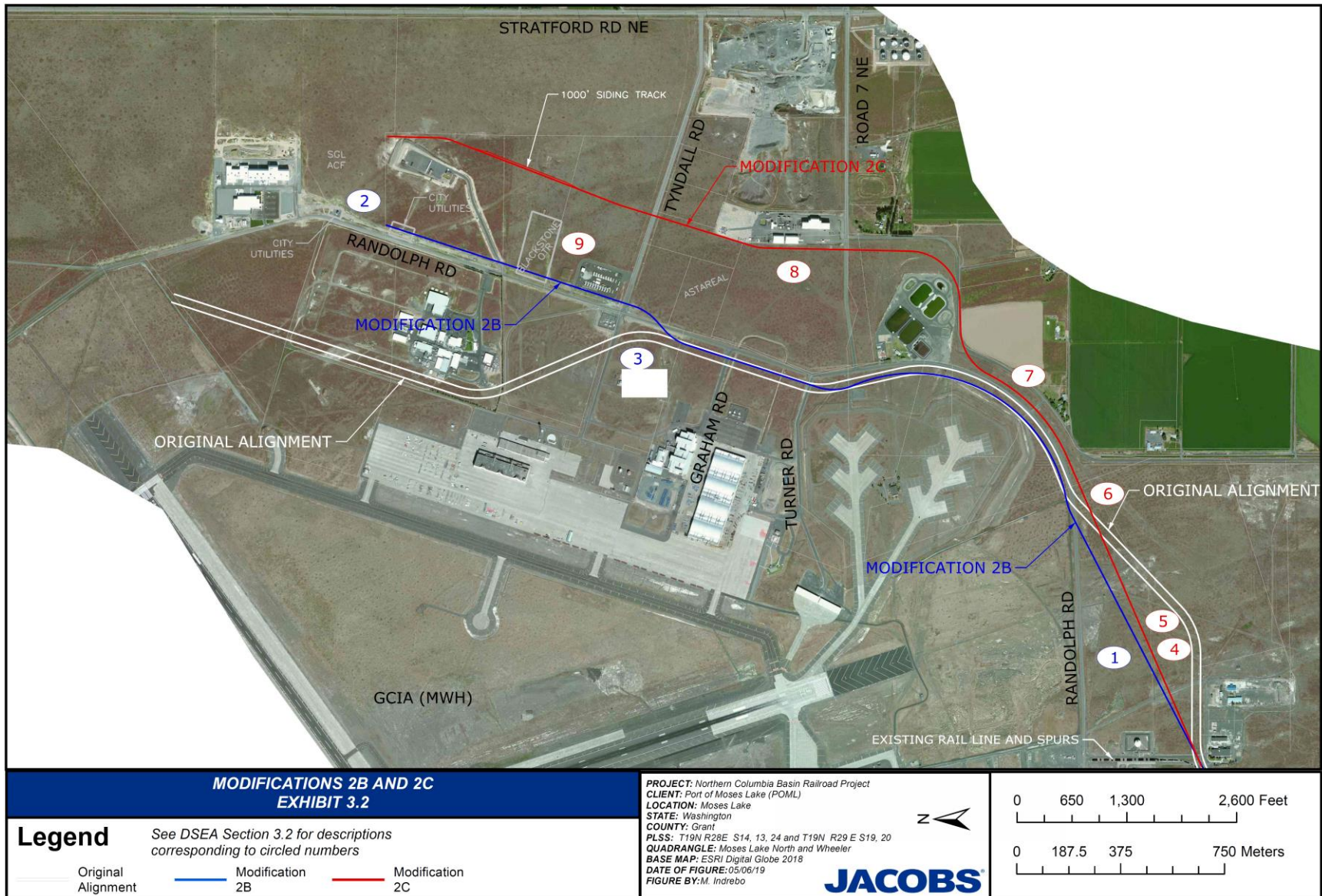
Modification 2C

4. Remove a curve and straighten the alignment at the beginning/south end immediately northeast of the connection with the existing CBRW rail line;
5. Reduce the length of track construction by approximately 2,000 feet;
6. Eliminate rail crossings of Randolph Road immediately south of and within the GCIA industrial area;
7. Shift the alignment further east and away from Randolph Road to minimize conflicts with utilities (storm drain, sewer, power, natural gas) that emanate from and/or parallel the road;

8. Continue north with the eastern alignment shift, bisecting undeveloped portions of existing industrial parcels to allow for future spur sidings and turnouts that would avoid existing buildings and serve both existing and future industrial tenants; and
9. Avoid crossing primary access driveways to existing industrial tenants along Randolph Road and substantially reduce the amount of grading.

Exhibit 3.2 illustrates the Segment 2 approved Original Alignment (white line), Modification 2B (blue line), and Modification 2C (red line), including the numbers corresponding to the above descriptions.

Exhibit 3.2: Modifications 2B and 2C



Chapter 4 Affected Environment

This chapter provides an overview of the existing environment in the Project corridor and surrounding area and compares prior study areas for each resource associated with Segment 1 and Segment 2 to the additional study areas for each resource associated with the proposed modifications for Segment 1 and Segment 2. The Port is not proposing to modify Segment 3; therefore, discussion of the affected environment for Segment 3 is minimal.¹⁹

OEA has reviewed the prior study areas for each resource to determine whether: (1) the proposed modifications extend outside of the Prior EA study areas; (2) baseline conditions have changed since the Prior EA; and (3) if applicable environmental requirements have changed. In addition, the Port's contractor, Jacobs, completed field work for new study areas related to the proposed modifications in September and December of 2018. They also completed field work in May and June 2017 to update wetland delineations and to assess a proposed design revision at two historic canal crossings in Segment 1.²⁰

4.1 Physical Setting of Project Area

The NCBRP is in central Washington, approximately 8.5 miles north of Interstate 90 in Grant County. The Project extends west from the community of Wheeler (east end of the rail corridor) to the Crab Creek water crossing, and then north to GCIA (north end of the rail corridor) and lies partially in the City of Moses Lake and partially in unincorporated areas of Grant County.

Grant County is the fourth largest county in Washington State in terms of land area, and Moses Lake is the largest city in the county. Agriculture plays a significant role in the economy of the area, which is known for its tree fruits, irrigated farming of a variety of crops, and the associated food processing industry that provides approximately 43 percent of the manufacturing jobs in the county. In 2012, Grant County registered the highest volume of agricultural sales in all of Washington's 39 counties (WESD 2018).

The climate in the Project vicinity is semi-arid. Average temperatures range from a low of 23 degrees Fahrenheit in January to a high of 88 degrees Fahrenheit in July. The average total annual precipitation is 7.69 inches (Jacobs 2017a). The Project area is situated on the upland Columbia River Plateau, with elevations ranging from 1,050 feet to 1,240 feet above sea level and is in Water Resource Inventory Area (WRIA) 41-Lower Crab.²¹

¹⁹ Any potential environmental impacts associated with Segment 3 discussed in the Prior EA will be incorporated by reference in this document.

²⁰ Jacobs' field staff included biologists, archaeologists, and an architectural historian.

²¹ The State of Washington is divided into 62 different Water Resource Inventory Areas (WRIAs), which are designations utilized to facilitate implementation of the state's Watershed Planning Act and overall management of water resources.

Crab Creek originates on the northeastern part of the Columbia River Plateau and flows to the Parker Horn arm of Moses Lake and ultimately to the Columbia River. Local topography consists of relatively flat uplands broken by the Crab Creek and Parker Horn drainages, where the topography slopes downward to the creek (Jacobs 2017a).

4.2 Prior Study Areas and Additional Study Areas Resulting from Proposed Project Modifications

Various technical memoranda and reports were prepared by the Port's previous contractor, HDR, Inc., to support the Project's Prior EA, encompassing rail Segments 1, 2, and 3. Depending on the technical discipline, prior study areas ranged from 50 feet on either side of the proposed rail corridor centerline to a one-mile radius around the Project area. Resources studied include air quality, cultural resources, fish/wildlife/vegetation, energy, hazardous materials, land use, noise/vibration, socioeconomic/environmental justice, soils/geology, traffic/transportation, visual quality, water resources, wetlands, and cumulative effects.

The rest of this chapter summarizes the affected environment for each resource as described in the Prior EA (prior study area) followed by a description of the affected environment for each resource associated with the proposed Modified Alignment (additional study area). The Port is not proposing to modify Segment 3; therefore, discussion of the affected environment for this segment is minimal.

4.2.1 Air Quality

Prior Study Area

The prior air quality study area included all areas within 0.25-mile of the Original Alignment rail corridor centerline. The study area was determined based on an assessment of the Project area, existing emission sources in the area, the air quality of the area, and environmental review of similar rail projects. The analysis included evaluation of existing emission sources, potential emissions from the Project, and the presence of potentially sensitive receptor populations.²²

Air pollutants noted included windblown dust and particulates from exposed agricultural soil, and emissions from agricultural equipment, traffic on nearby roads, and occasional locomotives on the existing rail corridor. Emission levels from these sources, as well as from a few industrial operations in the Project vicinity, were low. As of 2007, Grant County was in attainment for the six criteria pollutants (sulfur dioxide, carbon monoxide, nitrogen oxide, lead, ozone, and particulate matter) of the National Ambient Air Quality

²² Sensitive receptors include members of the population who are most sensitive to adverse health effects of air pollution, such as children, the elderly, and the chronically ill. Commonly identified sensitive land uses include residences, schools, retirement homes and hospitals (STB 2008).

Standards (NAAQS) established by the U.S. Environmental Protection Agency (USEPA).

One sensitive receptor existed within Segment 1– the Millerville neighborhood just west of Crab Creek, with a few residences located within 500 feet of the proposed railroad track.

Additional Study Area – Proposed Modifications

Consistent with the prior methodology, the additional study area includes all areas within 0.25-mile of the rail corridor centerline, as modified. There are no new sensitive receptors within the additional study area.

Newly identified air pollutants include minor to moderate emissions of nitrogen oxide and sulfur dioxide due to fuel combustion associated with aircraft operations and related non-aircraft operations at the GCIA in Segment 2 (POML 2015). Four facilities (TK Holdings, Inc., Moses Lake Industries Inc., Terex-Genie Industries, and SGL Automotive Carbon Fibers) operate within the additional study area for Segment 2 and are minor sources²³ of toxic air pollutants (POML 2015). REC Silicon, a major source industrial facility²⁴ that smelts and refines non-ferrous metals to produce polysilicon for solar cells, is located immediately north of the additional study area at the far east end of Segment 1 (POML 2015). REC expanded its plant in 2006-2008; however, it reduced production capacity by 75 percent in 2018 due to Chinese tariffs on polysilicon materials (iFiber One News 2018).

Grant County remains in attainment for the six NAAQS criteria pollutants (USEPA 2018). There are no changes to the regulatory environment relating to air quality that affect the additional study area.

4.2.2 Cultural, Historic, and Archaeological Resources

Prior Study Area

The prior study area for cultural resources, or “Area of Potential Effects” (APE), encompassed a 200-acre area extending 50 feet on either side of the Original Alignment rail corridor centerline. Analysis of indirect effects to historic properties, such as noise, vibration, and visual impacts, were considered within this 100-foot-wide corridor (WSDOT 2008a).

²³ Minor sources emit less than 10 tons per year of any hazardous air pollutant or less than 25 tons per year of any combination of hazardous air pollutants.

²⁴ A major source industrial facility has the potential to emit, considering controls, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

Analysis identified no prehistoric archaeological sites or traditional cultural properties within the APE. Of 22 identified potential historic resources older than 50 years of age, only one of these, the Columbia Basin East Low Feeder Canals system, was recommended eligible for listing in the National Register of Historic Places (NRHP) as part of the original environmental review for this Project. Four features of the canal system are located within the APE in Segment 1: East Low Canal Lateral 20 (EL 20), East Low Canal 20U1 (EL 20U1), Rocky Coulee Diversion Drain Canal 180+182 (RCD 180+182), and EL20 Extension. RCD 180+182, EL 20, and EL 20U1 were recommended eligible for listing in the NRHP as contributing features of the Columbia Basin East Low Feeder Canals system. However, EL20 Extension was recommended non-contributing and is not recommended NRHP-eligible (WSDOT 2008a; STB 2008; Jacobs 2019a).

Additional Study Area – Proposed Modifications

Generally, the APE for the proposed Modified Alignment is 100-feet-wide (50 feet on either side of the proposed track centerline, as modified). However, the APE for Segment 1 is expanded at certain locations, ranging from 90 feet to 120 feet on either side of the modified track centerline, to accommodate construction, staging, and/or laydown areas. Likewise, the APE for Segment 2 has been expanded to review two alternative modifications to the Original Alignment, and ranges from 100 feet wide to approximately 325 feet wide, including a staging area at the north end of the alignment (see Exhibits 4.1 and 4.2). STB OEA, FRA, and DAHP (SHPO) approved the new APE in August and November 2018.²⁵

There are no new or additional cultural, historic, or archaeological resources identified within the new APE (Jacobs 2019a). Instead of constructing bridges to span two of the previously-identified historic canals (RCD 180+182 and EL 20), as analyzed in the Prior EA, the Port is proposing a design change under Modification 1B that would replace those bridges with reverse siphons (a type of culvert). See Appendix B.

²⁵ SHPO approved the first APE revision by OEA on August 22, 2018, and the second APE revision on November 6, 2018. See Appendix B

Exhibit 4.1: Segment 1 APE Overview

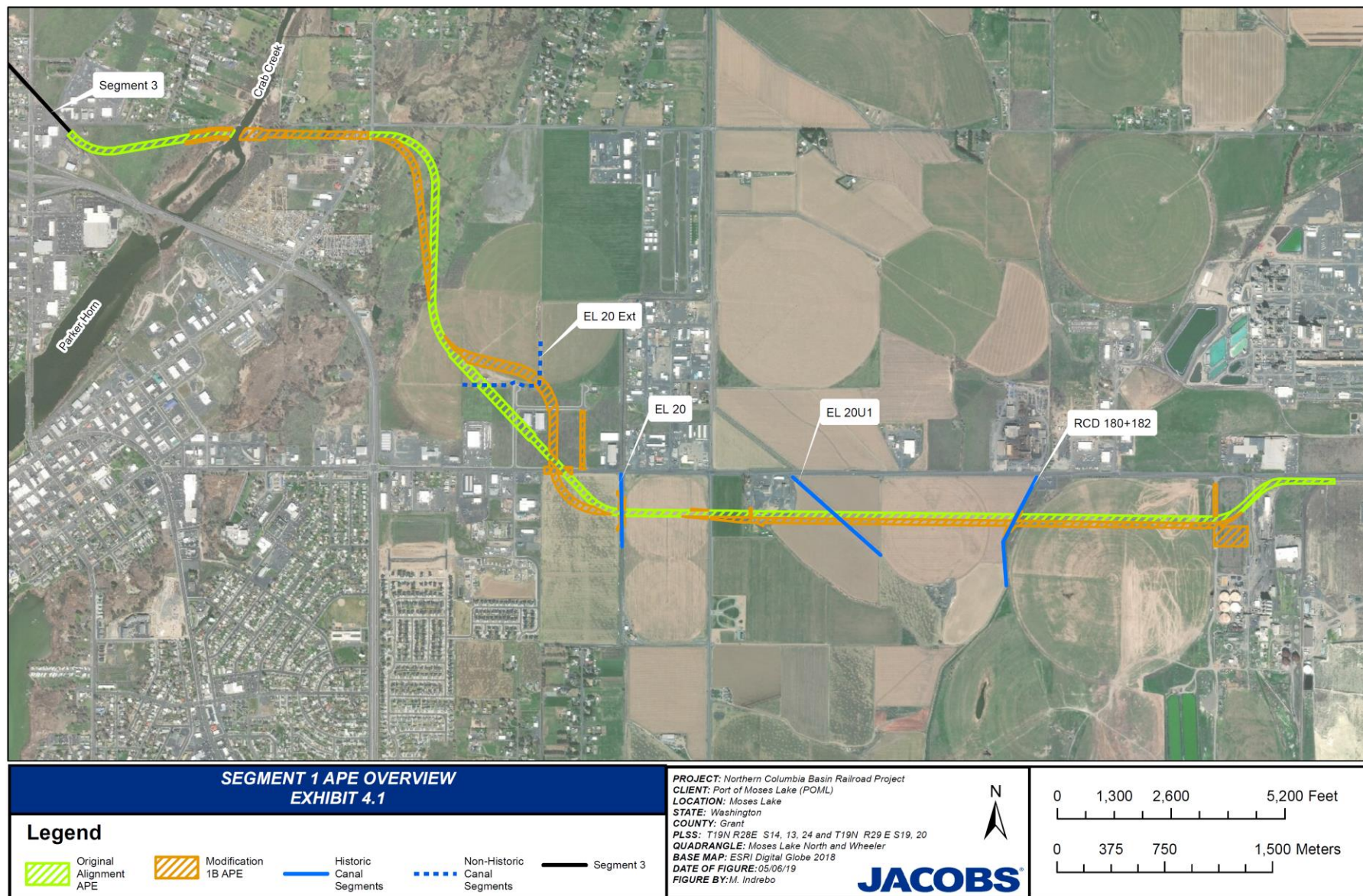
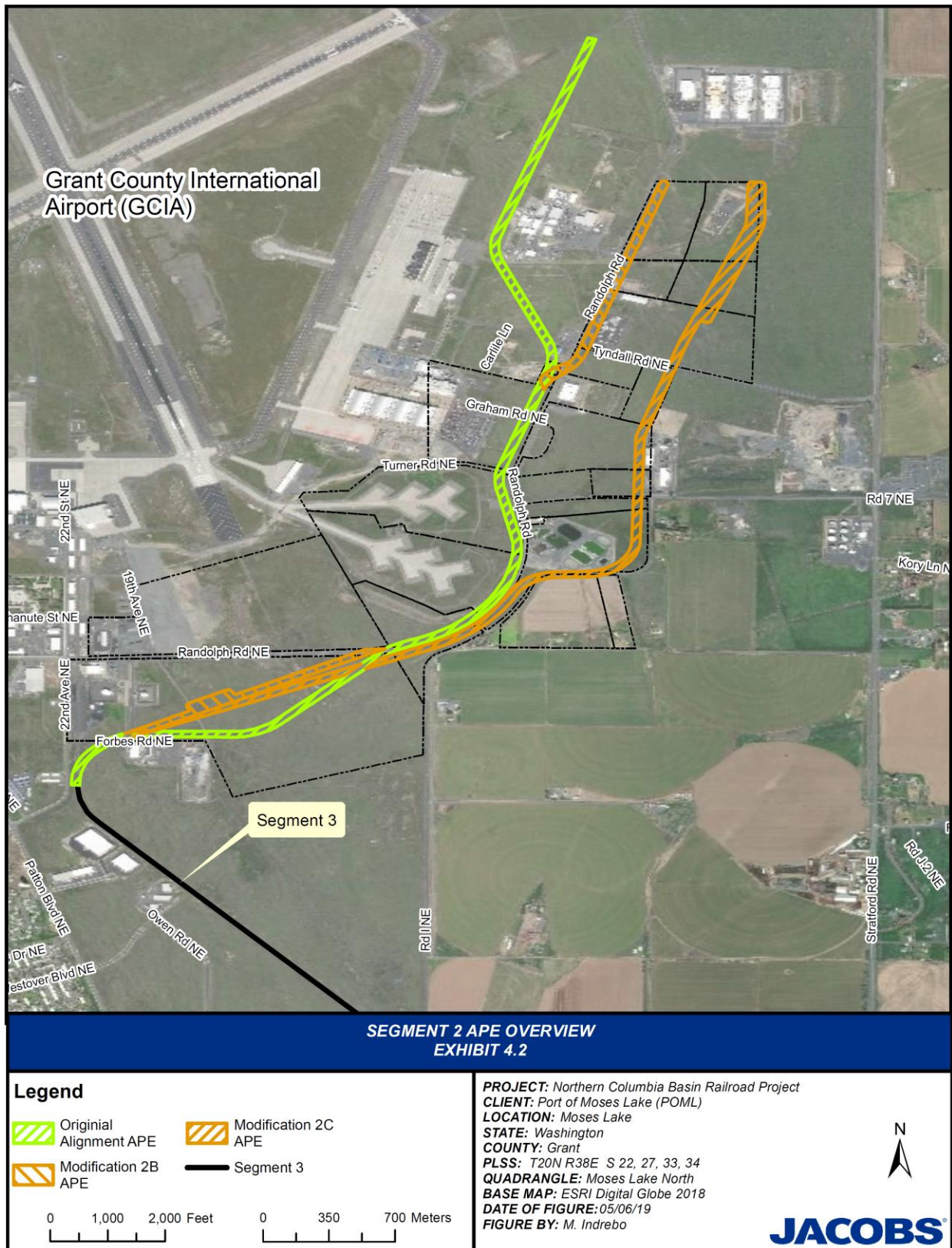


Exhibit 4.2: Segment 2 APE Overview



4.2.3 Fish, Wildlife, and Vegetation

Prior Study Area

The prior study area for fish, wildlife, and vegetation included all areas within 200 feet of the Original Alignment rail corridor, as well as aquatic and riparian areas 0.5-mile downstream of the Segment 1 Crab Creek crossing. The prior study area provided a basis to analyze potential impacts to fish, wildlife, vegetation, and habitat.

Fish

Analysis identified no federal or state rare, threatened, or endangered fish species within the prior study area. State priority fish species in Segment 1 included redband rainbow trout (also a federally designated species of concern), walleye, largemouth bass, and smallmouth bass (state-designated priority game fish). Walleye heavily utilize Crab Creek for spawning in April and May.

Wildlife

Analysis identified no federally-listed rare, threatened, endangered, or candidate wildlife species in the prior study area. Priority wildlife species included bald eagles (state listed as threatened), burrowing owls (federal species of concern and a state candidate species), Yuma myotis (small bat that is a federal species of concern), and the northern leopard frog (federal species of concern and state-listed endangered species). These species were limited to Segment 1, except for burrowing owls that were also in Segment 2.

Other priority species expected to be foraging in the prior study area included the Townsend's big-eared bat (federal species of concern), the western grebe, the great blue heron, and mink (state priority species). These species were limited to Segment 1, except for the Townsend's big-eared bat that could forage in all segments.

Vegetation/Habitat

The most common vegetation occurring in the prior study area was row crops of corn, wheat, and peas. The second most common type of vegetation consisted of range areas and unused fields dominated by non-native weed species. Wetland and riparian vegetation were present in wetlands and in moist sites close to Crab Creek in Segment 1. Analysis identified no federal or state listed rare, threatened, or endangered plant species or state priority plant species in the prior study area.

The majority of upland habitat within the prior study area was highly modified for agricultural use. Undeveloped upland habitat had a predominant cover of non-native vegetation. However, the prior study area contained suitable habitat for nesting by ground birds, raptors, and burrowing owls.

Higher quality riparian habitat existed in wetlands along Crab Creek in Segment 1, and the Washington State Department of Fish and Wildlife (WDFW) designated the Crab Creek crossing area as priority habitat for waterfowl, shorebirds, bald eagles, and mink. However, the existing habitat at Crab Creek was found to be degraded by poor water quality, weedy species cover, little upland buffering, and human presence, but it nonetheless remained the largest riparian corridor draining to Moses Lake.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area includes areas within 200 feet of the proposed modifications for Segments 1 and 2, as well as aquatic and riparian areas 0.5-mile downstream of the approved rail bridge crossing over Crab Creek in Segment 1.

Fish

The same fish species occur within the additional study area as in the prior study area. However, as shown in Table 4.1, changes occurred in state listing status between 2008 and 2018. Washington State no longer considers many of the fish species found in Segment 1 to be priority species. Walleye, largemouth bass, and smallmouth bass have been removed from the state priority habitat and species list but continue to be considered important game species. Rainbow trout remains as a state priority species but is unlikely to spawn in Crab Creek due to lack of suitable substrate (Jacobs 2018a). Crab Creek remains an important spawning habitat for walleye (Jacobs 2018a).

Table 4.1: Listing Status for Fish Species in the Study Area

Species	Federal Status		State Status	
	2008	2018	2008	2018
Redband rainbow trout (<i>Oncorhynchus mykiss</i> <i>subsp.</i>)	Species of concern	Species of concern	Priority species; Game fish	Priority species; Game fish
Walleye (<i>Stizostedion vitreum</i>)	None	None	Priority species; Game fish	Game fish
Largemouth bass (<i>Micropetrus salmoides</i>)	None	None	Priority species; Game fish	Game fish
Smallmouth bass (<i>Mocropterus dolomieu</i>)	None	None	Priority species; Game fish	Game fish

Wildlife

The same wildlife species occur within the additional study area as the prior study area, except for the new occurrence of Clark's grebe in Segment 1 and no occurrence of the northern leopard frog in Segment 1. In 2007, WDFW identified a nesting colony of Clark's grebe (a state candidate species) approximately 0.36-mile downstream of the proposed Crab Creek rail crossing and south of Highway 17 (Jacobs 2018a). This information was likely not published or readily available at the time of the Prior EA and was therefore not included. According to WDFW, both Clark's grebe and western grebe (also a state candidate species) may also nest along Crab Creek north of Highway 17 (Jacobs 2018a).

Table 4.2 notes changes in listing status for each species. The northern leopard frog remains listed as a state endangered species but is no longer a federal species of concern (WDFW 2018c). However, the northern leopard frog is no longer known to occur at the Crab Creek crossing or in wetlands associated with Crab Creek, and there is no longer any suitable habitat for this species in the Project area (Jacobs 2018a).

Protection status has also changed for other wildlife species since the Prior EA. Yuma myotis is no longer considered a federal species of concern and has been removed from the state priority species list along with mink. The bald eagle is no longer federally threatened and has also been removed from the state priority species list but is still protected under the federal Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The burrowing owl and Townsend's big-eared bat are no longer federal species of concern but remain as state candidate species (Jacobs 2018a). As noted in the prior study, burrowing owl habitat, including nesting sites, occurs throughout upland areas in Segment 1 and Segment 2 (Jacobs 2018a), and Townsend's big-eared bats may forage and/or roost in both Segment 1 and Segment 2.

Other state priority species that may forage in Segment 1 include the western grebe and the great blue heron. Great blue herons have state priority status only in breeding areas and there are no breeding sites within Segment 1 (Jacobs 2018a). The prior and additional Segment 1 study areas contain priority areas for waterfowl concentrations and shorebird concentrations in and around Crab Creek and Parker Horn that support large breeding populations of ducks and Canada geese. Shorebird concentrations tend to occur in late summer and fall and include several species of dowitcher, yellowlegs, blacknecked stilts, avocet, sandpipers, phalarope, killdeer, and other species (Jacobs 2018a).

Table 4.2: Listing Status for Wildlife Species in the Study Area

Species	Federal Status		State Status	
	2008	2018	2008	2018
Bald eagle <i>(Haliaeetus leucocephalus)</i>	Monitor species	Monitor species	Threatened	None
Burrowing owl <i>(Athene cunicularia)</i>	Species of concern	None	Candidate	Candidate
Clark's grebe <i>(Aechmophorus clarkia)</i>	None	None	None	Candidate
Townsend's big-eared bat <i>(Corynorhinus townsendii pallescens)</i>	Species of concern	None	Candidate	Candidate
Yuma or long-eared myotis <i>(Moyotis evotis)</i>	Species of concern	None	Monitor species	None
Northern leopard frog <i>(Rana pipiens)</i>	Species of concern	None	Endangered	Endangered (no longer present in Project area)
Western grebe <i>(Aechmophrus occidentalis)</i>	None	None	Candidate	Candidate
Great blue heron <i>(Ardea Herodias)</i>	None	None	Monitor species	Priority habitat (breeding areas)
Mink <i>(Mustela vison)</i>	None	None	Priority species; Game species	Game species

Vegetation/Habitat

The same vegetation and habitat types are present in the additional study area as in the prior study area. There are no substantial changes to vegetation and habitat conditions since the Prior EA (Jacobs 2018a).

See Appendix C.

4.2.4 Energy

Prior Study Area

The prior study area for energy included the Original Alignment rail corridor and at-grade rail crossing locations where vehicles might be required to idle and thus consume more energy. Moreover, the energy (diesel fuel) consumed by freight trains was estimated to support an operational analysis.

Trains running on the existing 16.8-mile route to the southern end of the GCIA were found to consume approximately 246 gallons of diesel fuel for each round trip. Fuel consumed by vehicles waiting for infrequent passage of freight trains, and the electricity to operate track switches, crossing arms, and communication devices, were considered negligible and were not quantified.

Additional Study Area – Proposed Modifications

The additional study area for energy includes the proposed modifications and at-grade rail crossing locations where vehicles might be required to idle and thus consume more energy. The anticipated train length remains at 10 cars, which would result in a minimal vehicular waiting time, estimated in the Prior EA to be 70 seconds at gated crossings; the proposed modifications also involve ungated crossings. There are no changes to baseline conditions or to the regulatory environment in the additional study area.

4.2.5 Hazardous Materials

Prior Study Area

The prior study area for hazardous materials was a one-mile radius around the Original Alignment rail corridor including known hazardous waste sites or potentially contaminated sites. Each site was classified as low, moderate, or high risk. High risk sites are sites that may be substantially contaminated and could create a liability to the Port if construction activities encounter or affect contamination or remediation efforts, or if the Port acquires all or a portion of the site. They are typically large and may have large volumes of contaminated materials or a long history of industrial or commercial use. Moderate risk sites are defined as having a moderate risk based on the type or extent of contamination, or where groundwater is impacted and has a reasonable potential to impact the Project footprint from offsite migration but there is no conclusive evidence. Low risk sites are those sites that are typically small in size where potential contaminants are not extremely toxic or difficult to treat. At low risk sites, remediation approaches are generally straightforward, and/or there is no evidence of contaminated groundwater, or contamination from offsite migration is not expected to impact the Project during construction.

One high risk site (Bernard Cattle Company; a 3- to 5- acre parcel on the southwest corner of Broadway and Road 4NE) and one moderate risk site (Grant County Road District No. 2 facility; south of Wheeler Road) were identified in Segment 1. Segment 2, whose northern portion is within the high-risk Moses Lake Wellfield Contamination Superfund Site (Superfund site), contained two potential high-risk chemical release sites along Randolph Road (Randolph Road Base Dump and Paint Hangar Leach Pit). Segment 2 also contained three moderate risk sites within the Superfund site (Boeing-Moses Lake Test Facility PCB cleanup area, Grant County shooting range, and Grant County PUD Diesel Generating Facility). All except the Grant County shooting range are adjacent to the Original Alignment.

Additional Study Area – Proposed Modifications

Consistent with the prior methodology, the Port and its contractors requested that Environmental Data Resources, Inc. (EDR) provide environmental regulatory records from federal, state, local, and tribal databases within one mile of the Segment 1 and Segment 2 Original and Modified Alignments, in accordance with the ASTM International²⁶ search radius guidance (Jacobs 2018b). Of the 136 listed sites in the EDR report, all but 13 sites were eliminated as sites of concern. Sites were eliminated because they were not listed in databases that would indicate a spill or release has occurred; they had been cleaned up and Ecology listed a “No Further Action” status; they were located a sufficient distance away from the rail corridor (greater than 1/8-mile from the Project footprint) and only listed on the UST database; or they were located downgradient of the Project. Furthermore, agricultural use in the Segment 1 study area is considered an environmental concern due to herbicide and pesticide use.

Sites of concern were classified as low, moderate, or high risk consistent with the prior methodology.

Segment 1 and Modification 1B

The Bernard Cattle Company site (Original Alignment where no modification is proposed) has been downgraded from high risk to moderate risk because no contamination has been documented on the site. It was identified as a site of concern in the prior study because it appeared to be a storage yard with abandoned vehicles and heavy equipment, and piles of debris implied that the site was filled from an unknown origin. Contaminants of concern include petroleum hydrocarbons, solvents, and metals.

Of identified low risk sites, only two are located within 100 feet of the Original Alignment and Modification 1B – the Grant County Road District 2 facility identified in the prior study as a moderate risk site south of Wheeler Road, and a newly-identified UST site

²⁶ ASTM International, formerly known as American Society for Testing and Materials, is an international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services.

(Francis J Jenny UST), situated north of Road 4 NE between the Bernard Cattle Company site and Crab Creek. The Francis J Jenny UST site is not listed in a regulatory database that would indicate contamination is present. Petroleum is the likely contaminant of concern.

Agricultural use of pesticides and herbicides in Segment 1, and the resulting potential accumulation of high concentrations of manganese, iron, and arsenic, is of low environmental concern.

Segment 2 and Modifications 2B and 2C

The Segment 2 Original Alignment, and Modifications 2B and 2C, are located almost entirely within the existing high-risk Superfund site. The Superfund site encompasses the potential source areas around the former Larson Air Force Base. Contaminants of concern that have been found on the Superfund site include solvents, polychlorinated biphenyls (PCBs), petroleum hydrocarbons, and metals. According to the USEPA, the site's long-term remedy includes extraction and treatment of contaminated groundwater, excavation of contaminated soil, and land use restrictions. The Port began ongoing remediation in 2011 (Jacobs 2018b). Although groundwater is contaminated with solvents (trichloroethylene), groundwater is likely located more than 50 feet below ground surface for the Original Alignment, and for Modifications 2B and 2C.

Original Alignment

The Original Alignment is located adjacent to two moderate risk sites and two potential solvent source areas associated with the Superfund site. The moderate risk sites, Boeing – Moses Lake Facility and Grant County PUD Diesel Generating Facility, are listed on the Ecology Confirmed and Suspected Contaminated Sites List (CSCSL) and have received a “No Further Action” status by Ecology. However, residual soil contamination may still exist in the vicinity of these sites (PCBs at the Boeing site and petroleum hydrocarbons at the Grant County site). The two solvent potential source areas --“3-Place Hangar” and “Paint Hangar Leach Pit” -- are also located adjacent/within this alignment. Solvent-contaminated soil may exist in these source areas.

Modification 2B

Like the Original Alignment, Modification 2B is located adjacent to the “3-Place Hangar” and “Paint Hangar Leach Pit” potential source areas associated with the Superfund site and solvent-contaminated soil may exist in these areas. Modification 2B is also located adjacent to one newly-identified moderate risk site, Moses Lake Industries Inc. While the Moses Lake Industries site is listed on the CSCSL list and has received a “No Further Action” status by Ecology, residual petroleum-contaminated soil may still exist in the site vicinity.

Modification 2C

Modification 2C is located adjacent to one moderate risk site, Grant County Shooting Range, which was identified in the prior study. While this site is not listed on a regulatory database, it is identified as a site of concern because it is reportedly used by law enforcement staff as a shooting range and lead-contaminated soil may exist in the site vicinity.

Modification 2C is also located within 100 feet of two potential solvent source areas associated with the Superfund site that were not included in the prior study area. These two sites, the “Dumpster Wash Area,” and the “Base Closure Landfill,” could contain/contribute solvent-contaminated soil within the Modification 2C alignment.

See Appendix D.

4.2.6 Land Use

Prior Study Area

The prior study area for land use was defined as the area within 0.25-mile of the Original Alignment rail corridor. The prior study identified existing and planned land uses in Grant County and in the City of Moses Lake, and assessed whether prime, unique, or significant farmlands existed in the study area.

Existing land uses included agricultural (although there was no zoning for agricultural use), residential, and commercial uses, as regulated by the City of Moses Lake and/or Grant County. Both jurisdictions had approved zoning ordinances and comprehensive plans identifying future planned land uses. City of Moses Lake zoning included: Heavy and Light Industrial, General Commercial, Public, and Rural Urban Reserve (areas transitioning from rural to urban uses). Grant County zoning included: Urban Commercial, Urban Heavy Industrial, Industrial Park, Urban Residential, Urban Residential 2, and Rural Residential. Several parcels near Segment 2 owned by the Port were designated as the “GCIA Zone” intended to maintain and enhance aviation-compatible businesses.

No prime or unique farmlands or farmlands of state or local significance were identified within the prior study area.

Additional Study Area – Proposed Modifications

Consistent with the prior methodology, the additional study area includes areas within 0.25-mile of the proposed alignment modifications.

The City of Moses Lake has periodically updated its Comprehensive Plan since 2001, with an extensive update to the Land Use Element in 2014 that noted the city’s expansion from 11 square miles to 16 square miles, and the expansion of its Urban

Growth Area from 32 square miles to 36 square miles (City of Moses Lake 2018c). However, the 2014 update did not change the land uses or zoning within the additional study area.

Grant County updated its Comprehensive Plan in 2018, with a focus on agricultural land use designations (Grant County 2018). However, the 2018 update did not change the land uses or zoning within the additional study area.

There are no changes to baseline conditions or to the regulatory environment in the additional study area.

4.2.7 Section 4(f) Properties

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. § 303(c)) applies only to agencies of the USDOT²⁷, including FRA, and states that USDOT agencies cannot approve the use of land from publicly owned parks, recreation areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative to the use of such land or the action includes all possible planning to minimize harm resulting from the use.²⁸

Not Previously Studied

Section 4(f) properties were not evaluated as part of the Prior EA, because there was no USDOT involvement in the Project at that time. However, various resource sections of the Preliminary EA in *Chapter Five - Potential Environmental Impacts*, noted the following:

- There were no recreational facilities within 500 feet of the proposed Project and there would be no recreational impacts (Socioeconomics and Environmental Justice section)
- There are no state parks or forests, national parks or forests, or wildlife refuges or sanctuaries within the study area (Fish, Wildlife and Vegetation section)
- Potential historic resources were identified and one of those resources (the Columbia Basin East Low Feeder Canals system) was determined to be eligible for listing in the National Register of Historic Places (Cultural, Historic, and Archaeological Resources section).

²⁷ The STB is an independent agency and its governing statute is the Interstate Commerce Act, not the Department of Transportation Act. Therefore, Board actions are not subject to Section 4(f).

²⁸ 23 C.F.R. § 774.

New Study Area – Proposed Modifications

FRA is a cooperating agency in the NEPA process for the Project and intends to use the analysis herein to help fulfil its NEPA and Section 4(f) obligations. Therefore, Section 4(f) has been added to this DSEA.

The only known Section 4(f) properties within the additional study area are the contributing features to the NRHP-eligible Columbia Basin East Low Feeder Canals system in Segment 1: RCD 180+182, EL 20, and EL 20U1. A fourth feature of the canals system, the EL 20 Extension, was determined to be non-contributing and is not considered NRHP-eligible (STB 2008; Jacobs 2019b) and is therefore not a Section 4(f) property. See Appendix E.

The PA executed by STB, FRA, SHPO, the Port, and CBRW describes the process for phased identification and evaluation of unanticipated discoveries of historic resources while constructing this Project. If a NRHP-eligible archaeological site that warrants preservation in place were to be discovered in the future, it would be subject to Section 4(f).

4.2.8 Noise and Vibration

Prior Study Area

The prior study for noise and vibration followed the General Assessment procedure outlined in the FRA 2005 manual *High-Speed Ground Transportation Noise and Vibration Impact Assessment* and the Federal Transit Administration (FTA) 2006 manual *Transit Noise and Vibration Impact Assessment*. The procedures and impact criteria provided in the two manuals were virtually identical when applied to the Project. (WSDOT 2007a).

The noise assessment included sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, and nursing homes) within 750 feet of the Original Alignment rail corridor. This distance considered potential noise-sensitive receptors for a train traveling at 25 mph, including horn noise. There were no sensitive noise receptors identified in Segments 1 or 2. In the southern part of Segment 3, a residential neighborhood was identified within 50 feet of the rail corridor and an elementary school was identified within 200 feet of the rail corridor.

The vibration assessment included residences within 40 feet of the tracks, and institutional uses (e.g., schools, hospitals) within 30 feet of the tracks. These distances considered sensitive receptors for a locomotive-powered freight train traveling at 25 mph. There were no sensitive receptors identified within these distances.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area for noise includes potential sensitive receptors within 750 feet of the proposed modifications and includes residences and institutional uses within 40 feet and 30 feet of the tracks, respectively, for vibration. There are no changes to baseline conditions in the additional study area. The FTA's more recent 2018 *Transit Noise and Vibration Impact Assessment Manual* was considered, and the manual does not include any changes that would affect the methodology used in the prior or additional study areas.²⁹

4.2.9 Socioeconomics and Environmental Justice

Prior Study Area

The Prior EA defined the study area for socioeconomics³⁰ as the area within 500 feet of the Original Alignment rail corridor based on an analysis of the Project area; the location of existing residences, schools, and parks; the availability of public services; and a review of similar rail projects. The environmental justice study area was larger, defining boundaries for low-income and minority populations based on census block group data (see Table 4.3). These study areas provided indicators of local and regional economic strength, population trends, and population characteristics.

Table 4.3: Demographics of the Prior Study Area

Location	Population 2007	Percent Below Poverty Level	Percent Non-White Population	Percent Total Hispanic or Latino
<i>Study Area</i>	13,669	16.6%	25.8%	27.1%
<i>City of Moses Lake</i>	17,932	15.1%	22.8%	25.4%
<i>Grant County</i>	74,698	17.4%	23.5%	30.1%

Source: 2000 U.S. Census Bureau, Block Group data (Tract 981000, Block Group 1; Tract 980900, Block Group 1; Tract 980800, Block Group 1; Tract 98100, Block Group 4; Tract 980900, Block Group 1)

The following key social and economic indicators were identified (WSDOT 2007b):

- Population in the City of Moses Lake was 17,932 in 2007.
- Manufacturing (23 percent of the labor force), government (17.9 percent of the labor force), and educational, health, and social services (15 percent of the labor force) were the base of the City's economic well-being in 2002.

²⁹ USDOT, FTA. Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123. September 2018.

³⁰ In the Prior EA, the term "social elements" was used instead of "socioeconomics."

- In 2000, the unemployment rate in Grant County was 7.7 percent; by September 2008 it had decreased to 5.3 percent.
- Median household income in the City of Moses Lake was \$38,200 in 2006, 37 percent lower than the state's median household income.
- A higher percentage of minorities and people living below the poverty level were in Segment 2; however, there were no residences in the prior study area for Segment 2.
- A few residences were located within the Millerville neighborhood just west of Crab Creek in the prior study area for Segment 1.
- No schools were located within the prior study area for Segments 1 and 2.
- There were no designated parks, recreational facilities, or emergency or medical facilities in the prior study area.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area includes areas within 500 feet of the proposed modifications. The environmental justice study area is larger and defined by low-income and minority populations based on census block group data for the City of Moses Lake and Grant County (see Table 4.4).

Table 4.4: Demographics of the Additional Study Area

Location	Population 2017	Percent below Poverty Level	Percent Non-White Population	Percent Total Hispanic or Latino
<i>Study Area</i>	8,132	14.5%	30.0%	23.8%
<i>City of Moses Lake</i>	23,328	14.5%	35.9%	29.5%
<i>Grant County</i>	95,158	16.1%	46.1%	41.7%

Source: U.S. Census Bureau Quick Facts for 2017 and American Community Survey 2012-2016 Five-Year Profiles (Tract 010901, Block Group 1, Tract 108001, Block Group 1, Tract 011000, Block Group 4, Tract 011000, Block Group 1.)

Note: Population and percentages for the Study Area in the table above reflect only those block groups associated with the proposed alignment modifications in Segments 1 and 2; additional study area population is therefore less than the prior study area population.

Key social and economic indicators within the additional study area are included below, including notable changes since the Prior EA:

- Population in the City of Moses Lake increased by an estimated 30 percent between 2007 and 2017, to 23,328 people (USCB 2018b).

- In 2016, manufacturing (23 percent of the labor force) remained as the main employment sector in the City of Moses Lake, followed by retail trade (15 percent of the labor force) (City-Data 2018).
- Grant County's top employment sectors in 2016 were: agriculture/forestry/fishing (25.8 percent), local government (17 percent), and manufacturing including food manufacturing (12.5 percent) (WESD 2018b).
- In September 2015, the unemployment rate in the City of Moses Lake was 5 percent, 0.2 percent higher than in the State of Washington (City-Data 2018).
- In September 2018, the unemployment rate in Grant County was 4.1 percent (WESD 2018a), 1.2 percent lower than in September 2008.
- Median household income in the City of Moses Lake (2012-2016) was \$47,005 (USCB 2018b), a 23 percent increase since 2006.
- The total non-white population in the City of Moses Lake has increased from 22.8 percent in 2000 to 35.9 percent in 2017. Similarly, the non-white population in Grant County increased from 23.5 percent in 2000 to 46.1 percent in 2017 (see Tables 4.3 and 4.4).
- The percentages of people living below the poverty level in the City of Moses Lake and Grant County in 2017 are similar to the levels in 2000, decreasing by approximately 1 percent.
- There are no parks, recreational facilities, or emergency or medical facilities within the additional study area.

4.2.10 Soils and Geology

Prior Study Area

The prior study area for geology and soils included the area within 100 feet of the Original Alignment rail corridor centerline. The prior study area was predominantly underlain by sand and gravel except at Parker Horn, which was underlain by relatively fine-grained sand and silt.

Although earthquakes and volcanic activity are known to occur in the Project vicinity, the Prior EA indicated that the rate of earthquake activity in the prior study area was moderate to low. It was also noted that the City of Moses Lake had no mapped seismic hazard areas within the study area; however, there was potential for seismic instability at Parker Horn and Crab Creek due to the potential for soil liquefaction.³¹ The principal source of volcanic activity identified in the Project vicinity was the Cascade Mountain Range, located more than 90 miles to the west. The nearest active fault identified was the Frenchman Hills Fault, approximately seven miles south of the City of Moses Lake.

³¹ During a liquefaction event, such as that which could be produced by an earthquake, soil particles, in combination with the water located in the pore spaces between them, tend to behave like quicksand.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area includes areas within 100 feet of the proposed modifications. The current earthquake risk is moderate, with 58 earthquakes reported within 30 miles of the City of Moses Lake since 1931, and the United States Geological Survey (USGS) estimating a 13.4 percent chance of a magnitude 5.0 earthquake within 30 miles of the City of Moses Lake within the next 50 years (USGS 2018).

There are no changes to the regulatory environment relating to the soils and geological resources and no changes to the soils in the additional study area.

4.2.11 Traffic and Transportation

Prior Study Area

The prior study area for traffic included the Original Alignment rail corridor from the east end of Segment 1 to the north end of Segment 2, including streets crossing the alignment, intersections of cross streets with State Route 17, and existing railroad at-grade crossings.

Many of the streets within the prior study area were minor roadways and traffic counts were not available. For those streets with available traffic counts, estimated traffic volumes in 2010 and 2030 were calculated by applying a three percent annual growth rate to the 2006/2007 existing traffic volumes (see Table 4.5).

Table 4.5: Average Daily Traffic (ADT) Volumes within the Prior Study Area

Location	ADT 2006/2007	ADT 2030 Projection
<i>Segment 1</i>		
Road L NE	1,560	2,640
Wheeler Road*	13,180	22,670
<i>Segment 2</i>		
Randolph Road**	1,700	2,870
Randolph Road***	1,300	2,200
Tyndall Road NE	960	1,620

* Approximately 3,100 feet west of proposed Wheeler Rd. at-grade crossing

** Between 22nd Ave. NE and Road 7 NE

***North of Road 7 NE

The vehicular delay time at an at-grade, gated train crossing was an estimated 70 seconds, starting from the first warning and lowering of a crossing gate to completion of the gate's rise after a train passed. Because Segments 1 and 2 would be newly built rail lines, there were no existing rail line crossings in Segment 1 or Segment 2.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional traffic study area consists of the proposed modifications, including proposed railroad at-grade crossings and streets crossing the Modified Alignment. Although the additional study area does not include intersections of cross streets with State Route 17, it does include one additional traffic count location near the proposed at-grade crossing on Wheeler Road in Segment 1.

As reported in the prior study area, many of the streets are minor roadways and traffic counts are not available. For those streets with traffic counts available, a 3 percent annual growth rate is applied to 2017-2018 traffic volumes to estimate future volumes in 2030 (see Table 4.6). This growth rate is consistent with the rate used for projections in the prior study, as well as the 30 percent population growth rate in the City of Moses Lake from 2007-2017.

Table 4.6: Average Daily Traffic (ADT) Volumes within the Additional Study Area

Location	ADT 2017-2018	ADT 2030 Projection (from Prior EA)	ADT 2030 Projection (current)	% Change in ADT 2030 Projection
<i>Segment 1</i>				
Road L NE	2,542	2,640	3,624	+38%
Wheeler Road*	11,536	22,670	16,941	-25%
Wheeler Road**	9,161	N/A	13,453	N/A
<i>Segment 2</i>				
Randolph Road***	3,361	2,870	4,792	+67%
Randolph Road****	3,830	2,200	5,461	+248%
Tyndall Road NE	1,860	1,620	2,652	+64%

* Approximately 3,100 feet west of proposed Wheeler Rd. at-grade crossing

** Approximately 1,600 feet west of proposed Wheeler Rd. at-grade crossing

*** Between 22nd Ave. NE and Road 7 NE

**** North of Road 7 NE

2017-2018 ADT Source: City of Moses Lake Engineering (City of Moses Lake 2018b and 2018d) and Grant County Public Works (Grant County 2018)

Segment 1

ADT for Road L NE has increased approximately 63 percent since the Prior EA, and the 2018 traffic volume nearly met the previously-projected 2030 ADT. As shown in Table 4.6, the current projected 2030 ADT is 38 percent higher than the prior study projection.

ADT for Wheeler Road, approximately 3,100 feet west of the proposed at-grade crossing, has decreased 12.5 percent since the prior study. Further, the current projected 2030 ADT for this location is 25 percent lower than the prior study projection.

ADT for Wheeler Road, approximately 1,600 feet west of the proposed at-grade crossing, was not provided in the Prior EA. However, though this location is closer to the proposed at-grade crossing, the current traffic volume is nearly 21 percent less than the traffic volumes for the location that is 1,500 feet farther from the proposed crossing. The decrease in Wheeler Road traffic volumes in 2017 compared to the Prior EA is likely due to substantial amounts of construction-related traffic in 2006-2007 associated with a \$600 million expansion of the REC Silicon plant just north of Wheeler Road at the east end of Segment 1 (City of Moses Lake 2018a; Aspi Group 2018).

Segment 2

ADT for the three roadway locations in Segment 2 have substantially increased since the Prior EA. As shown in Table 4.6, 2017-2018 traffic volumes at each location exceed the previously projected 2030 ADTs. The current projected 2030 ADTs are 64 percent to 248 percent higher than previously projected. These traffic volume increases are likely attributable to new industries and existing industry expansions in the GCIA Employment Center/industrial area. Considering the much larger increases in Segment 2 ADTs compared to Segment 1 over the past 10 years, and the anticipated future industrial development at the GCIA, the current Segment 2 traffic volume projections for 2030 may be exceeded.

4.2.12 Visual Quality

Prior Study Area

The prior study area for visual quality was approximately 1,000 feet from the Original Alignment track centerline, depending on topography. Key viewpoints within the prior study area were identified based on their potential to view the Project corridor during or after construction or because the view represented a particular landscape type (e.g., an industrial or residential area). Six viewpoints were identified in Segment 1 and one viewpoint was identified in Segment 2. The dominant visual features in the prior study area were undeveloped or irrigated crop fields, large industrial buildings, and enclaves of low-density residential development.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area includes the area within 1,000 feet from the proposed modifications. Since the minor modifications result in no new viewpoints, none required additional review or consideration of potential impacts, and there are no changes to the baseline conditions or to the regulatory environment for visual quality.

4.2.13 Water Resources

Prior Study Area

The prior study area for water resources included water bodies crossing or running parallel to the Original Alignment rail corridor or that received drainage from these water bodies, as well as aquatic areas 0.5 mile downstream of the Segment 1 Crab Creek crossing. The 0.5-mile limit was based on the potential extent of water quality-related Project impacts.

Water resources identified in Segment 1 included Lower Crab Creek and six irrigation canals and irrigation wasteways that eventually drain to the Potholes Reservoir (approximately 2.5 miles south of the Project area) and then to the Columbia River (approximately 30 miles west-southwest of the Project area) and were therefore jurisdictional (subject to regulation). The Prior EA reported that Lower Crab Creek was impaired by high temperatures, high pH, and fecal coliform bacteria requiring a Total Maximum Daily Load (TMDL) to set the maximum level of pollutants that could enter the creek. Water resources identified in Segment 2 included two drainage ditches.

Crab Creek was the only water body with a designated 100-year floodplain. It was noted that flooding was not normally an issue, but that Crab Creek could exceed its channel capacity during flash flood conditions.

Additional Study Area – Proposed Modifications

Consistent with prior methodology, the additional study area includes water bodies crossing or running parallel to the proposed modifications, as well as the aquatic area 0.5-mile downstream of the Segment 1 Crab Creek crossing.

There are no new water resources within the additional study area. Lower Crab Creek in Segment 1 remains impaired by high temperatures and high pH that require TMDLs, but it is not impaired by fecal coliform bacteria. As of 2016, Ecology reports evidence of a potential dissolved oxygen problem at the Crab Creek crossing location that will require further monitoring by Ecology to determine whether it may be a persistent impairment. The primary causes of low dissolved oxygen in a water body are excessive algae growth driven by high levels of phosphorus commonly originating from municipal and private wastewater discharges and runoff from cropland and urban areas; high water temperatures can also be a contributing factor (MPCA 2009).

4.2.14 Wetlands

Prior Study Area

The prior study area for wetlands was 300 feet on either side of the Original Alignment track centerline. Accessible wetlands within 100 feet of either side of the track centerline were delineated and rated, while inaccessible wetlands or wetlands located between 100 to 300 feet from the track centerline were mapped, and their boundaries and ratings estimated.

Four wetlands were identified within Segment 1; one wetland was associated with Crab Creek (Wetland C) and three wetlands were associated with spring flow and groundwater discharges from landscape-wide irrigation practices (Wetlands A, B, and D). These four wetlands were rated as Category III (moderate functional levels). There were no wetlands identified in Segments 2 or 3.

Additional Study Area – Proposed Modifications

The additional study area includes accessible areas within 300 feet of the track centerline for the proposed modifications, as well as previously identified wetlands outside of the modifications. Wetlands were reassessed and re-delineated in 2017, and wetland delineation and rating methodology was updated to meet current federal and state regulatory standards (Jacobs 2017a).

As in the prior study, there are no wetlands in Segment 2. There are four wetlands in Segment 1 (Wetlands A, B, C, and a new Wetland E) that are described below. Wetland D (identified in the prior study area west of Crab Creek) no longer exists.

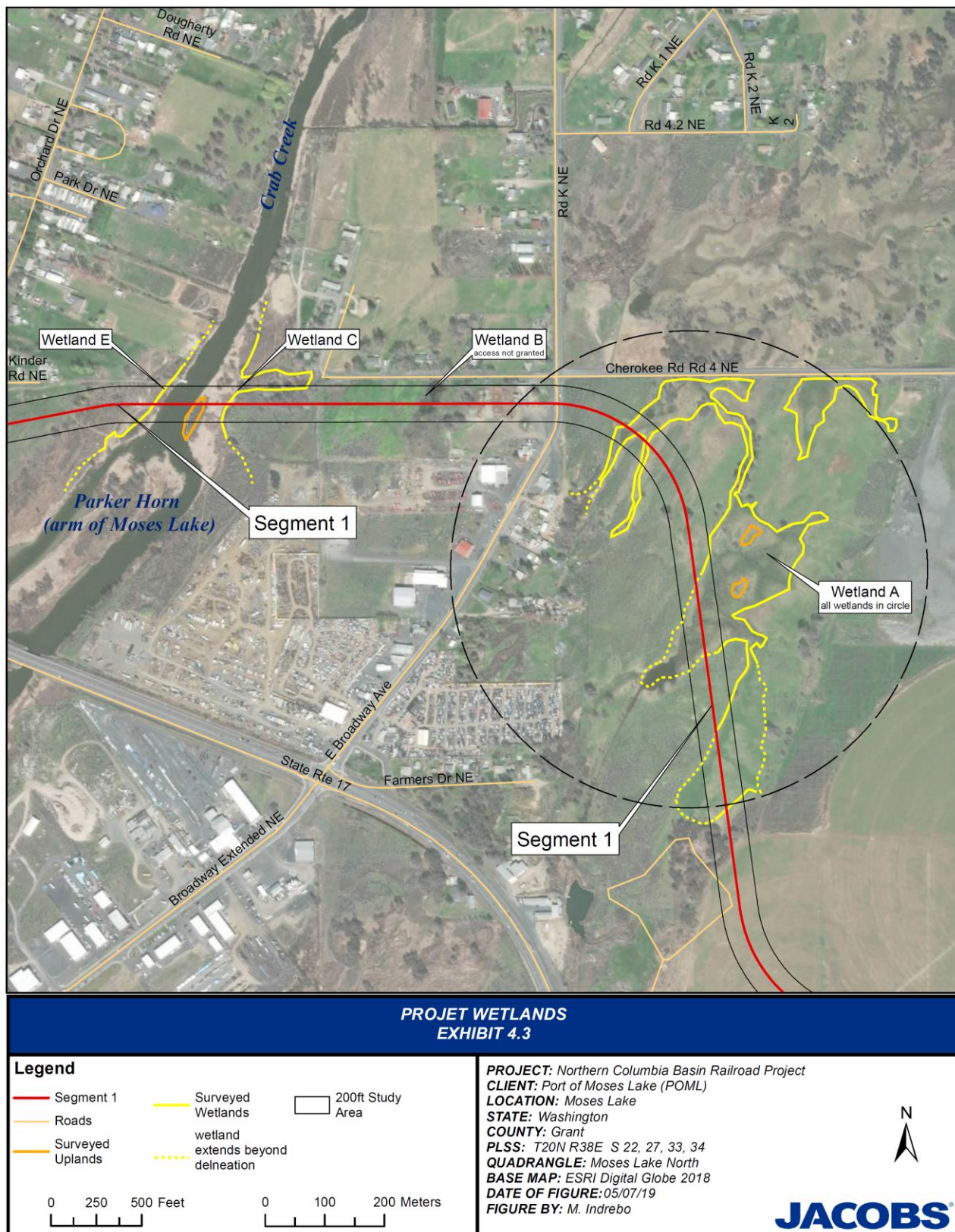
- Wetland A - Identified in the prior study, it is located north of Wheeler Road and approximately 0.5-mile east of Crab Creek in a parcel used for cattle grazing. It extends over 1,000 feet from the track centerline in some areas and was delineated nearly in its entirety (a portion was not delineated due to access issues subsequent to the 2017 delineation). It remains rated as Category III (moderate functional value).
- Wetland B – Identified in the prior study, it is located south of Road 4 NE and approximately 0.25-mile east of Crab Creek on a developed parcel that may contain hazardous materials. It was not delineated or rated due to access issues but is mapped and its boundaries estimated.
- Wetland C – Identified in the prior study, it is located along the east side of Crab Creek. Its rating is upgraded from Category III to Category II (higher functional values).

- New Wetland E - Located along the west side of Crab Creek. It is rated as Category II. This portion of the wetland was not identified in the prior study area (the main portion of Wetland E is located to the south and was identified and rated as Category III in the prior study area, however this main portion is no longer within the Original Alignment nor is it within the proposed Modified Alignment).

Wetlands A and B are associated with spring flow and groundwater discharges from landscape-wide irrigation practices. Wetlands C and E are associated with Crab Creek.

All four wetlands and their buffers are within, and are regulated by, the City of Moses Lake. Wetlands C and E are regulated under the city's 2017 Shoreline Master Program, and Wetlands A and B are regulated under the city's 2003 Critical Areas Ordinance. The wetlands are also regulated by USACE and Ecology. See Appendix F.

Exhibit 4.3: Project Wetlands



Chapter 5 Potential Environmental Impacts Resulting from Proposed Modifications

This chapter presents the potential environmental impacts of the proposed Segment 1 and Segment 2 Modified Alignment for the 13 resource areas evaluated in the Prior EA for the Original Alignment.³² The Port is not proposing to modify Segment 3, therefore discussion of the potential impacts to this segment is minimal.³³ In addition to new studies and research related to the changes in the proposed Modified Alignment, in order to identify affected resources, Port contractors and OEA reviewed the Prior EA and supporting documentation such as public comments, and technical reports and memoranda. Additionally, Port contractors and OEA reviewed relevant regulations, agency guidance, and other land use or resource management plans relevant to the Project area to identify any changes that may affect the previous analyses.

This chapter focuses on the differences between construction process and operational impacts analyzed and disclosed in the Prior EA and the 2009 Authorization Decision for the Original Alignment of Segments 1 and 2, compared to those of the proposed Modified Alignment. Construction process impacts are temporary and typically are resolved or mitigated by the completion of construction activities. Operational impacts result from operation of the railroad or from maintenance activities.

After reviewing the proposed Modified Alignment, OEA found that the affected environment, impacts, and/or regulations concerning seven of the thirteen resource areas evaluated in the Prior EA were substantively unchanged since originally evaluated; accordingly, OEA has determined that sufficient analysis and description was included in the Prior EA and 2009 Authorization Decision, and no further evaluation of those areas is required here. One resource area, Section 4(f) properties, was not evaluated in the Prior EA, but is being evaluated in this DSEA due to FRA's participation in the Project.

The seven resources that remain largely unchanged are:

- Air Quality
- Energy
- Land Use
- Noise and Vibration
- Soils and Geology

³² In its Authorization Decision, the STB authorized the Port to construct the Alternative 1A crossing of Crab Creek, not the Alternative 1 crossing of Parker Horn. See 2009 Authorization Decision, slip op. at p. 6. In this DSEA, the reference to the Original Alignment Segment 1 includes the Alternative 1A crossing, not Alternative 1.

³³ Any potential environmental impacts associated with Segment 3 discussed in the Prior EA will be incorporated by reference in this document.

- Visual Quality
- Water Resources

Seven resources that are evaluated in greater detail in this DSEA are:

- Cultural, Historic and Archaeological Resources
- Fish, Wildlife and Vegetation
- Hazardous Materials
- Section 4(f) Properties
- Socioeconomics and Environmental Justice
- Traffic and Transportation
- Wetlands

Additionally, changes to the Cumulative Effects analysis conducted for the Prior EA will also be evaluated.

5.1 Air Quality

No substantive changes have occurred to the affected environment as it relates to air quality within Grant County, or within the study area since the 2009 Authorization Decision. As noted in Chapter 4, though there are several new air pollutants, Grant County remains in attainment for all NAAQS criteria pollutants (sulfur dioxide, carbon monoxide, nitrogen oxide, lead, ozone, and particulate matter). There are no new sensitive receptors such as residences, schools, churches, libraries, or nursing homes located in the Project study area, and as previously analyzed, the Project would result in operation of two trains per day (one round trip), which is below the STB threshold of eight trains per day that would require locomotive air emissions to be quantified.³⁴

Rail line construction would result in short-term and localized construction process impacts from fugitive dust and construction vehicle and equipment emissions. However, mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential impacts (see Chapter 6 Mitigation Measures; Nos. 1, 2, 3, 4, and 5). Operation of two trains per day (one round trip) would result in minor effects to overall air quality in the Project area from locomotive emissions.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes or changes to approved air quality mitigation measures proposed under the Segment 1 and Segment 2 modifications. Therefore, there are no changes to the minor and insignificant air quality impacts as analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

³⁴ 49 C.F.R. § 1105.7(e)(5)(i)(C).

5.2 Cultural, Historic, and Archaeological Resources

Following issuance of the 2009 Final EA, a PA was negotiated and executed in June 2009 by STB, DAHP, and the Port to identify and mitigate impacts on cultural and historic sites and structures in accordance with Section 106 of the NHPA and to ensure that archaeological resources and/or historic structures on unevaluated and/or inaccessible parcels would be assessed prior to initiation of Project construction. WSDOT and the CBRW—as the proposed operator of the Project—were consulting parties to the PA (see Appendix A).

As noted in Chapter 4, there are no new or additional cultural, historic, or archaeological resources identified since issuance of the 2009 Authorization Decision. The Columbia Basin East Low Feeder Canals system was the only resource identified as eligible for listing on the NRHP in the Prior EA. The canals system has four features in Segment 1 – RCD 180+182, EL 20, EL 20U1, and EL 20 Extension (see Exhibit 4.1). RCD 180+182, EL 20, and EL 20U1 were recommended eligible for listing in the NRHP as contributing features of the Columbia Basin Project. However, EL20 Extension was recommended non-contributing and was not recommended NRHP-eligible (STB 2008; Jacobs 2019a). The Prior EA determined that Project construction and operation would not adversely affect the historic canals, and that bridges spanning EL 20 and RCD 180+182, and a culvert placed in EL 20U1, would have no adverse effects on the canals. SHPO concurred with OEA’s finding of no adverse effect on April 7, 2009.³⁵

The PA included in the 2009 Authorization Decision also established processes for the phased identification and evaluation of potential effects to any previously unidentified cultural resources (under consultation with the affected parties) and an Unanticipated Discovery Plan. The PA originally had a term of ten (10) years (until August 27, 2019), but it has been extended in an amendment to remain in effect for ten years after the date of any STB decision authorizing or declining to authorize the proposed modifications to the Project. Based upon stipulations in the PA, the STB determined there would be no significant impacts to cultural, historic, or archaeological resources once mitigation measures were implemented (see Chapter 6 Mitigation Measures; Nos. 6 and 7).

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

Instead of constructing bridges to span two of the previously-identified historic canals (RCD 180+182 and EL 20), as analyzed in the Prior EA, the Port is proposing a design change under Modification 1B that would replace those bridges with reverse siphons (a type of culvert). Jacobs’ Secretary of the Interior Professionally Qualified individuals conducted a supplemental field survey in May 2017 and assessed whether there would be an adverse effect from using culverts instead of bridges at these two historic canal crossings (Jacobs 2017b).

³⁵ 2009 Final EA, at Appendix A

Under regulations of the Advisory Council on Historic Preservation (36 C.F.R. § 800.5), a project would have an adverse effect if it would diminish—directly or indirectly—any of the characteristics of a historic property that qualifies it for inclusion in the NRHP. These characteristics include the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Jacobs' 2017 assessment built upon the previous 2007/2008 assessment prepared for WSDOT by HDR Engineering, Inc. and Jones & Stokes Associates,³⁶ and concluded that the proposed design refinements would not diminish integrity of location, setting, workmanship, feeling, or association, and would only cause a minor alteration to integrity of materials and design. Based on these recommendations, STB determined there would be no adverse effect from the proposed design change from bridges to culverts (Jacobs 2017b). SHPO concurred with STB's determination on June 18, 2019. See Appendix B.

There are no other construction or operational changes proposed under the Segment 1 and Segment 2 Modified Alignment that would impact cultural, historic, or archaeological resources. Assessment of the modifications under the PA stipulations imposed by the STB in its 2009 Authorization Decision meets the requirements for evaluating effects to historic properties and accounts for potential construction and/or operational impacts on the historic canals. This DSEA proposes to maintain the PA stipulations and other mitigation measures on the Modified Alignment (see Chapter 6 Mitigation Measures; Nos. 6 and 7). Therefore, there are no changes to the impacts as disclosed in the Prior EA and the 2009 Authorization Decision.

Jacobs conducted an archaeological pedestrian survey consisting of intensive survey, reconnaissance survey, and limited subsurface testing in 2018. The survey covered approximately 47 percent of the 130 acres in the modified APE along Modifications 1B, 2B, or 2C. Subsurface investigations by Jacobs focused on the Segment 1/Modification 1B crossing at Crab Creek and the upland areas along the easternmost end of Segment 1/Modification 1B. No cultural resources were identified in surface or subsurface contexts. See Appendix B.

The Modified Alignment is characterized primarily by Pleistocene deposits in upland settings with low potential for buried archaeological sites or areas modified by varying degrees of development. Therefore, previously unrecognized archaeological resources are unlikely to occur along most of Modification 1B and along all of Modifications 2B and 2C. See Appendix B.

5.3 Fish, Wildlife, and Vegetation

As noted in Chapter 4, no significant changes to the affected environment for fish, wildlife, and vegetation have occurred since the Prior EA and the 2009 Authorization Decision. However, federal- and state-designated protection statuses for several wildlife species within the Project study areas have changed to less protective status since 2009.

³⁶ WSDOT 2008a

The Prior EA determined that the Project would not result in any adverse impacts to federally listed threatened and endangered species or critical habitats because no such species or habitats occur within the Project. The Prior EA also determined that although there may be potential adverse impacts to several species considered to be state priority species in 2009 (bald eagles, burrowing owls, Yuma myotis, Townsend's big-eared bat, and northern leopard frog), design measures and implementation of mitigation measures that have been imposed on the Project by STB would minimize or avoid these impacts (see Chapter 6 Mitigation Measures; Nos. 8, 9, 10, 11, 12, 13, 14, 15, and 16).

Additionally, as concluded in the Prior EA, construction of the rail crossing over Crab Creek rather than Parker Horn would have fewer impacts on biological resources. Furthermore, potential impacts to walleye spawning in the Crab Creek crossing area would be avoided by restricting in-water work between April 1 to early July. Overall, the 2009 Authorization Decision imposed nine mitigation measures on the Project to avoid or minimize impacts to fish, wildlife, and vegetation (see Chapter 6 Mitigation Measures; Nos. 8, 9, 10, 11, 12, 13, 14, 15 and 16).

Potential Effects Resulting from Segment 1 Modifications

There are no construction process or operational changes proposed under Modification 1B that affect the previous analysis of this resource. Modification 1B would intersect the same types of vegetation and habitats as previously analyzed, and no new habitats, vegetation types, or sensitive plant species are identified within Segment 1 or Modification 1B. There are no federal or state threatened or endangered wildlife species or federally designated critical habitat within Segment 1 or Modification 1B. Though the northern leopard frog remains listed as a state endangered species, it no longer is known to occur at the Crab Creek crossing or in wetlands associated with Crab Creek, and there is no suitable habitat for this species in the Project area (Jacobs 2018a). Therefore, there would be no effect to federal or state threatened or endangered species or critical habitats. Accordingly, OEA recommends removing the previously imposed condition pertaining to this species (see Chapter 6 Mitigation Measures; No. 15).

Other federal and state designated protection statuses of several fish and wildlife species within Segment 1 and Modification 1B area have changed to less protective status since the Prior EA. Only burrowing owls, Townsend's big-eared bats, and western grebes remain listed by Washington State as candidate species. Walleye, largemouth and smallmouth bass, and Yuma myotis are no longer state priority species. Although Clark's grebe is a newly identified state candidate species near the Crab Creek crossing, the mitigation measures already imposed by the 2009 Authorization Decision and revised mitigation measures proposed in this DSEA would avoid or minimize potential impacts to this species and other species that remain listed by

Washington State as candidate species in Segment 1 and Modification 1B (see Chapter 6 Mitigation Measures; Nos. 8, 9, 10, 11, 12, 13, 14, 15 and 16). Therefore, there are no changes to the impacts on this resource as previously analyzed and disclosed in the Prior EA and 2009 Authorization Decision.

Potential Effects Resulting from Segment 2 Modifications

There are no construction process or operational changes proposed under Modification 2B or 2C that affect the previous analysis of fish, wildlife, and vegetation. The modifications intersect the same types of vegetation and habitats as previously analyzed, and no new habitats, vegetation types, or sensitive plant species are identified within Segment 2 or Modification 2B or 2C. There are no federal threatened or endangered wildlife species or federally designated critical habitat within Segment 2 or Modification 2B and 2C. Therefore, there would be no effect to federal threatened or endangered species or critical habitats.

As noted in Chapter 4, burrowing owls and Townsend's big-eared bats are state candidate species. Burrowing owl habitat, including nesting sites, occurs throughout upland areas in Segment 2, including areas around Modification 2B and 2C, and Townsend's big-eared bats may forage and/or roost in Segment 2 and Modifications 2B and 2C. However, mitigation measures already imposed by the 2009 Authorization Decision, and revised mitigation measures proposed in this DSEA, would avoid or minimize potential impacts to these species (see Chapter 6 Mitigation Measures; Nos. 8, 9, 10, 11, 12, 13, 14, 15 and 16). Therefore, there are no changes to the impacts on this resource as previously analyzed and disclosed in the Prior EA and 2009 STB Authorization Decision.

5.4 Energy

As noted in Chapter 4, the affected environment for energy has not changed since issuance of the 2009 Authorization Decision. The Prior EA determined that the Project would not affect the movement of energy resources; would have a positive effect on the transportation of recyclable commodities (steel); and would result in an insignificant amount of increased energy consumption during rail construction and rail operations.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes proposed under the Modified Alignment, and there were no energy mitigation measures included in the Prior EA or in the 2009 Authorization Decision. Therefore, there are no changes to the energy impacts as previously analyzed and disclosed in the Prior EA and 2009 Authorization Decision.

5.5 Hazardous Materials

As noted in Chapter 4, no substantive changes to the affected environment for hazardous materials have occurred since the 2009 Authorization Decision. However, several previously identified sites within Segment 2 have changed to lower risks since 2009. Additionally, there are four new sites identified within the Project. One site is in Segment 1, and three sites are in Segment 2.

The Prior EA determined that effects related to hazardous materials sites would primarily occur from disturbance during Project construction, there could be hazardous materials releases during rail operations or maintenance activities, and implementation of the mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential risks and adverse impacts associated with encountering, disturbing, or transporting hazardous materials.

Potential Effects Resulting from Segment 1 Modifications

For both the Original Alignment and Modification 1B, most of the Project would be constructed on fill and most of the excavation would occur in undeveloped areas that are not identified as sites of concern. As previously noted, there is potential for contaminated soil to be encountered on the Bernard Cattle Company site, the Grant County Road District No. 2 site, and the newly identified Francis J. Jenny UST site.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential impacts from hazardous materials, and this DSEA proposes to impose these same mitigation measures at the newly identified Francis J. Jenny UST site (see Chapter 6 Mitigation Measures; Nos. 17, 18, 19, 20, and 21). Therefore, there are no changes to the impacts from hazardous materials as previously analyzed and disclosed in the Prior EA and 2009 Authorization Decision.

Potential Effects Resulting from Segment 2 Modifications

As previously noted, contaminated soil may be encountered during excavation in Segment 2 at four moderate-risk hazardous materials sites (one newly identified in Modification 2B: Moses Lake Industries Inc.) and four potential solvent sources areas (two newly identified in Modification 2C: “Dumpster Wash Area” and “Base Closure Landfill”) associated with the high-risk Superfund site. The potential contaminants of concern include:

- Original Alignment: PCBs, petroleum hydrocarbons, and solvents
- Modification 2B: petroleum hydrocarbons and solvents
- Modification 2C: lead and solvents

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential impacts from hazardous materials, and this DSEA proposes to impose these same mitigation measures at the three newly identified sites in

Modification 2B and 2C (see Chapter 6 Mitigation Measures; Nos. 17, 18, 19, 20, and 21). Therefore, there are no changes to the impacts from hazardous materials as previously analyzed and disclosed in the Prior EA and 2009 Authorization Decision.

5.6 Land Use

As noted in Chapter 4, there are no land use or zoning changes since the 2009 Authorization Decision.

The Prior EA determined that impacts to land uses are primarily related to land acquisition necessary for the new railroad right-of-way (ROW), and potential land access restrictions on properties adjacent to the ROW. Effects include the permanent use and conversion of existing land uses for the ROW and the extension and realignment or reconstruction of small segments of area roadways. However, the Prior EA concluded that although there are lands in the Project area that are currently used for agricultural purposes, the land is primarily zoned for industrial use and Project land use conversions would be consistent with the City of Moses Lake's and Grant County's existing land use plans and policies. Acquisitions would be conducted in conformance with federal law.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes or changes to approved land use mitigation measures proposed under the Modified Alignment (see Chapter 6 Mitigation Measures; Nos. 22, 23, 24 and 25). Therefore, there are no changes to the land use impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.7 Section 4(f) Properties

The Prior EA did not identify or evaluate impacts to any Section 4(f) properties, which are defined as publicly owned public parks, recreation areas and wildlife or waterfowl refuges, or any publicly or privately-owned historic site listed or eligible for listing on the NRHP, because there was no USDOT involvement in the Project at that time. Because FRA has become a cooperating agency and must comply with Section 4(f) of the USDOT Act, potential uses of Section 4(f) properties are assessed in this DSEA. No publicly owned public parks, recreation areas or wildlife or waterfowl refuges are in the study area. However, the NRHP-eligible Columbia Basin East Low Feeder Canals system is addressed in this DSEA.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

Historic canals EL 20, EL 20U1, and RCD 180+182, as contributing features of the NRHP-eligible Columbia Basin East Low Feeder Canals system crossed by Modification 1B, are the only Section 4(f) resources associated with the Project. OEA determined that the installation of culverts at these canal crossing locations would result in only

minor physical alterations by introducing a maximum of 100 linear feet of culvert in each canal. These limited alterations would not diminish any aspect of the canals' physical integrity or ability to convey their historic significance, and would not diminish integrity of location, setting, workmanship, feeling, or association, and would only cause a minor alteration to integrity of materials and design (Jacobs 2017b). In OEA's June 17, 2019 finding of no adverse effect letter to the SHPO, OEA stated that FRA intended to make a *de minimis* impact determination upon SHPO concurrence with OEA's finding. The SHPO concurred with OEA's finding of no adverse effect, and also FRA's use of *de minimis* pursuant to Section 4(f), on June 18, 2019. See Appendix B.

5.8 Noise and Vibration

As noted in Chapter 4, the affected environment for noise and vibration has not changed since issuance of the 2009 Authorization Decision. The Prior EA analyzed noise impacts for all three segments using FRA guidelines to analyze impacts specifically from construction noise as well as impacts from ground-borne vibration generated by the interaction of steel wheels rolling on steel rails.

The prior study area for noise included all potential sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities and nursing homes) within 750 feet of the proposed rail corridor. This distance accounts for all potential sensitive receptors for a train traveling at 25 mph, including horn noise. The noise analysis for the proposed Project followed the STB's noise impact criteria of 65 dBA³⁷ and the noise assessment determined that noise would be greater than the STB's only within 20 feet of the tracks and within 750 linear feet of grade crossings. For vibration, the applicable FRA impact threshold for residences is 80 vibration decibels (VdB), which would occur at a distance of 40 feet from the track for a 25-mph locomotive-powered freight train. The threshold for institutional land uses (such as schools) is 83 VdB, which would occur at a distance of less than 30 feet from the track.

The Prior EA determined that there were no residences or other sensitive noise or vibration receptors located within the noise impact area (within 20 feet of the track) or within the vibration impact area (within 40 feet of the track) for any of the Project segments, and therefore there would be no significant adverse noise impacts from operation of the rail line. Any potential adverse construction process noise impacts on residential areas near construction sites would be mitigated (see Chapter 6 Mitigation Measures; Nos. 26 and 27).

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes and no changes to the construction noise mitigation measures for the Segment 1 and Segment 2 alignment modifications. There are no new residences or other sensitive receptors located within

³⁷ 49 C.F.R. § 1105.7(e)(6).

the noise or vibration impact areas. Therefore, there are no changes to the noise and vibration impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.9 Socioeconomics and Environmental Justice

As noted in Chapter 4, the population of the City of Moses Lake increased by approximately 30 percent and the median household income increased by 23 percent from the figures used in the Prior EA and the 2009 Authorization Decision. Notably, there has been a slight reduction in poverty levels in the City of Moses Lake and Grant County since 2000 while, at the same time, the minority population has increased by approximately 13 percent in the City of Moses Lake and by approximately 23 percent in Grant County since 2000.

The Prior EA determined that short-term construction process impacts included increased vehicle delays along existing roadways, with temporary effects to local traffic circulation and access to neighborhoods and businesses, caused by construction traffic/vehicles and construction of railroad crossings. However, there were no permanent effects to neighborhoods in Segment 1 or Segment 2 because the Project does not divide or separate any community or population groups, there are no residences within 200 feet of these track segments, access to neighborhoods and public services would be retained, and residential areas would not be separated from retail, service, or employment centers.

Regarding effects to minority and low-income populations, the Prior EA concluded that there were low-income and minority populations in Segments 2 and 3, however there were very few residences in the Segment 2 vicinity and none within 500 feet of the track; air quality or noise impacts would not disproportionately affect these populations; and no residences or businesses would be acquired for the rail line ROW in Segment 2 or Segment 3.

The Prior EA concluded that there would be no significant impacts to local communities during construction, impacts to neighborhoods in Segment 3 would be negligible, and there would be no significant adverse socioeconomic or community impacts and no disproportionately high or adverse impacts on minority or low-income communities.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes and no changes to mitigation measures relating to socioeconomic and environmental justice proposed under the Segment 1 and Segment 2 Modified Alignment (see Chapter 6 Mitigation Measures; Nos. 28, 29, 30, and 31). The modifications do not divide or separate any community or population groups, do not interfere with access to neighborhoods or public services, and do not separate residential areas from retail, service, or employment centers. There are no new residences within 200 feet of the Modified Alignment.

Regarding minority and low-income populations, there are no modifications proposed for Segment 3, and there are few residences near the Segment 2 alignment modifications and none within 500 feet of the track. None of the residences are within noise impact area (within 20 feet of the track) or within the vibration impact area (within 40 feet of the track) for any of the Project segments.

Therefore, there are no changes to the socioeconomic or community impacts, or to impacts on minority or low-income populations as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.10 Soils and Geology

As noted in Chapter 4, the affected environment for soils and geology has not changed since issuance of the 2009 Authorization Decision. The Prior EA determined that construction activities could result in short-term soils- and geology-related impacts from potential erosion of exposed soils in slope excavations or fills, potential shallow landslides and sloughing along Segment 1 at locations of deep cuts where shallow groundwater might exist, and landslides or erosion from poor drainage practices along the western end of Segment 1 east of Crab Creek.

However, the Prior EA determined that the erosion potential was relatively low for most of the disturbed areas and there would be no operational effects to soils and geology. Additionally, the Prior EA concluded that the underlying soils throughout the Project (sandy gravel and gravelly sand) are not typically subject to liquefaction³⁸ during earthquakes, and there would be no significant impacts from construction activities/erosion once mitigation measures were implemented (see Chapter 6 Mitigation Measures; Nos. 32, 33, 34, and 36).

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes and no changes to mitigation measures relating to soils and geology proposed under the Modified Alignment (see Chapter 6 Mitigation Measures; Nos. 32, 33, 34, and 36). There are no different soil types or geology underlying the proposed modifications, and there are no changes to the locations of slope excavations or fills. Therefore, there are no changes to impacts as analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.11 Traffic and Transportation

As noted in Chapter 4, there have been the following noteworthy changes to existing traffic volumes in Segments 1 and 2 since the Prior EA: in Segment 1, traffic volume on Road L NE has increased substantially while traffic volume on Wheeler Road has decreased. In Segment 2, traffic volumes have increased substantially on both

³⁸ Liquefaction is a phenomenon in which the strength and stiffness of soil is reduced by earthquake shaking, and commonly occurs in loose soils that are saturated with water.

Randolph Road and Tyndall Road NE. Notably, the largest changes have been in Segment 2, with traffic volume increases ranging from approximately 94 percent to nearly 250 percent, which are likely attributable to new industries and expansion of existing industries at the GCIA Employment Center/Port industrial area since 2009. The Original Alignment would construct new rail crossings at each of these roadways.

The Prior EA determined that construction process impacts included temporary traffic delays due to construction of the rail crossings and the movement of construction equipment on public roads. During rail operations, the Prior EA determined that traffic wait times could increase to a maximum of 70 seconds at gated at-grade rail crossings but would not be likely to occur during peak traffic hours due to the low volume of train traffic (e.g. one round-trip train per day). The Prior EA also determined that there was sufficient sight distance to allow vehicles to stop safely, and due to the low overall volume of vehicles on the roads, the line of cars waiting at a crossing would not be long enough to block more than one intersection at a time. Accordingly, the Prior EA concluded that the Project would have no significant impacts to traffic or transportation.

Potential Effects Resulting from Segment 1 Modifications

Modification 1B would result in the same temporary and operational traffic delays as the Original Alignment due to the movement of construction equipment on public roads and the construction of rail crossings at Road L NE and Wheeler Road. A design change from a diagonal crossing to a perpendicular rail crossing at Wheeler Road would improve vehicular sight distance, improving driver safety and resulting in a beneficial operational impact.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction and operational impacts on traffic (see Chapter 6 Mitigation Measures; Nos. 36, 37, 38, and 39). This DSEA proposes to impose these same mitigation measures on Modification 1B (see Chapter 6 Mitigation Measures). With the exception of the beneficial impact anticipated from improved safety at the Wheeler Road rail crossing, there are no changes to the impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

Potential Effects Resulting from Segment 2 Modifications

Modification 2B

As with the Original Alignment, Modification 2B would result in temporary traffic delays due to the movement of construction equipment on public roads and the construction of new rail crossings, and operational traffic delays due to the need for vehicles to intermittently wait at those crossing once rail use begins.

Modification 2B would construct two diagonal at-grade crossings at Randolph Road, one near the beginning/southern end of the Modified Alignment and the other near the northern end of the Modified Alignment. Modification 2B would also construct three

additional perpendicular at-grade rail crossings near the northern end of the Modified Alignment at Turner Road, Graham Road and Tyndall Road. Traffic wait times at these new at-grade rail crossings are expected to occur for less than 70 seconds during non-peak traffic hours. However, unlike the Original Alignment, there would be potential for the at-grade rail crossings at the northern end of Modification 2B (Turner, Graham and Tyndall Roads) to be blocked at the same time due to their proximity (approximately 500 feet to 1,000 feet apart). Since these will be ungated, at-grade rail crossings and the wait time at each crossing would be under 70 seconds, this would be an insignificant impact on vehicle traffic from rail operations associated with Modification 2B.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction impacts (see Chapter 6 Mitigation Measures; Nos. 36, 37, 38, and 39). This DSEA proposes to impose these same construction mitigation measures on Modification 2B (see Chapter 6 Mitigation Measures). There are no changes to the traffic impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

Modification 2C

As with the Original Alignment, Modification 2C would result in temporary traffic delays due to the movement of construction equipment on public roads and the construction of rail crossings at Tyndall Road and Road 7 NE. Similarly, during rail operations, Modification 2C would result in minor traffic wait times at the at-grade rail crossings. There would be no rail crossings of Randolph Road, Turner Road or Graham Road, reducing the number of at-grade rail crossings from five to two compared to Modification 2B.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction and operational impacts (see Chapter 6 Mitigation Measures; Nos. 36, 37, 38, and 39). This DSEA proposes to impose these same mitigation measures on Modification 2C). With the exception of beneficial impacts associated with a reduced number of at-grade rail crossings, there are no changes to the impacts on traffic as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.12 Visual Quality

As noted in Chapter 4, the affected environment for visual quality has not changed since issuance of the 2009 Authorization Decision. The Prior EA determined that most construction process impacts to visual quality would be temporary or relatively short-term and therefore insignificant, with the primary effect occurring during clearing and grading activities. Also, overall visual quality along the length of the rail corridor would return to near pre-existing conditions after rail construction.

The Prior EA determined that there would be no adverse visual quality impacts in Segment 2, however three viewpoints along Segment 1 would be degraded: views along Wheeler Road due to bisecting agricultural crop fields with the rail corridor; views from the western side of the Millerville neighborhood near the eastern side of Crab Creek due to the addition of new tracks; and views from the SR 17 highway bridge over Parker Horn due to adding of bridge structural elements to the overall natural setting at the rail crossing over Crab Creek. Degradation of these views was considered insignificant because these views already included urban, industrial, and transportation elements, and disturbed areas would be mitigated by revegetation after completion of construction.

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

There are no construction process or operational changes no changes to approved mitigation measures and no different or additional viewpoints associated with the Segment 1 and Segment 2 Modifications (see Chapter 6 Mitigation Measures; No. 40). The proposed modifications are relatively minor and do not substantially change the location of the rail line. Therefore, there are no changes to the visual quality impacts previously analyzed and disclosed in the 2009 Final EA and the 2009 Authorization Decision.

5.13 Water Resources

As noted in Chapter 4, there are no water resources in Segment 2 or Segment 3, and there are two changes to the affected environment for water resources in Segment 1 since the Prior EA -- Lower Crab Creek is not impaired by fecal coliform bacteria, and there is a potential dissolved oxygen impairment at the Crab Creek crossing location.

The Prior EA determined that there would be no significant impacts to water resources during rail operations. However, construction process activities in Segment 1 were determined to have the potential to impact water resources from increased turbidity and sedimentation of downstream waters at crossings of Crab Creek and irrigation canals, increased pH if water comes into contact with curing concrete during bridge construction at Crab Creek, potential spills of hazardous materials, increased flooding from Crab Creek floodplain encroachment, and greater peak flows from an increased amount of impervious surface. Of these, the Crab Creek bridge site was determined to have the greatest potential for construction impacts. However, the Prior EA also noted that there would be less potential for sedimentation and turbidity impacts because the creek channel is narrower than the location of an alternative bridge crossing over Parker Horn, and there would be fewer impacts to floodplain and wetland areas compared to a crossing at Parker Horn.

Accordingly, the Prior EA concluded that potential adverse impacts to water resources during construction would be minimized or avoided once mitigation measures were implemented (see Chapter 6 Mitigation Measures; Nos. 41, 42, 43, 44, 45, 46, 47, 48, 49, and 50).

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

The proposed modifications would not change the construction process or operational impacts on water resources identified during the Prior EA.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction process and operational impacts. This DSEA proposes to impose these same mitigation measures on the Modified Alignment (see Chapter 6 Mitigation Measures; Nos. 41, 42, 43, 44, 45, 46, 47, 48, 49, and 50:). Therefore, there are no changes to the water resource impacts as previously analyzed and disclosed in the Prior EA and the 2009 Authorization Decision.

5.14 Wetlands

As noted in Chapter 4, there are no wetlands in Segment 2 or Segment 3, there are several changes to the identified wetlands in Segment 1, and wetland delineation and rating methodology has changed since the Prior EA. These changes include an upgraded rating/higher functional value for the wetland located along the east side of Crab Creek (Wetland C), a newly identified portion of a wetland along the west side of Crab Creek (Wetland E), and the disappearance of a former wetland west of Crab Creek (Wetland D). There are no changes to two other identified wetlands in Segment 1 – Wetland A and Wetland B – both located east of Crab Creek and north of Wheeler Road.

The Prior EA determined that there would be direct impacts to wetlands caused by the placement of fill to construct the bridge over Crab Creek and the overall rail grade, as well as indirect impacts caused by fragmentation of Wetlands A and C. The Prior EA also determined that there would be indirect effects to wetlands during rail operations and maintenance (such as vegetation removal and fluid leakage from train traffic and operation) that could hinder wetland functions. The Prior EA concluded that construction and operation impacts would be mitigated through implementation of mitigation measures and required regulatory permit conditions issued by USACE and Ecology (see Chapter 6 Mitigation Measures; Nos. 51, 52, 53, 54, 55, and 56).

Potential Effects Resulting from Segment 1 and Segment 2 Modifications

Modification 1B would shift the rail line approximately 150 feet to 200 feet westward through Wetland A, limiting the extent of fragmentation and reducing the amount of fill by 1.33 acres (from 1.67 acres calculated in the Prior EA to 0.34-acre in the current design). Although a new wetland is present at the Crab Creek bridge crossing (new portion of Wetland E along the west side of the creek), bridge design refinements have limited the increase of fill to Wetlands C and E to 0.08-acre (from 0.43-acre of fill to Wetland C calculated in the Prior EA to 0.51-acre of fill to both Wetland C and E in the current design). Therefore, the proposed modifications would result in a net reduction of 1.25 acres of wetland fill. However, due to changes in wetland rating methodology

since the Prior EA, both Wetlands C and E have higher ratings/functions that require slightly more, and potentially different, mitigation measures than those imposed by the STB in 2009. Additionally, more recent wetland mitigation guidance from USACE and Ecology, as well as the absence of Wetland D, also suggest a different mitigation approach for the Project's wetland impacts than those originally imposed by the STB.

The mitigation measures imposed by the 2009 Authorization Decision would avoid or minimize potential adverse construction process and operational impacts to wetlands. This DSEA proposes to impose some of the same STB-approved mitigation measures on the Modified Alignment, as applicable, as well as introduce new and/or different mitigation measures according to current regulatory agency guidance (see Chapter 6 Mitigation Measures; Nos. 51, 52, 53, 54, 55, and 56). Once applicable mitigation measures are implemented from the 2009 Authorization Decision and this DSEA, there would be no significant adverse impacts to wetlands.

5.15 Cumulative Effects

The purpose of this section is to update the cumulative effects analysis in the 2009 Final EA and to identify additional projects that were not included in the 2009 analysis. This section provides a description of these projects and evaluates: (1) whether these projects could affect one or more of the environmental resources examined in this DSEA for the Modified Alignment; and (2) whether the NCBRP Modified Alignment might have adverse impacts on any of these projects.

The CEQ regulations for implementing NEPA require agencies to consider cumulative impacts. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. While individual project effects may be minor when viewed in the individual context of direct and indirect effects, they can add to the effects of other actions and eventually lead to a measurable environmental change. Cumulative effects can have a positive or negative effect, depending on the environmental resource.

As with the Project's 2009 Final EA, this DSEA's cumulative effects analysis addresses wetlands, storm water, and greenhouse gases (GHGs) in a geographic boundary set at 0.5 miles from the track. Impacts to wetlands and storm water runoff are addressed where proximity might result in cumulative impacts to wetlands or the natural flow regimen of surface waters. Impacts to other environmental resources are considered where necessary.

The GHG analysis considers the entire central Washington area due to concerns regarding cumulative increases in GHGs in the Project area, Washington State, and throughout the world. GHGs associated with transportation are mainly water vapor, carbon dioxide, methane, and nitrous oxide. Carbon dioxide makes up the bulk of the GHG emissions from transportation sources. Motor vehicles are a significant source of GHG emissions and contribute to global climate change primarily through the burning of gasoline and diesel fuels. The Washington State Legislature passed Senate Bill 6001 in

May 2007 which adopted the Governor's climate change goals. The law aims to achieve 1990 GHG levels by 2020, a 25 percent reduction below 1990 levels by 2035, and a 50 percent reduction by 2050. Technical guidance and regulations to implement these goals were under development at the time of the Prior EA and the 2009 Authorization Decision for the NCBRP.

The time period for the cumulative effects analysis in this DSEA is set from present through 2040. This is a reasonable timeframe because planning level data loses accuracy and becomes speculative beyond 2040.

Previously Identified Projects

The 2009 Final EA analyzed impacts from the following projects in the vicinity of the Project that were reasonably foreseeable through 2030 and that could have a cumulative or combined adverse effect on one or more environmental resources:

- Guardian Fiberglass Insulation Manufacturing Plant
- REC Silicon IV
- U.S. Bureau of Reclamation (USBR) Potholes Reservoir Supplemental Feed Route Project
- USBR Odessa Subarea Special Study
- Kayser Cemetery
- Blackstone/OTR, LLC Tire Assembly Warehouse
- City of Moses Lake Shoreline Master Program (SMP) Update
- Crittenden Major Plat and Proposed Comprehensive Plan Amendment

In the 2009 Final EA, STB determined that:

- The NCBRP, Guardian Fiberglass Insulation Manufacturing Plant, REC Silicon IV, Kayser Cemetery, Blackstone/OTR Tire Assembly Warehouse, and the Crittenden Major Plat are required to comply with current storm water regulations to avoid or minimize potential impacts to water resources; storm water would be managed through implementation of Best Management Practices (BMPs) and permit conditions; and mitigation measures contained in the 2009 Authorization Decision would avoid or minimize potential effects to wetlands and water resources from the NCBRP.
- The USBR Potholes Reservoir Supplemental Feed Route Project, located two miles north of the NCBRP, would have no effect on potential flows in Crab Creek during flood events in the Moses Lake area; would have minor impacts, if any, on water resources; and would not result in increased vehicle traffic or other sources of carbon emissions, and therefore would not contribute to GHG emissions.
- An EIS was underway for the USBR Odessa Subarea Special Study at the time of the 2009 Final EA and the 2009 Authorization Decision for the NCBRP. Completed in 2012, the USBR Final EIS addressed the possibility of continued

phased development of the Columbia Basin Project irrigation network to deliver surface water to lands currently using groundwater in the Odessa Subarea. The aquifer in the Odessa Subarea is declining to such an extent that the ability of farmers to irrigate their crops is at risk. Domestic, commercial, municipal, and industrial uses and water quality are also affected.

The USBR Final EIS and 2013 ROD selected an alternative that would provide CBP surface water to approximately 70,000 acres of lands north and south of I-90, and concluded that there would be benefits to groundwater resources, irrigated agriculture, and socioeconomics; there would be minimal to no effects to surface waters and water quality, geology, fisheries and aquatic resources, air quality, traffic and transportation, noise, hazardous materials, and environmental justice after all regulatory requirements and BMPs are fully implemented; and there would be unavoidable adverse impacts to soils, vegetation, wetlands, wildlife and wildlife habitat (including threatened and endangered species), land use, recreation, energy, visual resources, and cultural and historic resources even after application of reasonably practicable avoidance and other mitigation measures (USBR 2013). The project is not expected to contribute to cumulative effects with the NCBRP due to its location five miles northeast of the City of Moses Lake.

- The Kayser Cemetery would not impact any critical areas, including wetlands or wetland buffers, and would be designed to comply with all applicable environmental regulations. The project would result in minor increases in vehicle traffic, and therefore would result in a minor increase in GHG emissions.
- The Blackstone project would not have an impact on any critical areas, including wetlands or wetland buffers, and would comply with current storm water regulations to avoid or minimize potential impacts to water resources. Project construction would result in temporary air and noise impacts. The warehouse operation would result in regular automobile emissions from truck transportation, employee automobile traffic, and material handling equipment. These operational activities would result in a minor increase in GHG emissions. GHG emissions could be lessened if the company takes advantage of the rail service provided by the NCBRP, which would reduce the need for truck transportation.
- The City of Moses Lake's SMP update was underway at the time of the 2009 Final EA and the 2009 Authorization Decision for the NCBRP and took effect in January 2017. The updated SMP would have positive cumulative effects on shoreline areas in the vicinity of the NCBRP by promoting protection and restoration of shoreline resources and preventing the net loss of ecological functions, and the NCBRP has been designed to comply with the updated SMP. The updated SMP would not result in increased vehicle traffic or other sources of carbon emissions, and therefore would not contribute to GHG emissions.

- Environmental impacts of the Crittenden Major Plat were not known at the time of the 2009 Final EA and the 2009 Authorization Decision for the NCBRP because there was no information available about specific industrial enterprises to be located there. The property owner had not specified the light industrial uses or future owners of the platted parcel because the Major Plat complied with city and county zoning and land use regulations. Uses at the new industrial park could result in an increase in GHG emissions, but insufficient information existed in 2009 to determine the extent of this contribution. Impacts from GHG emissions would be lessened if companies locating at the industrial park would utilize rail service provided by the NCBRP to reduce the need for truck transportation.

The City rejected the Comprehensive Plan Amendment that proposed to re-designate two parcels from Light Industrial to Medium Density Residential, and future plans for the property were not known in 2009; therefore, there were no known impacts to environmental resources associated with the Comprehensive Plan Amendment.

Additionally, the STB determined in the 2009 Final EA that the above-described projects:

- Would not have a cumulative effect on wildlife habitat or habitat fragmentation; habitat would be lost incrementally in the region as development occurred according to city and county land use designations and zoning; and adverse effects to wildlife habitat would be mitigated as required by federal, state and local agencies.
- Would not have a significant cumulative effect on traffic congestion; as development occurred in the region, additional vehicles would travel along area roadways, and traffic congestion would likely increase over time; and traffic congestion would be monitored by the city and county.
- Would not have a significant cumulative effect on visual quality; as properties were developed in the study area, the visual character of the area would change from a primarily rural appearance to one or more light industrial and urban uses; and future development in the region is planned by the city and county and visual quality of developments would continue to be evaluated during their review and permitting processes.

Newly Identified Projects

The following projects in the vicinity of the NCBRP that are new since the 2009 Final EA and the 2009 Authorization Decision, and/or are reasonably foreseeable through 2040, and that could have a cumulative or combined adverse effect on one or more environmental resources, are all associated with the Port:

- Expansions of GCIA Employment Center
- Westside Employment Center

- Runway LOS remodel
- Midfield Training Facility
- Industrial Wastewater Pond Expansion
- existing industrial tenants and warehouses

Of the above projects, only the GCIA Employment Center and expansions of existing industrial tenants/warehouses would be located within 0.5-mile of the Segment 2 Original Alignment and Modifications 2B and 2C.

The GCIA Employment Center is located adjacent to and east of the GCIA on approximately 1,258 acres comprised of properties owned by the Port, the City of Moses Lake, and Grant County, and is intended for development as an employment center to strengthen the existing aerospace and manufacturing cluster at and near the airport. The project would construct infrastructure, buildings, and other improvements over a 20- year build-out period to 2035. Approximately 10.1 million square feet of new light manufacturing/technology building and new aviation development/revenue support building areas would provide capacity for approximately 19,000 new employees according to the Employment Center 2015 Final EIS (Port 2015). There are two new developments at the Employment Center since the Prior EA and the 2009 Authorization Decision – Aviation Technical Services that provides aircraft maintenance to more than 450 aircraft per year, and SGL/BMW Automotive Carbon Fibers that manufactures carbon fiber thread for electric vehicles (Port 2015).

Environmental impacts could occur during construction and operation of the GCIA Employment Center, including potential impacts to air quality, cultural resources, energy, fish/wildlife/vegetation, hazardous materials, land use, noise, socioeconomics, soils, visual quality, and water resources (depending on the specific enterprises to be located at the Employment Center). Required compliance with current environmental regulations and applicable federal, state, and/or local permit conditions, as well as implementation of mitigation measures, would avoid or minimize impacts to these resources (Port 2015).

There could be cumulative effects on GHG emissions as development at the Employment Center reaches full build-out. The exact cumulative GHG emissions cannot be calculated with the information available, but there would likely be an increase in emissions over time as properties developed, vehicle traffic and congestion increased, and new facilities are operated with electricity. GHG emissions could be lessened if companies take advantage of the rail service provided by the NCBRP, which would reduce the need for truck transportation.

Expansions of existing industrial tenants and warehouses can be expected at the Port. Environmental impacts could occur during construction and operation, including potential impacts to air quality, cultural resources, energy, fish/wildlife/vegetation,

hazardous materials, land use, noise, socioeconomics, soils, visual quality, and water resources, and there could be cumulative effects on GHG emissions (depending on the specific enterprises to be expanded).

As discussed in Chapter 2 of this DSEA, the purpose of the NCBRP is to enhance opportunities for economic development and to attract new rail-dependent businesses to lands designated for industrial development in the northern part of the City of Moses Lake and east of the GCIA. Any future development in these areas would be expected to contribute incrementally to the cumulative GHG emissions in the region. Additionally, although construction and operation of the NCBRP would also produce GHGs, the Project would reduce carbon dioxide emissions by approximately 1,854 tons per year compared with shipping the same amount of freight by truck (STB 2008). Further, while overall GHG emissions in the State of Washington increased by approximately 6 percent from 2012 to 2015, rail transportation contributed less than one percent (0.9 percent) of statewide GHGs during the same time period (Ecology 2018).

Chapter 6 Mitigation Measures

This Chapter sets forth both the final mitigation measures that were imposed on the Port by the STB in its 2009 Authorization Decision and new (and revised) mitigation measures recommended by OEA in response to the Port's proposed modifications to the Project since 2009. This Chapter recommends these additions and revisions, and one deletion, to address the Port's proposed modifications to the rail alignment authorized in 2009.

The mitigation measures recommended by OEA in this DSEA are set forth below organized by environmental resource area. Mitigation measures imposed in 2009 and recommended again here are set forth in normal typeface below. New, revised, or deleted mitigation measures are set forth in bold typeface and are noted as being new, revised, or deleted. (The resource area headings are also in bold but are not noted as revised measures.) OEA is proposing revision of 15 conditions, addition of three new conditions, and deletion of one condition. The revised conditions are:

- Nos. 6 and 7 under Cultural, Historic, and Archaeological Resources;
- Nos. 8, 9, 10, 12, and 13 under Fish, Wildlife, and Vegetation;
- No. 29 under Socioeconomics and Environmental Justice;
- No. 36 under Traffic and Transportation;
- Nos. 48 and 49 under Water Resources; and
- Nos. 53, 54, and 55 under Wetlands.

The three new conditions are added to No. 17 under Hazardous Materials.

The condition recommended for deletion is No. 15 under Fish, Wildlife, and Vegetation.

Air Quality

1. The Port³⁹ shall implement best management practices and appropriate fugitive dust suppression controls, such as spraying water on haul roads adjacent to construction sites and exposed soils, street sweeping, covering loaded trucks, and washing haul trucks before they leave the construction site.
2. The Port shall comply with the requirements of all applicable Federal, state, and local regulations regarding open burning and the control of fugitive dust related to rail line construction activities.
3. The Port shall revegetate areas disturbed during construction with native grasses or other appropriate native habitat as soon as possible after construction activities are completed, to minimize windblown dust.

³⁹ It is understood that the Port may utilize contractors, in which case the Port shall ensure that its contractor implement the mitigation measures in this chapter.

4. The Port shall shut off construction equipment when it is not in use to reduce idling emissions.
5. The Port shall verify that construction equipment is properly maintained and regularly inspected and that required pollution control devices are in good working condition.

Cultural, Historic, and Archaeological Resources

REVISED MEASURE 6: The Port shall comply with the terms of the June 2009 Programmatic Agreement (PA), as amended on July 3, 2019, which sets forth the steps for the identification and evaluation of historic properties, including archaeological sites, as well as the mitigation of any adverse effects. The PA addresses unanticipated historic or cultural properties, archaeological sites, human remains, funerary items, or assorted artifacts if discovered during Project construction.

REVISED MEASURE 7: Combined into revised No. 6.

Fish, Wildlife, and Vegetation

REVISED MEASURE 8: The Port shall abide by construction timing and guidelines stipulated by the Washington Department of Fish and Wildlife (WDFW) through the Hydraulic Project Approval (HPA). If there are differences between the measures in this DSEA and the conditions of the HPA, the HPA shall take precedence.

REVISED MEASURE 9: The Port shall consult with the WDFW and comply with its applicable laws and regulations so that Project-related construction activities are conducted in a manner that avoids or minimizes impacts to birds and bats (e.g., roosting bald eagles, over-wintering waterfowl, migrating shorebirds, foraging bats, and nesting birds).

REVISED MEASURE 10: To minimize disturbance to wildlife and vegetation to the maximum extent possible, the Port shall limit construction activities, including staging areas and vehicle turnaround areas, to the rail right-of-way or within previously disturbed areas to the maximum extent possible. Existing vegetation shall be preserved to the maximum extent possible. The Port shall replant disturbed areas with native flora and vegetation unless it would impair rail operations or maintenance.

11. To preserve water quality in aquatic or wetland habitat, the Port shall implement measures to prevent uncured concrete from coming into contact with surface waters, and all refueling shall occur more than 200 feet from a water body or wetlands.

REVISED MEASURE 12: The Port shall minimize the impacts that could result from over-water structures, such as the bridge crossing Crab Creek. To minimize or avoid impacts to walleye spawning, the Port shall comply with measures specified by the WDFW. Such measures may include, but are not limited to, avoidance of work within the waters of Crab Creek/Parker Horn between March 1 and early July.

13. To minimize or avoid impacts to nesting burrowing owls, the Port shall:

REVISED MEASURE 13, PART A: Conduct a directed survey for burrowing owl nests within 0.5 miles of the areas to be disturbed by construction. Surveys shall be done during the breeding season (April to June) and shall abide by a WDFW-approved protocol. Survey results shall be submitted to WDFW prior to the start of construction. If active nests or nests that could become active are located within the track alignment footprint, WDFW may require artificial burrow installations. Artificial burrows would be provided by WDFW and may be installed within the Project right-of-way.

REVISED MEASURE 13, PART B: Avoid new construction work in areas within 200 meters of identified nesting areas close to Segment 1 and Segment 2 between February 15 and September 25. If construction activities take place during this period, then the Port shall consult with WDFW to ensure that construction activities are conducted in a manner that avoids or minimizes impacts to burrowing owls.

14. To minimize or avoid impacts to bald eagle roost trees, the Port shall locate the Project alignment and support areas, such as staging areas, away from roost trees. If clearing of any roost trees is required, the Port shall create artificial roosts in an appropriate location near the existing roost.

DELETED MEASURE 15: Deleted this mitigation measure because the northern leopard frog and its habitat are no longer present in the Project area.

16. To minimize or avoid impacts to Yuma myotis and Townsend's big-eared bats, the Port shall install bat boxes (alternative bat roosting structures) to allow bat roosting near the Crab Creek crossing.

Hazardous Materials

17. Prior to initiating any construction activities, the Port shall consult and coordinate with the USEPA Region 10 Office and Ecology concerning appropriate investigation, if more is needed, and mitigation, as may be required, for the sites listed below. If more investigation is needed, such investigation shall be conducted by a qualified environmental professional, as defined by ASTM International and the EPA.

- a. On Segment 1 and Alternative 1A, the Bernard Cattle Company site at the southwest corner of Broadway and Road 4 NE (Cherokee Road).

NEW. On Segment 1 and Alternative 1A, the Francis J. Jenny UST site north of Road 4 NE between the Bernard Cattle Company site and Crab Creek.

- b. On Segment 1, the Grant County Road District No. 2 facility on the south side of Wheeler Road (Road 3 NE) just east of Road L.
- c. On Segment 2, the Randolph Road Base Dump (EPA Site No. 8), and the Paint Hangar Leach Pit (EPA Site No. 22).

NEW. On Modification 2B, Moses Lake Industries Inc.

- d. On Segment 2, the Boeing polychlorinated biphenyl cleanup area located on Tyndall Road.

NEW. On Modification 2C, the Grant County Shooting Range, the Dumpster Wash Area, and the Base Closure Landfill.

- 18. The Port shall coordinate with the operator of the rail line to develop a Spill Prevention Control and Countermeasures (SPCC) plan and an emergency response plan. In a manner consistent with applicable legal requirements, the SPCC plan and emergency response plan shall address the following:
 - a. Definition of what constitutes a reportable spill.
 - b. Requirements and procedures for reporting spills to appropriate government agencies.
 - c. Equipment available to respond to spills and where the equipment will be located.
 - d. Training of personnel and training records.
 - e. List of government agencies and response personnel to be contacted in the event of a spill.
 - f. Measures to address the transport of hazardous materials by rail.
- 19. The Port shall observe the requirements of FRA and other Federal, state, and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during construction.

20. The Port shall ensure that the operator of the rail line observes the requirements of the FRA and other federal, state, and local applicable requirements concerning the handling and disposal of any hazardous waste or hazardous materials and clean-up in the event of a spill during rail operation⁴⁰.
21. The Port shall ensure that locomotives associated with Project operations are checked regularly for leaks.

Land Use

22. To the maximum extent practicable, the Port shall advise businesses and the public of construction schedules in advance to minimize disruptions.
23. The Port shall abide by all requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. § 4601 et seq.). Relocation assistance shall be provided for any commercial properties acquired for the Project.
24. To the extent practicable, the Port shall negotiate with affected property owners to minimize any Project-related severance impacts, including impacts to irrigation systems.
25. The Port shall submit form 7460 (Notice of Proposed Construction or Alteration) to the Federal Aviation Administration prior to construction.

Noise and Vibration

26. During construction, the Port shall ensure that manufacturer-recommended mufflers have been installed on all diesel-powered equipment and that all equipment is kept in good operating condition.
27. The Port shall ensure that construction within the boundaries of the City of Moses Lake will not occur between 10:00 p.m. and 7:00 a.m. without prior approval by the City Council.

⁴⁰ The requirements of the Department of Transportation Hazardous Materials Regulations, 49 C.F.R. Parts 171-180, apply to the transportation by rail of hazardous waste and other hazardous materials, and are subject to enforcement by FRA.

Socioeconomics and Environmental Justice

28. During Project construction, the Port shall comply with applicable state, county, and city regulations or requirements regarding detour signs and the routing of construction vehicle traffic. The Port shall also provide proper notification of the construction schedule to the public and the nearest fire department and emergency response units.

REVISED MEASURE 29: The Port shall work with the operator of the rail line, the City of Moses Lake, community organizations, and Longview Elementary School to arrange for a rail safety program, such as Operation Lifesaver,⁴¹ to be offered at least once per year as long as the Port operates trains over the rail line.

30. The Port shall coordinate with the operator of the rail line and the Moses Lake School District to help identify and implement practicable safe crossings and other potential rail safety measures.
31. On Segment 3, the Port shall upgrade the existing crossing gate structures and signs to help provide better advance warnings of approaching trains for pedestrians and drivers.

Soils and Geology

32. The Port shall construct the proposed Project in accordance with the American Railway Engineering and Maintenance of Way Association guidelines.
33. The Port shall mitigate the potential liquefaction of loose or soft alluvium or other soils during an earthquake by designing foundation elements for reduced soil strength, accounting for potential ground displacements, and/or implementing ground improvements.
34. The Port shall minimize sedimentation and erosion in the Project area by employing best management practices during construction.
35. The Port shall revegetate disturbed areas with native grasses as soon as practicable after Project construction ends.

⁴¹ Operation Lifesaver seeks to educate drivers and pedestrians about making safer decisions at crossings and around railroad tracks. Information is available on-line at <https://www.oli.org/>.

Traffic and Transportation

REVISED MEASURE 36: The Port shall ensure, to the extent possible, that all construction vehicle activity associated with the construction of the proposed Project occurs during daytime hours.

37. The Port shall consider school bus schedules in planning and executing the necessary road work.
38. The Port shall consult with appropriate Federal, state, and local transportation agencies to determine the final design of the grade crossings and associated warning devices.⁴²
39. The Port shall comply with applicable FRA track maintenance and inspection standards or ensure that the operator of the rail line does so.

Visual Quality

40. To the extent practicable, the Port shall be responsible for the following:
 - a. Ensuring that only the vegetation that needs to be cleared for construction purposes is removed.
 - b. Using native flora and vegetation when replanting disturbed areas.
 - c. Adding compost to the soil before seeding or planting in order to increase plant establishment.
 - d. Ensuring that cut-and-fill slopes are blended with the form and line of the existing landscape through grading practices to enhance visual quality.
 - e. Ensuring that vegetative buffers, such as trees or bushy shrubs, are located near residential areas to help screen the railroad corridor from viewers. These buffers should be located where additional vegetation would not impair visibility at road crossings.

⁴² As part of the administration of the USDOT 2017 FASTLANE grant, which is being used to fund final design and construction of the Project, the Port shall submit engineering design sets to FRA for review and approval.

Water Resources

41. The Port shall ensure that any bridge constructed over Crab Creek is designed such that stormwater runoff does not enter the water body.⁴³
42. For Project-related construction, the Port shall comply with the stormwater management requirements of all federal, state, and local regulations regarding stormwater management, including the Ecology *Stormwater Manual for Eastern Washington* and National Pollutant Discharge Elimination System requirements.
43. The Port shall prepare an approved Stormwater Site Plan and a Temporary Erosion and Sediment Control Plan prior to construction. The temporary erosion control measures shall be inspected regularly by the Port and maintained as necessary to ensure that these measures are functioning properly.
44. Consistent with applicable legal requirements, the Port shall coordinate with the operator of the rail line to prepare a SPCC plan to minimize any impacts associated with accidental spills of hazardous materials. The SPCC plan will require the development of a spill contingency plan and will provide for the implementation of containment and other countermeasures that could prevent spills from reaching navigable waters or wetlands.
45. The Port shall implement the following erosion and sedimentation controls:
 - a. Installing silt fencing with geotextile material along the proposed Project area perimeter to filter sediment from unconcentrated surface water runoff.
 - b. Placing catch basin inserts in all new and existing catch basins receiving runoff from the disturbed areas of the Project.
 - c. Placing straw bales in paths of concentrated runoff to filter sediment.
 - d. Preserving existing vegetation to the maximum extent possible.
 - e. Revegetating areas disturbed during construction with native grasses, where practicable. These areas shall be reseeded as soon as practicable following construction to prevent erosion.
 - f. Covering exposed soils with plastic or straw in the event of a major storm.

⁴³ As part of the administration of the USDOT 2017 FASTLANE grant, which is being used to fund final design and construction of the Project, the Port shall submit engineering design sets to FRA for review and approval.

- g. Constructing temporary ditches, berms, and sedimentation ponds to collect runoff and prevent discharge of sediment into drainages, streams, or wetlands.
 - h. Installing stabilized construction entrances and exits⁴⁴ for truck access to the construction site to protect existing roadways and railroad tracks.
 - i. Cleaning any storm sewer facilities affected by Project construction to prevent sediment from leaving the site after construction is completed and erosion control measures are removed.
46. If the erosion and sediment control measures described above are not adequate to control erosion and sedimentation, all work shall cease and the Port shall consult with Ecology regarding additional erosion control or restoration measures to protect adjacent properties.
47. To avoid or minimize impacts to water resources during construction, the Port shall implement the following measures:
- a. Consulting with the USACE and complying with the requirements of the Section 404 permitting process (Segment 1/Alternative 1A only).
 - b. Consulting with Ecology and complying with the requirements of the Section 401 Water Quality Certification process (Segment 1/Alternative 1A only).
 - c. Locating equipment staging areas further than 200 feet from water bodies (Parker Horn, Crab Creek, or wetlands).
 - d. Leaving in place erosion control measures at culvert construction sites until the permanent culvert construction process is completed.
 - e. Coordinating with farmers and/or agricultural businesses regarding drainage issues that might arise.
 - f. Applying noxious weed control measures by an appropriately licensed contractor, using herbicides approved by the EPA's Region 10 Office. Herbicides shall not be applied during periods of high wind.

⁴⁴ A stabilized construction entrance involves placing blacktop or gravel along the edge of the roadway to avoid erosion or displacement of soil where trucks access and leave the roadway.

48. To prevent non-sedimentation pollutants (such as hazardous materials) from entering water bodies, the Port shall implement the following measures:
- a. Handling and disposing of all pollutants used on-site during construction in a manner that does not contaminate stormwater, wetlands, irrigation canals, Parker Horn, or Crab Creek.
 - b. Establishing staging areas for equipment repair and maintenance at least 200 feet from all wetlands or water bodies.
 - c. Inspecting all construction equipment regularly for any fuel, lube oil, hydraulic fluids, or antifreeze leaks. If leaks are found, the Port shall immediately remove the equipment from service and repair or replace it and remediate the spill.
 - d. Disposing any washout from concrete trucks in a manner that avoids dumping it into storm drains or onto soil or pavement.
 - e. Ensuring that thinners and solvents are used at least 200 feet from wetlands or water bodies. Capturing, containing, and properly disposing of thinners and solvents.
 - f. Requiring that fuel trucks maintain a minimum distance of 200 feet from water bodies and fueling construction vehicles away from sensitive areas, such as areas of permeable soils where a spill could more easily migrate to surface water.
 - g. Designing staging areas to capture all runoff and/or spills.

REVISED MEASURE 48, PART H: On-site excavated material, and/or clean structural rock from local commercial quarries that meets the engineering design criteria for use in railroad construction, may be used for fill. On-site excavated materials used for fill shall be tested before it is placed into surface water to ensure it is free of polluting materials. On-site excavated material shall not be used for fill if polluting materials are found and shall be removed from the site using Best Management Practices (BMPs).

49. The Port shall implement the following construction-related mitigation measures at the Crab Creek crossing:

REVISED MEASURE 49, PART A: Isolating cast-in-place concrete bridge piers or abutments from water in Crab Creek for seven days to allow the concrete to cure and to avoid toxicity to aquatic life. Uncured or wet concrete shall not come into contact with flowing waters. Any isolated water that comes into contact with wet concrete and that has a pH greater than nine shall be pumped out and disposed of appropriately.

- b. Consultation with USACE, Ecology, and WDFW, and compliance with the requirements of the Clean Water Act Section 404 permit, the Section 401 water quality certification, and the HPA.
50. To minimize the operational effects of the proposed Project on water resources, the Port shall implement the following railroad practices, or ensure that the operator of the rail line does so:
- a. Develop a bridge maintenance plan in compliance with FRA regulations.
 - b. Regularly check locomotives associated with the proposed operations to identify and repair fluid leaks or discharges.

Wetlands

- 51. Prior to submittal of wetland permit applications to appropriate Federal, state, and local agencies, the Port shall perform additional field work and conduct analysis for the properties that were previously unavailable for wetland assessment.
- 52. The Port shall avoid or minimize disturbance to wetland areas whenever possible during construction.

REVISED MITIGATION 53: The Port shall not allow construction staging areas in wetlands, including wetlands located within the Project right-of-way.

- 54. The Port shall prepare a Wetland Mitigation Plan to describe measures to avoid and minimize impacts to wetlands. The following measures shall be included:

REVISED MEASURE 54, PART A: Compensating for unavoidable impacts by creating, restoring, or enhancing existing wetlands, or by purchasing compensatory wetland mitigation credits at an approved Wetland Mitigation Bank.

- b. Adhering to current agency guidance on wetland mitigation, Wetland Mitigation in Washington State, as well as guidance in the City of Moses Lake's Shoreline Management Master Plan and the Critical Areas Ordinance (for wetlands within the city), and complying with replacement ratios, buffer width, site selection criteria, and other criteria presented in this guidance.
- c. Identifying a suitable off-site mitigation site.
- d. Designing bridge span widths, fill slope angles, and the alignment to minimize impacts to wetlands and other aquatic resources.

REVISED MEASURE 54, PART E: Restoring disturbed areas in native plant communities near Wetland A and in the Crab Creek area to improve habitats and buffer wetlands.

- f. Including habitat restoration to the extent practicable in the design of the proposed Crab Creek bridge to offset loss of wildlife habitats.

REVISED MEASURE 55: The Port shall mitigate wetland impacts at an available and approved Wetland Mitigation Bank if this is the preferred mitigation method of USACE and Ecology and shall comply with additional mitigation measures, if any, required by these agencies and the City of Moses Lake. If using a Wetland Mitigation Bank, the Port shall prepare a Mitigation Bank Use Plan that describes the appropriate categories, functions, and acreage of each impacted wetland and buffer and describes cost, credit ratio calculations, and available number of credits for purchase. The following impacted wetlands in Segment 1 shall be mitigated at an approved Wetland Mitigation Bank: Wetland A, Wetland B, Wetland C and Wetland E if the Port is required to do so by USACE, Ecology, or the City of Moses Lake.

- 56. The Port shall ensure that irrigation ditches and canals are either avoided by spanning both banks with the crossing structure, or that a culvert is installed to allow water to flow beneath the rail fill.

Permit Conditions

- 57. Conditions of all permits shall be included in any construction documents that the Port provides to contractors.

Chapter 7 Conclusion

Based on the analysis in this DSEA, STB's OEA, and FRA conclude that the proposed construction, acquisition, and operation of the NCRBP, as conditioned by the STB and FRA, would not result in any significant environmental impacts, therefore, an Environmental Impact Statement is unnecessary in this proceeding. The Port will be responsible directly, and through any contractor engaged by the Port, for the implementation of all mitigation conditions for construction and operation of the Project.

The Project totals approximately 11 miles of rail line in Grant County, Washington, and consists of three separate segments, two of which (Segments 1 and 2) will have the Port acquire property to be used as rail right-of-way and construct new rail lines and associated infrastructure, while the third (Segment 3) will have the Port acquire and refurbish an existing CBRW rail line. Any potential environmental impacts associated with Segment 3 discussed in the Prior EA are incorporated by reference in this document. Additionally, the environmental impacts associated with Segments 1 and 2 were previously evaluated in the Prior EA; this DSEA focuses on potential impacts arising from the Port's proposed modifications to the Original Alignment of Segments 1 and 2. Segment 3 is unchanged.

For the Build Alternative, the environmentally preferred route would be the Modified Alignment as presented in this DSEA, which incorporates the Port's proposed modifications to the Original Alignment designated as Modification 1B for Segment 1 and Modification 2B or 2C for Segment 2. The Modified Alignment is preferable to the Original Alignment for several reasons. First, land development has occurred in the vicinity of the Original Alignment since the STB's authorization of the Project in 2009, and several of the modifications would avoid and/or limit impacts to these new land uses. Second, land development has also affected the likely users of freight rail service, and the modifications are designed to increase Project effectiveness by ensuring that the new rail line is constructed near the existing businesses and facilities that are likely to utilize freight rail transportation.

In addition to limiting impacts to existing land uses and facilitating the purposes of the Project, the Modified Alignment would: (1) reduce impacts to wetlands; (2) avoid crossing Hamilton Road NE that was constructed after the 2009 Authorization Decision; (3) cross local streets at right angles rather than diagonally, thereby improving safety and sightlines for motor vehicle drivers; and (4) reduce the length of track needed for construction.

Segment 3 involves the acquisition of the existing CBRW rail line from a point just west of Parker Horn/Crab Creek northwestward to a point on the southern edge of the GCIA. Segment 1 would be built southeast/east of Segment 3 and connect at the starting point of Segment 3 just west of Crab Creek. Segment 2 would be built north of Segment 3 and connect to the ending point of Segment 3 on the southern edge of GCIA. STB evaluated the acquisition, track refurbishing, and operation of Segment 3 in 2009, and

the Port does not propose any modifications to Segment 3. If the Segment 3 mitigation measures imposed in the 2009 Authorization Decision are implemented, then the acquisition and operation of Segment 3 would not significantly affect the quality of the natural or human environment.

Accordingly, OEA recommends that the STB authorize the Port to construct and operate the Build Alternative, including:

- Segment 1, as modified by Modification 1B;
- Segment 2, as modified by Modification 2B or 2C; and
- Segment 3, as described in the Original Alignment.

OEA also recommends that, in any final decision approving the Project, the STB impose conditions requiring the Port to implement the mitigation measures contained in Chapter 6 of this document.

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Chapter 10 Public, Agency, and Tribal Involvement

Prior Environmental Assessment (EA)

As part of the environmental review process for the Preliminary EA, the OEA, and WSDOT held public open houses and posted information on their websites throughout 2007 to solicit comments prior to preparing the Preliminary EA. Additionally, OEA and WSDOT sent consultation letters soliciting comments from the following agencies, groups, and Tribes in 2007:

Federal Agencies

- U.S. Army Corps of Engineers
- U.S. Bureau of Reclamation
- U.S. Bureau of Land Management
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- NOAA Fisheries Service
- National Park Service
- Federal Railroad Administration
- Federal Aviation Administration

State Agencies

- Washington State Department of Archaeology and Historic Preservation (DAHP) or State Historic Preservation Office (SHPO)
- Washington State Department of Community, Trade and Economic Development
- Washington State Department of Ecology
- Washington State Department of Fish and Wildlife
- Washington State Department of Natural Resources
- Washington State Department of Transportation, North Central Region
- Washington State Parks
- Washington State Utilities and Transportation Commission

Local Agencies

- Grant County Community Development Department
- Grant County Economic Development Council
- Grant County Public Utility District
- Port of Moses Lake
- City of Moses Lake Community Development Department
- Moses Lake Irrigation and Rehabilitation District
- TransCo, via the Washington State Potato Commission
- Quad-County Regional Transportation Planning Organization

Tribes

- Colville Confederated Tribes
- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Warm Springs Reservation
- Wanapum Tribe

The Preliminary EA was made available to the public in November 2008 and was served on all parties to the proceeding; the federal, state, and local agencies and Tribes noted above; and any party requesting copies of the document. STB also solicited comments on the Preliminary EA via their website and a Notice in the Federal Register.

STB's OEA and WSDOT issued a Final EA for the Project in May 2009 that responded to public and agency comments; presented and analyzed new alternatives and modified routes; added to information that was in the Preliminary EA; and modified mitigation measures that were in the Preliminary EA. The 2009 Final EA was made available for review at the City of Moses Lake Public Library, the Port, and on the WSDOT Project website. STB subsequently issued their Authorization Decision for the Project in August 2009, which became effective in September 2009.

Draft Supplemental Environmental Assessment (DSEA)

As part of the environmental review process for the limited modifications proposed in this DSEA, the OEA consulted with and solicited comments from the following agencies and Tribes prior to release of the DSEA for public comment:

- Washington State Department of Archaeology and Historic Preservation (DAHP) or State Historic Preservation Office (SHPO)
- Washington State Department of Fish and Wildlife
- Washington State Department of Transportation, North Central Region

- East Columbia Basin Irrigation District
- City of Moses Lake
- Colville Confederated Tribes
- Confederated Tribes and Bands of the Yakama Nation
- Confederated Tribes of the Warm Springs Reservation
- Wanapum Tribe

The DSEA was made available to the public on July 11, 2019 and provided to all parties of record for this proceeding, as well as to federal, state and local agencies and Tribes served in 2007 for the Preliminary EA and those noted above. STB is also soliciting comments on the DSEA via its website and a Notice in the Federal Register. Copies are also available for review at the City of Moses Lake Public Library and at the Port of Moses Lake office.

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