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June 13, 2016

VIA EMAIL AND OVERNIGHT MAIL

Millennium Bulk Terminals EIS, c/o ICF International
710 Second Avenue, Suite 550
Seattle, WA 98104

Re: Comments in Response to Publication of Draft Environmental Impact Statement; Millennium Bulk Terminals

To Whom It May Concern:

Through this letter, BNSF Railway Company ("BNSF") provides comments in response to the publication of a Draft Environmental Impact Statement ("DEIS") for the Millennium Bulk Terminals--Longview ("the Project").

In comments made to date regarding the Project, certain parties have suggested that the geographic scope of analysis under Washington State Environmental Policy Act ("SEPA") should extend well beyond the Project area in order to address the effects of train traffic and other purported impacts in localities throughout Washington State or even other states. For the reasons provided below, BNSF believes that extending the geographic scope of analysis beyond the area impacted by the Project would be inappropriate, and in conflict with applicable agency policies and regulations.

In particular, BNSF is concerned with any decision making whether to approve the Project based on potential impacts resulting from interstate commerce moving into Washington. As you are aware, Article I, Section 8, Clause 3 of the United States Constitution grants to the United States Congress the power "To regulate commerce with foreign nations, and among the several states, and with the Indian Tribes." Further, the Interstate Commerce Commission Termination Act, *49 U.S.C.A. §10101 et seq.*, gives exclusive jurisdiction to the Surface Transportation Board ("STB") over "the construction, acquisition, operation, abandonment, or discontinuance of spur, industrial, team, switching, or side tracks, or facilities, even if the tracks are located, or intended to be located, entirely in one state. *49 U.S.C. § 10501(b)*. This federal scheme ensures that interstate rail operations occur in a safe, reliable manner that protect interstate commerce. Consequently, BNSF believes the Co-Lead Agencies should defer to the STB and Federal Railroad Administration consideration of the interstate rail system.

Leaving aside these federal law issues, it appears from reading the DEIS that virtually the entire document focuses on the impacts to the State of Washington from a maximum of eight

loaded trains per day moving in interstate commerce to the Longview, Washington. It is difficult to understand how this particular train traffic triggers a statewide study of the interstate rail system. This seems to be a significant over-reach. It is also worth noting that the DEIS fails to discuss the benefits to Washington's ports that come from being rail-served, including the environmental and economic benefits.

The Co-Leads should take note that the Pacific Northwest Rail Corridor Environmental Assessment, written and approved by Washington Department of Transportation and the Federal Railroad Administration, two agencies with far more expertise on rail issues, found that adding eight trains to the BNSF system in the same geographic area resulted in no environmental impacts (See additional reference below under "Terrestrial Wildlife").

I. Scope of Environmental Review

SEPA and NEPA regulations require an analysis of the direct and indirect effects of the proposed action. *See* WAC 197-11-060(4)(d); 40 C.F.R. § 1508.8. However, both SEPA and NEPA regulations limit analysis of impacts to those which are "reasonably foreseeable" and not merely speculative. *See* WAC 197-11-060(4)(a); 40 C.F.R. § 1508.8(b). Moreover, SEPA expressly requires consideration of environmental impacts that are "likely, not merely speculative." *See* WAC 197-11-060(4)(a).

Courts applying these regulations have held that "remote" or "speculative" impacts do not require analysis. An impact is "reasonably foreseeable" if it is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision." *See Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir.1992). *See also City of Shoreacres v. Waterworth*, 420 F.3d 440, 453 (5th Cir. 2005). "Reasonable foreseeability" does not include "highly speculative harms" that "distort the decision making process" by emphasizing consequences beyond those of "greatest concern to the public and of greatest relevance to the agency's decision." *See City of Shoreacres*, 420 F.3d at 453. *See also Cheney v. Mountlake Terrace*, 87 Wash.2d 338, 344 (1976).

Contrary to assertions contained in the DEIS, it is speculative and not reasonably foreseeable that construction of the Project will cause train traffic to increase on any particular line in the State. As discussed in more detail below, the statewide increase in train traffic is not attributable to the Project or any other specific commodity movement, and is in fact subject to many diverse factors

II. Rail Capacity in Washington

Although the Project has projected receiving up to eight unit trains per day, should the terminal ever reach full capacity, depending upon market conditions, it is speculative and not reasonably foreseeable that construction of the Project will cause train traffic to increase on any particular portion of the state's rail system.

One simply cannot make that definitive statement unless one knew how many other trains per day were traveling on a particular rail route at specific point in time in the future, which is simply not possible and explained in further detail below.

The method in which the DEIS approaches train growth projections is equally disingenuous. There are two ways to build growth projections of train traffic:

a) From an existing base, ground up, adding reasonably foreseeable projects and their associated estimated train traffic (a + b+ c…),
   or

b) Macro economically, where expected growth factor percentages (economic, population, etc.), essentially provide a big picture approach to predicting how many projects will likely be added.

Accuracy is compromised, however when one combines these two methods, (using a macroeconomic approach to predict a background growth rate and then adding projects on top of that, since it is those very added projects that were built into the macroeconomic assumptions in the first place, basically resulting in overstating the results. This is because the macroeconomic growth rate occurs only because various projects are built to accommodate capacity needs.

According to the Federal Highway Administration, current trends, as discussed further below on page 10, indicate that train traffic will realize a Compounded Annual Growth Rate (CAGR) of 13% per year over the next 25 years. This projection already includes any increases associated with commodity shipment to the proposed terminal.

Moreover, the 2013-2035 Washington State Rail Plan (SRP) predicts an even greater growth in train traffic over a shorter time period, essentially doubling or a 100% increase in less than 20 years. (See page 11 for additional information on the Washington SRP.)

To summarize this point, and allthough it seems like an easy answer to say that a project adding eight loaded trains to the system will automatically result in an increase of eight trains to overall traffic, this is an oversimplification and clear error, as discussed above. Traffic ebbs and flows, as particularly evidenced by the recent decline in overall rail shipments nationally. (See AAR report of June 1, 2016; https://www.aar.org/newsandevents/Press-Releases/Pages/2016-06-01-railtraffic.aspx) and eight freight trains per day are insignificant relative to BNSF's overall traffic.

Due to this dynamic nature of train traffic, no statewide overall increase in train traffic is attributable to the Project or any other specific commodity movement. No credible evidence indicates that this proposed project would cause actual increased train traffic throughout Washington. This dynamic nature is affected by many factors, including but not limited to the following:

- A diverse set of customers each with variable schedules
- Markets driven by global supply, commodity prices, and demand factors

- Competing modal choices, which themselves are influenced by factors such as highway congestion
- Population growth and the resultant demand for BNSF's transportation services
- Energy and environmental efficiencies of freight rail
- Scheduling factors for individual shipments, including seasonality and weather events

These supply and demand scenarios play out across the entire rail system in the United States, as further explained below.

BNSF operates a number of rail lines and retains the right to operate over some lines that are owned and/or controlled by other railroads. Possible routes thus include BNSF rail lines and other lines that may provide more convenient transportation options. Which route a train will take on a given day depends not only on convenience or distance, but also on the numerous variables listed above. While BNSF strives to provide reliable, exceptional rail transportation services, including individual project and rail lane reviews, these diverse and complex factors do not allow for complete certainty or predictability. Therefore, the route a particular train will take or how many trains any route will need to absorb is speculative, and not subject to precise prediction.

This letter addresses the following reasons why it is impermissibly speculative to assume that the proposed Project would increase rail traffic along any particular route:

1) BNSF rail traffic is complex and variable based on a host of factors beyond our control, which makes likely predictions impossible.
2) Several independent, government studies predict that rail traffic will increase over time due to various economic conditions, such as demand for commodities of the type proposed to be shipped at the proposed terminal, with or without the proposed Project
3) BNSF already has adequate capacity on its mainline for the proposed Project.
4) Commodities will be shipped regardless of the proposed Project, either to existing or potential future terminals on the West Coast by any number of rail routes.

III. BNSF Range of Operations

BNSF Railway operates as a common carrier and is one of North America's leading freight transportation companies operating on 32,000 route miles of track in 28 states, as well as connections with Mexico via five border gateways and Canada via three border gateways, and direct service to and from British Columbia and Manitoba. BNSF Railway also employs more than 40,000 individuals and serves more than 40 ports.

BNSF is one of the top transporters of consumer goods, grain, industrial goods and low-sulfur coal that help feed, clothe, supply, and power American homes and businesses every day. BNSF and its employees have developed one of the most technologically advanced, and efficient railroads in the industry. BNSF is working continuously to improve the value of the safety, service, energy, and environmental benefits we provide to our customers and the communities we serve. This is a partnership that BNSF values tremendously, so we seek opportunities to advance our common interests of safety, opportunity, and success.

Transportation by rail provides significant economic benefits to the State of Washington. Freight rail contributes more than $28.5 billion to the state economy – accounting for more than 7.5 percent of Washington's Gross Domestic Product. More than 342,000 workers in this state depend on freight rail. In Washington alone, BNSF employs nearly 4,000 people, with a combined payroll of more than $260 million. Additional information regarding BNSF is available on our website at: www.bnsf.com.

Figure 1. BNSF Rail Network and Variability of Customer Demand

BNSF has a diverse customer base and has segmented its business into 4 main groupings: Industrial Products, Consumer Products, Coal and Agricultural Products. These business groups are further differentiated into 43 forecast groups and 178 sub-forecast groups. These customers' demands are subject to the same complex factors as those driving the economy; one segment may experience significant growth while another segment is in decline. This variability in customer demand creates considerable uncertainty with respect to the timing and volume of future transportation of specific commodities.

Other factors can also affect rail volumes over particular segments. Railroads operate in a competitive marketplace. We compete with other modes: trucks and barge as well as other rail carriers. Business shifts between modes and carriers based on price, service, capability, and reliability. These shifts can be meaningful and can have major impacts to our network volumes.

Freight rail traffic is very dynamic and unlike passenger service, it does not adhere to a fixed schedule or particular route. In general, freight trains can go any direction, at any time. Which route a freight train will take on a given day depends not only on convenience or distance, but also on other numerous factors, including weather events, customer needs, market demands,

etc. BNSF's three existing east-west routes through Washington have available capacity, as discussed further below, and offer flexibility in ensuring network fluidity.

Market demand for any of the products we transport could cause an increase in rail traffic, and that demand fluctuates as the economy currently and continuously demonstrates. Increases in train traffic associated with the proposed projects in Washington will depend on the market demand when the terminals would open. It is simply too soon to know what the demands will be when the projects open, including the Millennium Bulk Terminals Project.

It is important to remember that even if none of these projects are built, and as stated above, we expect rail traffic to continue to grow. As such, we will continue to invest in capacity improvements, as we have done in Washington and the rest of our network for years, to accommodate all of the growth in our freight business. Further detail on our capacity improvements are provided below.

To accomplish this, BNSF has processes in place that review our operational capacity by specific rail lanes on a five-year planning cycle. Timely and predictable permitting processes are important to this established capacity review procedure as well.

IV. Nationwide Freight Rail Growth Projections

As noted above, a number of independent government agencies, national associations, and transportation professionals have predicted for years that this general growth trend will continue. Several national studies (FRA, AASHTO, GAO, Global Insights) have predicted that rail traffic in the United States will increase over the next 20-25 years based on a variety of factors. Some of the major factors contributing to this estimated growth in freight rail traffic include:

- Population Growth
- Highway Congestion
- Energy Efficiency of Rail
- Environmental Benefits of Rail vs. Truck
- Increased Demand
- Need for Maintaining Global Competitiveness
- Increased Passenger Use of the Rail Network

The AASHTO study titled, "Transportation Reboot: Restarting America's Most Essential Operating System, The Case for Capacity: To Unlock Gridlock, Generate Jobs, Deliver Freight, and Connect Communities" (July 2010) emphasizes the importance of the nation's transportation system: http://www.transportgooru.com/2010/07/transportation-reboot-%E2%80%93-aashto-study-growing-freight-demands-reaching-transportation-crisis/.

> ***We have prepared this report to describe how important an efficient freight system is to the economy, the congestion already taking place, the growth in anticipated demand, and the challenge of keeping America competitive in the world economy.***

AASHTO's study makes it clear that congestion on the nation's highways is emphasizing the need for the railroads to handle more freight, stating that:

> ***In 40 years, overall freight demand will double, from 15 billion tons today to 30 billion tons by 2050. Freight carried by trucks will increase 41 percent; by rail 38 percent from today's quantities. The number of trucks on the road compared to today will also double.***

More recently, the USDOT released in October 2015 a draft National Freight Strategic Plan, which cites current Department of Transportation (DOT's) "Freight Analysis Framework" data including freight tonnage growth projections by mode.

Some excerpts are contained below and the full report can be found at: https://www.transportation.gov/freight/NFSP.

<u>Expected Growth in Freight Tonnage</u> (pg. 5):

> ***The U.S. economy is expected to double in size over the next 30 years. By 2045, the nation's population is projected to increase to 389 million people, compared to 321 million in 2015. Americans will increasingly live in congested urban and suburban areas, with fewer than 10 percent living in rural areas by 2040 (compared to 16 percent in 2010 and 23 percent in 1980). To support our projected population and economic growth, freight movements across all modes are expected to grow by roughly 42 percent by the year 2040. For example, container traffic at ports will increase steadily as the volume of imports and exports transported by our freight system more than doubles over this period. Air freight is expected to triple in response to demand for the rapid movement of high-value merchandise, while multimodal shipments are predicted to more than double.***

<u>Expected Growth in Freight Traffic</u> (pg. 23):

> ***Our freight system moves approximately 63 tons of goods per American each year. As our population grows and our economy expands, demand for freight will grow as well, placing additional strain on an already challenged transportation system. U.S. freight demand will be affected by several trends:***
>
> ***• Freight will grow across all transportation modes.***
> ***• The changing nature of our economy and population will affect where and how freight moves.***
> ***• All else being equal, growth in overall freight demand will place increased pressure on infrastructure throughout the country, with particularly significant impacts concentrated in certain areas.***
> ***• Increasing domestic energy production will have profound implications for our transportation system.***

Freight will grow across all transportation modes. Even by conservative estimates, our economy is expected to double in size over the next 30 years. As the economy grows, freight movement is forecasted to increase as well, albeit at a slower rate as measured by tonnage. Freight movements are expected to increase at a rate of approximately 1.3 percent per year, or by roughly 42 percent by the year 2040. Air freight is expected to triple in response to demand for the rapid movement of high-value merchandise, while multimodal shipments are projected to more than double. Container traffic at ports is steadily increasing. Overall, the volume of imports and exports transported by our freight system is expected to more than double in the next 30 years. This growth in trade will have implications for ports, which handle 72 percent of America's international merchandise trade by tonnage; air cargo, which handles 25 percent of our international merchandise trade by value; and intermodal carriers that move imports and exports between ports of entry and inland locations.

Rail Volumes Will Increase by 49 percent (pgs.24-25):

The volume of goods moved by rail has increased steadily since 1980, and is projected to increase by 49 percent by 2040. With increases in passenger traffic and freight demand, track congestion may increase, especially in higher-traffic passenger corridors. Growing congestion may reduce the railway network's reliability for both freight and passenger movements unless appropriate investments are made.

As previously stated, growth in freight rail traffic of all commodities has significantly increased and is projected to continue to increase. This is good for local economies and the environment, as railroads are the most environmentally efficient and cost effective way to move freight. Moving freight by rail uses less energy, reduces pollution, lowers greenhouse gas emissions and cuts highway congestion, when compared to all other transportation modes.

Figure 4 and Table 1-Tonnage of Freight Carried by Transportation Mode (millions of tons), U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) and Federal Highway Administration (FHWA) , Freight Analysis Framework (FAF), version 3.6, 2015) are attached as Appendices A and B, respectively.

In short, if rail system use did not grow to meet these economic demands, the environmental, energy, and greenhouse gas impacts from less efficient transport through trucking and airfreight would increase globally. As detailed in Appendix C-"Helping to Preserve the Natural Beauty of the Pacific Northwest", freight rail moves approximately 40% of all U.S. products but contributes only 2.3% of transportation greenhouse gases. Additional information on this topic also appears under the "Air Quality" portion of this letter

Most recently, new projections were released on March 1, 2016 by the U.S. Department of Transportation's Bureau of Transportation Statistics (BTS) and Federal Highway Administration (FHWA) stating and confirming that freight tons moving on the nation's transportation network will grow 40 percent in the next three decades while the value of the freight will almost double, increasing by 92 percent. By 2045, total freight on all modes – air, vessel, pipeline, rail, and trucks – is projected to reach 25 billion tons while the value is expected to grow to $37 trillion.

The projections are from BTS' and FHWA's latest version of the *Freight Analysis Framework* (FAF), the most comprehensive publicly available dataset of freight movement. The current estimates show that in 2015, nearly 18.1 billion tons of goods worth about $19.2 trillion were moved on our nation's transportation network. On a daily basis, 49 million tons of goods valued at more than $53 billion are shipped throughout the country on all transportation modes.

The projections show tonnage will increase, reaching 69 million tons per day by 2045, and the growth in value will outpace growth in tonnage, reaching $101 billion per day, or $37 trillion total, by 2045. This edition of FAF also includes high-growth and low-growth scenarios for 2020-2045.

The mix of commodities has been changing in recent years and is projected to continue evolving. Energy commodities were 38 percent of total tonnage in 2015, and they are projected to decline to a 31 percent share by 2045. This is mostly due to increases for other goods. Tonnage for energy goods is projected to increase 14 percent by 2045, while non-energy goods are projected to increase by 56 percent.

Trucks are by far the single most-used mode to move freight, moving 64 percent of the tonnage in 2015 and 69 percent of the value. Tonnage for trucking is forecast to grow 44 percent by 2045, and value is forecast to grow 84 percent. Tonnage for rail is forecast to grow 24 percent by 2045, and value is forecast to grow by 82 percent.

(Note: These are tonnage forecasts, not volume, which were estimated in the earlier USDOT study mentioned above.)

The *Freight Analysis Framework* includes data on the amount and types of goods that move by land, sea and air between large metropolitan areas, states and regions. It is designed to provide information on national-level freight flows across the nation's transportation network.

This information helps the public and private sectors at all levels better understand freight movement, and transportation planners use it to better target resources to improve operations or increase capacity. See Freight Analysis Framework release for summary tables. More detail on the Freight Analysis Framework is available from BTS and from FHWA at http://www.rita.dot.gov/bts/press_releases/bts013_16; https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/subject_areas/freight_transportation/faf; and http://ops.fhwa.dot.gov/freight/freight_analysis/faf/index.htm

V. The State of Washington Capacity Improvements

The Washington Department of Transportation (WSDOT) 2013-2035 State Rail Plan provides information regarding rail capacity in Washington. The plan is available at (http://www.wsdot.wa.gov/NR/rdonlyres/F67D73E5-2F2D-40F2-9795-736131D98106/0/StateRailPlanFinal201403.pdf) and provides as follows:

> *Summary of Future Demand for Rail Transportation*
>
> *How will the system operate in the future?*
>
> *The Federal Railroad Administration requires state rail plans include a rail system capacity analysis. This broad analysis is meant to show what a future rail system would look like with the anticipated freight and passenger rail growth, if no additional capacity or operational improvements were made.*
>
> ***In reality, it is anticipated the Class I railroads (BNSF and UP) and other infrastructure owners will likely address key capacity issues as they emerge.* (Emphasis added.)** *Therefore, the 2035 capacity assessment is included here to illustrate the magnitude of growth anticipated for Washington's rail system. This underscores the need for continued planning and action to address capacity and mobility concerns throughout the system.*
>
> *Washington's rail system is expected to handle more than 260 million tons of cargo by 2035— more than double the volume carried on the system in 2010. This represents a compound annual growth rate of 3.4 percent for all commodities carried on the rail system. As a result, and as shown in Figure 4.3, several rail segments are expected to require operational changes and/or capital improvements to manage anticipated freight rail volumes.*

			Tons (000)							
Origin	Destination	Mode	2010	2015	2020	2025	2030	2035	2040	2010-2040 CAGR
Idaho	WA	Rail	53	76	82	88	90	93	95	8.6%
Montana	WA	Rail	8,991	9,543	9,791	10,785	12,546	13,893	15,355	7.9%
Oregon	WA	Rail	79	149	158	162	165	171	175	12.1%
Washington	WA	Rail	3,338	4,363	4,295	4,443	4,609	4,767	4,916	5.7%
Wyoming	WA	Rail	4,218	6,687	7,900	8,944	9,320	9,381	9,330	12.0%
Total (all states)	**WA**	**Rail**	**31,942**	**50,973**	**54,468**	**60,241**	**65,411**	**70,468**	**75,078**	**13.0%**
Idaho	WA	Truck	4,074	6,013	6,890	7,310	7,686	8,038	8,732	11.5%
Montana	WA	Truck	336	452	438	438	432	428	422	3.3%
Oregon	WA	Truck	15,910	21,306	23,673	26,181	28,620	31,558	35,402	12.1%
Washington	WA	Truck	226,472	302,616	309,309	326,220	344,303	360,189	379,597	7.7%
Wyoming	WA	Truck	44	112	128	152	179	195	213	25.2%
Total (all states)	**WA**	**Truck**	**259,350**	**351,581**	**363,111**	**385,582**	**409,375**	**431,322**	**458,663**	**8.5%**

Figure 2. Washington state traffic by rail is predicted to increase steadily, for Compounded Annual Growth Rate (CAGR) of 13% by the year 2040 (Source: Federal Highway Administration).

As indicated by Figure 2., Washington state traffic by rail is predicted to increase steadily, for a Compounded Annual Growth Rate (CAGR) increase of 13% by the year 2040 (Source: Federal Highway Administration). In the 30 years from 2010 to 2040, the State of Washington is expected to grow annual truck volumes by 6.4 million trucks to 15.8 million. This 70% increase in truck traffic will result in additional highway congestion and drive additional freight to the more energy and environmentally efficient rail system.

By comparison, if and when the Project reaches full capacity, the associated train traffic would represent only a small fraction of the total transportation increase represented by the anticipated natural economic growth for Washington.

This growth in transportation enables the economies of both the state of Washington and the United States to meet the projected growth expectations of the shipping public. In 2010, freight-dependent businesses represented 44% of Washington state jobs. Likewise, the Washington Council on International Trade (WCIT) has stated that 40 percent of all jobs in Washington are tied to international trade.

VI. BNSF Capacity Commitments

BNSF has adequate capacity in the near and long term to accommodate current and anticipated future freight traffic growth in Washington. Despite assertions to the contrary, we do not have a looming regional capacity issue. The Project DEIS acknowledges these facts, , stating in part: ***"It is expected that BNSF would make the necessary investments or operating changes to accommodate the growth in rail traffic."***

(See DEIS, Section 6.3.3.1-"Rail Transportation, Pg. 6-39".

Long-term forecast such as the 2011 Marine cargo Forecasts & Rail Capacity Study and the 2006 WSDOT Capacity Study made assumptions about growth, but acknowledge they do not constitute actual predictions of when and where growth will occur. As stated above, the economy and the marketplace are the key drivers of changes in freight volumes.

The 2006 WSDOT capacity study which was conducted during BNSF's all-time volume record, was quickly thrown out of date by the Great Recession and is inconsistent with what has actually happened since then. In the 2011 Marine Cargo Forecasts & Rail Capacity Study, the conclusion is that capacity is sufficient for growth along most routes today. The two routes where potential capacity constraints are forecast under high-growth scenarios – Pasco to Vancouver and Everett to Blaine – would not experience constraint with existing capacity until after 2020, according to the study, and would come to fruition only much later under low or moderate growth scenarios.. The study indicated these potential issues are remediated with modest upgrades.

Rail improvements are made financially possible only by increased rail volume. The system ensures that the necessary private capital to refresh BNSF's physical infrastructure and capacity becomes available as necessary to provide adequate levels of service along rail lines. Therefore, BNSF invests in capacity improvements when actual traffic demand justifies the investment. This includes capital investments that are made on track covered by operating agreements through railroad Switching Companies, such as the Longview Switching Company in which BNSF holds a 50% ownership interest, subject to approval of the other owner(s).

Freight demand driven by the marketplace and the economy determine when that demand actually occurs. While BNSF plans on a multi-year basis, BNSF reviews and approves capital investments on an annual basis. We have invested for a long time on that basis, including in the state of Washington, and will continue to do so. It is the best way to ensure that capacity expansion investments are made in response to actual market needs.

It is a basic tenet of economics that any business whether it be Microsoft, Amazon, or Boeing, will consistently make the necessary capital expenditures to ensure their profitable growth, and BNSF is certainly no exception, as discussed in detail below.

All freight capacity expansion needed on BNSF's right of way is paid for by the railroad. We have invested more than $53 billion of our own private capital on our network since 2000. In 2015, we invested nearly $6 billion across our network, with $1 billion of that capital being invested in expansion and maintenance on the Northern Corridor alone, more than any other part of the network. BNSF has continued to make these improvements to its lines that have resulted in improved system-wide train velocity over the last few years.

BNSF's history of investment in the Pacific Northwest demonstrates BNSF's commitment to this important region. BNSF regularly invests more than $125 million annually in Washington state alone in order to maintain and improve freight rail capacity. In 2015, BNSF invested nearly $200 million in Washington, and we will invest $220 million in the state this year. Since 2013, BNSF has invested approximately $3.5 billion to maintain and add capacity improvements in the Northern Corridor.

The three existing BNSF rail routes through Washington have available capacity and offer flexibility in ensuring network fluidity. In fact, to provide more capacity to move goods in and out of Washington, we invested more than $150 million in the mid-1990's to reopen the Stampede Pass Route. For 2016, BNSF's maintenance program in Washington includes more than 1,260 miles of track surfacing and/or undercutting work, the replacement of nearly 70 miles of rail and close to 243,000 ties, as well as signal upgrades for federally mandated positive train control (PTC). This year's capital projects in the state also include continuing the replacement of the Washougal River bridge in Camas and follow more than $550 million invested by BNSF in its network in Washington over the past three years.

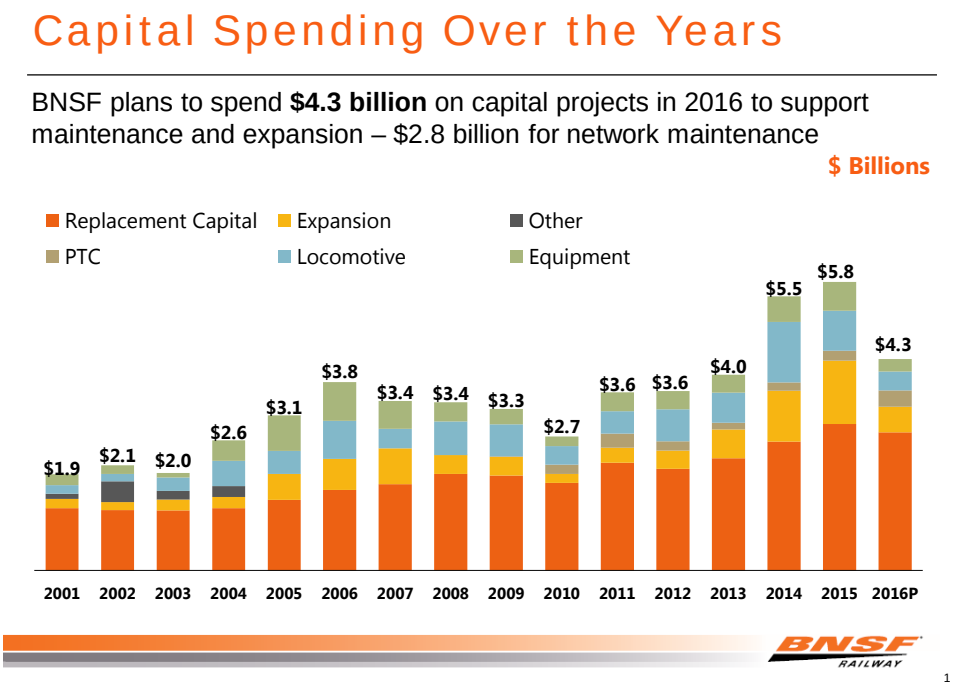

Figure 3. BNSF Capital Expenditures 2000-2016p

Figure 4. BNSF Capital Expenditures Plan Breakdown 2016p.

VII. Public-Private Partnerships

Public-private partnerships combine the business interests of private companies with the diverse goals of local, state and federal government entities who are working in the interest of the public. Cooperation between the private and public sectors may, in many cases, allow both sides to achieve their respective goals better, faster, and at lower cost. When more freight moves by rail, the public benefits through lower shipping costs, reduced highway gridlock, enhanced mobility, lower fuel consumption, lower greenhouse gas emissions and improved safety. And, since the railroads contribute funding commensurate with the benefits they receive -- It's a win-win for all involved.

BNSF engages in strategic public and private partnerships in the state of Washington. The recently opened West Vancouver Freight Access Project is a perfect example http://www.portvanusa.com/wvfa/wvfa-home/. This project provides new and enhanced rail access to the Port of Vancouver USA. This project will have a big benefit for freight and passenger service which no longer will be slowed by trains entering or leaving the port. The companion project to this is the Vancouver By-Pass, which will provide a main line route that will allow trains to by-pass the lower tracks within our yard.

BNSF has a proven track record of coming together and working with the state of Washington on issues. The FAST Corridor is an excellent example of this. The FAST Corridor program was a first for the region and near-unique at the time in terms of corridor partnership commitment and cooperation: federal, state, local, private sector. This program had, for

example, the Port of Tacoma contributing to a Port of Everett project – because the partners recognized each project benefited the viability of the whole corridor system.

VIII. Comments Concerning Environmental Impacts Associated with Rail Operations

BNSF offers the following detailed comments concerning the environmental impacts of rail operations discussed in the DEIS.

A. Air Quality

Rail is the most environmentally friendly method of moving the nation's freight. One train can carry as much freight as several hundred trucks. It would have taken approximately 5.6 million additional trucks to handle the 100.8 million tons of freight that originated in, terminated in, or moved through Washington by rail in 2012.
(Source AAR:https://www.aar.org/Style%20Library/railroads_and_states/dist/data/pdf/Washington%202012.pdf).

According to the Association of American Railroads (AAR) (https://www.aar.org/), trains move the same ton of freight more than three times as far as trucks per gallon of fuel. This efficiency produces more than 50 percent fewer CO2 emissions per ton mile than trucks.

Diesel emissions have been extensively analyzed, and are federally regulated by the Environmental Protection Agency (EPA). In fact, the existing EPA standards for locomotives, called Tier 4, were tightened in 2015. Specifically, the Environmental Protection Agency (EPA) requires all newly manufactured and all remanufactured locomotives that were originally manufactured after 1972 to comply with increasingly stringent emission standards and to be equipped with idle reduction technology that automatically shuts down locomotives if they are left idling unnecessarily (EPA 2013b).

BNSF has added 600 new, more energy-efficient locomotives to its fleet, which is the newest and cleanest-burning locomotive fleet in the rail industry. Nearly 40 percent of BNSF's fleet has been replaced in the last 10 years, resulting in a 10 percent improvement in fuel efficiency and a nearly 14 percent reduction in carbon dioxide emissions from its trains in the last decade.

The idling control program is expected to eventually reduce NOx, volatile organic compounds (VOCs), and PM emissions from locomotive idling by approximately 90 percent as well as significantly reduce locomotive smoke emissions and exhaust odors (EPA 2013b). These measures will reduce future locomotive emissions compared with both past and some present locomotive emissions. (See pages 3.2-25)

More than ninety eight percent (98%) of BNSF's locomotives, including all high horse power (HHP) locomotives, that are used in our over the road and heavy haul fleets, are equipped with an Automatic Emission Shutdown System (AESS), which automatically shuts down a locomotive not in use to reduce idling emissions.

In addition to idle control technology, improvements in operation and maintenance practices also have an impact on the inherent fuel efficiency of rail. BNSF, which has the industry's newest and most fuel-efficient fleet of road locomotives, is able to move one ton of freight 500 miles on a single gallon of fuel.

A number of factors impact fuel efficiency, including age of the fleet, network fluidity, technological solutions, freight commodity mix, and operating and maintenance practices. Because fuel efficiency is influenced by various factors, BNSF also measures the energy used by determining fuel used per gross ton mile. (Gross ton miles are the weight of the train, excluding the locomotive, multiplied by the miles the train has traveled.)

In 2014, BNSF averaged 833 gross ton miles on a single gallon of diesel, which is a 10 percent improvement from a decade earlier when gross ton miles on a single gallon of diesel were 757.

With 92 ultra-low-emission locomotives in use, at the end of 2014, for switching operations inside its rail yards, BNSF reduces nitrogen dioxide and particulate matter emissions from locomotives by 80 to 90 percent at those facilities and improves fuel efficiency by 25 percent compared to older switch engines (See “Helping Preserve the Natural Beauty of the Pacific Northwest”; Appendix C. for additional information).

B. Bridges

As background, BNSF has approximately 13,000 bridges across our network. The visual appearance of these structures is not indicative of their structural integrity. Every bridge receives one comprehensive inspection per calendar year by a qualified bridge inspector and an inspection by a supervisor, with a more frequent inspection schedule occurring in some cases.

Additionally, on our busiest routes, track inspections occur every day, and while those inspectors are looking at the track, they are also observing track conditions that may indicate underlying issues with a bridge structure, providing additional review.

Further, if we receive an inquiry on a particular bridge, our Structures team will perform an inspection to determine whether repairs are needed. BNSF has a staff of trained bridge inspectors, as well as structural engineers, consultants, and specialized contractors. We maintain bridge inspection reports, which as the railroad’s regulatory agency, the FRA can review, as well as inspect our structures.

As previously noted, railroads spend a higher percentage of revenue maintaining, replacing, and expanding infrastructure than any other industry. We spend private money to invest in our private rail network, unlike roads, highways, and bridges that are taxpayer funded. BNSF has an ongoing bridge replacement and maintenance program, which is part of the nearly $6 billion that we spent across our network in 2015 to replace and maintain our infrastructure. The Washougal River Bridge in Camas, Washington is a good example of this.

Inspections of all bridge structures are performed a minimum of once per year and are utilized to identify required maintenance and to ensure there are no structural exceptions. One of those inspections is also performed with the presence of a BNSF supervisor.

Bridges on BNSF's core routes are typically inspected three times per year, exceeding FRA standards. BNSF's bridge inspectors and engineering staff are also supported by consultants and contractors in our efforts to inspect and maintain BNSF bridges.

The key to the longevity of any structure is proper maintenance and repair. And railroads, such as BNSF, spend a higher percentage of revenue maintaining, replacing, and expanding its infrastructure than any other industry.

These bridge inspections are both comprehensive and as stated above, are supervised by a trained BNSF officer. Inspections are made on a periodic basis for underwater components, movable bridge machinery and other specific contract inspections. Additional inspections are performed when special conditions and events exist, such as high water, vehicle/boat strikes, fire, etc.

The following statistics apply to BNSF bridges:

- 99.9995% of bridge train miles occur without any type of service interruption.
- 0.02% of service interruptions across our entire network are caused by a bridge being removed from service.
- No derailments have been caused by the structural integrity of a bridge.
- BNSF's expert, certified Railroad Bridge Inspectors performed more than 35,000 Comprehensive Inspections in 2015.

BNSF's "Rail Bridge Safety" flier is attached as Appendix D.

C. Grade Crossings

Promoting grade-crossing safety is an essential part of our operation and culture. Our network includes just over 25,800 grade crossings, including approximately 17,200 public and 8,700 private and pedestrian at-grade crossings.

In addition, BNSF has more than 3,700 public grade separations and 650 private and pedestrian grade separations, including one of the lowest highway-railroad grade crossing collision rates in the rail industry. Since BNSF's merger in 1995, the rate of grade crossing collisions has declined about 68 percent – from 5.3 per million train miles in 1995 to a rate of 1.7 per million train miles in 2013.

Trains cannot stop quickly. A 100-car freight train traveling at 55 miles per hour will need more than a mile to stop once the train is set into emergency braking. When vehicle drivers or pedestrians violate traffic laws at grade crossings, or trespass onto railroad right of way, they are putting themselves and the train crews in danger.

In recent years, we've invested an average of $95 million annually on grade-crossing maintenance, improvements and safety programs. Our initiatives include community education and awareness, train crew education and testing, crossing closures, new safety technology, vegetation control, and track and signal inspection and maintenance.
For more information see the "BNSF Grade Crossing Safety" brochure in Appendix E.

For the past several years, BNSF has invested an average of approximately $95 million annually on grade crossing maintenance, improvements, and safety programs. BNSF's expenditures include community education and awareness, train crew education and testing, crossing closures, new safety technology, vegetation control, and track and signal inspection and maintenance. To accomplish these educational and program activities, BNSF dedicates 17 grade crossing safety managers and 9 public projects manager. The amount spent on grade-crossing safety includes an annual average of approximately $20 million to maintain grade-crossing road surfaces.

Federal and State Roles

The 1973 Highway Rail Safety Act created a partnership to be built between the federal government, state government, local agencies and the railroads. Congress established guidelines for evaluating grade crossings, and the Federal Government would provide a funding mechanism for railroad-highway upgrades. In addition, the federal government created an inventory database of each crossing within the United States, available at http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/crossing.aspx. There is also an application for mobile devices, located at https://www.fra.dot.gov/Page/P0703.

The Highway Rail Safety Act required each state Department of Transportation (DOT) to create a ranking system, review that ranking system of all public crossings within the state on an annual basis and provide information to maintain the national inventory that is maintained by the FRA. This Act also placed the responsibility for determining the adequacy of the crossing warning devices on each state DOT, based on the priority of ranking system they created.

The railroads participate in diagnostics requested by the Department of Transportation, provide railroad information and provide a workforce to install, and then maintain the crossing warning devices that the particular state DOT deems to be adequate for that crossing.
The Federal government provides the funding to the agencies that can be used for the installation and upgrading of traffic control devices and crossings. This information can be obtained through the FRA crossing database mentioned above. All crossing incidents and trespasser incidents on BNSF are sent to the FRA.

Grade Separated Crossings

The determination to grade separate a crossing is made by the appropriate road authority using their own calculations or other driving factors. BNSF participates in the process by conducting reviews of construction plans that would impact BNSF's ROW. Noise impacts are typically reviewed by the road authority through an environmental study.

Under federal law, there is a formula for cost-sharing between a community and the railroad for providing a grade-separated crossing when the grade separation results in the elimination of an at-grade crossing.

At-Grade Crossing Noise

There is no difference in train horn requirements by train type. The use of either train or an automated horn system, known as wayside horns, is determined through a diagnostic conducted by the Road Authority, FRA and BNSF. The installation and use is governed by the FRA Train Horn Rule https://www.fra.dot.gov/Page/P0105. Accordingly, BNSF does not determine where or when Wayside horns are installed. Section IV. Part 9 Subsection 9 of the FRA's Grade Crossing Safety Handbook (https://www.fra.dot.gov/Page/P0040 states that:

> ***A crossing bell is an audible warning device used to supplement other active traffic control devices. A bell is most effective as a warning to pedestrians and bicyclists. When used, the bell is usually mounted on top of one of the signal support masts. The bell is usually activated whenever the flashing light signals are operating. Bell circuitry may be designed so that the bell stops ringing when the lead end of the train reaches the crossing. When gates are used, the bell may be silenced when the gate arms descend to within 10 degrees of the horizontal position. Silencing the bell when the train reaches the crossing or when the gates are down may be desired to accommodate residents of suburban areas.***

Quiet Zones

Quiet Zones are established through the FRA Train Horn rule as outlined in the link below. https://www.fra.dot.gov/Page/P0104. BNSF participates in the diagnostics and review conducted by the road authority, the state DOT and the regional FRA representative. Crossing treatments and recommendations are determined through the diagnostic and calculations provided through the Train Horn Rule.

Grade-Crossing Consolidation

One of the best ways to address grade crossing safety is to reduce the number of at-grade crossings. BNSF's grade crossing safety program includes an aggressive initiative to close public and private at-grade crossings, working closely with communities and property owners. Good candidates for closure include those that are redundant (other crossings nearby allow access to the same roads or areas), are not designated emergency routes, have low traffic volumes, or are private crossings that are no longer needed or used. Since 2000, BNSF has closed more than 5,750 at-grade crossings.

Road crossing gate down times are minimal, especially for the number of trains anticipated by this project. BNSF has the ability to "split" a train in case a crossing is blocked and an emergency vehicle needs to pass. BNSF has a team that concentrates on eliminating at-

grade crossings and working with communities who show an interest in grade-separating crossings.

D. Weather-Related Impacts

Special inspections are required during extremely hot and cold weather conditions, storms, high water periods, and after earthquakes. When a significant earthquake is reported, BNSF inspects track based on the magnitude and epicenter location of the earthquake. BNSF's policy requires track to be inspected if the earthquake is measured at 5.5 magnitude or higher on the Richter scale. The required inspection radius is determined by the location of the epicenter.

Weather Alerts

BNSF subscribes to a private weather data service that monitors weather conditions on our network 24/7, and issues severe weather alerts to BNSF to enable our dispatchers to bring trains to a stop when severe local weather conditions such as tornadoes, very high winds or flash flooding could pose a threat to train movements anywhere on our network. When wind warnings are received that indicate possible wind speeds of 51 mph to 60 mph, BNSF instructs passenger trains to reduce speed to 40 mph. For wind warnings of possible wind speeds of 61mph or more, BNSF instructs passenger trains to stop. Depending on the type of freight trains in the area, some freight trains must come to a stop if wind speeds exceed 51mph.

Weather alerts are issued for a specific time-frame and for a specific portion of the railroad. Our employees comply with the applicable restrictions until either the train exits the affected area or the alert expires. We have attached below portions of BNSF's Special Service Instruction, No. 5, July 1, 2014, that deals with Wind Speed & Flash Flood conditions.

Slide Fence Detectors

BNSF has also invested in slide fences that have been strategically placed in potential slide areas to ensure that approaching rail traffic is warned in advance of possible dangerous track conditions stemming from rock or mud slides. When contact is made with the fences, a red block signal indication is displayed to provide advanced warning to approaching trains.

BNSF has also worked extensively with the Washington Department of Transportation (WSDOT) on a landslide mitigation plan (http://www.wsdot.wa.gov/NR/rdonlyres/8B3B653E-5C50-4E2B-977E-AE5AB36751B7/0/LandslideMitigationActionPlan.pdf) for slides in the Everett area, which is attached to this letter as Appendix F.

BNSF SYSTEM SPECIAL INSTRUCTIONS—No. 5—July 1, 2014

Excessive Wind Instructions
When wind warnings are received meeting the wind speed criteria, the train dispatcher will notify all affected trains and employees with movement authority in the area providing the time and limits of the expected high winds. The following table will govern train movement:

Wind Speed	Passenger Trains (includes Amtrak, commuter trains and freight trains consisting entirely of business cars)	Light engines, loaded ribbon rail trains and loaded bulk commodity unit trains as defined in the Air Brake and Train Handling Rules Glossary.	All other trains
51 to 60 MPH	40 MPH*	Not affected	Staging requirements*
61 MPH or greater	Staging requirements*	Not affected	Staging requirements*

Staging Requirements:
Affected trains and equipment may proceed not exceeding 20 MPH to a staging location (e.g. station, siding or location with double crossovers) as directed by the train dispatcher to allow trains not affected by the wind warning to pass.

* If a field employee (e.g. crew member on an affected train) observes that local weather conditions are not as severe as the wind warning indicated and these conditions would not impact safety, the employee will advise the train dispatcher of the local conditions. If the employee advises local wind conditions are 50 MPH or less, with chief dispatcher authority the train dispatcher may grant permission for passenger trains restricted to 40 MPH and other affected trains to operate at maximum authorized speed.

Tornado Watch and Warning Instructions
Tornadoes are the most violent of all storms. Paths of destruction range from a few hundred feet in width to more than a mile and extend the length of a city block to 300 miles.

E. Hazardous Materials

Although Project opponents have claimed that coal is classified as a Hazardous Material, that is not the case, and the DEIS states this incorrectly in some places as well. There are some references to the potential for release of locomotive fuel and lubricants, such as oil & grease on Pg. S-18, from rail operations and/or incidents, which we would like to address.

BNSF has enjoyed a proud 160-year history of providing rail services to the customers and communities we serve and looks forward to continuing the excellent relationships we have enjoyed over the years. In this regard, an important conversation is happening in our nation

around the safe movement of freight by the nation's railroads. As stated above, no matter what we carry, we are absolutely committed to moving products as safely and efficiently as possible.

A new improvement to allow swift access by emergency responders to the necessary information is a secure mobile device application called AskRail, website link: https://askrail.us/ created by BNSF and the other Class I railroads. It provides first responders immediate access to accurate real time data about individual rail cars on a train, which can help emergency responders make informed decisions about how to respond on a scene of a rail emergency.

AskRail is only available to emergency response planners and first responders and not for public use, and does not replace current communication channels, but is intended as a real-time supplement to the existing process.

In addition, in 2015 BNSF developed our own secure mobile device app called "SECURETRAK" which was offered to state and local fusion centers that provides near real-time locations and consist information on hazardous material trains (including crude and ethanol trains) on the network with the use of a Geographical Information System (GIS) interface. The location of trains are indicated on a map and are color coded indicating the type of train. Users can obtain a train list that includes the sequencing of the train and hazmat commodity detail by clicking on the dot on the map.

Also, SECURETRAK can provide a "2 hour look ahead" that shows an estimated location of the train in the next two hours. The purpose is to provide a comprehensive consist list or make-up of a train with detailed hazardous materials information. Any agency who participates in SECURETRAK program signs an agreement to keep the information classified according to a license agreement.

During an incident response, we share information on the specific train and car consist through multiple channels to ensure there is no gap in communication. Train crews carry a list that provides the location of every car as well as hazmat emergency response information to share with first responders. The manifest is also faxed to the designated local first responder, and upon request, we provide the same information to CHEMTREC, National Response Center and other local, state and federal responders.

Lubricants

All the products that are utilized in BNSF Friction Management are approved through our Technical Research & Development Department to ensure they are well tested prior to uses on the railroad. All products are within the guidelines of federal regulations.

F. Rail Safety

BNSF believes that every accident and injury is preventable. Operating free of accidents and injuries has long been part of BNSF's vision and our focus has been on preventing accidents in the first place. Rail is the safest mode of land transportation for freight in general and is one of the safest ways to transport crude oil and hazardous materials. According to the FRA, the rail

industry as a whole has reduced employee injury rates, train accident rates, and grade crossing collision rates by 80 percent or more since 1980.

The Federal Railroad Administration named 2013 and 2014 as the safest in U.S. history for American freight railroads, including BNSF, and the rail industry has reduced hazardous material train accident rates by 91% since 1980. This record setting safety record continued in 2015. According to the USDOT's Draft National Freight Strategic Plan (October 2015, pg. 66) mentioned above:

> ***Recent trends show impressive improvements in freight rail safety. There was a 27 percent increase in freight ton-miles for all surface modes between 1990 and 2011, but freight-related fatalities across all modes declined by 33% over that same period.***

The USDOT also notes that total rail fatalities have decreased by over 37% from 1980 to 2013 (1,365 down to 509) (Appendix G). Yet, while certainly even one fatality is too many, this tremendous improvement in rail safety cannot be ignored, especially as rail shipments have been increasing over this same time period.

We have made this remarkable safety progress in partnership with our employees and by continually investing in new technologies that help make the railroad safer and more efficient. Our philosophy and practice for rail transportation is that we must prevent incidents from happening, mitigate their severity and mobilize effective, efficient response. We believe our progress in all three areas: prevention, mitigation and response, coupled with the recently released USDOT rules, enhance our commitment to continually improving safety on our network.

To make this point, 99.998% of all hazardous materials shipped by rail reach their destination without incident. (Source: American Association of Railroads; Federal Railroad Administration.)

As we summarized in our previous comments on this project, BNSF operates under a number of federal laws that govern our operations. These laws and regulations, as well as BNSF's own voluntary safety and prevention measures, make rail transportation the safest mode for transporting industrial goods in the United States.

BNSF prioritizes safety and the maintenance of its railroad network and makes significant investments in railroad safety and infrastructure. As noted above, in 2015 alone BNSF invested nearly $6 billion in support of its rail maintenance and expansion programs. Nearly 50% of our 2015 capital plan was spent on replacing and maintaining existing infrastructure. In Washington, we have invested more than $1 billion in our infrastructure over the past six years.

BNSF's Risk Reduction Program

BNSF has a broad-based, multi-level risk reduction program to reduce incident risk on our railroad. This multi-layered risk reduction program is designed to ensure that all commodities are handled in a safe and damage-free manner. The aspects of this program are highlighted below and discussed in additional detail later in this letter.

Employee Training and Compliance

As stated above, BNSF's employees share the vision of an injury and accident-free workplace and are trained on exposure and risk identification. They look out for one another—reinforcing positive safety behavior by acknowledging when people are working safely and expressing concern when someone puts themselves or others at risk.

There is nothing is more important than returning home safely in all of the communities in which we live and operate. BNSF's safety focus is built on a culture of compliance and commitment and uses a robust compliance oversight process, including both direct and remote operations testing, to monitor rules compliance. Employees are trained on a comprehensive set of safety rules and practices based on Federal requirements, industry recommendations and BNSF-specific safety initiatives. In addition, BNSF conducts operational tests and audits to verify employees are working safely and in compliance with all company rules, policies, instructions and procedures.

Record Capital Investments

Record capital investments are being made in the railroad to help create a safer and more reliable physical plant. Through the end of 2015, BNSF will have reinvested more than $50 billion into its equipment and its network and infrastructure work that helps to maintain train traffic fluidity and capacity expansion projects intended to meet customers' ever-growing freight shipment demands. BNSF spent a record of nearly $6 billion for the capital expenditure program in 2015, which is the third consecutive year of record investment in BNSF network and infrastructure, and plans to invest an additional $4.3 billion in 2016.

In addition to these capital improvements, BNSF implements comprehensive inspection processes as discussed below, that ensures safety by identifying potential problems before they can lead to unsafe conditions on the rail network.

Track Inspections

BNSF inspects its tracks more frequently than required by the FRA to ensure they are safe. Most key routes on BNSF are inspected up to four times per week, more than twice the inspection frequency required by the FRA, and our busiest main lines can be inspected daily. These inspections include routine visual inspections by track inspectors and inspections with specially equipped rail cars that use ultrasonic and other advanced technology to look for flaws in the rail and to test track geometry, as discussed in further detail below.

Track inspections on BNSF main lines occur by a hy-rail vehicle, which rides on the rails. In addition to the normal hy-rail inspections, on-foot inspections of all turn-outs on the main lines and yard tracks are required at least monthly. Supervisors are also required to make regular train rides over their assigned territories.

BNSF employs track inspectors who are chartered by the FRA to comply with FRA regulations. These inspectors record track conditions and update data following each inspection, which is provided to the FRA.

For further details on FRA guidelines, visit the Track and Rail and Infrastructure Integrity Compliance Manual http://www.fra.dot.gov/Page/P0051. Please see "BNSF Railway Wayside Detection (July 16, 2015)" (Appendix H) for additional information on the technologies discussed below:

G. Track Inspections Technology

BNSF's track inspection program also utilizes state-of-the-art technology to help identify defects or problem areas that cannot be detected by the human eye. BNSF has made significant investments in inspection and detection technology to enhance the regular manual inspection process.

Rail Detectors

BNSF's rail detectors use ultra-sonic rays to detect internal (and external) flaws in the rail. The frequency of inspections are determined by the tonnage moved over a given section of track, however, the main line routes across BNSF's system receive rail detector testing every 30 to 50 days on average.

Track Geometry Car

BNSF's track geometry car measures major main line routes annually and up to three times a year depending on rail volume. The track geometry car is a specially-equipped passenger car that measures the tracks' surface under load for, gauge, cross-level, alignment and vertical acceleration. A computerized print out of the trackage indicates where the measured flaws exist in the track. This information is immediately communicated to field personnel to ensure that the defects are addressed.

Freight Car Defect Technology

BNSF has an extensive network of special detection technology, which are described below, along key routes on its network to monitor each passing rail car for early signs of potential problems that could cause premature equipment wear or failure. Detecting such defects early has helped improve safety and extend the service life of equipment.

Wheel Impact Load Detector

Measures forces applied to the rail to evaluate wheel surface defects. Decreasing the number of high impact wheels can help prevent derailments and also extend the useful life of rail.

Warm Bearing Detection System

Monitors for excess heat coming from wheel bearings. Identifying internal bearing defects early prevents potential derailments and helps to extend wheel life.

Hot / Cold Wheel Detector & Technology Drive Train Inspection

Measures wheel tread temperature to identify sticking or inoperative brakes; and applied handbrakes. Acoustic Bearing Detectors use a microphone array to evaluate and identify internal journal bearing flaws.

Machine Vision System

Utilizes a camera system to evaluate and identify component wear or damage of wheels, brakes, draft gear and truck components. The early warning this technology provides enables BNSF to repair trucks before safety issues occur and can extend the life of wheels.

Truck Performance Detector

Measures forces applied to the rail to evaluate each truck's ride performance. Early warning of truck performance issues enable BNSF to perform repairs before safety issues occur and extends the life of the equipment.

Bridge Inspections

BNSF performs comprehensive bridge inspections that are supervised by a trained BNSF officer. These inspections are typically performed three times per year, exceeding FRA standards. Under BNSF's inspection program, we inspect bridges and tracks more frequently than required by the Federal Railroad Administration (FRA).

The key to the longevity of any structure is proper maintenance and repair. Railroads, such as BNSF, spend a higher percentage of revenue maintaining, replacing, and expanding its infrastructure than any other industry.

Planning and Response Plans

BNSF has developed and shared Geographic Response Plans (GRPs) with state and local emergency response organizations in many areas as adopted by the Northwest Area Committee ("NWAC") and as directed within the Northwest Area Contingency Plan ("NWACP"). In many cases, we have developed these GRPs in consultation with response agencies.

Emergency Response

As stated above, coal is not a hazardous commodity. Therefore, the following information on BNSF's Emergency Response capabilities is provided to cover a response to a diesel spill incident only.

While we have made significant progress in reducing the likelihood of a hazmat incident in any community, we also want to ensure BNSF and the communities we serve can be prepared to respond if an incident were to occur. To this end, BNSF also invests in community hazmat training and provided free railroad hazmat response and training to over 8,500 local emergency responders in 2014 in communities across our network. In 2015, BNSF provided hazmat response training to over 10,250 first responders across the BNSF system, and we have provided training to more than 80,000 emergency responders since 1996.

In 2015, BNSF trained 878 first responders in Washington, many from the Columbia River Gorge. In the past five years, hazmat training has been conducted by BNSF to fire fighters across Washington, including in Anacortes, Auburn, Bellingham, Camas, Centralia, Edmonds, Longview, North Bend, Olympia, Pasco, Seattle, Spokane, Tacoma, Vancouver and White Salmon.

This was in addition to the training we provided in 2014 to 937 first responders in over 40 classes. We have also participated in tabletop exercises in Seattle, King County, Skagit County and Spokane, which are important opportunities for us to identify opportunities and any gaps in how we work with our community partners.

In 2014 and 2015, BNSF underwrote the travel and training expenses for nearly 1,200 local first responders, including 265from Washington, for specialized training conducted at a national training and research center, the Security and Emergency Response Training Center (SERTC) in Pueblo, Colorado.

This year, BNSF is sponsoring46ocal first responders to attend this training at SERTC and Texas A&M. The three-day, hands-on field exercises at SERTC provide 24 hours of specialized training for a crude oil incident, which will help prepare them for managing incidents related to crude oil.

In addition, BNSF has provided the following to first responders:

PNW Fire Trailers (30 across the BNSF System):
Type I - Whitefish, MT (550 G AR-AFFF, pumps/bladders etc.)
Type II - Spokane, WA (275 G AR-AFFF, pump/bladder etc.)
Type I - Pasco, WA (550 G AR-AFFF, pumps/bladders etc.)
Type II - Vancouver, WA (275 G AR-AFFF, pump/bladder etc.)
Type I - Seattle, WA (550 G AR-AFFF, pumps/bladders etc.)
Type I - Redmond, OR (550 G AR-AFFF, pumps/bladders etc.)
Type I - Klamath Falls, OR (550 G AR-AFFF, pumps/bladders etc.)

BNSF - Spokane, WA (1000’ boom/skimmer/storage tank, accessory items)
BNSF - Pasco, WA (1000’ boom/skimmer/storage tank, accessory items)
BNSF - Wishram, WA (5 helicopter portable containers – 2,000’ boom/skimmer/storage tank, accessory items)
BNSF – Moody, OR (1,600’ boom and accessory items)
BNSF – Maupin, OR (1,000’ boom and accessory items)
BNSF – Klamath Falls, OR (1,000’ boom/skimmer/storage tank, accessory items)
BNSF – Sandpoint, ID (1000’ boom/skimmer/storage tank, accessory items)
BNSF – Bonners Ferry, ID (2,800’ boom/skimmer/storage tank, accessory items)

PNW Contracted Locations with equipment:
Spokane, Pasco, Portland, Prineville, Longview, Seattle, Everett, Anacortes, Bellingham

Here is a summary:

State/Province & Country	Total Spill Containment Boom (ft.)	Oil Spill Skimming Systems: Total EDRC (bbl.)	Total Recovered Oil Storage (BBL.)	Total Vessels (#)	Total ER Personnel [Includes Contractor Non-responders: I.E. Admin and Offsite Support] (#)
Oregon, USA					
BNSF Resources	3,600	343	144	0	2
BNSF Contractor Resources	28,375	6,520	2,679	27	194
Total	**31,975**	**6,863**	**2,823**	**27**	**196**
Washington, USA					
BNSF Resources	3,050	686	145	0	30
BNSF Contractor Resources	123,170	55,251	8,253	148	481
Total	**126,220**	**55,937**	**8,398**	**148**	**511**

BNSF has also entered into an agreement with the Clean Rivers Cooperative in Portland, OR (not included on above table) which is a non-profit spill response organization. Through this agreement, we have access to all of their resources in the Area of Responsibility (between the I-205 bridge and Astoria, OR). For areas outside of their AOR including the remainder of WA, OR, ID, CA, MT, ND and WY we have access to their specialized equipment including Wildlife Response Trailer, Communications trailer, Shoreline trailers, 20,000 feet of boom plus 10% of their skimmer/recovery and boat inventory.

Finally, BNSF has a Mutual Aid Agreement with the Western State Petroleum Association (WSPA) for refinery assets including foam and oil spill resources from Tacoma Oil, Shell, Tesoro, BP and P66.

BNSF has launched a new website: www.BNSFHAZMAT.com that provides the following:

- Participate in on-line BNSF hazmat training
- Schedule BNSF hazmat training for first responders
- Download a summary of BNSF's System Emergency Response Plan
- Request a Hazmat Traffic Flow Report for your city or county
- Request access to AskRail (See additional information above.)

The following emphasize BNSF's commitment to hazmat safety:

- BNSF has earned the national TRANSCAER (Transportation Community Awareness and Emergency Response) award 14 times since 1998 for our national outreach efforts to assist communities prepare for and respond to possible transportation hazardous material incidents.

- BNSF has specialized equipment and hazmat responders staged across its network to deal with hazmat and crude oil incidents, including for firefighting and spill cleanup.

- BNSF has more than 250 trained hazmat responders at 60 locations on our network who are supported by a network of contract emergency and environmental responders.

- BNSF has a Geographic Information System (GIS) for emergency incidents that enables BNSF to quickly identify and contact the local emergency responders closest to any incident on our network.

- BNSF has specialized equipment and hazmat responders staged across our network, which includes several locations in Washington such as Everett, Seattle, Longview, Wishram (Columbia River Gorge), Pasco and Spokane.

- BNSF has developed and shared geographic emergency response plans with state and local emergency response organizations, engages in ongoing planning, drills, and rapid response exercises with local, state, and federal agencies, and reports hazmat traffic and volumes to state emergency response agencies.

H. Coal Dust

Regarding coal dust, BNSF does not believe that coal or any commodity should be allowed to escape from their shipping containers. This is why a decade ago we conducted extensive studies to address coal dust. All of our research and experience has shown the presence of coal dust in our track structure near mine-loading points in the Powder River Basin in Wyoming and Montana – not nearly a thousand miles away in the Pacific Northwest.

We developed a coal loading rule that virtually eliminates any issues with coal dust – both at the mines and in the Pacific Northwest. Our coal loading rule is two-fold: coal must be loaded so that it utilizes a "bread loaf" shape that helps reduce issues with wind and then an approved topper agent must be applied. The topper agents are like a glue and have been identified during our testing as effectively controlling dust.

To add another redundant layer to an already effective mitigation program, we opened a state-of-the-art re-spray facility at our Pasco rail yard. Now all unit trains of coal traveling through Washington receive a second spray of an approved topper agent, furthering enhancing our coal dust program.

Before any measures were adopted to control coal dust, BNSF estimated that as much as 500 pounds of coal dust per car could be lost in areas near coal mines in Wyoming and Montana. Opponents to coal like to misuse this estimate and take it way out of context. The key to this estimate is putting it into context. First, it is just that - a very rough estimate made on untreated coal cars in the Powder River Basin at the very beginning of their movement, not elsewhere along our rail line. Second, these estimates were made a decade ago when we first started studying coal dust, before we issued our coal-loading rule and before the mines began taking any measures to prevent coal dust losses. Third, and most importantly, all of our research and experience has shown coal dust to be an issue near mine-loading points in the PRB - not nearly a thousand miles away in Washington.

In 2013, we announced plans to build a coal re-spray center and this facility is a voluntary measure that is responsive to a request from Canada's Port of Vancouver as part of its permitting process for coal export facilities located in British Columbia. This additional effort provides another level of redundancy to an already well-established mitigation process. As we've always said, BNSF is committed to addressing coal dust as an issue. We take this commitment very seriously, and this is why for nearly a decade we have been very proactive in our efforts to mitigate coal dust.

The re-spray center is located at our Pasco Rail Yard, and we have added additional rail capacity to accommodate trains running through our re-spray center. This location was selected because it best fits our operational needs. BNSF designed the facility with environmental and community issues in mind. As such, the entire re-spray center is enclosed, and there is no run-off from the re-spray. The coal is treated within a shed, helping to prevent the process from being a nuisance to our neighbors.

The re-spray center became operational in early 2015, and it is our expectation that all unit trains of coal traveling through the facility are treated. To date, nearly 1,000 coal trains have been sprayed since the facility opened.

As part of their campaign against coal, several opposition groups have misconstrued facts related to how railroads transport this commodity. For example, there have been claims about coal dust escaping from railcars that are simply not supported by any data in the research that has been done. It has been asserted that trains carrying coal lose one pound of coal dust for every

mile traveled, including areas far from the Powder River Basin. There is no data to support this claim. This claim is also inconsistent with commonsense observations of coal movements through the Northwest for over two decades. If this claim was accurate, we would have heard many complaints about coal dust long before opponents of coal took up the issue as a convenient way to try to block coal transportation. Millions of tons of coal have been hauled through Washington for decades and we are not aware of a single coal dust complaint lodged with a Washington state agency or with the railroad until after the coal export terminals were proposed.

The following links are provided as additional information.

BNSF response to the University of Washington study:
http://bnsfnorthwest.com/news/2016/04/05/setting-record-straight-coal-dust/.

Research and testing: http://www.bnsf.com/customers/what-can-i-ship/coal/coal-dust.html.

Pasco, Washington re-spray facility video:
https://www.youtube.com/watch?v=EYpYOfMFBAI&feature=youtu.be

For additional information, please refer to the following Appendices:

- Coal Dust Facts (Appendix I)
- Coal Dust Slides (Appendices J & K)
- Topper Agents (Appendix L)Pasco Re-spray Center Background (Appendix M)

I. Historic and Cultural Resources

The DEIS suggests that trains may block access to culturally-important areas, such as Usual and Accustomed (U&A) Places. BNSF knows of no instance in which access to U&A Places has been blocked, or where parties have not had access over public or private crossings. BNSF works regularly with tribes to identify and address concerns, and would certainly work with any tribe who could not access U&A Places by the use of a public or private crossing.

J. Insurance and Financial Responsibility

BNSF has a strong track record of corporate responsibility. We have never expected taxpayers to assume the expense of a clean up after a derailment, and we stand by the practices that have allowed us to keep that record to date. BNSF is financially sound with a long history, substantial assets and a track record of being a responsible corporate citizen. In the event of an incident, BNSF commences remediation efforts without regard to the availability of insurance, i.e., BNSF responds and then looks to recover from its insurers.

K. Noise-related Impacts

In 2005, in response to a Congressional mandate, the Federal Railroad Administration (FRA) issued a Final Rule on the Use of Locomotive Horns at Highway-/Rail Grade Crossings: https://www.fra.dot.gov/Page/P0105. Under the new rule, local governments may establish quiet

zones or continue existing quiet zones, if they are willing to take remedial steps to address risk, based on a calculation of potential risk at the crossing. In many cases, the rule makes these designations subject to FRA review, approval and ongoing oversight.

These remedial steps can include crossing closure, grade separation, full-width crossing gates with an approved median divider, full-width gates and lights at crossings on a one-way street, temporary closure (for nighttime quiet zones only) or four quadrant gates. The rule also allows for an automated horn system, commonly wayside horns, at the crossing as a substitute for the train horn, if this provision is approved by the Federal Highway Administration.

Certain Alternative Safety Measures (ASMs) are also described. BNSF works with communities who wish to establish quiet zones and regularly reviews their quiet zone applications to the FRA. BNSF will certainly work cooperatively with Millennium in Longview for the establishment of quiet zones at two locations identified in the Project application where Millennium volunteered to fund specific quiet crossing improvements.

L. Positive Train Control

Congress mandated in 2008 that Positive Train Control (PTC) technology be installed on routes that carry passengers and/or toxic-by-inhalation (TIH) commodities. PTC deployment is an unprecedented technical and operational challenge that requires the entire U.S. railroad network to develop, test, and implement this new safety system, and avoid impacts to network capacity and fluidity as we do so.

The scope of BNSF's PTC installation is immense covering more than 11,100 miles of track, roughly half of the entire BNSF system and 80% of BNSF's freight density, as well as equipping 6,000 locomotives with PTC technology.

BNSF has been an early industry leader in and is committed to implementing PTC and has made great progress and devoted significant resources to that end. Specifically, BNSF has invested over $1.5 billion in the testing, development, purchase, and installation of PTC components out of an estimated total exceeding $2 billion. Thousands of BNSF employees have been trained on PTC, and thousands more will be.

BNSF expects to install and operate PTC on all legislatively mandated territories in the state of Washington within the federally mandated PTC timelines.

As of June 1, 2016, construction has been completed on more than 91% of the PTC-mandated subdivisions, which represents 78 of 86 Subdivisions. (See attached BNSF PTC Implementation Map (Appendix K).

- Cutover Phases Completed: 919 of 1,017: 90%
- Base Stations Installed on Mandated Subdivisions: 539 of 552: 96%
- Locomotives Equipped: 4,277 of 5,000: 86%

See attached BNSF PTC Implementation Map (Appendix N)

Additional information on PTC can be obtained from the Federal Railroad Administration (FRA) and American Association of Railroads (AAR) website links: https://www.fra.dot.gov/Page/P0621 and https://www.aar.org/policy/positive-train-control.

M. Vegetation Management

BNSF dedicates resources and has established standards shown below for the proper treatment of terrestrial vegetation in order to maintain a safe and environmentally conscious rail operation in line with federal laws and regulations.

Herbicides

The use of herbicides on BNSF property allows for the following:

- Maintain a safe working environment for employees.
- Maintain drainage of ballast and waterways.
- Allow for structure and track inspections.
- Maintain visibility at grade crossings, signs, and signals.
- Allow for inspections of moving trains.
- Comply with federal regulations.
- Reduce the spread of noxious weeds.

Any herbicides that used are EPA approved and applied by licensed applicators, under strict BNSF Engineering Instructions, including, but not limited to those discussed below.

Applications of herbicides on BNSF property are only to be handled by licensed contractors and with the permission of BNSF's Manager Vegetation Control in Ft. Worth, Texas, who consults with our Technical Research & Development Department to ensure that such materials are within the guidelines of federal regulations.

This includes the October 31, 2011 NPDES nationwide restrictions for herbicide use on a landowners property as well as the responsibility for violations. The BNSF Manager Vegetation Control will select the chemicals to be used based both on their effectiveness for weed control and the safety considerations for workers, applicators, and bystanders.

The BNSF System areas of control for vegetation control contractors are identified in their specific contract. Any change to the designated areas of control must be communicated in writing by the exempt officer responsible for the territory to the vegetation control contractor and the BNSF Manager Vegetation Control. Labels on herbicide chemicals must be monitored with any application applied per the requirements of FIFRA. BNSF must approve of subcontractors and reserves the right to refuse specific applicators or applicators' employees access to its property. The contractor must submit a list of chemicals, including their labels and Material

Safety Data Sheets (MSDS), to be used on BNSF property when requested by BNSF. This list will be pre-approved by the Manager Vegetation Control and the Manager Industrial Hygiene.

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N. Terrestrial Wildlife

BNSF follows the Endangered Species Act to ensure that all threatened and endangered species are protected under the law. When there is a threatened or endangered species that is likely to be affected by the movement of trains, BNSF works closely with federal and state regulators to take measures to protect these populations.

In particular, and as an example, BNSF is proud of the work it has done in Montana to protect grizzly bears. Although the grizzly bear population has increased substantially in recent years, and many other groups are seeing increases in grizzly bear incidents that result in the death of a grizzly bear, BNSF has actually seen a significant decrease in incidents along our tracks.

There is no evidence that any barrier effects or small quantities of contaminants exist and/or pose any reasonably foreseeable threat to terrestrial wildlife. In fact, the Washington Department of Fish & Wildlife's (WDFW) letter dated October 16, 2009 in connection with the "Pacific Northwest Rail Corridor Program Environmental Assessment; WSDOT-Federal Rail Administration Proponent, BNSF Railway north-south mainline from Vancouver, Washington to Blaine, Washington", https://www.fra.dot.gov/Page/P0413 "Finding of No Significant Impacts (FONSI), Appendix A: Comment Letters on the Tier I Environmental Assessment," stated the following:

> ***Fences, sound walls, railway buttresses, bulkheads, and other vertical surfaces can impede migration travel corridors for terrestrial wildlife and may result in fragmentation or isolation of certain wildlife species. Vertical surfaces may decrease terrestrial wildlife travel corridors to fewer locations which could concentrate crossings of nearby roads resulting in potential rail and road kill hotspots. WDFW encourages the proponent to avoid, minimize, or otherwise mitigate habitat fragmentation, population isolation, or the unintended funneling of animals where it may be undesirable for wildlife or dangerous to humans.***

Further, on October 22, 2009, the Washington Department of Transportation (WSDOT) responded to the WDFW in part as follows:

> ***The corridor currently hosts more than 60 trains per day in some rural segments, therefore the addition of eight trains per day is a relatively small increase in train frequency, Additionally, on average a train passes any given location on the corridor approximately once an hour. This frequency is far less than the vehicle frequency on I-5, which is in close proximity to the rail corridor over most of the route. Finally, nearly all the specific improvements in the corridor expansion are proposed to improve an existing corridor, so wildlife in the vicinity are already accustomed to the passing of trains.***

IX. Conclusion

In conclusion, and for all the reasons cited herein, BNSF believes the scope of review contained in the DEIS to be overly-broad, not supported by available information, and not consistent with the requirements of SEPA or NEPA. BNSF recommends that the Council defer consideration of the interstate rail system and its regulation to federal agencies that possess authority and expertise in this area.

BNSF would like to thank the Co-Leads for this opportunity to provide comments and information concerning the Project and the DEIS.

Sincerely,

F. E. Kalb, Jr.

Enclosures