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Congress of the United States
House of Representatives
Washington, DC 20515-4709

COMMITTEE ON ARMED SERVICES
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ANALYSIS, AND COUNTERINTELLIGENCE
TECHNICAL AND TACTICAL INTELLIGENCE
VICE CHAIR,
NEW DEMOCRAT COALITION

February 26, 2010

Secretary Paula Hammond
Washington State Department of Transportation
P. O. Box 47300
Olympia, Washington 98504-7300

Dear Secretary Hammond,

I am writing to convey the concerns that I have received from citizens and business owners in the Lakewood-Tillicum area over the proposed Point Defiance Bypass project, included by the Washington State Department of Transportation (WSDOT) in its proposal for high speed rail/intercity passenger rail funding through the American Recovery and Reinvestment Act of 2009 (ARRA). Over the past few months, I have received a number of inquiries from constituents worried about the potential impacts of the project upon their properties, which exist nearby and are, in many cases, adjacent to the rails themselves.

I would request that you review the following concerns listed below and give them your full attention. The main concerns expressed to include:

Impacts to businesses: Business owners in Tillicum along Union Avenue are worried about the possibility of being negatively affected by high-speed trains running a dozen times throughout the day adjacent to their properties. Many of the buildings in question were constructed decades ago and their owners are concerned about their ability to withstand potential shaking caused by the passenger trains. Also of concern is the added liability insurance each business will have to obtain should there be a derailment. This is an expense that many business owners fear could put them out of business. Lastly, the railroad track easement expansion is depleting valuable parking and storage space for those businesses adjacent to the track.

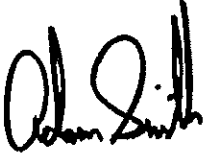
Increases in traffic: Due to its proximity between American Lake and I-5, Lakewood and Tillicum residents must cross the rail lines in order to gain access to I-5 and the surrounding community. Residents that I have spoken to fear that an increase in train activity will increase wait times in an already congested series of surface streets. As you know, Camp Murray, home to the Washington State National Guard and the Washington State Emergency Management Division, is located at the Berkeley Ave exit off of I-5. I hope that appropriate measures will be addressed to minimize potential access restrictions to the installation.

Safety risks: With a potential increase in traffic volumes, residents are also concerned with the possibility of safety risks posed by the project. Currently, the tracks running adjacent to

Lakewood are seldom used; it is not uncommon to see drivers idling their cars on the tracks while waiting for traffic signals to change. Residents are concerned that trains traveling upwards of 90mph will strike cars sitting on the tracks. Also troubling to residents is the integrity of the rail bed, which, if compromised, could adversely affect adjacent properties and structures.

Again, thank you for taking the time to read the concerns shared by myself and citizens and business owners in the Lakewood-Tillicum area. If you have any questions, please contact my Tacoma office at 253-593-6600.

Sincerely,

A handwritten signature in black ink, appearing to read "Adam Smith". The signature is stylized with a large initial "A" and "S".

Adam Smith
Member of Congress

cc: Mayor Douglas G. Richardson
City Manager Andrew Neiditz
Lakewood City Council
Pierce County Executive Pat McCarthy
Senator Mike Carrell
Senator Rosa Franklin
Representative Troy Kelley
Representative Tami Green
Representative Steve Conway
Representative Steve Kirby



Douglas G. Richardson
Mayor

February 24, 2010

Don Anderson
Deputy Mayor

Ms. Paula J. Hammond, P.E.
Secretary of Transportation
310 Maple Park Ave. SE
P.O. Box 47300
Olympia, WA 98504-7300

Claudia B. Thomas
Council Member

Walter Neary
Council Member

Dear Secretary Hammond,

Michael D. Brandstetter
Council Member

I recently received your letter addressing the Lakewood City Council's resolution about the Point Defiance Bypass Project. I understand that the City Manager subsequently met with your senior staff and that Congressman Adam Smith also met with you on this matter after his visit to City Hall and the Tillicum neighborhood.

Mary Moss
Council Member

Jason Whalen
Council Member

We appreciate your staff coming to Lakewood to discuss the issue. While we think they left with a greater appreciation of our enduring objections to the project, I think it would still be useful to respond to some key points from your letter.

Andrew E. Nelditz
City Manager

In short, let me be clear that it is simply not genuine for WSDOT to accuse the City of Lakewood of making "eleventh hour" objections to a project that is on the verge of breaking ground. Our resolution would not have come as a surprise if your staff had recalled the following:

Heldi Ann Wachter
City Attorney

Alice M. Bush, MMC
City Clerk

- Publicly voiced concerns during initial meetings between your representatives and the City Council in November 2006.
- The body of formal correspondence between the City and WSDOT on this issue that is consistent with the tenor of our resolution: November 15, 2007, November 19, 2007, August 26, 2008, November 12, 2008, November 14, 2008 and October 19, 2009.
- Articles and editorials in 2008 and 2009 in The News Tribune made it clear that Lakewood objected to the project as proposed.


It is also important to note that the City never "waived" hearings before the WUTC with regard to Amtrak service. We did take such a step with Sounder service to Lakewood and only a tenuous legal interpretation would suggest that

this applied to WSDOT rail as well. We had significant mitigation discussions with Sound Transit over a several year period. As you well know, there is a big difference between Sounder rail and Amtrak.

The City of Lakewood has a responsibility to ensure that transportation is safe and efficient throughout the City. You did state in a previous letter that WSDOT would never pursue a project that created a safety problem. I have no doubt that this was a sincere commitment on your part. As such, we look forward to ongoing discussions with your staff on how we can better mitigate the safety issues identified in our resolution.

It should go without saying that a positive and professional relationship between WSDOT and the City of Lakewood is in our mutual best interest. As important as this is, we cannot sacrifice safety for expediency.

Sincerely,


Douglas G. Richardson
Mayor

cc: Lakewood City Council
Congressman Adam Smith
City Manager Andrew Neiditz

CLOVER PARK SCHOOL DISTRICT
Regular Meeting/Workshop of the Board
Student Services Center, Room 4
January 25, 2010

MINUTES

Present: President Marty Schafer, Vice President Walt Kelcy, Jr., Carole Jacobs, Joe Vlaming, Paul Wagemann, and Debbie LeBeau

5:02 p.m. President Marty Schafer called to order the Regular Meeting of the Board.

SUPERINTENDENT REPORT

The superintendent, Debbie LeBeau, opened her report by reminding board members that last spring Clover Park High School presented a plan to address the educational needs of 9th grade students. The board gave authorization to provide and implement the plan and asked for a mid-year update. The district will also present information about the Science, Technology, Engineering and Mathematics (STEM) program.

Summit Initiative

The superintendent asked Deputy Superintendent Keith Rittel to begin this evening's report with an update on the **summit district improvement initiative**. Mr. Rittel discussed some of the activities underway such as the data reviews conducted by The BERC Group and Center for Educational Effectiveness. The data has been valuable to district administrators and principals. He outlined the instructional support available to staff who are conducting classroom walk throughs (CWTs) and shared information about math benchmark assessments (MBAs). In addition, Mr. Rittel highlighted details relating to the goals and action plans that have been established based on the assessment results. The Office of the Superintendent of Public Instruction provides the district with a district improvement facilitator and several technical assistance contractors who work with schools directly. In addition, the district has access to technical assistant contractors with special expertise in math, special education and reading.

Thousands of CWTs have been recorded across the district. This is a clear indicator that principals and coaches are getting into the classrooms. The MBA I test data is uploaded into an online tool. This data has been very informative and shows how scores are distributed and how individual students are performing. Designing differentiation is a priority that the district believes will have long-term impact on student success. Mr. Rittel said that he believes this will be the biggest win for Clover Park School District. Clover Park School District has possibly the broadest range of student ability in its classrooms and differentiation of instruction will help teachers address this area.

SUPERINTENDENT REPORT (continued)

The Summit Steering Committee is meeting weekly to organize the work. Communiqués are provided regularly to all administrators and schools. The information is also posted on the district website.

Data exchange between the district and Teachscape has presented some challenges. It has been difficult to exchange data electronically. In addition, there have been some significant errors in the data transfers at all grade levels. The district and Teachscape are both working to clean the data and build trust in the product. MBA I testing also had problems to overcome. The overarching goal is to provide clear and open communication to ensure transparency throughout the process.

Next year, the Summit funding will likely be significantly reduced by the state due to changes in federal regulations. The district is working on the implementation of a viable Data Dashboard system as a positive outcome from the Summit process. Mr. Rittel indicated that the district hopes to introduce a Data Dashboard model to the school board in June. The DoDEA grant also has a component to create a viable Data Dashboard. The steering committee continues to implement district goals. First, the district is tackling math, next will be differentiation. The math committee will have its first meeting on January 26.

There is a lot of work going on throughout the district that has added to everyone's workload. The superintendent said the school district needs to have an assessment tool, especially for grades K-5. It is a challenge, but it is important to continue on. She said that Mr. Rittel is doing a wonderful job keeping tabs on the work. Many issues are up in the air, and there may be limited funds in the future. The district is identifying the most valuable areas to pursue next year by carefully weighing the investment to ensure a payout at the end.

Director Kelley commented that getting data in a manageable format has always seemed to be difficult for the district. He would like to know when it is going to materialize and if it is really attainable. He said that he hears a lot that people have full plates. He asked if the district is hiring the right people to help with systems and if the district believes it is a personnel issue or budgetary constraint. He is particularly concerned to learn after moving forward with Summit that the funding will not be available for the duration. Mr. Rittel indicated that when Office of the Superintendent of Public Instruction presented Summit information to the board in late August, they were unaware of the funding cut from the Federal government until three weeks later. This change can be tied to having a new education secretary and priorities of the President. The delays are not a result of the work Clover Park is doing, they are tied to the state starting this ambitious project and now they are having a difficult time keeping up with the demands and facing funding challenges.

9th Grade Academy

Clover Park High School principal John Seaton and Assistant Principal David Slagle presented an update on the **9th Grade Academy**. The Crossroads Preparatory/9th Grade Academy presently has about 320 students enrolled. Clover Park High School has experienced great turnover since September 9, the first day of school. It has lost 100

SUPERINTENDENT REPORT (continued)

9th grade students, and gained 120 9th grade new students. The change drastically impacts the work of staff, and we expect more change before the end of the school year.

Research shows that the grades a student receives in the first semester of high school is the single most important predictor of who will dropout and who will graduate. With every grade of "F" a freshman receives, the chance of graduating declines by 20 percent. Clover Park High School implemented a 9th grade academy to ease the transition of becoming a high school student and offering targeted instruction to build more successful opportunities for students. This 9th grade "small learning community" has made a shift in the school culture in how students learn and behave. In the past, 9th graders have typically been the most demanding students. Now, with common lunch periods, housing in specific portions of the building, and targeted interventions, failing grades have dropped 25-30%.

Ongoing strategies to increase success include new student orientation workshops with mentors, student induction programs in the Fall and end of Winter to review academics and social behaviors, daily advisory, extended learning opportunities, special services, partnerships with outside organizations, higher level courses, availability of the summer Warrior Academy, and common planning time for teachers.

To increase student success, grades are reviewed a minimum of eight times during the school year. Students build note-taking and organization skills and are subject to daily homework checks by staff. The school also works to increase parent contact and utilizes upper classmen mentors who can help them build readiness skills. Interestingly, the changeover to a 9th grade academy has impacted discipline and staff are seeing a significant decrease in the number of 9th grade students involved in poor behavior choices.

The school has made a concerted effort to recruit mentors, which is part of the Family and Community Volunteer Coordinator's role. Community in Schools of Lakewood has built a math intervention program at Woodbrook and Hudtloff middle schools, which feed into Clover Park High School.

In terms of grade level proficiency, one out of four students need an intervention to reach proficiency in reading. In some cases, students are years behind in terms of proficiency in math. Daily math lessons are a powerful step for tier II students, but it will be a struggle for tier I students. There is no silver bullet for intervention when considering the kind of turnover experienced in our community and the scarce resources.

Science, Technology, Engineering and Mathematics (STEM)

Clover Park High School is reviewing the possibility of integrating STEM into the Phoenix Academy and Power House programs. The principal, John Seaton, said that today's jobs require an understanding of science, technology and math concepts, along with problem solving skills. He added that research shows the highest paying and fastest growing occupations require a significant understanding of these skills to compete for jobs.

SUPERINTENDENT REPORT (continued)

Mr. Seaton highlighted the four principles of STEM and student learning: 1) rigor, 2) relevance, 3) understanding, and 4) application. He reviewed course schedules and indicated that the school would have to build significant active internships for students. The district would also need to take the next step in STEM to complete articulation agreements. This is already happening in some of the Career and Technical Education (CTE) classes.

The final goal would be to allow Clover Park High School students to have an opportunity to choose from a variety of STEM courses. Science, technology and math courses would be a part of the students' core academics. Courses in technology, engineering and applied science would be CTE electives. Students in grades 10-12 would choose core and CTE electives in the following strands: Human Systems and Structures (Phoenix Academy) and Global Systems and Structures (Power House). These two pathways and the 9th grade academy will correspond with the current Clover Park High School house structures.

Director Kelcy said he believes STEM is a wonderful concept. He would like to see the enrollment decline at Clover Park High School subside and said hopefully STEM could be a part of that turnaround. The principal, John Seaton, said he is convinced that if we can keep students academically successful for their first two years in high school, that they will graduate. Director Kelcy asked if the atmosphere has changed at Clover Park High School based on past complaints. Mr. Seaton responded that he believes it has over the course of the last several years. Director Jacobs attended a STEM meeting in Orlando, Florida and saw that the results of having a STEM program can be amazing after only two years. She commented that she would want the information about STEM be shared with the community, that the positive results not be hidden or a secret. She said that if the board moves forward with STEM, she wants to make sure the information is being shared with the community.

7:00 p.m. The board recessed for 10 minutes.

7:10 p.m. The board president reconvened the meeting.

BOARD REPORT

President Schafer opened the board report with news of an upcoming audit entrance meeting. He encouraged new board members to participate in the process if time permits. He invited Director Jacobs to present a brief update on the work of the citizens committee. As part of her update, she encouraged board members to participate in sign waving and the phone bank. She suggested members visit staff at the phone bank locations to thank them for their work.

The school board reviewed the **new member orientation checklist** and **standard operating procedures**. Director Kelcy condensed the standard operating procedures, which was appreciated by all members. Director Kelcy added that he also worked on a draft strategic plan based on a template from another school district. He believes the draft can be a starting point for the work necessary to establish a Clover Park School District strategic plan. He volunteered to take the lead if the board so desires.

BOARD REPORT (continued)

The board discussed the **Point Defiance bypass project and enhanced Amtrak rail service plan**. An environmental impact study had not been conducted and there are concerns about the possible impact that additional rail service would have on students and transportation of students to and from schools. It does not appear that the Washington State Department of Transportation took the plan to the public. The city passed a similar resolution last week. The Mayor met with Congressman Adam Smith, who also was extremely unhappy about the process. The district's number one priority is the safety of children. The additional rail services will impact bus schedules and increase the potential for rail accidents.

INDIVIDUAL ACTION ITEM

On motion by Carole Jacobs, seconded by Joe Vlaming, the following resolution was adopted. For the record, Director Walt Kelcy opposed the language in section 2 of this resolution.

10-058 Resolution opposing the Washington State Department of Transportation's (WSDOT) Point Defiance Bypass project and enhanced Amtrak rail service as are currently proposed:

WHEREAS, In 2006, WSDOT initiated plans to relocate Amtrak passenger service to an existing rail line located partially within Lakewood's corporate limits and Clover Park School District, known as the Point Defiance Bypass project; and

WHEREAS, The stated intent of the Point Defiance Bypass project is to reduce passenger travel time by lessening the rail distance between Seattle and Portland by 5.9 miles and avoiding several identified physical features of the current route that tend to create delays, for a net time savings of only six minutes; and

WHEREAS, In early 2009, the USDOT introduced a new High-Speed Intercity Passenger Rail (HSIPR) \$8 billion grant program; and

WHEREAS, In seeking HSIPR funding, WSDOT included the Point Defiance Bypass project within a broader scope of improvements in the Pacific Northwest Rail Corridor program; and

WHEREAS, In order to satisfy HSIPR eligibility requirements, a Program Environmental Assessment was issued for the Pacific Northwest Rail Corridor program in September 2009; and

WHEREAS, The Clover Park School District submitted timely comments expressing concerns and safety issues with the *Pacific Northwest Rail Corridor Program Environmental Assessment*; and

10-058 Resolution opposing the Washington State Department of Transportation's (WSDOT) Point Defiance Bypass project and enhanced Amtrak rail service as are currently proposed:

WHEREAS, In 2009, the HSIPR program became linked with the American Recovery and Reinvestment Act of 2009 (ARRA), in the context of laying a foundation for a longer-term program to establish a national network of passenger rail corridors as a part of federal economic stimulus actions; and

WHEREAS, \$8 billion in immediate ARRA funds are reserved for HSIPR projects nationwide, of which WSDOT has applied for more than \$1.3 billion; and

WHEREAS, The ARRA/HSIPR funding being sought by WSDOT would not only fund the Point Defiance Bypass and other, non-Lakewood projects but also would result, over time, in the placement of additional trips and train sets upon the rail line running through Lakewood and within close proximity of three elementary schools within the Clover Park School District; and

WHEREAS, The State Transportation Secretary has gone on record indicating that the Point Defiance Bypass project will not proceed unless it is safe; and

WHEREAS, The Clover Park School District has serious concerns about the project which will not be satisfactorily mitigated by the project as it is currently configured, including but not limited to significant safety concerns;

NOW, THEREFORE, The Clover Park School District Board of Directors hereby resolves as follows:

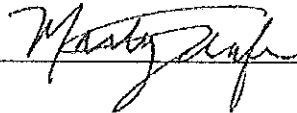
Section 1. The Clover Park School District Board of Directors formally sets forth its opposition to the Point Defiance Bypass project as currently proposed by WSDOT.

Section 2. The Clover Park School District Board of Directors requests a full review and environmental impact statement by WSDOT of safety mitigation measures such as grade separation between trains and vehicular traffic.

Section 3. The Clover Park School District Board of Directors encourages state and federal representatives to withhold financial support for the Point Defiance Bypass project and additional related corridor projects and service enhancements until safety concerns have been addressed to the District's satisfaction.

••Executive Session

- 8:30 p.m. The board recessed and moved into executive session to discuss real estate for approximately 15 minutes.
- 8:45 p.m. Following its executive session, the board reconvened the meeting. There were no members of the public present, or had been since the public meeting was recessed.
- 8:46 p.m. The meeting was adjourned



Marty Schafer, President



Deborah L. LeBeau, Superintendent

Deborah Johnson

From: Jeff Brewster
Sent: Thursday, January 21, 2010 12:03 PM
To: Council-list; Andrew Neiditz
Cc: David Bugher; Don Wickstrom; Desiree Winkler; Deborah Johnson
Subject: FW: Lakewood objects to Amtrak Plan
Attachments: PT DEFIANCE RES..pdf

Councilmembers –

This press release just went to the TNT. We'll send to the rest of the local media a bit later this afternoon. Please note that Congressman Smith's office learned about the resolution yesterday morning and requested a copy, which we provided. We will be sending out letters to our state and federal delegations soon and will attach the resolution for their review and consideration.

Jeff

From: Jeff Brewster
Sent: Thursday, January 21, 2010 11:59 AM
To: 'brent.champaco@thenewstribune.com'; 'Matt Misterek'
Cc: 'newstips@thenewstribune.com'
Subject: Lakewood objects to Amtrak Plan

Brent – I left you a voicemail on this issue. Please call if you have any questions.

PRESS RELEASE

January 21, 2010
 FOR IMMEDIATE RELEASE
 Contact Information:
 Jeff Brewster, Communications Director
 (253) 983-7761

Lakewood objects to Amtrak Plan
Council passes resolution asking State to address safety issues

LAKESWOOD, WA – On Tuesday, January 19th the Lakewood City Council unanimously adopted a resolution opposing the Point Defiance Bypass project as it is currently proposed by the Washington State Department of Transportation (WSDOT). Since 2007, Lakewood has taken issue with the state's decision to avoid an environmental review for this project in light of serious traffic and safety concerns.

The City Council underscored its support for viable transportation alternatives to congestion on Interstate 5 as it discussed the resolution on Tuesday night. Nonetheless, it noted that trains traveling at high speeds with no grade separation between trains and cars through urban areas, most of which are low-income, generated an unacceptable risk to community safety.

The resolution asks state and federal representatives to withhold financial support of the Point Defiance Bypass project until these concerns can be properly addressed.

A copy of this resolution is attached.

DB02 - 12

01/27/2010

RESOLUTION NO. 2010-03

A RESOLUTION of the City Council of the City of Lakewood, Washington, opposing the Washington State Department of Transportation's Point Defiance Bypass project and enhanced Amtrak rail service as are currently proposed.

WHEREAS, key policy decisions and actions on the part of the Washington State Department of Transportation (WSDOT) and others prior to Lakewood's incorporation led to its partnership with Amtrak and establishment of high-speed passenger rail service providing bidirectional service between British Columbia and Oregon and points in between; and

WHEREAS, both *Cascades* and *Coast Starlight* service are currently routed through Pierce County upon an existing rail line, bypassing Lakewood to the west along Puget Sound and outside of Lakewood's corporate boundaries; and

WHEREAS, in 2006, WSDOT initiated plans to relocate Amtrak passenger service to an existing rail line located partially within Lakewood's corporate limits, known as the Point Defiance Bypass project; and

WHEREAS, the stated intent of the Point Defiance Bypass project is to reduce passenger travel time by lessening the rail distance between Seattle and Portland by 5.9 miles and avoiding several identified physical features of the current route that tend to create delays, for a net time savings of only six minutes; and

WHEREAS, in November 2006, the Lakewood City Council received a briefing from WSDOT staff on the Point Defiance Bypass project and questioned impacts of the project upon Lakewood and means of mitigation; and

WHEREAS, in late 2007, the City learned that WSDOT was considering abandonment of the development of an Environmental Assessment under the National Environmental Policy Act (NEPA) in favor of utilizing a Documented Categorical Exclusion (DCE) for the Point Defiance Bypass project; and

WHEREAS, in November 2007, the Lakewood City Manager expressed concerns to the Transportation Secretary that the NEPA DCE instrument was inadequate to mitigate expected impacts; and

WHEREAS, WSDOT disagreed with the City Manager's concerns about the NEPA DCE approach; and

WHEREAS, pursuant to an agreement between WSDOT, the Federal Highway Administration (FHWA) and the Federal Railroad Administration (FRA/USDOT) to act as co-leads on the Point Defiance Bypass project, a NEPA DCE was issued in June 2008 for the Point Defiance Bypass project under the FHWA's authority; and

WHEREAS, in late 2008, WSDOT issued the *Washington State Amtrak Cascades Mid-Range Plan*, which included the Point Defiance Bypass project, in order to fulfill a legislative directive that it provide financial and other logistical justification related to developing additional Amtrak *Cascades* service; and

WHEREAS, the City of Lakewood submitted timely comments expressing concerns with the *Washington State Amtrak Cascades Mid-Range Plan*; and

WHEREAS, WSDOT disagreed with the City of Lakewood's concerns about the *Washington State Amtrak Cascades Mid-Range Plan*; and

WHEREAS, in early 2009, the USDOT introduced a new High-Speed Intercity Passenger Rail (HSIPR) \$8 billion grant program; and

WHEREAS, in seeking HSIPR funding, WSDOT included the Point Defiance Bypass project within a broader scope of improvements in the Pacific Northwest Rail Corridor program; and

WHEREAS, in order to satisfy HSIPR eligibility requirements, a Program Environmental Assessment was issued for the Pacific Northwest Rail Corridor program in September 2009; and

WHEREAS, the City of Lakewood submitted timely comments expressing concerns with the *Pacific Northwest Rail Corridor Program Environmental Assessment*; and

WHEREAS, WSDOT disregarded the City of Lakewood's concerns with the *Pacific Northwest Rail Corridor Program Environmental Assessment*; and

WHEREAS, in 2009, the HSIPR program became linked with the American Recovery and Reinvestment Act of 2009 (ARRA), in the context of laying a foundation for a longer-term program to establish a national network of passenger rail corridors as a part of federal economic stimulus actions; and

WHEREAS, \$8 billion in immediate ARRA funds are reserved for HSIPR projects nationwide, of which WSDOT has applied for more than \$1.3 billion; and

WHEREAS, the ARRA/HSIPR funding being sought by WSDOT would not only fund the Point Defiance Bypass and other, non-Lakewood projects but also would result, over time, in the placement of additional trips and train sets upon the rail line running through Lakewood; and

WHEREAS, the USDOT decision on ARRA/HSIPR funding is likely to occur during the first quarter of 2010; and

WHEREAS, the State Transportation Secretary has gone on record indicating that the Point Defiance Bypass project will not proceed unless it is safe; and

WHEREAS, the City of Lakewood has serious concerns about the project which will not be satisfactorily mitigated by the project as it is currently configured, including but not limited to significant safety concerns;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF LAKEWOOD, WASHINGTON, DOES HEREBY RESOLVE as follows:

Section 1. The Lakewood City Council formally sets forth its opposition to the Point Defiance Bypass project as currently proposed by WSDOT.

Section 2. The City of Lakewood requests a full review by WSDOT of safety mitigation measures such as grade separation between trains and vehicular traffic.

Section 3. The Lakewood City Council encourages state and federal representatives to withhold financial support for the Point Defiance Bypass project and additional related corridor projects and service enhancements until safety concerns have been addressed to the City's satisfaction.

ADOPTED by the City Council this 19th day of January, 2010.

CITY OF LAKEWOOD


Douglas G. Richardson, Mayor

Attest:


Alice M. Bush, MMC, City Clerk

Approved as to Form:


Heidi Ann Wachter, City Attorney



Tacoma, WA - Wednesday, January 13, 2010

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Where are bypass benefits for Lakewood?

THE NEWS TRIBUNE

Last updated: November 18th, 2009 10:32 AM (PST)

Lakewood officials are absolutely right to challenge the state's proposed Point Defiance bypass project that would send Amtrak passenger trains hurtling through the city at 79 mph. They would be seriously remiss if they didn't.

At first glance, at least, Lakewood stands to shoulder all the negatives of the project – noise, traffic disruptions, safety threats – while reaping few if any discernible benefits. The Amtrak trains are not currently scheduled to stop in Lakewood, so residents who want to ride to Portland and points south would actually have to go north to Tacoma to board and backtrack through Lakewood on their trip.

It's easy to see the appeal of the bypass for the state, Amtrak and the Port of Tacoma. It would separate passenger and freight trains that currently share tracks that wind around Point Defiance and along the shores of Puget Sound.

With the passenger trains shifted to the inland route through South Tacoma, Lakewood and DuPont, more freight service could be added on the Point Defiance tracks. And Amtrak trains that wouldn't have to slow down around the Point Defiance curves would get from Seattle to Portland six minutes faster.

But none of those advantages benefit Lakewood directly. Instead, neighborhoods that rarely get train traffic now could experience the noise of up to 18 trains daily by 2012. Traffic intersections already busy at rush hour would come to complete halts as Amtrak trains speed through at 79 mph, requiring vehicles to stop at seven different intersections in Lakewood alone.

Last year, state Department of Transportation planners somehow decided that there was no need for a detailed assessment of the bypass' traffic-related impacts – which means there would be no public hearings on the project. But how could there be only minimal impact when several trains daily would cut off the county's second-biggest city from freeway access?

And that six minutes in saved time on the Seattle-Portland route? All it takes is an accident at one of the seven Lakewood intersections to negate that savings with time consumed by emergency response and investigation.

Witness an accident Tuesday involving an Amtrak train and a car trying to go around a gate at an intersection in Hardeeville, S.C. Four people were killed, and hours later the car was still wedged in the train, disrupting rail traffic on the line. The train passengers lost a lot more than six minutes when they had to be bused to their destination.

Even if the bypass is able to shave a few minutes off the Seattle-Portland Amtrak route, it would undoubtedly add time to the commutes of many Pierce County drivers who will have to wait at intersections that now aren't being crossed by much train traffic. Fort Lewis alone estimates that the bypass will add a minute to the commute of drivers coming to and leaving the post.

And the state didn't consider that kind of impact worth studying?

It very well might be a good idea to divert passenger trains to the inland route. But Lakewood should get more out of the change than noise and traffic problems. The city should hold out for Amtrak service, grade separations where that makes sense and noise walls in residential areas.



Tacoma, WA - Wednesday, January 13, 2010

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Amtrak's Point Defiance Bypass worries Lakewood

Officials say proposed Amtrak route would clog an already congested area of roads and train tracks

BRENT CHAMPACO; The News Tribune

Last updated: October 20th, 2009 08:45 AM (PDT)

Choked by congestion, the Tillicum neighborhood in Lakewood becomes a stalled parade of cars every rush hour.

The cars come from different sources – Interstate 5, Fort Lewis, Camp Murray. Traffic sometimes backs up over a set of train tracks west of the highway.

Lakewood city leaders say Tillicum's street system around I-5 is already failing. It can't handle the backups there today.

Now they're trying again to sound the alarm about a flashpoint for further traffic woes: the state's plan to build the Point Defiance Bypass, which would introduce high-speed Amtrak runs through Lakewood, possibly as soon as 2012.

"We do not know how they are going to be able to keep vehicles off those train tracks," said David Bugher, the assistant city manager and community development director.

Although the bypass would shave six minutes off Amtrak's Seattle-Portland run and free up space for freight trains to operate in the Port of Tacoma area, it also would introduce 79-mph passenger trains through urban Lakewood neighborhoods.

A year after the state concluded the project would have no major impact on Lakewood's roads – a decision that has some locals still scratching their heads — the city is again trying to voice its concerns.

Early next month, the City Council will discuss the bypass and what, if anything, it can do to persuade the state to take a closer look.

The state Department of Transportation last month completed an environmental assessment of the whole rail corridor from Vancouver, Wash., all the way north to the Canadian border at Blaine, Wash., including the section through Pierce County.

Currently Amtrak runs five round-trip trains a day on the route. The state is vying for \$1.4 billion in federal stimulus money that could help add up to four round-trip trains daily between Portland and Vancouver B.C., by 2012. In the South Sound, millions of dollars would be spent laying track and other infrastructure needed for high-speed passenger trains.

Without stimulus funds, the project would need another \$90 million, which pushes back the projected opening to about 2019.

WSDOT is asking for feedback from local governments. Lakewood will use the opportunity to highlight local problems the trains will generate.

DB02 - 19

Whether the state is willing to change its plans is unclear.

"We've heard their concerns," said Kevin Jeffers, rail engineer for the state. "We felt we have addressed those concerns as best we can."

MONUMENTAL CHANGE

The state's determination a year ago that the bypass would have little impact on Lakewood's roads still irks City Councilman Don Anderson.

Currently, southbound Amtrak trains coming from Seattle travel around Tacoma, through Ruston, University Place and Steilacoom, offering one of the best views of the Puget Sound.

The bypass would redirect southbound trains through South Tacoma, Lakewood, Fort Lewis and DuPont before reconnecting with the original route in the Nisqually area. Northbound trains would follow the same route.

In Lakewood, the trains would run through seven street-level crossings in the city with no stops to pick up passengers. The route also travels near apartment complexes, schools and businesses.

"It's a proposal to monumentally change the city," Anderson said.

That's not the way the state sees it. Its planners determined in 2008 that there was no need to do a detailed traffic-related environmental assessment on the Point Defiance Bypass.

That meant the state could skip an in-depth examination, including a full slate of public hearings.

According to Jeffers, the state found it could improve roads enough to minimize backups and potential collisions between trains and cars.

In addition to adding flashing lights, gates and horns at crossings, the state plans to widen turn lanes and install medians that would prevent drivers from trying to swerve around a gate.

"From a traffic standpoint, the design is as such that we're not going to make traffic any worse," Jeffers said.

Lakewood officials disagreed and continued to push WSDOT to take a closer look and acknowledge there will be challenges for the city, according to documents obtained by The News Tribune.

State Transportation Secretary Paula Hammond wrote a Dec. 31, 2007 response to Lakewood City Manager Andrew Neiditz, who had pleaded for WSDOT to reconsider.

"As we discussed with city staff," Hammond wrote, "these potential impacts were not found to be significant, thus making an EA (Environmental Assessment) unnecessary."

'DO IT RIGHT'

Alan Hart, whose home is located in a neighborhood along I-5, said he and his neighbors disagree with the state and are plenty concerned.

The 66-year-old retired chemist says the trains will create noise, vibration and a potential hazard for anyone who lives along the tracks.

They're also worried trains could serve as a barricade for ambulances and firetrucks coming from the highway.

Hart questions whether all that is worth shaving six minutes off a train route.

“Why would you do this and impose this change on us for a minimal benefit?” he asked.

It isn't only Lakewood residents who will be affected. For example, people who drive to the Washington National Guard headquarters at Camp Murray – accessible mainly via an entrance off Berkeley Street Southwest in Tillicum – could get stuck waiting for trains to pass.

Mark McElroy, director of facilities and grounds at the 244-acre, state-owned facility, said the proposed bypass has heightened Camp Murray's sense of urgency to add another gate off Portland Avenue Southwest, farther from the train tracks.

The second gate might take the hundreds of cars that enter and exit Camp Murray every day to a different freeway exit, but they still face a potential hazard in trying to cross the tracks to get to I-5.

“We have a significant concern with that,” McElroy said.

Fort Lewis' public affairs office says the post hasn't done a detailed analysis of the bypass' impact, but it estimates it would add an extra minute to the already-daunting traffic on I-5 near Fort Lewis.

“At face value, this would not appear to be a significant impact on installation traffic,” wrote garrison spokesman J.C. Mathews in an e-mail to The News Tribune. “However, we'll have to do additional analysis to produce conclusive impacts.”

Bugher, Lakewood's assistant city manager, says he thinks the trains will have a negative impact, even if the state does not.

However, the city doesn't want residents to confuse its concerns over the bypass with its desire for Sound Transit commuter rail service. Those trains move about half the speed of Amtrak trains and will go only as far south as Lakewood Station in the Lakeview area; Tillicum will not be affected.

The plan is to have Sounder running between Lakewood and Tacoma Dome stations by 2012. Voters in Sound Transit's three-county area passed a bond in 1996 that included commuter rail service to Lakewood, and the city has been waiting for the agency to make good on the promise ever since.

Bugher says he realizes the Point Defiance Bypass will move forward. He just hopes the state will go back and re-examine the route's effects on Lakewood, which he says will be more profound than the state realizes.

“We're not anti-train,” he said. “If you're going to do it, do it right.”

Brent Champaco: 253-597-8653

brent.champaco@thenewstribune.com

WHAT: Lakewood City Council study session on Point Defiance Bypass

WHEN: 7 p.m., Nov. 9

WHERE: Lakewood City Hall, 6000 Main St. S.W.

FOR MORE INFORMATION: Visit www.cityoflakewood.us.



Pt. Defiance Bypass Project



Passenger trains will avoid the slower, congested route. This will improve travel times and free up space on the congested route, resulting in an improved rail system.

What is the Pt. Defiance Bypass Project?

Passenger trains, including Amtrak *Cascades*, currently must slow down due to curves and single-track tunnels on the BNSF Railway main line tracks near Point Defiance and along southern Puget Sound.

This project will reroute passenger trains to an inland route. The bypass is on an existing rail line that runs along the west side of Interstate 5 (I-5), through south Tacoma, Lakewood and DuPont. It reconnects back to the BNSF Railway main line near Nisqually on the east side of I-5.

What are the project benefits?

These improvements will allow passenger trains to use the bypass route without being delayed by freight or Sounder trains. This will result in:

- Improved Amtrak *Cascades* reliability.
- Provide faster and more frequent Amtrak *Cascades* service. Speeds will be increased up to 79 mph, reducing travel times between Seattle and Portland by six minutes.
- At least one additional Amtrak *Cascades* round trip between Seattle and Portland will be added once this and another major project in Vancouver, WA is completed.
- Allow increased freight rail service around Pt. Defiance and along southern Puget Sound by eliminating passenger trains from the BNSF Railway main line.

What improvements will be made on this route?

This project is located along an 18-mile corridor owned by Sound Transit. Improvements that will be made include:

- A new second track between 66th St. in South Tacoma and Bridgeport Way in Lakewood.
- New rails, ties, and ballast between Lakewood and Nisqually along the west side of I-5.
- Improved connection to the main line near Nisqually.
- Safety improvements at ten road/rail (at-grade) crossings, where the rail line and the road cross one another at the same level.

Part of the proposed route of this WSDOT project is the same route that Sound Transit will use to extend Sounder commuter rail to Lakewood. Sound Transit will administer the construction of the improvements. WSDOT and Sound Transit are working together to save time and money by ensuring that construction only has to be done once in any one location.

Are significant impacts expected as a result of the project?

WSDOT has done extensive research and modeling in many areas including traffic, noise, and wetlands and have found no significant impact will result from the project.

How will construction proceed?

Work in Segment 1 – between Bridgeport Way and 66th – began in June, 2009 along with Sound Transit's planned work between Bridgeport Way and "M" Street in Tacoma. Additional funding is required to complete the new segment between "D" Street and "M" Street, including the bridge over Pacific Avenue. A pending federal high speed rail/intercity passenger rail grant application would fill the funding gap and allow construction to begin as early as Spring 2010. WSDOT has decided not to construct any WSDOT funded improvements outside of Segment 1 until this funding is secured.

How is the project funded?

This project is funded through the following WSDOT sources:

2005 Partnership Funding (Vehicle Weight Fees)	\$21.0 million
2003 Legislative Transportation Package (New & Used Vehicle Sales Tax)	\$21.0 million
Pre-existing Funds (State & Federal grade crossings)	\$57.9 million
Total funding from all sources*	\$99.9 million

* This does not include work by Sound Transit on this route.

WSDOT Improvements

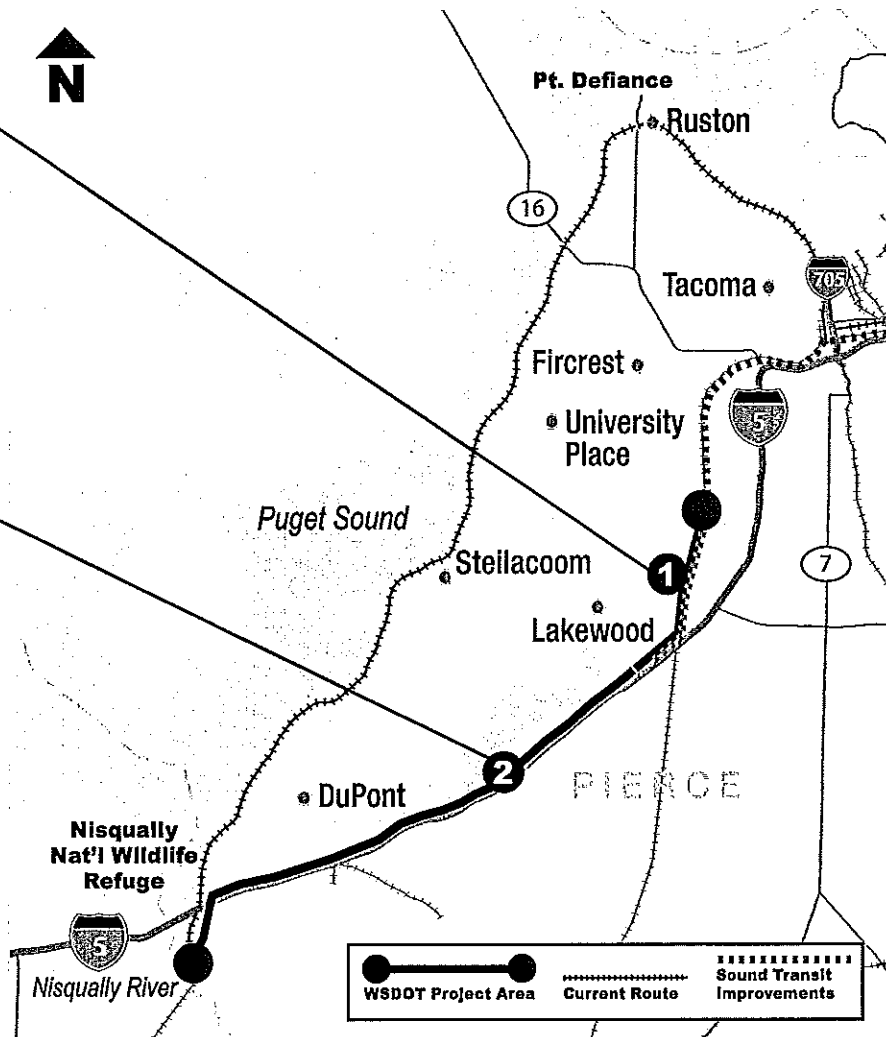


Segment 1:

- Constructs second track from South 66th Street, past Lakewood Station and Bridgeport Way.
- Safety upgrades and improvements to five road/rail grade crossings to accommodate the second track, and so trains can travel up to 79 mph.

Segment 2:

- Upgrades tracks and improves existing connection to BNSF Railway main line so trains can travel up to 40 mph from Nisqually to Mounts Road and 79 mph from Mounts Road to Bridgeport Way.
- Safety upgrades to five road/rail grade crossings.



Sound Transit Improvements

- Constructs new single-track connection between D Street and Chandler Street, including new bridge over Pacific Avenue.
- Upgrades tracks between Chandler Street and the new Lakewood Station, so trains can travel up to 65 mph.
- Upgrade ten road/rail grade crossings outside the WSDOT project area.
- Constructs new layover facility in Lakewood for Sounder trains to stay overnight.

What is the project timeline?

Environmental and Engineering	Began Summer 2006
Public and Agency Open House	November 2006 & June 2008
Environmental Process	Completed May 2007
Final (Complete) Design and Permitting	Winter 2007-2008
Begin Construction on Segment 1	June 2009
Complete Construction on Segment 1	Winter 2010
Begin Construction of Segment 2 improvements*	Spring 2010

*Construction on Segment 2 is dependent on securing funding for the Sound Transit planned "D" Street to "M" Street improvements in downtown Tacoma.

Grade crossings planned improvements

LOCATION	Flashing Lights & Gates	Medians	Pre-Signals	Wayside Horns	Traffic Signal & Roadway Improvements
South 74th Street	X	X	X		X
Stellacoom Boulevard SW	X	X		X	X
100th Street SW	X	X		X	X
108th Street SW	X	X		X	X
Bridgeport Way SW	X	X	X	X	X
Clover Creek Drive SW	X	X		X	
North Thorne Lane SW	X	X		X	X
Berkeley Street SW	X	X		X	X
41st Division Drive (entrance to N. Fort Lewis)	X	X	X		X
Barksdale Avenue (Dupont-Stellacoom Rd)	X	X		X	X

Medians deter driving around gates.
Pre-Signals keep vehicles from backing up onto tracks.
Wayside Horns confine horn noise to the grade crossings.

Pt. Defiance Bypass



WE WANT TO HEAR FROM YOU

For More Information:

Kevin Jeffers, P.E.
Project Manager
JefferK@wsdot.wa.gov
360-705-7982

www.wsdot.wa.gov/Projects/Rail/PNWRC_PtDefiance

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360-705-7900
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**Washington State
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WSDOT State Rail Office
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**Washington State
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Paula J. Hammond, P.E.
Secretary of Transportation

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AEN
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DAN C.
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DAN P

October 22, 2009

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COMMUNITY DEVELOPMENT

Mr. David Bugher
Assistant City Manager
City of Lakewood
6000 Main Street SW
Lakewood, WA 98499-5027

**Subject: Response to the City of Lakewood comments on the Pacific Northwest Rail
Corridor Program Environmental Assessment**

Dear Mr. Bugher:

Thank you for your letter of October 19, 2009, providing comments on the Pacific Northwest Rail Corridor Program Environmental Assessment (EA).

The purpose of this letter is to respond to the comments in your letter. In this letter, your quoted or paraphrased comments appear in italics, with responses in standard font.

Third Paragraph "... The three Service Block(s) proposed could add up to four additional round trips and the potential for five more round trips in future phases. In the future, our rarely used rail corridor could have up to 26 daily crossings in all which could have a profoundly adverse impacts on our residents and citizens."

The reference to five additional round trips and to up to 26 daily crossings in the future implies that the program EA proposes and analyzes up to 13 Amtrak *Cascades* round trips between Seattle and Portland. However, the Program EA only analyses up to 8 such round trips. Further, the rail traffic levels analyzed in the Program EA is very similar to those analyzed in the project-level NEPA Documented Categorical Exclusion (DCE) for the Point Defiance Bypass project. Thus, the underlined phrase "potential to induce significant adverse impacts" earlier in the paragraph is not supported.

Comment 1: The omission of a review of Transportation impacts could be considered a fatal flaw of the entire report.

Detailed transportation impacts of a project are evaluated when project-level analysis is prepared, such as was done for the Point Defiance Bypass Rail Project. Regional transportation issues are evaluated by the Puget Sound Regional Council (PSRC) in their

Mr. David Bugher
October 22, 2009
Page 2

regional transportation plan. In fact, the Point Defiance Bypass Project was included in PSRC's 2007 Update to the Metropolitan Transportation Plan for the Central Puget Sound Region (Destination 2030).

Comment 1a.i: The safety and roadway congestion concerns raised by the City of Lakewood as part of the Point Defiance Bypass DCE should be acknowledged in the Program EA.

Such safety and congestion concerns are addressed generally in the Program EA, but the project-specific reference to the City of Lakewood concerns was not included as they were addressed in the project-level NEPA DCE.

Comment 1.a.ii: "The City remains concerned with the safety hazards at the Berkeley Street crossing due to the proximity to the I-5 ramp signals. WSDOT has still not made clear how this intersection will be cleared of traffic prior to the High-Speed trains crossing."

WSDOT has had numerous meetings with, and has given demonstrations of visualizations of the modeling results, to the city transportation and planning staff to address clearing the crossings and queuing at all adjacent intersections. The design at Berkeley Street will limit when vehicles have access to the crossing. This will be at times when they can continue beyond the crossing without stopping at the I-5 southbound on/off ramp intersection signal. This limits their opportunity to be blocking the crossing. A similar situation is created in the westbound direction.

Further, the phrase "High-Speed trains" is not accurate for any service discussed in the Program EA. The Program EA does not propose to raise speeds above the current maximum of 79 mph, while FRA classifies a high-speed train as one that is travelling in excess of 90 mph.

Comment 2: "Many of the areas that these trains travel through have been identified as severely disadvantaged with high rates of poverty and unemployment. Access to the Tillicum neighborhood area is especially difficult, as the train tracks cut it off from the rest of Lakewood. Without adequate mitigation, the proposed increase to the number of high speed trains will exacerbate existing traffic patterns and cause a disproportionate environmental burden on these residents."

The Environmental Justice analysis completed for the Point Defiance Bypass Project showed that the Tillicum neighborhood, although disadvantaged, did not receive a disproportionate high and adverse impact from intercity passenger rail service.

Mr. David Bugher
October 22, 2009
Page 3

Comment 3: "The City of Lakewood Comprehensive Plan was adopted in 2000, not 2004 as reported on page 4-41, and has been amended annually."

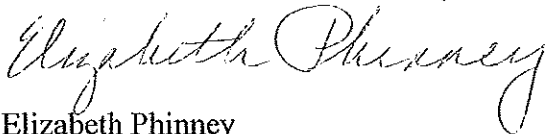
A correction will be made to the date for the City of Lakewood Comprehensive Plan.

Comment 4: The general statement that existing noise levels from existing freight operations on the rail corridor is not applicable to the Point Defiance Bypass route due to the relatively small amount of freight rail traffic on the line.

It is true that the amount of rail traffic on the route is small. The Program EA addresses impacts in a generalized manner but project-specific analysis is still required as project specifics become known. As the city staff is aware, a noise impact analysis was prepared as part of the project-level NEPA DCE for the Point Defiance Bypass project. With wayside horns to be installed at the seven at-grade crossings in Lakewood and other at-grade crossings outside of Lakewood, the analysis found no significant impacts from noise.

We sincerely appreciate the cooperation and aid your staff has provided in these matters. Please be assured that WSDOT will continue to work with the City of Lakewood to increase safety for all its citizens as this project moves forward. We look forward to making a presentation at the Lakewood City Council work session on November 9th.

Sincerely,



Elizabeth Phinney
Rail Environmental Manager
State Rail and Marine Office

cc: Kevin Jeffers, WSDOT



Douglas G. Richardson
Mayor

Don Anderson
Deputy Mayor

Claudia B. Thomas
Council Member

Pad Finnigan
Council Member

Helen McGovern
Council Member

Walter Neary
Council Member

Ron Cronk
Council Member

Andrew E. Neiditz
City Manager

Heidi Ann Wachter
City Attorney

Alice M. Bush, MMC
General Services Director
City Clerk

October 19, 2009

Ms. Elizabeth Phinney
Rail Environmental Manager
WSDOT Rail Office
P.O. Box 47407
Olympia, WA 98504-7407

Subject: **Pacific Northwest Rail Corridor Program Environmental Assessment**

Dear Ms. Phinney:

Thank you for the opportunity to provide comments on the NEPA Program Environmental Assessment for the Pacific Northwest Rail Corridor. I understand that this document was produced in just a few short months and considering the vast scope of the report (297 miles through nine counties), we appreciate that you forwarded this to the many stakeholders for review.

As we understand it, the purpose of the Program Environmental Assessment is to determine if the environmental impacts of implementing a corridor-wide rail service expansion plan are significant, and if so, to mitigate environmentally unsound concepts before they are turned into projects.

The City believes that each of the three Service Block proposed in the Program EA have the potential to induce significant adverse impacts on the Lakewood section of the PNWRC, including the seven at-grade crossings at Berkeley Avenue, Thorne Lane, Clover Creek Drive, Bridgeport Way, 108th Street, 100th Street and Steilacoom Boulevard. The Point Defiance Bypass project, studied by WSDOT in 2008, includes new track, new right-of-way acquisition and a substantial increase to the number and speed of trains going through our community. The three Service Block proposed projects could add up to four additional round trips, and the potential for five more round trips in future phases. In the future, our rarely used rail corridor could have up to 26 daily crossings in all which could have a profoundly adverse impact on our residents and citizens.

We have identified four specific additional concerns:

1. *Chapter Four - Existing Conditions and Chapter Five - Impacts and Mitigation*

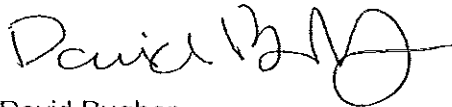
- a. Neither of these chapters included any review of Transportation impacts. While the PNWRC is generally rural in the southern and northern sections of the corridor, the central section goes through the most densely populated and urban areas of Washington State. This omission could be considered a fatal flaw of the entire report.
 - i. The City raised significant safety and traffic congestion concerns that would be present at the at-grade crossings during the Pt. Defiance Bypass Documented Categorical Exclusion (DCE) process in 2008. These issues should be acknowledged in the PNWRC Program EA.
 - ii. The City remains concerned with the safety hazards at the Berkeley Street crossing due to the proximity to the Interstate 5 ramp signals. WSDOT has still not made clear how this intersection will be cleared of traffic prior to the high-speed trains crossing. The addition of four new daily round trips makes this issue even more critical to resolve.
2. *Social and Economic*
- a. Many of the areas that these trains travel through have been identified as severely disadvantaged with high rates of poverty and unemployment. Access to the Tillicum neighborhood area is especially difficult, as the train tracks cut it off from the rest of the Lakewood. Without adequate mitigation, the proposed increase to the number of high speed trains will exacerbate existing traffic patterns and cause a disproportionate environmental burden on these residents.
3. *Land Use*
- a. The City of Lakewood Comprehensive Plan was adopted in 2000, not 2004 as reported on page 4-41, and has been amended annually.
4. *Noise*
- a. The report states that "general noise and vibration analyses were conducted and it was discovered that noise and vibration levels are already high through the program corridor due to existing freight operations." While this might be true for some sections of the PNWRC, it is not at all accurate for that portion of the portion through Lakewood, known as the Pt. Defiance Bypass rail alignment
 - i. Currently Tacoma Rail runs a freight train through Lakewood on Thursdays and Sundays (once during the work week). This is significant in that the baseline for the noise model (at Page 4-65) claims that freight trains run 24 hours a day and that the average freight train consists of 100 cars and four diesel locomotives.
 - ii. The FRA and FTA noise impact criteria are based on "the percentage of people expected to be highly annoyed by the addition of any given amount of noise to their current environment". Therefore, to assume that people are used to 100

car freight trains, 24 hours per day when they are actually only used to a single, less than daily train traveling at a less than 10 mph will greatly distort the results and will likely result in significant adverse noise impacts.

The City of Lakewood is supportive of reliable and efficient intercity passenger rail service and agree that it is important to provide travel options in order to relieve the congested Interstate system. However, we maintain that high speed rail can be integrated into the existing communities along the PNWRC without adversely impacting the safety or well-being of those residents.

It is our goal to see a much more robust environmental review, (one that includes a review of existing conditions for transportation and any potential mitigation to alleviate those impacts), in the very near future.

Sincerely,

A handwritten signature in black ink, appearing to read "David Bugher". The signature is fluid and cursive, with a large, stylized initial "D" and "B".

David Bugher
Assistant City Manager

Cc: Andrew Neiditz, City Manager
Heidi Wachter, City Attorney

Pacific Northwest Rail Corridor

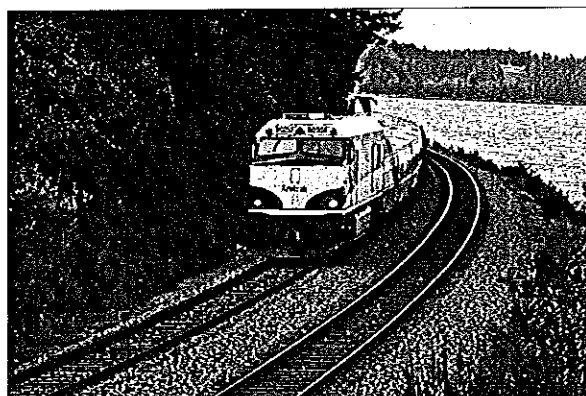
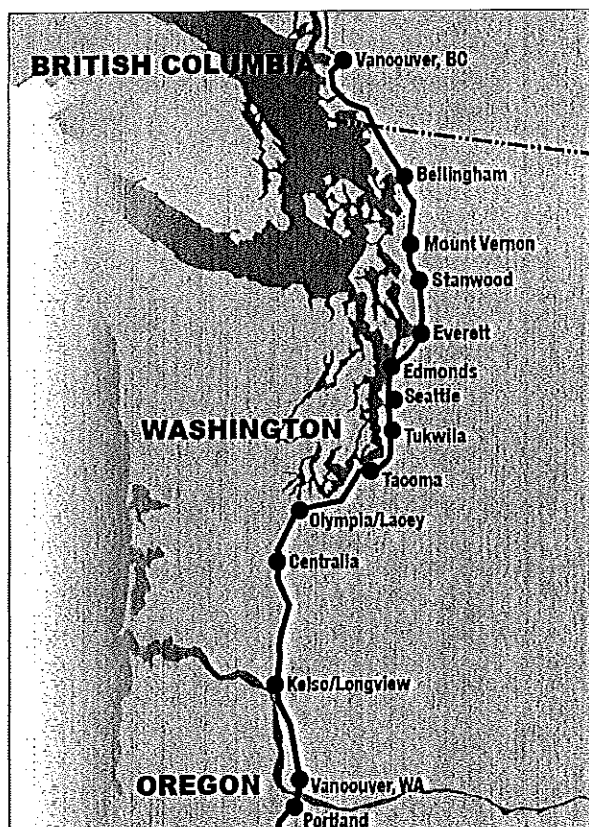
Washington State Segment - Columbia River to the Canadian Border

Program Environmental Assessment

September 2009

Prepared for:
U.S. Department of Transportation
Federal Railroad Administration

Prepared by:
Washington State Department of
Transportation





Pacific Northwest Rail Corridor

Washington State Segment - Columbia River to the Canadian Border

Program Environmental Assessment

September 2009

**Prepared for:
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**Prepared by:
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Pacific Northwest Rail Corridor

Washington State Segment – Columbia River to the Canadian Border

Program Environmental Assessment


Submitted pursuant to the National Environmental Policy Act
(42 U.S.C. 4332(2)(c))

Prepared for:
U.S. Department of Transportation
Federal Railroad Administration

Prepared by:
Washington State Department of Transportation
State Rail and Marine Office

9/30/09

Date of Approval



Megan White, P.E.
Director, Environmental Services Office
Washington State Dept. of Transportation

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Appendix B – Census Data

Executive Summary

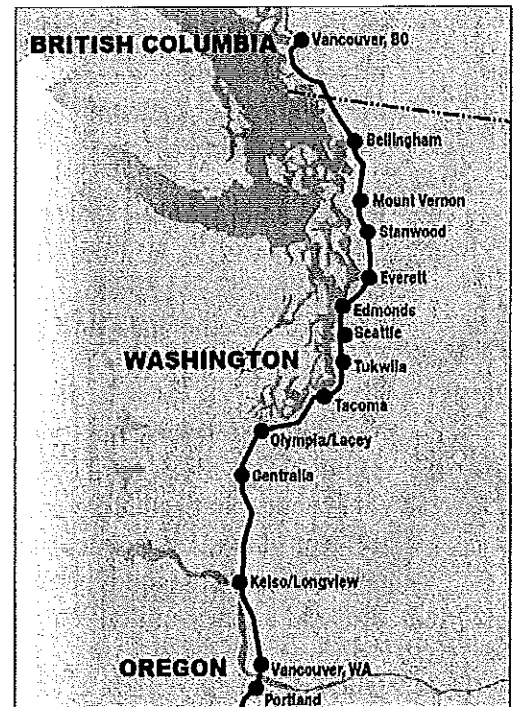
What is the Program Environmental Assessment for the Washington State Segment of the Pacific Northwest Rail Corridor?

The Washington State Segment of the Pacific Northwest Rail Corridor (PNWRC) links the cities in western Washington with Portland, OR and Vancouver, B.C. The rail corridor is used by Amtrak intercity passenger rail service and BNSF Railway freight service, and loosely parallels Interstate 5. The Washington State Department of Transportation (WSDOT) has been developing intercity passenger rail service in the state of Washington to serve the Pacific Northwest for over 16 years.

For the purposes of this document, intercity rail service refers to the passenger rail service operated by Amtrak and known as the *Cascades*. This service provides daily passenger service between Portland, OR and Vancouver, B.C. with intermediate stops at communities between these cities. The expansion plans of this service and of BNSF must be taken into account when considering improvements along the rail corridor. Service development to date has been guided by a series of plans and actions based on detailed rail corridor modeling performed in conjunction with BNSF.

The need for intercity passenger rail service in the Pacific Northwest has grown in urgency during the past 16 years as rail travel has become a more desirable and convenient mode of transportation compared to air and highway travel. Air travel, with heightened airport security, has become more challenging on the corridor since September 11, 2001. Highway traffic congestion on Interstate 5, which roughly parallels the entire PNWRC, has become a regular occurrence and is no longer restricted to peak times around major cities. People are searching for travel options for both business and leisure travel that is affordable and reliable. It is crucial to the economy of the state of Washington and the Pacific Northwest region that development of an alternative form of effective and efficient travel continues to move forward without delay.

Additionally, intercity passenger rail service is recognized by state and federal policy-makers as a means to address 21st century public policy goals. These goals include reducing the nation's dependency on foreign sources of energy, reducing greenhouse gas emissions that contribute to climate change, increasing public safety, and strengthening transportation system redundancies in the wake of natural and man-made disasters.



The Washington segment of the PNWRC

The PNWRC carries over 600,000 intercity travelers between Portland, Seattle, and Vancouver, B.C. each year. The round trip between Seattle and Portland is offered 4 times daily and takes 3 hours 30 minutes one way. The round trip between Seattle and Vancouver, B.C. is offered twice daily, and takes 3 hours 55 minutes one way.

The purpose of the program is to improve intercity passenger rail service by reducing travel times and achieving greater schedule reliability in order to accommodate growing intercity travel demand along the Washington State Segment of the Pacific Northwest Rail Corridor.

Improvements to the Washington rail corridor would help meet the region's needs of today, as well as helping to address the expected increase in intercity travel demand rising out of the growth in population over the next 20 years and beyond. This document describes the benefits and environmental impacts of improving the Washington rail corridor.

WSDOT's intercity passenger rail program is governed by both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). SEPA requires that most proposed actions (policy and project) undergo a review to consider the likely environmental consequences of the action. As part of this review, a governmental agency acts as the lead agency, ensuring that the process meets state requirements. WSDOT is the lead agency under SEPA for the rail program.

Under a NEPA action, a federal agency is the designated lead agency; in this case the Federal Railroad Administration (FRA) serves as the lead agency. It is the lead agency's responsibility to ensure that the requirements and intent of NEPA are fulfilled. NEPA requires environmental consideration for all proposed actions by considering the possible impacts from and reasonable alternatives to those actions.

This Program Environmental Assessment is being prepared to determine if the impacts of implementing a corridor-wide rail service expansion plan are significant. The program-level approach provides the opportunity to mitigate or abandon environmentally unsound concepts before they are turned into projects.

What is the History of the Environmental Documentation for the PNWRC?

In 1993, under the five-year high-speed rail initiative, the Federal Railroad Administration (FRA) was charged with the responsibility of overseeing the high-speed rail program. For the WSDOT program, FRA partnered with the Federal Highway Administration (FHWA), which had staff and resources in the Pacific Northwest, giving FHWA the designation as co-lead agency. In addition, it was agreed that development of the PNWRC should follow FHWA environmental procedures. The Washington and Oregon Division of the FHWA, FRA, and WSDOT signed an MOU in October 1995 to address the roles and responsibilities for NEPA actions in the high-speed rail program.

In January 1996, FRA and FHWA issued a formal Notice of Intent to prepare an Environmental Impact Statement (EIS) for the Portland-Seattle-Vancouver, B.C. segment of the PNWRC that would be prepared in cooperation with WSDOT.¹ The purpose of the EIS was to provide background for the decision whether or not to implement high-speed passenger rail service on the corridor. It was also intended to provide background for decisions related to possible future investment in passenger rail service related facilities in the corridor, including daily levels of service and capital improvements needed to meet those levels of service.

One of the components to be included in the EIS was a corridor service plan. This plan would show how WSDOT and its partners would follow an incremental approach over a 20-year timeframe that would ultimately result in 13 daily round trips between Seattle and Portland and four daily round trips between Seattle and Vancouver, B.C. As WSDOT was working with the FRA and FHWA in 1997 and 1998 on the 20-year incremental plan and the EIS, it was determined by the federal agencies that an EIS would not be necessary since the first set of proposed projects listed in the 20-year plan had logical termini and independent utility as stand-alone projects that would improve existing service. Instead, a 20-year service plan that described incremental capital improvements to the Portland-Seattle-Vancouver, B.C. segment of the PNWRC and an Environmental Overview of the Washington segment of the PNWRC would be prepared in lieu of the NEPA EIS.² Further, it was determined that future environmental documentation would be project-specific and comply with SEPA and/or NEPA, depending on the existing and anticipated source of project funding. In August 2000, the Notice of Intent to prepare an EIS for the Portland-Seattle-Vancouver, B.C. segment of the PNWRC was rescinded.³

The first project to proceed with the new approach of project-specific environmental documentation was the Vancouver Rail Project in Southwest Washington. WSDOT, with FHWA as the federal co-lead and FRA as a cooperating agency, prepared a NEPA/SEPA EIS for the project. The project would eliminate conflicts between freight trains and passenger trains in the heavily-congested Vancouver Rail Yard. WSDOT obtained a Record of Decision for that project in 2003.

In 2001, WSDOT, FHWA, and FRA began to develop an EIS for the Kelso to Martin's Bluff Rail Project. This project would eliminate freight and passenger train conflicts near the Columbia River ports of Longview and Kalama. The environmental documentation for the Kelso to Martin's Bluff Rail Project only proceeded as far as a preliminary draft EIS due to state budget limitations and legislative direction.

WSDOT also completed environmental documentation for the Point Defiance Bypass Rail Project near Tacoma. FHWA and FRA were the federal co-leads for the project, and a FHWA NEPA Documented Categorical Exclusion was signed in 2008.

¹ *Federal Register, Volume 61, No. 13, January 19, 1996, pp. 1431-1432.*

² *Pacific Northwest Rail Corridor Intercity Passenger Rail Plan for Washington State, 1997-2020 and Pacific Northwest Rail Corridor Environmental Overview 1998.*

³ *Federal Register, Volume 65, No. 164, August 23, 2000, p. 51401.*

Other construction projects undertaken by WSDOT were relatively small in scale, used state funds only, and were issued Determinations of Non-Significance under SEPA. These projects were either crossovers or siding extensions, or a combination of both.

In early 2009, the federal government introduced the new High-Speed Intercity Passenger Rail (HSIPR) grant program. The \$8 billion grant program was established to assist with financing for state development of improved intercity and high-speed passenger rail services. The 2009 HSIPR grant program has four funding tracks. Track 2 of this grant program requires that NEPA documentation be completed for proposed corridor projects in order to be eligible for federal funds. This documentation is to be in the form of a Program NEPA Environmental Assessment or EIS for the corridor improvements; an EA has been prepared for this program as the impacts do not warrant an EIS.

What are the Benefits of the Intercity Passenger Rail Program?

The Washington State Legislature issued a mandate in 1993 directing WSDOT to provide a safe, efficient, environmentally responsible alternative to increasing highway capacity through development of a regional intercity passenger rail service. The intercity passenger rail service is intended to complement and enhance air transportation systems, help accommodate future intercity travel demand, ensure state economic vitality, save energy, and protect the state's quality of life.⁴ The mandate serves to guide future development on the rail corridor.

WSDOT responded to this mandate by making improvements to the BNSF main line tracks so that freight, intercity passenger, and commuter trains can share the tracks safely and with increasing degrees of operational efficiencies for all carriers using the tracks. WSDOT also purchased new train sets and worked with local jurisdictions to make improvements to train stations so that intercity travelers have safe and convenient places to board and disembark trains.

The purpose and need for intercity passenger rail service in the Pacific Northwest has grown in urgency as rail travel has become a more desirable and convenient mode of transportation compared to air and highway travel. The identified goal of WSDOT is to increase service to the ultimate levels of 13 daily round trips between Seattle and Portland and four daily round trips between Seattle and Vancouver, B.C.

It is crucial to the economy of the state of Washington and the Pacific Northwest region that development of this alternative form of effective and efficient travel continues to move forward without delay. Additionally, intercity passenger rail service is recognized by state and federal policy-makers as a means to address 21st century public policy goals. These goals include reducing the nation's dependency on foreign sources of energy, reducing greenhouse gas emissions that contribute to climate change, increasing public safety, and strengthening transportation system redundancies in the wake of natural and man-made disasters.

⁴ *Revised Code of Washington 47.79.010 (1993)*

The HSIPR grant program of 2009 is intended to help states like Washington that have already established a purpose and need for intercity passenger rail service but lack sufficient funding resources to significantly implement a program. The funding will allow WSDOT to accelerate efforts to increase the level of public utility derived from expanded passenger rail.

What are the Alternatives Considered in this Program EA?

The two alternatives that are evaluated in this environmental document are the No Build Alternative and the Corridor Service Expansion Alternative. The No Build Alternative examines what will happen with the intercity passenger rail service if there are no further improvements to the corridor. The Corridor Service Expansion Alternative looks at the increased passenger rail service provided by implementing the projects contained in Service Blocks 1, 2, and 3.

What is the No Build Alternative?

If no further improvements are made to the existing corridor, the capacity of the rail line will remain the same, and intercity passenger rail service will not improve beyond the three round trips that currently operate between Seattle and Portland, the one round trip between Portland and Vancouver, B.C., and the one round trip between Seattle and Vancouver, B.C.

- Ridership growth on intercity passenger trains will be limited by the seating capacity of the existing levels of service;
- The average on-time performance of the trains will remain at 62% to 69%, and may be degraded over time by increasing freight traffic on the shared rail corridor;
- Travel times between cities will remain the same as they are today;
- Reduced use of fuel consumed by automobiles and commercial aircraft transporting intercity travelers will not be realized;
- The anticipated reductions in greenhouse gas emissions generated by intercity auto and air travel will not be realized through increased levels of daily intercity passenger rail service.
- Mobility in the PNWRC will be constrained, making the region a less attractive location for businesses, which may relocate to areas with improved intercity passenger rail systems.

What is the Corridor Service Expansion Alternative?

The Corridor Service Expansion Alternative includes projects that, when completed, will result in improvements to daily service levels, and improved on-time performance and schedule reliability.

These projects have been grouped into service blocks that will provide distinct improvements to daily service levels, on-time performance, and scheduled running times between cities. To gain maximum benefit from the incremental infrastructure improvements to the corridor, the service blocks must be constructed in sequence. This is

the service development method WSDOT has successfully followed since 1994 and intends to follow in the future. The following projects are evaluated in this Environmental Assessment:

Service Block 1 Proposed Projects

Service Block 1 projects will add one daily round trip between Seattle and Portland (for a total of five round trips), will help achieve greater schedule reliability, and will reduce the travel time between Seattle and Portland by six minutes. Projects will also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Tacoma – D to M Street Connection**
1.2 miles of new railroad track and a new railroad bridge will be constructed over Pacific Avenue in downtown Tacoma.
- **Tacoma – Point Defiance Bypass**
3.5 miles of new track will be constructed, 10.5 miles of existing track will be reconstructed, and five at-grade crossings will be improved.
- **Vancouver – Yard Bypass Track**
A new crew-change track and an additional connection between the east-west and north-south main lines will be provided.
- **Vancouver – New Middle Lead**
A second connection between the east-west and north-south main lines will be provided.
- **Vancouver – West Side Port Associated Trackage**
Nearly 36,000 feet of new track and a new roadway bridge will be constructed on port property.
- **Cascades Corridor Reliability Upgrades – South**
Track quality improvements will be made between Nisqually and the Columbia River.
- **Cascades Corridor Reliability Upgrades – North**
Track quality will be improved between Everett and the Canadian border.
- **King Street Station – Seismic Retrofit**
The structural integrity of King Street Station will be strengthened to withstand earthquakes.
- **Blaine – Swift Customs Facility Siding**
A second siding track for freight trains awaiting U.S. Customs inspections near the Canadian border will be provided.

- **Everett – Storage Track**
Two new receiving/departure tracks will be constructed through Everett’s Delta Yard.
- **Amtrak *Cascades* – New Train Set**
One new train set will be purchased, but only if the purchase of 4 new train sets listed in Service Block 2 as “Amtrak *Cascades* – New Train Sets” is not fully funded.

Service Block 2 Proposed Projects

Service Block 2 includes all the projects listed in Service Block 1 (with the exception of the purchase of one new Amtrak *Cascades* train set as noted in Service Block 1) plus the projects listed below. It will enable WSDOT and Amtrak to add a fifth and sixth daily round trip between Seattle and Portland and will reduce the travel time between these cities by 10 minutes. The projects also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Amtrak *Cascades* – New Train Sets**
Four new train sets will be purchased.
- **Amtrak *Cascades* – High Speed Locomotives**
18 new, fuel-efficient, high-speed locomotives will be purchased.
- **Advanced Signal System – Positive Train Control**
A new train control system between locomotives, trackside signals, and road/rail crossings will be installed. This is a federally mandated project.
- **Kelso to Martins Bluff – New Siding**
A new siding and other improvements will be constructed near the Port of Kalama.
- **Kelso to Martins Bluff – Toteff Siding Extension**
A siding track will be extended and a new grade separation carrying Toteff Road over the siding, main line, and yard tracks will be constructed.
- **Kelso to Martins Bluff – Kelso to Longview Junction**
A new 4.5-mile main line will be construed adjacent to the existing main line and a new grade separation will be constructed at Hazel Avenue in Kelso.
- **King Street Station Track Upgrades**
New tracks will be added at King Street Station to support more daily trains; and two roadway structures near the station will be rebuilt to accommodate the new tracks.

Service Block 3 Proposed Projects

Service Block 3 includes all the projects in Service Blocks 1 and 2 (with the exception of the purchase of one new Amtrak *Cascades* train set as noted in Service Block 1) plus the projects listed below. It will enable WSDOT and Amtrak to add a fifth, sixth, seventh and eighth daily round trip between Seattle and Portland, maintain a high level of schedule reliability, and reduce travel times between Seattle and Portland by up to

18 minutes. The service block 3 projects will also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Kelso to Martins Bluff – Kalama New Main Line**
This project adds 2.9 miles of new third main line track adjacent to the existing main line near the Port of Kalama.
- **Bellingham Main Line Relocation**
4,000 feet of track near Bellingham's waterfront will be relocated and a new roadway bridge over the realigned tracks will be constructed.
- **Everett Curve Realignment**
The main line will be realigned, the signal system improved, and the mechanical portions of the Snohomish River Bridge upgraded.
- **King Street Station Renovation**
The passenger, baggage, and adjoining offices in Seattle's King Street Station will be restored to accommodate higher volumes of rail travelers.
- **Tukwila Station**
A passenger waiting shelter will be added at Sound Transit's commuter station and an Amtrak *Cascades* passenger information system will be installed at nearby Sea-Tac International Airport.
- **Vancouver Port Access**
New east-west tracks will be constructed beneath the BNSF north-south main line near the Port of Vancouver.
- **Tacoma Trestle Replacement**
A single track functionally-obsolete timber trestle will be replaced with a modern multiple track structure and retained earth fill.

How Will the Program Affect the Future Environment?

The Program EA describes the existing conditions for a number of areas of environmental concern and assesses the potential impacts to these areas from both the No Build and Corridor Service Expansion Alternatives. Chapter 5 contains a more detailed discussion of these potential impacts. After evaluating the expected impacts caused by the rail improvement projects listed in the Corridor Service Expansion Alternative, the conclusion is that any potential impacts can be avoided, minimized, or mitigated.

The following is an overview of potential environmental impacts that could result from the proposed alternatives.

Waterways and Hydrological Systems

No Build Alternative

Surface water, ground water and floodplains will not be affected because there will be no rail improvements constructed and no additional intercity passenger trains will operate on the railroad main line. BNSF railroad maintenance will continue to support the current rail traffic.

Corridor Service Expansion Alternative

The rail corridor crosses a number of rivers and streams, and their associated floodplains and habitats. In addition, a number of other water features are located within close proximity to the corridor. In order to expand the passenger rail service, new rail crossings would be constructed over the Coweeman River, Schoolhouse Creek, and some unnamed streams. In addition, rail improvements would be constructed directly adjacent to the Columbia River, Vancouver Lake, Burnt Bridge Creek, Cowlitz River, Kalama River, Owl Creek, China Creek, and Snohomish River. Although most types of potential project improvements will occur within the existing rail right of way, some improvements will require between 15 and 20 acres of fill placement in floodplains (including wetlands and non-wetlands) in Clark, Cowlitz, and Snohomish counties and less than 5 acres of increased impervious areas outside the existing developed rail line in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties.

Physical improvements will be designed to meet standard engineering practices to avoid and minimize impacts to floodplains and hydrological connection of waterways. Engineering design and facility construction will be consistent with all regulatory requirements for protection of water resources. Further, restrictions and confinements of waterways are regulated by state and federal agencies; mitigation conditions will be determined during the project permitting process. Temporary water quality impacts during construction over and adjacent to waterways would be avoided or minimized through compliance with the Washington Department of Ecology's Stormwater Management Manual for Western Washington, and city and county grading/drainage ordinances and BMPs, as appropriate. For construction sites disturbing more than one acre, an NPDES permit would be required. In addition, a 401 Water Quality Certification would be required for projects that include filling wetlands to verify that water quality standards would not be violated. (The 401 Water Quality Certification will be issued in conjunction with the U.S. Corps of Engineers Section 404 permit for wetland fill.)

Hazardous Materials

No Build Alternative

There will be no impacts to existing hazardous waste sites if no rail improvement projects are constructed.

Corridor Service Expansion Alternative

A total of 7 Superfund sites, 401 state cleanup sites, and 781 leaking underground storage tank sites were found within a 2,000 foot buffer along the rail corridor. Impacts of the

Corridor Service Expansion Alternative on the environment and human health are expected to be minimal. When project-level analysis is begun, procedures to further investigate known or potentially contaminated sites that may be disturbed will be conducted in order to identify and implement standard mitigation measures to ensure construction does not cause, contribute to or spread contamination and expose the public to hazardous materials. With respect to hazardous materials, construction impacts are typically positive to the environment when excavation removes contamination. However, project-specific investigations will determine if hazardous materials will be impacted by future projects.

Hazardous materials investigations will be performed to identify contaminated sites and the potential type and extent of contamination as individual improvements are designed. Mitigation will be required to properly manage pre-existing contaminated soil or ground water so that it does not spread, and so that clean water does not come into contact with contaminated stockpiled soil. The plans put in place to properly manage the potential contact with hazardous materials will result in minimized impacts for the improvements due to hazardous materials. During construction, Spill Prevention, Control and Countermeasures (SPCC) Plans will also be required. Preventing a spill is the primary goal; however, the contractor is expected to be prepared to minimize the impacts of a spill through immediate and appropriate response actions. Requiring an SPCC for all projects will result in minimized risk of contamination due to a hazardous materials spill during construction.

Biological Resources / Ecology

No Build Alternative

Wetlands and aquatic resources will not be affected because there will be no rail improvements constructed and no additional intercity passenger trains will operate on the railroad main line. BNSF railroad maintenance will continue to support the current rail traffic.

Corridor Service Expansion Alternative

The rail corridor crosses a number of rivers and streams as well as sensitive wetland and plant communities, and a number of other water features and species occurrences are located within close proximity to the corridor. In the case of fill or cut areas, especially near streams or wetlands, moderate impacts to fisheries, vegetation, and wildlife could be expected. In these areas, critical, suitable or available habitat for species could be lost or modified in ways that limits usability by species. Most types of potential project improvements will occur within the existing rail right of way. However, some of these habitats could be impacted by improvements in Cowlitz and Snohomish counties. It is anticipated that the improvement projects could create between 8 and 12 acres of wetland fill in Cowlitz County and between 1 and 2 acres of wetland fill in Snohomish County. It is anticipated that the improvement projects could affect between 18 and 25 acres of vegetation and wildlife sites in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties. It is anticipated that the improvement projects could affect less than

1 river mile of fish designated critical habitat within Schoolhouse Creek and the Coweeman River in Cowlitz County.

Mitigation measures would follow a hierarchy of avoidance, minimization, and compensation for impacts. Sensitive areas will be avoided as much as possible. Engineering designs are developed to minimize impacts to aquatic resources. Restoration of degraded wetlands, enhancement of existing wetlands or creation of new wetland habitat is often used to replace impacted wetlands. Enhancement of existing wetlands within the immediate project area may involve eradicating invasive plant species and planting native vegetation. Projects will be assessed individually and regulatory compensatory mitigation will be completed.

Air Quality

No Build Alternative

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, the air quality along the corridor will not be impacted.

Corridor Service Expansion Alternative

The air quality analysis that was performed for rail operations indicates that the level for each criteria pollutant was not exceeded. As such, this analysis confirms that the rail program's increased operations conform to the purpose and intent of the State Implementation Plans and Maintenance Plans for achieving the National Ambient Air Quality Standards.

The major air quality impacts during construction are expected to be dust, odors, other particulate matter, and hydrocarbons. Construction impacts in the project area are expected to be temporary and intermittent only, and they will be diluted at increasing distances from the project. However, project-specific investigations will determine if air quality will be impacted by future projects.

Contract specifications will require those performing the construction work to comply with federal, state, and local air quality regulations to cover temporary construction conditions such as dust and smoke emissions. Since construction will be a temporary condition only, it is anticipated that no other measures will be necessary to control emissions.

Soils and Geology

No Build Alternative

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, soils and geology along the corridor will not be impacted.

Corridor Service Expansion Alternative

The construction of new track in areas adjacent to or at the foot of unstable slopes could cause potential impacts. None of the proposed improvements are located in the general locations of unstable slopes so the potential of impacts to unstable slopes is small.

Liquefaction (ground failure due to earthquakes) is possible in portions of the corridor. The potential for sections of track to be dislocated is also possible during an earthquake. Faster and more frequent trains will increase the frequency of vibration, increasing the risk of liquefaction and track damage in any areas of liquefaction-prone soils. Erosion impacts during construction in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties are primarily related to the increased potential for erosion resulting from exposure of excavated soils to water. If not controlled, such erosion could result in the deposition of silt and/or sediment in wetlands, streams, or any other adjacent surface water. It is also likely that soils could be tracked onto nearby paved roads by construction vehicles. Wind action over exposed soils could generate dust.

Where steep slopes are unavoidable in cut and fill sections, attempts will be made to minimize the disruption of soils and to apply current soil stabilization techniques. When necessary, retaining walls will also be utilized. As a last resort, steep slopes will be cut back to a reasonable angle so that future landslide risk is minimized. Proper subgrade preparation and embankment compaction will reduce the risk of liquefaction and track damage in any areas of liquefaction-prone soils. Potential erosion during project construction will be mitigated by the use of best management practices specified in the erosion and sedimentation control plans for the project, as required by state and local jurisdictions. Re-establishment of vegetation in non-paved cleared areas as soon as possible and application of appropriate ground cover will also minimize the potential for erosion hazards.

Land Use

No Build Alternative

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, land use along the corridor will not be impacted.

Corridor Service Expansion Alternative

Some impacts may result from the addition of rail facilities in Clark, Cowlitz, and Whatcom counties. All efforts will be made to keep the project limits within the railroad's current right of way. However, it will not be possible to avoid work off the existing rail right of way. It is likely that between 10 and 15 acres of land will be converted from its present use to rail-related use in these three counties, which will cause some minor land use impacts. State, regional, and county plans throughout the corridor have incorporated the Amtrak passenger rail service (and its associated facilities) into their comprehensive plans. Many other jurisdictions have also recognized the rail service in their plans, especially in the cities of Vancouver, Kelso, Lacey, Tacoma, Tukwila, Seattle, Edmonds, Everett, Mt. Vernon, and Bellingham, which all have stations. Overall, the intercity passenger program is compatible with existing comprehensive plans and policies.

No long-term impacts to land use are anticipated to result from project improvements to allow for faster and more frequent intercity passenger trains; thus, no mitigation is proposed.

Farmlands

No Build Alternative

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, farmlands along the corridor will not be impacted by increased intercity passenger train frequencies or speeds.

Corridor Service Expansion Alternative

Impacts to farmlands will be minor, because most of the new tracks will be constructed inside the existing railroad right of way. Between 3 and 5 acres of farmland used as pastures for small resident farms in suburban Kelso in Cowlitz County may be displaced by related roadway improvements. Some farmland could be converted to wetlands as mitigation for wetland impacts adjacent to the existing right of way in Cowlitz and Snohomish counties. The amount and location of the farmland converted to wetland mitigation will vary depending on consultation with the permitting agencies, but would likely not exceed a total of 15 acres in Cowlitz and Snohomish counties.

No long-term impacts to farmlands are anticipated to result from faster and more frequent intercity trains and its associated project improvements; thus, no mitigation is proposed.

Parks and Cultural Resources

No Build Alternative

Parks and cultural resources along the corridor will not be impacted because no improvements will be made to the rail corridor.

Corridor Service Expansion Alternative

Throughout the corridor, the rail line is located near a number of parks and cultural facilities. As such, the addition of rail improvements such as new sidings, bypasses, or additional main lines could potentially impact these resources. Such impacts could result in the disruption of a cultural resource or a change in access to a park or recreation facility. None of the improvements proposed in the Corridor Service Expansion Alternative appear to be near enough to existing parks or known cultural resources to result in impacts from the improvements. Project-specific investigations will determine the effects of each project on parks, historic structures and archaeological sites. Also, a Section 106 consultation for cultural resources will be initiated with affected Native American Tribes, the State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, and local governments. WSDOT will work with the lead federal agency to ensure compliance with Section 106.

Future thorough project-specific investigations will determine if parks and cultural resources would be impacted by construction of the improvements or by additional train operations.

Social and Economic

Impacts analysis for this section involves a qualitative discussion of potential impacts to community cohesion and safety. It also discusses potential relocation and environmental justice issues.

No Build Alternative

Community cohesion and safety, relocation, and environmental justice along the corridor will not be affected because no improvements will be made to the rail corridor.

Corridor Service Expansion Alternative

Potential effects of faster and more frequent passenger trains on community cohesion could result from increased train traffic along the line and from construction of associated facilities. Construction of bypass tracks and additional main lines could potentially disrupt neighborhoods and businesses by changing access. Increased rail service is not expected to require the relocation of any homes or businesses. It is not anticipated that these trains will result in extremely high levels of noise or vibration that will make homes or businesses adjacent to the railroad tracks unusable. In addition, increased rail service will not cause any disproportionately high and adverse impacts on populations protected by the Environmental Justice Executive Order. The rail program will actually provide mobility benefits to minority populations. However, project-specific investigations will determine if social and economic factors will be impacted by future projects.

If additional right of way is needed, acquisition will begin once plans are approved and the project is funded. Monetary compensation will be provided to the current title holder for the necessary land required.

To address safety concerns, WSDOT is working with local communities up and down the corridor to improve, close and consolidate grade crossings and educate the public about the dangers of railroad trespassing. In addition, the volunteer group, Operation Lifesaver, provides extensive community education and outreach about the dangers of trespassing on railroad property.

Visual Quality

No Build Alternative

Visual quality will remain the same along the corridor because no improvements will be made to the rail corridor.

Corridor Service Expansion Alternative

Most railroad improvements will occur within the existing right of way, where track and supporting structures already exist. Additional railroad facilities will comprise an incremental change that will be unnoticeable in most locations. Overall there is not expected to be any change in visible quality from the project.

Following construction, the visual quality is anticipated to return to near pre-existing conditions for most improvement sites. Where new rail bridge structures will be added, specifically at the Coweeman River crossing in Kelso, the new bridge will be placed alongside the existing structure, thus minimizing the visual impact. At locations where there will be new roadway bridges over the tracks, the design of the new bridges will be coordinated with local government and the general public to minimize the visual impact of the new structures. At locations where new retaining walls will be added, the visible surface of the retaining walls could be designed to minimize the visual impact by modifying the surface color and texture to resemble natural rock surfaces or by adding a vegetation buffer to shield it from view. Mitigation also includes replacing removed vegetation with native vegetation and locating vegetative buffers beneficial to the visual quality along portions of the improvement sites where cuts or fills have occurred within sight of residential viewers.

Energy

No Build Alternative

Energy use will remain the same along the corridor because no improvements will be made.

Corridor Service Expansion Alternative

A primary goal of the rail program is to reduce the existing bottlenecks in the rail system. This will result in an overall decrease in travel time. Additional fuel efficiency will be realized with the use of the new models of locomotives being built for this route in the future, which are assumed to be at least 10 percent more fuel efficient than the existing locomotives.

Current total daily consumption of fuel for Amtrak *Cascades* rail passenger service is approximately 3,200 gallons. With the planned rail improvements for Amtrak *Cascades* service expansion and using new locomotives, fuel use is projected to increase to 4,212 gallons per day, for a net increase of approximately 1,000 gallons per day. Local supplies of diesel fuel will not be impacted by these improvements.

Noise

No Build Alternative

Noise will remain the same along the corridor because no improvements will be made.

Corridor Service Expansion Alternative

General noise and vibration analyses were conducted, and it was discovered that noise and vibration levels are already high throughout the program corridor due to existing freight operations. The proposed rail improvements will not noticeably add to the existing levels of noise or vibration in these areas, resulting in a finding of no noise or vibration impacts for all of the improvement areas studied. For this same reason, one can logically conclude that the increase in the number and speed of passenger trains will not result in impacts in any of the areas between improvements. However, project-specific

investigations will determine if noise and vibration levels will be impacted by future projects.

The need for mitigation is based on the magnitude of impact and consideration of factors specifically related to the proposed improvement and affected land uses. Every reasonable effort will be made to reduce predicted noise and vibration to levels deemed acceptable for impacted sensitive land uses. Any decision to include mitigation will be made after site-specific analysis.

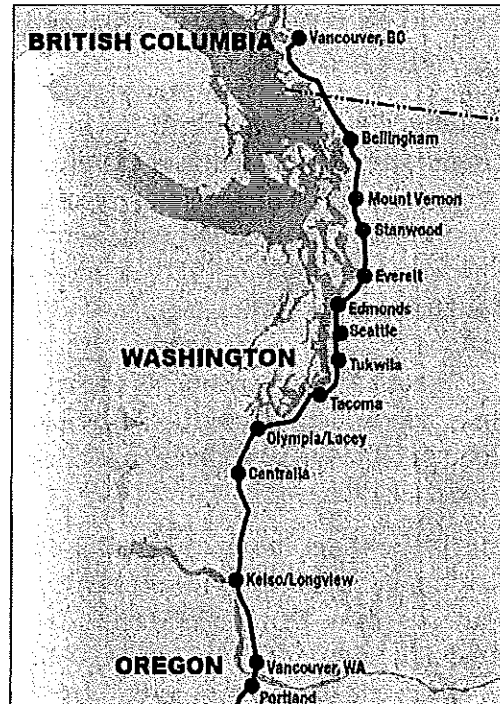
What are the Next Steps in the Environmental Process?

As funding becomes available, a project-level analysis and NEPA environmental documentation will be completed for each of the corridor improvements that have been identified as necessary to meet the goals of an intercity passenger rail service of eight round trips between Seattle and Portland, increased schedule reliability between Portland and Vancouver, B.C., and reduced travel times between cities.

The Washington State Department of Transportation (WSDOT) has been developing intercity passenger rail service in the Pacific Northwest for over 16 years. Service development has been guided by a series of plans and actions based on detailed rail corridor modeling performed in conjunction with the BNSF Railway (BNSF).

WSDOT has developed intercity passenger rail service using an incremental approach so that service development occurs in a strategic and controlled manner that provides increasing levels of public utility.

The passenger rail service that operates in Washington today is known and branded as Amtrak *Cascades*. The service operates on the federally-designated Pacific Northwest Rail Corridor (PNWRC) that spans 466 miles from Eugene, Oregon, to Vancouver, B.C. WSDOT and its partners have invested over \$1 billion for new and upgraded tracks, signal improvements, stations, and road/rail grade separations. This investment has led to greater rail line capacity, freight, intercity, and commuter rail operating efficiencies, improved access to and from Washington's ports, and increased public safety.



The Washington segment of the PNWRC

How did the intercity passenger rail service develop?

Incremental service improvements to intercity passenger rail service along the Portland-Seattle-Vancouver, B.C. segment of the PNWRC have occurred in stages. Since its inception in 1971, Amtrak has operated a single daily round trip between Seattle and Portland. In 1994, WSDOT began providing operating funds to Amtrak for a second daily round trip between Seattle and Portland. After completing a series of construction projects that created more main line capacity, WSDOT and Amtrak re-introduced intercity passenger rail service between Seattle and Vancouver, B.C. in 1995 and offered one daily round trip between these cities.

Public crossing upgrades, new crossovers, and the use of passive-tilt train sets led to a third daily round trip and a 25-minute one-way travel time reduction between Seattle and Portland in 1998. Siding extensions funded by WSDOT and Amtrak led to a new daily round trip between Seattle and Bellingham in 1999. After completing track work near Tacoma and Mount Vernon, the train operating between Seattle and Bellingham began

operating between Portland and Bellingham in 2006. Most recently, the construction of a new siding track in British Columbia, Canada enabled the Portland- Bellingham train to extend its route to include Vancouver B.C. in August 2009.

What is the history of the environmental documentation for the corridor?

Under Washington's State Environmental Policy Act (SEPA), any agency that proposes to take an official action is required to perform a series of environmental analyses⁵ to ensure minimal impacts will result from that action. At the federal level, pursuant to the National Environmental Policy Act (NEPA), a similar environmental analysis must be performed if the proposed action is being implemented by a federal agency, requires a federal permit, or has federal funding.

Rail corridor improvements to the Washington Segment of the Pacific Northwest Rail Corridor must follow federal and state environmental regulations as dictated by SEPA and NEPA, because the improvements are being initiated by both a state (WSDOT) and a federal (FRA) agency.

In 1993, under the five-year high-speed rail initiative, the Federal Railroad Administration (FRA) was charged with the responsibility of overseeing the high-speed rail program. For the WSDOT program, FRA partnered with the Federal Highway Administration (FHWA), which had staff and resources in the Pacific Northwest, giving FHWA the designation as co-lead agency. In addition, it was agreed that development of the PNWRC should follow FHWA environmental procedures. The Washington and Oregon Division of the FHWA, FRA, and WSDOT signed an MOU in October 1995 to address the roles and responsibilities for NEPA actions in the high-speed rail program.

In January 1996, FRA and FHWA issued a formal Notice of Intent to prepare an Environmental Impact Statement (EIS) for the Portland-Seattle-Vancouver, B.C. segment of the PNWRC that would be prepared in cooperation with WSDOT.⁶ The purpose of the EIS was to provide background for the decision whether or not to implement high-speed passenger rail service on the corridor. It was also intended to provide background for decisions related to possible future investment in passenger rail service related facilities in the corridor, including daily levels of service and capital improvements needed to meet those levels of service.

One of the components to be included in the EIS was a corridor service plan. This plan would show how WSDOT and its partners would follow an incremental approach over a 20-year timeframe that would ultimately result in 13 daily round trips between Seattle and Portland and four daily round trips between Seattle and Vancouver, B.C. As WSDOT was working with the FRA and FHWA in 1997 and 1998 on the 20-year incremental plan and the EIS, it was determined by the federal agencies that an EIS would not be necessary since the first set of proposed projects listed in the 20-year plan

⁵Unless the action is exempt under SEPA.

⁶ *Federal Register*, Volume 61, No. 13, January 19, 1996, pp. 1431-1432.

had logical termini and independent utility as stand-alone projects that would improve existing service. Instead, a 20-year service plan that described incremental capital improvements to the Portland-Seattle-Vancouver, B.C. segment of the PNWRC and an Environmental Overview of the Washington segment of the PNWRC would be prepared in lieu of the NEPA EIS.⁷ Further, it was determined that future environmental documentation would be project-specific and comply with SEPA and/or NEPA, depending on the existing and anticipated source of project funding. In August 2000, the Notice of Intent to prepare an EIS for the Portland-Seattle-Vancouver, B.C. segment of the PNWRC was rescinded.⁸

The first project to proceed with the new approach of project-specific environmental documentation was the Vancouver Rail Project in Southwest Washington. WSDOT, with FHWA as the federal co-lead and FRA as a cooperating agency, prepared a NEPA/SEPA EIS for the project. The project would eliminate conflicts between freight trains and passenger trains in the heavily-congested Vancouver Rail Yard. WSDOT obtained a Record of Decision for that project in 2003.

In 2001, WSDOT, FHWA, and FRA began to develop an EIS for the Kelso to Martin's Bluff Rail Project. This project would eliminate freight and passenger train conflicts near the Columbia River ports of Longview and Kalama. The environmental documentation for the Kelso to Martin's Bluff Rail Project only proceeded as far as a preliminary draft EIS due to state budget limitations and legislative direction.

WSDOT also completed environmental documentation for the Point Defiance Bypass Rail Project near Tacoma. FHWA and FRA were the federal co-leads for the project, and a FHWA NEPA Documented Categorical Exclusion was signed in 2008.

Other construction projects undertaken by WSDOT were relatively small in scale, used state funds only, and were issued Determinations of Non-Significance under SEPA. These projects were either crossovers or siding extensions, or a combination of both.

In early 2009, the federal government introduced the new High-Speed Intercity Passenger Rail (HSIPR) grant program. The \$8 billion grant program was established to assist with financing for state development of improved intercity and high-speed passenger rail services. The 2009 HSIPR grant program has four funding tracks. Track 2 of this grant program requires that NEPA documentation be completed for proposed corridor projects in order to be eligible for federal funds. This documentation is to be in the form of a Program NEPA Environmental Assessment or EIS for the corridor improvements.

The requirement for a Program NEPA document in order to secure funding is a different approach than the way WSDOT has been completing its projects to date. In conjunction with the FRA, WSDOT updated the 1998 Environmental Overview and used it as the basis for the development of a programmatic NEPA Environmental Assessment for the corridor projects to fulfill the requirements of the Track 2 HSIPR grant program.

⁷ *Pacific Northwest Rail Corridor Intercity Passenger Rail Plan for Washington State, 1997-2020 and Pacific Northwest Rail Corridor Environmental Overview 1998.*

⁸ *Federal Register, Volume 65, No. 164., August 23, 2000, p. 51401.*

As funding becomes available, project-level analysis and documentation will be completed for each of the corridor improvements that have been identified as necessary to meet the goals of an intercity passenger service of eight round trips between Seattle and Portland, increased schedule reliability between Portland and Vancouver, B.C., and reduced travel times between cities.

What projects are proposed for the continued growth of intercity passenger rail service?

WSDOT, in conjunction with BNSF, Amtrak, and other providers, have identified a number of railroad construction projects that, once completed, will allow WSDOT to increase the number of daily intercity passenger trains operating between Seattle and Portland, increase schedule reliability for trains operating between Portland and Vancouver, B.C., and reduce travel times between cities.

The proposed projects follow WSDOT's incremental service development philosophy. The projects have been grouped to provide distinct improvements in daily service levels, on-time performance, and scheduled running times between cities. To gain maximum benefit from the incremental infrastructure improvements to the corridor, the project groups must be constructed in sequence. This is the service development method WSDOT has successfully followed since 1994 and intends to follow in the future.

Service Block 1 Proposed Projects

Service Block 1 projects will add one daily round trip between Seattle and Portland (for a total of five), will help achieve greater schedule reliability, and will reduce the travel time between Seattle and Portland by six minutes.

- **Tacoma – D to M Street Connection**
1.2 miles of new railroad track and a new railroad bridge will be constructed over Pacific Avenue in downtown Tacoma.
- **Tacoma – Point Defiance Bypass**
3.5 miles of new track will be constructed, 10.5 miles of existing track will be reconstructed, and five at-grade crossings will be improved.
- **Vancouver – Yard Bypass Track**
A new crew-change track and an additional connection between the east-west and north-south main lines will be provided.
- **Vancouver – New Middle Lead**
A second connection between the east-west and north-south main lines will be provided.
- **Vancouver – West Side Port Associated Trackage**
Nearly 36,000 feet of new track and a new roadway bridge will be constructed on port property.

- Cascades Corridor Reliability Upgrades – South
Track quality improvements will be made between Nisqually and the Columbia River.
- Cascades Corridor Reliability Upgrades – North
Track quality will be improved between Everett and the Canadian border.
- King Street Station – Seismic Retrofit
The structural integrity of King Street Station will be strengthened to withstand earthquakes.
- Blaine – Swift Customs facility Siding
A second siding track for freight trains awaiting U.S. Customs inspections near the Canadian border will be provided.
- Everett – Storage Track
Two new receiving/departure tracks will be constructed through Everett’s Delta Yard.
- Amtrak *Cascades* – New Train Set
One new train set will be purchased, but only if the purchase of 4 new train sets listed in Service Block 2 as “Amtrak *Cascades* – New Train Sets” is not fully funded.

Service Block 2 Proposed Projects

Service Block 2 projects will add a sixth daily round trip between Seattle and Portland and will reduce the travel time between these cities by 4 minutes.

- Amtrak *Cascades* – New Train Sets
Four new train sets will be purchased.
- Amtrak *Cascades* – High Speed Locomotives
18 new, fuel-efficient, high-speed locomotives will be purchased.
- Kelso to Martins Bluff – New Siding
A new siding and other improvements will be constructed near the Port of Kalama.
- Kelso to Martins Bluff – Toteff Siding Extension
A siding track will be extended and a new grade separation carrying Toteff Road over the siding, main line, and yard tracks will be constructed.
- Kelso to Martins Bluff – Kelso to Longview Junction
A new 4.5-mile main line will be constructed adjacent to the existing main line and a new grade separation will be constructed at Hazel Avenue in Kelso.

- **King Street Station Track Upgrades**
New tracks will be added at King Street Station to support more daily trains; and two roadway structures near the station will be rebuilt to accommodate the new tracks.
- **Advanced Signal System – Positive Train Control**
A new train control system between locomotives, trackside signals, and road/rail crossings will be installed. This is a federally mandated project.

Service Block 3 Proposed Projects

Service Block 3 projects will enable WSDOT and Amtrak to add a seventh and eight daily round trip between Seattle and Portland, maintain a high level of schedule reliability, and reduce travel times between Seattle and Portland by an average of 8 minutes.

- **Kelso to Martins Bluff – Kalama New Main Line**
This project adds 2.9 miles of new third main line track adjacent to the existing main line near the Port of Kalama.
- **Bellingham Main Line Relocation**
4,000 feet of track near Bellingham’s waterfront will be relocated and a new roadway bridge over the realigned tracks will be constructed.
- **Everett Curve Realignment**
The main line will be realigned, the signal system improved, and the mechanical portions of the Snohomish River Bridge upgraded.
- **King Street Station Renovation**
The passenger, baggage, and adjoining offices in Seattle’s King Street Station will be restored to accommodate higher volumes of rail travelers.
- **Tukwila Station**
A passenger waiting shelter will be added at Sound Transit’s commuter station and an Amtrak *Cascades* passenger information system will be installed at nearby Sea-Tac International Airport.
- **Vancouver Port Access**
New east-west tracks will be constructed beneath the BNSF north-south main line near the Port of Vancouver.
- **Tacoma Trestle Replacement**
A single track functionally-obsolete timber trestle will be replaced with a modern multiple track structure and retained earth fill.

What is the purpose of the intercity passenger rail service program?

The purpose of the program is to improve intercity passenger rail service by reducing travel times and achieving greater schedule reliability in order to accommodate growing intercity travel demand along the Washington State segment of the Pacific Northwest Rail Corridor

Why is the intercity passenger rail service program needed?

In 1993, the Washington State Legislature determined that major intercity transportation corridors in the State were becoming increasingly congested. Population was projected to increase 40 percent and employment almost 50 percent by 2013. This resulted in intercity travel demand forecast to increase by seventy-five percent. There was a need to accommodate this intercity travel demand with a mode of transportation that would ensure the State's economic vitality and protect the quality of life in the state, while also improving safety, increasing energy efficiency, and reducing environmental impacts

To address these needs, the Washington State Legislature authorized the intercity rail passenger program in 1993 and directed WSDOT to provide a safe, efficient, environmentally responsible alternative to increasing highway capacity. The intercity passenger rail program is intended to complement and enhance air transportation systems, help accommodate future intercity travel demand, ensure state economic vitality, save energy, and protect the quality of life in the state.⁹

WSDOT has responded to this mandate by making improvements to the BNSF main line tracks so that freight, intercity passenger, and commuter trains can share the tracks safely and with increasing degrees of operational efficiencies for all carriers using the tracks. WSDOT has also purchased new train sets and worked with local jurisdictions to make improvements to train stations so that intercity travelers have safe and convenient places to board and disembark trains. These actions, taken over the past 16 years, have resulted in a service that carries over 600,000 intercity travelers between Portland, Seattle, and Vancouver, B.C. each year.

The need for intercity passenger rail service in the Pacific Northwest has grown in urgency during the past 16 years as rail travel has become a more desirable and convenient mode of transportation compared to air and highway travel. Air travel, with heightened airport security, has become more challenging on the corridor since September 11, 2001. Highway traffic congestion on Interstate 5, which parallels the entire PNWRC, has become a regular occurrence and is no longer restricted to peak times around major cities. People are searching for travel options for both business and leisure

⁹ *Revised Code of Washington 47.79.010 (1993)*

travel that is affordable and reliable. It is crucial to the economy of the state of Washington and the Pacific Northwest region that development of an alternative form of effective and efficient travel continues to move forward without delay.

Additionally, intercity passenger rail service is recognized by state and federal policy-makers as a means to address 21st century public policy goals. These goals include reducing the nations' dependency on foreign sources of energy, reducing greenhouse gas emissions that contribute to climate change, increasing public safety, and strengthening transportation system redundancies in the wake of natural and man-made disasters.

The HSIPR grant program of 2009 is intended to help states like Washington that have already established a purpose and need for intercity passenger rail service, but lack sufficient funding resources to significantly implement a program. The funding will allow WSDOT to accelerate efforts to increase the level of public utility derived from expanded passenger rail.

What alternatives are evaluated in this Environmental Assessment?

The two alternatives that are evaluated in this environmental document are the No Build Alternative and the Corridor Service Expansion Alternative. The No Build Alternative examines what will happen with the intercity passenger rail service if there are no further improvements to the corridor. The Corridor Service Expansion Alternative looks at the increased passenger rail service provided by implementing the projects contained in Service Blocks 1, 2 and 3.

No Build Alternative

The Pacific Northwest Rail Corridor (PNWRC) was designated as a future high-speed rail corridor by the federal government in 1992. This 466-mile rail line from Eugene, OR to Vancouver, B.C. roughly parallels Interstate 5 and Provincial Highway 99 and connects the commercial business districts of the region's largest population centers. The portion of the PNWRC that lies within Washington State is 297 miles long, and is located on the BNSF north-south main line. No alternative rail corridor exists in the region.

If no further improvements are made to the existing corridor, the capacity of the rail line will remain the same, and intercity passenger rail service will not improve beyond the three round trips that currently operate between Seattle and Portland, the one round trip between Portland and Vancouver, B.C., and the one round trip between Seattle and Vancouver, B.C.

- Ridership growth on intercity passenger trains will be limited by the seating capacity of the existing levels of service;
- The average on-time performance of the trains will remain at 62% to 69%, and may be degraded over time by increasing freight traffic on the shared rail corridor;
- Travel times between cities will remain the same as they are today;
- Reduced use of fuel consumed by automobiles and commercial aircraft transporting intercity travelers will not be realized;
- The anticipated reductions in greenhouse gas emissions generated by intercity auto and air travel will not be realized through increased levels of daily intercity passenger rail service.
- Mobility in the PNWRC will be constrained, making the region a less attractive location for businesses, which may relocate to areas with improved intercity passenger rail systems.

Corridor Service Expansion Alternative

The Corridor Service Expansion Alternative includes projects that, when completed, will result in improvements to daily service levels, and improved on-time performance and schedule reliability.

These projects have been grouped into service blocks that will provide distinct improvements to daily service levels, on-time performance, and scheduled running times between cities. To gain maximum benefit from the incremental infrastructure improvements to the corridor, the service blocks must be constructed in sequence. This is the service development method WSDOT has successfully followed since 1994 and intends to follow in the future. The following projects are evaluated in this Environmental Assessment:

Service Block 1 Proposed Projects

Service Block 1 projects will add one daily round trip between Seattle and Portland (for a total of five round trips), will help achieve greater schedule reliability, and will reduce the travel time between Seattle and Portland by six minutes. Projects will also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Tacoma – D to M Street Connection**
1.2 miles of new railroad track and a new railroad bridge will be constructed over Pacific Avenue in downtown Tacoma.
- **Tacoma – Point Defiance Bypass**
3.5 miles of new track will be constructed, 10.5 miles of existing track will be reconstructed, and five at-grade crossings will be improved.
- **Vancouver – Yard Bypass Track**
A new crew-change track and an additional connection between the east-west and north-south main lines will be provided.
- **Vancouver – New Middle Lead**
A second connection between the east-west and north-south main lines will be provided.
- **Vancouver – West Side Port Associated Trackage**
Nearly 36,000 feet of new track and a new roadway bridge will be constructed on port property.
- **Cascades Corridor Reliability Upgrades – South**
Track quality improvements will be made between Nisqually and the Columbia River.

- **Cascades Corridor Reliability Upgrades – North**
Track quality will be improved between Everett and the Canadian border.
- **King Street Station – Seismic Retrofit**
The structural integrity of King Street Station will be strengthened to withstand earthquakes.
- **Blaine – Swift Customs Facility Siding**
A second siding track for freight trains awaiting U.S. Customs inspections near the Canadian border will be provided.
- **Everett – Storage Track**
Two new receiving/departure tracks will be constructed through Everett’s Delta Yard.
- **Amtrak *Cascades* – New Train Set**
One new train set will be purchased, but only if the purchase of 4 new train sets listed in Service Block 2 as “Amtrak *Cascades* – New Train Sets” is not fully funded.

Service Block 2 Proposed Projects

Service Block 2 includes all the projects listed in Service Block 1 (with the exception of the purchase of one new Amtrak *Cascades* train set as noted in Service Block 1) plus the projects listed below. It will enable WSDOT and Amtrak to add a fifth and sixth daily round trip between Seattle and Portland and will reduce the travel time between these cities by 10 minutes. The projects also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Amtrak *Cascades* – New Train Sets**
Four new train sets will be purchased.
- **Amtrak *Cascades* – High Speed Locomotives**
18 new, fuel-efficient, high-speed locomotives will be purchased.
- **Advanced Signal System – Positive Train Control**
A new train control system between locomotives, trackside signals, and road/rail crossings will be installed. This is a federally mandated project.
- **Kelso to Martins Bluff – New Siding**
A new siding and other improvements will be constructed near the Port of Kalama.
- **Kelso to Martins Bluff – Toteff Siding Extension**
A siding track will be extended and a new grade separation carrying Toteff Road over the siding, main line, and yard tracks will be constructed.

- **Kelso to Martins Bluff – Kelso to Longview Junction**
A new 4.5-mile main line will be constructed adjacent to the existing main line and a new grade separation will be constructed at Hazel Avenue in Kelso.
- **King Street Station Track Upgrades**
New tracks will be added at King Street Station to support more daily trains; and two roadway structures near the station will be rebuilt to accommodate the new tracks.

Service Block 3 Proposed Projects

Service Block 3 includes all the projects in Service Blocks 1 and 2 (with the exception of the purchase of one new Amtrak *Cascades* train set as noted in Service Block 1) plus the projects listed below. It will enable WSDOT and Amtrak to add a fifth, sixth, seventh and eighth daily round trip between Seattle and Portland, maintain a high level of schedule reliability, and reduce travel times between Seattle and Portland by up to 18 minutes. The service block 3 projects will also improve reliability for existing train service operating between Portland and Vancouver, B.C. and Seattle and Vancouver, B.C.

- **Kelso to Martins Bluff – Kalama New Main Line**
This project adds 2.9 miles of new third main line track adjacent to the existing main line near the Port of Kalama.
- **Bellingham Main Line Relocation**
4,000 feet of track near Bellingham's waterfront will be relocated and a new roadway bridge over the realigned tracks will be constructed.
- **Everett Curve Realignment**
The main line will be realigned, the signal system improved, and the mechanical portions of the Snohomish River Bridge upgraded.
- **King Street Station Renovation**
The passenger, baggage, and adjoining offices in Seattle's King Street Station will be restored to accommodate higher volumes of rail travelers.
- **Tukwila Station**
A passenger waiting shelter will be added at Sound Transit's commuter station and an Amtrak *Cascades* passenger information system will be installed at nearby Sea-Tac International Airport.
- **Vancouver Port Access**
New east-west tracks will be constructed beneath the BNSF north-south main line near the Port of Vancouver.
- **Tacoma Trestle Replacement**
A single track functionally-obsolete timber trestle will be replaced with a modern multiple track structure and retained earth fill.

The feasibility of a plan and its implementation often depends on whether it will have impacts on the communities that it is intended to serve, or if construction of its components will impact the surrounding natural environment.

The purpose of this chapter is to provide an overview of the existing environmental features along the corridor. Appendix A of this document has detailed Geographic Information System (GIS) mapping of these features. A list of the GIS database sources used for the mapping is also included in Appendix A. Other sources used during the preparation of this document are listed in Chapter Seven, References.

Affected resources were identified using a variety of sources, maps and reports. Due to the scale of the maps used and the width of the area examined (1,000 feet or 2,000 feet on either side of the centerline of the BNSF main line), some resources that may not be impacted in a project have been included in this document.

The buffer distance will typically extend beyond the actual project impact area. The general impacts from the projects to reach the eight-round trip service level are described in Chapter Five, Impacts and Mitigation. When site-specific analysis is completed for each project, the actual impacts of the project will be known and can be mitigated if necessary.

Waterways and Hydrological Systems

Research for this section was completed using various published data sources (see Chapter Seven, References).¹⁰ Floodplains were identified from the county and city comprehensive plans and Federal Emergency Management Agency (FEMA) floodway maps (FEMA). Supporting data was gathered from a review of the Soil Survey maps for the respective counties. Geographic information database sources included: FEMA, WSDOT, and the Washington Department of Ecology.

Waterways, ground water resources and floodplain information were inventoried within 1,000 feet of the corridor. This section presents an overview of the resources within this specified geographic area.

Accompanying mapping for this environmental resource can be found in Appendix A (Group A).

¹⁰ Although no fieldwork was conducted in 2009 specifically in support of this Program Environmental Assessment, the corridor environmental setting has been previously documented as a result of corridor projects completed by WSDOT over the past sixteen years.

Surface Water

Washington State contains numerous lakes, rivers, and coastal waterways. Preservation and maintenance of these waters is critical to the natural beauty of our communities and the survival of animal species and fisheries that depend upon these waterways for habitat, water, and food. A list of the hydrologic systems located within 1,000 feet of the rail corridor is shown in Table 1.

Table 1. Hydrologic systems located within 1,000 feet of the rail corridor.

County	River Crossings (Named Streams listed)	Miles of Marine Shoreline within 500 ft	Water Features	Associated 100 Year Flood Zones	Associated Sole Source Aquifers
Clark	(10 Crossings) Columbia River Burnt Bridge Creek Cold Canyon Creek Salmon Creek Whipple Creek Flume Creek Gee Creek Allen Creek Lewis River	0.0	(Approx. 59 unnamed features) Campbell Lake Cary Lake Columbia River Green Lake Lake River Lancaster Lake Lewis River Salmon Creek Vancouver Lake Allen Creek Burnt Bridge Creek Cold Canyon Flume Creek Gee Creek Whipple Creek	Columbia River Lewis River	Troutdale Aquifer System
Cowlitz	(27 Crossings) Lewis River Wallace Slough Burris Creek Burke Creek Canyon Creek Mill Creek Bybee Creek Schoolhouse Creek Kalama River Owl Creek Coweeman River Ostrander Creek Salmon Creek Toutle River Cowlitz River	0.0	(Approx. 153 unnamed features) Carrolls Channel Columbia River Coweeman River Cowlitz River Kalama River Lewis River Olequa Creek Owl Creek Toutle River Wallace Slough Agren Creek Burke Creek Burke Slough Burris Creek Bybee Creek Canyon Creek	Lewis River Columbia River Cowlitz River Toutle River Kalama River Owl Creek Olequa Creek Hill Creek Schoolhouse Creek Coweeman River Ostrander Creek Salmon Creek	None

County	River Crossings (Named Streams listed)	Miles of Marine Shoreline within 500 ft	Water Features	Associated 100 Year Flood Zones	Associated Sole Source Aquifers
			Coal Mine Creek Hill Creek Martin Slough Mill Creek Ostrander Creek Rock Creek Salmon Creek Schoolhouse Creek		
Lewis	(11 Crossings) Olequa Creek McMurphy Creek Ferrier Creek Newaukum River Dillenbaugh Creek Salzer Creek China Creek Hanaford Creek	0.0	(Approx. 159 unnamed features) Newaukum River Skookumchuck River China Creek Coal Creek Curtis Creek Dillenbaugh Creek Ferrier Creek Hanaford Creek King Creek McMurphy Creek Olequa Creek Salzer Creek Snow Creek Stearns Creek Stillwater Creek	Olequa Creek Stearns Creek Newaukum River Dillenbaugh Creek Salzer Creek Chehalis River China Creek Skookumchuck River Hanaford Creek McMurphy Creek Coal Creek	None
Thurston	(7 Crossings) Skookumchuck River Scatter Creek Beaver Creek Deschutes River Woodland Creek Nisqually River	0.0	(Approx. 67 unnamed features) Deschutes River Long Lake Lost Lake Mud Lake Nisqually River Pattison Lake Skookumchuck River Beaver Creek Medicine Creek Scatter Creek Spurgeon Creek Woodland Creek	Skookumchuck River Scatter Creek Beaver Creek Deschutes River Spurgeon Creek Woodland Creek Nisqually River Medicine Creek	None

County	River Crossings (Named Streams listed)	Miles of Marine Shoreline within 500 ft	Water Features	Associated 100 Year Flood Zones	Associated Sole Source Aquifers
Pierce	<p><i>Existing Corridor (6 Crossings)</i> Red Salmon Creek Sequalitchew Creek Chambers Creek</p> <p><i>Point Defiance Bypass Corridor (14 Crossings)</i> Nisqually River Murray Creek Clover Creek Swan Creek Squally Creek Clear Creek Clarks Creek Puyallup River Salmon Creek</p>	25.4	(Approx. 91 unnamed features) American Lake Flett Creek Holding Basin Hood Street Reservoir Nisqually River Puget Sound Puyallup River Titlow Lagoon White River Chambers Creek Clarks Creek Clear Creek Clover Creek Flett Creek Murray Creek Red Salmon Creek Rody Creek Salmon Creek Sequalitchew Creek Squally Creek Swan Creek Woodland Creek	Nisqually River Sequalitchew Creek Squally Creek Salmon Creek Chambers Creek Murray Creek Clover Creek Flett Creek Swan Creek Clear Creek Puyallup River Clarks Creek White River	Central Pierce County Aquifer
King	(7 Crossings) White River Green River Springbrook Creek Black River Pipers Creek Boeing Creek	10.7	(Approx. 48 unnamed features) Duwamish River Green River Puget Sound Salmon Bay White River Black River Boeing Creek Pipers Creek Springbrook Creek	White River Green River Black River Pipers Creek Boeing Creek	None

County	River Crossings (Named Streams listed)	Miles of Marine Shoreline within 500 ft	Water Features	Associated 100 Year Flood Zones	Associated Sole Source Aquifers
Snohomish	(25 Crossings) Deer Creek Shellberger Creek Shell Creek Lunds Gulch Big Gulch Japanese Gulch Powder Mill Gulch Merrill and Ring Creek Pigeon Creek Snohomish River Union Slough Steamboat Slough Quilceda Creek West Fork Quilceda Creek Portage Creek Cook Slough Stillaguamish River Church Creek	21.3	(Approx. 91 unnamed features) Ebey Slough Cook Slough Picnic Point Lake Portage Creek Puget Sound Quilceda Creek Snohomish River South Slough Steamboat Slough Stillaguamish River Big Gulch Church Creek Deer Creek Fish Creek Japanese Gulch Lunds Gulch Merrill And Ring Creek Miller Creek Norma Creek Pigeon Creek Pigeon Creek Number 2 Powder Mill Gulch Shell Creek Shellenberger Creek Union Slough West Fork Quilceda Creek	Snohomish River Union Slough Steamboat Slough Quilceda Creek Stillaguamish River Portage Creek Cook Slough South Slough Church Creek Shelleberger Creek Shell Creek	None
Skagit	(9 Crossings) Skagit River Samish River Oyster Creek	8.1	(Approx. 44 unnamed features) Gages Slough Puget Sound Skagit River Steamboat Slough Tom Moore Slough Big Ditch / Maddox Slough Colony Creek Edison Slough	Skagit River Samish River Colony Creek Steamboat Slough Tom Moore Slough Gages Slough	None

County	River Crossings (Named Streams listed)	Miles of Marine Shoreline within 500 ft	Water Features	Associated 100 Year Flood Zones	Associated Sole Source Aquifers
			Gages Slough Joe Leary Slough Kulshan River Oyster Creek Samish River Whitehall Creek		
Whatcom	(17 Crossings) Padden Creek Whatcom Creek Squalicum Creek Silver Creek Nooksack River California Creek Dakota Creek	15.5	(Approx. 75 unnamed features) Brennan Pond Nooksack River Puget Sound Tennant Creek Whatcom Creek Cain Creek California Creek Dakota Creek Padden Creek Silver Creek Squalicum Creek	Squalicum Creek Silver Creek Nooksack River Dakota Creek Padden Creek Whatcom Creek	None

Numerous small drainages cross the rail corridor. Due to the large number of crossings, only larger documented streams are described here. Project-specific impact analyses completed in the future will address all potential impacts to stream and waterways. The rail corridor extends from the Port of Vancouver along the Columbia River northward, past the mouth of Burnt Bridge and Cold Canyon creeks at Vancouver Lake. To the north, the corridor extends along the lakeshore of Vancouver Lake, paralleling Lake River before crossing Salmon Creek. The corridor follows the shoreline of Green Lake to Ridgefield, crossing Whipple Creek at the north end of Green Lake. After crossing Whipple Creek, the corridor meets up with Lake River and crosses several small tributaries, including Flume Creek and Gee Creek north of Ridgefield. From Ridgefield the rail line extends due north to Woodland in Cowlitz County, running parallel to Lancaster Lake and crossing the confluence of Allen Creek and the Lewis River. Along the corridor in Clark County, the Columbia River and Lake River are listed on the 2008 303(d) list of impaired waterbodies (Table 2).

Table 2. 2008 Water quality listings within 1,000 feet of rail corridor*

County	2008 303(d) Listed Impaired Waterbodies ¹¹	Waterbodies with Total Maximum Daily Load Restrictions ¹²	
Clark	Columbia River Lake River	None	
Cowlitz	Columbia River Cowlitz River Lewis River	Columbia River	
Lewis	Dillenbaugh Creek	Coal Creek Salzer Creek Newaukum River	
Thurston	Deschutes River Long Lake Pattison Lake Scatter Creek Spurgeon Creek	None	
Pierce	<i>Existing Corridor</i> Puyallup River Chambers Creek	<i>Point Defiance Bypass Corridor</i> Puyallup River American Lake Clarks Creek Clear Creek Clover Creek Salmon Creek Swan Creek White River Woodland Creek	Nisqually Reach/Drayton Passage Clarks Creek Rody Creek
King	Black River Duwamish River Green River Springbrook (Mill) Creek White River Puget Sound (Central) Salmon Bay	Green River Pipers Creek	

¹¹ The 303(d) list reports on category 5 waters, which are the impaired waters of the state. Waters placed in Category 5 require the preparation of a plan to improve water quality by limiting pollutant loads. "Total Maximum Daily Loads" (TMDLs) are a key tool in the work to clean up polluted waters.

¹² The Total Maximum Daily Load (TMDL) or Water Quality Improvement Project process was established by Section 303(d) of the Clean Water Act (CWA). Federal law requires states to identify sources of pollution in waters that fail to meet state water quality standards, and to develop Water Quality Improvement Reports to address those pollutants. The Water Quality Improvement Project (TMDL) establishes limits on pollutants that can be discharged to the water body and still allow state standards to be met.

County	2008 303(d) Listed Impaired Waterbodies ¹¹	Waterbodies with Total Maximum Daily Load Restrictions ¹²
Snohomish	Ebey Slough Jorgenson Slough (Church Creek) Cook Slough Fish Creek Quilceda Creek Miller Creek Norma Creek Portage Creek Puget Sound (N Central) and Useless Bay Snohomish River Stillaguamish River (including old channels) West Fork Quilceda Creek	Miller Creek Fish Creek Portage Creek Quilceda Creek Stillaguamish River Jorgenson Slough (Church Creek) South Slough Old Stillaguamish Channel, West Passage Possession Sound (North)
Skagit	Big Ditch / Maddox Slough Colony Creek Joe Leary Slough Samish River Skagit River Steamboat Slough	Kulshan River Skagit River
Whatcom	Cain Creek Dakota Creek Tennant Creek Nooksack River Padden Creek Silver Creek Squalicum Creek Whatcom Creek Puget Sound / Drayton Harbor	Bellingham Bay Nooksack River Tennant Creek
* Includes waterbodies within 1,000 feet that have listed upstream segments.		

The rail corridor crosses the Lewis River into Cowlitz County en route to the city of Woodland. Just south of Woodland, the rail line crosses Wallace Slough and continues northward until its path intersects with Interstate 5 in the vicinity of Burris Creek. At this point both the highway and the rail corridor shift northwesterly to parallel the banks of the Columbia River. The route continues crossing numerous Columbia River tributaries including Burke, Canyon, Mill, Bybee and Schoolhouse creeks, past the city of Kalama and crossing the Kalama River, Owl Creek, and the confluence of the Coweeman River and the Cowlitz River. At Kelso the route turns northward, again paralleling Interstate 5 along the east side of the Cowlitz River where it crosses Ostrander Creek approximately two miles north of Kelso. The rail corridor continues north through the city of Castle Rock, crossing Salmon Creek. North of the Toutle River crossing, the route splits from the Interstate 5 alignment and crosses the Cowlitz River. It continues northward toward the Town of Vader in Lewis County. The Columbia, Cowlitz and Lewis rivers are listed on the 2008 303(d) list of impaired waterbodies (Table 2).

The rail line enters Lewis County near the town of Vader and parallels Olequa Creek northward for approximately three miles before crossing McMurphy Creek in the Town of Vader. The route continues paralleling Olequa Creek northward, crossing Ferrier Creek south of Winlock and crossing Olequa Creek north of Winlock. The rail corridor continues northward to Napavine, crossing the Newaukum River, Dillenbaugh Creek and Interstate 5 in Chehalis. Between the cities of Chehalis and Centralia, the corridor crosses Salzer and China creeks before paralleling the Skookumchuck River. North of Chehalis and Centralia the track runs along the east shore of the Skookumchuck River, crossing Hanaford Creek in the vicinity of Schaefer State Park. In Lewis County, only Dillenbaugh Creek is on the 2008 303(d) list of impaired waterbodies (Table 2).

The alignment enters Thurston County just north of Schaefer State Park in Lewis County. It travels northeasterly, paralleling the east bank of the Skookumchuck River until it crosses the river just south of Bucoda. From Bucoda the route turns northward, traversing Tenino and Scatter Creek. Approximately 2 miles north of Tenino, the rail line crosses Beaver Creek, and the confluence of the Deschutes River and Spurgeon Creek another four miles north. From this location the tracks enter the urbanized areas of Olympia and Lacey, where the rail line crosses Pattison Lake and Woodland Creek. The route continues east, crossing Medicine Creek just prior to leaving Thurston County. Five streams and lakes in Thurston County are listed on the 2008 303(d) list of impaired waterbodies including the Deschutes River, Long Lake, Pattison Lake, Scatter Creek and Spurgeon Creek (Table 2).

Just north of the Nisqually River crossing, the corridor splits at Interstate 5 with the current alignment to the west along the shoreline of Puget Sound (the BNSF main line along Point Defiance) and to the east parallel to Interstate 5 (the proposed Point Defiance Bypass). The western alignment skirts the eastern side of the Nisqually River delta before reaching the shore of Puget Sound near the city of DuPont. The line parallels Puget Sound from the Nisqually delta to Salmon Beach, north of the Tacoma Narrows Bridge. Through this stretch the tracks run along beaches and cross several small creeks including Red Salmon, Sequelitchew and Chambers creeks. Chambers Creek, home of the Garrison Springs Hatchery, drains to Puget Sound via Chambers Bay. The alignment tunnels through portions of Tacoma and around Point Defiance, emerging along Commencement Bay near the Thea Foss Waterway. Several streams and waterbodies are listed on the 2008 303(d) list of impaired waterbodies in Pierce County (Table 2).

The eastern alignment parallels Interstate 5 through the cities of DuPont, Lakewood and Tacoma, crossing Murray Creek, an inlet to American Lake, and Clover Creek.

The eastern and western alignments merge just south of the Puyallup River and cross Interstate 5. From there, the rail corridor turns southeast toward the city of Puyallup, crossing Swan, Squally, Clear, and Clarks creeks before crossing the Puyallup River in Sumner. The alignment traverses King County in a north-south manner, entering King County due south of Auburn. It crosses the White River prior to reaching the existing Auburn Yard, then crosses the Green River before entering the city of Kent. In the urban area of Kent, the rail line crosses Springbrook Creek and the Black River. The alignment turns northwesterly as it heads through the city of Tukwila and into the city of Seattle.

North of the King Street Station the alignment goes underground through metropolitan Seattle, before crossing Salmon Bay near the Howard Chittenden Locks. North of Ballard the alignment crosses the small creeks of Boeing Creek and Pipers Creek where they enter Puget Sound. The track parallels the Puget Sound shoreline northward into Snohomish County. The Black, White, Duwamish and Green rivers, Springbrook Creek and Puget Sound are listed on the 2008 303(d) list of impaired waterbodies in King County (Table 2).

The railroad right of way enters Snohomish County in the vicinity of Point Wells along the coast of Puget Sound. The tracks hug the coastline for most of the route north to Everett. In south Snohomish County, the rail line crosses Shellberger Creek, Shell Creek and Lunds Gulch in Edmonds. Continuing to hug the Puget Sound shoreline, the rail line crosses Big Gulch, Japanese Gulch, Powder Mill Gulch, Merrill and Ring Creek, and Pigeon Creek in Mukilteo and Everett before heading east away from the Puget Sound shoreline. From Everett the tracks cross the Snohomish River, Steamboat Slough, Union Slough and Ebey Slough heading into Marysville. The right of way crosses Quilceda Creek in north Marysville. The rail line then turns slightly westward, passing to the west of Twin Lakes Park, and crosses Portage Creek, Cook Slough and the Stillaguamish River. The route crosses the Stillaguamish River near Norman, and continues in a northwesterly direction towards Stanwood, crossing Church Slough. North of Stanwood the tracks head into Skagit County, paralleling Tom Moore Slough and crossing several tributaries to the Skagit River delta. Many of the bays and streams in Snohomish County are listed on the 2008 303(d) list of impaired waterbodies. In addition, Total Maximum Daily Load (TMDL) studies are occurring in nine waterbodies within 1,000 feet of the rail corridor in Snohomish County (Table 2).

The tracks continue northward through Mount Vernon and cross the Skagit River and Gages Slough between Mount Vernon and Burlington. North of Burlington the tracks cross the Samish River west of Interstate 5, and then parallels Edison Slough in two places. The route shifts to a northwesterly alignment and reaches the Puget Sound shoreline at Samish Bay and crosses the Colony Creek estuary. The tracks continue to parallel the coast northward to the Whatcom County line, crossing Oyster Creek. Three sloughs, two creeks and the Skagit and Samish rivers are listed on the 2008 303(d) list of impaired waterbodies in Skagit County. One of these, the Skagit River, is in the TMDL process (Table 2).

The tracks enter Whatcom County along the Puget Sound coast south of Larabee State Park. The tracks enter several tunnels in the vicinity of Pleasant Bay before paralleling Chuckanut Bay and crossing the Chuckanut Creek estuary. North of Chuckanut Bay, the route enters Fairhaven and Bellingham. It crosses Padden, Whatcom and Squalicum creeks just inland from Bellingham Bay. The rail line parallels the bay until the vicinity of the Bellingham International Airport. At this location it turns more northward, crossing Silver Creek and passing by Brennan Pond and Tennant Lake before entering Ferndale and crossing the Nooksack River. From Ferndale the alignment parallels Interstate 5, crossing tributaries to California Creek and Dakota Creek before heading into Blaine. At Blaine the route parallels Drayton Harbor, and heads northward to the Canadian border. In Whatcom County, Cain, Dakota, Tennant, Padden, Silver,

Squalicum, and Whatcom creeks, the Nooksack River and Drayton Harbor are listed on the 2008 303(d) list of impaired waterbodies (Table 2). Tennant Creek, Bellingham Bay and the Nooksack River are undergoing TMDL studies.

Ground Water

In addition to surface waters, ground water and aquifers are also critical elements of the environment. Ground water is an important natural resource. For many residents of western Washington, ground water is the sole source of water for drinking and washing, for farming and manufacturing, and for all daily water needs.

Although ground water exists everywhere at varying depths, some parts of the saturated ground contain more water than others. An aquifer is an underground formation of permeable rock or loose material that stores useful quantities of water and can be tapped by a well. Aquifers provide drinking water for communities throughout the corridor.

Ground water quality can be eroded by contaminants introduced by various domestic, industrial, and agricultural practices. Although it may not be directly used, ground water quality should still be protected, as it can carry contaminants and pollutants from the land into the lakes and rivers from which people get a large percentage of their freshwater supply.

The BNSF main line in Clark County lies above sedimentary rock deposits that yield ground water from the Lewis aquifer region. The aquifers lie in the Troutdale Formation, and in more recent alluvial deposits. The Troutdale Aquifer System was designated as a Sole Source Aquifer¹³ in 2006.

The Washington Department of Ecology (Ecology) and the U.S. Environmental Protection Agency (EPA), as part of a ground water quality monitoring network for Washington State, have tested ground water in Clark County. The ground water in the vicinity is primarily soft to moderately hard calcium-magnesium bicarbonate-type water.

Ground water resources inventoried in Cowlitz County indicate the county is underlain by two aquifer regions, the Lewis and Cowlitz aquifers. Alluvial deposits are the most productive sources of ground water in the county. Although nitrate concentrations are generally low, iron concentrations exceed the maximum contaminant level recommended by the U.S. Environmental Protection Agency in many samples taken both close to the rail alignment and further east near Toutle Lake.

¹³ *The U.S. Environmental Protection Agency (EPA) defines a Sole Source Aquifer as one which supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. A Sole Source Aquifer designation is one tool to protect drinking water supplies in areas where there are few or no alternative sources to the ground water resource and where, if contamination occurred, using an alternative source would be extremely expensive. The designation also helps to increase public awareness of the nature and value of local ground water resources by demonstrating the link between an aquifer and a community's drinking water supply.*

Ground water resources inventoried in Lewis County indicate the county is underlain by two aquifer regions, the Chehalis and Cowlitz aquifers. Wells sampled in the county tap numerous water-bearing formations, including tertiary rock formations, glaciofluvial deposits and alluvial deposits. Glaciofluvial deposits are the most productive sources of ground water in the county. In some wells, iron and magnesium concentrations generally exceeded the maximum contaminant level as recommended by the U.S. Environmental Protection Agency, both close to the rail alignment and further west near the upper Chehalis River.

Thurston County was affected by several periods of glaciation, which influenced the development of aquifers in the region. The glacial deposits here are thousands of feet thick. Major river valleys, including the Nisqually, contain unconsolidated, water-bearing sediments. Northern Thurston County has four major aquifers; the southern part of the county and the Tenino areas are underlain by a single shallow aquifer. Generally the water is soft, with lower iron and manganese than in other areas of the Puget Sound.

As with Thurston County, Pierce County was affected by several periods of glaciation, influencing the development of aquifers in the region. The glacial deposits are thousands of feet thick. The Puyallup River valley contains evidence of volcanic mudflows. The Central Pierce County Aquifer System was designated as a Sole Source Aquifer in 1994. Both coastal seawater intrusion and urban development affect water quality in the vicinity. Generally the water was found to be soft, with iron and manganese concentrations exceeding secondary drinking water regulations for quality.

Ground water quality for King County was also sampled as part of the agency study. Although the pH of water tested in King County was higher than the average, iron and manganese concentrations were lower than much of the state, and did not exceed the minimum drinking water standards. Similarly to other urban areas, water quality in King County is affected by pollution.

As with the rest of the Puget Sound counties, Snohomish County was affected by several periods of glaciation, influencing the development of aquifers in the region. The glacial deposits are thousands of feet thick. Generally the water was found to be soft, with iron and manganese concentrations exceeding secondary drinking water regulations for quality.

Skagit County was affected by several periods of glaciation, influencing the development of aquifers in the region. The glacial deposits are thousands of feet thick. The Skagit River valley also contains evidence of volcanic mudflows. No individual aquifers were distinguished in the Ecology and EPA study. Generally the water quality in wells was found to be compromised by nitrates and dissolved solids in addition to iron and manganese concentrations that exceed secondary drinking water regulations for quality. Nitrate concentrations most likely reflect the agricultural land use of the county, whereas dissolved solids are indicative of seawater intrusion.

Water quality in Whatcom County shows similarities to water quality in Skagit County. In both areas moderate concentrations of dissolved solids and moderate to high levels of

nitrate were found in wells tested by Ecology. The dissolved solids findings indicate some seawater intrusion occurring along the coast. Nitrates are most likely caused by agricultural land use.

Floodplains

Floodplains are lowland areas adjacent to lakes, wetlands and rivers that are covered by water during a flood. The ability of the floodplain to carry and store floodwaters needs to be preserved and respected in order to protect human life and property from flood damage. Undeveloped floodplains provide many natural and economic resource benefits; they often contain wetlands and other areas vital to a diverse and healthy ecosystem.

Floodplain vegetation provides important resting, feeding and nesting areas for many waterfowl species. Undisturbed floodplains have high natural biological diversity and productivity. River corridors are frequently used as flyways for migrating birds.

Floodplain vegetation and soils serve as water filters, intercepting surface water runoff before it reaches the lake, stream or river. This process aids in the removal of excess nutrients, pollutants and sediments from the water and helps reduce the need for costly cleanups and sediment removal.

Approximately 43 miles of the 297-mile rail line pass within a 100-year floodplain. The most frequently flooded rivers along the corridor include the Cowlitz, Chehalis, Skagit, Snohomish, Nooksack, and Stillaguamish rivers and their tributaries. Several of these rivers flood annually.

The rail corridor crosses the Columbia River floodplain as it enters Clark County (WA) from Oregon. Much of the corridor in Clark County generally follows the border of the Columbia River floodplain, other than in a small stretch in the city of Vancouver. In the greater Vancouver area, the corridor crosses the 100-year floodplains of Burnt Bridge, Salmon, Gee, and Whipple creeks. Upon leaving Clark County, the corridor crosses the Lewis River 100-year floodplain and leaves the Columbia River floodplain.

In Cowlitz County, the corridor does not enter a floodplain until north of Woodland, where Interstate 5 and the rail corridor act as the eastern floodplain boundary of the Columbia River. The rail corridor follows the Columbia River northward until the city of Kalama where the rail corridor crosses the Columbia River and Kalama River floodplains. Through the remainder of Cowlitz County, the rail corridor lies within the floodplains of the Columbia, Kalama, Coweeman, Toutle and Cowlitz rivers.

As the corridor enters into Lewis County, it follows the floodplain of Olequa Creek through the towns of Vader and Winlock. The corridor then travels north through Napavine to Chehalis where it enters and crosses floodplains associated with the Newaukum River, Chehalis River, Salzer Creek, Hanaford Creek and Dillenbaugh Creek. These streams are frequently flooded and overtop the rail corridor. North of Centralia, the corridor parallels the Skookumchuck River floodplain through the remainder of Lewis County.

The rail corridor crosses the Skookumchuck River floodplain upon entering into Thurston County. The corridor follows the Skookumchuck River northerly to the town of Bucoda. The corridor then precedes northeasterly, crossing Scatter Creek, the Deschutes River, Chambers Creek, Woodland Creek, and Pattison Lake. At the Pierce/Thurston county border, the rail corridor crosses the 100-year floodplain of the Nisqually River.

In Pierce County, the corridor crosses the floodplain of the Nisqually River and then splits into two alignments. The western alignment follows the Puget Sound shoreline and floodplain fringe through its entirety. The eastern corridor (the proposed Point Defiance Bypass) runs through the developed urban areas of Lakewood and Tacoma. This alignment crosses the floodplain of Clover Creek and parallels the 100-year floodplain of Flett Creek. The two alignments merge just prior to entering the Puyallup River floodplain. The corridor leaves Tacoma and proceeds up the Puyallup River basin crossing the floodplain of Clarks Creek in Puyallup. The corridor crosses the Puyallup River floodplain and enters into the White River floodplain in Sumner prior to crossing into King County.

In King County, the corridor crosses the White River floodplain in the city of Auburn. The corridor travels north, crossing floodplains of the Green River through Auburn, Kent and Tukwila. In Tukwila, the corridor crosses the Black River floodplain and parallels the Duwamish River floodplain into Seattle. In the northern portion of the county, along the waters of Puget Sound, the corridor crosses the Pipers and Boeing creek floodplains.

In Snohomish County, the rail corridor follows along the shoreline of Puget Sound northerly to the city of Everett. Between Everett and Marysville, the corridor crosses the combined floodplain of the Snohomish River, Steamboat Slough, Union Slough, Ebey Slough and Allen Creek. Further north, into Marysville, the corridor crosses the Quilceda Creek floodplain. From Marysville north to the county line and through Stanwood, the rail corridor resides in the Portage Creek, Cook Slough, South Slough, Stillaguamish River and Tom Moore Slough floodplains.

The corridor crosses the lowlands of the Skagit and Samish rivers and then along the shores of Samish Bay through the majority of Skagit County. From the Skagit/Snohomish county line, the rail corridor is located in the floodplains of these rivers until north of the Samish River crossing. From there, the corridor is within 1,000 feet of the Samish River or Samish Bay floodplain and estuary until the Whatcom County line.

In Whatcom County, the corridor parallels the shoreline of Samish Bay and Puget Sound to the city of Bellingham. In Bellingham, floodplains of Whatcom and Squalicum creeks are crossed before returning to the shorelines of Bellingham Bay. Through Ferndale, the rail corridor crosses floodplains of Silver Creek and the Nooksack River. The remainder of the rail corridor through Whatcom County crosses agricultural lands and the Dakota Creek floodplain just south of Blaine.

Hazardous Materials

Hazardous materials can impact the environment, construction projects, and long-term cleanup liability. Hazardous material is a broad term for media that may be toxic to humans or the environment. This term includes dangerous waste, problem waste/contamination, petroleum products and hazardous substances. Identifying hazardous materials along the corridor allows WSDOT to make informed decisions regarding selection of alternatives and mitigation measures to eliminate or reduce the impact to the environment, the construction project and cleanup liability.

Exposure to potential substantially contaminated hazardous materials is not anticipated during construction or operations. However, there is a possibility of finding a historical spill or dump site anywhere along the corridor. As the railroad right of way is primarily used for hauling freight, any commodity being hauled along the route during the past 100 years could have spilled at any location. Current legislation requires reporting and clean-ups of such incidents. BNSF has standard operating procedures for managing contaminants within their right of way.

To initially identify known or potentially significant hazardous material sites, data was obtained from the WSDOT Environmental Workbench ArcMap Geographic Information System (GIS) which obtains GIS data from the Washington Department of Ecology, and the U.S. Environmental Protection Agency. GIS databases were used to locate and map the following regulatory listed sites along the corridor.

- Superfund sites
- State Cleanup Site
- Leaking Underground Storage Tank (LUST) sites

Superfund sites (also known as National Priorities List sites) are sites that have been screened and assigned a priority for cleanup under the Superfund Cleanup Program that is administered by the U.S. Environmental Protection Agency (EPA).

State Clean-up Sites (also known as Confirmed & Suspected Contaminated Sites List, CSCSL) are known or potentially contaminated sites that may or may not already be listed on the federal Superfund/CERCLIS lists. These state clean-up sites are ranked and assigned a priority for cleanup to be paid by state funds and/or by potentially responsible parties.

Leaking Underground Storage Tank (LUST) sites are an inventory of reported leaking underground storage tank incidents in Washington State.

Any regulatory-listed site located within 2,000 feet of the railroad right of way were identified and mapped. Maps for identified sites are in Appendix A (Group A) of this Environmental Assessment.

Hundreds of known or potential hazardous materials sites were identified along the corridor between the Canadian and Oregon borders. An increased number of identified

sites are accumulated in areas with a long commercial and industrial history, with the majority of sites located in King County. A total of 7 Superfund sites, 401 State Cleanup Sites and 781 LUST sites have been identified within 2,000 feet of the 297-mile railroad corridor in Washington State. A quantified summary of these sites are organized by county in Table 8 in Chapter Five, Impacts and Mitigation.

Biological Resources/Ecology

The preservation of our wildlife, fisheries, vegetation, and wetlands has long been a priority of Washingtonians. The rail corridor lies adjacent to and crosses many water resources and habitat areas within the state. In the study area, there are fish-bearing streams that contain species listed under the federal Endangered Species Act (ESA) and resident fish that are a state or federal species of concern. ESA-listed fish species along the corridor include steelhead; Chinook, Coho, chum, and sockeye salmon; bull trout; eulachon; and green sturgeon. Resident fish within many of the streams along the corridor include lamprey, bass, sculpin, dace, and cutthroat trout. In addition, there are several species of plants and wildlife considered a priority by the state or federal agencies found along the corridor such as golden paintbrush, Kincaid's lupine, mardon skipper, Mazama pocket gopher, bald eagle, peregrine falcon and marbled murrelet. Marine mammals are protected under both the ESA and the Marine Mammal Protection Act (MMPA). Several species of marine mammals can be found in the Columbia River, off the Washington coast and in Puget Sound within the corridor study area. Migratory birds are federally protected and habitat for many species is present throughout the corridor.

Wildlife habitat is abundant along the Columbia River and in lake and stream crossings along the corridor. Threatened and endangered species, species of concern, and the counties in which they are likely to occur along the corridor are summarized in Table 3. The list is not exhaustive and does not include all species potentially present along the corridor. The list also does not distinguish Evolutionarily Significant Units or Distinct Population Segments as listed under the Endangered Species Act. Individual project documentation and environmental analysis will assess impacts to species on a site-specific scale.

Table 3. State (S) and federally (F) listed threatened (T), endangered (E), and candidate species (C), species of concern (SOC), and critical habitat likely present within 2,000 feet of the pacific northwest rail corridor.

Species	Federal Status	State Status	Critical Habitat	Counties Potentially Present
Chinook salmon	FE, FT	SC	Yes	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Chum salmon	FT	SC	Yes	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom

Species	Federal Status	State Status	Critical Habitat	Counties Potentially Present
Coho salmon	FT	None	Yes	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Sockeye salmon	FE	SC	No*	Clark, Cowlitz, King, Snohomish, Skagit, Whatcom
Steelhead	FE, FT	SC	Yes	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Coastal Cutthroat	FSOC	None	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Bull trout	FT	SC	Yes	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Green Sturgeon	FT	None	Yes	Clark, Cowlitz, Snohomish, Skagit, Whatcom
Eulachon	FP	SC	No	Clark, Cowlitz, Lewis, Pierce, King, Snohomish, Skagit, Whatcom
Killer whale	FE	SE	No*	King, Snohomish, Skagit, Whatcom
Steller sea lion	FT	ST	No	Clark, Cowlitz, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Oregon spotted frog	FC	SE	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Van Dyke's salamander	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Western toad	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Bald eagle	FSOC	SSOC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Marbled murrelet	FT	ST	No*	Clark, Cowlitz, Lewis, Pierce, Snohomish, Skagit, Whatcom
Northern goshawk	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Oregon vesper sparrow	FSOC	SC	No	Clark, Cowlitz,
Peregrine falcon	FSOC	SSOC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Brown pelican	FE	SE	No	Snohomish, Skagit, Whatcom

Species	Federal Status	State Status	Critical Habitat	Counties Potentially Present
Slender-billed white-breasted nuthatch	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Northern Spotted owl	FT	SE	No*	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Oregon silverspot butterfly	FT	SE	No	Clark, Cowlitz, Lewis, Thurston, Pierce
Taylor's checkerspot	FC	SE	No	Clark, Cowlitz, Lewis, Thurston, Pierce,
Valley silverspot	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce,
Margined sculpin	FSOC	SSOC	No	Clark, Cowlitz, Lewis,
Pacific herring	FSOC	SC	No	Pierce, King, Snohomish, Skagit, Whatcom
River lamprey	FSOC	SC	No	Clark, Cowlitz, Lewis, Thurston, Pierce, King, Snohomish, Skagit, Whatcom
Sea otter	FSOC	SE	No	Snohomish, Skagit, Whatcom
Western gray squirrel	FSOC	ST	No	Lewis, Thurston, Pierce

¹ List does not include all state-listed species.

* Critical habitat may be designated in the county for the species, but is not designated within 2,000 feet of the rail corridor.

The western Cascade Mountains and the Puget Sound Trough are dominated by conifer forest landscapes. The corridor represents a mesic temperate forest¹⁴ consisting of Douglas fir, western hemlock and western red cedar. Early history indicates the area along the corridor was dominated by forested areas with the exception of small areas in the Willamette Valley, near Vancouver, and the prairies in the Puget Trough.

To preserve wildlife, fisheries, and habitats, a number of federal and state programs and regulations have been put into place:

- The Endangered Species Act (ESA) is a federal law initially passed by Congress in 1973 in an attempt to counteract the alarming rate of species extinction. ESA provides a means of conserving plants and animal species that are currently in danger of extinction (endangered species) and those that are likely to become endangered within the foreseeable future (threatened species). It also protects the habitat needed for their survival.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) are responsible for ensuring that government and citizen actions do not further harm species that are listed as endangered or threatened. They are

¹⁴ A mesic temperate forest is a temperate forest with a moderate or well-balanced supply of moisture.

also responsible for developing and implementing a plan for recovering the species to a stable population.

- The Marine Mammal Protection Act was federally enacted in 1972 to protect marine mammals from the taking (including harassment) and importation of individuals or parts.
- The federal Migratory Bird Treaty Act, administered by the USFWS, makes it unlawful to take birds, their parts, nests, or eggs.
- As a companion law to the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act is a federal law administered by the USFWS that makes it unlawful to take, import, export, sell, purchase, or barter any bald or golden eagle, their parts, products, nests or eggs. Taking includes killing or disturbing eagles.
- The Magnuson Stevens Act, as amended by the Sustainable Fisheries Act of 1996, requires federal agencies to consult with the National Marine Fisheries Service on activities that may adversely affect essential fish habitat. Essential Fish Habitat is defined as waters and substrate necessary for fish for spawning, breeding, feeding or growth to maturity. In the case of WSDOT projects, FHWA and NMFS have a memorandum of agreement that allows these consultations to be conducted at the same time as an ESA consultation.
- The Washington State Department of Fish and Wildlife (WDFW) oversees the protection and preservation of state wildlife species. The definitions for state-protected species are below:

Endangered Species is defined in WAC 232-12-297, Section 2.4, to include "any wildlife species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state."

Threatened Species is defined in WAC 232-12-297, Section 2.5, to include "any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats."

Sensitive Species is defined in WAC 232-12-297, Section 2.6, to include "any wildlife species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened throughout a significant portion of its range within the state without cooperative management or removal of threats."

Candidate Species is defined in WDFW Policy M-6001 to include "fish and wildlife species that the Department will review for possible listing as State Endangered, Threatened, or Sensitive. A species will be considered for designation as a State Candidate if sufficient evidence suggests that its status may meet the listing criteria defined for State Endangered, Threatened, or Sensitive."

- The Legislature established the Washington Natural Heritage Program (WNHP) within the Washington State Department of Natural Resources in 1981. The WNHP collects data about existing native ecosystems and species to provide an objective, scientific basis from which to determine protection needs. The program also develops and recommends strategies for protection of the native ecosystems and species most threatened in Washington.

Wetlands

Much of our wildlife and vegetation depend upon the numerous wetlands in western Washington. Wetlands were once thought of as swampy, bug-filled "wastelands" that were useful only when they were filled and developed for industry, housing, or businesses. Today society is beginning to realize that wetlands are unique, natural areas, important to the ecosystem we all share, and should be conserved and protected.

Wetlands occur wherever land is inundated, covered, or influenced by the presence of water. Wetlands support the growth of water-loving/tolerant vegetation that is adapted to wet sites.

At times of flooding, wetlands at the mouths of streams and rivers receive flood water, which is rich in nutrients and sediments. In the stillness of the wetlands, these sediments settle out and water percolates into the groundwater. Thus, wetlands play an essential role in filtering nutrients and sediments out of water before it enters lakes and bays. By storing and releasing flood water, wetlands also moderate the damage that flooding could cause.

Wetlands are also located throughout stream and river systems, providing nutrient and sediment traps and flood control. Wetlands often have close connections with the ground water system. Some may serve as important ground water recharge areas. Others are receptors for significant amounts of ground water discharge. Thus, if the underlying ground water is contaminated, the consequences will be felt by the wildlife and all other resources dependent on that wetland. Numerous and diverse types of wetlands are located within the corridor, in particular where the railroad crosses the many waterways.

Wetlands were identified from county and city comprehensive plans and agency wetland mapping, including National Wetland Inventory (NWI) mapping. Additional information was gathered from the Soil Survey maps for each county, field observations, and rail corridor video. GIS mapping was developed using NWI mapping databases. Mapping of wetlands can be found in Appendix A (Group B) of this document.

The corridor in Clark County follows the Columbia River basin from the Oregon border to the Cowlitz County line, remaining in the lowlands throughout. Soils are typically somewhat excessively well-drained to very poorly drained soils of bottomlands and terraces. In Vancouver, soils consist of the Sauvie-Puyallup association, which are deep, nearly level, and somewhat poorly draining; and the Lauren-Sifton-Wind River association, which are somewhat excessively drained, nearly level, gravelly textured terraces. Scrub-shrub (dominated by red osier dogwood, Pacific willow, Pacific ninebark) and emergent (dominated by soft rush, water foxtail, sedges and bulrush)

wetlands are identified along Vancouver Lake, Lake River, and Salmon Creek. Similar wetlands exist where the corridor crosses or borders upon Lancaster Lake, Whipple Creek, Flume Creek, Gee Creek, Allen Creek and the Lewis River. North of Vancouver, soils in Clark County consist of Hillsboro-Gee-Odne associations which are deep, nearly level, medium textured terraces. Forested wetlands consisting of black cottonwood, Oregon ash and black hawthorn are present as well as scrub-shrub and emergent wetlands. Many wetlands are also dominated by Himalayan blackberry, reed canary grass and cattail. These are typically wet areas along the rail borrow.

In Cowlitz County, the corridor follows the Columbia and Cowlitz River basins and then along Olequa Creek to the Lewis County line in the north, passing through the cities of Woodland, Kalama, Kelso, Longview, and Castle Rock. Soils in this area are dominated by Caples-Clato-Newberg association consisting of nearly level, poorly drained to well-drained soils that formed in floodplain alluvium. Emergent wetlands are dominant between the Lewis and Kalama Rivers, lining the corridor in many places. Small patches of forested and scrub-shrub wetlands are noted along this stretch. The rail corridor just south of the Cowlitz River runs through areas of forested wetland consisting of Oregon ash, black cottonwood, red alder, Pacific crabapple and black hawthorn. The corridor encounters scrub-shrub and emergent wetlands as it borders or crosses Wallace Slough, Burris Creek, Burke Creek, Canyon Creek, Mill Creek, Bybee Creek, Schoolhouse Creek, and Ostrander Creek. Ponds and wet areas are also noted in the cities of Woodland and Castle Rock.

The corridor in Lewis County follows Olequa Creek northerly into the Chehalis River basin, passing through Vader, Winlock, Napavine, Chehalis, Centralia, and then up the Skookumchuck River into Thurston County. The majority of the corridor in Lewis County up to Napavine runs through very deep, well to somewhat excessively well-drained soils of the Winston-Olequa and Salkum-Prather-Lacamas varieties. As the corridor follows Olequa Creek, it encounters several small wet forested and scrub-shrub wetlands. North of Napavine, the corridor encounters wetter, poorly drained soils associated with the Newaukum, Chehalis and Skookumchuck rivers, and Salzer, Hanaford, McMurphy, and China creeks. These soils are of the Reed-Chehalis variety consisting of very deep, level soils formed on alluvium, floodplains and some terraces. Emergent, forested, and scrub-shrub wetlands are common through the area and contain vegetation dominated by willows, red alder, black cottonwood, Pacific ninebark, sedges, bulrush, foxtail, reedgrass, and rushes. In disturbed areas typical around the rail line, invasive species including Himalayan blackberry and reed canary grass are also common.

In Thurston County, the corridor follows the Skookumchuck River northerly to the town of Bucoda. Soils through the area consist of Chehalis-Newberg and the Spanaway-Nisqually associations. These soils are very deep and very to somewhat excessively well-drained. The Chehalis-Newberg soils are found on floodplains, while the Spanaway-Nisqually associations are found on glacial outwash terraces. Along the Skookumchuck River, wetlands range from forested to emergent to scrub-shrub. The corridor then proceeds northerly through Tenino, East Olympia, and Lacey, where the soils more frequently fall within the Alderwood-Everett associations consisting of moderately deep and very deep, moderately well drained and excessively drained nearly

level soils on glacial plains. NWI mapping identifies small patches of scrub-shrub and emergent wetlands encountered at various locations along the corridor. Wetlands are noted adjacent to the corridor along the Skookumchuck River, Scatter Creek, Deschutes River, Chambers Creek, Patterson Lake, Medicine Creek, and the Nisqually River.

In Pierce County, the corridor crosses the Nisqually River southwest of the city of DuPont and splits into two alignments. At the Nisqually River, the rail line bisects estuarine aquatic bed wetlands associated with the river and the Nisqually delta. The western alignment heads north toward Puget Sound and follows the marine shoreline where salt marsh and wetlands occur. The corridor then enters the city of Tacoma. As the corridor moves through Tacoma, it enters the Puyallup River valley. Wetlands along the western alignment are tidal emergent and tidal aquatic bed types.

The eastern alignment (the proposed Point Defiance Bypass) follows the Interstate 5 corridor, climbing out of the Nisqually River valley and passing through Lakewood, crossing urban wetlands associated with American Lake, Clover Creek, Swan Creek and Squally Creek. The alignment then moves through Tacoma where it drops into the Puyallup River Valley.

At the Puyallup River, the two alignments reconnect and are associated with several small wetlands around the Puyallup River. Both alignments occur in Spanaway and Alderwood-Everett soil associations. These associations are moderately well drained to excessively well drained, nearly level, and formed on glacial outwash. The corridor then turns north along the White River, entering King County near Auburn.

Specific wetlands areas are noted at Lake Sellers in the city of DuPont, Swan Creek and Clear Creek in Tacoma, Clarks Creek in the city of Puyallup, and near East 15th Street in the city of Puyallup. Generally wetlands through northern Pierce County are limited by the amount of development present. Emergent and scrub-shrub wetlands consisting of invasive species such as reed canary grass and Himalayan blackberry are evident throughout the Puyallup Valley between the rail line and adjacent land uses.

In King County, the corridor follows the Green River Valley in the south traveling through the center of the cities of Auburn, Kent, Tukwila, and Seattle. North of Seattle the corridor follows the shoreline of Puget Sound through the city of Shoreline to the Snohomish County line. The corridor encounters several small emergent and scrub-shrub wetlands along the corridor. The majority of these wetlands fall within developed areas and are largely dominated by invasive species such as Himalayan blackberry and reed canary grass, as well as natives such as broadleaf cattail. The corridor falls next to the meandering Duwamish River in several locations. In the north part of King County, the corridor closely follows the shoreline of Puget Sound where tidal aquatic-bed type wetlands are present. The upland side of the corridor includes several pockets of scrub-shrub and forested wetlands.

In Snohomish County, the corridor follows the shoreline through Edmonds, Mukilteo and Everett, then crosses the Snohomish River traveling through Marysville and Stanwood, and enters Skagit County near the shoreline of Skagit Bay. Prior to crossing the

Snohomish River, the rail line lies within Alderwood-Everett soil associations consisting of deep well-drained nearly level to steep soils on till plains, terraces and outwash plains. At the Snohomish River, soils transition to Puget-Sultan-Pilchuck and Norma-Lynnwood-Custer associations. The southern Puget-Sultan-Pilchuck associations consist of very deep poorly drained nearly level soils on floodplains. To the north, the Norma-Lynnwood-Custer associations are very deep, poorly drained and somewhat excessively drained, nearly level to steep soils, on outwash plains and terraces. The corridor crosses the Snohomish River, Ebey Slough, the Stillaguamish River, Church Creek, Shell Creek, Lunds Gulch, Big Gulch, Powder Mill Gulch, Merrill and Ring Creek, Pigeon Creek, Pilchuck Creek, and other smaller streams, creeks and sloughs. In areas within the sloughs and estuaries of the Stillaguamish and Snohomish Rivers, tidal emergent and aquatic bed wetlands are present. Scrub-shrub wetlands occur south of Everett's estuary, emergent wetlands occur between Everett and Marysville, and scrub-shrub wetlands occur north of Marysville. Along the Puget Sound coastline, tidal aquatic bed wetlands line the shoreline.

In Skagit County the corridor travels north through Conway, Mount Vernon and Burlington through the lowlands of the Skagit River and Samish River to Samish Bay and then along the shore of Samish Bay to the Whatcom County line. Through the majority of Skagit County, the rail corridor runs through Skagit-Sumas-Field association soils. The soils are very deep, poorly drained and moderately drained, level to nearly level soils on floodplains and deltas. The corridor crosses the Skagit River, Samish River, Tom Moore Slough, Fisher Creek, Gages Slough, Oyster Creek, Edison Slough, and Colony Creek. Scrub-shrub, emergent, tidally-influenced and patches of forested wetlands occur through the entirety of southern Skagit County. A mix of emergent and scrub-shrub wetlands occurs in the valley between the corridor and adjacent farming communities. At the northern end of the county, the soils transition to Tokul-Skipopa-Dystric Xerorcrepts association consisting of moderately deep to very deep, somewhat poorly drained to well drained, level to extremely steep soils on terraces, hills and escarpments.

In Whatcom County, the corridor follows along the shoreline of Puget Sound on Samish Bay and continues along the shoreline of Puget Sound up to Bellingham, crossing Chuckanut Bay. The corridor passes through Bellingham along the waterfront and proceeds northwesterly through Ferndale to the town of Blaine at the Canadian border. Soils are widely varied through Whatcom County ranging from very well drained to poorly drained, level to steep, and very deep to very shallow. In that vein, the wetlands through the county have also taken on a varied establishment. The corridor crosses or borders on Chuckanut Bay, Bellingham Bay, Chuckanut Creek, Padden Creek, Squaticum Creek, the Nooksack River, California Creek, Dakota Creek, and Drayton Harbor near Blaine. Along the Puget Sound shoreline, wetland areas typically consist of tidally-influenced emergent and aquatic bed types. More inland areas of the corridor consist of scrub-shrub, emergent and some forested wetlands, particularly around southern and northern Bellingham. Around Ferndale, wetlands consist of all types from forested and scrub-shrub to tidally-influenced aquatic beds. Typical wetland vegetation consists of combinations of Oregon ash, red alder, Pacific crabapple, Pacific willow, Sitka willow, hardhack, Pacific ninebark, sedges, rushes, broadleaf cattail, bulrush and non-native invasives such as reed canary grass and Himalayan blackberry.

Vegetation, Fisheries, and Wildlife (including Threatened and Endangered Species)

Wildlife and vegetation likely occurring along the rail corridor were identified using the Washington State Department of Fish and Wildlife (WDFW) Priority Habitats and Species data; county-wide and state-wide species lists from the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NOAA Fisheries); WDFW species of concern lists; city and county comprehensive plans; presence data from various natural resource agencies and aerial photo review of habitats. Research for this section was completed using various published data sources and through conversations with WDFW staff. GIS mapping for threatened and endangered species was developed using federal and state fish, wildlife, and vegetation natural resource databases. Mapping can be found in Appendix A (Group B) of this document.

Due to the vast variety of habitats and species located along the Pacific Northwest Rail Corridor, the following existing habitat descriptions are not exhaustive of all species potentially present. The analysis of existing conditions is focused primarily on federal and state species of concern, protected species and priority habitats. The corridor contains a multitude of habitat types ranging from open meadows and prairies to heavily forested and oak woodlands. In many of the streams, lakes and wetlands along the corridor, resident species of fish such as speckled dace, three-spine stickleback, large and small mouthed bass, northern pikeminnow, brown bullhead, pumpkinseed, black and white crappie, suckers, sculpin, minnows, and carp will be common. Habitats along the corridor also support various wildlife, including but not limited to, black-tailed deer, raccoons, opossum, mice, coyotes, skunks, beaver, marmot, chipmunks, squirrels, amphibians, snakes, lizards, turtles and many species of migratory and resident birds. In the northern counties along the corridor, the rail line runs along the Puget Sound shoreline. Marine mammals including seals, sea lions, killer whales and sea otter are present. Detailed project-specific environmental assessments or discipline reports will be prepared for individual projects with impacts to natural and biological resources.

In Clark County, vegetation and wildlife will predominately be located near riparian areas and wetlands along the Columbia River, Vancouver Lake and other bordering lakes or stream crossings, as well as the Ridgefield National Wildlife Refuge. Much of the corridor is located in the Willamette Valley Province, which consists of forested dominant vegetation. Douglas fir is a main component of this province as are widespread grand fir and big leaf maple. Oregon white oak and Pacific madrone with varying understories are precursors to forests in the area. Small patches of oak woodlands are found along the rail corridor near Ridgefield. Also mixed throughout the county are patches of grasslands created from grazing, prescribed burns and other activities. Dominant species in the grasslands include perennial and annual grasses such as California oatgrass, red fescue, ripgut brome, and reed canary grass, as well as forbs such as western buttercup.

Within the Columbia River, marine mammals foraging for salmon and sturgeon, such as California and Steller sea lions, harbor seals, and otter could be expected and typically follow migrational patterns of fish into the river. Other resident wildlife species such as black-tailed deer, coyote and raccoons are common in suburban areas of Clark County. Migratory birds such as Canada goose, sandhill crane, great blue heron, mallard ducks, sparrows, finches, juncos, and other passerine and waterfowl species will be common near wetlands, streams, and vegetated areas in Clark County. Several peregrine falcon, osprey, and bald eagle nests are located along the rail corridor in Clark County, specifically near Vancouver Lake, Lake River and the Columbia River.

The BNSF rail corridor enters into Washington on bridges over the Columbia River, which is a migration route for spring and fall Chinook, Coho, chum and sockeye salmon, sea-run cutthroat trout, winter and summer steelhead, bull trout, green sturgeon, eulachon, and Pacific lamprey. The corridor continues northward along the Lake Vancouver shoreline and Lake River, which provide breeding and rearing environments for warm-water species such as bass and perch. The rail corridor continues northward along Lake River, crossing several streams including Burnt Bridge Creek, Salmon Creek, Whipple Creek, Flume Creek, and Gee Creek. These tributaries support small runs of steelhead, chum, Coho, and sea-run cutthroat trout and many resident species including stickleback, dace and minnows. Critical habitat for listed fish species in Clark County is summarized in Table 4.

Table 4. Waterbodies and streams containing designated critical habitat within 1,000 feet of the rail corridor identified by species and county.

County	Green Sturgeon	Chinook	Chum	Steelhead	Bull Trout
Clark	Columbia River Lewis River	Columbia River Lewis River	Columbia River Gee Creek Lake Creek Salmon Creek Lewis River	Columbia River Gee Creek Allen Creek Lewis River	Lewis River
Cowlitz	Lewis River Columbia River Cowlitz River	Lewis River Burke Slough Kalama River Owl Creek Coweeman River Cowlitz River Ostrander Creek Salmon Creek Toutle River Hill Creek Olequa Creek	Lewis River Burke Slough Kalama River Owl Creek Coweeman River Cowlitz River Salmon Creek Toutle River Hill Creek Olequa Creek	Lewis River Wallace Slough Burris Creek Burke Slough Mill Creek Bybee Creek Schoolhouse Creek Columbia River Kalama River Owl Creek Cowlitz River Coweeman River	Lewis River

County	Green Sturgeon	Chinook	Chum	Steelhead	Bull Trout
				Ostrander Creek Salmon Creek Toutle River Hill Creek Olequa Creek	
Lewis	None	Olequa Creek Stillwater Creek King Creek	Olequa Creek McMurphy Creek	Olequa Creek Stillwater Creek McMurrey Creek Snow Creek Ferrier Creek Curtis Creek King Creek	None
Thurston	None	None	None	None	None
Pierce	None	Puyallup River Swam Creek Clear Creek Clarks Creek White River	None	None	Puyallup River White River Puget Sound
King	None	Green River Black River White River Duwamish River	None	None	Duwamish River Green River Puget Sound
Snohomish	None	Skykomish River Quilceda Creek Cook Slough South Slough Steamboat Slough Stillaguamish River	None	None	Ebey Slough Snohomish River Stillaguamish River Steamboat Slough Union Slough Puget Sound
Skagit	None	Steamboat Slough Skagit River South Fork Skagit River	None	None	Samish River Skagit River South Fork Skagit River
Whatcom	None	Nooksack river	None	None	Nooksack River Puget Sound

In Cowlitz County, vegetation and wildlife are associated with the several wetlands and riparian areas along the many rivers, creeks and floodplains that are dominant throughout the corridor. The county falls within the *Tsuga heterophylla* or western hemlock vegetation zone. Douglas fir, western hemlock and western red cedar are the dominant overstory. Grand fir and western white pine appear sporadically while Pacific yew is a

subordinate species. Hardwood species such as big leaf maple and red alder are found along disturbed areas and riparian corridors as are black cottonwood, Oregon ash and red alder. Pacific madrone and Oregon white oak may be found on dryer slopes but are not common. Small pockets of oak woodlands occur along the rail corridor. Wildlife species are similar to the Clark County section. Waterfowl and passerines present are similar throughout the corridor. Osprey and bald eagle nests are present along the Lewis, Kalama, Coweeman, Cowlitz and Columbia rivers of Cowlitz County. Great blue heron and great egret have been observed north of Kalama near the Columbia and Kalama rivers.

Entering Cowlitz County the rail corridor crosses the Lewis River, which is a migration route for fall and spring Chinook, Coho, summer and winter steelhead, bull trout, sea-run cutthroat trout and a small chum population. Chinook, Coho, steelhead and chum spawn in the lower reaches of the Lewis River, while bull trout populations primarily utilize the headwaters. Eulachon are known to occasionally spawn in the Lewis River.

The alignment then parallels the Columbia River, crossing several tributaries including Burris Creek, Burke Creek, Canyon Creek, Mill Creek, Bybee Creek and Schoolhouse Creek. These tributaries support runs of sea-run cutthroat, steelhead and small chum salmon populations. Northward, the Kalama River provides a migration corridor for spring and fall Chinook, Coho, chum, sea-run cutthroat, winter and spring steelhead, and bull trout. Spawning of steelhead, cutthroat and Coho occurs in the lower reaches of the Kalama River. Between the Kalama and Coweeman rivers, the rail corridor follows the shoreline of the Columbia River. At this location there are documented osprey and bald eagle nests as well as several small tributaries that contain resident fish species. Owl Creek and the Coweeman River are migratory corridors for fall Chinook, Coho, sea-run cutthroat and winter steelhead. Resident fish species such as sculpin, three-spine stickleback, dace, northern pikeminnow, suckers and bass are present in many of the streams and rivers of Cowlitz County.

The Cowlitz River produces runs of spring and fall Chinook, chum, Coho, sea-run cutthroat, and spring steelhead. The Cowlitz River is also the largest producer of eulachon in the Columbia River basin. Eulachon are known to spawn throughout the river. In addition, the Cowlitz River supports a multitude of resident fish species including lamprey, bass, carp, sculpin, bullhead, perch, stickleback, suckers and mountain whitefish. Ostrander Creek and the Toutle River support runs of Chinook, Coho, winter steelhead, and cutthroat trout. Critical habitat for fish species is identified or proposed throughout Cowlitz County and is summarized in Table 4.

From Lewis County north, vegetation types fall within the Puget Sound subdivision of the *Tsuga heterophylla* zone. The dominant species are similar to what is described for Cowlitz County; however, other habitats areas are included within the subdivision. These include areas of prairie, oak woodland, pine forest and swamps and bogs. Prairie areas are found within Pierce, Lewis, and Thurston counties and consist of Idaho fescue, moss, and several species of sedges. Douglas fir and Oregon white oak groves often move into prairie areas. Pine forests found along the corridor include dominant species such as lodgepole pine, western white pine, ponderosa pine and Douglas fir. Swamps and bogs

are typically found in the more northern counties. Western red cedar and red alder are dominant in swamps. Sitka spruce, western hemlock, lodgepole pine, and western white pine may also be present in swamps. Bog areas contain sphagnum mosses, sedges, bluejoint reedgrass, small fruited bulrush, mannagrasses and rushes and are sometimes surrounded by shrubs including bog Labrador tea and bog laurel. In Lewis County, wetlands and floodplains occur along the corridor similar to what is found in Cowlitz County. Much of the vegetation between the corridor and adjacent farmland is scrub-shrub wetland. Bald eagle nests line the Cowlitz and Chehalis rivers in Lewis County. Wildlife occurring in Lewis County along the rail corridor is similar to that found in Cowlitz County, including back-tailed deer, raccoon, opossum, squirrels, migratory birds, amphibians, and garter snakes. Other small mammals and reptiles are typically present throughout the corridor. Throughout Lewis County and along the rail corridor, there are several small ponds and wetlands that provide habitat for migratory birds and waterfowl.

Upon entering Lewis County the rail corridor crosses Olequa Creek, a tributary to the Cowlitz River that is designated critical habitat for Chinook salmon and contains runs of Coho, chum and Chinook salmon and steelhead. Olequa Creek is crossed twice by the rail line; first, on the southern border of Vader and secondly, at the northern end of Winlock. Between the two Olequa Creek crossings, the rail corridor crosses McMurphy and Ferrier creeks, which both are presumed to support runs of chum salmon, Coho salmon and steelhead. The corridor crosses the Newaukum River and Dillenbaugh Creek before entering the city of Chehalis. The Newaukum River produces runs of spring and fall Chinook, Coho, coastal cutthroat and winter steelhead trout. Dillenbaugh Creek supports runs of Coho salmon and cutthroat trout. Before entering Centralia the railway crosses Salzer, China and Hanaford creeks, which are tributaries to the Chehalis and Skookumchuck rivers and provide migration routes and rearing areas for Coho salmon, steelhead and cutthroat trout. Resident fish such as sculpin and dace are found in all of the streams in Lewis County.

In Thurston County, lands are transitional from the more aquatic systems and swamp areas of Lewis County to more terrestrial systems near the fringe of the Nisqually National Wildlife Refuge. Vegetation areas transition from prairie species to wooded areas in the north county area that are dominated by Douglas fir, red alder and big leaf maple. Wildlife occurring in the corridor includes the bald eagle, peregrine falcon, osprey and black-tailed deer.

The Skookumchuck River, crossed slightly east of Bucoda, produces runs of spring and fall Chinook, chum, and Coho salmon; coastal and resident cutthroat trout; and steelhead. North of Bucoda, the rail line bisects an unnamed tributary to the Skookumchuck River that contains runs of Coho salmon, steelhead and cutthroat as well as several species of resident fish. In this area, the rail corridor travels through areas of oak woodlands and rare prairie plant communities consisting of Pacific pea and white top aster. Also found in this habitat are pocket gophers, Taylor checkerspot butterflies and mardon skippers.

In Tenino, the rail corridor crosses Scatter Creek, which supports cutthroat trout and Coho salmon. Near Beaver Creek, patches of rock prairie and oak woodlands line the corridor, while there are several patches of sensitive plants species including white-top

aster, golden paintbrush and fescue. Oregon vesper sparrow and other migratory birds have been observed in grasslands in this area. Beaver and Scatter Creeks contain resident fish species such as suckers, sculpin and dace.

In northern Thurston County, the rail line crosses the Deschutes River near its confluence with Spurgeon Creek. The lower Deschutes River, including Capitol Lake, is the major migration route to spawning areas for Chinook salmon, steelhead and Coho salmon. Riffle sculpin, western brook lamprey and coastal cutthroat trout are found in this system.

Near the Olympia/Lacey train station, Mazama pocket gophers have been documented and oak woodlands are present in conjunction with agricultural development. Also in the area, the rail line bisects Pattison Lake and passes in the vicinity of Long Lake, which contains habitat for migratory birds and waterfowl. Coho and chum salmon are also found in the Woodard-Smith Creek drainage into Henderson Inlet.

In Pierce County, Douglas fir, big leaf maple, and red alder dominate vegetation. Oregon oak groves exist in the Fort Lewis area where understory vegetation is dominated by prairie species and snowberry. As the corridor progresses through Tacoma toward Puyallup, vegetation transitions into areas that are farmed or in floodplains where numerous wetlands or drainages with wetland vegetation exist. Wildlife species of concern including bald eagle, peregrine falcon, osprey, and western gray squirrel are documented along the corridor. Marbled murrelet use the Nisqually River as a flight path to nesting grounds on Fort Lewis. Wetlands and drainages throughout Pierce County provide habitat for species of migratory birds and waterfowl, amphibians and invertebrates.

The Nisqually River, including McAllister Creek, produces large runs of Chinook, chum, pink and Coho salmon and steelhead. Bull trout and cutthroat trout are present as well. Suitable spawning habitat begins above river mile 3.0, in the vicinity of the BNSF tracks, and extends upstream in both the mainstem and side channels. The Nisqually River is also home to many species of resident fish including sculpin, dace, stickleback, mountain whitefish, northern pikeminnow, Pacific and brook lamprey and suckers. Critical habitat and foraging, migration and overwintering habitat for bull trout is documented at the Nisqually River crossing, while critical habitat for Chinook salmon is designated downstream.

North of the Nisqually River crossing, the rail corridor diverges to a western and a proposed eastern alignment (Point Defiance Bypass). The western alignment begins at the Nisqually River delta and Red Salmon Creek where there is salt marsh habitat and designated critical habitat for Chinook salmon and bull trout. Coho and chum salmon utilize the Red Salmon and Sequatchew Creek drainages. These salmon use the area adjacent to the BNSF tracks primarily as a migration corridor. No spawning occurs in the very lower reaches of these creeks. As the rail line follows the shoreline of Puget Sound, shorebird concentrations and littleneck and butter clams, horse clams, geoducks, Dungeness crab, and in some locations, shrimp utilize the saltwater intertidal areas.

In addition to shoreline habitat, the western rail alignment travels through Douglas fir and western hemlock forested areas between DuPont and Steilacoom. As the rail corridor

reaches University Place, it crosses Chambers Creek, where Coho, chum, Chinook, steelhead and cutthroat trout are present. There are several bald eagle nests in this area as well. Critical habitat for Chinook salmon is designated in Chambers Creek. The majority of terrestrial habitat is limited to urban residential and commercial areas and small patches of urban oak woodland. Other wildlife species include vesper sparrow colonies, purple martins, raccoon, and possum.

The western alignment follows the Tacoma Narrows around Point Defiance and along Commencement Bay to meet up with the proposed eastern alignment near the Puyallup River. The Tacoma Narrows and Commencement Bay provide habitat for marine fish species including rockfish, herring, and flounder as well as for shorebirds and marine mammals. Killer whales, gray whales and harbor seals are seen in this area annually. Peregrine nests are documented in Commencement Bay waterways.

The proposed eastern alignment (Point Defiance Bypass) follows the Interstate 5 corridor through the highly developed areas of DuPont, Lakewood and Tacoma, and also through heavily wooded areas near Fort Lewis. Osprey nests, great blue heron rookeries, western bluebird observations and sporadic oak habitat areas are documented along the corridor. North of Dupont, the corridor runs adjacent to American Lake and crosses several of the lake's unnamed inlet streams. American Lake is home to migratory birds, waterfowl, bald eagle and osprey, deer, raccoon, amphibians, and other wildlife. The rail corridor crosses Murray Creek in this area as well, which is home to cutthroat trout and sculpin. In Lakewood, the corridor crosses Clover Creek, which supports runs of steelhead, Coho salmon, rainbow trout and cutthroat trout.

Just south of the Puyallup River, the two alignments merge and cross Swan, Squally, Clear and Clarks creeks, which contain Coho salmon, steelhead, chum salmon, Chinook salmon and pink salmon. Chinook critical habitat is designated in Clear and Clarks creeks. Bull trout core habitat is present in Clear and Clarks creeks. Great blue heron rookeries and bald eagle nests are found along the Puyallup River in this area. The tracks cross the Puyallup River east of Puyallup and the confluence with the White River; in this area Chinook, Coho, pink, chum salmon, steelhead, bull trout, and cutthroat trout are using the river as a migration route and for some spawning. Critical habitat is designated for bull trout and Chinook salmon in this stretch of the river. As the corridor runs through Sumner, the line crosses Salmon Creek, a tributary to the White River. Salmon Creek supports runs of chum, Coho and pink salmon.

The rail corridor crosses into King County just south of crossing the White River. In King County, vegetation varies dramatically from floodplain, bogs and wetlands in the south county area to forested riparian vegetation in the north county area. The south county area includes a variety of wetland scrub-shrub, emergent and forested areas. The north county area includes a mixture of forested areas with shrub understory in a primarily suburban residential and commercially developed area.

The White River provides a migration corridor for spring and fall Chinook, pink, Coho, chum, steelhead, bull trout, coastal cutthroat trout and sockeye. Most of the spawning in

the White River occurs several miles upstream of the rail crossing. Critical habitat for Chinook is designated and bull trout core habitat is identified through this section.

North of Auburn, the corridor crosses the Green River. Fall Chinook, Coho, and chum salmon spawn and rear in this section of the mainstem Green River. Steelhead use this area as a migration corridor. Green heron have been documented in the area as well as great blue heron and osprey. Critical habitat for Chinook and bull trout is designated in the Green River at the corridor crossing. Other resident fish species include sockeye, cutthroat trout and sculpin. North of the Green River, the corridor crosses Springbrook Creek which supports cutthroat trout populations.

Through Tukwila and Renton, the rail corridor parallels the Duwamish River and crosses the Black River. At the rail line, the Black River contains fall Chinook, Coho, steelhead and cutthroat trout. The Black River is dammed upstream of the railroad line; fish passage is provided for Coho. Heron, osprey and bald eagles are present in the area. In Seattle, the rail corridor parallels Interstate 5 and US 99, running through a heavily-developed corridor. There are peregrine nests on structures in this area. In Seattle, the rail corridor crosses US 99 and parallels the Puget Sound shoreline. The shoreline provides habitat for several species including Chinook salmon, bull trout, herring, smelt, and other forage fish species, peregrines, shorebirds, waterfowl, and purple martin.

At Lake Union, the rail corridor crosses critical habitat for bull trout and Chinook salmon. There are nesting bald eagles and heron rookeries in the area. Lake Union is used by migrating steelhead, cutthroat, Coho, Chinook, and various resident fish species. Through northern Seattle, the corridor parallels Puget Sound again, where shorebirds and haul-out sites for seals and sea lions are present as well as piers containing nesting purple martins and near shore habitat designated critical for bull trout.

North of the Salmon Bay Ship Canal and northward into Snohomish County, shellfish resources are found in the intertidal and near shore beaches of Puget Sound. These resources include butter and littleneck clams, horse clams, geoducks and Dungeness crab. Northern King County includes crossings of Pipers and Boeing creeks which support Coho, Chinook, steelhead, and cutthroat.

In Snohomish County, steep hillsides on the upland side and shoreline on the west dominate the south county corridor. Big leaf maple, western red cedar, Douglas fir and western hemlock on the upland side dominate vegetation. Scrub-shrub vegetation exists at the toe of the upland slopes and along the riparian areas. Vegetation north of Everett, after crossing the Snohomish River, is dominated by estuarine emergent wetlands in the vicinity of Ebey Slough. Wildlife is prevalent throughout the corridor except in the downtown Everett area. Wildlife in the corridor includes songbirds, purple martin, great blue heron, bald eagle, peregrine, osprey, and black-tailed deer.

The short coastal streams between Point Wells and Everett generally do not support salmonid resources. However, cutthroat trout are present in Deer, Shellberger, Shell and Pigeon creeks and Lunds, Big, Japanese, Powder Mill and Merrill Ring Gulches. Coho salmon are also found in many of these streams. Steelhead are also observed in Lunds Gulch, north of Edmonds.

In Everett, the rail corridor turns inland and runs through developed urban areas between the Snohomish River and Interstate 5. The Snohomish River and the two side channels crossed by the railroad, Steamboat Slough and Ebey Slough provide migration routes for Chinook, Coho, pink, sockeye and chum salmon, steelhead, bull trout and cutthroat trout. Also, resident fish species are abundant including black and white crappie, sculpin, largemouth bass, Pacific and river lamprey, stickleback and mountain whitefish. The Ebey Slough runs include those entering Quilceda Creek on the Tulalip Reservation as well as those moving upstream to the Skykomish and Snoqualmie rivers. Freshwater and intertidal plant communities are found throughout this area.

Several unnamed drainage channels run along or cross the rail corridor in the area of Marysville. These drainages contain resident fish and Coho salmon. Portage Creek is a tributary to the Stillaguamish River in Snohomish County. Portage Creek, Cook Slough and the Stillaguamish River support cutthroat trout, Coho and chum salmon, bull trout, and steelhead in addition to resident fish species. At the southern border of Stanwood, the rail corridor crosses Church Creek which supports runs of cutthroat trout, bull trout, Coho and chum salmon, and steelhead. Critical habitat within Snohomish County and along the rail corridor is found nearly exclusively within the Stillaguamish, Skykomish, Snoqualmie, and Snohomish rivers and along the Puget Sound shoreline. Haul-out sites for seals are located in a few places along the coastline.

In Skagit County, the corridor vegetation is predominately wetlands and grasses in the Skagit River valley bordered by farmlands and pockets of black cottonwood and alder groves. Lining the Skagit River, there are numerous bald eagle nests. Also, the Skagit River area contains one of the state's largest wintering populations of bald eagles. North of the Skagit River, vegetation becomes more upland, transitioning from big leaf maple, cottonwood and red alder to a mixture of paper birch, poplars, Douglas fir and western red cedar vegetation. Wildlife varies with a variety of songbirds in the Skagit valley and bald eagles in the area of the various river and creek crossings. Also found in the corridor are peregrine falcon, osprey, Townsend's big eared bats, black-tailed deer, western toad and marbled murrelet. Between Colony Creek and Oyster Creek, forest vegetation is well developed and marbled murrelet are often seen traveling through this area to eastern nesting grounds. Around Larabee State Park, seal and sea lion haul-out sites are present along the coastline.

The railroad crosses the Skagit River at approximately river mile 16.5. The lower mainstem Skagit River within this section provides migration and rearing for all species of salmon as well as bull trout, cutthroat trout and steelhead. Rearing is extensive within the sloughs, channels and along the estuaries and islands downstream of the railroad crossing. Spawning generally occurs upstream. Most of the lower Skagit River is also considered high-quality sensitive tidal surge plain wetland and estuarine habitat.

The Samish River supports Chinook, Coho, sockeye/kokanee, pink and chum salmon, steelhead, bull trout and cutthroat trout. All five salmon species spawn within the reach of the river near the railroad crossing. Rearing takes place throughout the lower river. Bull trout critical habitat is designated up to the railroad crossing. Prior to entering Whatcom County, the rail corridor crosses a small pond, Oyster Creek and Colony Creek,

and parallel to Edison Slough, which contain Coho salmon, steelhead and cutthroat trout. The lower portions of Whitehall, Harrison and Oyster creeks provide low gradient flows with good spawning gravels for chum and Coho.

In Whatcom County, vegetation is predominately upland vegetation east of the corridor with Douglas fir, red alder and big leaf maple as the primary trees and a variety of understory vegetation. South of Bellingham are small patches of white oak and north pacific bald and buff habitat. The vegetation along Chuckanut Bay and Bellingham Bay includes a variety of shrubs in areas that have been ripped to contain the rail line. North of Bellingham, vegetation is a mixture of upland deciduous trees and shrubs in the proximity of the rail line itself. Near Ferndale, there are large areas of Canadian St. John's wort. Pockets of wetland scrub-shrub vegetation exist in lowland areas. Estuarine and riparian habitats exist throughout much of the corridor. Birds found in the vicinity of the corridor include common loon, peregrine falcon, marbled murrelet, great blue heron, cavity-nesting ducks, snow goose, bald eagle, northern goshawk and osprey. Shorebirds and seabirds are present all along the coastline in Whatcom County. Black-tailed deer also inhabit the corridor area. Haul-out sites for seals and sea lions are present along the coast.

Chuckanut Creek and Chuckanut Bay, adjacent to Samish Bay, support Coho and chum salmon, steelhead and cutthroat trout. Puget Sound intertidal and near shore beaches support clam and oyster populations.

Continuing northward, Padden Creek in the Fairhaven area of Bellingham supports small runs of Coho, Chinook, and chum salmon, steelhead, and cutthroat trout. In central Bellingham, Whatcom Creek supports both natural and hatchery-reared runs of Coho, Chinook, pink, sockeye and chum. In addition, steelhead and cutthroat trout are documented rearing near the rail crossing over the creek. Further north, Squalicum Creek has runs of cutthroat trout, steelhead, Coho, Chinook and chum as well as resident fish species. North of Bellingham, several small streams cross under the rail line and contain runs of cutthroat trout and Coho salmon.

In Silverdale, the rail corridor crosses Silver Creek, which supports runs of Coho salmon, chum salmon, and resident cutthroat trout. The railroad crosses the Nooksack River at approximately river mile 6.0 near Ferndale. The Nooksack River is a major migration corridor for Chinook, Coho, pink, chum and sockeye salmon, steelhead, bull trout and cutthroat trout. The mainstem of the river is used for spawning and rearing by Chinook while the tributaries are used by the other species, mostly upstream of the railroad crossing. The river is also designated critical habitat for Chinook salmon and bull trout.

North of the Nooksack River, the rail corridor crosses several small streams before entering British Columbia. These streams, including California and Dakota creeks, support runs of Coho salmon and cutthroat trout as well as resident sculpin. Dakota Creek also supports runs of Chinook, chum and steelhead.

Air Quality

Polluted air has many negative impacts, including causing or worsening lung-related diseases, such as emphysema, chronic bronchitis and asthma, and causing breathing difficulty and even death. Easily inhaled small particles, called particulate matter, are perhaps the most significant health concern related to poor air quality.

Polluted air can contribute to water pollution, and can damage building materials, cloth and metals. It can also damage trees, agricultural crops and other living organisms, as well as contributing to decreased visibility.

Air quality in Washington is considered moderate to good. In 1995, thirteen areas in the state were identified as being in "non-attainment" (not meeting federal health-based standards) for one or more of four air pollutants: ground-level ozone, small particulate matter, carbon monoxide and sulfur dioxide. Those areas are now clean enough to meet federal standards.

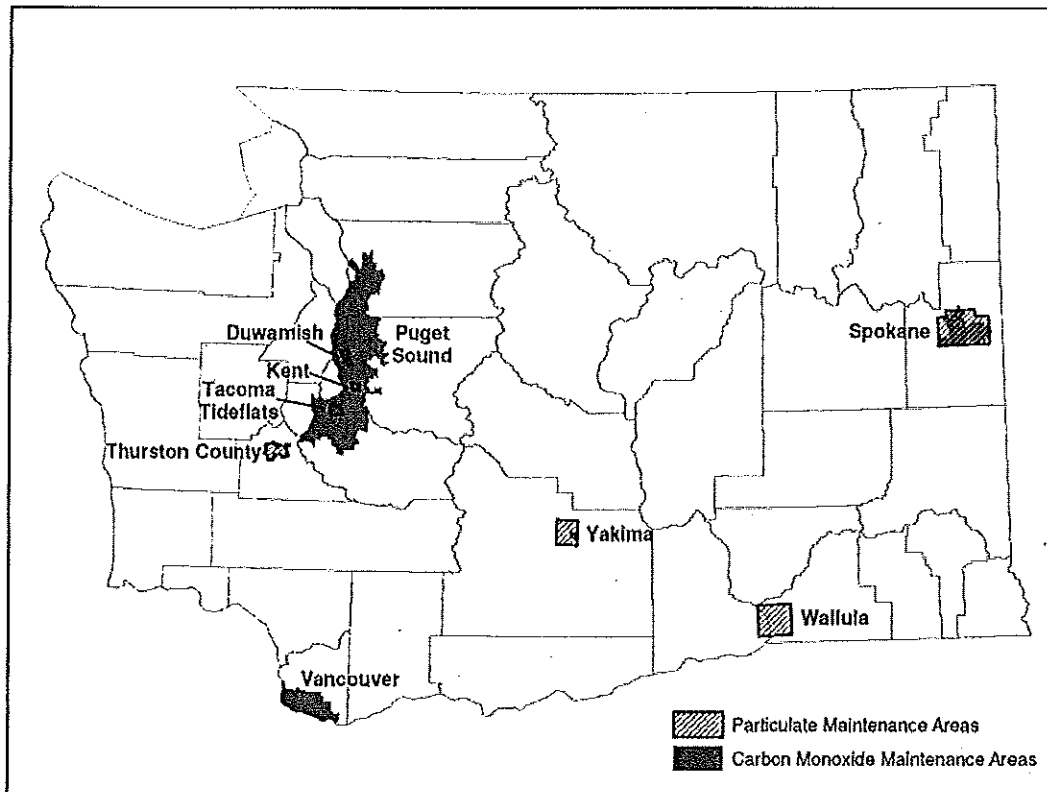
The air quality status of the nine counties traversed by the Pacific Northwest rail corridor is presented in Appendix A (Group C) of this document.

The primary cause of poor air quality in Washington is motor vehicle exhaust. Exhaust from motor vehicles contains many toxic pollutants, including carbon monoxide. Motor vehicle emissions are also a source of particulate matter and are precursors to ground level ozone.

In addition, high levels of particulate matter are caused by tiny particles of soot, dust, and unburned fuel from woodstoves, fireplaces, backyard burning, agricultural burning, and industry.

As shown in Exhibit 1, the project is located within the Puget Sound ozone and carbon monoxide maintenance areas, the Vancouver ozone and carbon monoxide maintenance areas, and the Tacoma Tide Flats, Kent, and Duwamish PM10 maintenance areas. The carbon monoxide maintenance area includes the entire Puget Sound Metropolitan Urban Area Boundary. It extends from north of Everett in Snohomish County to just south of DuPont in Pierce County. The maintenance area is bounded on the eastern side by the Cascade foothills. The Puget Sound ozone maintenance area includes the southwestern half of Snohomish County, most of King County, and all of Pierce County. The Vancouver ozone maintenance and carbon monoxide areas include the entire Vancouver Metropolitan Urban Area Boundary. The Tacoma Tideflats PM10 maintenance area includes the industrialized Port of Tacoma area northwest of Interstate 5. The Kent PM10 maintenance area includes the industrialized area around Kent. The Duwamish PM10 maintenance area includes the Port of Seattle area northwest of Interstate 5.

Exhibit 1. Statewide air quality maintenance areas



Federal Transportation Conformity Rules apply to only the railroad crossings where changes are made to the roadway. Railroad crossings are specifically exempted under both the State and Federal Transportation Conformity Rules. These rules recognize that safety impacts may be greater than potential air quality impacts. Consequently air quality conformity analysis of motor vehicles due to changes in railroad crossings is not required under the Transportation Conformity Rules.

Federal General Conformity Regulations, however, do apply when increasing the service of passenger trains. Emissions outside the maintenance areas are not expected to exceed the NAAQS and are not required to be analyzed.

Soils and Geology

The types of soils and geologic formations in a project area dictate how a project should be constructed, the potential for landslides in the area, and the area's susceptibility to earthquakes.

In addition, steep slopes throughout the corridor can be disrupted during construction of rail improvements. It is critical that these areas be identified as part of project planning.

Soils and geology were identified from a review of the Soil Survey maps for each respective county. Additional information was gathered by reviewing the city and county comprehensive plans. Slope stability information was developed through various sources including the state's Coastal Atlas, comprehensive plans, and various publications from the Washington State Department of Natural Resources.

Mapping of the general slope stability of the corridor can be found in Appendix A (Group D) in this document.

In Clark County, the corridor generally follows the Columbia River basin from the Oregon border to the Cowlitz County line, remaining in the lowlands throughout. Soils are predominately silt loam. The corridor crosses slopes exceeding 40% within the city of Vancouver just south of Vancouver Lake. The corridor occasionally borders slopes greater than 40% on the east side of the Columbia River basin. Landslides are a potential in Clark County. Slope stability of most concern is in the Vancouver/Ridgefield area.

In Cowlitz County, the corridor follows the Columbia River and continues along the Columbia and Cowlitz River basins and along Olequa Creek to the Lewis County line. The predominant soil type found throughout the county in this corridor is silt loam. The slopes range from level to nearly level, with slopes of 30 to 50% as the corridor nears the valley bluffs to the east. The corridor occasionally encounters rock bluffs as the railroad nears the eastern edge of the lowlands. The corridor tunnels through a rock bluff near the city of Kelso. Slope stability is of concern in the Kelso/Longview area.

The corridor in Lewis County follows Olequa Creek, encountering nearly level silt loam soils. The corridor proceeds north to Winlock, encountering slopes occasionally ranging up to 15% with silt loams. Silt clay and silty clay loam with slopes from 0 to 5% and 5 to 15% are also encountered. The corridor proceeds north through the Chehalis and Centralia area, passing through the Newaukum River, Dillenbaugh Creek and China Creek basins where the slopes are level to nearly level with soils of silt clay loam. The corridor then follows the Skookumchuck River where fine sandy loam is encountered with level to nearly level slopes. No potential landslide areas are noted in the corridor. Slope stability is of most concern in the Napavine and Centralia areas.

In Thurston County, the corridor follows the Skookumchuck River and along the river basin to the town of Bucoda. The soils along the river are primarily silty clay loam. The corridor then proceeds northerly toward Tumwater, Olympia, and Lacey. Leaving the river basin, soils transition to more gravelly sandy loam or loamy fine sand. Slopes are level to nearly level, ranging up to 3%. The corridor crosses several streams or rivers where soils change to more typical river basin silts. The corridor proceeds northeasterly, crossing the Nisqually River near the city of DuPont. Prior to crossing the river the corridor enters a large cut section of mixed soil conditions ranging from loam sand to gravelly sand loam with slopes up 30%.

In Pierce County, the corridor crosses the Nisqually River near the city of DuPont and enters into gravelly soil conditions. The BNSF corridor proceeds northeasterly to Tacoma. The corridor enters the Puyallup River valley and proceeds through Puyallup

and Sumner to the city of Auburn. The slopes are level or nearly level. Soils in the valley range from silty clay loams to muck. Potential for liquefaction in a seismic event is noted in those areas as well as the areas within the Port of Tacoma rail access area. Slope stability is of major concern along the entire shoreline from DuPont into Tacoma. For the proposed Point Defiance Bypass route, the rail line is situated on a broad upland plateau consisting of sands and gravels, with the majority of the surface covered by Steilacoom Gravel. No potential landslide areas are noted for this upland route.

In King County, the corridor passes through Auburn near the White River, close to the east side of the valley. From that point into the industrial area of Seattle the corridor remains on silt loam type soils of level or nearly level topography. The underlying soils are of rich farming types typical of the floodplain areas of south Puget Sound. Within the city of Kent the corridor encounters a seismic hazard area, due to the soft muck soil conditions. Near the Duwamish River in Tukwila the corridor lies between steep bluffs and the river with landslide potentials. From downtown Seattle northerly the corridor follows the shores of Puget Sound to Snohomish County. In this area the tracks lie on a low bench with high bluffs on the east and the waters of Puget Sound on the west. Landslide potential exists along this area. Slope stability is of major concern all along the shoreline north of Shilshole Bay.

In Snohomish County, the corridor follows the shoreline of Puget Sound to the city of Everett, passing through Edmonds and Mukilteo. Along this shoreline the slopes range from 25 to 75% with potential for landslides next to the corridor. Some areas adjacent to the corridor are filled lands in the tidewaters of Puget Sound. The corridor proceeds northerly from Everett through the floodplains of the Snohomish River. Soils are level to nearly level silts and loams throughout. Slope stability is of most concern along the shoreline from the King/Snohomish border to Mukilteo.

In Skagit County, the corridor follows north through the floodplains of the Skagit River. The soils are primarily silts deposited from the frequent flooding with level to nearly level slopes except at the river crossings. Along Samish Bay to the Whatcom County line the corridor follows the shoreline with steep slopes ranging from 65 to 90 % with rock outcrops. Landslide potential exists along this portion of the corridor. Slope stability is of most concern in northern Skagit County, along the shoreline of Samish Bay.

In Whatcom County, the corridor follows along the shoreline of Samish Bay and to the city of Bellingham along the shores of Puget Sound. The soils are loam over sandstone or bedrock on severe slopes of 30 to 60 %. Landslide potential is evident along this portion of the corridor. Within Bellingham, the soils are classified as urban with slopes varying from 0 to 3% to 0 to 8%. The corridor proceeds from Bellingham to Blaine with soils of silt, clay, loam, and muck with level to nearly level terrain. Near Blaine the soils are silt and loam on marine terraces. High water tables exist throughout this portion of the corridor. Slope stability is of most concern in northern Bellingham and Blaine.

Land Use

Land use refers to the utilization of buildings and land (for example, commercial, residential, agricultural) in an area. It is important to look at land uses to determine the compatibility of a proposed project with the surrounding land uses, as well as to determine if the existing land uses could change as a result of the new transportation facility.

Throughout the corridor, there are many different land uses. In Clark, Cowlitz, and Lewis counties, the land uses are primarily rural in nature. In the larger cities, such as Tacoma or Seattle, the land uses are concentrated with a mix of industrial uses and commercial uses. In the northern portion of the corridor, in Skagit and Whatcom counties, the land uses are primarily agricultural. In a few of the smaller communities, some housing is located close to the railroad tracks.

Another aspect of land use in Western Washington is achieved through the development and enforcement of comprehensive plans. In 1990, the Washington State Legislature adopted the state's first comprehensive Growth Management Act (GMA), which is designed to help communities direct urban growth, reduce sprawl, and protect resources. As part of GMA, most communities are required to develop land use plans that will dictate the character and direction of growth within their cities. Many of the comprehensive plans designated the rail line as an Essential Public Facility under GMA, and all were supportive of intercity passenger rail service.

Due to the rail projects completed over the past sixteen years using the state's incremental approach to developing its intercity passenger rail system, the land uses adjacent to the corridor have been previously documented. Information gathered for this resource also included reviews of comprehensive plans and policies. The Bibliography at the end of this document provides a detailed listing of sources used for this research.

In Clark County, the rail corridor extends through the incorporated cities of Vancouver and Ridgefield and the unincorporated areas of Clark County.

Through its 2007 Comprehensive Plan, Clark County has provided guidelines for future development with the goal of managing and accommodating growth for the next 20 years while preserving its existing character. The transportation element within the plan anticipates a transition from private to transit vehicles, including high-capacity transit and light rail. The plan supports improved Amtrak intercity passenger rail transportation and high-speed rail along the Pacific Northwest Rail Corridor as an alternate form of transportation to the single occupant vehicle.

The City of Vancouver serves as the largest urban growth area in Clark County. The land uses that abut the corridor include industrial, residential, and open space. In 2004, the city of Vancouver adopted its updated Comprehensive Plan for 2003-2023. The updated comprehensive plan does not propose significant changes in land uses or allowed densities throughout Vancouver from the 1994 plan. The Amtrak station is owned by the City of Vancouver.

The City of Ridgefield's Comprehensive Plan 2005 Update (effective September 2008) outlines its future growth strategies, including its desire to maintain a strong and vibrant downtown and increasing commercial type of waterfront activities and access to the areas located on the east and west side of the tracks respectively. The rail line abuts commercial, mixed use, and low density residential land uses.

From Clark County, the rail corridor continues north through Cowlitz County, passing through the incorporated cities of Woodland, Kalama, Kelso, Longview, and Castle Rock, and the expansive unincorporated areas.

The Cowlitz County Comprehensive Plan, updated May 1981, serves to manage the County's growth in an orderly, positive, and constructive fashion. The plan encourages efficient transportation systems and alternate modes of transportation. The plan also strives to manage and protect available resources and maximize the potential of available lands for future growth. Industrial activity is favored along the rail line as well as the continuation of growth in areas with similar land uses within existing industrial and residential areas.

The City of Woodland's 2005 Comprehensive Plan Update designates the areas along the rail corridor as heavy and light industrial with small pockets of low and high density residential. A number of vacant lots exist along the rail corridor, providing the opportunity for the corridor to eventually meet the desired density of activity as stated in the plan.

All through Woodland and Kalama, the corridor is primarily agricultural with pockets of industrial and rural residential. Suburban and rural residential and industrial uses are found close to the city of Kalama.

The City of Kalama Comprehensive Plan 2005-2025, adopted December 7, 2005, serves to guide development while considering natural and economic elements. The plan addresses support for expanded railroad freight service, and specifically mentions the WSDOT rail passenger capacity expansion project (Kelso to Martins Bluff) in the plan.

The City of Kelso provides for passenger rail in its current and future plans. The city owns the passenger depot located in the downtown section of Kelso. The areas along the rail corridor are similar to other jurisdictions in Cowlitz County, ranging from industrial and commercial uses to open space and agricultural.

The 2006 Castle Rock Comprehensive Plan was created as a tool to provide for uniform development of the region. The corridor is currently bordered by vacant land (for future residential uses) and low and high-density residential units. The plan does, however, acknowledge the existence of Amtrak rail passenger service and the BNSF right of way, and provides a small buffer from future land uses along the rail corridor.

From Cowlitz County, the rail corridor extends north into Lewis County's unincorporated areas and its incorporated cities of Vader, Winlock, Napavine, Chehalis, and Centralia.

Lewis County developed its current Comprehensive Plan in 1999. The plan provides an overall direction for land use planning in Lewis County and has been amended several times. Lewis County's plan designates the unincorporated areas located south of Napavine as rural mixed use. The unincorporated areas north of Napavine are designated as urban and some suburban. The existing land uses in these areas reflect their designated uses. The plan recognizes the intercity rail passenger service and the proposed upgrades to high speed rail along the Pacific Northwest Rail Corridor

The City of Vader's Comprehensive Plan was amended in 2005 and designates the area around the rail corridor for community services (primarily for open space and park areas), residential, commercial and industrial. Existing land uses are primarily commercial, residential and open space. The plan and the city support enhancement of passenger rail and high speed rail planning efforts in the region.

The City of Winlock updated their Comprehensive Plan in 2005 to reflect the changes experienced within the city and to integrate the requirements of the Growth Management Act. Land uses are primarily commercial, residential and open space.

The City of Napavine's 2006 Comprehensive Plan Update and EIS Addendum proposed an expansion of the Urban Growth Area (UGA) to accommodate population growth and to promote economic development. The rail line passes through the city's core commercial area as well as residential and commercial/industrial land uses. The city's transportation policy supports enhancement of passenger rail and high speed rail planning efforts in the region.

The 1999 Chehalis Comprehensive Plan favors a multiple center or cluster concept for future development patterns. Under the desired approach, land uses would be grouped in pockets of residential neighborhoods, parks and open space, commercial and industrial activities. The existing land development along the rail corridor is primarily commercial and industrial.

Centralia is the largest city in Lewis County and updated their Comprehensive Plan in 2007. The goals and corresponding policies in the city's plan include the preservation and enhancement of residential neighborhoods and orderly development in the designated commercial areas, while reducing the long-range public costs of development. Existing land uses within the city are typical for a small urban area, and include industrial, commercial, and undeveloped areas. The comprehensive plan also encourages the use and expansion of both passenger and freight rail services.

The rail corridor extends in a northerly direction through the town of Bucoda, and the cities of Tenino and Lacey, and the unincorporated areas of Thurston County. The majority of the corridor extends through sparsely-developed unincorporated areas. The Thurston County Comprehensive Plan emphasizes the need to preserve this low density and other county resources. Land uses along the corridor are designated for a mix of commercial, agricultural, and residential uses. The 2004 plan also encourages continued and enhanced passenger rail transportation.

Current land uses in the city of Tenino are predominately low density residential. The city, in its 2006 Comprehensive Plan, has designated the land adjacent to the corridor for continued residential use in the southern and northern sections of the city. The central portion is designated for industrial use.

The City of Lacey and Thurston County land use plan for the Lacey Urban Growth Area is a joint planning document prepared as the Lacey Comprehensive Land Use Plan and is an element of the Thurston County Comprehensive Land Use Plan updated in 2003 under Growth Management Act requirements. The plan identifies the rail corridor for rail transportation and other public purposes. The rail corridor extends through the urban growth area boundary. Land uses bordering the rail corridor are primarily single family and low density residential.

The Pierce County Comprehensive Plan was created in accordance with the Growth Management Act and was originally adopted in 1994. It is amended every two years. The purpose of the plan is to provide policies and strategies for current and future land uses and development for the next 20 years throughout the county.

The unincorporated areas of Pierce County consist of a diverse range of land uses. The Fort Lewis Military Reservation, which is under the authority of the federal government, is primarily utilized as open space. The remaining areas throughout the county that abut the rail line include moderate density residential, rural separators, and agricultural resource lands.

The City of DuPont's 2001 Comprehensive Plan designates the portion of the rail corridor along Puget Sound as a sensitive areas buffer. Due to the steep topography, the area is only appropriate for open space use. The proposed Point Defiance Bypass rail alignment passes next to mixed use, commercial, and historic village sections of the City.

The City of Lakewood is also located on the new Point Defiance Bypass rail alignment. The rail line passes through a variety of land uses including open space, commercial, single and multi-family residential, industrial, and institutional. The City of Lakewood Comprehensive Plan was adopted in 2004, and has been amended annually.

The town of Steilacoom's 2008 Comprehensive Plan Update acknowledges that the rail line land uses are as a sensitive areas buffer. Due to the steep topography, the area is only appropriate for open space use. The plan acknowledges the future of increased passenger service in the corridor. Support for rail is reflected through the town's desire to work with BNSF on future track and grade crossing improvements.

The City of University Place last amended their Comprehensive Plan in 2004. The shoreline and steep slopes make it difficult to develop along the rail corridor. Current uses include some low density residential, civic/public open space, and a scattering of mixed uses. Future rail activity along the corridor is expected to be limited as outlined in the goals and policies of the Shoreline Management element of the plan.

The town of Ruston's 2003 Comprehensive Plan provides guidelines for the town's future growth in accordance with the Growth Management Act and the desires of the

current residents. The existing land uses include commercial and residential activity in the corridor.

Land uses along the corridor within the city of Tacoma are a mixture of commercial, industrial, port activities, and highway uses. The city of Tacoma's Comprehensive Plan was adopted in 2004 and is regularly updated. It recognizes these current uses and encourages higher density transit-oriented development in the area near the Tacoma train station.

The City of Puyallup's Comprehensive Plan was updated in 2006. It designates land uses along the rail corridor for mixed residential, auto-oriented commercial, light manufacturing, business and parks. The Sound Transit Commuter Rail station is located adjacent to the rail line, and the city is encouraging Transit-Oriented Development in the zone near the station.

The City of Sumner's 2005 Comprehensive Plan recognizes the rail corridor as a critical link in their intermodal transportation goals. Current uses in the corridor range from commercial to light industrial. The Sound Transit Commuter Rail station is located adjacent to the rail line, and the city is encouraging higher density and infill development near the station.

Over 35 miles of the project corridor traverses King County, the most populous county in the state of Washington. The corridor, as it extends through the western area of the county, is comprised of the incorporated cities of Auburn, Kent, Tukwila, Renton, Seattle, and Shoreline, and unincorporated areas under the jurisdiction of King County.

According to King County's 2008 Comprehensive Plan Update, the corridor passes through a number of incorporated and unincorporated areas that have been designated as King County's Urban Growth Areas and Manufacturing/ Industrial Centers. Some of these growth areas include the city of Tukwila, areas within the city of Seattle, Duwamish, Ballard/Interbay, Kent, and the Aurora/Richmond area.

In the southern region of King County, the comprehensive plan designates some of the unincorporated area for agricultural/natural resource lands, mining, and open space. The plan also supports the concept of maintaining these activities in support of focusing growth in adjacent urban growth areas.

The City of Auburn's 2005 Comprehensive Plan anticipates future industrial and commercial growth in the corridor due to the number of vacant and underutilized lots in the area. The comprehensive plan outlines the city's goal for the rail corridor within their downtown as the Rail Yard Special Planning Area. It is bounded by Ellingson Road on the south, State Route 18 on the north, and A Street SE on the west. Through its designation, the city of Auburn acknowledges the need to give consideration to BNSF and to provide access between the east and west side of the city when future land uses are proposed. The Shoreline Master Plan will also dictate future land uses in the corridor's crossing of the White River. The Sound Transit Commuter Rail station is located in

downtown Auburn adjacent to the rail line, and the city is encouraging higher density and infill development near the station.

The City of Kent's existing land-uses range from commercial and industrial to a general mixture of uses. Similar uses are laid out in the 2004 Comprehensive Plan for the city of Kent. The comprehensive plan, updated in 2006, also supports the development of a concentration of housing, commercial uses and cultural activities in Downtown, by the Sound Transit Commuter Rail station, with the intent of increasing and maintaining the vitality of the community. The city of Kent's Shoreline Master Plan has established guidelines for future development occurring on the banks of the Green River, which the rail corridor crosses.

The existing land uses along the rail corridor within the city of Tukwila represent a variety of uses, from industrial to public recreational lands. The 2005 Comprehensive Plan supports the continued development and support of the industrial area along the rail corridor for the next 20 years. The existing Tukwila train station is used by Amtrak and Sound Transit rail services. The city of Tukwila's vision for the Tukwila Urban Center includes transit-oriented development in a high density area with regional employment and areas of high quality housing within walking distance of the Amtrak/Sounder station.

The 2004-2024 Comprehensive Plan for the city of Seattle outlines policies furthering the creation of urban centers and villages, reflecting the desire to maintain and enhance the city's character while accommodating growth through the designations of growth areas. Existing uses are found, in general, to be in conformance with the goals and land use designations referenced in the comprehensive plan. Land uses along the corridor vary significantly in Seattle, with the southern portion predominately industrial port uses, and traveling north through park land and open space, with scattered residential uses. The city owns King Street Station, the state's busiest rail station. The city of Seattle's Shoreline Management Plan will also guide future land use activities in areas of the Duwamish River, Lake Union, Salmon Bay, and the coastline of Puget Sound.

The City of Shoreline adopted their Comprehensive Plan in June 2005. According to the plan, the land use designation for the area is open space/recreation (Richmond Beach) and residential uses along the corridor. Due to the proximity of the corridor to the water and steep hillsides, the city's Shoreline Master Plan and Critical Area Ordinance also guide future land use activities. It is a goal of Shoreline to provide for the safe and efficient movement of people and goods within the shoreline area while enhancing its unique, fragile, and scenic character.

From King County, the rail corridor enters Snohomish County and extends in a northerly direction for approximately 46 miles. The rail corridor passes through the town of Woodway, the cities of Edmonds, Mukilteo, Everett, Marysville, and Stanwood, and the unincorporated areas of Snohomish County.

According to Snohomish County's 2008 Update to their 2005-2025 Comprehensive Plan, the corridor passes through the composite Urban Growth Area (UGA) of Snohomish County, consisting of several smaller UGAs. The goals set forth include orderly

development, the provision of public facilities, increased densities of various uses, and to protect and enhance rural areas. These goals and others are to be incorporated into the cities' comprehensive plans as well.

Snohomish County's plan indicates that the rail corridor and its existing surrounding uses are in general conformance with designated future land uses. Open space, including wetlands and waterways, are discussed in the county's Shoreline Management Plan and the county's Critical Area Ordinance. A great number of the areas referred to as open space in the existing land use descriptions have been identified as protected areas as mandated by those two documents. The county plan supports continued and enhanced passenger rail transportation.

The City of Woodway was incorporated in 1958 as a means to protect and preserve the area and to retain its original concepts. Those concepts were to maintain the area as a low density residential area, prohibiting commercial activities and to maintain control over property taxes and the area's roadways. Existing uses reflect these early town goals. Areas along the rail corridor consist of open space and steep bluffs. The bluffs are protected under an ordinance regarding critical areas. The city's comprehensive plan was revised in 2008.

Existing land uses along the corridor in the City of Edmonds consist of water-oriented recreational uses, residential uses, and scattered industrial uses. According to the December 2008 City of Edmonds Comprehensive Plan, little change in land use is expected in the future. A master plan development, under the direction of the Port of Edmonds, is located in the vicinity of the marina extending east to State Route 104. The city, Sound Transit, and the Port of Edmonds are working together to relocate the existing ferry terminal and the existing Sound Transit/Amtrak station, as part of a multi-modal transportation facility. The preferred site for this facility is at Point Edwards.

According to the City of Mukilteo's 2008 Comprehensive Plan, existing land uses along the rail corridor are residential, open space and commercial. A new Sound Transit Commuter Rail station opened up in the commercial area near the ferry terminal in 2007. Many areas next to the tracks have steep bluffs and are classified as critical areas.

The current land uses along the rail corridor range from recreational to residential to industrial. Similar uses are proposed along the corridor as part of the city of Everett's Final 2025 Comprehensive Plan. Critical areas, as determined by the city of Everett's Critical Areas Ordinance and the city's Shoreline Master Plan, will not be developable due to the impacts such activities may have to those areas. Sounder and Amtrak serve the Everett station, which is owned by the city. The City of Everett is supportive of transit-oriented redevelopment in the area adjacent to the station.

The 2005 Comprehensive Plan for the City of Marysville and its Urban Growth Area (UGA) provides a detailed review of the sub-areas of the city and their designated land uses. Throughout the sub-areas, the existing land uses are similar, if not the same, to those designated for proposed land uses, and include residential, commercial and agricultural. The sub-area discussions integrate the goals of the land use element with discussion of the existing land uses and how they can be blended into the desired

outcome. The rail line extends through existing commercial, residential, industrial, and mixed land uses in the Marysville UGA.

A review of the City of Stanwood's Comprehensive Plan, amended in 2007, indicates future land development within the rail corridor. Existing land uses are less dense than the planned future uses. The immediate area adjacent to the corridor is currently bordered by industrial, commercial uses, and public facilities. An Amtrak station is under construction and will be opened in November 2009.

The rail corridor extends from the Snohomish County border north through the cities of Mount Vernon and Burlington and the unincorporated areas of Skagit County generally paralleling Interstate 5. The Skagit County Comprehensive Plan, last published in 2007, supports passenger rail service to and through Skagit County as an important element of a balanced transportation system. The rail line extends through substantial areas of rural and natural resource lands in the unincorporated county.

The 2005 Comprehensive Plan for the City of Mount Vernon integrates goals set forth by the state and county including concentration of densities in cities and their UGA. The existing land uses are in general conformance with those desired for future growth, including future growth in the downtown area. The rail line passes through commercial, industrial, and downtown retail core land uses. The Amtrak Station is located in the downtown area.

The City of Burlington's 2005 Comprehensive Plan identifies goals to reflect the values and heritage of the city and provide a quality of life of the community, as Burlington begins to approach its maximum size. The rail line extends through the original downtown, heavy commercial and industrial uses, and open space land as it passes through the city.

The rail corridor continues north from Skagit County through Whatcom County to the United States/Canada Border. As it traverses through Whatcom County, it passes through the cities of Bellingham, Ferndale and Blaine and the unincorporated areas of the county.

The Whatcom County 2009 Comprehensive Plan sets out the goals, policies, and vision for the county. The plan incorporates the goals of the Growth Management Act (GMA) and other goals favored by the residents of Whatcom County, including the desire to maintain the rural areas of the county. The plan designates the rail corridor as an essential public facility under GMA.

Throughout the county, in both the incorporated and unincorporated areas, existing land uses include a mixture of rural, agricultural and crossroad commercial. Short segments of the rail corridor are located within the UGA. Areas with the UGA designation serve as limits for future growth within the region. The remaining areas will be maintained as agricultural, open space (undeveloped land) and rural.

According to the 2006 City of Bellingham Comprehensive Plan, the land uses located along the rail corridor include industrial, public (park area), commercial and residential.

The City and the Port of Bellingham are currently redeveloping a former waterfront industrial site adjacent to the rail line.

The City of Ferndale's 2005 Update to the 1996 Comprehensive Plan is the official statement adopted by the City Council setting forth goals and policies to protect the health, welfare, safety, and quality of life of Ferndale residents, while accommodating at least 20 years of projected growth. It also includes not only the area within the existing incorporated city limits, but also the UGA. The rail line runs through industrial, commercial, and a small area of multiple dwelling land uses.

The City of Blaine Comprehensive Plan was updated in July 2008. The rail line passes through manufacturing, residential, commercial, and open space land uses before crossing over the international boundary into Canada.

Farmlands

In this ever-growing urbanized society, the federal government and the State of Washington have recognized the importance of preserving our depleting farmland. As such it is imperative that projects minimize the disruption to these agricultural resources as much as possible.

Farmland information was obtained through sources from the U.S. Department of Agriculture's Natural Resources Conservation Service.

The corridor in Clark County follows the Columbia River basin from the Oregon border to the Cowlitz County line, remaining in the lowlands throughout. The corridor encounters farmlands on both sides of the corridor between Vancouver and Ridgefield.

In Cowlitz County, the corridor follows the Columbia River and continues along the Columbia and Cowlitz River basins and along Olequa Creek to the Lewis County line in the north. The corridor follows the lowlands throughout. It borders or crosses over numerous farms except within the urban growth or forested areas.

In Lewis County, the corridor follows Olequa Creek, traveling north through Vader, Winlock, Napavine. The corridor then travels north through Chehalis, Centralia, and up the Skookumchuck River to the Thurston County line. Farmlands are encountered along the corridor between Winlock and Napavine. Near Chehalis the corridor crosses large farmland tracts. Smaller farms are also encountered along the Skookumchuck River.

In Thurston County, the corridor follows the Skookumchuck River to the town of Bucoda. The corridor then proceeds northeasterly through Thurston County passing through the town of Tenino and the city of Lacey. The corridor borders or bisects several small farms and some larger dairy farms along the Skookumchuck River. Between Tenino and Lacey, there are long-term agricultural zones noted adjacent to the corridor.

In Pierce County, the corridor crosses the Nisqually River near DuPont and travels northeasterly into Tacoma. The proposed Point Defiance Bypass route travels through

the urbanized areas adjacent to the cities of DuPont and Lakewood prior to reaching Tacoma. The corridor then follows the Puyallup River to Sumner turning north along the White River. Much of the corridor along the Puyallup and White rivers is farmland on both sides of the tracks except within the cities of Tacoma, Puyallup, and Sumner.

In King County, the corridor passes through the city of Auburn and travels north through the cities of Kent, Tukwila, Seattle, and Shoreline. Much of the land in the south county within this corridor was once considered prime farmlands but has been replaced with commercial, industrial, and residential uses. Several farms are present near the corridor. In the northern portion of the corridor, from the Seattle city center northerly to the Snohomish County line, there are no farmlands.

In Snohomish County, the corridor follows the shoreline of Puget Sound and travels north to Everett, encountering no farmlands. North of Everett the area has class II farmlands within the lowlands of the Snohomish and Stillaguamish rivers.

In Skagit County, the corridor travels north through the Skagit Valley, passing through large tracts of farmland on both sides except in the urban areas of Conway, Mount Vernon, and Burlington. From there the corridor proceeds northerly along the shorelines of Samish Bay and Puget Sound where shellfish are raised commercially.

In Whatcom County, the corridor follows Samish Bay and Puget Sound to Bellingham. No farmlands are in this region. From Bellingham northerly to Blaine, prime and unique farmlands, used mostly for dairy, are present with potential for greater use of farmlands where the soils are well drained.

Prime farmlands, which are lands that have the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops, are located in the corridor. Skagit and Whatcom counties have the largest percentage of prime farmlands within the corridor.

Parks and Cultural Resources

Cultural resources include state- and nationally-designated historic buildings, districts, and archeological sites. Western Washington is rich in cultural resources ranging from Native American burial sites and villages to the historic Fairhaven district in Bellingham. The majority of the historic sites along the corridor are eligible for the National Register of Historic Places.

The corridor is also rich in park and recreation facilities. They include small playgrounds, sandy beaches, and large state facilities. The rail right of way parallels numerous parks and recreation facilities.

Maps indicating the general areas of Parks and National Register Listed Properties are located in Appendix A (Group E) of this document.

Section 4(f) of the Department of Transportation Act of 1966, as amended, provides protection for significant publicly owned parks, recreation areas, wildlife refuges, and

historic sites. Transportation projects that adversely affect such resources may not be approved by the Secretary of Transportation unless a determination is made that there is no feasible and prudent alternative, and all possible planning has been done to minimize harm.

Section 6(f) of the Land and Water Conservation Fund Act (LWCFA), passed by Congress in 1965, concerns transportation projects that propose to convert outdoor recreation property that was acquired or developed with LWCFA grant assistance. Section 6(f) prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's National Park Service (NPS).

Section 106 of the National Historic Preservation Act of 1966, as amended, requires that federal agencies identify and assess the effects of federally-assisted undertakings on historic properties, consult with others to find acceptable ways to avoid or mitigate adverse effects, and afford the Advisory Council on Historic Preservation an opportunity to comment.

A number of Parks and Recreation Facilities, National Register Listed Historic Properties, and Archaeological Sites and Districts are located within 1,000 feet of the rail right of way, as shown in Table 5. The majority of these resources are located in urbanized areas. In addition, hundreds of potentially eligible historic properties are likely located within 1,000 feet of the rail corridor as well, and some of the rail facilities themselves are also potentially eligible properties.

Table 5. Parks and recreation facilities, natural register listed historic properties, and archaeological sites and districts within 1,000 feet of the rail corridor

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
1	Dugan Regional Park (Vancouver) Vancouver Lake County Park East Vancouver Lake County Park Franklin Park (Vancouver) Burnt Bridge Creek Greenway (Vancouver) Heathergate Ridge (Vancouver) Vancouver Lake County Park (Mettler) Shillapoo State Wildlife Area	None	197
2	Vancouver Lake County Park (Mettler) Davis Park (Ridgefield) Ridgefield National Wildlife Refuge	Judge Columbia Lancaster House; Ridgefield American Woman's League Chapter House; William Henry Shobert House	30
3	None	Hulda Klager Lilac Gardens;	0

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
4	None	US Post Office--Kelso Main;	7
5	None	None	0
6	None	Laughlin Round Barn; Ben Olsen House	2
7	Winolequa Memorial Park (Winlock)	John Adams House	2
8	Stan Hedwall Park (Chehalis)	Burlington Northern Depot; O.K. Palmer House; St. Helens Hotel	3
9	Schaeffer County Park (Lewis County) Memorial Park (Bucoda)	Townsend Family Farm (Centralia); Armistice Day Riot; Centralia Union Depot; Olympic Club Saloon; Oliver and Mary Shead House; The Sentinel; US Post Office--Centralia Main	5
10	Tenino City Park	Chambers Prairie School	0
11	Horizon Pointe Park (Lacey) Lakepointe Park (Lacey) McAllaster Grove (Lacey) Mopthers Natures Acres Park	None	3
12	Nisqually National Wildlife Refuge Fort Lewis Golf Course City of DuPont Park	Adjutant General's Residence; Philip Keach House; Nathaniel Orr Home & Orchard; Steilacoom Creek Bridge; Thornewood	40
13	Cormorant Park (Steilacoom) Saltair Point Beach (Steilacoom) Perkins Park (Steilacoom) Pioneer Park (Steilacoom) Sunnyside Beach Park (Steilacoom) Tacoma Country and Golf Club (private) South End Recreation Area SERA (Tacoma) South Park (Tacoma)	None	21

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
14	Day Island (University Place) Titlow Park (Tacoma) Living War Memorial Park (Tacoma) Ruston Playfield (Ruston) Ruston Way (Tacoma) Cummings Park (Tacoma) Marine Park (Tacoma) Puget Creek Beach (Pierce County) Dirkman Mill Park (Tacoma) Hamilton Park (Tacoma) Old Town Dock (Tacoma) Jack Hyde Park (Tacoma) Garfield Park (Tacoma) Puget Gulch (Tacoma) Puget Gardens (Tacoma) Old Town Park (Tacoma) Ursich Gulch (Tacoma) Theas Park (Tacoma) Firemans Park (Tacoma) Foss Waterway Park (Tacoma) South End Recreation Area SERA (Tacoma) South Park (Tacoma) Irving Park (Tacoma) Sawyer Park (Tacoma) McKinley Park (Tacoma)	Albers Brothers Mill; Bowes Bldg; Cabin No. 97; Dickman Lumber Company Head Saw; Henry Drum House; Engine House No. 4; Fire Station No. 2; Fireboat No. 1; Fireboat Station; Masonic Temple - Tacoma; National Bank of Tacoma; Nisqually Power Substation; Northern Pacific Office Bldg.; Old City Hall; Pacific Brewing & Malting Company; Pacific National Bank Bldg; Perkins Bldg; Sandberg--Schoenfeld Bldgs; Slavonian Hall; Sprague Bldg; St. Peter's Episcopal Church; Tacoma Bldg; Tacoma Light & Water Company Purifier Bldg; Tacoma Totem Pole; Union Passenger Station; US Post Office--Tacoma Downtown Station--Federal Bldg; Washington Bldg; Winnifred Street Bridge	10
15	Theas Park (Tacoma) Firemans Park (Tacoma) Foss Waterway Park (Tacoma) McKinley Pak (Tacoma) Swan Creek Park Pioneer Park (Puyallup)	Christ Episcopal Church; J.H. Lotz House; Ezra Meeker Mansion; Peace Lutheran Church	11
16	Pioneer Park (Puyallup) Foothills Trail Meeker to McMillin (Pierce County) Linden Golf Course (private) Rueban Knoblauch Heritage Park (Sumner) Seibenthaler Park (Sumner) Sumner Meadows (Sumner) Roegner Park (Auburn) GSA Ballfield Park (Auburn) City Hall of Auburn Park	Dieringer School; Ryan House; Herbert Williams House; Sidney Williams House	1

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
17	Green River Trail (King County) Kaibara Park (Kent) Boren Park (Kent) Kent Memorial Park Interurban Trail (King County) Springbrook Greenbelt (Kent)	Alvord's Landing; Carnation Milk Factory	1
18	Interurban Trail (King County) Fort Dent Park (Tukwila) Black River Forest (Renton) Foster Golf Links (Tukwila) Georgetown Playfield (Seattle) Cleveland Playfield (Seattle) East Duwamish Greenbelt (Seattle)	Maple Donation Claim; Old Georgetown City Hall	8
19	Hing Hay Park (Seattle) Union Station Square (Seattle) SafeCo Field Qwest Field Occidental Square (Seattle) Pioneer Square (Seattle) City Hall Park (Seattle) Harborview Park (Seattle) Freeway Park (Seattle) Waterfront Park (Seattle) Westlake Park (Seattle) Victor Steinbrueck Park (Seattle) Belltown Cottage Park (Seattle) Myrtle Edwards Park (Seattle) Elliot Bay Park (Seattle) Kinnear Park (Seattle) SW Queen Anne Greenbelt (Seattle) Interbay Athletic Park (Seattle) Lawton Park (Seattle) Kiwanis Memorial Preserve Park (Seattle) Commodore Park (Seattle) Sunset Hill Park (Seattle) Golden Gardens Park (Seattle) North Beach Ravine (Seattle) Blue Ridge Places (Seattle) Carkeek Park (Seattle)	1411 Fourth Ave. Bldg; A.L. Palmer Bldg; Agen Warehouse; Alaska Trade Bldg; Arctic Bldg; Barnes Bldg; Battle of Seattle Site; Bell Apt.; Carson Boren Home Site; Butterworth Bldg; Cobb Bldg; Colonial Hotel; Arthur Denny Home Site; First Post Office Site; First Public School Site; Gilmore Block; J.S. Graham Store; Grand Pacific Hotel; Great White Fleet Disembarkation Site; Guiry & Schillestad Bldg; Hoge Bldg; Holyoke Bldg; Hull Bldg; King Street Station; Leamington Hotel & Apt.; Lyon Bldg; Moore Theatre & Hotel; New Washington Hotel; Northern Bank & Trust Bldg; Northern Life Tower; Old Public Safety Bldg; Olympic Hotel; Panama Hotel; Pioneer Bldg, Pergola, & Totem Pole; Rainier Club; Rector Hotel; Salmon Bay Great Northern Railroad Bridge; Skinner Bldg; Squire-Latimer Block; Skinner Bldg; Squire-Latimer Block; Ton of Gold & Sailing of Willapa Site; U.S. Court House; U.S. Immigrant Station	8

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
		& Assay Office; Union Station; United Shopping Tower; US Immigration Bldg; Washington Territorial University Site; YWCA Bldg - Seattle	
20	Innis Arden Reserve (Shoreline) Richmond Beach Saltwater Park (Shoreline) Deer Park Reserve (Woodway) Point Edwards Park (Woodway) Bracketts Landing Park (Edmonds) Hutt Park (Edmonds) Overlook Park (Edmonds) Southwest County Olympic View Park (Snohomish County) Meadowdale Park (Snohomish County)	Brackett's Landing; Olympic View Hotel; Site of First School in district #15; Wells House	1
21	Picnic Point (Snohomish County) Middle Gulch Open Space (Mukilteo) North Gulch Open Space (Mukilteo) Mukilteo City Park Edgewater Park (Mukilteo) Harborview Park (Mukilteo) City of Everett Park Forest Park (Everett)	Fowler Pear Tree; Mukilteo Light Station; Point Elliot Treaty Site; Point Elliott Treaty Monument	23
22	City of Everett Park Forest Park (Everett) Henry M. Jackson Park (Everett) Langus Riverfront Park (Everett)	Carnegie Library - Everett; Commerce Bldg; Everett City Hall; Everett Fire Station No. 2; Everett Public Library; Everett Theatre; Knights of Columbus Community Center & War Memorial Bldg; Marion Bldg Hotel Marion, Tontine Saloon; Marysville Opera House; McCabe Building; Monte Cristo Hotel; Pioneer Block; Rucker House; U.S. Post Office and Customs House	37
23	Walters Manor (Snohomish County)	None	0

Map Number	Parks and Recreation Facilities	National Register Listed Historic Properties	Archaeology Sites and Districts
	Gissberg Twin Lakes (Snohomish County)		
24	Heritage Park (Stanwood) Skagit Wildlife Area (State of Washington)	None	22
25	None	Burlington Fire & Police Station; Otto & Inga Carolson House; Lincoln Theater & Commercial Block	3
26	None	None	0
27	Larabee State Park Teddy-Bear Cove (Whatcom County) Arroyo Park (Bellingham) City of Bellingham Park Marine Park (Bellingham) Boulevard Park (Bellingham) Forest and Cedar Park (Bellingham) Maritime Heritage Park (Bellingham) Elizabeth Park (Bellingham) Little Squalicum Creek Park (Bellingham)	Aftermath Clubhouse; George H. Bacon House; Barlow Bldg; Bellingham National Bank Bldg; Alfred L. Black House; Eldridge Homesite & Mansion; Flatiron Bldg; Great Northern Passenger Station; Immanuel School of Industries-Department of Public Welfare; Leopold Hotel; Morse Hardware Company Bldg; Pickett House; T.G. Richards & Company Store; Lottie Roth Block; Sanitary Meat Market; Sweet & Company Bldg; Washington Grocery Company Warehouse; Whatcom Museum of History & Art	44
28	Little Squalicum Creek Park (Bellingham) Tennant Lake Park (Whatcom County) Tennant Lake Wildlife Area (State of Washington) Hovander Park (Whatcom County) Vanderyacht Park (Whatcom County)	Fort Bellingham	14
29	Peace Arch Park (State of Washington)	Peace Arch	5

Park and Recreation Facilities

Research for this section was completed using published maps, city and county comprehensive plans, and field review. In addition, some interviews were conducted with local representatives. Maps of the generalized areas of parks and recreation

facilities are located in APPENDIX A (Group E) of this document, and a listing of these facilities are shown in Table 5 in this chapter.

Parks and recreation facilities will be further analyzed for potential impacts when project-level environmental documentation is prepared.

The rail corridor enters Washington State by crossing the Columbia River into the city of Vancouver. Within the city of Vancouver the rail corridor runs near three parks and several water recreation areas. Access to these areas is primarily from the east and does not require crossing over the rail corridor. The rail corridor crosses the Stewart Glen Burnt Bridge Creek Greenway. The Greenway and Burnt Bridge Creek lead to the eastern edge of Vancouver Lake, a multiple-use resource.

North of the city of Vancouver and toward Ridgefield the rail corridor runs along Lake River and near water bodies such as Green Lake, Salmon Creek, and Campbell Lake that are used for water-oriented recreation. In Ridgefield the rail corridor continues along Lake River but does not pass near any city of Ridgefield parks. Access to the Lake River shoreline and the marina from the city requires crossing the rail corridor. North of Ridgefield, the rail corridor is adjacent to the Ridgefield National Wildlife Refuge. The rail corridor continues north toward the city of Woodland, running near Lancaster Lake and crossing the Lewis River, both utilized for water-oriented recreation. The Cowlitz County jurisdictional boundary follows the midway mark of the Lewis River.

The rail corridor enters Cowlitz County by crossing the Lewis River and entering the city of Woodland. No recreational areas are located near the rail corridor in the city. Recreational access to the Columbia River, located west of the rail corridor is via two roads that cross the rail corridor. The corridor continues toward the city of Kalama and recreational access to the Columbia River is by selected exits from the I-5 corridor. In the city of Kalama the rail corridor runs through the western edge of the city and access to the Columbia River shoreline requires crossing the rail corridor. The rail line runs near the Port of Kalama, including Marine Park, and access to this area is by an overhead pedestrian walkway or by a vehicular overpass at Marine Drive. North Park is located on the west side of the railroad before leaving city limits.

North of Kalama the railroad crosses the Kalama River. A public boat launch, RV park and water-oriented recreation activities are located in this area. The rail corridor continues through Cowlitz County to the cities of Kelso and Longview. In Kelso, the rail passes by more water-oriented facilities and the Three Rivers Golf Course, a private recreational area. A community park just north of Cowlitz Way is proposed for the shoreline area. A bicycle trail is west of the rail corridor from the Three Rivers Golf Course and continues north, following the rail corridor into downtown Kelso. Recreational access to the Cowlitz River is generally provided by grade-separated roadways.

Lewis County jurisdiction begins just south of the city of Vader. The rail corridor runs on the western edge of the city, and no parks are adjacent to the railway. The tracks continue northward, running along Olequa Creek, past the city of Winlock, the city of

Napavine, and crossing Newaukum River and Dillenbaugh Creek. As tributaries to the Cowlitz River they offer local water-oriented recreational opportunities. The rail corridor bisects the city of Chehalis where it passes near baseball diamonds and soccer fields located on the east side of the rail alignment. North of Centralia the only recreational facility, Schaefer State Park, is located northwest of the rail corridor in unincorporated Lewis County. The park offers recreational opportunities along the Skookumchuck River.

The rail corridor enters Thurston County following Highway 507 toward the city of Bucoda. Access to fishing and other recreation on the Skookumchuck River in this vicinity requires crossing the rail corridor. The rail continues north along Highway 507 toward the city of Tenino. Parks in the city of Tenino are located away from the rail corridor. A trail begins along the rail corridor that runs from Tenino to Yelm. North of Tenino, Wolf Haven International is located on the east side of the rail line. Continuing to East Olympia, the rail corridor crosses the Deschutes River and its water-oriented recreation, but does not pass near any county parks. The Chehalis Western Trailhead crosses the rail corridor in the Lacey/East Olympia area. The railway heads northeasterly across Pattison Lake just south of Lacey. The rail corridor also passes Long Lake and continues toward the Nisqually River. All of these areas are used for water-oriented recreation; however, the BNSF right of way does not impede access to these areas.

The rail corridor enters Pierce County after crossing the Nisqually River and entering the Fort Lewis Military Reservation. It then follows the Puget Sound coast into the DuPont area. A trail system and viewpoints are located along the bluff area in the DuPont area along the old narrow gauge railroad tracks.

Northward along the Puget Sound shoreline the BNSF rail line passes through the city of Steilacoom. Ferry access to McNeil Island and local access to the marina requires crossing the rail corridor. Saltair Park is located west of the railroad and Pioneer Park is located to the east. The rail corridor bisects Sunnyside Beach Park. Several private and public shoreline access points cross the tracks within city limits.

The rail corridor continues along Puget Sound, crosses Chambers Creek and enters the city of University Place. Day Island, accessed by a bridge across the rail corridor, has two private recreational areas, a marina and the Day Island Yacht Club. The railroad enters the city of Tacoma following the Puget Sound/Tacoma Narrows shoreline. It bisects Titlow Beach Park and Living War Memorial Park, and heads east through a tunnel under Point Defiance Park. The alignment re-emerges in the Ruston Way area before heading southeast along the Commencement Bay shoreline. The rail runs near, but not adjacent to Marine Park, Fireman Park, Hamilton Park and Commencement Park. These shoreline parks are accessible by crossing the alignment at marked grade crossings to Ruston Way or by an overpass. Puget Park and Garfield Park are located on the bluff above the rail in this area.

The rail line on the proposed Point Defiance Bypass route runs past five recreational facilities. These are the Fort Lewis Golf Course, the city of DuPont's City Park and City Hall Park, the Tacoma Country and Golf Club, and the South End Recreation Area.

These facilities are accessible by crossing the rail alignment using Interstate 5 overpasses or from local streets.

Outside of Tacoma, the rail corridor parallels the Puyallup River toward the Puyallup-Summer area in unincorporated Pierce County. The city of Puyallup has a bike path on the edge of Stewart Street along the tracks. A proposed park abuts the track on Pioneer and 2nd Street Northeast. Upon exiting the city of Puyallup the railway crosses the Puyallup River with its water-oriented recreation areas, and enters the city of Sumner. St. Seibenthaler Park is located adjacent to the east side of the tracks. Access to White River recreation is provided by several road crossings. The corridor heads north through unincorporated Pierce County and enters King County south of Auburn.

The railway corridor enters King County, paralleling the East Valley Highway through Pacific and Auburn. The rail line follows C Street through the city and is near GSA Park and Auburn Municipal Airport. The Interurban trail also follows the rail corridor at times. The rail corridor continues due north crossing the Green River. In the city of Kent, Railroad Park abuts the west side of the railway and Kiwanis Park is located on 1st Avenue. The rail corridor bisects Burlington Green Park and crosses near Borden Playfield. The rail corridor then heads northwest and into the city of Tukwila, passing near the Fort Dent Park. Located west of the railroad is the Green River and Foster Golf Links area.

The railroad continues along the I-5 corridor and into the city of Seattle. Land surrounding the rail corridor is primarily industrial in the southern portion of Seattle, and the rail line is straddled by the I-5 corridor to the east and Boeing Field to the west.

The alignment heads into King Street Station, adjacent to the stadiums for the Seahawks and the Mariners. North of the station, the alignment tunnels through downtown, emerging along Elliott Bay near Myrtle Edwards Park and Elliott Bay Park. Heading north into the Interbay area, the rail runs near the Interbay Golf Course and Interbay Athletic Field. The rail corridor then heads northwest towards Salmon Bay and runs near Kiwanis Memorial Park located west of the railway. The corridor crosses Salmon Bay via an overhead bridge into the Ballard area. The bridge crosses both the canal and Seaview Avenue Northwest just west of the Hiram M. Chittenden Locks. The locks are a public viewing and recreation area. The rail does not affect the park facilities on either side of Salmon Bay. The rail corridor then runs on the east side of Seaview Avenue Northwest. Located on Seaview Avenue Northwest along Shilshole Bay are the Shilshole Marina and a public boat launch. The rail corridor bisects Golden Gardens Park, but pedestrian and vehicular access to this recreational area is by roadway underpasses. Continuing along the waterfront and into Snohomish County the railway runs below the bluff at Carkeek Park and bisects Richmond Beach Park. Public access to the shoreline beaches at these parks is provided by pedestrian overpasses.

The rail corridor enters Snohomish County in the Shoreline area and continues to follow the waterfront. A private shoreline park abuts the railway in the Point Edwards area before Edmonds. Entering the Edmonds area the railroad runs on the east side of Admiral Way. Recreational areas located west of Admiral Way that require crossing the

rail line include Edmonds Marina, Marina Beach, Kingston Ferry, Olympic Beach, Brackets Landing Park, Edmonds Underwater Park, and Brackett's Landing Beach. These areas are accessible by marked grade crossings at street intersections. Continuing in Edmonds along the waterfront the railway runs near residential areas with scenic overlooks, including Overlook Park, a small park located east of the railroad on the bluff above the alignment.

In the Meadowdale area the railway abuts Meadowdale Beach Park. Public access to the beach at this park is by a pedestrian overpass. The rail corridor bisects Picnic Point Park in the Norma Beach area and continues north along the waterfront through the Mukilteo area. In northern Mukilteo, the rail line runs on the east side of Mukilteo State Park, the lighthouse, and the Mukilteo-to-Clinton Ferry dock. Access to these facilities is by crossing the rail corridor at-grade crossings. In the Everett area the railroad runs near Edgewater and Harborview Park to the east, and runs adjacent to Howarth Park, Forest Park, Maggies Park and Grand Avenue Park. In the Port of Everett the railway must be crossed to access Marina Village, the Port of Everett piers, Yacht Club, Marine Park, a public boat launch, North and South View Parks, and the Everett Marina. There are multiple ways to access these facilities including at-grade crossings and an underpass near Hewitt Avenue.

The rail corridor crosses the Snohomish River and related water-oriented recreation areas and enters into the Marysville vicinity. In the city of Marysville, the closest park to the railroad is Comeford Park located east of the corridor. North of Marysville, in unincorporated Snohomish County, the rail corridor heads northwest toward Lakewood and Stanwood. The railway continues heading west toward Stanwood, then north into Skagit County. The unincorporated area is primarily rural agricultural land, with no established parks located near the rail corridor.

The railroad corridor enters Skagit County near Skagit Bay, a habitat management area. Northward, in the Conway area the railroad runs near Conway Park and the Field & Stream Estuary. In the city of Mount Vernon, the rail runs near the Skagit River shoreline, with water-related recreation, and Lions Riverside Park. The railroad alignment continues northward, crossing the Samish River and approaching the waterfront at Samish Bay in north Skagit County. Padilla Bay National Estuarine Research Reserve lies on both sides of the rail line.

The railroad corridor enters Whatcom County, bisecting Larrabee State Park, with public access to the shoreline by a pedestrian underpass. The corridor is tunneled and re-emerges along the waterfront south of the Fairhaven area. In Fairhaven the corridor abuts Post Point Marine Park. In order to reach the Bellingham Cruise Terminal and the public boat launch, it is necessary to cross via marked at-grade crossings to. Approaching downtown Bellingham, the railroad corridor passes through the lower part of Boulevard Park and runs adjacent to the main portion of the park which includes a small art studio. A recreational trail runs on the east side of the rail from Boulevard Park into downtown Bellingham. The rail corridor continues through the industrial waterfront area of downtown Bellingham and crosses the Whatcom Creek waterway. The railroad runs adjacent to Roeder Avenue; access to the Marina, Port of Bellingham, Marina Park and

the public boat launch, all located west of the rails, is provided by at-grade or separated-grade road crossings. Exiting the city limits, the railway bisects Little Squalicum Park via an overhead trestle. The corridor then diverges from the waterfront and runs northeast toward Ferndale. In the city of Ferndale, the railroad abuts Tennant Lake County Park to the west, and runs near Hovander Homestead Park which contains a public boat launch. Exiting the city of Ferndale the rail line heads northwest, running on the west side of Portal Way through Custer toward Blaine and the Canadian border. In the city of Blaine, the rail corridor runs near the Loomis Trail Golf Course to its east and crosses Dakota Creek. Following the Drayton Harbor waterfront area, the corridor runs near the Marina, Marine Park, and a public boat launch, bisects Peace Arch Park and enters Canada.

Cultural Resources

Given the scope of this corridor environmental assessment, only recorded data were used to inventory existing conditions located within 1,000 feet of the rail right of way. Information was obtained from the Washington Department of Archaeology and Historic Preservation.

A number of listed National Register Properties are located within 1,000 feet of the rail right of way, as shown in Table 5. The majority of these resources are located in urbanized areas. In addition, hundreds of potentially eligible historic properties are likely located within 1,000 feet of the rail corridor as well, and some of the rail facilities themselves are also potentially eligible properties. Numerous Archaeology Sites and Districts are also located within 1,000 feet of the rail right of way, as shown in Table 5.

A detailed cultural resources survey will be completed when project-specific environmental documentation is completed. Also, Section 106 consultation with the State Historic Preservation Officer will be initiated during the project-specific investigation. In addition, government-to-government consultation with Native American tribes will be completed.

Social and Economic

The communities existing today along the rail line historically developed along river valleys. These early settlements were later linked by roadways and rail lines. Most of the cities were incorporated in the late 19th and early 20th centuries, and were farming-based communities for much of their history. Rail lines, including the Northern Pacific, were central to community development. The railroads carried produce, freight, and passengers north and south to depots in the town centers.

With the construction of Interstate 5, Interstate 405, and State Route 167 in the 1950s and 1960s, urbanized development began to spread. Most of the BNSF corridor today is dominated by commercial and industrial land uses. Occasional and sporadic residential neighborhoods lie close to the rail lines.

This social and economic resources section includes reviews of access to social and educational facilities (religious institutions, schools, community centers), emergency vehicle access, community cohesiveness, disruption to the community through displacements and relocation, and general impacts to disadvantaged groups (minorities and low-income individuals and families).

When building a new project or implementing a new program, these social and economic elements play a vital role in the placement of the new facility or program. For example, it would not be useful to plan and implement a bus system if it did not go from a residential neighborhood to a commercial area. It is important to make sure future facilities can truly serve the community.

In the case of intercity passenger rail, many of the communities cannot be served directly because a station does not exist in their community. However, it is still critical to look at the social and economic resources throughout the corridor to make sure that the rail system will not impact the social structure of the existing communities.

Safety is another important aspect of the social and economic conditions of a community. Many residents feel that an increased number of faster trains will make their communities less safe. Residents feel uncomfortable driving or walking over railroad tracks. However, since the tracks separate neighborhoods from shorelines, many people illegally walk over the tracks to get to the beach to fish, walk, or picnic.

Community Cohesion and Safety

Given the scope and purpose of this corridor Environmental Assessment, it would be impractical to inventory every social and emergency facility and grade crossing. For the purposes of this environmental review, a listing of local cities and towns along the corridor is provided, as well as an approximate number of legal, public grade crossings within the corridor.

The rail corridor travels through nine counties and numerous cities and towns. The southern portion of the corridor, from Portland to Tacoma, includes four Washington counties and numerous jurisdictions. In Clark County, the communities of Vancouver, Ridgefield and Woodland are bisected. In Cowlitz County, the communities of Kelso, Kalama and Castle Rock are traversed. In Lewis County, the communities of Vader, Winlock, Napavine, Chehalis, and Centralia are crossed. North of Lewis County, Thurston County communities include Bucoda, Tenino and East Olympia/Lacey. Pierce County communities along the corridor include DuPont, Steilacoom, University Place, Lakewood, Ruston, and Tacoma.

Within this southern segment of Washington state, 96 public, at-grade crossings are located within these communities along the rail corridor. In addition, 12 pedestrian bridges/crossings provide access over the rail line.

The lower mid-section of the corridor, between Tacoma and Seattle, travels through Pierce and King counties. The communities of Tacoma, Puyallup, Sumner, Auburn, Kent, Tukwila, and Seattle are crossed by the rail right of way. Within this segment, 58

public, at-grade crossings are located within the corridor. There are no designated pedestrian-only crossings in this area.

North of Seattle, between Seattle and Everett, the communities of Shoreline, Woodway, Edmonds, Mukilteo, and Everett are traversed. These communities are located in King and Snohomish counties. Within this area, seven public, at-grade crossings provide vehicular, pedestrian, and bicycle access across the railroad right of way.

The northern segment of the corridor, from North Everett to Blaine, travels across Snohomish, Skagit and Whatcom counties. The rail line crosses the communities of Everett, Marysville, Stanwood, Mount Vernon, Burlington, Bellingham, Ferndale, and Blaine. This segment of the corridor contains 98 public, at-grade crossings and five pedestrian-only designated crossings.

Public crossings serve as access points for local residents; they serve as links for those communities that are separated by the rail line, thus linking local residents to their shops, parks, religious institutions, families and friends. They are also used by emergency vehicles (fire, police and ambulances) and social service organizations (such as school buses, paratransit and senior services).

Relocation

If a new transportation facility has the potential to impact a home or business to the point where that property is no longer usable, it may be necessary to relocate families and businesses.

Urban Growth Areas (UGA) are areas designated by a county, with input from towns and cities, where urban development is to occur. The UGA is one of the major tools for deciding where urban development should be encouraged and where the limits to that development should end. UGAs are areas where growth and higher densities are expected and supported by urban services. It is likely that impacts to homes and businesses would likely occur in these areas. Through review of county and city comprehensive plans, designated UGAs were identified. In particular, areas that overlap or cross the rail right of way were mapped and are illustrated in Appendix A (Group F) of this document.

The program-level rail plans anticipate expansion of the rail lines within the existing rail right of way. This document identifies areas of potential growth that could possibly be disrupted should the rail line need to expand past the existing rail right of way.

Communities with Growth Management Act designated urban growth areas that intersect the rail corridor include: Vancouver, Ridgefield, Woodland, Vader, Winlock, Napavine, Chehalis, Centralia, Tenino, Lacey, DuPont, Tacoma, Puyallup, Auburn, Kent, Sumner, Seattle, Edmonds, Mukilteo, Everett, Marysville, Stanwood, Mount Vernon, Burlington, Bellingham, Ferndale, and Blaine.

In the uncommon case where business or residential displacements occur, WSDOT will comply with the Uniform Relocation Assistance and Real Property Acquisition Act, state

law, and with its own adopted policies and procedures to protect the interest of current landowners. Appropriate compensation and assistance in relocation will be provided consistent with applicable laws and procedures available to all displaced businesses and residents.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was promulgated on February 11, 1994. The Executive Order (EO) requires each federal agency, to the greatest extent practicable and permitted by law, to achieve environmental justice as part of its mission. Agencies are to identify, and address as appropriate, disproportionately high and adverse human health or environmental effects, including interrelated social and economic effects of their programs, policies, and activities on minority and low-income populations. In June 1997, the U.S. Department of Transportation (DOT) implemented Order 5610.2 to establish procedures for DOT agencies, including FHWA and FRA, to comply with the Executive Order. In December 1998, *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* established policies and procedures for FHWA to use in complying with EO 12898.

The methodology used for this section entailed mapping (via GIS) census tracts along the corridor. There were 192 census tracts identified that were parallel or traversed by the rail line. Database inquiries were performed for population, minority population, and low-income (below poverty level) households. Data were compiled by census tract. Note that Hispanic or Latino can be of any race. Appendix B provides a summary, by census tract, of populations along the corridor.

The demographics vary greatly among the 192 census tracts. The percentage of minority population in the census tracts along the corridor ranges from almost three percent to as high as 95 percent, with a median of 19 percent. High, low, and median minority population percentages for the census tract are broken out by county in Table 6. The overall percentage of minority populations in each county is also shown for comparison purposes.

Table 6. Percent of minority populations by county

County	Minority populations, percent			Whole county
	Potentially affected census tracts Lowest	Highest	Median	
Whatcom	7.7	26.5	15.8	16.8
Skagit	13.0	67.0	35.4	24.7
Snohomish	4.7	34.6	16.8	19.1
King	8.9	95.1	26.6	29.8
Pierce	6.1	72.9	23.6	27.1
Thurston	9.2	37.1	19.2	18.9
Lewis	2.7	28.9	13.9	12.4
Cowlitz	6.1	48.0	9.2	12.8
Clark	6.4	24.5	13.4	15.9

Similarly, the concentrations of low-income populations also vary greatly among the 192 census tracts located along the corridor. In some census tracts, the percentage of low income populations is as low as one to two percent. Other census tracts are composed of as much as 52 percent low-income populations. The median of all the census tracts located along the corridor is about 10 percent. High, low, and median census tract percentages for low-income populations are broken out by county in Table 7. The percentage of low-income populations in each county as a whole is also shown for comparison purposes.

Table 7. Percent of low income populations by county

County	Low-income populations, percent			Whole county
	Lowest	Highest	Median	
Whatcom	7.7	52.0	12.4	0.2
Skagit	6.0	23.8	11.8	11.9
Snohomish	1.2	37.3	5.6	8.0
King	1.4	49.6	10.3	9.9
Pierce	2.1	47.0	9.1	11.1
Thurston	2.9	15.6	6.1	9.5
Lewis	6.1	26.8	15.1	14.2
Cowlitz	2.6	28.1	10.9	15.4
Clark	2.6	47.6	8.7	9.5

Visual Quality

This corridor Environmental Assessment is analyzing potential improvements to passenger rail service that will allow a service level of eight round trips between Seattle and Portland. These improvements include standard track improvements along the existing BNSF right of way that are not expected to impede visual quality. Other planned improvements include replacing existing grade crossings and bridge or overpass facilities with new facilities.

The evaluation of visual quality should consider views from and toward the rail right of way, outside of the rail right of way, and extending to the visible landscape.

The typical landscape, as viewed from the rail right of way by the passenger along the southern segments of the corridor, is rural valley farmlands or areas along the Columbia River. Limited industrial areas can also be seen. In the northern portion of the corridor, landscapes are comprised of urban settings such as Tacoma and Seattle. Moving further north, one can view rural valley farmlands and distant views of the mountains or Puget Sound. Other views include brief glimpses of small rivers, streams, or lakes.

Although the corridor primarily runs through agricultural areas, it often runs adjacent or near highway corridors. Through municipalities, the rail line primarily runs through industrial property and along rail support structures. The view is a side view, as passengers cannot see ahead, nor can they see the tracks the train is riding on.

Views of the existing track structure are often limited to the view of the existing embankment. Most of the existing BNSF right of way and tracks are approximately fifteen feet above grade through much of the corridor.

Energy

Energy and its conservation in general are important factors to consider when implementing a transportation program.

A passenger train consumes about 55,000 BTUs of energy per vehicle mile. This energy is in the form of diesel fuel, a hydrocarbon-based petroleum product. A typical automobile consumes about 5,517 BTUs of energy (in gasoline form) per vehicle mile and personal trucks consume about 6,788 BTUs of energy (in gasoline form) per vehicle mile. Thus, because of its high passenger capacity, the passenger train carrying 10 or more passengers, is more energy-efficient than an automobile or personal trucks with a single occupant. In 2008, Amtrak *Cascades* trains operating between Seattle and Vancouver, BC and Seattle and Portland, OR averaged 177 passengers.

Estimations of fuel consumption were based on the existing operations and equipment configurations modeled on train performance calculator software. A train operating from Seattle to Vancouver, B.C. uses approximately 335 gallons per round-trip. Factoring in approximately 2 hours of idling time at 60 gallons per hour (30 minutes before and after each one-way trip to allow for switching, loading, unloading of passengers and supplies), this amounts to 455 gallons. Current Amtrak travel time between Seattle and Vancouver, B.C. is 3 hours and 55 minutes and the distance is 155 miles. There are two round trip trains per a day, for a total estimated fuel consumption of 910 gallons per day.

Similarly, estimations of diesel fuel consumption were made for the train operating from Seattle to Portland, OR. The train performance calculator software estimated that the train uses approximately 451 gallons per round trip. Factoring in approximately 2 hours of idling time at 60 gallons per hour (using the same assumptions as above), this amounts to 571 gallons. Current Amtrak travel time between Seattle and Portland, OR is 3 hours and 30 minutes. There are four round trips per day, for a total fuel consumption of 2,284 gallons per day.

Total daily Amtrak *Cascades* fuel consumption for the Seattle-Vancouver, B.C. and Seattle-Portland services is approximately 3,194 gallons per day. Annually, almost 1.2 million gallons of diesel fuel are consumed by Amtrak *Cascades* service. These figures do not reflect any additional fuel consumption due to unusual delays.

Noise and Vibration

An increase in noise can affect the quality of life. Potential changes in noise must be considered, and mitigation proposed for any adverse effects.

Railroad noise varies with operating factors and conditions. Operating factors include the numbers of trains, type of train, length of train, and operating speed. Conditions include

the curvature of the track, track maintenance, and the terrain in which the track is set. In addition, grade crossings require certain whistles and warning bells. The significance of the noise depends not only on conditions, but also on the particular land uses and activities that occur along the corridor and their sensitivity to noise.

Two descriptors are used to discuss rail noise, $L_{eq}(h)$ and L_{dn} . $L_{eq}(h)$ is the average noise energy present over any one hour time period. The L_{dn} descriptor is an energy average of 24 hourly L_{eq} s with a ten decibel penalty added to the night-time hours of 10 p.m. to 7 a.m. While $L_{eq}(h)$ provides a good description of a noise environment by taking into account moment to moment fluctuations in sound levels, L_{dn} is useful when considering the annoyance factor of noise occurring during hours of sleep. Both are measured using A-weighted decibels (dB(A)) to represent the range of normal human hearing.

Vibration consists of rapidly fluctuating motions with an average motion of zero. The vibration associated with train operations is the result of the steel wheels rolling on steel rails, creating vibrational energy which is then transmitted through the rail structure and ground to nearby buildings. When sufficient vibrational energy reaches a building it may result in the perceptible motion of objects and a rumbling noise that is generated by the motion of the structural surfaces in the rooms. Two descriptors are used when discussing the effects of vibrations produced by trains, VdB and dBA. VdB is a logarithmic measure of vibrational velocity in millionths of an inch per second. The ground-borne noise generated by the motion of the building is measured in dBA.

While vibration from rail operations has been known to cause human annoyance or to interfere with the use of sensitive equipment, it is extremely rare for vibration from train operations to cause any sort of building damage.

A noise and vibration analysis for a rail corridor would typically be performed in accordance with the guidance provided by the Federal Railroad Administration (FRA) and the Federal Transit Administration (FTA).

FRA and FTA noise impact criteria were developed by researchers who analyzed the percentage of people expected to be highly annoyed by the addition of any given amount of noise to their current noise environment. The criterion for the noise that will bring about the onset of impact from improvements in intercity passenger rail service varies according to the existing noise level. As existing noise levels increase, the amount of noise that a rail improvement can generate without causing an impact will go up; however, the amount of increase that is allowed in the cumulative noise level (the sum of the existing noise and the improvement noise) without causing an impact will go down.

As part of the analysis completed for what was to be the programmatic Pacific Northwest Rail Corridor Environmental Impact Statement in 1998, a Noise and Vibration Discipline Report was prepared. The noise analysis was conducted in accordance with the guidance provided by the FTA manual "Transit Noise and Vibration Impact Assessment," April,

1995¹⁵. (Please note that the FRA manual, "Guidance Manual for High-Speed Ground Transportation Noise and Vibration Impact Assessment," was not issued until October 2005.)

The procedures for analyzing both noise and vibration followed a similar format. A screening process used distances that were designed to identify rail improvements which had little possibility of resulting in any adverse impact. If no sensitive receiver sites were found within the screening distance, then no further analysis on that rail improvement area was conducted. The screening distance for noise from a rail main line is 750 feet for an unobstructed condition or 375 feet if there are intervening buildings. For the vibration analysis, the screening distance is 600 feet for buildings where low ambient vibration is essential for interior operations, 200 feet for residences or buildings where people normally sleep, or 120 feet for institutional buildings. Aerial photographs were examined and field reviews were conducted to determine if any sensitive receiver sites were located within these screening distances. General assessments were conducted on proposed rail improvements found to have sensitive receivers within the screening distances.

The existing noise levels were modeled by considering freight traffic only. It was assumed that freight trains run 24 hours a day and that the average freight train consists of 100 cars and four diesel locomotives. Maximum train speeds and average daily freight traffic volumes were obtained from the WSDOT Rail Office operations manager.

The noise levels were modeled by considering future passenger train traffic of 13 round trips per day between Seattle and Portland. In accordance with future schedules, all passenger trains were assumed to run between 6:00 a.m. and 11:00 p.m. Maximum passenger train speed on the rail improvement was used in the model.

The FTA vibration impact criteria used in this analysis were developed by studying the vibration levels necessary to cause annoyance in people or interfere with the use of vibration-sensitive equipment. They are based on the maximum levels for a single event and take into account the type of land use as well as the frequency of events. Higher vibration levels are allowed without causing an impact for infrequent events and less sensitive land uses.

This discipline report found that existing noise levels in the corridor ranged from 57 L_{dn} to 72 L_{eq} . This range reflects the varying land uses along the corridor, from quiet, rural farmlands to urban, industrialized areas. Vibration levels throughout the corridor ranged from 97 VdB to 102 VdB.

¹⁵ *The Second Edition of the Federal Transit Administration (FTA) manual, "Transit Noise and Vibration Impact Assessment Guidance Manual" was published in May 2006. The FTA Regional Administrator, Richard Krochalis, in the July 20, 2006, Region 10 Information Bulletin No. 06-19, stated that, "For the great majority of projects, the results obtained from the application of the methods described in this manual will not depart significantly from results obtained from the old manual."*

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The purpose of this chapter is to evaluate potential environmental impacts associated with constructing and operating the Corridor Service Expansion Alternative and to present potential program-level mitigation strategies to avoid or reduce those impacts. The analysis presented in this chapter addresses the general effects of a program of actions that would provide the PNWRC with a service level of eight round trips, improved on-time performance, reduction in travel time, increased ridership, and improved safety. This chapter describes the general differences in potential environmental consequences between the No Build Alternative and the Corridor Service Expansion Alternative. Project-specific analysis will be completed as each individual project moves forward; impacts will be mitigated as appropriate.

Potential impacts from the Corridor Service Expansion Alternative” are classified into three groups: Permanent, Operational and Construction. Permanent impacts involve physical changes to the landscape – those remaining long after construction ends. Operational impacts involve those incurred by changes in passenger railroad operations – not only the logistics of train travel, but also the daily activities on, and maintenance of, railroad facilities. Construction impacts are those temporary impacts that are resolved or mitigated by the end of construction activity.

Many sources were used to prepare this document. References are provided in Chapter Seven, References.

Waterways and Hydrological Systems

This section discusses potential impacts, mitigation, and indirect and cumulative impacts to surface water, ground water, and floodplains. Waterway features and crossings located within 1,000 feet of the rail line are also discussed in a general nature and are only inclusive of larger streams. Table 1 in Chapter Four, Existing Conditions presents a listing of water resources that may be potentially impacted. The mapping in Appendix A (Group A) of this document also provides the general locations of these resources.

No Build Alternative

Potential Impacts

Surface water, ground water and floodplains will not be affected because there will be no rail improvements constructed and no additional intercity passenger trains will operate on the railroad main line. BNSF railroad maintenance will continue to support the current rail traffic.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

The rail corridor crosses a number of rivers and streams, and their associated floodplains and habitats. In addition, a number of other water features are located within close proximity to the corridor. In order to expand the passenger rail service, new rail crossings would be constructed over the Coweeman River, Schoolhouse Creek, and some unnamed streams. In addition, rail improvements would be constructed directly adjacent to the Columbia River, Vancouver Lake, Burnt Bridge Creek, Cowlitz River, Kalama River, Owl Creek, China Creek, and Snohomish River. Although most types of potential project improvements will occur within the existing rail right of way, some improvements will require between 15 and 20 acres of fill placement in floodplains (including wetlands and non-wetlands) in Clark, Cowlitz, and Snohomish counties and less than 5 acres of increased impervious areas outside the existing developed rail line in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties.

Potential Operational Impacts

The Corridor Service Expansion Alternative would change the operations of the rail corridor. However, increased speeds and frequency of service would not impact surface water, ground water, or floodplains along the corridor.

Potential Construction Impacts

During construction, contractors are responsible for ensuring that construction waste materials do not endanger ground or surface waters. Applicable construction permits will be obtained where required, including National Pollution Discharge Elimination System (NPDES) permits. Construction Best Management Practices (BMPs) will be utilized. Examples of Best Management Practices include silt fencing, dust control, settling ponds, and permanent seeding after construction is complete.

Mitigation

Physical improvements will be designed to meet standard engineering practices to avoid and minimize impacts to floodplains and hydrological connection of waterways. These designs include, but are not limited to, bridge structures, culverts, swales, water retention facilities and retaining walls. The bridge structures for the new rail crossings of the Coweeman River and Schoolhouse Creek will be designed to avoid or minimize the number of piers in the water. Engineering design and facility construction will be consistent with all regulatory requirements for protection of water resources. Further, restrictions and confinements of waterways are regulated by state and federal agencies; mitigation conditions will be determined during the project permitting process. Project-specific analysis will consider improvements to existing hydrological connections and maintain or improve them over existing conditions. As the fill areas are in the large floodplains of the Columbia River, Kalama River, Cowlitz River, and Snohomish River, the added fill areas are not anticipated to make a noticeable impact to the capacity of the floodplain.

Temporary water quality impacts during construction over and adjacent to waterways would be avoided or minimized through compliance with the Washington Department of Ecology's Stormwater Management Manual for Western Washington, and city and county grading/drainage ordinances and BMPs, as appropriate. For construction sites disturbing more than one acre, an NPDES permit would be required. In addition, a 401 Water Quality Certification would be required for projects that include filling wetlands to verify that water quality standards would not be violated. (The 401 Water Quality Certification will be issued in conjunction with the U.S. Corps of Engineers Section 404 permit for wetland fill.)

Indirect and Cumulative Impacts

Cumulative impacts from the rail corridor to floodplain and hydrologic features could result from additional development around stations and at industrial ports. The growth may lead to higher development in floodplains, more stream crossings and increased impervious areas. These impacts will be minimized through existing and future growth regulations and critical areas ordinances that require set-backs from critical areas and encourage appropriately-sized designs.

Even with increased rail traffic on sections of the corridor, little new construction would be required, and no significant water quality impacts are anticipated.

Impacts Summary - Waterways and Hydrological Systems

The impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Hazardous Materials

Construction of potential project improvements may cause ground disturbances to some existing hazardous waste sites, and thereby potentially impact the environment. Hazardous waste sites located within 2,000 feet of the rail corridor were inventoried, with the majority of the sites located in King County. A quantified summary of these sites is presented in Table 8. The mapping provided in Appendix A (Group A) of this document also provides general locations of these sites.

Table 8. Known hazardous sites located within 2,000 feet of the rail corridor

County	Superfund Sites	State Cleanup Sites	LUST* Sites
Clark	0	23	6
Cowlitz	0	14	38
Lewis	2	13	47
Thurston	0	5	4
Pierce	2	87	156
King	1	163	328
Snohomish	1	47	106
Skagit	0	11	39
Whatcom	1	0	57
TOTALS:	7	401	781

* LUST: Leaking Underground Storage Tank

No Build Alternative

Potential Impacts

There will be no impacts to existing hazardous waste sites because no rail improvement projects will be constructed.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

The potential impact of the new rail facilities in the Corridor Service Expansion Alternative related to hazardous material is limited to the spread of pre-existing contamination.

Environmental impacts may result if pre-existing contaminated soil or ground water is not properly managed and allowed to spread to clean soil, surface water, and/or ground water. Contaminated water may also result from clean water coming into contact with contaminated stockpiled soil. The risk of encountering contaminated soil and ground water is higher in areas that have a long and varied history of industrial and commercial land use, and in areas near properties with underground storage tanks. Contamination not managed properly in accordance with existing regulations could potentially affect human health and ecological receptors.

Potential Operational Impacts

The intercity passenger rail service will not transport hazardous materials. However, the rail lines, whether owned by BNSF or Sound Transit, will continue to function as freight railroad lines, and hazardous materials may be transported along the corridor. Any previous spills and releases as well as potential future spills and releases present potential impacts to the safety of passengers and others along the right of way and at stations. However, the potential for releases and the potential safety risk along the right of way is low. In the unlikely event of a spill, protocols are in place to control and minimize contamination under the emergency response control plans of the freight rail operators.

Potential Construction Impacts

With respect to hazardous materials, construction impacts are typically positive to the environment when excavation removes contamination.

Potential negative environmental impacts are limited to spills during construction. Construction involves various activities, equipment, and materials that can result in a release of hazardous materials into the environment. During construction, the contractor will be required to follow the applicable Washington Industrial Safety and Health Administration (WISHA) regulations regarding the use of hazardous materials or the discovery of hazardous waste. Also, the rail line operators will require the contractor's Health and Safety Plan to define the appropriate engineering control methods and personal

protection equipment for the health and safety of their workers. The contractor will be required to have a safety officer on-site at all times. In addition, the contractor's employees are required to attend a railroad-sponsored safety orientation.

Project-specific investigations will be completed and, if necessary, appropriate cleanup actions taken to ensure maximum safety for the public and construction workers. The contractor will be required to have written project-specific Spill Prevention, Control and Countermeasures Plans to prevent and minimize spills.

Mitigation

Hazardous materials investigations will be performed to identify contaminated sites and the potential type and extent of contamination as individual improvements are designed. Mitigation will be required to properly manage pre-existing contaminated soil or ground water so that it does not spread, and so that clean water does not come into contact with contaminated stockpiled soil. The plans put in place to properly manage the potential contact with hazardous materials will result in minimized impacts for the improvements due to hazardous materials.

Freight rail operations are subject to extensive federal, state, and local environmental regulations; thus, the railroad owner's operating procedures include practices to protect the environment from the risks inherent in railroad operations. Therefore, the required protocols will control and minimize contamination under the emergency response control plans of the freight rail operators.

In addition, BNSF Railway owns commercial or industrial properties with former activities that may have resulted in contamination, which are subject to environmental cleanup and enforcement actions. BNSF is actively involved in the investigation and cleanup of environmental contamination. Contamination identified within BNSF right of way will be managed in accordance with BNSF's standard operating procedures, resulting in minimized risk from hazardous materials.

During construction, Spill Prevention, Control and Countermeasures (SPCC) Plans will also be required. Preventing a spill is the primary goal; however, the contractor is expected to be prepared to minimize the impacts of a spill through immediate and appropriate response actions. Requiring an SPCC for all projects will result in minimized risk of contamination due to a hazardous materials spill during construction.

Indirect and Cumulative Impacts

No negative indirect or cumulative impacts will occur with the construction or operation of the planned facilities. Post-construction operation is generally expected to improve potential environmental impacts. If contaminated media are uncovered as a result of project construction, there will be an improvement in environmental quality when the contamination is removed.

The improved rail facilities resulting from the implementation of additional intercity rail projects will increase rail safety for all forms of rail traffic, including freight movement

of hazardous materials. This leads to an overall beneficial cumulative effect of the projects.

Impacts Summary - Hazardous Materials

The impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Biological Resources/Ecology

Wetlands and aquatic resources were inventoried within 1,000 feet of the rail corridor. However, as a result of noise sensitivity of terrestrial wildlife species, wildlife impacts were assessed at 2,000 feet from the corridor. Table 9, Table 10, and Table 11 present summaries of the wetland, aquatic and terrestrial resources that could potentially be impacted by construction of project improvements along the rail corridor. Mapping in Appendix A (Groups A and B) of this document also provides general locations of these resources.

Table 9. Wetlands potentially within 1,000 ft of the rail corridor

County	Acres of Wetland
Clark	1,000
Cowlitz	2,350
Lewis	700
Thurston	500
Pierce	450
King	150
Snohomish	2,450
Skagit	1,000
Whatcom	1,250

Note: Rounded to nearest 50 acres.

Table 10. Vegetation and wildlife sites located within 2,000 feet of the rail corridor

County	Washington and Puget Sound Rare and Native Plant Sites	Wildlife Heritage Data Sites	Seabird Colony Sites	Seal / Sea Lion Haul-Out Sites
Clark	5	16	-	-
Cowlitz	6	17	-	-
Lewis	1	2	-	-
Thurston	30	12	-	-
Pierce	23	24	2	-
King	-	20	2	1
Snohomish	11	30	1	1
Skagit	6	16	-	-
Whatcom	4	12	3	4

**Table 11. Miles of fish designated critical habitat located within
1,000 feet of the rail corridor**

	Green Sturgeon	Chinook		Chum	Steelhead	Bull Trout
		Freshwater	Nearshore			
Clark	0.5	0.4	-	6.6	2.3	0.4
Cowlitz	8.5	21.0	-	22.6	31.3	0.4
Lewis	-	12.5	-	4.0	14.0	-
Thurston	-	-	-	-	-	-
Pierce	-	4.9	25.4	-	-	26.2
King	-	5.3	12.0	-	-	19.4
Snohomish	-	6.3	22.4	-	-	23.3
Skagit	-	4.6	5.7	-	-	7.6
Whatcom	-	0.4	16.7	-	-	17.6

No Build Alternative

Potential Impacts

Wetlands and aquatic resources will not be affected because there will be no rail improvements constructed and no additional intercity passenger trains will operate on the railroad main line. Railroad maintenance of the existing rail facilities will continue to support the current rail traffic.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

As stated above, the rail corridor crosses a number of rivers and streams as well as sensitive wetland and plant communities, and a number of other water features and species occurrences are located within close proximity to the corridor. In the case of fill or cut areas, especially near streams or wetlands, moderate impacts to fisheries, vegetation and wildlife could be expected. In these areas, critical, suitable or available habitat for species could be lost or modified in ways that limits usability by species. Most types of potential project improvements will occur within the existing rail right of way. However, some of these habitats could be impacted by improvements in Cowlitz and Snohomish counties.

It is anticipated that the improvement projects could create between 8 and 12 acres of wetland fill in Cowlitz County and between 1 and 2 acres of wetland fill in Snohomish County.

It is anticipated that the improvement projects could affect between 18 and 25 acres of vegetation and wildlife sites in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties.

It is anticipated that the improvement projects could affect less than 1 river mile of fish designated critical habitat within Schoolhouse Creek and the Coweeman River in Cowlitz County.

Potential Operational Impacts

Impacts from operational activities have the potential to permanently change the frequency of impacts compared to existing conditions. Faster and more frequent trains would not physically intrude on the habitats, wetlands and streams along the corridor. However, changes to the frequency of wildlife interactions or wildlife exposure to train traffic and elevated noise represent potential operational impacts from corridor improvements. Much of the rail corridor runs through existing developed areas or parallel to Interstate 5, limiting impacts from elevated noise during operations to a level that would not noticeably modify habitats and affect terrestrial wildlife. Wildlife occurring along much of the corridor would be accustomed to the elevated noise levels.

Train/wildlife interactions could increase as a result of faster and more frequent trains. Residential wildlife species may not readily adjust to the changes, and the result could be more frequent collisions. As this occurs infrequently today at the present levels of rail traffic, the impact of these interactions are anticipated to be minor.

Minimal impacts to vegetation would result from the operation of more frequent and faster trains. With the increased train traffic and speeds, an incremental increase in the potential for a train derailment and subsequent spill, primarily of diesel fuel, is possible. In the unlikely event of a spill, the impact on biological resources would depend upon the location, timing, quantity spilled, and the toxicity of the spilled material. However, as discussed in the hazardous materials section of this document, all regulatory and safety requirements would be met concerning hazardous materials.

Potential Construction Impacts

Construction at sites and at staging areas may cause disturbance, displacement, or injury to species as a result of changes to habitats, grading, vegetation impacts, hydrologic changes, water quality changes, elevated noise during construction, or visual disturbance. Construction beyond the right of way could disrupt natural processes and habitat elements within the impacted area on a temporary basis.

The level and types of impacts would vary depending on construction activities, best management practices employed, and the species occurring in the area. For example, construction of new bridges, culverts, or fill of wetlands in Cowlitz and Snohomish counties could result in changes to water quality and habitat availability for aquatic species such as salmon, steelhead, or bull trout. These types of projects could also require handling or relocation of fish. Also, birds found in project areas in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties could be impacted by

activities conducted during nesting periods or by habitat or tree removal. Marine mammals, if present in the Columbia River in Clark County, and terrestrial species in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties may be affected by elevated noise during construction, especially during loud elements such as pile driving. There are a few marine mammal haul-out sites located near the shorelines in the northern counties along the rail corridor. Animals using the sites may be disturbed by construction activities.

Impacts to biological resources can be avoided or minimized, in some cases, through altering the location of the facility or staging areas. For example, new tracks or sidings could be placed in locations where wetlands or sensitive habitat is not present, such as building a new section on the opposite side of the tracks from wetlands, streams or avoiding tree removal.

Other impacts that may result from construction activities near streams, wetlands, and other habitat include erosion of exposed soils during site grading and construction; increased sedimentation and deposition into wetlands and creeks; and accidental spills of contaminants.

Mitigation

Mitigation measures would follow a hierarchy of avoidance, minimization, and compensation for impacts.

Sensitive areas will be avoided as much as possible. Impacts to biological resources can be avoided or minimized, in some cases, by placing new tracks or sidings in locations where wetlands or sensitive habitat is not present (for example, building a new section on the opposite side of the tracks from wetlands, streams or avoiding tree removal). Other steps to minimize impacts would include building new tracks close to the existing tracks, thereby minimizing wetland and vegetation impacts.

Engineering designs would be developed to minimize impacts to aquatic resources. Designs would include minimizing project footprints, using retaining walls instead of fill placement, and lengthening culverts or bridges to span waterways. In addition, the use of best management practices to prevent sedimentation will minimize construction impacts.

As such, appropriate mitigation goals for the corridor could include maintaining the pre-construction hydrologic regime of the area; creating replacement wildlife habitat and rehabilitating existing nearby habitat; and improving water quality.

Restoration of degraded wetlands, enhancement of existing wetlands, or creation of new wetland habitat is often used to replace impacted wetlands. Projects will be assessed individually and regulatory compensatory mitigation will be completed.

Enhancement of existing wetlands within the immediate project area may involve eradicating invasive plant species and planting native vegetation. Wetland restoration typically involves re-establishing wetland hydrology to a former wetland area that has been effectively drained, or excavating fill out of a former wetland and replanting the

area with native wetland plants. Similar rehabilitation methods will be used to mitigate or minimize impacts to aquatic or riparian habitats. As a standard requirement, projects will vegetate disturbed areas to limit erosion and improve regrowth of impacted vegetation. Incorporating revegetation elements into the design and construction plans will minimize vegetation and wildlife impacts.

The construction activities of each individual project will be evaluated and necessary mitigation or impact-minimizing techniques will be identified during discussions or consultations with federal and state wildlife experts. The actual construction of projects will avoid some impacts by doing work during work windows when endangered or threatened fish species are least likely to be present. If necessary, such fish could be isolated and moved from the work area. Construction-related impacts to species can be minimized by relocating the activity (similar to wetland impact avoidance) and reducing the impact area. Construction will be done in accordance with federal and state regulations, and will include federally-approved conservation measures.

Where new bridge work is proposed, in-water work would be avoided to the maximum extent practicable during construction. Best management practices would be implemented during construction to minimize erosion and runoff.

In addition, the use of best management practices to prevent sedimentation and fish relocation will minimize construction impacts. Finally, the actual construction of projects will be done when fish species will be least impacted. This construction will be done in accordance with Washington State Department of Fish and Wildlife regulations.

Indirect and Cumulative Impacts

Indirect and cumulative impacts to habitats along the rail line should be minimal from operations or construction. Improvements were designed to improve safety and speed along the route. The increased frequency and speed of passenger trains between urban areas may improve the connectivity between areas and accelerate current and planned growth and development patterns around stations. This would be governed by local planning agencies through zoning decisions. This may provide benefits to biological resources through reduced development in rural areas while increasing density in urban and existing developed areas, leaving habitat areas untouched. However, the improvement of rail lines may also increase industrial development at ports, adding increased impervious areas, potential for contaminants, and activity.

Impacts Summary - Biological Resources/Ecology

Impacts from the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Air Quality

Air quality impacts from rail projects, including operational changes, are governed by the U.S. Environmental Protection Agency's General Conformity Rules 40 CFR 51 and 93.

The rule requires that a conformity determination must be made for projects that emit more than the de minimis level for each criteria pollutant.

The U.S. Environmental Protection Agency (EPA) has established emission standards for oxides of nitrogen (NOx), hydrocarbons (HC), carbon monoxide (CO), particulate matter (PM) and smoke for newly manufactured and re-manufactured diesel-powered locomotives and locomotive engines. In 2008 the EPA adopted new standards that drastically reduced emissions of PM and NOx from new locomotive engines. In addition, the EPA also mandated the application of idle emission controls on new locomotives.¹⁶

No Build Alternative

Potential Impacts

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, the air quality along the corridor will not be impacted.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

No air quality impacts from additional rail facilities are anticipated. Any impacts would be from the construction or operations of the facilities

Potential Operational Impacts

The de minimis air quality analysis that was performed for future rail operations indicated that the de minimis level for each criteria pollutant was not exceeded. As such, this analysis confirms that the rail program's increased operations conform to the purpose and intent of the State Implementation Plans and Maintenance Plans for achieving the National Ambient Air Quality Standards.

Under the proposed Corridor Service Expansion, new locomotives will be purchased. These locomotives will replace the existing locomotives which comply with EPA's Tier 0 locomotive emission standards. These new locomotives will comply with EPA's new emission and idle-emission control standards. Combined with new ultra-low sulfur diesel fuel available in 2012¹⁷, EPA is estimating that emissions from engines meeting the new standards will reduce PM by 90 percent and NOx by 80 percent from engines meeting Tier 0 standards. EPA also estimates that the new standards will yield sizable reductions in emissions of HC, CO, and other air toxics.

¹⁶ *Federal Register, Volume 73, No. 126. June 30, 2008.*

¹⁷ *Federal Register, Volume 69, No. 124. June 29, 2004.*

Potential Construction Impacts

The major air quality impacts during construction are expected to be dust, odors, other particulate matter, and hydrocarbons. These are caused by heavy machinery, traffic, and removal and/or placement of materials. Local weather conditions, fuel aromatic content and engine efficiency will affect odor intensity and particulate effects. Construction impacts in the project area are expected to be temporary and intermittent only, and they will be diluted at increasing distances from the project.

Mitigation

Contract specifications will be written stating that those performing the construction work shall comply with federal, state, and local air quality regulations. These regulations cover temporary construction conditions such as dust and smoke emissions. Some of the control measures that could be used to reduce the particulate pollution caused by construction are street sweeping at rail crossings and watering, which would reduce the potential impacts to below a level of significance. Since construction will be a temporary condition only, it is anticipated that no other measures will be necessary to control emissions.

No other impacts on air quality are anticipated; therefore, no other mitigation is proposed.

Indirect and Cumulative Impacts

No indirect and cumulative impacts are expected as a result of increased passenger rail traffic along the corridor. However, it is likely that the increased operations of passenger rail along the corridor will have a positive effect on air quality because of the expected reduction in automobile and personal truck mileage.

Impacts Summary - Air Quality

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Soils and Geology

Areas of significant unstable slopes were inventoried and mapped (see Appendix A, Group D of this document), and are discussed in general terms in this section. A review of the existing environment indicates that unstable slopes and landslide hazard areas are located in areas throughout the corridor, predominately along shorelines. These areas range in size from ¼ mile long to 15 miles long. Table 12 summarizes the locations of these unstable slopes.

Table 12. General locations of unstable slopes in the corridor

County	General Location
Clark	North of Vancouver
Cowlitz	North of Kelso
Lewis	-
Thurston	-
Pierce	DuPont, Steilacoom, University Place, Tacoma
King	Shilshole (North Seattle) to Snohomish County
Snohomish	South of Edmonds, North Edmonds to Mukilteo
Skagit	Samish Bay
Whatcom	South of Bellingham, Blaine

No Build Alternative

Potential Impacts

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, soils and geology along the corridor will not be impacted.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

The construction of new track in areas adjacent to or at the foot of unstable slopes could cause potential impacts. None of the proposed improvements are located in the general locations of unstable slopes listed in Table 12 so the potential of impacts to unstable slopes is small. Liquefaction (ground failure due to earthquakes) is possible in portions of the corridor. The potential for sections of track to be dislocated is also possible during an earthquake.

Potential Operational Impacts

Moderate impacts to soils and geology are expected. Faster and more frequent trains will increase the frequency of vibration, increasing the risk of liquefaction and track damage in any areas of liquefaction-prone soils.

Potential Construction Impacts

Erosion impacts during construction in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties are primarily related to the increased potential for erosion resulting from exposure of excavated soils to water. If not controlled, such erosion could result in the deposition of silt and/or sediment in wetlands, streams, or any other adjacent surface water. It is also likely that soils could be tracked onto nearby paved roads by construction vehicles. Wind action over exposed soils could generate dust.

Mitigation

Where steep slopes are unavoidable in cut and fill sections, attempts will be made to minimize the disruption of soils and to apply current soil stabilization techniques. When necessary, retaining walls will also be utilized. As a last resort, steep slopes will be cut back to a reasonable angle so that future landslide risk is minimized.

Proper subgrade preparation and embankment compaction will reduce the risk of liquefaction and track damage in any areas of liquefaction-prone soils.

Potential erosion during project construction will be mitigated by the use of best management practices specified in the erosion and sedimentation control plans for the project, as required by state and local jurisdictions. Typical measures include erosion fences, sediment ponds, and covering of stockpiled soils when practicable. Re-establishment of vegetation in non-paved cleared areas as soon as possible and application of appropriate ground cover will also minimize the potential for erosion hazards.

Indirect and Cumulative Impacts

No indirect or cumulative impacts to soils and geology are anticipated as a result of faster and more frequent passenger trains. However, it is recognized that the tracks are in a geologically-fragile area, and BNSF is currently working with communities along the corridor to stabilize slopes.

Impacts Summary – Soils and Geology

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Land Use

A qualitative discussion of potential land use impacts is presented in this section.

The railroad is embedded into the communities it serves and has served for over 100 years. The railroad right of way varies in width, but generally averages 100 feet. Because of its unique use of land, and the long narrow configuration of the property, adjacent land uses have evolved based upon general local land use rather than the location of the tracks. Local planning agencies have zoned areas accordingly, often after the actual development has occurred.

This history results in a variety of land uses adjacent to the rail corridor. Much of the corridor is located in rural areas; however, as local land use evolves into denser concentrations of people and businesses, the local zoning reflects this increased use of the surrounding land. Regardless, the railroad right of way has remained a constant on the landscape. However, additional track crossings have been placed as development has occurred, and joint use of the right of way by various utilities has occurred in some locations.

No Build Alternative

Potential Impacts

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, land use along the corridor will not be impacted. Land uses abutting the corridor may change, but that will be due to an action taken by a town, city, or county.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

Some impacts may result from the addition of rail facilities in Clark, Cowlitz, and Whatcom counties. All efforts will be made to keep the project limits within the railroad's current right of way. However, it will not be possible to avoid work off the existing rail right of way. It is likely that between 10 and 15 acres of land will be converted from its present use to rail-related use in these three counties, which will cause some minor land use impacts.

Potential Operational Impacts

State, regional, and county plans throughout the corridor have incorporated the Amtrak passenger rail service (and its associated facilities) into their comprehensive plans. Many other jurisdictions have also recognized the rail service in their plans, especially in the cities of Vancouver, Kelso, Lacey, Tacoma, Tukwila, Seattle, Edmonds, Everett, Mt. Vernon, and Bellingham, which all have stations. Overall, the intercity passenger program is compatible with existing comprehensive plans and policies.

Potential Construction Impacts

It is anticipated that project improvements and staging areas for those improvements in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties will occur within the existing railroad right of way. Most track construction will not impact surrounding land uses any more than routine track maintenance. This is because some of the activities associated with the unique methods of railroad construction can be done by using specially-designed track-mounted vehicles that construct the track structure while on the tracks themselves. Most additional construction work that is not unique to rail construction would be performed using standard construction vehicles and tools.

Mitigation

The relatively minor conversion of between 15 and 20 acres of land from its current use adjacent to the existing rail corridor to a rail-related use is a minor impact. No long-term impacts to land use are anticipated to result from operations or construction of project improvements to allow for faster and more frequent intercity passenger trains; thus, no mitigation is proposed.

Indirect and Cumulative Impacts

Increased passenger rail service may have the effect of inducing growth in commercial and retail uses serving customers at the stations. This would be governed by local planning agencies through zoning decisions. It is unlikely, however, that industrial and agricultural areas would change as a result of faster and more frequent intercity passenger trains.

Impacts Summary – Land Use

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Farmlands

A qualitative discussion of potential impacts to farmlands is presented in this section.

No Build Alternative

Potential Impacts

No improvements will be made to the rail corridor or the existing intercity passenger rail service. Therefore, farmlands along the corridor will not be impacted. Farmlands abutting the corridor may change but that will be due to an action taken by a town, city, or county.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

Impacts to farmlands would be minor, because most of the new tracks will be constructed inside the existing railroad right of way.

Between 3 and 5 acres of farmland used as pastures for small resident farms in suburban Kelso in Cowlitz County may be displaced by related roadway improvements. Some farmland could be converted to wetlands as mitigation for wetland impacts adjacent to the existing right of way in Cowlitz and Snohomish counties. The amount and location of the farmland converted to wetland mitigation will vary depending on consultation with the permitting agencies, but would likely not exceed 15 acres in Cowlitz and Snohomish counties. As such, faster and more frequent passenger trains may slightly impact some farmlands.

Potential Operational Impacts

The nature of intercity passenger rail is that operating terminals are in, or very near, cities and towns on the corridor. As such, impacts to farmlands from faster and more frequent operation of intercity passenger trains would not impact farmlands beyond potential noise

impacts on farm animals. As with residential wildlife discussed in the Biological Resources/Ecology section of this chapter, farm animals along the corridor would become accustomed to the minor increase in noise levels given that the route already hosts frequent freight trains and intercity passenger rail service.

Potential Construction Impacts

It is anticipated that most construction will occur within the existing railroad right of way. Most track construction performed on the right of way will not impact farmlands any more than routine track maintenance. This is because some of the activities associated with the unique methods of railroad construction can be done by using specially-designed track-mounted vehicles which construct the track structure while on the tracks. Most additional construction work that is not unique to rail construction would be performed using standard construction vehicles and tools.

Mitigation

No long-term impacts to farmlands are anticipated to result from faster and more frequent intercity trains and its associated project improvements; thus, no mitigation is proposed.

Indirect and Cumulative Impacts

Increased rail service and upgraded stations may have the effect of inducing planned growth in commercial and retail uses serving customers at the stations. This would be governed by local planning agencies through zoning decisions. It is unlikely that industrial and agricultural areas would change.

Impacts Summary – Farmlands

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Parks and Cultural Resources

An inventory of parks and recreational facilities, listed National Historic Register properties, and other cultural resources located within 1,000 feet of the rail corridor was compiled. This information is presented in Table 5 in Chapter Four, Existing Conditions. Maps indicating the general locations of these facilities are located in Appendix A (Group E) of this document.

The Advisory Council on Historic Preservation's regulations implementing Section 106 of the National Historic Preservation Act create a process by which federally-assisted undertakings are reviewed for their effect on properties listed in, or eligible for, listing in the National Register of Historic Properties. Such rules govern the appropriate changes that are permissible near the property as well as determining if adverse effects to the property will result.

Mitigation for park land is also covered by federal regulations. Pursuant to Section 4(f) of the Department of Transportation Act of 1966, park land cannot be taken unless it is

proven that no other feasible and prudent alternative exists. As such, very strict guidelines are imposed on the disruption to park land. Project-specific Section 106 and Section 4(f) analyses will be completed, as appropriate, as each project moves forward.

No Build Alternative

Potential Impacts

Parks and recreational facilities, listed National Historic Register properties, and other cultural resources along the corridor will not be impacted because no improvements will be made to the rail corridor to support increased intercity passenger rail service.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

Throughout the corridor, the rail line is located near a number of parks and cultural facilities. As such, the addition of rail improvements such as new sidings, bypasses, or additional main lines could potentially impact these resources. Such impacts could result in the disruption of a cultural resource or a change in access to a park or recreation facility.

None of the improvements proposed in the Corridor Service Expansion Alternative appear to be near enough to existing parks or known cultural resources to result in impacts from the improvements. Project-specific investigations will determine the effects of each project on parks, historic structures and archaeological sites. Also, a Section 106 consultation for cultural resources will be initiated with affected Native American Tribes, the State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, and local governments. WSDOT will work with the lead federal agency to ensure compliance with Section 106.

Potential Operational Impacts

The impacts of increased train traffic and train speed on cultural resources will be minimal. However, faster and more frequent trains could increase the frequency of noise and vibration for users of parks. Faster and more frequent trains, by their nature, would not likely impact cultural resources such as archaeological sites.

Potential Construction Impacts

One of the issues related to construction activity and recreational activities is potential delay of access at existing crossings during construction. Public safety at crossings is an ongoing concern of the rail line owners and operators. Efforts have been made, and will continue, to further increase public safety. Another issue is noise that is generated from construction activities may impact users of parks. As with potential operational impacts noted earlier in this section, none of the improvements proposed in the Corridor Service Expansion Alternative appear to be near enough to existing park lands to result in impacts

from noise and vibration for park users. Finally, it is possible that cultural resources, such as archaeological sites, could be inadvertently discovered at the construction site and thus be potentially impacted.

Mitigation

Future thorough project-specific investigations will determine if parks and cultural resources would be impacted by construction of the improvements or by additional train operations.

Any potential impacts to parks will be addressed by either avoiding or minimizing the impacts through the design of the project improvement, such as adding track on the opposite side of the existing tracks from the identified resource. If the impacts cannot be avoided or minimized, any impacts will be mitigated as necessary after consulting with the appropriate federal, state, and local agencies, as well as public stakeholders.

For cultural resources, Section 106 of the National Historic Preservation Act requires WSDOT to consult with the affected Native American tribes, the Department of Archaeology and Historic Preservation, the Advisory Committee on Historic Preservation, the federal lead agency, and local governments on all federally-funded projects.

WSDOT consults with affected Native American tribes on every project to identify potential cultural resources that could be impacted by the project. This early cultural resource identification enables the project designer to design the improvement so that impacts can be avoided, if at all possible, or minimized. If an impact to a cultural resource cannot be avoided, then the Section 106 process will be followed, which may result in a Programmatic Agreement being prepared and signed by all parties.

If a WSDOT rail improvement project involves ground disturbance, an unanticipated discovery plan will be prepared that describes what will be done if archaeological materials or human remains are discovered during construction.

If cultural resources are likely to be encountered during construction but their location is not precisely known, it is common for WSDOT to employ one or more tribal representatives to monitor construction activities. This information is included in the construction contract to direct the actions of the construction contractor if the cultural resource is encountered. It is also WSDOT's policy to include construction contract requirements that direct actions of the construction contractor in the event of the unanticipated discovery of previously unidentified cultural resources. This policy is extended to projects with railroads via individual project agreements between WSDOT and the railroad directing the construction.

Impacts Summary – Parks and Cultural Resources

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Social and Economic

Impacts analysis for this section involves a qualitative discussion of potential impacts to community cohesion and safety. It also discusses potential relocation and environmental justice issues. As discussed in Chapter Four, Existing Conditions, some areas along the corridor have been designated as Urban Growth Areas. It is these areas that may be potentially impacted by construction projects.

Project-specific analysis that will identify specific social and economic impacts will be completed as each individual project moves forward.

No Build Alternative

Potential Impacts

Community cohesion and safety, relocation, and environmental justice along the corridor will not be affected because no improvements will be made to the rail corridor to support increased intercity passenger rail service.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Community Cohesion and Safety

Potential Permanent Impacts

The addition of sidings, bypass tracks, and additional main lines could potentially disrupt neighborhoods and businesses by permanently changing access to residences and facilities.

Potential Operational Impacts

Potential effects of faster and more frequent passenger trains on community cohesion and safety could result from increased train traffic along the line and from construction of associated facilities. Faster speeds will actually result in shorter wait times at railroad crossings. However, additional trains and increased speed will impact public access and safety at corridor crossings. Public safety is already an important issue with all railway operations, and will continue to be addressed by the railroads. Of particular concern are waterfront, beach, and recreational facility access points at railroad crossings, and the recreation trails that parallel the rail corridor owned by the BNSF Railway. The rail lines are posted with "No Trespassing" signs, and BNSF levies fines for violation of these notices. In addition, BNSF meets all federal and state regulations regarding signals, bells, and whistles at-grade crossings. Public safety impacts could be mitigated with increased public education of the hazards of crossing the rail corridor.

The majority of safety issues will result from the increase in the number of trains in the corridor and the incremental increased speed of existing trains in the corridor. The areas of greatest safety concern are typically where the highest concentrations of people live

and work near the tracks (increasing the potential for collisions and other accidents). In these areas, railroad accidents are most likely to occur at-grade crossings with roadways. Accidents at railroad grade crossings are often due to ignorance of the risks or errors in judgment by road users, both of which can result in disregard of the warning devices intended for personal safety. Common examples include walking along railroad tracks and driving around lowered crossing gates.

Typical safety measures that are used to enhance pedestrian and vehicular safety at-grade crossings range from community education to warning devices to active controls. Railroad locomotives are also equipped with whistles that are used to alert motorists when a train is approaching. However, by the time engineers see motorists or individuals on the tracks, it is often too late to stop. Additional safety measures that are used along the railroad right of way include the installation of security fencing and posting of no trespassing signs.

Walking along a railroad track or crossing a track at an area that is not a designated crossing is illegal because the railroad right of way is private property owned by the railroad. Since it is not intended for people to walk in these areas, safety warnings are not present. It is only at designated crossings (pedestrian bridges, trails and roadways) that warning signs are in place.

Potential Construction Impacts

Impacts to the community and access to social services/recreational facilities include possible temporary delays during construction. WSDOT will work with the local community to minimize impacts to citizens.

Relocation

Potential Permanent Impacts

The addition of sidings, bypass tracks, and additional main lines is not expected to require the relocation of any homes or businesses beyond those described in the Potential Construction Impacts section that follows.

Potential Operational Impacts

Increased rail service is not expected to require the relocation of any homes or businesses. It is also not anticipated that these trains will result in levels of noise or vibration that will make homes or businesses adjacent to the railroad tracks unusable.

Potential Construction Impacts

In order to construct one of the improvements, as many as three homes and two businesses in Kelso, Cowlitz County, will be required to relocate. This is not a major impact.

Environmental Justice

The wide range of variability in the demographics of census tracts along the corridor suggests that neither low-income or minority populations would predominately bear the effects of the program. Appendix B provides a summary, by census tract, of populations along the corridor.

Increased rail service would not result in substantial noise level increases or violations of ambient air quality standards, or other environmental health hazards. It is possible that if homes or businesses are displaced, one or more could be owned by a member of a protected population, but the overall numbers of displacements will be small, and relocation assistance would be provided in accordance with federal and state law. The rail program will actually provide mobility benefits to minority populations.

Corridor service expansion would not likely involve any disproportionately high and adverse impacts on populations protected by the Environmental Justice Executive Order. When project-specific analysis is prepared, the impact on these populations will be carefully examined to verify this determination.

Mitigation – Social and Economic

As projects move forward, close coordination with the local community will be imperative to ensure that other planned uses are not underway for designated growth areas.

During the design process for each project, the exact location of the right of way will be determined. The acquisition of any additional right of way would begin once plans are approved and the individual project is funded.

The amount of land required will be dependent upon several factors, including the stability of the soils and topography, engineering recommendations on design and placement, and environmental requirements. Once these factors have been determined, monetary compensation would be provided to the current title holder for the necessary land required.

The project's acquisition and relocation procedures are based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and state law in Chapter 8.26 of the Revised Code of Washington. Any persons displaced from homes, businesses or farms are guaranteed uniform and equitable treatment.

Properties to be acquired will be independently appraised for fair market value. Eligible individuals, families, businesses or organizations will receive advisory services and may receive moving costs, housing replacement, rental assistance, or business relocation benefits to minimize hardship and provide the assistance necessary to accomplish this consistently.

To address safety concerns, WSDOT is working with local communities along the corridor to improve, close and consolidate grade crossings and educate the public on the

dangers of railroad trespassing. In addition, the volunteer group, Operation Lifesaver, provides extensive community education and outreach about the dangers of trespassing on railroad property. Currently, Operation Lifesaver is working with grade schools and teachers to educate children along the entire corridor.

Indirect and Cumulative Impacts – Social and Economic

WSDOT's goal is to create minimal disruption to the communities along the corridor.

Cumulative impacts of increased train traffic and speed include continued and increased concern for public safety at-grade crossings. Also of continued concern is public trespassing to use, or cross, the right of way for recreational purposes. As more trains traveling at higher speeds use the corridor, the public will be forced to use planned and approved access to the recreational facilities instead of trespassing. Although this may cause some congestion at access points, it will result in increased public safety.

Most individuals are concerned with both the safety of crossing the tracks (either on foot, bicycle or in an automobile) and safety from train derailments and spills.

WSDOT recognizes the need to provide a safe environment around railroad tracks and facilities. As WSDOT moves forward with the rail program, site-specific analysis will be done for individual projects.

Impacts Summary – Social and Economic

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized, or mitigated for community cohesion, safety, and relocation.

For Environmental Justice, corridor service expansion would not likely involve any disproportionately high and adverse impacts on populations protected by the Environmental Justice Executive Order.

Visual Quality

This section discusses the qualitative impacts on the visual quality of the environment. In-depth project-specific visual analysis will be performed as individual projects move forward.

No Build Alternative

Potential Impacts

Visual quality will remain the same along the corridor because no improvements will be made to the rail corridor.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

Most railroad improvements will occur within the existing right of way where track and supporting structures already exist. Additional railroad facilities will be an incremental change that will be unnoticeable in most locations.

A typical cross section for potential projects include single or multiple sets of tracks, the supporting rock ballast and vegetated right of way. The actual tracks stand eight inches above ground and the right of way typically extends 50 feet or more from each side of the track centerline. Rail signals and/or cross traffic warning signals are located at specific locations. The actual rail configurations are often unnoticeable by the viewing public, whether passenger or bystander.

Grade crossings, bridge and road crossings and retaining walls are the most apparent feature, both when in use (with flashing signals and/or gates) and when not in use. Project improvements may result in grade-separated or improved at-grade crossings which include the related crossing guards, crossing signs and "signal houses" (small square structures which control switches and crossing guards). Most of these will be similar to facilities already in place.

New rail bridges would be added in Kalama, Kelso, and Tacoma. Most rail bridges will be added alongside existing bridges because the existing bridges are too narrow to allow additional track. Many of the existing bridges are timber trestles on multiple creosote timber pilings, or steel truss bridges on concrete columns. Roadway bridges will be added in Kalama, Kelso, Tacoma, and Bellingham. All new bridges will be constructed on concrete columns or steel pilings.

New concrete retaining walls above or below the railroad or associated highway improvements would be added in Vancouver, Kalama, Kelso, Tacoma, and Bellingham.

Potential Operational Impacts

Operating increasing numbers of faster trains will have the same impacts as existing trains going through the corridor. Grade crossings are the most apparent operating feature when in use with flashing signals and/or gates. Depending on personal perspective, individuals may find viewing the passenger trains that will briefly enter and leave their line of sight aesthetically pleasing. The improvements will allow trains to move through residential views faster, especially at siding locations. The improved sidings will allow trains to move past each other concurrently, rather than forcing one to stop and wait while the other passes. Whether communities or individuals view the trains positively or negatively, the actual change in view will be momentary.

Potential Construction Impacts

Construction of physical improvements may cause some temporary degradation of visual quality. Most likely the actual construction will occur quickly, and be similar to existing maintenance along the right of way. Some types and locations of the improvements will

require the use of large construction equipment; this equipment will be most noticeable during the time when footings and pilings for bridges and retaining walls are being placed. Best management practices during construction will include the use of silt fencing or construction barriers. Typically, construction barriers are brightly colored to improve worker safety.

Mitigation

Following construction, the visual quality is anticipated to return to near pre-existing conditions for most improvement sites. Where new rail bridge structures could be added, specifically at the Coweeman River crossing in Kelso, the new bridge will be placed alongside the existing structure, thus minimizing the visual impact. At locations where there will be new roadway bridges over the tracks, the design of the new bridges will be coordinated with local government and the general public to minimize the visual impact of the new structures. At locations where new retaining walls will be added, the visible surface of the retaining walls could be designed to minimize the visual impact by modifying the surface color and texture to resemble natural rock surfaces or by adding a vegetation buffer to shield it from view. Mitigation also includes replacing removed vegetation with native vegetation and locating vegetative buffers beneficial to the visual quality along portions of the improvement sites where cuts or fills have occurred within sight of residential viewers.

Indirect and Cumulative Impacts

This program will improve the rail line, resulting in increased train service and train speeds. Therefore, any changes in visual quality caused by the passenger train traffic will decrease in duration, but increase in frequency. As the existing rail line is well-established throughout the corridor, the additional upgrades will probably be visually unnoticeable and unremarkable to the general public. Thus, no indirect or cumulative impacts to visual quality are expected.

Impacts Summary – Visual Quality

All impacts from the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Energy

This section presents a general discussion of energy and its relationship to implementation of the rail program.

No Build Alternative

Potential Impacts

Energy use will remain the same along the corridor because no improvements will be made.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

With the addition of the rail and highway improvements, a number of highway-rail at-grade crossings in Kalama, Kelso, and Bellingham will be eliminated by grade separations. This will reduce the fuel used by roadway vehicles waiting for existing rail traffic to pass. This positive impact is considered permanent as it will occur separately from the operations of additional passenger trains in the corridor.

Potential Operational Impacts

A primary goal of the rail program is to reduce the existing bottlenecks in the rail system. This will result in an overall decrease in travel time. A portion of the decrease in travel time will be accomplished by decreasing the waiting periods trains currently experience on the limited numbers of sidings. Additionally, the project involves reconfiguration of some track curvature, and upgrading turnouts, signals and crossovers, all of which will increase speed and fuel efficiency.

By increasing the number of usable sidings, and creating other capacity and efficiency improvements, trains will be able to pass each other while moving. Currently some trains must wait for opposing traffic to pass at a few locations. By decreasing the time the trains sit idling on a siding, the projects should greatly improve energy efficiency through reduced fuel consumption. Although the distances vary, current Amtrak travel time between Seattle and Vancouver, B.C. is 3 hours and 55 minutes and current travel time between Seattle and Portland, OR is 3 hours and 30 minutes. The difference in travel times and speed, and therefore fuel consumption, may reflect a variety of causes for the slower movement between Seattle and Vancouver, B.C., including terrain, track layout and track conditions.

At completion of these improvements, travel times are estimated to decrease 18 minutes each way between Seattle and Portland. Between Seattle and Vancouver, B.C., there will be an increase in schedule reliability (on-time performance).

Additional fuel efficiency will be realized with the use of the new models of locomotives being built for this route in the future. The F59PHI locomotives currently being used were state of the art when they were introduced 13 years ago. However, existing freight locomotives being introduced today are 10 to 12 percent more energy efficient than locomotives built in the mid-1990s. Therefore, it is assumed that new passenger locomotives purchased in the next several years will be at least 10 percent more fuel efficient than the existing F59PHIs.

Current total daily consumption of fuel for Amtrak *Cascades* rail passenger service is approximately 3,200 gallons. With the planned rail improvements for Amtrak *Cascades* service expansion and with using new locomotives, fuel use is projected to increase to

4,212 gallons per day, for a net increase of approximately 1,000 gallons per day. Local supplies of diesel fuel will not be impacted by these improvements. Table 13 includes the current and projected fuel usage amounts.

Greater overall fuel efficiency will occur with the building of the rail improvements and the increase in passenger rail service. When comparing the amount of fuel used if train passengers drove their own vehicles to the amount of fuel projected to be used by the new trains, less fuel will be consumed with the building of the rail improvements and the increase in passenger rail service. In addition, the corridor projects will not generate substantial development along the rail line; therefore, there will be no increased energy demands from growth-related service.

Table 13. Current and projected fuel usage

	SEA-PDX		SEA-VAC	
	2009	2018	2009	2018
Trips	8	16	4	4
Fuel Use (gal)	2,288	3,392	908	820
Fuel Use per trip (gal)	286	212	227	205
Trip Distance (miles)	186	180	155	155
Total Distance (miles)	1,488	2,880	620	620
Fuel Economy (mpg)	0.7	0.8	0.7	0.8
Total GHG Emissions (MT CO ₂ e)	24	35	9	9
GHG emissions per mile (kg CO ₂ e/mi)	16	12	15	14

Note: Emission factors taken from The Climate Registry's General Reporting Protocol, Version 1.1, May, 2008.
Includes idling fuel use.
MT is metric tons = 1000 kg. Metric tons is the standard measure for GHGs.
CO₂e is carbon dioxide equivalents, which take into account not only the CO₂ emitted but other greenhouse gases (GHGs), in this case nitrous oxide (N₂O) and methane (CH₄).

During rail operations, electricity will continue to be used to operate switches, crossing signals, wayside signals and safety devices, and communication devices. Diesel fuel will be required to operate the diesel locomotive engines.

Potential Construction Impacts

A temporary increase in energy consumption will occur at project areas during construction. This energy use will include diesel fuel to operate heavy machinery, electrical or gas-powered hand tools, and battery or generator electrical lighting and safety signals.

Specialized heavy machinery that is track-mounted will be fueled at the BNSF railyards. These procedures are standard with any track maintenance or improvement. Contractor vehicles and hand-held tools will be replenished with local supplies.

Mitigation

Since no impacts are anticipated, mitigation is not expected to be required.

Indirect and Cumulative Impacts

The Corridor Service Expansion alternative would increase Seattle-Portland round trips to eight per day. Ridership forecasts for 2018 project that 1,538,883 passengers, traveling almost 243 million passenger miles, will be carried by the Corridor Service Expansion alternative. At this level of service, train loads would average 222 passengers. Amtrak's system-wide average of BTUs per passenger mile in 2007 was 2,516. The amount of energy expended per mile per single-occupancy-car is typically 5,517 BTUs. The resulting energy savings is 3,001 BTUs per passenger mile over a single-occupancy vehicle.

Impacts Summary – Energy

Impacts of the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Noise

This section presents a general discussion of noise and its relationship to improvements for the rail program. General noise and vibration analyses were conducted for the improvement areas in the Pacific Northwest Rail Corridor in accordance with federal guidelines, as shown in Table 14.

Table 14. Vibration and ground-borne noise impact criteria

Land Use Category	Ground-Borne Vibration Impact Levels (VdB re 1 micro inch/sec)		Ground-Borne Noise Impact Levels (dB re 20 Micro Pascals)	
	Frequent ¹ Events	Infrequent ² Events	Frequent ¹ Events	Infrequent ² Events
Category 1: Buildings where low ambient vibration is essential for interior operations	65 VdB ³	65 VdB ³	-4	-4
Category 2 Residences and buildings where people normally sleep	72 VdB	80 VdB	35 dBA	43 dBA
Category 3 Institutional land uses with primarily daytime use.	75 VdB	83 VdB	40 dBA	48 dBA

1. "Frequent Events is defined as more than 70 vibration events per day. Most rapid transit projects fall into this category.

2. "Infrequent Events" is defined as fewer than 70 vibration events per day. This category includes most commuter rail systems.
3. The criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the HVAC systems and stiffened floors.
4. Vibration sensitive equipment is not sensitive to ground-borne noise.

No Build Alternative

Potential Impacts

Noise and vibration will remain the same along the corridor because no improvements will be made.

Mitigation

There are no impacts from this alternative. No mitigation is required.

Corridor Service Expansion Alternative

Potential Permanent Impacts

Existing freight noise and vibration levels, and the noise and vibration which will be added by the proposed improvements, were predicted at the nearest sensitive receiver to the track for each improvement studied. It was discovered that noise and vibration levels are already high throughout the program corridor due to existing freight operations. As this noise level will not noticeably change with the operation of additional passenger trains, there are no permanent impacts from noise and vibration in the corridor.

Potential Operational Impacts

As stated earlier, existing freight noise and vibration levels, and the noise and vibration which will be added by the proposed improvements, were predicted and it was discovered that noise and vibration levels are already high throughout the program corridor due to existing freight operations. The proposed rail improvements will not noticeably add to the existing levels of noise or vibration in these areas, resulting in a finding of either no impacts or minimal noise or vibration impacts for all of the improvement areas studied.

Additional studies for proposed bypass projects in Vancouver and Tacoma also found that noise levels would not be increased along the current routes for the same reason. In the case of these bypass projects, rail traffic would be rerouted closer to some homes and further from other homes, thus causing some impacts. Thus, for a third proposed project in Bellingham, one can anticipate that there may be some impacts from that project as well.

Potential Construction Impacts

During construction, people working and living near improvements in Clark, Cowlitz, Lewis, Pierce, King, Snohomish, and Whatcom counties may be exposed to noise and vibration originating from the contractor's construction equipment and operations. Railroad construction is not typical construction. Some large vehicles are used, but some

of the work is done by track-mounted specialty vehicles. These vehicles place and shape ballast, and lay the track and supporting structures. The primary source of noise and vibration during construction will be the large machinery and track-mounted specialty vehicles. However, noise and vibrations of this type would tend to be intermittent and of a temporary nature.

Noise levels of typical construction equipment are measured at 50 feet (15.2 meters) from the source. Construction equipment noise levels decrease at six decibels per doubling of the distance provided there is a clear line of sight to the equipment. For example, a bulldozer creating 80 dBA at 50 feet (15.2 meters) will have an observed value of 74 dBA at 100 feet (30.5 meters) and 68 dBA at 200 feet (61.0 meters).

Contractors are required to comply with all state and local regulations governing equipment source levels and noise resulting from the construction site activities during the life of the improvement; however, daytime construction activities are generally exempt from these limits. Despite this legal exemption, construction noise can annoy people living in the area, and some simple and inexpensive techniques can be used to minimize the negative effects. Stationary noise sources should be placed as far from sensitive receivers as possible. Portable noise barriers can be used to further shield sensitive receivers and demonstrate the contractor's commitment to the public to limit construction noise annoyance during construction. Construction noise can be further reduced through the use of properly sized and maintained mufflers, engine intake silencers, ambient sensitive backup alarms, engine enclosures, turning off idling equipment, confining operations to daylight hours, driving forward instead of backward whenever feasible, and lifting instead of dragging materials.

Mitigation

The need for mitigation is based on the magnitude of impact and consideration of factors specifically related to the proposed improvement and affected land uses. Every reasonable effort would be made to reduce predicted noise and vibration to levels deemed acceptable for impacted sensitive land uses. Any decision to include mitigation would be made after site-specific analysis.

Since no noise or vibration impacts were found at this level of analysis for most of the improvement areas studied, no mitigation is expected to be required for them. For the bypass project studied in Vancouver, the noise and vibration impacts were minimized by the selection of a route slightly farther from residences than another build option. In the case of the bypass project in Tacoma no vibration impacts were predicted and the noise impacts were minimized through the use of wayside horns at at-grade crossings rather than using the typical locomotive-mounted horns. Similar consideration at the Bellingham project location will likely minimize any potential impacts at that location as well.

Even though the analyses have shown that these improvements will not cause any noise or vibration impacts under federal criteria, annoyance caused by noise from rail operations along this corridor does exist and can be expected to continue. Measures that could be considered when attempting to reduce the human annoyance caused by noise

from rail operations include the use of supplementary safety measures to replace train whistles at problem crossings such as wayside horns, and a maintenance program dedicated to preventing the degradation of rails and wheels.

Indirect and Cumulative Impacts

Much of the route is along Interstate 5 which is the major north-south auto, bus and truck route in western Washington. Another large noise generator outside the corridor is from industrial activities in Vancouver, Seattle, Everett, and other rural locations. The increased noise from additional passenger train traffic within the corridor will add only a slight amount of noise above that caused by Interstate 5 or the industrial activities along the corridor. This program improves the rail line and increases the speed of trains; therefore, the typical noise will decrease in duration. In addition, new track will be continuously welded steel rail, thus no joint noise will occur as the train rolls over the tracks.

The passenger equipment that is currently being used on the corridor for the passenger trains is quieter than the freight train equipment used on the corridor. While actual train noise volume associated with intercity passenger rail may decrease, the frequency of the noise will increase as a result of more frequent train service. Indirect and cumulative impacts of increased frequency of noise may be heard and felt in urban areas adjacent to the route. Freight rail traffic will continue to make the loudest noise; construction and increased passenger service will not significantly increase noise levels.

Impacts Summary – Noise and Vibration

Impacts from the Corridor Service Expansion Alternative can be avoided, minimized or mitigated.

Other Cumulative Effects

The Council on Environmental Quality's (CEQ's) regulations for implementing NEPA require agencies to consider three types of impacts: direct, indirect, and cumulative. Direct and indirect impacts are caused by an action either in the present or future,¹⁸ whereas a cumulative impact is "the impact on the environment which results from the incremental impact of an action when added to past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.¹⁹

Climate Change

Greenhouse Gas Emissions

Vehicles emit a variety of gases during their operation; some of these are greenhouse gases (GHGs). The GHGs associated with transportation are water vapor, carbon dioxide (CO₂), methane (also known as "marsh gas"), and nitrous oxide (used in dentists' offices

¹⁸ See 40 CFR 1508.8, *Protection of Environment, Council on Environmental Quality*.

¹⁹ See 40 CFR 1508.7, *Protection of Environment, Council on Environmental Quality, Cumulative Impact*.

as “laughing gas”). Any process that burns fossil fuel releases CO₂ into the air. Carbon dioxide makes up the bulk of the GHG emissions from transportation.

Vehicles are a significant source of GHG emissions and contribute to global warming primarily through the burning of gasoline and diesel fuels. National estimates show that the transportation sector (including on-road vehicles, construction activities, airplanes, and boats) accounts for almost 30 percent of total domestic CO₂ emissions. However, in Washington State, transportation accounts for nearly half of GHG emissions because the state relies heavily on hydropower for electricity generation, unlike other states that rely on fossil fuels such as coal, petroleum, and natural gas to generate electricity. The next largest contributors to total GHG emissions in Washington are fossil fuel combustion in the residential, commercial, and industrial sectors at 20%; and in electricity consumption, also 20%.

What efforts are underway to reduce greenhouse gas emissions in Washington State?

In 2007, Governor Gregoire and the legislature set GHG reduction goals for Washington State:

- 1990 GHG levels by 2020
- 25% reduction below 1990 levels by 2035
- 50% by 2050.

In March 2008, the Governor signed Washington’s Climate Change Framework/Green-Collar Jobs Act (HB 2815). This law includes, among other elements, statewide per capita vehicle miles traveled (VMT) reduction goals as part of the state’s GHG emission reduction strategy. This law also established the Climate Action Team, which developed specific actions the state could take to reduce GHG emissions.

WSDOT’s Secretary of Transportation, Paula Hammond, is a member of the Climate Action Team. WSDOT staff served on subgroups focused on strategies to reduce VMT and on how to include climate change in State Environmental Policy Act (SEPA) evaluations. The final report and other information is available at: http://www.ecy.wa.gov/climatechange/2008CAT_overview.htm.

In addition to working with others in our state, WSDOT is leading the development of effective, measurable, and balanced emission reduction strategies. Current WSDOT activities that reduce GHG emissions include:

- **Transportation Options** – For 30 years, WSDOT has supported carpooling, vanpooling, and public transportation through the funding, building, and maintenance of the freeway HOV system, ferries, rail, and other programs, thereby reducing VMT and peak period congestion.
- **Incident Response Team (IRT)** –. IRT clears 98.6 percent of all incidents in less than 90 minutes, reducing the amount of time motorists spend sitting and idling in traffic.

- **Biodiesel Use** – WSDOT is increasing its use of biodiesel fuels in ferries and maintenance vehicles, thus improving both local air quality and the Earth’s climate.

Finally, the most valuable contributions are found in the delivery of well-planned transportation improvements. These efforts combine to create more efficient driving conditions, offer mode choices, and help to move toward state GHG reduction goals.

What effect will the increased PNWRC passenger rail service improvements have on greenhouse gas emissions?

The passenger rail service improvements proposed for the corridor will increase the frequency and speed of the trains. Increased frequency and speed will give the public more travel options and increase ridership, thus removing cars from the roads. The new locomotives that will be purchased to support the increased trip frequency will be at least 10 to 12 percent more energy-efficient than the current locomotives. This improved efficiency means that less fuel will be used, thus reducing GHG emissions.

How is Washington State’s climate change response strategy likely to address future risks to the rail corridor resulting from changing climate?

The Governor of Washington committed the state to preparing for and adapting to the impacts of climate change as part of Executive Order 07-02. A focus sheet entitled “Preparing for Impacts” provides a brief summary of the key climate changes that Washington State is likely to experience over the next 50 years:

- increased temperature (heat waves, poor air quality)
- changes in volume and timing of precipitation (reduced snow pack, increased erosion, flooding)
- ecological effects of a changing climate (spread of disease, altered plant and animal habitats, negative impacts on human health and well-being)
- sea-level rise, coastal erosion

In 2009, the WA State Legislature passed E2SSB 5560 – Agency Climate Leadership. That law directs the Washington Department of Ecology in consultation with WSDOT and other agencies to develop a response strategy to climate change impacts. WSDOT is the lead for developing the Infrastructure chapter of the state’s strategy. WSDOT will work with BNSF and others to identify vulnerable infrastructure including rail, highways, seawalls, and more.

If vulnerable sections of this rail corridor are identified, actions will likely be recommended to protect rail and other vital transportation infrastructure as well as protecting communities and public safety. No recommendations are currently available. Possible strategies to address vulnerabilities include raising rail berms or bridges to span inundated areas. The state’s climate response strategy is due by the end of 2011.

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The Washington State Department of Transportation regularly interacts with federal agencies, freight railroad companies, state regulatory and resource agencies, local governments, tribes, and the public to allow for ongoing participation in the Pacific Northwest Rail Corridor (PNWRC) projects.

Since its designation as one of the five original high speed rail corridors by the Federal Railroad Administration (FRA) in 1992, WSDOT has worked to extensively involve local governments and the public in the development of the rail corridor. This has included both corridor-wide rail studies, as well as project-specific environmental documents.

High Speed Ground Transportation Study

The WSDOT High Speed Ground Transportation Study was published in October of 1992 and influenced the resurgence in rail transportation as a part of a balanced transportation system in Washington State. The study was guided by a steering committee that involved state, local, and federal agencies, railroads, ports, legislators, and the private sector. The steering committee conducted extensive communications and public outreach efforts to educate the public about the High Speed Ground Transportation Study, including newsletters, meetings, and statewide public forums in 1992.

In 1993, the Washington legislature appropriated funding to begin state-supported rail passenger service in the PNWRC. As part of this new service the WSDOT Rail Office conducted extensive public outreach in 1993-1995. These outreach efforts included:

- Presentations to 32 city and town councils on the corridor
- Presentations to the 9 county councils on the PNWRC
- Development of a video presentation on the purpose, need, and goals for the PNWRC
- A quarterly newsletter mailed to the public, elected officials, and interest groups to highlight the new rail passenger program.
- Presentations to Port Districts, Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Organizations (RTPOs).
- Presentation to the Ministry of Transport in the Province of British Columbia and the Greater Vancouver Regional District
- Presentations to various civic groups (Rotary Clubs, Washington Association of Rail Passengers, etc.)
- Cooperating agency scoping meetings were held with 42 cities, counties, ports, regional transportation councils, Washington Department of Ecology, Washington State Department of Fish and Wildlife, Fort Lewis, McChord Air Force Base,

Pacific Northwest Rail Corridor Tier 1 (Programmatic) Environmental Impact Statement (EIS) Outreach History

In November 1995 Washington, Oregon, and the Province of British Columbia released the "*Options for Passenger Rail in the Pacific Northwest Rail Corridor*" report. This report was the beginning of a targeted public outreach effort to gather information for the Pacific Northwest Rail Corridor Tier 1 (Programmatic) Environmental Impact Statement (EIS).

On January 19, 1996, the Federal Highway Administration (FHWA) and FRA issued a Notice of Intent to prepare and Environmental Impact Statement for "a proposed high speed rail improvement program between Portland, Oregon and Vancouver, British Columbia."

The first phase of EIS preparation, consisting of agency and public scoping, began in December of 1995 and continued until the Alternative Review phase began in mid-1996. During agency and public scoping, WSDOT Rail Office staff discussed the proposed Pacific Northwest intercity passenger rail improvements face-to-face with over 1,000 interested parties employing Open Houses, Speaker's Bureau meetings, and Cooperating Agency scoping meetings. Additional education was conducted through advertising, public relations, direct mail and surveys, and television.

Open Houses and Speaker's Bureau Meetings

During January and February of 1996, the Rail Office conducted twenty public open houses and additional speaker's bureau meetings in communities along the Pacific Northwest Rail Corridor from Blaine, Washington to Vancouver, Washington. Participating groups included the WSDOT Rail Office, Northwest Region, Olympic Region, Southwest Region, and the Office of Communications and Public Involvement; EIS Interdisciplinary Team members; Amtrak; Burlington Northern Santa Fe Railroad; Operation Lifesaver; the Washington Association of Rail Passengers; the Washington Utilities and Transportation Commission; local transit agencies; the Regional Transit Authority; local communities; and WSDOT Rail EIS consultants.

At open houses, participating groups set up displays for public review and talked with participating community members in an informal, one-on-one setting.

At speaker's bureau events, speakers from the participating groups made formal presentations and then took questions and comments from attendees who often represented specific stakeholder groups. Examples include WSDOT regional staff, regional planning organizations, city councils, bus driver trainers, and members of the League of Women Voters.

Advertising and Public Relations

Print advertisements and media releases promoting the development of the PNWRC Programmatic EIS were distributed to communities on or near the rail corridor. The information included the Internet web site address, a toll-free telephone number for comments, the mailing address for written comments, and public meeting locations and times. Advertisements with similar information appeared in 47 newspapers along the corridor with a total circulation of over 900,000.

Pre- and post-meeting news coverage appeared in media in every county along the corridor, including coverage in community weekly newspapers, daily newspapers, radio stations and cable television.

Direct Mail and Survey

The *Rail Connection* newsletter, which included similar information as the media releases, was distributed to over 40,000 people along the corridor; targeted mailings reached over 5,000 local, state and federal policymakers. Information was distributed to every branch library along the corridor. In addition, over 250 participants responded to a rail survey designed to elicit comments from EIS public scoping participants.

Cooperating Agency EIS Scoping Meetings

Several agencies had a vested interest in the Pacific Northwest Rail Corridor project, including those with permitting or approval jurisdiction over the proposed action. Federal, state, and local agencies with jurisdiction or special expertise were invited to be Cooperating Agencies and invited to attend EIS scoping meetings within the corridor. Tribes in Washington State were also invited to participate in the meetings.

Agencies and Tribes were invited to comment on the EIS purpose and need and the criteria for alternative selection; and to identify any special concerns they had about the rail project.

In an effort to maximize interest and focus on the issues specific to a region, three regional meetings were conducted. The three regions were Southwest Washington, South/Central Puget Sound, and North Puget Sound. These meetings were held in May 1996 in Kelso, Tacoma and Mount Vernon.

Agencies and others participating in the three workshops by region are shown in Table 15.

Table 15. Agencies and other workshop participants

Southwest Washington	South / Central Puget Sound	North Puget Sound
City of Centralia	Burlington Northern Santa Fe Railroad	City of Bellingham
City of Kelso	City of Auburn	City of Blaine
City of Vancouver	City of Edmonds	City of Everett
City of Woodland	City of Kent	City of Marysville
Cowlitz County	City of Lacey	Department of Ecology

Southwest Washington	South / Central Puget Sound	North Puget Sound
Cowlitz-Wahkiakum Council of Governments	City of Lakewood	Port of Edmonds
Kalama Planning Commission	City of Roy	Port of Skagit County
Lewis County	City of Sumner	Skagit County
Port of Kalama	City of Tacoma	Tulalip Utilities Authority
Port of Longview	City of Tukwila	Whatcom County
Port of Ridgefield	City of University Place	
Private Citizen	Fort Lewis	
Southwest Regional Transportation Council	McChord Air Force Base	
Washington State Department of Fish and Wildlife	Pierce County	
Port of Chehalis	Tacoma Chamber of Commerce	
	Port of Tacoma	
	State of Washington Military Department and WA National Guard	

Cooperating Agencies were briefed on their responsibilities and were given the opportunity to discuss any concerns or issues relative to those responsibilities. There was general concurrence in the responsibilities, which included:

- Respond to the invitation to be a cooperating agency.
- Assist in identifying interest groups.
- Attend scoping and coordination meetings and joint field review.
- Provide meaningful and early input on issues of concern.
- Participate in joint involvement activities.
- Review and comment on pre-draft and pre-final environmental documents.
- Adopt the final document if it meets their agency's requirements for permits, approvals, or clearances.
- Cooperate in the application of principles for integration of NEPA/SEPA and the Section 404 permit process, as applicable.

Television

Another method used to reach the public about the WSDOT rail program and the development of the programmatic EIS was television. Washington Interactive Television, part of the state's Department of Information Service, was used to develop and broadcast two statewide programs on the plans for expanded intercity rail passenger service in the PNWRC. The first show, *The Future Is On Track: Intercity Rail In The Pacific Northwest*, aired on January 7, 1997. The second show, *The Future Is On Track -*

Amtrak Cascades, was first broadcast on October 27, 1999. Each show took questions and e-mails from viewers.

Programmatic Documentation to Project Documentation

One of the components to be included in the programmatic EIS was a corridor service plan. This plan showed how WSDOT and its partners would follow an incremental approach over a 20-year timeframe that would ultimately result in 13 daily round trips between Seattle and Portland and four daily round trips between Seattle and Vancouver, B.C. As WSDOT was working with the FHWA and the FRA in 1997 and 1998 on the 20-year incremental plan and the programmatic EIS, it was determined by the federal government that a programmatic EIS would not be necessary since the first set of proposed projects listed in the 20-year plan had logical termini and independent utility as stand-alone projects that would improve the existing service. Instead, a 20-year service plan that described incremental capital improvements to the Portland-Seattle-Vancouver, B.C. segment of the PNWRC and an Environmental Overview (with mapping) of the Washington segment of the PNWRC would be completed in lieu of the NEPA EIS.²⁰ Further, it was determined that future NEPA documentation would be project-specific. In August 2000, the Notice of Intent to prepare a programmatic EIS for the Portland-Seattle-Vancouver, B.C. segment of the PNWRC was rescinded.²¹ Since that time, WSDOT has prepared project-level environmental documentation for a number of projects:

- Vancouver Rail Project – NEPA/SEPA EIS. The project, located in southwest Washington, would eliminate conflicts between freight trains and passenger trains in the heavily-congested Vancouver Rail Yard. The Final EIS was issued in May 2003, and the Record of Decision was issued in August 2003. In 2008, a NEPA Reevaluation was completed and signed by FHWA.
- Kelso-Martin’s Bluff Rail Project – NEPA/SEPA Preliminary Draft EIS. In 2001, WSDOT began the development of a NEPA/SEPA EIS for the Kelso-Martin’s Bluff Rail Project. This project would eliminate freight and passenger train conflicts near the Columbia River ports of Kalama and Longview. The environmental documentation only proceeded as far as a preliminary draft EIS due to state budget limitations and legislative direction.
- Point Defiance Bypass Rail Project – FHWA NEPA Documented Categorical Exclusion (DCE). The DCE was signed by FHWA in 2008. This project would build, reconstruct, or rehabilitate approximately 18 miles of track that bypasses the BNSF main line around scenic Point Defiance. The NEPA DCE was adopted under the State Environmental Policy Act (SEPA) as a Determination of Nonsignificance.
- Several crossovers and siding upgrades or extensions have been completed since 2000. These projects had state funding only; the environmental documentation

²⁰ Pacific Northwest Rail Corridor Intercity Passenger Rail Plan for Washington State, 1997-2020 and Pacific Northwest Rail Corridor Environmental Overview 1998.

²¹ Federal Register, Volume 65, No. 164, Wednesday, August 23, 2000, p. 51401.

complied with SEPA and a SEPA Determination of Nonsignificance was issued for each project.

The 20-year incremental service plan was updated in February 2006 and is now called the "Washington State Long-Range Plan for Amtrak *Cascades*".

Amtrak *Cascades* Mid-Range Plan

An advisory committee was formed to assist in the development of the 2008 mid-range plan. The advisory committee's role was to help WSDOT assess and evaluate beneficial impacts of rail infrastructure improvement on society, to help WSDOT understand concerns of local communities, and to share information and provide feedback during the mid-range plan development process. Advisory committee stakeholders involved in the development of the mid-range plan included:

- MPOs and RTPOs in the I-5 corridor
- Counties and cities within the study area
- Oregon State
- Province of British Columbia
- Private railroads
- Amtrak
- Washington Public Ports Association
- WSDOT planning units in different modes
- WSDOT regions
- All tribes in Washington State with an interest in the I-5 corridor
- Passenger rail advocacy groups

Two advisory committee meetings were held at WSDOT. The first was held on July 23, 2008 and the second was held on October 1, 2008. These meetings were led by State Rail and Marine Office staff who provided progress reports and opportunities for public comment and discussion. The draft Mid-Range Plan was made available for public review and comment from November 3-14, 2008. Some public comments were incorporated into the final draft and the remainder were included in Appendix 13 of the Mid-Range Plan. The comments received were supportive of the intercity passenger rail service and some dealt with technical issues.

The final Amtrak *Cascades* Mid-Range Plan was delivered to the Washington State legislature in December 2008.

Agency, public, and tribal outreach completed for the Pacific Northwest Rail Corridor since the decision was made to proceed with project-level documentation

Vancouver Rail Project NEPA/SEPA EIS

The Vancouver Rail Project would construct a rail bypass track and associated improvements as well as an overpass over W. 39th Street.

As part of the early development process for the EIS, the project team met with City of Vancouver Transportation and Planning staff to discuss the scope of the traffic analysis as well as potential alternatives for the West 39th Street overpass. At the suggestion of city representatives, a community team was established for this project. For an eight month period beginning in January 2000, a Vancouver Community Resource Team (CRT) worked with the project team to develop additional alternatives. The CRT consisted of representatives from the City of Vancouver Planning Department, Fire Department and Police Department; the Regional Transportation Council, the Vancouver School District, the Vancouver Housing Authority, neighborhood groups; the Port of Vancouver; and other regional and local agencies/groups. Working with the project team, the CRT helped establish a fatal flaw evaluation methodology to identify alternatives for study in the environmental document (EIS). Using the project's purpose and need as a foundation for fatal flaw review, the CRT and project team evaluated a number of preliminary alternatives. The CRT was instrumental in the development of a bypass alternative that became the preferred alternative for the project.

On March 6, 2002, following release of the Draft EIS, a public hearing was held. Twenty-eight community members and agency representatives attended this public hearing.

During the course of the public hearing, 12 individuals made a public statement. In addition to these verbal comments, numerous residents and interested citizens e-mailed or mailed in their comments on the EIS. In total, 63 written comments were received. Of these comments, eleven were from local, regional, state, and federal agencies.

Rail Office staff made presentations to the Vancouver City Council, which was televised for local access television, and at neighborhood association meetings.

A Final EIS was completed in May 2003. The EIS had wide distribution to federal, state, and local agencies; the CRT; and neighborhood associations. FHWA issued a Record of Decision on August 1, 2003, which was again widely distributed to federal, state, and local agencies; the CRT; and neighborhood associations.

In addition, notices were published in the newspaper when the Draft EIS, the Final EIS, and the Record of Decision were issued.

When the NEPA Reevaluation was completed in 2008, it was mailed to federal, state, and local agencies; and neighborhood associations.

Rail Office and regional WSDOT staff have continued to keep agencies and the public informed of project progress via project meetings and newsletter mailings at key milestone achievements.

Cultural Resources

A cultural resources survey was completed and mailed to the Chinook Tribe for review and comment. No comments were received. The survey was also sent to the Department of Archaeology and Historic Preservation for review. The Vancouver Rail Project, as originally proposed and analyzed, was going to have an adverse effect on an historic house that was eligible for the National Register of Historic Places; an MOU was prepared and signed by all parties. When the project was later re-designed, the house was no longer impacted and the MOU was not updated.

Tribal consultation

The Chinook Tribe was consulted for the Vancouver Rail Project in 2001. They had no comment on the project or on the cultural resources survey.

When the NEPA Reevaluation was prepared, the Cowlitz Tribe and the Chinook Tribe were consulted. Neither tribe had comments on the project or the updated cultural resources survey.

Kelso-Martin's Bluff Rail Project NEPA/SEPA EIS

The Kelso-Martin Bluff Rail Project, 18 miles long, would add a third main line to the existing two-track main line; add about 130,000 feet of additional siding and yard tracks; and improve highway-rail grade crossing safety.

Scoping

Scoping for the Kelso-Martin's Bluff Rail Project EIS began in early 2001, with the official scoping period occurring from March 13 to April 13. More than 125 scoping notices were sent to federal, state, and local agencies; elected officials; and community stakeholders. Additional public outreach consisted of a press release, a display advertisement, a newsletter meeting announcement, and radio announcements about upcoming public open houses.

Interviews were conducted with nine community and business organizations and local residents to get an early indication of issues and concerns related to the project and to elicit ideas and suggestions for effective public information and public involvement approaches in the project area.

Two open houses/scoping meetings were held for interested citizens.

Field trips/site visits were conducted with federal, state, and local agencies.

Meetings with government agencies and businesses

Meetings were held with the Cowlitz-Wahkiakum Council of Governments, City of Kelso, City of Longview, Diking Districts, Port of Longview, Port of Kalama, Cowlitz County, City of Kalama, Port business representatives, Rail Policy Advisory Committee, City of Kelso Planning Commission over a period of three weeks.

Agency scoping

Meeting attendees included U.S. Environmental Protection Agency, Washington State Department of Fish and Wildlife, City of Kelso, City of Kalama, Cowlitz County, Port of Kalama, Cowlitz-Wahkiakum Council of Governments, Port of Kalama, and BNSF. Comments expressed during the meeting included the topic areas of safety and grade crossings; the natural environment and fish and waterways; the community and the economy; rail operations; and the cumulative effects analysis.

Official agency scoping letters were received from the U.S. Environmental Protection Agency Region 10; U.S. Fish and Wildlife Service Portland Office, Washington Department of Ecology, Washington State Department of Fish and Wildlife, Washington State Department of Natural Resources, Port of Kalama, City of Kelso Community Development Department, and the City of Kelso Public Works Department. Agency comments addressed concerns about impacts on fish, listed species, wetlands, riparian habitats, stream channels, access issues, grade crossings, and cumulative effects.

Public open houses

Two public open houses were held in Kalama and Kelso. Comments made by attendees during the open houses included the topic areas of culverts; pedestrian and wheelchair access; noise; vehicle and road access; sewer and water lines; and wetlands mitigation.

Other comments made by the attendees showed that they were very supportive of the project. Attendees stated that rail was a great alternative to highway congestion, and that the project was a win-win for everyone.

Additional public outreach

As alternative options were developed for certain Kelso grade crossing closures, a community meeting was held. Between 50 and 60 people attended, and provided a public alternative that was subsequently moved forward in the EIS. In addition to a notice in the newspaper about the meeting, flyers inviting residents to the meeting were left at neighborhood houses, and flyers were posted in nearby businesses.

Another meeting was held at the Port of Kalama about pedestrian overpass alternatives. Unfortunately, the evening selected was the night that President Bush was making a statement about the 9/11 World Trade Center terrorism. No one attended the meeting. The notice for the meeting had been placed in the local newspaper prior to September 11.

Tribal outreach

The Cowlitz Tribe was consulted regarding the proposed project.

Point Defiance Bypass Rail Project

The Point Defiance Bypass Rail Project would construct 3.5 miles of new track, reconstruct 10.5 miles of existing track, and improve five at-grade crossings.

Public and agency outreach efforts for the Point Defiance Bypass Project began in the fall of 2006. The first phase of outreach entailed public, agency, and tribal scoping for the project's environmental process.

Additional public involvement efforts continued to keep agencies, tribes, and the general public informed of project progress. The initial phase of these activities included a public open house and local agency and tribal scoping meetings.

After learning about the Point Defiance Bypass Project, most agencies and citizens did not indicate any significant environmental issues or concerns. Issues and concerns that emerged through the agency and public scoping process included grade-crossing safety, air quality impacts, noise, increased congestion and traffic back-ups, and potential loss of property value. These issues were addressed and analyzed as part of the environmental review process.

Public and agency involvement activities for the scoping process included stakeholder interviews, agency meetings, agency scoping meetings, and a public open house.

Pre-Scoping Meetings

In September 2006, the Point Defiance Bypass Project team held pre-scoping meetings with agencies that were expected to have an interest in or be affected by the project. These agencies were the cities of DuPont, Lakewood, and Tacoma; Lakewood City Council; Environment and Public Works Subcommittee of the Tacoma City Council; Pierce County; and Fort Lewis.

Public Scoping Meeting

On November 14, 2006, the project team hosted a public open house in Lakewood. The purpose of the meeting was to give agencies and interested citizens an opportunity to learn more about the project and to identify issues or concerns. The open house was advertised in local newspapers; agencies were sent invitation letters.

Newspaper Coverage

An additional and unplanned opportunity for scoping was provided by the *Tacoma News Tribune*. On November 15, 2006, the newspaper published an article on the Point Defiance Bypass Project. The newspaper invited visitors to its website to vote "yes" or "no" to the following question: *Do you think Amtrak should reroute its passenger trains*

through Lakewood and Tacoma? By November 18, approximately 211 votes had been cast: 136 votes (64 percent) supported the project; 75 votes (36 percent) opposed the project. Many of those who voted also wrote comments to explain their votes. Many of these comments identified issues and concerns about the project that were legitimate scoping comments; many also described what they saw as the potential benefits of the project.

Informational materials supporting scoping efforts

- Letters to local jurisdictions requesting a meeting to present information about the project and to discuss potential issues and concerns.
- An informational handout for agency briefings that included a map of the proposed route, a description of the project, a list of at-grade crossings along the route, the purpose of and need for the project, funding for the project, the schedule, and contact information to learn more.
- A second letter to agencies inviting their participation in the formal scoping process.
- A project folio that presented basic information about the project.
- A project website that provided information about the project.
- A paid ad in the *Tacoma News Tribune* advertising the open house.

Additional agency coordination

The Washington State Department of Transportation (WSDOT) continued to work directly with representatives from Sound Transit; Pierce County; the cities of Tacoma, Lakewood, and DuPont; Fort Lewis; and Camp Murray. This coordination continued throughout the course of the environmental process and through design and construction.

A project folio was mailed to over 200 adjoining property owners and interested parties.

Tribal consultation

On September 1, 2006, WSDOT sent letters to the Nisqually Tribe, the Puyallup Tribe, the Snoqualmie Nation, and the Squaxin Island Tribe, initiating formal government-to-government consultation, pursuant to *Section 106* of the *National Historic Preservation Act*²². The Nisqually Tribe and the Puyallup Tribe accepted the invitation for a meeting to discuss the project.

Environmental Summary

An *Environmental Summary* was prepared that was intended to provide the community and local agencies with general information about the effects of the project and the measures that had been incorporated into the project design to avoid, minimize or reduce

²²36 CFR 800.2(c)(4)

those effects. The information in the summary was taken from detailed environmental analyses performed by WSDOT as part of required federal and state environmental regulations.

The *Environmental Summary* was sent to the affected cities, the county, the military bases, and the affected Tribes, and was posted on the project web site.

Cultural Resources

A cultural resources survey was completed and mailed to the tribes for review and comment. No comments were received. The survey was also sent to the Department of Archaeology and Historic Preservation for review. The SHPO concurrence with a No Adverse Effect determination was signed on March 28, 2008.

Additional public review

The FHWA-signed NEPA DCE was adopted under SEPA as a Determination of Nonsignificance, published in the newspaper, and mailed to federal, state, and local agencies for additional public review and comment. A copy of the *Environmental Summary* for the project was included in the mailing.

Crossovers and siding extensions or upgrades – SEPA DNSs

For SEPA, the threshold determination is made by the lead agency; WSDOT is the lead agency for state transportation projects. If a project is not exempt from SEPA and the project does not warrant a Determination of Significance (DS) which would lead to an EIS, then a Determination of Nonsignificance (DNS) is made. An Environmental Checklist is prepared and accompanies the DNS for agency and public distribution.

WSDOT has prepared DNSs and Environmental Checklists for three crossover projects and two siding extensions and upgrades. The project documentation for each project was sent to the Washington Department of Ecology (Ecology) SEPA Unit for posting in the SEPA Register. The permit unit at Ecology reviews all transportation projects; the appropriate Ecology region also reviews the project. In addition, WSDOT sent the project documentation to the affected city, county, agencies, and Native American Tribes.

If the project was not exempt, a cultural resource survey was prepared and mailed to the tribes for review and comment. The survey was also sent to the Department of Archaeology and Historic Preservation for review and concurrence.

Public notices

Public notices for each project are placed in local newspapers.

Project web pages

For each rail project, a project web site is developed; the web site address is included in all public outreach materials. Environmental documents are placed on the project web page so that the public has easy access to the project information.

Outreach to Native American Tribes

In Washington State, Native American Tribes have determined their areas of interest for WSDOT projects. When a project is proposed, the affected Tribes are consulted on a government-to-government basis. This government-to-government consultation occurs either as a Section 106 consultation or as an Executive Order 05-05²³ consultation.

For NEPA/SEPA EISs: Section 106 consultation with the Tribes is begun at the project proposal stage. Scoping documents are sent; meetings are offered if the Tribes want them. Comments on any cultural resource issues regarding the proposed projects are also solicited from the Tribes. The completed cultural resource survey is sent to the Tribes for their review and comment. The environmental document is also sent to them for review and comment.

The Washington Department of Archaeology and Historic Preservation will not issue a finding on cultural resources until tribal consultation is complete.

SEPA DNSs: Governor's Executive Order 05-05 consultation is begun at the project proposal stage. WSDOT follows the same consultation and review process with the Tribes for state-funded crossovers and siding extensions as is done for Section 106 projects.

Other

Washington State Legislature

The Washington State Legislature Senate and House hold public hearings every legislative session to discuss the rail program and projects. These hearings vary in size and subject matter each session, but illustrate the legislature's open involvement and support for the rail program. The hearings are broadcast live and also recorded to be shown across the state on the TVW²⁴ channel in evening peak viewing hours.

²³ *The Governor's Executive Order 05-05 order all state agencies to: "Review capital construction projects and land acquisitions for the purpose of a capital construction project, not undergoing Section 106 review under the National Historic Preservation Act of 1966 (Section 106) with the Department of Archaeology and Historic Preservation (DAHP) and affected Tribes to determine potential impacts to cultural resources. This review shall be required on all capital construction projects unless they are categorically exempted by DAHP."*

²⁴ *TVW is Washington State's Public Affairs Network which broadcasts and webcasts Washington state legislative deliberations, public policy events and other content of interest to Washington citizens.*

State Freight Rail Plan

During the development of the Freight Rail Plan, several public meetings have been held during which the interaction between freight and passenger rail on the Pacific Northwest Rail Corridor is discussed.

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APPENDIX A

Mapping

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APPENDIX B

Census Data

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Census Tract	County	Total Population	White	%	Black or African American	%	American Indian and Alaska Native	%	Asian	%	Hispanic or Latino	%	Below Poverty Level	%
403	Clark	4923	4674	94.9	36	0.7	38	0.8	26	0.5	76	1.5	286	5.9
409.05	Clark	2736	2562	93.6	25	0.9	0	0.0	120	4.4	0	0.0	207	7.6
409.07	Clark	3554	3261	91.8	36	1.0	0	0.0	128	3.6	9	0.3	161	4.5
409.08	Clark	5506	5082	92.3	0	0.0	157	2.9	89	1.6	194	3.5	144	2.6
410.03	Clark	4027	3593	89.2	73	1.8	76	1.9	28	0.7	196	4.9	328	8.3
410.05	Clark	2055	1720	83.7	12	0.6	5	0.2	22	1.1	169	8.2	707	34.7
410.07	Clark	3057	2720	89.0	77	2.5	17	0.6	35	1.1	155	5.1	296	9.7
410.08	Clark	3697	3364	91.0	73	2.0	29	0.8	67	1.8	64	1.7	113	3.1
420	Clark	1524	1445	94.8	13	0.9	18	1.2	7	0.5	37	2.4	143	9.5
421	Clark	2612	2243	85.9	76	2.9	14	0.5	49	1.9	141	5.4	237	9.1
423	Clark	2782	2409	86.6	52	1.9	17	0.6	31	1.1	196	7.0	542	19.5
424	Clark	1442	1300	90.2	35	2.4	0	0.0	35	2.4	86	6.0	365	47.6
2	Cowlitz	3689	3282	89.0	80	2.2	148	4.0	30	0.8	221	6.0	686	23.7
3	Cowlitz	844	624	73.9	0	0.0	16	1.9	28	3.3	185	21.9	237	28.1
8	Cowlitz	6483	6115	94.3	0	0.0	79	1.2	94	1.4	55	0.8	170	2.6
9	Cowlitz	5863	5472	93.3	31	0.5	82	1.4	0	0.0	146	2.5	628	10.9
10	Cowlitz	1346	1221	90.7	0	0.0	33	2.5	0	0.0	65	4.8	342	25.7
11	Cowlitz	5765	5115	88.7	12	0.2	65	1.1	100	1.7	426	7.4	1482	25.8
12	Cowlitz	4017	3795	94.5	18	0.4	23	0.6	7	0.2	124	3.1	347	8.7
13	Cowlitz	3570	3203	89.7	18	0.5	64	1.8	34	1.0	267	7.5	539	15.3
15	Cowlitz	8056	7441	92.4	7	0.1	157	1.9	18	0.2	440	5.5	848	10.7
16	Cowlitz	4766	4569	95.9	24	0.5	50	1.0	37	0.8	99	2.1	772	16.5
17	Cowlitz	4664	4397	94.3	15	0.3	65	1.4	11	0.2	77	1.7	330	7.1
20.01	Cowlitz	3336	3191	95.7	0	0.0	36	1.1	21	0.6	58	1.7	192	5.8
20.02	Cowlitz	5502	5207	94.6	23	0.4	112	2.0	22	0.4	183	3.3	511	9.4
9702	Lewis	2657	2498	94.0	28	1.1	15	0.6	37	1.4	45	1.7	154	6.1
9704	Lewis	5046	4460	88.4	0	0.0	60	1.2	24	0.5	590	11.7	710	14.1
9705	Lewis	2000	1953	97.7	0	0.0	9	0.5	0	0.0	103	5.2	280	14.2
9706	Lewis	1953	1731	88.6	0	0.0	28	1.4	7	0.4	232	11.9	427	22.7
9707	Lewis	4277	3697	86.4	29	0.7	46	1.1	46	1.1	531	12.4	815	19.4

Census Tract	County	Total Population	White %	Black or African American %	American Indian and Alaska Native %	Asian %	Hispanic or Latino %	Below Poverty Level %
9708	Lewis	3845	91.8	27	61	1.6	364	689
9709	Lewis	1698	85.2	0	32	1.9	239	452
9710	Lewis	2890	89.0	90	36	1.2	100	419
9713	Lewis	5006	92.8	2	55	1.1	306	556
9714	Lewis	2128	98.2	0	13	0.6	19	155
9715	Lewis	6278	94.3	9	62	1.0	215	798
9716	Lewis	3540	94.3	9	57	1.6	139	557
116.10	Thurston	6697	81.5	291	48	0.7	365	310
116.20	Thurston	14541	80.4	629	104	0.7	810	876
117	Thurston	8146	89.9	45	85	1.0	173	234
118.20	Thurston	6733	93.3	48	125	1.9	170	374
123.10	Thurston	6392	71.1	492	74	1.2	415	377
123.20	Thurston	2698	67.0	81	445	16.5	113	421
124.20	Thurston	3439	92.3	40	50	1.5	111	214
126	Thurston	8426	92.4	18	64	0.8	267	779
127	Thurston	11100	88.3	74	107	1.0	833	1036
602	Pierce	883	90.3	47	5	0.6	29	211
603	Pierce	4027	88.2	195	13	0.3	90	305
604	Pierce	4009	89.4	84	28	0.7	132	205
605	Pierce	4028	93.3	42	10	0.2	67	223
606	Pierce	5360	88.4	301	89	1.7	198	467
609.03	Pierce	2995	78.5	282	41	1.4	20	141
609.05	Pierce	6557	83.1	458	0	0.0	257	1036
610.01	Pierce	3768	88.1	98	0	0.0	180	286
615	Pierce	4482	79.5	281	141	3.1	196	994
616.01	Pierce	1408	61.5	227	37	2.6	89	662
616.02	Pierce	637	70.3	109	37	5.8	15	207
617	Pierce	4129	37.1	1435	80	1.9	369	1178
618	Pierce	2880	66.7	360	108	3.8	140	546
621	Pierce	3267	45.2	366	655	20.0	491	806

Appendix B

Program Environmental Assessment
Pacific Northwest Rail Corridor

Census Tract	County	Total Population	White	%	Black or African American	%	American Indian and Alaska Native	%	Asian	%	Hispanic or Latino	%	Below Poverty Level	%
626	Pierce	2478	1569	63.3	264	10.7	28	1.1	145	5.9	244	9.8	463	19.2
628.01	Pierce	6158	3420	55.5	1360	22.1	124	2.0	390	6.3	514	8.3	1603	26.7
628.02	Pierce	3718	2280	61.3	516	13.9	0	0.0	320	8.6	298	8.0	408	11.0
629	Pierce	6685	4535	67.8	764	11.4	130	1.9	352	5.3	775	11.6	1143	17.4
703.03	Pierce	7235	6817	94.2	21	0.3	10	0.1	141	1.9	173	2.4	402	5.6
703.06	Pierce	4889	4577	93.6	27	0.6	17	0.3	41	0.8	137	2.8	209	4.3
705	Pierce	4106	3641	88.7	45	1.1	103	2.5	47	1.1	186	4.5	253	6.2
706	Pierce	420	371	88.3	0	0.0	0	0.0	24	5.7	16	3.8	29	6.9
709	Pierce	6369	4705	73.9	286	4.5	262	4.1	309	4.9	707	11.1	802	12.6
710	Pierce	6784	6030	88.9	208	3.1	134	2.0	112	1.7	144	2.1	464	6.9
712.05	Pierce	4116	3577	86.9	188	4.6	6	0.1	145	3.5	133	3.2	263	6.4
712.10	Pierce	4658	4069	87.4	68	1.5	27	0.6	231	5.0	171	3.7	96	2.1
718.03	Pierce	4782	2741	57.3	824	17.2	26	0.5	511	10.7	461	9.6	551	11.6
718.04	Pierce	7539	3939	52.2	1211	16.1	201	2.7	819	10.9	807	10.7	1538	20.5
718.05	Pierce	3525	1555	44.1	506	14.4	209	5.9	694	19.7	445	12.6	898	26.2
718.06	Pierce	4272	2037	47.7	740	17.3	47	1.1	328	7.7	880	20.6	1391	32.6
719.01	Pierce	4537	3155	69.5	468	10.3	27	0.6	529	11.7	286	6.3	444	9.8
719.02	Pierce	5164	4427	85.7	185	3.6	46	0.9	237	4.6	193	3.7	179	3.5
720	Pierce	4865	3046	62.6	818	16.8	62	1.3	235	4.8	559	11.5	1793	37.0
721.09	Pierce	3505	2867	81.8	216	6.2	45	1.3	232	6.6	188	5.4	276	7.9
723.07	Pierce	4450	3224	72.4	575	12.9	66	1.5	327	7.3	165	3.7	432	9.7
723.08	Pierce	7223	5509	76.3	525	7.3	11	0.2	674	9.3	257	3.6	374	5.3
723.09	Pierce	5699	4626	81.2	287	5.0	20	0.4	392	6.9	240	4.2	464	8.2
726.03	Pierce	4052	3815	94.2	4	0.1	36	0.9	5	0.1	97	2.4	368	9.1
728	Pierce	2162	1697	78.5	123	5.7	0	0.0	193	8.9	125	5.8	98	4.5
729.01	Pierce	4168	3211	77.0	279	6.7	68	1.6	183	4.4	337	8.1	259	7.3
729.03	Pierce	2958	1801	60.9	628	21.2	31	1.0	131	4.4	331	11.2	47	2.4
729.04	Pierce	16747	10069	60.1	3344	20.0	213	1.3	542	3.2	2310	13.8	1044	9.1
733.01	Pierce	4624	4092	88.5	81	1.8	76	1.6	15	0.3	404	8.7	436	9.5
733.02	Pierce	3575	3384	94.7	8	0.2	52	1.5	69	1.9	28	0.8	261	7.3

Census Tract	County	Total Population	White	%	Black or African American	%	American Indian and Alaska Native	%	Asian	%	Hispanic or Latino	%	Below Poverty Level	%
734.01	Pierce	7515	6448	85.8	156	2.1	88	1.2	253	3.4	451	6.0	792	10.6
734.03	Pierce	7547	6762	89.6	16	0.2	22	0.3	143	1.9	464	6.1	531	7.1
734.04	Pierce	6231	5657	90.8	61	1.0	74	1.2	72	1.2	271	4.3	305	5.1
5	King	3296	2936	89.1	21	0.6	18	0.5	176	5.3	84	2.5	143	4.3
14	King	4673	3817	81.7	173	3.7	18	0.4	359	7.7	244	5.2	333	7.2
15	King	2329	2213	95.0	0	0.0	0	0.0	58	2.5	91	3.9	104	4.5
16	King	3967	3534	89.1	57	1.4	8	0.2	242	6.1	60	1.5	223	5.6
31	King	6038	5607	92.9	43	0.7	77	1.3	161	2.7	191	3.2	270	4.5
32	King	7213	6476	89.8	81	1.1	45	0.6	297	4.1	257	3.6	487	6.8
57	King	5990	5126	85.6	134	2.2	62	1.0	378	6.3	197	3.3	377	6.4
58.01	King	4543	3844	84.6	101	2.2	7	0.2	389	8.6	174	3.8	324	7.1
58.02	King	4817	4140	85.9	116	2.4	33	0.7	278	5.8	257	5.3	320	7.3
69	King	3845	3421	89.0	45	1.2	23	0.6	150	3.9	75	2.0	196	5.1
70	King	6855	6037	88.1	143	2.1	10	0.1	373	5.4	217	3.2	549	8.1
71	King	1796	1499	83.5	85	4.7	28	1.6	65	3.6	90	5.0	184	10.2
72	King	2969	2340	78.8	82	2.8	66	2.2	294	9.9	142	4.8	468	17.8
80.01	King	3477	2574	74.0	305	8.8	86	2.5	286	8.2	181	5.2	717	20.6
80.02	King	2711	1910	70.5	330	12.2	61	2.3	236	8.7	97	3.6	604	22.6
81	King	3461	2507	72.4	412	11.9	71	2.1	238	6.9	274	7.9	1140	34.9
82	King	2954	2291	77.6	169	5.7	34	1.2	250	8.5	185	6.3	563	19.6
85	King	6025	3161	52.5	1755	29.1	156	2.6	593	9.8	459	7.6	917	34.1
91	King	1952	269	13.8	414	21.2	13	0.7	1139	58.4	38	1.9	966	49.6
92	King	1967	953	48.4	181	9.2	75	3.8	558	28.4	212	10.8	952	48.4
93	King	2562	1306	51.0	333	13.0	64	2.5	579	22.6	255	10.0	697	28.0
96	King	4919	4506	91.6	55	1.1	29	0.6	174	3.5	171	3.5	155	3.2
104	King	9002	1686	18.7	1275	14.2	16	0.2	5163	57.4	377	4.2	876	9.8
109	King	1091	676	62.0	87	8.0	80	7.3	123	11.3	122	11.2	211	19.3
110	King	6260	667	10.7	1408	22.5	181	2.9	3212	51.3	363	5.8	1161	18.7
117	King	5192	786	15.1	1323	25.5	4	0.1	2588	49.8	327	6.3	743	14.4
119	King	7161	2088	29.2	2176	30.4	26	0.4	2172	30.3	226	3.2	386	5.5

Appendix B

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Census Tract	County	Total Population	White %	Black or African American %	American Indian and Alaska Native %	Asian %	Hispanic or Latino %	Below Poverty Level %
201	King	3235	90.8	5	0.2	0.4	32	157
208	King	4501	89.0	54	1.2	0.2	87	187
209	King	3167	78.8	83	2.6	1.3	44	171
260.02	King	5812	48.8	1332	22.9	1.2	345	767
261	King	6036	36.9	1931	32.0	0.3	287	639
262	King	4938	61.8	689	14.0	0.7	553	505
263	King	1244	56.5	145	11.7	0.3	58	74
272	King	2206	60.6	276	12.5	0.4	201	344
292.01	King	8751	71.4	730	8.3	0.4	1226	1564
292.03	King	2628	63.4	311	11.8	0.0	307	348
292.04	King	5195	71.4	343	6.6	0.7	392	339
297	King	6173	80.0	426	6.9	2.6	350	496
305.01	King	1913	91.4	27	1.4	2.1	124	597
305.03	King	3904	81.6	90	2.3	0.0	323	430
307	King	3845	80.9	83	2.2	2.7	251	566
308.01	King	5958	81.1	272	4.6	2.5	651	984
309.02	King	4651	84.6	58	1.2	2.6	314	553
310	King	3084	83.5	98	3.2	0.0	111	42
401	Snohomish	6241	81.0	422	6.8	2.1	387	184
402	Snohomish	5607	74.7	120	2.1	2.0	521	2065
404	Snohomish	3974	86.5	69	1.7	4.3	239	537
405	Snohomish	2579	84.5	8	0.3	2.2	237	273
406	Snohomish	970	82.4	47	4.8	4.4	63	217
407	Snohomish	3152	85.8	100	3.2	0.9	151	553
408	Snohomish	2067	86.8	33	1.6	5.2	94	303
409	Snohomish	2881	93.0	12	0.4	0.7	16	89
413.01	Snohomish	4845	87.9	24	0.5	0.1	175	173
413.02	Snohomish	6001	81.5	159	2.6	1.6	215	271
420.01	Snohomish	5862	85.3	144	2.5	0.0	115	208
420.03	Snohomish	3350	83.5	36	1.1	0.6	77	112

Census Tract	County	Total Population	White %	Black or African American %	American Indian and Alaska Native %	Asian %	Hispanic or Latino %	Below Poverty Level %
420.05	Snohomish	4838	75.6	56	1.2	1002	58	60
501.01	Snohomish	2670	81.4	69	2.6	318	100	67
502	Snohomish	4239	92.6	22	0.5	228	84	197
503	Snohomish	5487	90.7	9	0.2	265	75	100
505	Snohomish	6246	93.7	18	0.3	153	52	221
506	Snohomish	912	93.0	0	0.0	43	11	22
521.04	Snohomish	1390	89.8	9	0.6	45	42	135
528.03	Snohomish	5169	85.6	82	1.6	234	337	352
528.04	Snohomish	6419	90.7	42	0.7	158	254	415
528.05	Snohomish	4019	92.4	8	0.2	147	57	153
529.01	Snohomish	7718	89.4	118	1.5	179	402	528
529.03	Snohomish	4130	88.9	0	0.0	93	359	365
530.02	Snohomish	5455	72.8	54	1.0	73	279	523
531.01	Snohomish	2770	94.4	0	0.0	19	43	47
531.02	Snohomish	4461	93.8	0	0.0	49	164	199
532.01	Snohomish	3597	97.2	0	0.0	8	69	234
533.01	Snohomish	4542	88.4	29	0.6	68	244	494
533.02	Snohomish	4753	93.6	33	0.7	69	19	302
9508	Skagit	5472	92.9	0	0.0	67	320	356
9516	Skagit	3551	89.1	0	0.0	117	270	244
9517	Skagit	3374	80.4	17	0.5	34	781	391
9518	Skagit	3411	71.9	51	1.5	37	955	494
9522	Skagit	3450	79.4	21	0.6	145	551	523
9523	Skagit	10951	68.2	31	0.3	416	3857	1857
9524	Skagit	8819	82.9	11	0.1	19	1518	950
9525	Skagit	3050	79.0	31	1.0	66	570	682
9526	Skagit	3268	91.8	7	0.2	31	295	234
9527	Skagit	3338	89.6	9	0.3	0	191	200
2	Whatcom	6876	86.6	20	0.3	293	474	895
3	Whatcom	5916	83.4	72	1.2	359	393	1041

Appendix B

Program Environmental Assessment
Pacific Northwest Rail Corridor

Census Tract	County	Total Population	White	%	Black or African American	%	American Indian and Alaska Native	%	Asian	%	Hispanic or Latino	%	Below Poverty Level	%
4	Whatcom	6339	5927	93.5	12	0.2	57	0.9	55	0.9	187	2.9	567	9.2
5	Whatcom	7609	6793	89.3	96	1.3	170	2.2	174	2.3	449	5.9	2116	28.2
6	Whatcom	782	648	82.9	18	2.3	62	7.9	0	0.0	41	5.2	131	27.3
10	Whatcom	6890	5870	85.2	102	1.5	43	0.6	475	6.9	190	2.8	1892	52.0
11	Whatcom	6319	5959	94.3	21	0.3	46	0.7	97	1.5	125	2.0	754	11.9
12	Whatcom	8771	7795	88.9	15	0.2	104	1.2	307	3.5	341	3.9	2638	30.8
104.01	Whatcom	6609	5889	89.1	141	2.1	88	1.3	90	1.4	319	4.8	678	10.4
104.02	Whatcom	7582	6972	92.0	129	1.7	69	0.9	46	0.6	265	3.5	650	8.7
105.01	Whatcom	5599	5023	89.7	18	0.3	114	2.0	215	3.8	229	4.1	651	11.6
105.02	Whatcom	6203	5199	83.8	6	0.1	271	4.4	18	0.3	640	10.3	768	12.4
106	Whatcom	5695	5173	90.8	0	0.0	62	1.1	154	2.7	378	6.6	437	7.7



November 14, 2008

Douglas G. Richardson
Mayor

George Xu
Planning and Strategic Assessment Manager
WSDOT State Rail & Marine Office
PO Box 47407
Olympia, WA 98504-7407

Don Anderson
Deputy Mayor

Claudia B. Thomas
Council Member

Via e-mail to <xugeorge@wsdot.wa.gov>

Pad Finnigan
Council Member

Dear Mr. Xu:

Helen McGovern
Council Member

This letter is in response to the draft *Washington State Amtrak Cascades Mid-Range Plan* ("Plan"). The City of Lakewood has the following comments:

Walter Neary
Council Member

Data missing. It is impossible to offer feedback on some of the substantive content of the Plan, as none of the appendices – many of which contain supporting data from which conclusions are drawn in the body of the document – were included in the review draft we received.

Ron Cronk
Council Member

Organization. Generally, the Plan is organized in a rather confusing manner. It seems as though it would be beneficial to look at reediting similar or related portions of the information presented, which are located in various portions of the document, into single sections. The bullets on pp. 6-1 & -2 stating the purpose of the mid-range plan options seem more appropriately brought to the front of the document as purposes of the plan overall. Additionally, as there are numerous acronyms included in the Plan that may or may not be familiar to end users, it would be helpful to include a list of acronyms in the prefatory material. A list of acronyms is slated as Appendix 10 (missing from draft), but relocating this information to the front would improve the document's readability.

Andrew E. Neiditz
City Manager

Heidi Ann Wachter
City Attorney

Alice M. Bush, MMC
General Services Director
City Clerk

Public involvement. p. 1-4: Inclusion of the language "...the draft plan was available for two weeks for public review and comment, followed by final approval by WSDOT executive management" within the draft suggests that there will be no consideration of or meaningful response to comments received, that comments are only being taken as a matter of form. Further, it is not clear whether the Plan was made available for "public" review and comment as stated or was only e-mailed to the stakeholders' group (which is how I received it). It does not appear to have been posted on WSDOT's Web site or otherwise

distributed for open public review. This approach tends to devalue the public participation process.

Air travel competition. p. 2-5: Competition with air service is discussed in the fourth paragraph, stating that “intercity passenger rail service...could potentially ease air travel congestion...and it could reduce the number of flights between cities.”

Headquartered in the City of SeaTac, Alaska Air Group, Inc. (dba Alaska Airlines and Horizon Air) is not just one of SeaTac’s and King County’s, but also the state’s largest employers, with around 14,000 employees. *Washington CEO* magazine lists it among the “top public companies” in Washington. According to Alaska’s 2007 annual report, it relies on a limited number of key markets as a primary strategy of its business focus. “A significant portion of our flights occurs to and from our Seattle hub. In 2007, traffic to and from Seattle accounted for 62% of our total traffic. ...we remain highly dependent on our key markets. Our business would be harmed by any circumstances causing a reduction in demand for air transportation in our key markets. An increase in competition in our key markets could also cause us to reduce fares or take other competitive measures that could harm our business, financial condition and results of operations.” The downward economy is already pressing on Alaska; its November 2008 Securities and Exchange Commission filing reports that the company is ‘reducing planned capacity at both Alaska and Horizon for the fourth quarter and in 2009. ...the global financial instability has put downward pressures on demand for air travel and results in a great deal of uncertainty...’ Although not all market data is readily available on Alaska’s Web site, Alaska cites an almost 88 percent market share of trips from Portland to Seattle.

This competition is shaped as positive at its earliest mention in the Plan, while hidden in the marketing chapter on p. 9-2 is the statement that “Amtrak Cascades poses no direct competition to international air travel, but will compete directly with air travel in the I-5 corridor that it serves.” Thus, Amtrak Cascades service directly competes with a major state employer which is currently faced with economic downturn, and in doing so likely poses a threat to Alaska Air (which also serves Vancouver, BC, out of both Seattle and Portland; contrary to the statement indicating no direct competition with international air travel). Further, Chapter 9 (p. 9-1) states an intent to “position [Amtrak Cascades] as the preferred method of [both intercity and business] travel,” which would even more closely compete with Alaska Air. I do not recall that either airline industry or WSDOT Aviation representation was included among your stakeholders for this Plan, although Alaska Air in particular appears to be a stakeholder.

Economic impacts. pp. 2-3 & -3: “Economic development...would embrace transportation strategies to change driving patterns and develop infrastructure that includes transportation options.” This is debatable as applied to Amtrak Cascades service. The outbound routes, particularly to Oregon where there is notably no sales tax, probably represent retail and tax leakage for Washington businesses (later in the Plan, it’s noted that over 80 percent of Cascades trips are leisure-based). In this sense service is not

a boon to, but provides competition with, economic development in Washington State. The economic impact analysis provided for the options (pp. 6-14 & -15) is superficial and does not go far enough to address this issue, nor to meaningfully express the impacts; and there did not appear to be supporting documentation slated for the appendices beyond the stating in the text that computer modeling was used. Similarly, the benefits and cost assessment (pp. 7-3 through -7) does not do far enough to probe tax and economic aspects. The outcome data in both chapters does not explore the potential loss to all areas of economic impacts expressed if Alaska Air is negatively impacted, which well may be significant.

“Outrageous claims.” There seems to be a pattern of strong assertions made within the document that take on the flavor of “outrageous claims” as there is no supporting data or evidence included to offer a logical foundation for the argument. We have not attempted to chronicle them all, but here are two such examples:

- In the next-to-last paragraph on p. 2-7, the statement is made that “Of every \$1 billion invested in rail, an estimated 20,000 new jobs curb global warming and support cleaner energy.” This suggests that investing \$1B in rail will not only result in 20,000 new jobs but that all of those jobs will have positive impacts upon global warming and clean energy. This is unlikely.
- The discussion of “With/Without Principle” on p. 7-2 states that “...with an investment in Amtrak Cascades capacity, more people would ride trains instead of driving cars.” While it is possible that with some marketing work, WSDOT might be able to achieve a certain degree of mode shift; but capacity investments alone are not going to spur the behavior. (This, in turn, is used as an argument that rail investment equates to I-5 congestion relief on p. 7-5.)

Please review the Plan closely to cull out these sort of unfounded statements that draw broad conclusions not in evidence.

Demand growth drivers. Marketing is not discussed as a factor that drives ridership growth (p. 3-6). However, it was clear to our staff attending the last stakeholders’ meeting that marketing is seen as a crucial and primary driver of ridership growth; and that lacking marketing, ridership growth would stall. (Correspondingly, a marketing component is included in the plan.) Demand for a good or service is something that might be expected to occur organically, but based on information discussed at the stakeholders’ meeting, demand for Amtrak Cascades service appears to be strongly tied to marketing. This is more strongly put on p. 2-8, “A cultural shift will need to take place across America to encourage our citizens to take...passenger rail...” This relationship and influence should be disclosed in the context of driving ridership growth.

Demand forecasting. p. 3-7: Reference is made to “population based upon driving time from Amtrak stations” as a factor in determining the baseline forecast. I am aware that our staff attending the last stakeholders’ meeting expressed skepticism as to the reliability of growth forecasts in the area of stations as a predictor of actual growth and, in turn, its relationship with ridership. This appears to be addressed further in the appendices that have yet to be included. One means of testing the reliability of this approach relates back to an earlier statement made on p. 3-3: “Station volumes can assist local planners and businesses in determining population levels using a local train station.” Similarly, station volumes, or the “on-offs” as shown in Exhibit 3-2, could provide a basis for testing the validity of assuming that increased population within a certain drive time of stations results in heightened ridership. Is there a correspondence between current on-offs and proximate population density in those areas? If not, then perhaps population forecasts are not the most reliable basis for determining future demand.

Improvement costs. Exhibit 4-1 on p. 4-4 could be improved by adding a column indicating the amount currently funded (if any). As this section progresses into discussion of specific projects beginning on p. 4-6, it’s clear there are funding disparities. For instance, the current cost estimate for Ph. 1 Pt. Defiance Bypass is \$74.1M (Exhibit 4-1 and p. 4-8) while added text on p. 4-8 shows that \$59.8 is funded. Including this information into the table would make it more clear where additional funding is needed. Comparatively, we are not clear about where the costs included in Exhibit 6-1 (p. 6-4) came from. Again looking at the Ph. 1 Pt. Defiance Bypass project, the amounts included in the table under options 2-4 do not align with either the budgeted amount or current cost estimate information expressed earlier in the document (as cited above). From this information, it appears that Ph. 1 Pt. Defiance Bypass would cost less than even the budgeted amount – or, if the budgeted amount was for the entire bypass project and not just Ph. 1, that is not articulated in the earlier information. Please revisit the cost information to be sure that it all aligns.

On-time performance. On-time performance is cited in several places within the Plan. Given the information on p. 4-8, which would have the Pt. Defiance Bypass project shaving six minutes off travel time, and that in Exhibit 5-1 (p. 5-2, and text on p. 5-3), those six minutes evidently equate to an on-time difference of almost 27 percent. Generally, on-time performance is characterized as a customer service issue; but there is no discussion of the on-time performance penalty clause in the Amtrak/WSDOT contract. This would seem to be the most pressing reason compelling trip time improvement, and it would be much more honest to openly discuss on-time trips as a matter of historic performance within the Plan, particularly as this is already included as a Gray Notebook performance measure. Potentially, this is discussed in Appendix 6 (not included) but would benefit from being brought into a broader discussion of on-time performance in the body of the document.

It is noted that “Amtrak Cascades cannot achieve broader acceptance unless service is punctual and dependable, regardless of other infrastructure and operating improvements.”

(p. 5-4) It is not clear what the down side is, or if there is a down side to, simply adjusting the schedule to reflect historic performance patterns, thus creating greater on-time compliance. If a trip is, say, a three-hour trip by its circumstances, and it usually takes three hours to arrive no matter what interventions are introduced, willpower and economizing may not be able reshape it into a two-and-a-half-hour trip; perhaps it's just best to set the expectation that it's a three-hour trip.

"In real time" adjustments also help to manage customer expectations. This seems to be the contemporary standard for airports, where flight schedules are adjusted while planes are in the air; and is reflective of Cascades on-board scheduling information broadcast to riders which shows and adjusts anticipated arrival time at the next destination.

Miscellaneous.

Wherever projects for "Vancouver" are discussed – such as on p. 4-6 – it would make it more clear to add "Wash." to differentiate between the city in our state and Vancouver, BC, since it is also addressed within the service area.

p. 4-8: The second paragraph states that freight trains on the Lakewood line currently serve only Ft. Lewis. This is not our understanding. When Sound Transit entered into an agreement with Tacoma Rail to use the Tacoma-to-Nisqually segment of the line, we were given to understand Tacoma Rail would serve areas within Thurston Co., and we believe users of this line also serve Port of Olympia. However, this information may be outdated. Also, we are given to understand that Sound Transit does own the line between Tacoma and Nisqually; while p. 5-6 states that BNSF owns "the track in Washington State." Please check your sources to be certain the information portrayed here is accurate.

We suggest using a different photo on p. 4-9. Inserting a photo of seats, particularly as the comfortable seating on Cascades trains have long been a marketing point, under the title "Increase Capacity of Existing Train Sets" immediately leads the reader to the conclusion that more seats will be fitted into existing trains. This, of course, is not the intent of the text that follows, but is a likely first impression just given the title and photo. Using a photo of train exterior may be more on-point.

p. 9-2: The first bullet under "Current Travel Options" makes no sense. Is this meant to refer to intercity trips along the corridor? Even at that, the number seems low.

The language at the top of page 10-5 about the current economic situation seems insufficient, given the nature and intensity (as well as probable duration) of the economic downturn. We believe the downturn is highly likely to impact multimodal funding as tough choices about transportation investments come to the forefront.

Something that is not broached in terms of the Seattle-to-Vancouver, BC route is border crossing. Is there a significant time/hassle savings to travelers in avoiding border

crossings associated with roads or airports? Does this route represent significant congestion relief at, for instance, the Blaine border crossing? (Please note the usage of "significant"; this is not meant to suggest additional unfounded claims as discussed above.)

One issue that is not raised in relation to the Pt. Defiance Bypass, marketing, or any other aspect of the Plan is that of view loss due to rerouting. Many people consider the waterward line along Puget Sound to be the most scenic portion of the Tacoma-to-Portland (or other points southward) Cascades experience. Loss of this view segment may make the route less marketable and desirable and deter demand. How does WSDOT plan to approach the loss of this important asset?

This concludes our comments on the draft Plan. However, irrespective of this document, it would be helpful to gain additional insight on one aspect of the Plan. On p. 4-8, it is stated that "initial work between S. 66th Street and Bridgeport Way is planned to begin construction...in late 2008." Given the funding gap, to what extent is this work capable of being finished? If left in an unfinished state, it is not clear how that would impact our local crossings. We would appreciate further clarification on this.

Although this letter will be transmitted by regular mail, it is being initially submitted via e-mail in order to meet the comment deadline of 5pm today. If you have any questions or need additional information, please contact me at 253.983.7739 or e-mail <dbugher@cityoflakewood.us>.

Sincerely,



M. David Bugher
Community Development Director/
Assistant City Manager for Development



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

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RECEIVED

OCT 15 2008

CITY COUNCIL
CITY MANAGER

October 10, 2008

Mr. Andrew Neiditz
City Manager
City of Lakewood
6000 Main Street SW
Lakewood, WA 98499-5027

**Subject: Point Defiance Bypass Project
Response to Lakewood's comments on the SEPA documentation**

Dear Mr. Neiditz:

Thank you for your letter of August 26, 2008, providing comments on the Point Defiance Bypass Project SEPA documentation.

The purpose of this letter is to respond to some of the comments in your letter. In this letter, your quoted or paraphrased comments appear in italics, with responses in standard font.

Comment 1c: "..... The Cumulative Queue Table for All At-grade Crossings in Appendix F at footnote one states: 'One freight train during the peak hour with an estimated blockage time of 100 sec/train uses.' Using this blockage comparison is invalid and disingenuous, as Tacoma Rail only has one trip during the work week PM hour, not daily as the table promotes."

We believe that the comparison of the one freight train at the peak hour is valid as this often does occur on a given day. At the time of the original study, freight traffic was actually included three or more times per week from Tacoma Rail trains. The city's research with Tacoma Rail does not address the fact that BNSF trains bound for Roy and southeast Fort Lewis (Mobase) also travel over all but the Steilacoom Boulevard crossing on a regular basis.

Comment 2: Comments on potential queuing at Berkeley and I-5 and onto mainline Interstate 5, and how it is to be mitigated.

WSDOT, as the proponent, has had numerous meetings with the city staff to address clearing the crossings and queuing of all adjacent intersections. The design actually addresses the queuing on to I-5 at Berkeley Street and Thorne Lane interchanges. Thus,

1c - D. Buaher, File

Mr. Andrew Neiditz
October 10, 2008
Page 2

no specific "mitigation," separate from the designed signal and turning movement improvements, is needed.

Comment 3: "The City remains concerned with the safety hazards at the Berkeley Street crossing due to the proximity to the I-5 ramp signals."

Again, WSDOT has had numerous meetings with the city staff to address clearing the crossings and queuing at all adjacent intersections. The design at Berkeley Street will limit when vehicles have access to the crossing to times when they can continue beyond the crossing without stopping at the I-5 southbound on/off ramp intersection signal. This limits their opportunity to be blocking the crossing. A similar situation is created in the westbound direction.

Comment 4: Comments on the consequences of blocking left-hand turns out of Halcyon Road onto 108th Street and using Montgrove Avenue instead to make left turns onto 108th Street."

The removal of the left turns from Halcyon Road will not cause delays. This is a residential street that experiences some "cut-through" traffic during the peak hour. Restricting the left-turn movement will cause local drivers and drivers who use this route regularly to alter their traffic patterns to proceed to Montgrove Avenue, another residential street similar to Halcyon Road. The left turn from Montgrove Avenue is less difficult than from Halcyon Road, as Halcyon Road is on an upgrade, slightly acute, and does not have a left-turn refuge to the left (west) of the intersection. Montgrove Avenue is relatively flat, at right angles to 108th Street, and has center-turn lanes on 108th Street in both directions.

We sincerely appreciate the cooperation and aid your staff has provided in these matters. Please be assured that WSDOT will continue to work with the city of Lakewood to increase safety for all its citizens as this project moves forward.

Sincerely,



Kevin Jeffers
Capital Projects Manager
State Rail Office

cc: Elizabeth Phinney, WSDOT

DAVE B.



COPY

August 26, 2008

Ms. Elizabeth Phinney
Rail Environmental Manager
WSDOT Rail Office
P.O. Box 47300
Olympia, WA 98504-7300

MAILED
9/2/08 DKW

Douglas G. Richardson
Mayor

Don Anderson
Deputy Mayor

Ron Cronk
Council Member

Pad Finnigan
Council Member

Helen McGovern
Council Member

Claudia B. Thomas
Council Member

Walter Neary
Council Member

Andrew E. Neiditz
City Manager

Heidi Ann Wachter
City Attorney

Alice M. Bush, MMC
General Services Director
City Clerk

Subject: Point Defiance Bypass Project SEPA Documentation

Dear Ms. Phinney:

Thank you for the opportunity the provide comments on Point Defiance Bypass Project SEPA documentation.

After review of the project NEPA Documented Categorical Exclusion support documentation, the City disputes the statement in the last sentence of Chapter 4 of the *Traffic and Transportation Discipline Report* that "Operational Impacts from the Point Defiance Bypass project are avoided through the use of design measures at crossings listed in Chapter 2." More specifically:

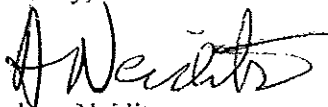
1. The increase in queue and delay at all intersections with the addition of Amtrak rail service has not been mitigated. Each of the intersections studied within the City of Lakewood will experience extensive queues as a result of the Amtrak at-grade crossings during peak PM traffic.
 - a. Bridgeport Way northbound will experience a 500 foot queue length during the planned PM peak Amtrak train. The additional delay caused by this project is on top of the year 2020 anticipated level of service F intersection. (See *Traffic & Discipline Report*, Page 3-4 & 3-10)
 - b. The intersections at 100th St., 108th St. and Steilacoom experience similar delays. WSDOT has agreed to install upgraded traffic controllers at their ramp signals in order to partially mitigate gate crossing delays. Modern traffic signal controllers "flush" patterns in order to get the vehicle queues moved through. This is especially important to the City, as several intersections will experience five crossings within the PM peak hour (4:30-5:30). There are twelve crossings within the two hour period from 4:30-6:30 during the heaviest traffic of the day. Without the ability to manage queues from one train, the cumulative effects will get worse.
 - c. There is no discussion within the documents on how the project proponent proposes to mitigate traffic impacts caused by train crossings. The *Cumulative Queue Table for All AT-grade Crossings* in Appendix F at footnote one states: "One freight train during the peak hour with an estimated blockage time of 100 sec/train uses." Using this blockage comparison is invalid and disingenuous, as Tacoma Rail only has one trip during the work week PM hour, not daily as the table promotes.
 - i. Currently Tacoma Rail runs a freight train through Lakewood on Thursdays and Sundays (once during the work week). Based on information received from Tacoma Rail, freight traffic through



- Lakewood is inconsistent during the peak hour, and is not every day during the week.
- ii. The train arrives in Tacoma at 56th Street around 6 PM. The distance from 56th to Steilacoom is a little over two miles. If the train had been traveling north at 10 MPH the train would reach Steilacoom Blvd at 5:45. The train would have traveled the previous two miles from Bridgeport in 15 minutes, which places it at the crossing at just past 5:30 PM. Therefore it is conceivable that the freight train could be traveling through Lakewood during peak hour, but it is unlikely.
 - iii. Regardless, this blocking only occurs once during the work week. With the track improved this schedule might increase to twice during the work week, but with faster trains, the blocking is expected to be reduced.
2. Additional queues caused by train crossings will cause back-ups onto mainline Interstate 5 at the crossings close to the interchanges (Bridgeport Way, North Thorne Lane, and Berkeley). This is a safety hazard of having “stopped” traffic on a high-speed thoroughfare. Again, modern traffic signal controllers can run “flush” patterns after railroad preemptions to help clear queues caused by the train crossing. There is a potential to make other queues much worse. For example, at Berkeley and I-5, the signals can be phased to favor clearing of the I-5 off-ramp backup. However, Union Avenue and Berkeley Street will then experience larger delays. There is no discussion within the documents on how the project proponent proposes to mitigate queues onto mainline Interstate 5.
 3. The City remains concerned with the safety hazards at the Berkeley Street crossing due to the proximity to the I-5 ramp signals. The project proponent has not made clear within the documents how this intersection will be cleared of traffic prior to the trains crossing.
 4. The analysis of blocking of left-hand turns out of Halcyon Road onto 108th Street is incomplete. Traffic counts indicate 37 left turns occur in the PM peak hour. Although this is stated as “low”, the analysis does not address delays that these left turning vehicles will now incur as the vehicles travel over 900 feet west to the next intersection at Montgrove Avenue in order to make their left turn onto 108th Street. In order to access Montgrove Ave., vehicles must travel through residential, local access roads and make a difficult left turn lane across traffic during the PM peak hour. The potential for increased delay, volumes and speed on this neighborhood street has not been addressed.

The City remains committed to working with WSDOT on the Point Defiance Bypass project. As I’m sure you understand, we are also obligated to ensure that the consequences of this project do not adversely affect our citizens. I look forward to discussing with you how WSDOT might revise the project to mitigate these traffic impacts.

Sincerely,



Andrew Neiditz
City Manager



Washington State
Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

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August 1, 2008

Mr. Dan Penrose
Planning Division
City of Lakewood
6000 Main Street
Lakewood, WA 98499

Subject: Point Defiance Bypass Project SEPA Documentation

Dear Mr. Penrose:

Enclosed is the SEPA documentation for the Point Defiance Bypass Project.

In 1996, the Washington State Department of Ecology and the Washington State Department of Transportation (WSDOT) signed an agreement called the "*Implementing Agreement between The Washington State Department of Transportation and The Washington State Department of Ecology Concerning Adoption of NEPA Documented Categorical Exclusions.*"

Per the agreement, WSDOT is allowed to adopt the NEPA Documented Categorical Exclusion (DCE) that was signed by FHWA on May 5, 2008 as the SEPA Environmental Checklist for the SEPA Determination of Nonsignificance (DNS) threshold decision. WSDOT is required to include in the adoption submittal the signed DCE and the information asked for in the SEPA Environmental Checklist, Section A. Background, along with additional information on earth and water.

Due date for comments on the SEPA documentation is **August 18, 2008.**

If you have any questions, please contact me at 705-7902 or phinnee@wsdot.wa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Elizabeth Phinney".

Elizabeth Phinney
Rail Environmental Manager

Enclosure

Adoption of Existing Environmental Document

Adoption for: NEPA Documented Categorical Exclusion (DCE) for the Point Defiance Bypass Project, per the terms of the "Implementing Agreement between The Washington State Department of Transportation and The Washington State Department of Ecology Concerning Adoption of NEPA Documented Categorical Exclusions," signed in 1996 by both parties. The SEPA classification for this document is a DNS (attached).

Description of current proposal:

Background: The proposed Point Defiance Bypass Project will improve safety, reduce rail congestion, and, as a result, support more frequent and reliable Amtrak *Cascades* service.

Freight and passenger train traffic has increased on the existing main line in the Tacoma vicinity and the rail system is operating at or near its maximum capacity. By removing the passenger traffic from the existing main line and diverting that traffic to the shorter, more direct Point Defiance Bypass route, travel times for the passenger trains will be reduced. In addition, since the Point Defiance Bypass will primarily be used by passenger trains, the reliability of the train schedules will be improved. By using this alternate route, congestion on the existing main line will be reduced, thereby freeing capacity for freight trains.

Proposed Project: The Point Defiance Bypass Project consists of three major track elements: construction of a new track adjacent to the existing main line; reconstruction of the existing main line track; and rehabilitation of the existing track.

New Track Adjacent to the Existing Main Line

A new track adjacent to the existing main line will be constructed from South 66th Street (rail milepost 6.92) to one quarter mile south of Bridgeport Way SW (rail milepost 10.67). This new 2.5 mile track will be constructed parallel to and east of (with 15-foot track centers) the existing Sound Transit track. In some places, due to curves, track centers may be wider, particularly in the vicinity of Lakewood Station, Bridgeport Way and Clover Creek. Sound Transit's Sounder trains and freight trains will predominately use the eastern main track (new track, main line 2) as it operates in its service area (northern terminus of Point Defiance Bypass Project to Bridgeport Way SW).

The second main line will be built on new embankment which has already been upgraded by Sound Transit. The new second main line to be constructed in this area will require minimal grading work. There will be no in-water work as part of this new construction.

Reconstruction of the Existing Main Line

Starting at Steilacoom Boulevard SW (rail milepost 8.36), the existing track will be reconstructed to a location just north of Mounts Road SW (rail milepost 19.89). This will involve removal of the existing track and minor re-grading of the existing sub-grade to provide a slightly wider, re-graded and compacted, stable surface top on which to construct a new track. This reconstructed segment is approximately nine miles in length.

For a short segment, between rail milepost 8.88 and 9.96, the existing track and the new track will be on a new alignment. Therefore, the existing track will be removed and both main lines constructed on a new sub-grade alignment. Upon removal of the track structure, the existing sub-grade will be graded and cleared of debris to match existing ground conditions in the general area. There will be no in-water work as part of this reconstruction.

Rehabilitation of the Existing Line

Just north of Mounts Road SW (rail milepost 19.89), for approximately two miles (to rail milepost 21.23), the existing single main line track will be rehabilitated. This work will consist of replacing existing, worn, or otherwise defective ties with new ties, and adding ballast. These activities are typical of the maintenance work regularly performed on most railroads and is accomplished without removing the track. Existing drainage paths will be cleared of blockages. Little or no new grading work will be required. There will be no in-water work as part of this rehabilitation.

Proponent: Washington State Department of Transportation

Location of current proposal:

The Point Defiance Project is located along Sound Transit's Lakeview Subdivision rail line in Pierce County (Township 18N through 20N, Range 1E and 2E). The project area extends approximately 18 miles from South 66th Street (in Tacoma), through Lakewood and DuPont, to just east of I-5, where it connects with the BNSF Railway Company's (BNSF) main line. (Vicinity map included with required additional information)

Title of document being adopted: Point Defiance Bypass NEPA Documented Categorical Exclusion

Agency that prepared document being adopted: Washington State Department of Transportation

Date adopted document was prepared: Prepared and submitted to FHWA on March 26, 2008; signed by FHWA on May 5, 2008.

Description of document being adopted: Point Defiance Bypass Environmental Classification Summary (ECS) for a NEPA Documented Categorical Exclusion; signed by FHWA on May 5, 2008.

If the document being adopted has been challenged (WAC 197-11-630), please describe: The document has not been challenged.

The document is available to be read at (place/time):

WSDOT State Rail and Marine Office, 310 Maple Park Ave SE, Olympia, WA 98504 during business hours 8 a.m. to 5 p.m. Monday through Friday. Please call ahead at 360-705-7900.

Additional information is available on the project web site at http://www.wsdot.wa.gov/Projects/Rail/PNWRC_PtDefiance/. Also, the Point Defiance Bypass Project Environmental Summary can be downloaded from the site.

We have identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decisionmaker.

Name of agency adopting document: Washington State Department of Transportation

Contact person, if other than responsible official:

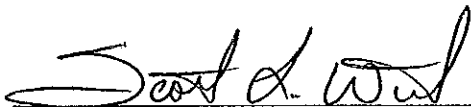
Elizabeth Phinney
Rail Environmental Manager

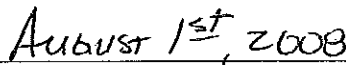
Phone: 360-705-7902

Responsible official:

Scott Witt
Director, State Rail and Marine Office
PO Box 47407
Olympia, WA 98504-7407

Phone: 360-705-6903


Signature


Date

DETERMINATION OF NONSIGNIFICANCE

Description of proposal:

Background: The proposed **Point Defiance Bypass Project** will improve safety, reduce rail congestion, and, as a result, support more frequent and reliable Amtrak *Cascades* service.

Freight and passenger train traffic has increased on the existing main line in the Tacoma vicinity and the rail system is operating at or near its maximum capacity. By removing the passenger traffic from the existing main line and diverting that traffic to the shorter, more direct Point Defiance Bypass route, travel times for the passenger trains will be reduced. In addition, since the Point Defiance Bypass will primarily be used by passenger trains, the reliability of the train schedules will be improved. By using this alternate route, congestion on the existing main line will be reduced, thereby freeing capacity for freight trains.

Proposed Project: The Point Defiance Bypass Project consists of three major track elements: construction of a new track adjacent to the existing main line; reconstruction of the existing main line track; and rehabilitation of the existing track.

New Track Adjacent to the Existing Main Line

A new track adjacent to the existing main line will be constructed from South 66th Street (rail milepost 6.92) to one quarter mile south of Bridgeport Way SW (rail milepost 10.67). This new 2.5 mile track will be constructed parallel to and east of (with 15-foot track centers) the existing Sound Transit track. In some places, due to curves, track centers may be wider, particularly in the vicinity of Lakewood Station, Bridgeport Way and Clover Creek. Sound Transit's Sounder trains and freight trains will predominately use the eastern main track (new track, main line 2) as it operates in its service area (northern terminus of Point Defiance Bypass Project to Bridgeport Way SW).

The second main line will be built on new embankment which has already been upgraded by Sound Transit. The new second main line to be constructed in this area will require minimal grading work. There will be no in-water work as part of this new construction.

Reconstruction of the Existing Main Line

Starting at Steilacoom Boulevard SW (rail milepost 8.36), the existing track will be reconstructed to a location just north of Mounts Road SW (rail milepost 19.89). This will involve removal of the existing track and minor re-grading of the existing sub-grade to provide a slightly wider, re-graded and compacted, stable surface top on which to construct a new track. This reconstructed segment is approximately nine miles in length.

For a short segment, between rail milepost 8.88 and 9.96, the existing track and the new track will be on a new alignment. Therefore, the existing track will be removed and both main lines constructed on a new sub-grade alignment. Upon

removal of the track structure, the existing sub-grade will be graded and cleared of debris to match existing ground conditions in the general area. There will be no in-water work as part of this reconstruction.

Rehabilitation of the Existing Line

Just north of Mounts Road SW (rail milepost 19.89), for approximately two miles (to rail milepost 21.23), the existing single main line track will be rehabilitated. This work will consist of replacing existing, worn, or otherwise defective ties with new ties, and adding ballast. These activities are typical of the maintenance work regularly performed on most railroads and is accomplished without removing the track. Existing drainage paths will be cleared of blockages. Little or no new grading work will be required. There will be no in-water work as part of this rehabilitation.

Proponent:

Washington State Department of Transportation (WSDOT)

Location of proposal, including street address, if any:

The Point Defiance Project is located along Sound Transit's Lakeview Subdivision rail line in Pierce County (Township 18N through 20N, Range 1E and 2E). The project area extends approximately 18 miles from South 66th Street (in Tacoma), through Lakewood and DuPont, to just east of I-5, where it connects with the BNSF Railway Company's (BNSF) main line. (Please see the enclosed map.)

Lead agency:

Washington State Department of Transportation (WSDOT)

For engineering questions, please contact:

Kevin Jeffers, P.E., Rail Projects Engineer

WSDOT Rail Office

PO Box 47407

Olympia WA 98504-7407

360-705-7982; jefferk@wsdot.wa.gov

For environmental questions, please contact:

Elizabeth Phinney, Rail Environmental Manager

WSDOT Rail Office

PO Box 47407

Olympia WA 98504-7407

360-705-7902; phinnee@wsdot.wa.gov

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below.

Comments must be submitted by August 8, 2008.

Please send comments to:
Elizabeth Phinney
WSDOT State Rail Office
PO Box 47407
Olympia WA 98504-7407
phinnee@wsdot.wa.gov

Responsible official: Scott Witt

Position/title: Director, WSDOT State Rail and Marine Office

Phone: 360-705-6903

Address: PO Box 47407
Olympia WA 98504-7407

Date: August 1st 2008 **Signature:** 

**Additional Required Information
for the
Implementing Agreement
between
The Washington State Department of Transportation
and
The Washington State Department of Ecology
Concerning Adoption of NEPA Documented Categorical Exclusions**

1. **Project name** Point Defiance Bypass Project
2. **Applicant** Washington State Department of Transportation
3. **Address and phone number of applicant and contact person**

<u>Applicant</u>	<u>Contact</u>
Washington State Department of Transportation State Rail Office 310 Maple Park Avenue SE PO Box 47407 Olympia WA 98504-7407	Kevin Jeffers, P.E. 360-705-7982 or Elizabeth Phinney 360-705-7902

4. **Proposed timing or schedule**

Land acquisition to take place in late 2007 and early 2008; construction and rehabilitation to begin October 2008. Phasing may occur for both the Sound Transit and WSDOT projects if funding is insufficient.

5. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal?**

No.

6. **Environmental information that has been prepared**

- Point Defiance Bypass Project NEPA Documented Categorical Exclusion (approved by FHWA on May 5, 2008) (Attached)
- Point Defiance Bypass Project Environmental Summary (May 2008) (Available upon request)
- Environmental technical reports (air quality; cultural resources; energy; fish, wildlife and vegetation; geology and soils; hazardous materials; hydrology and water quality; land use; noise and vibration; public services; relocation; social elements; transportation; visual quality; and wetlands)

- Biological Assessment (No Effect Letter, May 16, 2007; Project Update Letter, also No Effect, October 29, 2007)
- Cultural Resources Report – SHPO Concurrence with No Adverse Effect Determination, March 28, 2008.

7. Other governmental approvals

Sound Transit owns the rail line, and will be sharing it with the Amtrak *Cascades* trains sponsored by the state via WSDOT. Sound Transit will be improving portions of the line and is also building a *Sounder* commuter train station and a *Sounder* maintenance facility along the line. Sound Transit has already received approvals from the Federal Transit Administration for their project.

8. Government approvals or permits that will be needed

WSDOT is contracting with Sound Transit to construct the WSDOT portion of the project along with Sound Transit's project construction. Therefore, Sound Transit and their rail contractor will be responsible for obtaining all permits.

9. Project Description

Background: The Point Defiance Bypass Project will improve safety, reduce rail congestion, and, as a result, support more frequent and reliable Amtrak *Cascades* service. Freight and passenger train traffic has increased on the existing BNSF main line in the Tacoma vicinity and the rail system is operating at or near its maximum capacity. By removing the passenger traffic from the existing main line and diverting that traffic to the shorter, more direct Point Defiance Bypass route, travel times for the passenger trains will be reduced. In addition, since the Point Defiance Bypass will primarily be used by passenger trains, the reliability of the train schedules will be improved. By using this alternate route, congestion on the existing main line will be reduced, thereby freeing capacity for freight trains.

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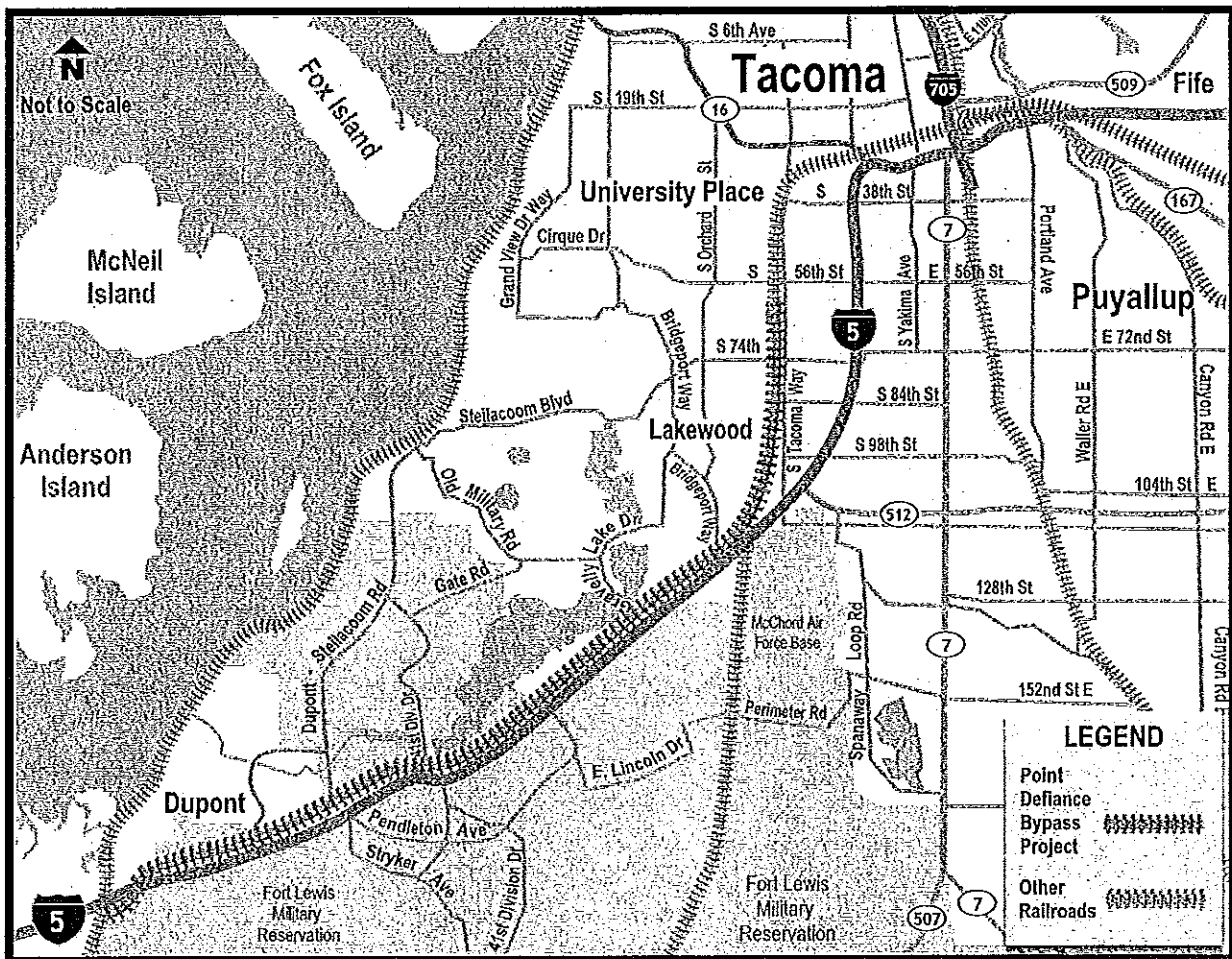
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10. Project Location

The Point Defiance Project is located along Sound Transit's Lakeview Subdivision rail line in Pierce County (Township 18N through 20N, Range 1E and 2E). The project area extends approximately 18 miles from South 66th Street (in Tacoma), through Lakewood and DuPont, to just east of I-5, where it connects with the BNSF Railway Company's (BNSF) main line.

General Vicinity of the Point Defiance Bypass Project



Additional Required Information

Earth

- a. **General description of the site (circle one): Flat, rolling, hilly, steep slopes, mountainous, other:**

The existing rail bed is standard railroad right-of-way. The tracks are placed on level fill above a standard railroad embankment.

- b. **What is the steepest slope on the site (approximate percent slope)?**

The existing railroad bed is elevated up to 4 feet above the bottom of the raiiside ditch, with 2H:1V sloping sides (50% slope).

- c. **What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.**

The site is underlain with Spanaway gravelly sandy loam.

- d. **Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

The railroad track has been in its present location for over 90 years. At the southern end of the rail line before it re-connects with the BNSF main line, there has been some recent sloughing of the uphill slope due to drainage problems. Hillside drainage will be installed as part of this project.

- e. **Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.**

From railroad mileposts 8.88 to 9.96, it is anticipated that approximately 67.88 acres will be cleared and grubbed for the relocation of the existing rail line and the construction of a new main line. The two rail lines will be placed atop 137,238 tons of clean engineered sub-ballast and ballast.

- f. **Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Soil erosion is not probable on the site because of the nature of the construction practices involving compacted stabilized material. Construction Best Management Practices (BMPs) will be used appropriately to prevent any construction-related erosion. The finished project has been designed to preclude erosion.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The only impervious surface for the rail line will be the rail, ties, and signal bungalows. The ties are spaced at 16 to 23 inches apart with pervious crushed rock ballast between rails. The ballast is designed so any precipitation striking the rail or ties infiltrates into the ballast and the subballast.

A signal bungalow will be added to each grade crossing for a total of 10 bungalows, with an additional bungalow needed for each of the two railroad control points. Each bungalow is an 8 x 8 foot structure. There will be minimal stormwater runoff from these structures.

There will be minimal additional impervious surfaces resulting from the grade crossing improvements.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.**

Construction Best Management Practices (BMPs) will be designed and implemented according to the most recent version of the Stormwater Management Manual for Puget Sound. The BMPs used will be those most appropriate for the project site, and could include such items as construction entrances, filter fabric fences, sediment ponds or basins, check dams, filter berms, and permanent seeding.

Water

- a. Surface:**

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

The rail line crosses five streams: Murray Creek, Chambers Creek, and three unnamed streams.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters?**

Yes. The rail line that crosses over the streams on trestles will be rehabilitated with new ties. There will be no in-water work.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

None.

- 4) **Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

No surface water withdrawals or diversions will be required.

- 5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

No.

- 6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No waste will be discharged to surface waters. Best Management Practices will be employed, which will prevent construction erosion and sedimentation.

b. Ground:

- 1) **Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.**

No ground water will be withdrawn, nor will water be discharged to the groundwater.

- 2) **Describe waste material that will be charged into the ground from septic tanks or other sources, if any (for example: Domestic sewage, industrial, containing the following chemicals; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

There will be no waste discharged to ground water.

c. Water Runoff (including storm water):

- 1) **Describe the source of runoff (including storm water) and method of collection and disposal, if any (including quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The only source of runoff will be precipitation in the form of rain and/or snowmelt. During construction, to prevent sediments from traveling beyond the construction zone, a series of Best Management Practices have been designated for the site. These best management practices include such items as construction entrances, filter fabric fences, sediment ponds or basins, check dams, filter berms, and permanent seeding. No runoff will be allowed to flow off the construction site until the quality of the discharge is at or below acceptable water quality limits.

Since the grade crossing improvements will only add minimal impervious surfaces, the current collection and disposal methods will not need additional capacity or improvements.

2) Could waste materials endanger ground or surface waters? If so, generally describe.

No. Best Management Practices for erosion control will be applied for handling any possible waste materials.

d. Proposed measures to reduce or control surface, ground, or runoff water impacts, if any:

Best Management Practices will be used during construction, and seeding, fertilizing and mulching of disturbed soil after construction will be performed to reduce and eliminate surface water runoff impacts.



PART 1. PROJECT DESCRIPTION							
WIN	SR (WIN)	OTHER SR(S)?	REGION	COUNTY	RECORD CREATED	DATE FORM REVISED	
		<input type="checkbox"/>	Olympic	Pierce			
PIN	Title (WIN): Point Defiance Bypass Project					TOWNSHIP	
PO1008C	Type of Work: Track and railbed maintenance and improvements					18N - 20N	
BEGN (WIN)		END (WIN)		CENTERLINE LENGTH	WITHIN PUGET SOUND BASIN?	WATER RESOURCE INVENTORY AREA (WRIA) NO. & NAME	
KP Rail MP		KP Rail MP		KM		WRIA 12 Chambers/Clover Creek	
MP 6.92		MP 21.23		Miles 18	Yes	WRIA 11 Nisqually River	

PART 2. PERMITS AND APPROVALS REQUIRED	
<p>Permit or Approval</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Corps of Engineers <input type="checkbox"/> Section 404 <input type="checkbox"/> Section 10</p> <p>COE Type: <input type="checkbox"/> Individual <input type="checkbox"/> Nationwide</p> <p>Individual Permit #: _____</p> <p>Nationwide Type: _____</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Coast Guard</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No Coastal Zone Management Certification</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Critical Area Ordinance (CAO) Permit</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Flood Plain Development Permit</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Forest Practices Approval</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No Hydraulic Project Approval</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Local Building or Site Development Permits</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No Local Clearing & Grading Permits</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No Nat. Historic Preservation Act - Section 106</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No (NPDES) Municipal Stormwater Discharge</p>	<p>Permit or Approval</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No Nat. Pollutant Discharge Elimination System (NPDES) Baseline General for Construction</p> <p><input type="checkbox"/> Stormwater Site Plan</p> <p><input checked="" type="radio"/> Temporary Erosion Sediment Control Plan (TESC)</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Shoreline Permit</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No State Waste Discharge Permit</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Temporary Modification of Water Quality (TWQM) standards</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Tribal Permit(s) (Any)</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Section 4(f)/6(f): Wildlife Refuges, Recreation Areas, Historic Properties</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Water Use Permit</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No Water quality certification — Sec. 401</p> <p>Issued By: _____</p> <p>Other Permits List:</p> <p><input type="radio"/> Yes <input checked="" type="radio"/> No</p>

PART 3. ENVIRONMENTAL CLASSIFICATION	
<p>NEPA</p> <p><input type="checkbox"/> Categorically excluded per 23 CFR 771.117()</p> <p><input checked="" type="checkbox"/> Documented CE (DCE) 23 CFR 771.117 (d)</p> <p><input type="checkbox"/> Environmental Assessment (EA)</p> <p><input type="checkbox"/> Environmental Impact Statement (EIS)</p> <p><input type="checkbox"/> Supplemental EIS (SEIS)</p>	<p>SEPA</p> <p><input type="checkbox"/> Categorically exempt per WAC 197-11-800</p> <p><input checked="" type="checkbox"/> Determination of Non-Significance (DNS)</p> <p><input type="checkbox"/> Environmental Impact Statement (EIS)</p> <p><input type="checkbox"/> Other Action <input type="checkbox"/> Adoption <input type="checkbox"/> Addendum</p>

APPROVAL SIGNATURES	
<p>DATE</p> <p><i>[Signature]</i> 3/26/08</p>	<p>REGIONAL ENVIRONMENTAL CONTACT</p> <p>Elizabeth Phinney 360-705-7902</p>
<p>FEDERAL HIGHWAY ADMINISTRATION (FOR ECS USE ONLY)</p> <p>DATE</p> <p><i>[Signature]</i> 5/5/2008</p>	<p>COMPLETED BY</p> <p>Same as above</p> <p>Telephone: _____ FAX: 360-705-6821</p>

PART 4. ENVIRONMENTAL CONSIDERATIONS WIN

Will the project involve work in or affect any of the following? Identify proposed mitigation. Attach additional pages or supplemental information if necessary.

1. Air Quality Identify any anticipated air quality issues.

Is project included in Metropolitan Transportation Plan?

Yes No

Located in an Air Quality Non-Attainment Area (for carbon monoxide, ozone, or PM 10)?

Yes No

Exempt from Air Quality conformity requirements?

Yes No

2. Critical/Sensitive Areas Identify any known Critical or Sensitive Areas as designated by local Growth Management Act ordinances.

a. Aquifer Recharge Area, Wellhead Protection Area, or Sole Source Aquifer

Central Pierce County Aquifer System (Designated Sole Source Aquifer 1994);

Chambers/Clover Creek Aquifer Recharge Area; Wellhead Protection Area, 10-year time of travel

b. Geologically Hazardous Area

None

c. Habitat List known species.

(1) Threatened/Endangered Species or Priority Habitat or Species. Indicate state or federal listing.

None, please see Biological Assessment for this project.

(2) General fish and wildlife habitat

Coho, cutthroat trout in Murray Creek. Coho, cutthroat trout, steelhead, and rainbow trout in Clover Creek.

d. Wetlands. Estimate impacted categories and acreage.

Are wetlands present?

Yes No

Estimated Acres Impacted: Acres

3. Cultural Resources/Historic Structures Identify any historic or archaeological resources.

Please see Cultural Resources Survey/Discipline Report, March 2008.

4. Flood Plains or Ways

Is the project located in a 100-year flood plain?

Yes No

If yes, is the project located in a 100-year floodway?

Yes No

Will the project impact a 100-year flood plain?

Yes No

5. Hazardous and Problem Waste Identify potential sources and type.

Is project likely to involve site clean-up?

Yes No

6. Noise Identify potential sensitive receptors or previous mitigation commitments.

Please see Noise and Vibration Discipline Report, March 2008.

PART 4. ENVIRONMENTAL CONSIDERATIONS (CONTINUED)		WIN
7. Parks, Recreation Areas, Wildlife Refuges, Historic Properties, or Scenic Rivers/Byways, 4(f)/6(f) Lands Identify areas of impact.		
None		
8. Resource Lands Identify areas of impact.		
a. Agricultural		
None		
b. Forest/Timber		
None		
c. Mineral		
None		
9. Rivers, Streams (continuous, intermittent), or Tidal Waters		Fisheries WA Stream No. _____
a. Identify by name, proximity to project, and Washington Stream Catalog Number.		Ecology 305b Report No. _____
b. Identify stream crossing structures by type		
The rail line crosses five streams: Murray Creek, Chambers Creek, and three unnamed streams Please see Point Defiance Bypass Project Hydrology and Water Quality Technical Memorandum		
10. Tribal Lands Identify.		
None.		
11. Visual Quality	Will project impact roadside classification or visual aspects?	<input type="radio"/> Yes <input checked="" type="radio"/> No
12. Water Quality/Storm Water	Is project likely to increase runoff or affect water quality?	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Will project include water quality/quantity treatment for the new pavement?	<input checked="" type="radio"/> Yes <input type="radio"/> No
	Will project include water quality/quantity treatment for existing pavement?	<input checked="" type="radio"/> Yes <input type="radio"/> No
	Has a NPDES municipal general permit been issued for this WRIA?	<input type="radio"/> Yes <input checked="" type="radio"/> No
13. Have previous environmental commitments been made in project area? Identify.		<input type="radio"/> Yes <input checked="" type="radio"/> No
14. Are long-term maintenance commitments necessary for this project? Identify.		<input type="radio"/> Yes <input checked="" type="radio"/> No



Washington State
Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

June 25, 2008

Mr. Dan Penrose
Planning Division
City of Lakewood
6000 Main Street
Lakewood, WA 98499

Subject: Point Defiance Bypass Project Environmental Summary

Dear Mr. Penrose:

As you will recall, in September 2006, the Washington State Department of Transportation (WSDOT) met with the City of Lakewood to discuss a rail project called the Point Defiance Bypass Project. The project is located along the 18-mile corridor owned by Sound Transit that runs along the west side of I-5 from south Tacoma through Lakewood and DuPont, reconnecting with the BNSF Railway main line east of I-5, near Nisqually. The purpose of the project is to improve the speed and reliability of the Amtrak *Cascades* passenger trains, thereby decreasing the travel time between Seattle and Portland.

The Federal Highway Administration (FHWA) is the federal lead agency for this project. As a result of the environmental analysis prepared for the Point Defiance Bypass Project, the National Environmental Policy Act (NEPA) classification for the project was determined to be a Documented Categorical Exclusion (DCE). On May 5, 2008, the FHWA approved the DCE.

In order to make the environmental information available to the City of Lakewood, WSDOT prepared an Environmental Summary (enclosed) that presents the analysis in an easy-to-read document. The accompanying CD contains the supporting documents (discipline reports and technical memoranda) that were prepared for the project.

If you have any questions on the environmental documentation, please contact me at 705-7902 or phinnee@wsdot.wa.gov. If you have any questions on the project, please contact Kevin Jeffers, Capital Projects Manager, at 705-7982 or jefferk@wsdot.wa.gov.

Sincerely,

Elizabeth Phinney
Rail Environmental Manager

Mr. Dan Penrose
June 25, 2008
Page 2

Enclosures

Point Defiance Bypass Environmental Summary
Point Defiance Bypass Supporting Documents CD



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

RECEIVED

JAN 17 2008

CITY COUNCIL
CITY MANAGER

December 31, 2007

Mr. Andrew Neiditz
City of Lakewood
6000 Main Street
Lakewood, WA 98499-5027

Dear Mr. Neiditz:

Thank you for your recent letter regarding the Pt. Defiance Bypass Rail Project. We appreciate the city's commitment to working with WSDOT on this project.

We also appreciate the city's concerns about the project's potential impacts. Our staff is continuing to review the potential traffic impacts and refine the designs to ensure that the rail operations are implemented in a safe manner and with as little impact to your community as possible. If these traffic safety issues cannot be accomplished to the satisfaction of WSDOT, City of Lakewood, and the federal lead agency—Federal Highway Administration (FHWA), we will take steps to delay portions of the project until a safe and sound solution is found.

We also understand the city's concern about the decision to move the NEPA environmental documentation from an Environmental Assessment (EA) to a Documented Categorical Exclusion (DCE). This was done after the major potential impacts were analyzed, and in full consultation with the federal lead agency for the project. As was discussed with city staff, these potential impacts were not found to be significant, thus making an EA unnecessary.

WSDOT is committed to continuously working with all of the stakeholders as the project continues. Further, we will continue to solicit public comments through various channels as the project moves through the design process.

Again, thank you for your commitment to this project. We are dedicated to improving the state's transportation system and value the input from our city partners.

Sincerely,

Paula J. Hammond, P.E.
Secretary of Transportation

PJH:jaa

cc: Barb Ivanov, WSDOT
Scott Witt, WSDOT
Megan White, WSDOT
Kevin Dayton, WSDOT

Mayor Richards
D. Bugher
D. Penrose
X/c-File



November 19, 2007

Dr. Claudia B. Thomas
Mayor

Paula J. Hammond
Transportation Secretary
Washington State Department of Transportation
P.O. Box 47316
Olympia WA 98504-7316

John Arbeeny
Deputy Mayor

Subject: Pt. Defiance Bypass Project

Ron Cronk
Council Member

Dear Secretary Hammond,

Pad Finnigan
Council Member

The City of Lakewood recently met with WSDOT Rail Office staff and consultant team (HDR) to discuss the Amtrak Cascades Point Defiance Bypass project scheduled for construction next year. While WSDOT staff was able to answer several questions regarding the environmental impacts of the project, the City remains skeptical that the expected impacts can be adequately mitigated through the current process, a Documented Categorical Exclusion.

Helen McGovern
Council Member

Doug Richardson
Council Member

I have attached a letter that was sent to project manager Kevin Jeffers on November 15, 2007. It details a number of technical problems with the project, including:

Walter Neary
Council Member

1. Significant disruption of the traffic patterns of our City.
2. Serious safety concerns at the Tillicum intersections.
3. Limited public comment and public agency review of the environmental documents.
4. Concerns related to the process. WSDOT has planned and advertised using a NEPA Environmental Assessment since the middle of 2006. We now realize that a more accelerated Documented Categorical Exclusion (DCE) is being considered.

Andrew E. Neiditz
City Manager

Heidi Ann Wachter
City Attorney

The City is committed to working with WSDOT on the Point Defiance Bypass project. However, we are also obligated to ensure that the consequences of this project do not adversely affect our citizens. Please contact me with information on how WSDOT plans to mitigate these and other environmental impacts. Thank you.

Alice M. Bush, MMC
General Services Director
City Clerk

Sincerely,

Andrew Neiditz
City Manager

Enclosure

Model Community
designated in 2004 by
America's Promise



DB02 - 227



November 15, 2007

Dr. Claudia B. Thomas
Mayor

John Arbeeney
Deputy Mayor

Ron Cronk
Council Member

Pad Finnigan
Council Member

Helen McGovern
Council Member

Doug Richardson
Council Member

Walter Neary
Council Member

Andrew E. Neiditz
City Manager

Heidi Ann Wachter
City Attorney

Alice M. Bush, MMC
General Services Director
City Clerk

Kevin Jeffers, PE
Pt. Defiance Bypass Project Manager
State Rail Office
PO Box 47407
Olympia, WA 98504-7407

Subject: Pt. Defiance Bypass Project

Dear Mr. Jeffers,

I wanted to express my appreciation for bringing your staff and consultant team (HDR) to Lakewood last week to discuss the Point Defiance Bypass project. In spite of the short notice, you pulled the group together in order to address several concerns that the City has with the Point Defiance Bypass scope, process and environmental impacts. I realize the project has time and budget constraints and it is our desire to work with you in meeting your schedules.

I also acknowledge that your office has been kind enough to permit Lakewood staff to preview Point Defiance Bypass draft environmental documents. We have taken the time to review them. We have identified four areas of concern:

1. The Traffic and Transportation Report reported a 1,474 second delay (almost 25 minutes) during PM peak hour at 108th Street SW.
2. The 2020 Peak Hour Level-of-Service (LOS) at Berkeley Street/Union Avenue which is reported as a C in Exhibit 3.3 in the Traffic and Transportation Discipline Report, is contrary to known LOS at this intersection.
3. The mitigation measures suggested in Chapter Four to reduce environmental impacts are vague, and, for example, do not specify how the installation of turn pockets or upgraded signal timing would reduce the delays to an acceptable LOS threshold.
4. The Environmental Summary purports the use of a Documented Categorical Exclusion (DCE). However, as recently as the beginning of the third quarter of 2007, your agency reported that you were preparing a NEPA/SEPA Environmental Assessment (EA) for the project.



At the meeting on November 8th, you acknowledged that there were technical errors in the computation of the vehicle delays at some intersections. You provided Lakewood staff with a new Exhibit 4.11 showing much reduced average delay per vehicle during peak hours. The City is relieved that the original numbers were incorrect. However, we do intend to review and "double" check other numbers in your documents. If we notice errors, we will contact your office and request that the data be corrected.

The City has also agreed to provide WSDOT and HDR, your consultant, with trip counts at Berkeley Street and Union Avenue to more closely match the PM peak hour LOS at this intersection. Our Public Works staff report that our data for Tillicum shows peak hour traffic between noon and 1 PM when the service members exit McChord AFB and Ft. Lewis for lunch and to run errands.

As you are aware, most of the discussion last week centered on the signal timing at Berkeley Street/Union Avenue and how to coordinate those signals with the WSDOT Olympic Region signals used on the I-5 northbound off-ramps.

At a previous meeting, HDR demonstrated how in order to provide enough "free zone" for vehicles to be able to safely clear the railroad tracks, it was necessary to operate all three signals off one signal controller. However, the current signal controller standard for WSDOT Olympic region does not support this type of operation. It is the City's position that unless WSDOT Rail Office can prove that the traffic signal timing and coordination can: 1) not further deteriorate intersection LOS; and 2) provide enough free zone space for vehicles to clear the railroad tracks prior to the train arrival, that the project has unacceptable adverse impacts. Although we focused on the one at-grade crossing during prior meetings, this concern applies throughout the City.

Finally, although it was acknowledged that there are significant environmental and technical questions surrounding the Traffic and Transportation Report data on this project, you did not state that you or your agency were going to reassess your environmental process. WSDOT has planned and advertised using a NEPA Environmental Assessment since the middle of 2006. We now realize that a more accelerated Documented Categorical Exclusion (DCE) is being considered.

For the record, the City is skeptical that the scope and environmental impacts of this project can be adequately addressed by a DCE. The Point Defiance Bypass project includes new track, new right-of-way acquisition and a substantial increase to the number and speed of trains going through our community. As this is Phase 1 of a 20-year long range plan for Amtrak Cascades, there is a potential for more trains in future phases, which could also adversely impact our residents and citizens.

The environmental impacts of the Point Defiance Bypass significantly disrupt the traffic patterns of our City and result in serious safety concerns at the Tillicum intersections. The use of the DCE, while expedient for WSDOT, provides for only limited public comment and public agency review of the environmental documents. I would remind WSDOT that Tillicum is a severely disadvantaged community with high rates of poverty and unemployment. Tillicum has "hard edges" and is disconnected from the rest of the Lakewood community because of the military bases, American Lake, and I-5. Without adequate mitigation, including installation of the proper signal controllers, your project again exacerbates existing traffic patterns. The material recently reviewed by City staff convinces us that the original EA approach remains the correct one.

City staff is committed to continue working with WSDOT and your office specifically on the Point Defiance Bypass project. Please contact Dan Penrose in Community Development or Desiree Winkler in Public Works if you need clarification on these or other issues.

Sincerely,

A handwritten signature in black ink that reads "David Bugher". The signature is fluid and cursive, with a large, sweeping flourish at the end.

David Bugher
Assistant City Manager



MEMO

Date: November 16, 2006

To: Mayor and Members of the City Council

Through: Andrew Neiditz, City Manager
Dave Bugher, Community Development Director

From: Dan Catron, AICP
Principal Planner

RE: Amtrak Point Defiance Bypass Project

As requested, this memo has been prepared to describe the Amtrak Point Defiance Bypass project and outline the City's role and authority in implementing the project.

Project Description:

The Washington State Department of Transportation, in conjunction with Amtrak and Sound Transit, intends to implement re-routing of Amtrak passenger train service along an existing 18 mile rail corridor owned by Sound Transit that runs roughly adjacent to Interstate 5 from the Nisqually River to Tacoma. Passenger trains currently use the curved BNSF Railway main line along Puget Sound shoreline through Fort Lewis, Steilacoom, University Place, Tacoma and Point Defiance. Freight trains will continue to use the BNSF main line.

Currently, passenger trains must slow down to negotiate the curved BNSF main line alignment and single track tunnels under Point Defiance. The bypass alignment through Lakewood would include track improvements to allow passenger trains to operate at speeds up to 79 mph, reducing travel times between Seattle and Portland by six minutes or more. The separation of passenger and freight traffic is also expected to allow for both increased freight rail service along the BNSF main line, as well as an increase in the number of passenger trains serving the Portland to Seattle and Seattle to Vancouver, BC routes. Increased freight transport capacity will be of significant benefit to the Port of Tacoma and regional port related industries.

Specific rail line improvements in the Lakewood vicinity include a second track from South 66th Street in Tacoma south past the new Lakewood Station and Bridgeport Way SW crossing, and safety upgrades to at-grade crossings along the alignment. In addition, Sound Transit will be installing improvements, including a layover facility between 100th Street SW and Steilacoom Boulevard SW, as part of the Sound Transit Lakewood Station project.

Construction of the proposed improvements is anticipated to begin in late 2007 with completion scheduled for early 2010.

Impacts to the City of Lakewood

Implementation of the bypass route, together with extension of Sounder commuter rail service to Lakewood, will have a noticeable impact on east-west traffic movement through the City. With the exception of Gravelly Lake Drive, all east-west arterials through the City providing access to Interstate 5 include at-grade crossings of the railroad line, which will be blocked by train traffic for some time each day.

The City Engineer will also be evaluating specific safety issues and noise impacts at each at-grade crossing.

Role of the City of Lakewood

The City was first advised of the bypass proposal in a letter from WSDOT received August 25, 2006. The City Council was advised of the project in the City Manager weekly bullets on September 15, 2006. WSDOT is currently conducting an environmental analysis of the project under both the state SEPA and federal NEPA statutes. The City will review and comment on the environmental aspects of the project as part of the SEPA/NEPA process, however the City does not have the ability to assert any substantive authority over the project. The City is expressly preempted with regard to practices, routes, services, and the construction, acquisition, and operation of tracks or facilities of rail carriers by the Interstate Commerce Commission Termination Act (ICCTA), 49 U.S.C. §§ 10101-16106. This preemption is extended to the environmental review of railway projects (see *City of Auburn v. United States Government*, 154 F.3d 1025 (9th Cir. 1998) certiorari denied). In addition, municipal regulation of railroad operations through application of general traffic laws (e.g. regulation of speed or restrictions on blocking of surface streets) is further preempted by the Federal Rail Safety Act of 1970. (See *City of Seattle vs. Burlington Northern Railroad Company*, 145 Wn.2d 661, March 2002.)

Based on the above described limitations on the City's authority, the City should nevertheless cooperate in good faith with WSDOT to attempt to mitigate identified traffic and other impacts through the environmental review process. Specific mitigation measures have not been identified at this time, but the City should request cooperation from WSDOT in implementing any such mitigation measures that may be identified in the

future. It is expected that required mitigation measures will include more robust gate systems and improved traffic signal coordination and programming at crossings.

Construction of grade separated crossings is very expensive (\$15-20M) and not currently contemplated as a part of the bypass project. The decision to invest in a grade separation structure is a complex question of economics. The City should make a preliminary evaluation of the costs and benefits of grade separated crossings as background for its comments on the environmental assessment for the bypass project. If grade separated crossings or other infrastructure improvements are found to be warranted to improve traffic circulation and/or safety (above and beyond what WSDOT implements as a part of this project) the City could pursue funding in cooperation with WSDOT and other agencies to implement such improvements.

One mitigating action the City can initiate will be to establish "Quiet Zones" as permitted under the Federal Railroad Administration's Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings. This process requires the City to work with the FRA to select crossings to be included in proposed quiet zones, perform safety analysis at affected crossings, install signage and "supplemental safety measures" as required by the FRA, file notifications with the FRA and update the USDOT Grade Crossing Inventory. This action would waive horn sounding requirements in the selected zones, and help mitigate the noise impacts that would otherwise be experienced from the use of horns at the selected crossings.

Lakewood City Council Study Session Briefing

Kevin Jeffers provided a briefing to the Lakewood City Council at a Study Session that began at 7 PM on Monday, November 13, 2006 in City Council Chambers. The briefing and discussion lasted about one hour.

What was the purpose of the meetings?

The purpose of the briefing was to describe the bypass project and to receive input on issues and concerns from the City Council.

Mr. Jeffers provided a copy of the Pt. Defiance Bypass Project folio to the City Council along with a project handout. During his remarks, he referred to two map boards that showed the bypass route from Tacoma through Lakewood and DuPont to the Nisqually River.

Who attended the meetings?

Five members of the Lakewood City Council participated in the Study Session, including John Arbeeny (Deputy Mayor); Pad Finnigan; Walter Neary; Claudia Thomas (Mayor); and Ron Cronk. City Manager Andrew Neiditz also participated.

Project team members who accompanied Mr. Jeffers were Rail Office staff Elizabeth Phinney (Environmental Coordinator) and Abe Sahari (Engineer) and consultant Vicki King, public information specialist.

What were the main issues, concerns, comments and questions?

The main issues, concerns, comments and questions about the project follow.

General Comments and Questions

Comment: Talk to us about coordination with Sound Transit and alignment and timing of the Sound Transit Project and the Pt. Defiance Bypass.

Question: Does this project deal only with passenger service?

Question: Will the trains stop in Lakewood?

Question: Is there any advantage to Lakewood to having this go through the city?

Question: Who else would use this line? What about freight use of the line?

Question: Do we have a voice in this or will the state do this anyway? If we were to say we didn't want this project, could we do that? What's in this for Lakewood? It seems like it's disruption with no real advantages for the city. Could the City charge a utility fee for use of the right of way?

Question (to City Manager): When did the City become aware that this project would be added to the Sound Transit project? What is our obligation? Do we have a voice or are we just observers?

City Manager's Response: WSDOT briefed staff several months ago. The purpose of tonight's briefing is to make you aware of the proposal and to get your questions. With respect to the choices, the city is not being asked to concur.

Question: How many people fill a trip from north to south?

Question: How are you dealing with cities?

Community Development Department comment: Staff will use the environmental review process to analyze the project and its impacts and will propose changes to make it work well along with mitigations measures. The process will be similar to the way we have dealt with Sound Transit.

Question: How long does the train take to get to Portland? If I want to go to Portland by train, how would I do it?

Question: Has there been any consideration of making the Sound Transit station in Lakewood an Amtrak stop?

Issues and concerns

Question: How many times will we have to stop traffic in town?

Question: Will the noise study assess the impacts to nearby residents?

Question: What hours will the trains go through – earliest and latest?

Question: Exactly how long would the gates be down? Please give us the answer.

Comment: We regularly kill people with freight trains that are slower than these passenger trains. With trains traveling at 79 mph, we would have to lower gates miles early which would cause a problem at Bridgeport. Drivers could be stuck on the tracks because of the lights, with no way to get out of there. A second point is that most of the track has no fencing or restrictions to prevent people from crossing or walking along the tracks. What will you do about this? This isn't just a railroad problem; it's a traffic control problem which could cause a potential catastrophe.

Comment: At Bridgeport you will need lights to keep vehicles from getting onto the tracks. It's also a question of where the traffic lights are placed, to prevent vehicles from getting onto a crossing and to allow those who are on it to get out.

Funding

Comment: We're getting only six minutes of savings for \$60 million? That works out to \$10 million per minute. It's an expensive way to save six minutes. What has the \$90 million previously invested in the corridor gotten us?

Question: Who's paying for this? How much is Amtrak contributing?

Question concerning a caveat on p. 8 of the handout with respect to increasing construction costs: How far off is your estimate? What's the status of funding? Do you expect an adjustment for this project because of construction costs? If the Governor or State Legislature took money out of your budget, could you still build this project?

Impacts to Businesses/Right of Way Issues

Question: Will the second track you are adding in Lakewood affect customary operations of businesses along Pacific Highway, especially at Ponders Corner, where they use railroad right of way for parking and dumpsters?

Question: Will you build the second track on the east or west side of the tracks?

Question: Does the current right of way accommodate the second track?

At the conclusion of the briefing and discussions, a City Councilmember thanked Mr. Jeffers for providing the briefing and responding to the tough questions.

WSDOT PROJECTS

"Washington's Future Just Got Better"

MAKING EVERY DOLLAR COUNT.

Funded in part by the 2005 Transportation Partnership Project Program.

PROJECT INFO

- [Project Home](#)
- [Project Map](#)
- [Get Involved](#)
- [WSDOT Rail](#)

QUARTERLY REPORT

- [June 2006](#)
- [March 2006](#)
- [December 2005](#)

Rail - Point Defiance Bypass

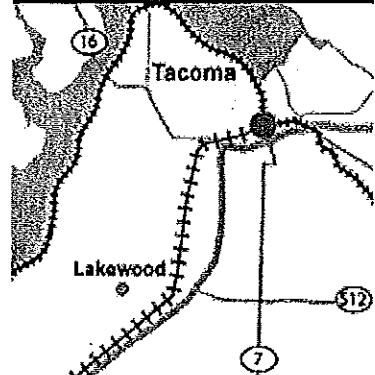
Project Status

November 2006

The environmental and design process began in July 2006. Construction is scheduled to begin in late 2007 with completion scheduled for early 2010.

An informational open house will be held on Tuesday, November 14, from 4:30 p.m. to 7:30 p.m., in the Commissioners Room of Lakewood Fire Station 20, 10928 Pacific Highway Southwest.

PLANNING DESIGN CONSTRUCTION COMPLETE



[Click to enlarge map](#)

Overview

The proposed route of this WSDOT project is the same route that Sound Transit will use to extend Sounder commuter rail service to Lakewood.

The two agencies are working cooperatively to develop this alternate route.

Why is WSDOT building tracks for passenger trains to bypass the Pt. Defiance area in Tacoma?

Currently passenger trains, including Amtrak Cascades, must slow down to use the curved BNSF Railway main line along Puget Sound and the single-track tunnels under Pt. Defiance.

This project re-routes passenger trains from those tracks to an inland route on an existing rail line that runs along the west side of Interstate 5 (I-5), from south Tacoma through Lakewood and DuPont. The bypass reconnects back to the BNSF Railway main line near Nisqually, on the east side of I-5.

Most freight trains will continue to use the existing main line along Pt. Defiance. Current freight traffic on the bypass route will remain unchanged by the project.

The End Result

The end result is faster, more reliable Amtrak Cascades service.

The improvements will allow Amtrak trains to use the bypass route without being delayed by freight or Sounder trains. This will reduce travel times by six minutes between Seattle and Portland.

Project Benefits

- Improved Amtrak Cascades reliability
- Faster, more frequent Amtrak Cascades service

What is the project timeline?

The environmental and design process began in July 2006. Construction is scheduled to begin in late 2007 with completion scheduled for early 2010.

An informational open house will be held on Tuesday, November 14, from 4:30 p.m. to 7:30 p.m., in the Commissioners Room of Lakewood Fire Station 20, 10928 Pacific Highway Southwest.

Project Facts

- Currently passenger trains must slow down to use the curved tracks along Puget Sound and the single-track tunnels under Pt. Defiance.
- This project will build a bypass so that passenger trains can avoid those areas.
- Most freight trains will continue to use the existing tracks in the Pt. Defiance area.

Public Involvement

Your thoughts and opinions are important to us. The environmental process will include many opportunities for the public to help shape the design of the project. Contact the WSDOT Rail Office for more information.

Environmental Protection

As WSDOT works with partners to identify, plan, and design construction projects aimed at expanding passenger rail service, detailed environmental review is undertaken for each project. For major construction projects, an environmental impact statement is often necessary. Precise environmental issues have not been defined at this time.

In addition to the EIS process, WSDOT will coordinate with local tribes, Nisqually National Wildlife Refuge, the cities of Tacoma and Lakewood, and Fort Lewis Army Base.

Please visit the WSDOT Environmental Services Web site for more information.

Increasing safety is one of our priorities

Several at-grade crossings in the project area will be evaluated for safety-related improvements.

Will this project impact tribal resources?

WSDOT is consulting with the Nisqually Tribe, Puyallup Tribe, Snoqualmie Nation, and Squaxin Island Tribe on this project.

Financial Information

This project is funded through the following sources:

- **2005 Partnership Funding (Weight Fees)** - \$52.512 million
- **2003 Legislative Transportation Package (New & Used Vehicle Sales Tax)** - \$7.072 million
- **Total Funding From All Sources - \$59.584 million** (This does not include work by Sound Transit on this route)

Due to the state and national experience in cost escalation of construction materials and fuel, WSDOT is re-evaluating project cost estimates. These updated cost estimates will be incorporated into WSDOT's 2007-2009 Budget request to the Governor.

How can I get more information?**Contact:**

Kevin Jeffers, P.E.

Rail Engineering Manager

PO Box 47387

Olympia, WA 98504-7387

Phone: 360.705.7901, or toll-free 1.800.822.2015 (in Washington State)

E-mail: rail@wsdot.wa.gov

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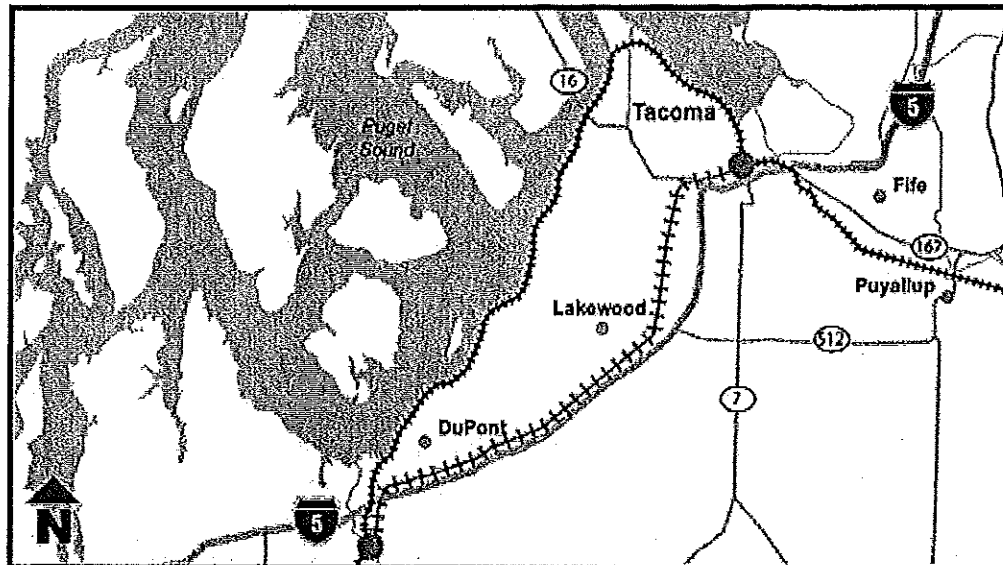


WSDOT PROJECTS

PROJECT INFO

- [Project Home](#)
- [Project Map](#)

Point Defiance Bypass - Project Map



Currently passenger trains must slow down to use the curved tracks along Puget Sound and the single-track tunnels under Pt. Defiance. This project will build a bypass so that passenger trains can avoid those areas. Most freight trains will continue to use the existing tracks in the Pt. Defiance area.

The proposed route of this WSDOT project is the same that Sound Transit will use to extend Sounder Commuter Rail service to Lakewood.

After both projects are completed, Amtrak trains and Sounder Commuter Rail will share the route with freight trains.

How can I get more information?

Contact:

WSDOT Rail Office

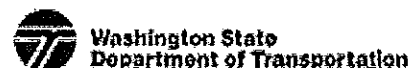
PO Box 47387

Olympia, WA 98504-7387

Phone: 360.705.7901, or toll-free 1.800.822.2015 (in Washington State)

E-mail: rail@wsdot.wa.gov

Rail - Point Defiance Bypass

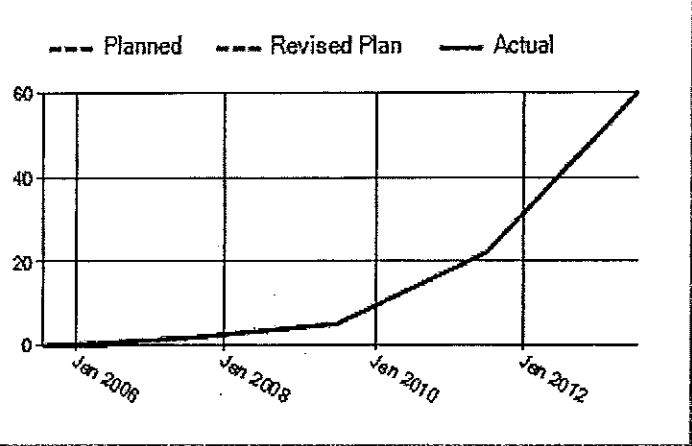


Quarterly Project Report Update for Quarter Ending December 2005

Project Title & Location Pt Defiance Bypass-Phase 1, Pierce Co., WA		Project Description Constructs and upgrades part of the mainline tracks along a 20-mile corridor for passenger service. Results in 6-minute reduction in Seattle-Portland schedule.	
Contractor/Consultant Sound Transit, Seattle, & Tacoma Rail, Tacoma			
Recent Progress WSDOT has developed a phased plan for the project using existing state funds. Phase 1 will construct improvements that will allow Amtrak Cascades trains to use the bypass route without being delayed by freight or Sounder commuter trains. This will also reduce travel times between Seattle/Tacoma and Portland by six minutes. Completion of Phase I creates additional main line capacity for the Union Pacific Railroad and the BNSF Railway. The freed up capacity comes from the elimination of eight daily passenger trains on the congested main line between the Port of Tacoma and Nisqually. The added main line capacity supports the broader public sector goal of improved freight mobility. Sound Transit and WSDOT have discussed cost sharing and joint construction of this project. However, the two agencies have different timelines for construction. Sound Transit intends to complete their project by the end of 2007. State funds for construction on the shared rail line do not become available until mid-2007 (\$3.5 million), mid-2009 (\$16.9 million), and mid-2011 (\$37.4 million). This will prevent the two agencies from constructing the projects simultaneously and potentially reducing costs for both Sound Transit and WSDOT. The lack of coordinated investments will cause Sound Transit to design and build only for its needs. When WSDOT funding becomes available, major components of the Sound Transit work will need to be redone to provide for both Sounder commuter service and Amtrak Cascades intercity service. Recently, Sound Transit and WSDOT began exploring the feasibility of constructing a new grade separation in downtown Tacoma that would support more efficient passenger train operations and ensure public safety. WSDOT has met with Sound Transit to discuss preliminary cost estimates for the structure and the acquisition of additional land. However, neither agency has funds for a Pacific Avenue grade separation. If additional funding can be secured for this grade separation project, it would solve operational challenges associated with the current alignment and eliminate two at grade crossings on Pacific Avenue and South Tacoma Way. WSDOT has asked the Governor and the Washington State Legislature to move project funds from the 2009-2011 and 2011-2013 biennia forward so that WSDOT and Sound Transit could coordinate the design and construct the rail line at the same time and maximize the value of public funds. Further, accelerating this investment would separate freight and passenger around the Port of Tacoma sooner than currently planned, which will support both public and freight mobility in the region.			
Design Construction Impacts The construction impacts have not been determined.			
Environmental Impacts / Compliance The environmental impacts have not been determined.		Impacts to Traffic Impacts to rail and roadway traffic have not been determined.	
Project Milestones	Scheduled	Attained	Milestone Outlook
Engineering Complete	Jun 2009		
Right-of-Way Purchased	Jun 2011		
Construction Begins	Jul 2010		
Construction Complete	Jun 2013		
Project Cost Summary:	Dollars in millions	Percent of Total	Planned vs. Actual Expenditures (Total Project Cost)
Preliminary Engineering	\$5.9	10%	
Right-of-Way	\$0.2	0%	
	\$48.0	89%	

DB02 - 240

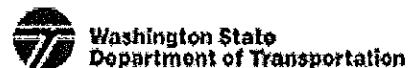
Construction		
Funded Project Costs	\$53.5	100%
Nickel funds included in above costs	\$13.7	
2005 Transportation Partnership Account		



For more information, go to www.wsdot.wa.gov/projects

Kevin Jeffers at 360-705-7982 or E-mail: rail@wsdot.wa.gov

Rail - Point Defiance Bypass



Quarterly Project Report Update for Quarter Ending March 2006

Project Title & Location Pt Defiance Bypass-Phase 1, Pierce Co., WA	Project Description Constructs and upgrades part of the mainline tracks along a 20-mile corridor for passenger service. Results in 6-minute reduction in Seattle-Portland schedule.
Contractor/Consultant Sound Transit, Seattle, & Tacoma Rail, Tacoma	

Recent Progress
WSDOT has developed a phased plan for the project using existing state funds. Phase 1 will construct improvements that will allow Amtrak Cascades trains to use the bypass route without being delayed by freight or Sounder commuter trains. This will also reduce travel times between Seattle/Tacoma and Portland by six minutes.

Sound Transit and WSDOT have discussed cost sharing and joint construction of this project. However, the two agencies have different timelines for construction. Sound Transit intends to complete their project by the end of 2007. State funds for construction on the shared rail line do not become available until mid-2007 (\$3.5 million), mid-2009 (\$16.9 million), and mid-2011 (\$37.4 million). This will prevent the two agencies from constructing the projects simultaneously and potentially reducing costs for both Sound Transit and WSDOT.

Recently, Sound Transit and WSDOT began exploring the feasibility of constructing a new grade separation in downtown Tacoma that would support more efficient passenger train operations and ensure public safety. WSDOT has met with Sound Transit to discuss preliminary cost estimates for the structure and the acquisition of additional land. However, neither agency has funds for a Pacific Avenue grade separation. If additional funding can be secured for this grade separation project, it would solve operational challenges associated with the current alignment and eliminate two at grade crossings on Pacific Avenue and South Tacoma Way.

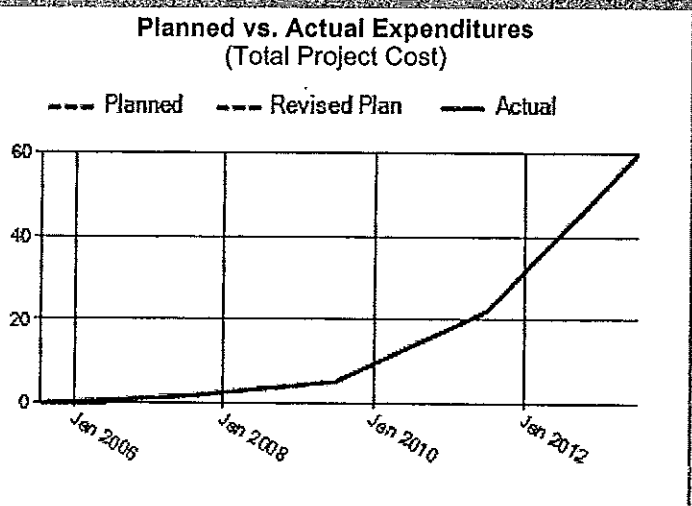
The Washington State Legislature has moved project funds from the 2009-2011 and 2011-2013 biennia to 2007-2009 so that WSDOT and Sound Transit could coordinate the design and construct the rail line at the same time and maximize the value of public funds.

Design Construction Impacts
The construction impacts have not been determined.

Environmental Impacts / Compliance The environmental impacts have not been determined.	Impacts to Traffic Impacts to rail and roadway traffic have not been determined.
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Project Milestones	Scheduled	Attained	Milestone Outlook
Engineering Complete	Jun 2009		
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Construction Complete	Jun 2013		

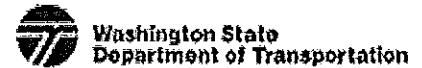
Project Cost Summary:	Dollars in millions	Percent of Total
Preliminary Engineering	\$5.9	10%
Right-of-Way	\$0.2	0%
Construction	\$48.0	89%
Funded Project Costs	\$53.5	100%
Nickel funds included in above costs	\$13.7	
2005 Transportation Partnership Account		



For more information, go to www.wsdot.wa.gov/projects

Kevin Jeffers, Rail Engineering Manager at 360-705-7982 or E-mail: jefferk@wsdot.wa.gov DB02 - 242

Rail - Point Defiance Bypass



Quarterly Project Report Update for Quarter Ending June 06

Project Title & Location Pt Defiance Bypass-Phase 1, Pierce Co., WA		Project Description Constructs and upgrades part of the mainline tracks along a 20-mile corridor for passenger service. Results in 6-minute reduction in Seattle-Portland schedule.	
Contractor/Consultant Sound Transit, Seattle, & Tacoma Rail, Tacoma			
Recent Progress WSDOT has developed a phased plan for the project using existing state funds. Phase 1 will construct improvements that will allow Amtrak Cascades trains to use the bypass route without being delayed by freight or Sounder commuter trains. This will also reduce travel times between Seattle/Tacoma and Portland by six minutes. In the 2006 Supplemental budget, the Washington State Legislature moved project funds from the 2009-2011 and 2011-2013 biennia to 2007-2009 so that WSDOT and Sound Transit can coordinate the design and construct the rail line at the same time and maximize the value of public funds. WSDOT began this effort and has initiated Pre-Construction Engineering and environmental documentation. The department is seeking to advance more funds for Pre-construction Engineering in the current biennium, making the total 2005-2007 biennium budget \$5.64 million for this project. This will allow continued coordination with Sound Transit, guarantee the construction of the WSDOT project is completed prior to Sound Transit starting service to Lake wood, and possibly reduce costs of both projects. Because of the delay of the "Everett - Delta Jct. Curve Realignment and Delta Yard Storage Tracks" project in the current 2005-2007 biennium, the department has proposed to advance \$2.965 million in 2003 "Nickel" funds for this project from the 2007-2009 biennium. In addition, the delay of the "Chehalis Jct. to Blakeslee Jct." project, the deletion of the "Mukilteo Temporary Sounder Station" project, and through adjustments to the budget from "Swift Customs Facility Capacity Improvements" project, the department also proposes to advance \$900,000 in 2005 Transportation Partnership funds for this project from the 2007-2009 biennium. If the funds are not advanced, the beginning of construction will be delayed by 6 to 12 months. These actions require approval by the Office of Financial Management.			
Design Construction Impacts The construction impacts have not been determined.			
Environmental Impacts / Compliance The environmental impacts have not been determined.		Impacts to Traffic Impacts to rail and roadway traffic have not been determined.	
Project Milestones	Scheduled	Attained	Milestone Outlook
Engineering Complete	Jun 2009		
Right-of-Way Purchased	Jun 2011		
Construction Begins	Jul 2010		
Construction Complete	Jun 2013		
Project Cost Summary:	Dollars in millions	Percent of Total	Planned vs. Actual Expenditures (Total Project Cost) --- Planned --- Revised Plan — Actual
Preliminary Engineering	\$5.9	10%	
Right-of-Way	\$0.2	0%	
Construction	\$48.0	89%	
Funded Project Costs	\$53.5	100%	
Nickel funds included in above costs	\$13.7		
2005 Transportation Partnership Account			

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Washington State
Department of Transportation



Pt. Defiance Bypass Project

November 2006

Pt. Defiance Bypass

What is the Pt. Defiance Bypass Project?

The project is located along an 18-mile corridor owned by Sound Transit. It includes:

- A new second track between South Tacoma and Lakewood.
- New rails, ties, and ballast between Lakewood and Nisqually.
- Improved connection to the main line near Nisqually.
- Safety improvements at several road/rail (at-grade) crossings, where the rail line and the road cross one another at the same level.

Part of the proposed route of this WSDOT project is the same route that Sound Transit will use to extend Sounder commuter rail to Lakewood.

What is the purpose of the project?

- Improve Amtrak *Cascades* reliability. Passenger trains will not have to share the tracks with freight trains in this area.
- Provide faster and more frequent Amtrak *Cascades* service. Speeds will be increased up to 79 mph, reducing travel times between Seattle and Portland by six minutes. This will then allow for additional Amtrak *Cascades* trains in the future.
- Allow increased freight rail service around Pt. Defiance and along southern Puget Sound by eliminating passenger trains from the BNSF Railway main line.

Why is WSDOT re-routing Amtrak trains away from Pt. Defiance?

Passenger trains must slow down due to curves and single-track tunnels on the BNSF Railway main line tracks around Pt. Defiance and along southern

Puget Sound. This project re-routes passenger trains to a bypass on an existing rail line. The bypass runs along the west side of Interstate 5 (I-5), from south Tacoma through Lakewood and DuPont, and reconnects with the BNSF Railway main line east of I-5, near Nisqually.

- This project provides more reliable Amtrak *Cascades* service.
- WSDOT and Sound Transit are working together to save time and money.

Why is WSDOT building the bypass?

Currently passenger and freight trains share the same route. This results in unreliable, limited, and slower service because:

- The curved tracks along southern Puget Sound require passenger trains to move more slowly.
- The Nelson Bennett and Ruston tunnels near Pt. Defiance are both single-track, limiting the number of trains that can operate on this route.
- The longer route, around Pt. Defiance and along southern Puget Sound, increases travel times for passenger trains.

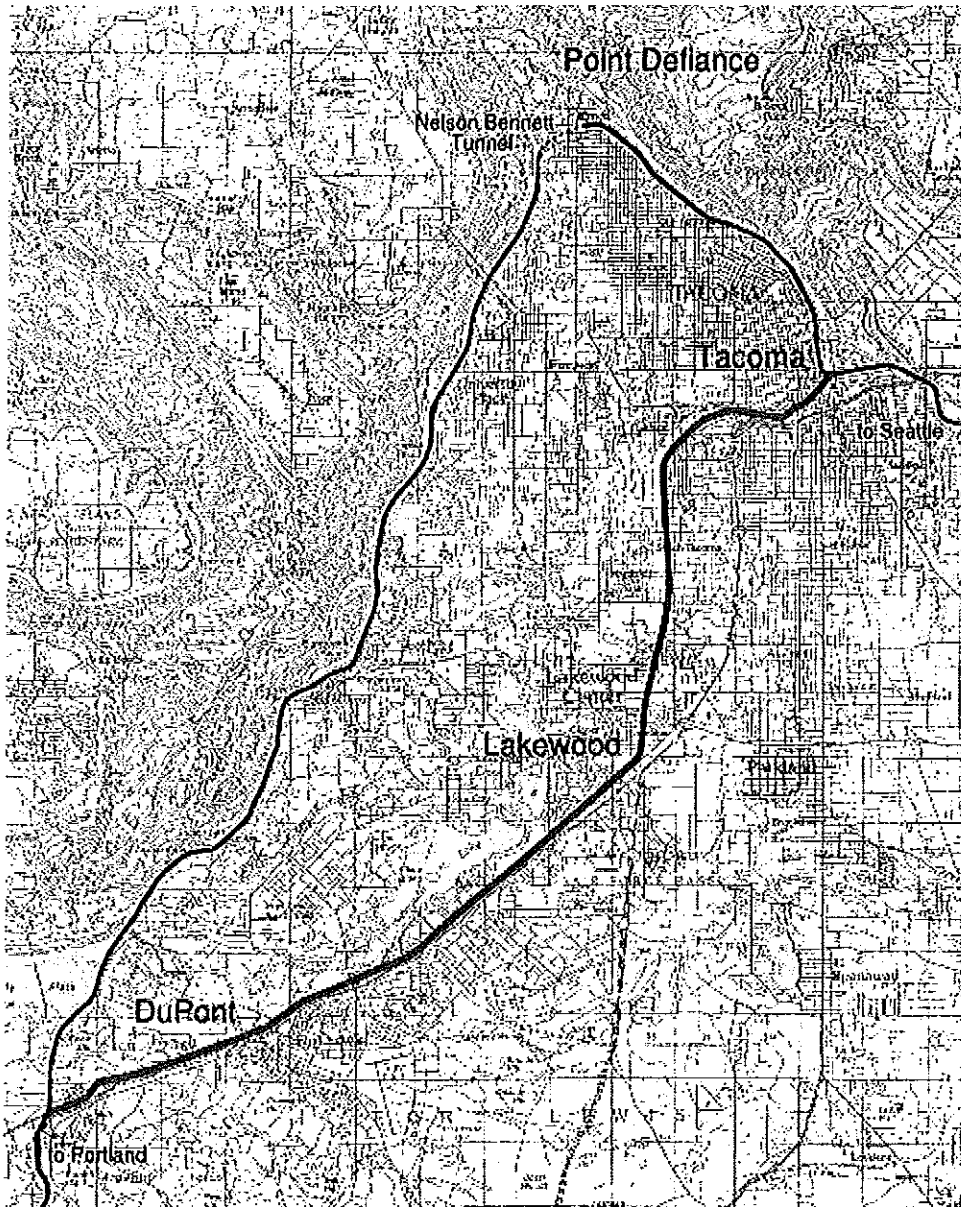
How is the project funded?

This project is funded through the following sources:

2005 Partnership Funding (Vehicle Weight Fees)	\$52,512 million
2003 Legislative Transportation Package (New & Used Vehicle Sales Tax)	\$7.072 million
Total funding from all sources*	\$59,584 million

*This does not include work by Sound Transit on this route.

Note: Due to the state and national experience in cost escalation of construction materials and fuel, WSDOT is re-evaluating project cost estimates. These updated cost estimates will be incorporated into WSDOT's 2007-2009 Budget Request to the Governor.



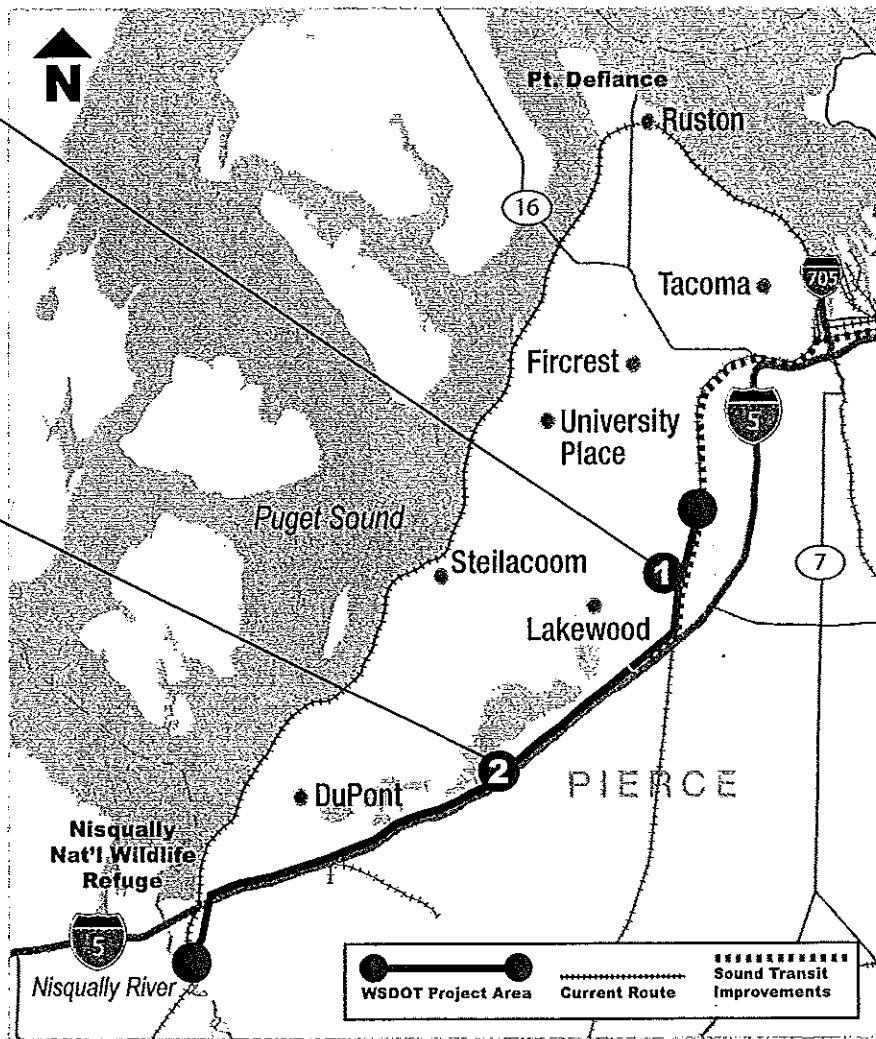
WSDOT Improvements

Segment 1:

- Constructs second track from South 66th Street, past Lakewood Station and Bridgeport Way.
- Safety upgrades and improvements to at-grade crossings to accommodate the second track, so trains can travel up to 79 mph.

Segment 2:

- Upgrades tracks from Nisqually to Mounts Road, so trains can travel up to 40 mph.
- Upgrades tracks from Mounts Road to Bridgeport Way, so trains can travel up to 79 mph.
- Improves existing connection to BNSF Railway main line, so trains can travel up to 40 mph.
- Safety upgrades at five road/rail (at-grade) crossings, so trains can travel up to 79 mph.



Sound Transit Improvements

- Constructs new single-track connection between D Street and Chandler Street.
- Upgrades tracks between Chandler Street and new Lakewood Station, so trains can travel up to 65 mph.
- Upgrade ten road/rail (at-grade) crossings outside the WSDOT project area.
- Constructs new layover facility in Lakewood for Sounder trains to stay overnight.

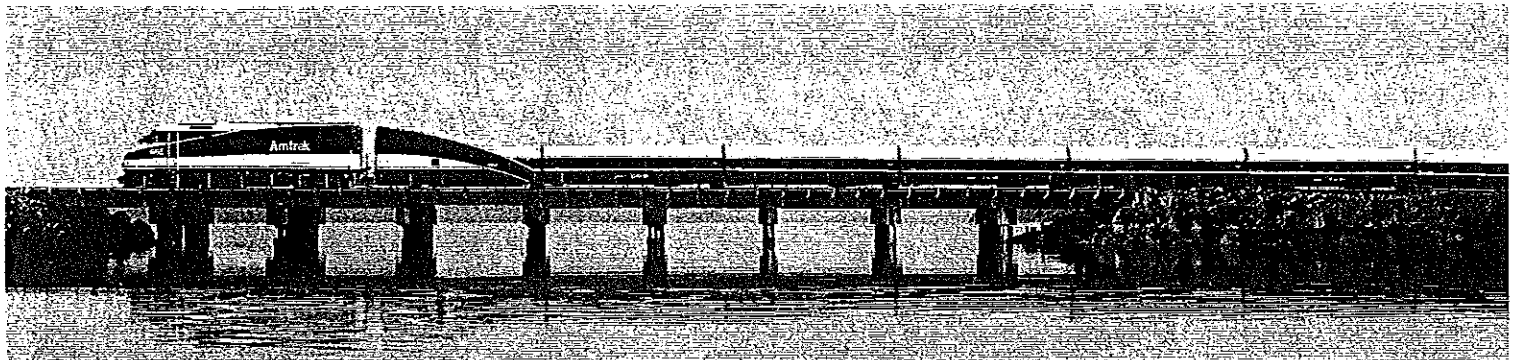
WSDOT will examine these road/rail (at-grade) crossings for safety upgrades

Location/Segment	Jurisdiction
South 74th Street/ ①	Tacoma
Steilacoom Boulevard SW/ ①	Lakewood
100th Street SW/ ①	Lakewood
108th Street SW/ ①	Lakewood
Bridgeport Way SW/ ①	Lakewood
Clover Creek Drive SW/ ②	Lakewood
North Thorne Lane SW/ ②	Lakewood
Berkeley Street SW/ ②	Lakewood
41st Division Drive/ ② (entrance to North Ft. Lewis)	Fort Lewis
Barksdale Avenue/ ② (aka Dupont-Steilacoom Road)	Pierce County

What is the current schedule?

Environmental and Engineering	Began Summer 2006
Public and Agency Open House	November 2006
Environmental Assessment for Public Review	June 2007
Complete Environmental Process	November 2007
Final Design and Permitting	2007
Begin Construction	2007-2010

Pt. Defiance Bypass



For More Information

Kevin Jeffers, P.E.
Rail Engineering Manager

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Olympia, WA 98504-7387

Elizabeth Phinney
Rail Environmental Specialist

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www.wsdot.wa.gov/Projects/Rail/PNWRC-PtDefiance

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Washington State
Department of Transportation

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**Washington State
Department of Transportation**
Douglas B. MacDonald
Secretary of Transportation

August 23, 2006

Ms. Desiree Brown
City of Lakewood
6000 Main Street SW
Lakewood, WA 98499-5027

Subject: Request for a Meeting to Discuss the WSDOT Point Defiance
Rail Bypass Project

Dear Ms. Brown:

The Washington State Department of Transportation (WSDOT) is initiating work on a project that will re-route existing Amtrak *Cascades* passenger rail service from the current Point Defiance route to an inland route. The purpose of the project is to improve the on-time performance of the Amtrak *Cascades* service, reduce travel times between Seattle and Portland, and eliminate conflicts with freight trains.

The enclosed graphic shows the general route for the proposed bypass. Much of the proposed route is the same one that Sound Transit will use for *Sounder* service to South Tacoma and Lakewood. The WSDOT project will:

- Add a second track between South Tacoma and Lakewood
- Make improvements to the existing tracks to enable speeds up to 79 mph
- Make improvements at several grade crossings to ensure safety

We would appreciate an opportunity to meet with you in-person to discuss this project and, in particular, to get your suggestions, questions, issues, or concerns about the project. Your input will be valuable as we design and conduct the environmental review of the project in 2006 and 2007. Additional information about the project is available at www.wsdot.wa.gov/Projects/Rail/PNWRC_PtDefiance/.

I will call you next week to discuss a convenient time to meet. If you have any questions, please feel free to contact me at 360-705-7902 or phinnee@wsdot.wa.gov. I look forward to talking with you soon.

Sincerely,

Elizabeth Phinney

Elizabeth Phinney
Rail Environmental Specialist

EP:trg
Enclosure

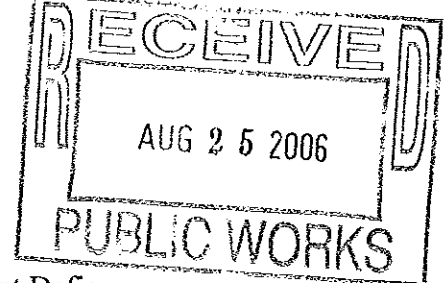
Handwritten: Dan- Are you the planner to be assigned to this? -Desiree
Dave just said so !!

Handwritten: verify w/ Deborah - k?

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300

360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

Handwritten: 9/14
9/15



Handwritten: Construction in mid 2007
Completion mid 2009
\$60 million

Point Defiance Bypass Project – Phase I

