

# Washington State Short Line Rail Inventory and Needs Assessment Preliminary Report

**Washington State Department of  
Transportation**

**March 1, 2015**

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## **EXECUTIVE SUMMARY**

The Washington State Short Line Rail Inventory and Needs Assessment Study preliminary report provides a framework for a data-based evaluation of the condition and capital needs of the state's entire short line system. The Washington State Legislature directed the Washington State Department of Transportation (WSDOT) to provide a preliminary report on the short line railroads by March 1 and the final report by June 30, 2015 in ESSB 6001 Sec. 222.

The preliminary report is a collaborative effort between WSDOT and researchers with the Freight Policy Transportation Institute at Washington State University (WSU). The research team is grateful to the Short Line Rail Study expert review group, composed of short line railroad operators and owners, and rail-dependent industry representatives, who provided valuable input to this report.

### **Key Preliminary Findings**

Researchers at the WSU Freight Policy Transportation Institute and the WSDOT Freight Systems Division have completed in-depth interviews with short line rail owners and operators who manage 63 percent of track miles in the state and found that:

- Much of the existing short line rail inventory does not meet the state's current or future needs and is not well maintained. For example over 20 percent, 315 miles, of these short lines' rail road miles are less than 90-pound rail and often nearly a century old;
- Failing to meet the mainline railroads' heavier 286,000-pound rail car standard will make portions of the state's short line system obsolete; and
- Eleven short line railroads responding to the study survey estimated capital needs of over \$122,000,000. There are 24 short line railroads in the state.

### **Content of the Preliminary and Final Reports**

The full preliminary report:

- Provides a high level inventory of short line railroads in Washington State and their existing infrastructure conditions;

- Defines ‘state of good repair’ for the short line railroads and highlights existing gaps to state of good repair;
- Begins to explain how short line rail systems in good repair support regional economic development goals in three case studies; and
- Benchmarks a selection of other states’ freight rail grant and loan programs to inform policy recommendations for Washington State.

WSDOT will submit the final report to the transportation committees of the legislature and the office of financial management by June 30, 2015. It will complete the elements of the preliminary report and also include:

- Recommendations for a programmatic response with funding options; and
- Partial assessment of existing freight rail transload centers in Washington State and the potential for additional facility development.

# **THE WASHINGTON STATE SHORT LINE RAIL INVENTORY AND NEEDS ASSESSMENT STUDY PRELIMINARY REPORT**

## **What is the Study's Purpose?**

The Washington State Short Line Rail Inventory and Needs Assessment Study preliminary report provides the first data-based evaluation of the condition and capital needs of the state's entire short line system. The Study was conceived as a recommendation in the Washington State Rail Plan which advised that more information about the condition of the State's short line railroads would help to inform decision makers as they prioritize multimodal transportation needs across Washington.

The Washington State Legislature directed the Washington State Department of Transportation (WSDOT) to provide a preliminary and final report on the short line railroads in ESSB 6001 Section 222 in 2014: "\$150,000 of the multimodal transportation account—state appropriation is provided solely for the department to develop an inventory of short line rail infrastructure that can be used to support a data-driven approach to identifying system needs. The department shall work with short line rail owners and operators within the state, provide status updates periodically to the joint transportation committee, submit a progress report of its findings to the transportation committees of the legislature and the office of financial management by December 15, 2014, submit a preliminary report of key findings and recommendations to the transportation committees of the legislature and the office of financial management by March 1, 2015, and submit a final report to the transportation committees of the legislature and the office of financial management by June 30, 2015." WSDOT presented the initial findings of the study to the Joint Transportation Committee of the Washington State Legislature on December 11, 2014, and submitted a progress report with the same information in early 2015.

## **What are the Key Preliminary Findings?**

Researchers with the Freight Policy Transportation Institute at Washington State University working with WSDOT have completed an in-depth survey of short line rail owners and operators who manage 63 percent of the system and found that:

- Much of the existing short line rail inventory does not meet the state’s current or future needs and is not well maintained. For example, over 20 percent (315 miles) of these short lines’ rail road miles are less than 90-pound rail and often nearly a century old;
- Failing to meet the mainline railroads’ heavier 286,000-pound rail car standard will make portions of the state’s short line system obsolete; and
- Eleven short line railroads responding to the study survey estimated capital needs of over \$122,000,000.

### **Study Overview**

The 2014 Washington State Rail Plan identified, via a needs assessment, important issues facing the state’s rail system. The key issues facing short line railroads include the lack of investment to maintain and improve the system particularly on low-volume short line rail road segments, the need to access ports and support the competitive needs of the state’s ports, and the lack of intermodal connectors to serve freight-dependent industries.

Short line railroads provide connectivity between rural agricultural and timber/wood products production areas and the main line rail transcontinental networks so that Washington State farmers, manufacturers and other sectors have access to national and global markets. In addition several of the state’s deep-water and inland ports rely on short line railroads to transport both state and national exported goods, and bring imports in and keep them moving onto their final destination.

This study was created by a proviso of the 2014 Regular Session of the 63<sup>rd</sup> Legislature of Washington State, as the Legislature recognized the value of the short line system in Washington State and sought to better understand the current state of the short line railroads. The report considers the short line railroads in line with standards set forth by both the American Association of Railroads (AAR) and the federal Surface Transportation Board (STB).

This preliminary report:

- Provides a high level inventory of short line railroads in Washington State and their existing infrastructure conditions;

- Defines ‘state of good repair’ for the backbone short line railroad system and highlights existing gaps to state of good repair;
- Outlines how properly maintained short line railroads support regional economic development goals in three draft case studies; and
- Benchmarks other states’ freight rail grant and loan programs to inform policy recommendations for Washington State.

The final report of the Short Line Inventory and Assessment Study will complete the elements of the preliminary report and also include:

1. Complete the high-level inventory of short line railroads in Washington State and their existing infrastructure conditions, with a detailed statewide needs assessment to develop an efficient 286,000-pound capable rail short line rail system in Washington State. This estimate will be based on track and bridge conditions recorded on each line’s track charts and bridge plans. For lines that do not report, the study will produce an estimate based on known information about the line as well as statewide average rail conditions.
2. Refine the ‘state of good repair’ definition and highlight existing gaps to state of good repair.
3. Discussion of regulatory considerations as federal mandates are put in place, such a positive train control, that would create additional capital needs for the state’s short line system.
4. Three detailed case studies of operating lines and the role they play in their regional economies. The case studies will include the manner in which the line competes with other modes such as truck or barge, and the likely effects if the line is unable to compete with alternative modes. There will be impacts on regional industries currently using the short line as well as local residents. There are potential roadway effects should freight rail be restricted or eliminated and more trucks serve the area’s industry sectors.
5. Several additional case studies on load centers illustrating the on-the-ground conditions that would favor expansion or development of a new short line rail loading facility.
6. More detailed discussion of the opportunities for Washington to adopt other states’ funding and/or financial incentive programs to maintain and improve short line railroads.
7. Define a programmatic response that includes funding options.

There are 24 short line railroads in Washington State. Three of the branch lines, the CW, PV Hooper, and the L&I, combine to form the state-owned Palouse Coulee City (PCC) Railroad. The short lines connect to the Class 1 railroads serving the state: the BNSF Railway and the Union Pacific Railroad as shown in Figure 1.

# 2013 Washington State Rail System



February 2014

Figure 1: Washington State Rail Network

## **What is the Condition of Short Line Railroads in Washington State?**

The configuration of the current U.S. short line rail system was heavily influenced by the 1980 Staggers Rail Act. The Staggers Act deregulated the railroad industry and allowed Class I railroads to adopt cost reduction strategies through the sale or lease of no- or low-profit, low-density rail lines. This action led to the creation of 227 short lines railroads nationwide from 1980 -1989, and an additional 229 in the 1990s.<sup>1</sup> Many of those lines were subsequently leased, purchased, or otherwise obtained by various private or public entities to maintain their operation for the benefit of the local region and industry sectors. Short line railroads are located throughout the state and connect a variety of regional production to the mainline rail system.<sup>2</sup> Even in the 1990s many of these lines were in a state of neglect and in need of significant repair to catch up with the back log of deferred maintenance that had occurred under the mainline railroads' ownership.

Regional railroads, as defined by the Association of American Railroads (AAR), are line-haul railroads operating at least 350 miles of road and/or earning revenue between \$37 million and the Class I revenue minimum threshold. The AAR identifies two categories of short line railroads:

- Local railroads are line-haul railroads below the Regional criteria.
- Switching & Terminal railroads have several defining characteristics, including those that are either jointly owned by two railroads for the purpose of transferring cars between railroads or operate solely within a facility or group of facilities.

All switching and terminal carriers regardless of revenue level are Class III carriers. The Surface Transportation Board (STB) also provides a precise revenue-based definition of categories of U.S. railroads. The STB's accounting regulations group rail carriers into three classes for purposes of accounting and reporting (49 CFR Part 1201 Subpart A):

- Class I: Carriers with annual carrier operating revenues of \$467.0 million\* or more
- Class II: Carriers with annual carrier operating revenues of less than \$467.0 million\* but in excess of \$37.4 million\*

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<sup>1</sup> Babcock, M.W., and Sanderson, J. 2004. *Should Short line Railroads Upgrade Their Systems to Handle Heavy Axle Load Cars? A Kansas Case Study.*

<sup>2</sup> <http://www.wsdot.wa.gov/NR/rdonlyres/AFF740F6-20F2-4C85-8569-F107E5B649D8/0/StateFreightRailPlan.pdf>

- Class III: Carriers with annual carrier operating revenues of \$37.4 million\* or less, and all switching and terminal companies regardless of operating revenues.

\* These threshold figures are adjusted annually for inflation using the base year of 1991.

The ownership structure of short line railroads in the U.S. and Washington State varies. Nationwide roughly 50 percent are controlled by holding companies; Genesee & Wyoming Inc. is the largest such firm. Individual private owners, public entities, shipper groups, and Class Is and groups of Class I railroads<sup>3</sup> also own short line railroads.

### **Modern Requirements for Short Line Railroads**

Compounding the need to recover from deferred maintenance, the U.S. industry standard for freight rail cars on the mainline system has moved beyond the use of lighter, 263,000-pound railcars to heavier and more efficient 286,000-pound railcars. Many short lines are unable or underequipped to efficiently and safely handle these car sizes at sufficient operating speeds. This standardization is putting pressure on the short line system, as the main line railroads are requiring them to become 286,000-pound compatible to receive competitive rates.

Since the Staggers Act enabled mainline railroads to pursue strategies to increase productivity, there has been a steady migration from 263,000-pound cars capable of carrying 100 tons, to 286,000-pound cars capable of carrying 111 tons. The recent *Summary of Class II and Class III Railroad Capital Needs and Funding Sources* report to Congress by the FRA compared the adoption of 286,000-pound cars to that of the ubiquity of the 53-foot truck trailers on U.S. highways. This change gained speed as multiple studies within the rail industry documented a reduction in operating costs from use of the heavier cars. Savings are realized in:

- Capital costs (fewer cars needed to move a fixed volume of traffic)
- Fuel costs (reduced tare weight means an improved ratio of net load to gross weight)
- Crew costs (fewer car trips may permit a reduction in the number of trains operated)
- Locomotive costs (if train net load can be increased within the same gross train weight, there is more revenue for the same locomotive mileage)<sup>4</sup>

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<sup>3</sup> AAR, 2014. *Railroad Ten-Year Trends, 2003-2012*.

<sup>4</sup> ZETA-TECH Associates, 2000. *An Estimation of the Investment in Track and Structures Needed to Handle 129,844 kg (286,000 lb.) Rail Cars on Short Line Railroads*.

286,000-pound cars may reduce operating costs per ton-mile by nine percent compared to 263,000-pound cars.<sup>5</sup> However, in order to make the transition in car weight, a more robust track infrastructure is needed along with capable bridges; this is not currently met by many short lines. As of 2010, only 57 percent of short line miles in the U.S. were capable of carrying 286,000-pound cars.<sup>6</sup> The 286,000 pound transition has left many of those unable to handle the heavier cars at a distinct disadvantage. Incompatible lines face the real threat of an inability to offer competitive rates necessary to prevent use of trucks for the first or last mile of movements that would have previously been performed by the short line railroad. The Upper Great Plains Transportation Institute identified the economic benefits of short line operations, including increased economic development opportunities, as increased local business volume, decreased highway maintenance costs, decreased highway user costs, and decreased shipper costs in a 2002 study. This study notes that the ability to transition to the heavier cars comes at a substantial price tag; one often untenable by an individual short line railroad owner.<sup>7</sup>

### **The Performance Goal: Washington State Short Lines Handle 286,000 Pound Rail Cars**

In recognition of the business imperative for short line railroads to adopt the 286,000-pound standard, this report defines the ability to effectively and safely operate 286,000-pound cars at 25 miles per hour as the primary benchmark of state of good repair for the backbone short line system. Not every segment of every short line railroad needs to meet this standard, however if they do not, they must often develop alternate strategies to interchange heavier rail cars to the mainline network. Achieving and maintaining this condition depends on several line components, including rail weight (e.g. 112 pound), tie condition, ballast, bridges, and crossings. This preliminary report identifies the key metrics used to indicate sufficient condition. The final report will summarize the needs throughout Washington's short line system where this standard is necessary. The final report will examine both a complete transition in the short line network to 286,000-pound rail, and a metric to identify those lines most in imminent need of such a standard

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<sup>5</sup> Casavant, K., and Tolliver, D. 2001. *Impacts of Heavy Axle Loads on Light Density Lines in the State of Washington*. Report submitted to the Washington State Department of Transportation,

<sup>6</sup> American Short line and Regional Railroad Association, 2012. *Short line Regional Railroad Facts and Figures*.

<sup>7</sup> UGPTI, 2002. *Small Railroads – Investment Needs Financial Options, and Public Benefits*. North Dakota State University.

of operation, thus providing different, appropriate performance goals that fit the short lines' real-world operations.

### **Additional Infrastructure Needs**

While the ability to efficiently move 286,000-pound cars along their tracks is a significant consideration for short line railroad's future viability, it is not the only infrastructure issue. As many short lines serve a first and/or last mile function for longer freight rail movements, two other key characteristics (depending upon short line function) occur based on their interactions with the Class I railroad system.

First, full unit trains are preferred by main line railroads as they are the most productive use of their locomotives and workforce. A unit grain train is typically 110 cars long and many short line railroads and/or their industry partners are investing in facilities with the capacity to originate or terminate these long trains. A recent example is the McCoy Multi-Car Loading Facility on the PCC Railroad in eastern Washington. Class I railroads have developed specific guidelines for such projects.

Second, and frequently related, the interchange condition between short line and Class I must be of effective size, configuration and gradient between lines. Short line railroads are making every effort to meet the efficiency and throughput standards sought by the main line carriers.

This preliminary report identifies funding options by which short line railroads could develop sufficient infrastructure. The final report will include methods to calculate the estimated

### **Beyond 286,000-pounds?**

Short line railroads must meet the mainline rail industry standard for the 286,000-pound cars to efficiently connect to them.

Some signs point to the adoption of even heavier, 315,000-pound cars in the future. While some mainline railroads do currently accommodate the heavier 315,000-pound cars, there is little indication that an overall change in the standard car size is imminent.

If and when a shift towards heavier cars occurs, lines that do not meet the 286,000-pound standard will further run the risk of becoming obsolete.

investment needs. For the backbone short line rail system the study will examine the following condition requirements:

- Track at FRA Class II status (sustained operations at 25 mile per hour); and
- Capable of handling 286,000 pound rail cars

In order to meet these condition requirements, several track components are to be analyzed, in addition to bridges and crossings. Track components include rail, ties and ballast. These three components all work together to provide the needed support for rail traffic and in some cases the conditions of two components may make up for one weaker component. For example, a good ballast section and tie condition may allow 286,000 pound car operations with a lighter rail section of less than 100 pound/yd.

**Rail-** A rail weight of 112 pound/yd. or greater is identified as the objective to meet the above standard. Rail of less than 90 pound/yd. is inadequate for 286,000 pound loads, even with good support conditions. At the desired operating speed of 25 miles per hour, heavier rail is required due to increased dynamic forces, so that even 100 pound /yd. rail becomes marginal.

- 286,000-pound cars impose wheel loads of 36,000 pounds on the rail. Rail less than 90 pound/yd. will be stressed beyond its bending strength by these loads and will be permanently deformed.
- 90 pound rail is adequate only at low speeds and with good support (tie and ballast) condition.<sup>8</sup>

**Ties -** A tie replacement rate of 25 percent needed to meet the above standard. Tie condition is measured by the number of good ties in a section of rail (typically 23 ties in 39 feet). FRA standards for Class II track state that there only need to be eight effective ties in a 39 foot section. This is an example of why FRA track standards are not maintenance standards, but minimum standards. Typically, rail operations at 10 mph (Class I) across track with less than 16

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<sup>8</sup> ZETA-TECH Associates, 2000. *An Estimation of the Investment in Track and Structures Needed to Handle 129,844 kg (286,000 lb.) Rail Cars on Short Line Railroads.* p 6.

effective ties (66 percent) in 39 feet is not desirable. By replacing 25 percent of ties, a short line can establish a tie condition which safely allows operations at 25 mph.

**Ballast** - An application rate of 1,056 tons/mile is identified as the objective to meet the above standard. This represents approximately four inches of ballast under the ties. When combined with rail and tire replacement, this provides a solid track section capable of sustained operations at 25 mph with 286,000-pound rail cars.

**Bridges** - Bridge replacement costs are typically represented in dollars per track foot (\$/T.F.). Given the information gathered thus far for this study, a more general figure for both bridge replacement and bridge rehabilitation have been determined. These costs were arrived at by averaging bridge lengths over a large short line rail system and applying a \$/T.F figure for both rehabilitation (\$1,500/T.F.) and replacement (\$7,400/T.F.). In order to accurately determine short line bridge needs more information is being gathered from the operator's Bridge Management Plans regarding specific bridge lengths and conditions. Rehabilitation costs represent replacement of stringers with new 10x18 members and replacement of deck ties and some substructure elements.

**Crossings** - Crossings costs are determined by utilizing an average crossing rehabilitation cost on a large short line system. This cost represents replacement of the underlying crossties, placing new ballast and replacing either crossing planks or the crossing with asphalt concrete pavement.

### **Cost Calculations**

Each line to be considered will be assessed based on operator/owner revealed needs, either as stated individually, or as determined by shared track and bridge information through Track Charts and Bridge Maintenance Plans. Table 1 provides a generalized costs estimate of the associated components necessary to achieve the standards.

**Table 1. Track Rehabilitation Estimation Template.**

Item	Unit	Unit Cost
Rail Replacement	Track Foot	\$80
Joint Rehabilitation	Each	\$30
Crosstie Replacement	Each	\$80
Ballast Distribution	Ton	\$25
Surface Line and Dress	Track Foot	\$3
Ditching	Track Foot	\$6
Bridge Rehabilitation	Each	\$125,000
Bridge Replacement	Each	\$550,000
Crossing Allowance	Each	\$30,000

For non-reporting lines, infrastructure costs and needs will be estimated in the final report. The portion of the remaining lines in need of improvement to satisfy the above requirements will be established based on national averages of track miles and bridges not compatible with 286,000-pound cars.

### **What are the Results of the Survey of Washington State Short Line Rail Operators?**

WSU and WSDOT conducted a survey of the state’s short line operators and/or owners from fall 2014 through winter 2015. The survey was designed to help state officials understand the operating conditions of the lines and the strengths, weaknesses, and needs for continued successful operation from the owner/operator perspective. This report contains information collected from 16 of the state’s short line railroads that represent 63 percent of the total short line miles (920 of 1,460) in the state. The survey showed that at least 315 of these miles are currently operating with less than 90-pound rail that is often nearly a century old.

WSU researchers developed a questionnaire (please see Appendix A) and sent it to the 24 short lines currently operating in the state. The survey provides a snapshot of the lines’

conditions and system needs as perceived by operators and/or owners of the lines. The survey asked 36 questions in four topic areas:

1. Background information on the line: ownership structure, length of ownership, annual revenue over the last five years.
2. Rail infrastructure conditions: length of the line, other trackage rights, service type, capacity and volume, commodities moved, infrastructure restricting movement.
3. Rail infrastructure investment needs: needed capital improvements, maintenance plans, funding sufficiency for maintenance needs, and participation in the Freight Rail Assistance Program (FRAP) and the Freight Rail Investment Bank (FRIB).
4. Regional economic role and future plans: employment level, shipper utilization (or lack of) on the lines, identified strengths and weaknesses, and the perceived regional impact of the line.

Initial returns generated 10 completed surveys (37 percent). FPTI and WSDOT staff followed up with non-responding lines, thus generating an additional six responses, bringing the total response to 16 usable questionnaires (59 percent)<sup>9</sup>. The following sections summarize the results.

### **Results of the Short Line Railroad Survey: Background Information**

Short line railroads in Washington State have diverse ownership structures, and therefore diverse missions. The structures vary from public ownership (eight respondents), to privately held operations (four respondents), to publicly traded holding companies (three respondents), and a joint ownership by the region's two Class I's (one respondent).

Both the function and the industries served by the short lines are highly dependent upon the region in which they operate. Functions reported by the respondents include<sup>10</sup>:

- Shipper to Class I Railroad, Class I Railroad to Shipper;
- Class I to Class I Railroad;

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<sup>9</sup> At the time of the writing of the preliminary report, effort continues to be applied to collecting further responses to be included in the final report.

<sup>10</sup> See Appendix for Survey Instrument.

- Class I Railroad to Columbia/Snake River, River to Class I;
- Handling for Class I Railroads;
- Switching or Interchange for Class I Railroads; and
- Car storage for major regional shippers.

Most of the responding lines have some level of interaction with at least one of the region's two Class I railroads. Rural operations tend to be highly focused on single commodities or industry groups such as lumber or wheat, and the products that support them. The urban and port-based lines carry a higher volume and diversity of product. There are examples of both rural and urban short line railroads included as case studies in this report.

#### **Short Line Railroad Survey: Infrastructure Conditions**

Within the values contained in Table 2 below, marked differences begin to unfold in relation to rail conditions, and capability to handle heavier 286,000-pound cars. Largely, these issues involve rural lines that serve limited industries and have lower shipment volumes.

One respondent said that he is using “19<sup>th</sup> century railroad infrastructure to respond to 21<sup>st</sup> century industry demands.” Short line respondents said that having to operate at lower speeds due to poor track condition is a prevalent concern, as is the lack of ability to run 286,000-pound cars. One respondent said that despite being able to run 286,000-pound cars on their line, they are concerned with the toll it takes on their line as it is minimally capable of carrying the heavier weight.

**Table 2. Aggregate Characteristics of Reporting Lines**

<b>Total Length</b>	920.45 miles
<b>Total Bridges</b>	335
<b>At-Grade Crossings</b>	1201
<b>Tunnels</b>	5
<b>FRA Track Class</b>	
<b>Class I</b>	112.1 miles
<b>Class II</b>	555.6 miles
<b>Excepted</b>	218.1 miles
<b>Jointed Rail</b>	717.1 miles
<b>Welded Rail</b>	103.5 miles
<b>Rail Weight</b>	
<b>Less than 90 Pound Rail</b>	315 miles
<b>At least 90 Pound Rail</b>	460 miles

As the Class I lines now use unit trains for most moves, they may call for short lines to provide the ability to originate or terminate 110-car trains. The researchers wanted to verify whether this uniformly applies to all short lines, and asked owners and operators whether the ability to originate or terminate unit trains constrained their business. While no respondents said that the inability to originate and/or terminate unit trains presents significant limitations to their operation currently, several said that they will need to expand to do so efficiently in the future.

Another concern to multiple respondents is the condition of their interchange to Class I lines. Reported issues arise from multiple sources:

- Business growth has maxed out the capacity of the current interchange track;
- Inadequate size and configuration;
- Significant gradient at the interchange.

**Results of the Short Line Railroad Survey: Infrastructure Investment Needs**

The owners and operators were asked to describe their primary capital needs to ensure continued, successful operations. Eleven firms provided very detailed responses. Ties and rail replacement were the top two needs identified, with total estimated costs of \$16.5 million and \$43.2 million dollars, respectively. The full identified major needs of the 11 respondents exceed \$122 million, most of which has not been addressed due to the companies' lack of adequate funding for capital projects.

Table 3 below summarizes the responses of the 11 short line railroads that answered the question to a level sufficient to generate a cost estimate. Significant portions of the identified needs demonstrate potential for correlation with the recommended 286,000-pound capability. Several other respondents identified needs, but provided no cost estimate of those needs. These are shown in Table 4.

**Table 3. Short Line Railroads Self-Identified Infrastructure Needs\***

Category	Identified Funding Need
Ties, Main Line	\$ 16,519,954
Ties, Switching	\$ 144,722
Rail Replacement	\$ 43,153,109
Surfacing and Ballast	\$ 6,744,500
Road Crossing Rehabilitation	\$ 717,373
Tracks	\$ 319,955
Track Realignment	\$ 17,000,000
Structures (Bridge and culvert)	\$ 4,000,906
Structures (non-Bridge)	\$ 100,000
MOW Equipment and Tools	\$ 760,500
Rail Yard Reconstruction	\$ 20,000,000
Interchange Improvement	\$ 2,000,000
Signaling	\$ 80,000
Undercut	\$ 450,000
Drainage	\$ 200,000
Other Undefined costs	\$ 10,000,000
<b>Total Identified Need</b>	<b>\$ 122,191,019</b>

\* Note: These estimates summarize information from the 11 completed surveys received by February 20, 2015. They are the firms’ self-identified needs. This table does not include the cost of fully upgrading the state’s short lines to 286,000-pound car capability; an analysis of the larger gap will be included in the final report. Identified Funding Need for the state-owned PCC Rail System comes from the PCC Rail System Strategic Plan which is scheduled to be adopted in May, 2015.

**Table 4. Respondent-Identified Qualitative Infrastructure Needs**

Category
Interchange - Upgrades and Relocation
Creation of New Line Segment
Industrial Park Siding

Elimination of At-Grade Crossings on US 97
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Safety Signaling
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The short lines maintenance and infrastructure needs largely fall outside of respondents' ability to self-fund from earned revenue. Only two of the respondents<sup>11</sup> said that their identified needs are in their current maintenance plan and that they have funding for the identified needs. One of these two is a publicly owned line, while the other is directly supported by the Class I lines. Another group of respondents said that they cannot adequately fund their identified needs with current and anticipated revenue. Several said they have the ability to keep the line at the current levels without any ability for upgrades or improvements.

Respondents were asked to identify funding sources they have sought out, both at the state level and from other sources, and comment on their success in securing these funds.

They said that:

- Of those that have successfully taken advantage of either the Washington State Freight Rail Assistance Program (FRAP) or the Freight Rail Investment Bank (FRIB), most were pleased with the WSDOT performance and interaction and expressed the desire for increased funding availability. One respondent who has received WSDOT funding said that the reimbursement process is overly slow and hampers their ability to garner quality bids from reputable bidders.
- Smaller and more rural lines said that they had:
  - Difficulty in demonstrating competitiveness with such a small operation under the public funding guidelines;
  - Application requirements are frustrating as they appear to focus on large lines in urban areas (the criteria include reducing high-volume traffic delays, and emissions) that are not necessarily of concern or importance to rural carriers. The point system seems unfair to rural lines and other federal funding is also intimidating – cannot hire a \$20,000 grant writer for a small chance at funds.

- The lack of ability to successfully acquire grants is due in part to an inability to demonstrate the short line's capacity for job creation. The job creation potential associated with their proposed improvements is uncertain given the current inability to garner new customers due to slow track conditions.
- If the back log of deferred maintenance could be addressed, then annual maintenance program would be sufficient.
- Four lines indicated they have sought federal funding, some in the form of TIGER grants.

### **Results of the Short Line Railroad Survey: What are Their Regional Economic Roles and Future Plans?**

Short lines throughout the state perform multiple functions within the larger transportation system. When asked to describe competition for freight customers within their regions, nine of the 16 respondents said that truck carriers were a major competitor. The competitive nature between short line railroads and truck operations serves to lower rates for shippers in the area. When shippers use freight rail instead of trucks, some truck volume may be removed from roadways, thereby reducing the damages of heavy loads. Short line railroads provide flexibility and transportation options to shippers and receivers, making access to them desirable to companies expanding or considering locating in Washington State.

When asked to describe their lines major weaknesses, the majority centered on infrastructure needs and limitations. In their words:

- Interchange efficiency and cooperation with Class I is of major concern;
- Deferred maintenance by previous owner is a large hurdle;
- Time will deteriorate the line to a point where it can't be maintained to an operation level without a large infusion of cash;
- Track infrastructure in need of rehabilitation;
- Interchange is in need of an upgrade;
- Need seed capital to invest in the rail and then the land use will follow;

- Woefully inadequate infrastructure

In response to their acknowledged weaknesses, respondents followed up with suggestions of the improvements in service that would most benefit their customers. Responses focused on needed infrastructure improvements such as heavier rail and tie programs, transload facility development, and interchange conditions. They also want operational gains such as reduction in dwell times, increased frequency of service, and improved interaction with Class I carriers.

### **Short Line Railroad Funding Programs**

Many short line railroads in Washington face a significant backlog of deferred maintenance but do not earn enough revenue to address it. Recognizing these shortcomings, the federal government and many states have implemented a variety of strategies to aide short line railroads to improve and further develop their infrastructure. In October 2014 the FRA delivered a report to Congress outlining the capital needs and funding sources of Class II and Class III railroads nationwide.

### **Overview of Federal Funding Strategies**

**RRIF** - Since 1998, the Railroad Rehabilitation and Improvement Financing (RRIF) program has provided nearly \$700 million in loans to Class II and III railroads. RRIF originated with the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21)<sup>12</sup> and subsequently amended by the Safe Accountable, Flexible and Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU)<sup>13</sup> in 2005, as well as the Rail Safety Improvement Act of 2008<sup>14</sup>. The acts provided loan opportunities to improve or rehabilitate intermodal facilities and rail equipment. Within the \$3.5 billion ceiling established by TEA-21, \$1 billion was direct towards lines other than Class I. SAFETEA-LU increased the loan ceiling to \$35 billion, with \$7 billion reserved for freight carriers other than Class I lines. Twenty-seven Class II or III railroads have taken

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<sup>12</sup> Pub. L. No. 105-178, Transportation Equity Act for the 21<sup>st</sup> Century, Section 7203 (112 Stat. 471), enacted June 9, 1998.

<sup>13</sup> Pub. L. No. 109-59, Safe Accountable, Flexible and Efficient Transportation Equity Act: a Legacy of Users, Section 9003 (119 Stat. 1921), enacted August 10, 2005.

<sup>14</sup> Pub. L. No. 110-432, Rail Safety Improvement Act of 2008, Sec. 701(e) (122 Stat. 4906), enacted October 16, 2008.

advantage of the loan program since 2002, including one railroad in Washington State: the Columbia Basin Railroad.

**TIGER Grants** – In 2009, President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA)<sup>15</sup> that created the Transportation Investment Generating Economic Recovery (TIGER) program. The TIGER program’s objective is to invest in and modernize the nation’s transportation network, and it has provided competitive grants to recipients throughout the transportation system, including over \$270 million to short line railroads. Although most of the TIGER funds are used to leverage other funding secured for larger projects, smaller rural projects are also funded through this program.

**Short Line Railroad Tax Credit** – Commonly known as 45G<sup>16</sup>, the short line railroad tax credit originated in 2004 legislation to enable and encourage private investment in rail line rehabilitation. Similar to programs found in states such as Kentucky (please see below) the 45G program is a federal income tax credit for up to 50 percent of track maintenance and qualified infrastructure expenditures. The credit is allowable up to the product of \$3,500 by the sum of the number of miles of railroad track owned or leased and the number of miles assigned to the taxpayer by a Class II or III railroad.

### **How Do Other States Support Their Short Line Railroads?**

This study reviewed a number of methods used by other states to finance or provide financial support to short line railroads so that they are able to maintain safe and efficient operations. These states have developed funding sources to implement policies that recognize the value of the short line system in supporting regional economies.

State support for short line railroad investment and infrastructure improvement typically takes on two major forms: grant and/or loan programs, and tax based incentives and benefits. Many states offer some level of support for one or more of these strategies. The study found the following state support mechanisms:

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<sup>15</sup> Pub. L. No. 111-5, American Recovery and Reinvestment Act of 2009, (123 Stat. 203-205), enacted February 17, 2009.

<sup>16</sup> <http://www.law.cornell.edu/uscode/text/26/45G>

**Loan and Grant Programs** – Typically managed by a State Department of Transportation or Economic Development Commission, freight rail loan and grant based programs found throughout the U.S. center on providing support for maintenance, construction and rehabilitation, with some also allowing for purchase and/or preservation for future use. Where programs are competitively based, applicants are charged with quantification of the benefits stemming from investment. Benefits are typically manifested in job creation and industry support, environmental performance, and truck diversion; all indicators of regional economic performance.<sup>17, 18</sup> Many states only fund projects with benefit-cost ratios in excess of one, unless the project is deemed a system critical link (e.g. NJ<sup>19</sup>).

Example state freight rail loan and grant programs include:

**Oregon (ConnectOregon)** - Using a **lottery bond-based initiative** available to public agencies, non-profit organizations, and private businesses with a guaranteed match, *ConnectOregon* is a flexible funding program aimed to increase transportation connectivity and thus reduce transportation costs and improve job access. The fund allows projects focused on maintenance, acquisition, capital improvement, among others venues. Applicants are ranked and selected based on the stated benefits and feasibility as determined by agency staff. Most recent funding availability totaled just over \$40 million for 36 projects, with no dollar limitations on the request made by individual applicants.<sup>20</sup>

**Florida (Strategic Intermodal System (SIS))** – Under a **grant system**, qualifying short line railroads in the state are eligible for a capacity improvement grant in which the state pays 75 percent of project costs. The grants require a 75/25 match. Funds are available for use on projects related to new lines, track upgrades, siding, capital improvements, as well as for intermodal

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<sup>17</sup> DOT/FRA, 2014. *Summary of Class II and Class III Railroad Capital Needs and Funding Sources: A Report to Congress*.

<sup>18</sup> <http://www.drpt.virginia.gov/studies/files/Appendixpercent20Cpercent20Shortlinepercent20Techpercent20Memo.pdf>

<sup>19</sup> NJ DOT: <http://www.state.nj.us/transportation/freight/rail/projects.shtm>

<sup>20</sup> ODOT: <http://www.oregon.gov/ODOT/TD/TP/pages/connector.aspx>

facilities where the investments are geared towards rail transfer or staging areas. Funding availability is approximately \$32 million annually.<sup>21</sup>

**Idaho (Idaho Rural Economic Development and Integrated Freight Transportation Program (REDIFiT))** – Idaho’s **Revolving Loan Program** seeks eligible applicants (Class III, Class II, and Public Entities) interested in improving short line railroads to preserve local service, and construct of loading and reloading facilities to support business and commercial activities. The state provides approximately \$5 million for the program. Idaho uses eligibility standards that include financial commitment level and benefit-cost ratios.<sup>22</sup>

**Iowa (Railroad Revolving Loan and Grant Program (RRLGP))** – Iowa’s **Revolving Loan Program** provides zero-percent interest loans to eligible entities (cities, counties, rail users, railroads, Metropolitan Planning Organizations) for use in any rail facility, except at-grade crossings surface repair and protection devices. Project evaluation includes consideration of job creation, public and private benefits, total investment need (requires a 20 percent local contribution)<sup>23</sup>.

**Other States with Short Line Grant or Loan Programs:** KA, OH, WI, IA, NH, NJ, KY, MI, MN, MS, MT, NJ, ND, OK, PA, VA, and WA.

**Tax based incentives** – In addition to grant and loan programs, many states additionally provide tax based incentives in the form of exemptions, credits, and other relief or special status. While incentives such as those listed here do not directly support the funding of infrastructure development and the assistance with recovering from mounting deferred maintenance, they do free up some financial opportunity through reduced tax burden. As reported in the 2014 FRA report to congress, “the states of Connecticut, North Carolina, and Pennsylvania impose statewide gross earnings or receipt taxes on railroads rather than a property tax” ( p.15). Massachusetts and New Jersey largely exempt railroads from property taxes.

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<sup>21</sup> Florida DOT: <http://www.dot.state.fl.us/rail/plandevol.shtm>

<sup>22</sup> ITD: <http://www.agri.idaho.gov/Categories/Marketing/transportation.php>

<sup>23</sup> Iowa DOT: <http://www.iowadot.gov/iowarail/assistance/rrlgp.htm>

**Table 5. Examples of State Short Line Funding Strategies.**

Funding/Support Mechanism	Disbursement Strategy	Sample of States Using Mechanism
<b>Tax Incentives</b>	Credits	KY
	Exempt (e.g. Property Taxes)	NJ, CT, MA
<b>Bonds</b>	Lottery-Backed; Competitive	OR
	Competitive Grants; Obligated Allocations	NY, CA, NM, UT, VA, WI
<b>Tax Collection (e.g. Real Property Transfer, Fuel, Sales, Rail Car Earnings, Car Rental)</b>	Appropriated/Allocation Based on Prioritized and Assessed Need	TN, OH, OK, VA
	Local Authority Decisions (Competitive or Allocative Basis)	CA, FL,
<b>Revolving Loan Programs</b>	Competitive	KA, OH, WI, IA, NH
<b>General Funds</b>	Annual Appropriation/Subsidy	NY, OK
<b>Grants</b>	Competitive	OH, WI, NJ

In addition to these grant and loan programs, several states have developed unique strategies to fund and support short line railroads.

**Transportation Equity Fund<sup>24</sup>** - Tennessee’s Department of Transportation (TDOT) Office of Freight & Rail administers the Rail and Water Transportation Assistance Program, providing grants for track and bridge rehabilitation for Short line Railroad Authorities who have applied for and have been accepted into the Short Line Railroad program. Funds are used for rail and track structure improvements, and to fund engineering services for the authorities. Using funds

<sup>24</sup> NOTE: Tennessee’s program has currently been frozen as a result of a lawsuit filed by the Class I railroads. The Class I’s contend that the tax is discriminatory. Payments to the short lines have been suspended pending the outcome of appeals. <http://www.tennessean.com/story/money/2014/07/21/new-lawsuits-put-small-railroad-money-jeopardy/12964611/>

generated by the sales tax paid on fuel (seven percent) used by aeronautics, railroads, and towboats that have been placed in a designated Transportation Equity Fund. The railroad portion of this fund is granted to short line railroad authorities who are enabled by the legislature to preserve and maintain essential rail transportation to communities threatened with abandonment or loss of rail service.

In each year, TDOT distributes the funds amongst the railroad authorities who may choose to use it at that time or bank the funds to aggregate with future years. Up to three years of funds may be retained. Allocations are based separately on track and bridge rehabilitation needs. Funding for the program began in 1988. In FY 2001-2002 (Short line Review 2003<sup>25</sup>), funds totaled nearly \$10 Million.

In their 2003 Rail plan, TDOT posed several Infrastructure Sustainability Questions aimed to reconsider the mechanisms by which projects are evaluated from eligibility. While criteria based on these policy issues have yet to be developed and implemented, these discussions are ongoing in Tennessee and other states.

- At what point do the normal business operations of a short line railroad yield sufficient revenues to permit the freight railroad owner/operator to continue to operate at a standard of performance acceptable to clients?
- Is the level of state infrastructure investment needed to maintain economically viable shortline railroad operations sustainable?
- At what point can a short line railroad maintain sustainable operations without further infrastructure investments by the state?

Acknowledging that state funds are highly limited, TDOT sought methods to identify the point or conditions under which a railroad authority is capable of sustainable railroad operations without further infrastructure investment by the state. One such method is a revenue-based approach outlining that when a railroad meets the revenue per ton-mile for national railroads, they would no longer be eligible for state-funded rail rehabilitation. However questions remained

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<sup>25</sup> [http://www.tdot.state.tn.us/publictrans/RailPlan/tasks/short\\_line\\_review.pdf](http://www.tdot.state.tn.us/publictrans/RailPlan/tasks/short_line_review.pdf)

regarding the ability of some short lines to ever achieve this goal. TDOT then asked industry representatives for ideas. They recommended shifting the focus from alleviating needs that had been identified by track and bridge needs assessment studies, to a new objective where the state would participate in funding the life-cycle costs of track and bridge replacement.

**Economic Development Tax Credit** – The Kentucky Transportation Cabinet’s *Railroad Assistance Funds* allows for a tax credit of up to 100 percent of the Kentucky income tax and limited liability tax (imposed under KRS 141.020 or 141.040 and 141.0401) for corporations, LLCs, partnerships, limited partnerships, sole proprietorships, business trusts or other entities in manufacturing, agribusiness, non-retail service, technology, or national or regional headquarters operations. The credit applies to the construction and installation of railroad spurs as needed to connect economic development projects to existing railroads.

Additional tax incentive programs in Kentucky include a nonrefundable tax credit for railroad improvement (50 percent Tax Credit) for Class II and III railroads or persons who transport using the facilities of a Class II or III railroad. The fund’s objective is to aide in maintaining or improving roadbeds, bridges and related structures. The value of the credit may not exceed \$3,500 multiplied by the number of eligible miles owned or leased or assigned for use by the taxpayer.

Kentucky also offers a nonrefundable 25 percent tax credit for railroad expansion or upgrades to corporations that own fossil energy or biomass resources and are served by rail, or to railway companies that transport these products to firms. The tax credit applies to expenditures related to the expansion or upgrading of railroad track, including roadbeds, bridges, and related track structures. The credit is limited to \$1 million aggregated amongst all taxpayers applying for the credit. If applications exceed the maximum value, applicants will be awarded a proportional fraction of the total allowable credit.

## **Draft Regional Case Studies**

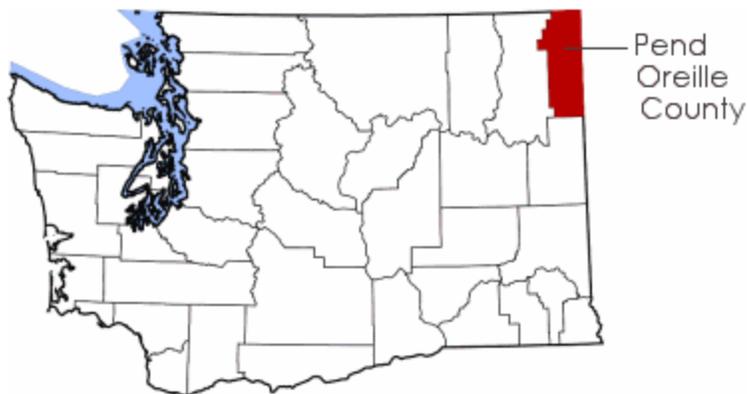
The economic impacts of short line railroads vary substantially in different regions of the state. These differences are dependent on not only the types of sectors served by the line, but also the

geographic interaction of the line with other modes: truck and barge. This interaction produces modal competition, as well as a flexible freight transportation system that meets shippers' needs.

This preliminary report identifies and briefly introduces the three regional cases that will become fully developed in the final report. The three cases were chosen to examine different operating conditions and geographic regions. The cases studies chosen are the Pend Oreille Valley Railroad, Tacoma Rail, and the Columbia Basin Railroad. The economic impacts to be considered reflect those evaluated in prior studies by Casavant and Tolliver<sup>26</sup> as well as UGPTI<sup>27</sup>. The case studies will not only serve as the basis for specific funding recommendations, but also serve as an example of the need to accurately identify the benefits derived from access to short line railroads.

### **Pend Oreille Valley Railroad (POVA)**

The POVA is owned and operated by the Port of Pend Oreille. The Port of Pend Oreille was voted in without taxing authority. POVA owned tracks run from Metaline Falls to Newport (61 miles), and leases additional track from BNSF between Newport and Dover, Idaho (24 miles). Currently, miles 0-16 and all of the leased line are capable of handling 286,000-pound cars and meet FRA Class II specifications. The line beyond mile 16 is not capable of handling traffic at this time as it is in need of bridge inspections, ballasts and ties in order to handle freight.



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<sup>26</sup> Casavant, K., and Tolliver, D. 2001. *Impacts of Heavy Axle Loads on Light Density Lines in the State of Washington*. Report submitted to the Washington State Department of Transportation,

<sup>27</sup> UGPTI, 2002. *Small Railroads – Investment Needs Financial Options, and Public Benefits*. North Dakota State University.

**Figure 2: POVA Region of Operation**

The POVA short line railroad once served multiple timber based mills and a cement facility. Conditions have changed and the cement company has closed most operations at Metaline Falls; at this time the company only uses the facility for storage in its large capacity silos. Recent difficulties caused the closure and dismantling of the area’s lumber mill at Ione. The remaining shipper on the short line between Metaline Falls and Newport is located at Usk; the Ponderay Newsprint Company (PNC) ships newsprint, and recycled paper and a few loads of chemicals per year by rail.<sup>28</sup>

The Port of Pend Oreille is one of only a few port districts within Washington that does not collect a property tax, and the railroad operation is the main source of revenue for the Port. Revenues for the line have averaged near \$2 million over the past five years (Table 6); however due to the loss of customers the Port anticipates that revenues will decline in the next few years.

**Table 6. POVA Revenue 2009-2013.**

2009	2010	2011	2012	2013
\$ 1,789,329.00	\$ 2,272,690.00	\$ 1,825,506.00	\$ 2,011,545.00	\$ 1,966,374.00

POVA’s one major rail customer is served via the line it owns, another two larger customers and a few small shippers are served by the line it leases. Table 7 shows that timber-related industries dominate the line’s activity, as lumber makes up 50 percent of total annual carloads and newsprint 38 percent.

**Table 7. Monthly (mm/yy) carloads moved on POVA between October of 2013 and September of 2014.**

Commodity	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
<b>Lumber</b>	91	94	87	106	93	86	85	107	98	91	101	92
<b>Newsprint</b>	65	64	96	87	70	86	73	64	62	73	74	64
<b>Bark</b>	17	12	10	6	5	18	25	36	25	23	25	11
<b>Poles</b>	3	1	8	7	2	4	1	6	6	2	3	5
<b>Clay</b>	2	1	1	0	0	4	2	1	0	1	1	2
<b>TOTAL</b>	178	172	202	206	170	198	186	214	191	190	204	174

<sup>28</sup> <http://www.povarr.com/>

The UGPTI<sup>29</sup> and other national sources state that the decreased cost of highway maintenance, and user and shipper costs cause the economic benefits derived from the efficient operations of short line railroads. If the POVA short line stopped operating it would likely result in an increase of the cost of freight transportation to area shippers and a net loss of profit. The POVA operator said that a loss of the line would significantly increase the shipping costs of the PNC given its isolated location and lack of access to other options; product would have to be transported by truck. The margins in the newsprint business are already small and increased shipping costs could jeopardize the mill's viability.

**Observations made by the operator:**

- “Our 105-year-old rail will not last forever, especially running 286 cars over it. Rail needs to be upgraded to at least 90 pound and preferably 125 pound.
- Current revenue streams only allow for keeping the railroad at existing levels and does not allow for upgrading and improving the line.
- Funding requests basically need to be made a couple years in advance; as a small short line our needs may not be known that far in advance. We also find the process extremely frustrating. Look through application forms and you will find that many of the questions, and therefore points toward who gets funded, are based on how improvements help large cities reduce traffic delays, control emissions, etc. These questions, and the corresponding point system, are not fair to those of us who live in rural areas. Our services are just as important to our citizens, communities and shippers but we get penalized for living in a rural area. We operate 1950 model locomotives – we cannot compete with green issues and cannot afford to replace them. Small rural short lines collect freight which is added to the trains passing through the larger communities. Yet those short lines serving the larger communities and handling the larger trains get points to increase their chances on funding.

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<sup>29</sup> UGPTI, 2002. *Small Railroads – Investment Needs Financial Options, and Public Benefits*. North Dakota State University.

- We have looked into Tiger Funding but we do not have grant writers on staff and hiring a professional for \$20,000 for a “chance” at a grant is not feasible. Tiger funding also focuses on what can you do to help eliminate traffic congestion, how will you eliminate diesel fumes. We need to replace ties, 100-year old rail and repair bridges in order to stay in operation.”

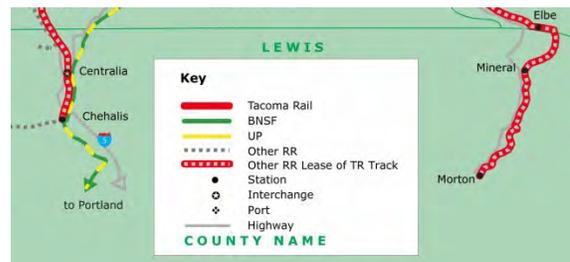
### Tacoma Rail

Tacoma Rail is a municipally-owned, 204-mile short line rail road that is part of the city’s Public Utilities Division. It is one of three city operating divisions, along with Tacoma Power and Tacoma Water. However, the rail division operates in a significantly different manner from other city departments in that it is governed by a Public Utility Board and is 100 percent self-supported. All operating expenses are covered by freight revenues from rail customers. Tacoma Rail is an at-cost operator and a net tax-payer to the city as eight percent of its gross earnings (total revenue has averaged just over \$18 million in the last five years) are delivered to the City’s general fund and it takes no taxpayer subsidies.<sup>30</sup> These conditions and operations make Tacoma Rail both an economic engine for the city and region and increase the overall attractiveness of the Port of Tacoma.

The short line moves approximately 40 trains per week from 69 major customers with goods ranging from international intermodal, crude oil, automobiles, and chemicals, to frozen food (please see Table 8). Crude oil shipments have rapidly grown on the line in the past two years. In October 2013, crude constituted 1,026 carloads (12 percent of the top five commodities), while in September 2014, it had risen to 1,820 carloads (18.5 percent of the top five commodities). The operator expects



Figure 3: Tacoma Rail Operating Region



<sup>30</sup> Tacoma Rail: <http://www.mytpu.org/tacomarail/about/>

that their annual revenues will continue to increase as the economy recovers and their traffic base diversifies from international intermodal container cargo.

**Table 8. Monthly (mm/yy) carloads moved on Tacoma Rail between October of 2013 and September of 2014**

Commodity	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
<b>International Intermodal</b>	5237	4714	5403	5703	4849	4700	5847	6513	6128	5408	6220	6318
<b>Crude Oil</b>	1026	1191	1511	1665	1252	1280	1756	1713	1008	1443	1570	1820
<b>Automobiles</b>	929	880	992	873	869	867	926	858	914	828	1084	921
<b>Chemicals</b>	498	570	383	548	369	513	454	470	328	467	385	428
<b>Frozen Food</b>	267	214	196	259	343	302	388	378	272	457	440	328
<b>TOTAL</b>	<b>7957</b>	<b>7569</b>	<b>8485</b>	<b>9048</b>	<b>7682</b>	<b>7662</b>	<b>9371</b>	<b>9932</b>	<b>8650</b>	<b>8603</b>	<b>9699</b>	<b>9815</b>

The operator responded to the question of “is your business actually constrained by any of the following factors: slow speeds, bridges, capacity to originate 110-cars trains, class I interchange, car/engine availability; answered no to all the above, placing it among the few lines with sound infrastructure conditions in the state. This stands in stark contrast to responses received from smaller, rural carriers.

**Columbia Basin Railroad (CBR)**

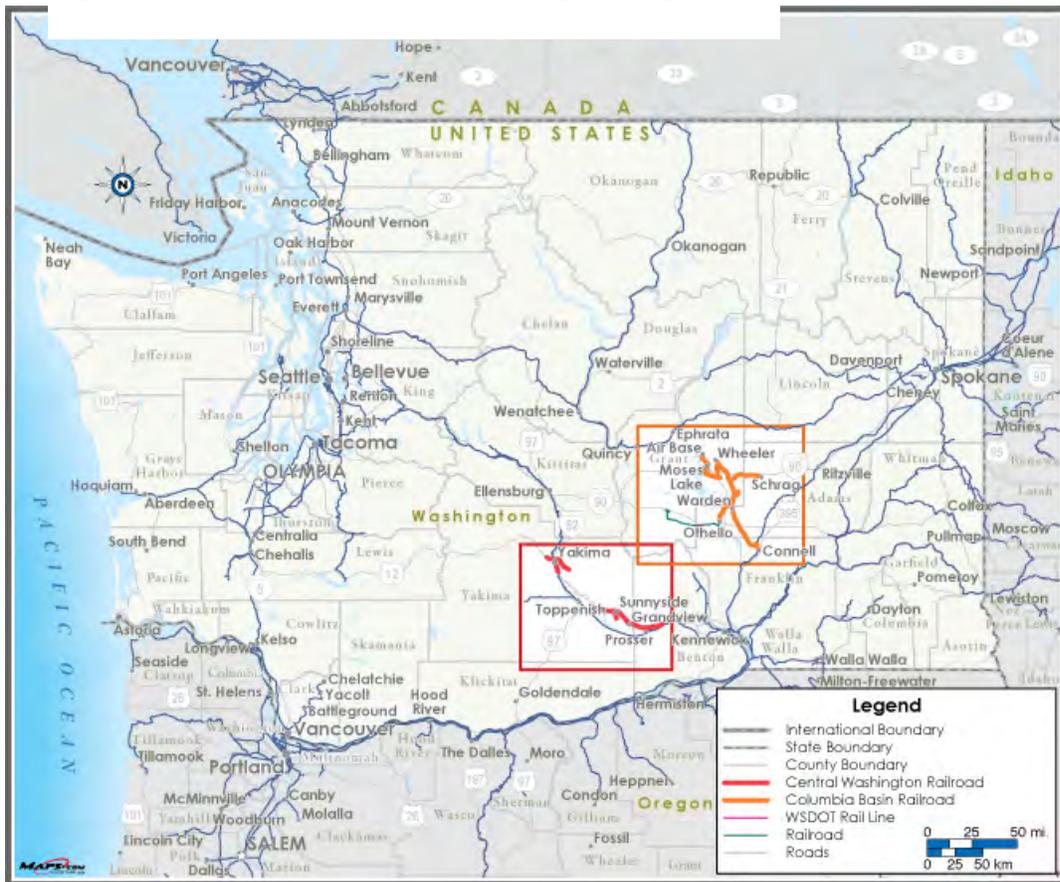
The Columbia Basin Railroad is a privately held short line railroad that has operated in central Washington since 1986. In 2007 the Columbia Basin Railroad took advantage of the FRA’s Railroad Rehabilitation and Improvement Financing (RRIF) program, receiving a \$3 million loan to purchase 73 miles of track between Connell and Moses Lake that it had been leasing from BNSF. The purchase was made to increase efficiency and thus reduce costs and permit the upgrading of its track infrastructure to handle heavier loads. The CBR primarily hauls agricultural products including wheat, soybean oil, frozen and packaged food, along with inputs to agricultural production such as fertilizers.

While most of the CBR is capable of handling 286,000 cars, the line needs track rehabilitation as well as an interchange upgrade. The Great Northern Corridor Coalition (GNCC), an organization comprised of state departments of transportation, ports and other entities interested in improving freight rail transport from Washington State east to Minnesota, has identified the Connell

interchange in their list of necessary projects. The interest by the GNCC in the status of the CBR line is but one of several entities expressing interest in improvement and expansion of the reach and connectivity of the line. The short line has submitted multiple TIGER grant applications to fund improved CBR operations, with support from WSDOT and the Port of Moses Lake.

The CBR is a prime candidate for further exploration in a detailed case study in the final report.

**Figure 4: Columbia Basin Railroad Operating Region**



### Next Steps in the Short Line Rail Study

The final report will incorporate the latest survey results, completed case studies and include recommendations for a programmatic response with funding options, a partial assessment of existing freight rail transload centers in Washington State, and the potential for additional facility development.

## Appendix A

### Owner and/or operator survey instrument

**Instructions:** Please answer each question to the best of your knowledge. Answers may be supplied by clicking on the red text or table cell. If a question does not apply to you, please indicate so by responding “NA”. Thank you.

#### Respondent Background Information

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1. What is the name of the Short line for which you are responding to this survey?  
**Enter Response Here.**
  
2. Are you the owner or the operator of the railroad identified above?
  - I am the owner of the railroad
  - I am the operator of the railroad
  - I both own and operate the railroad
  
3. Please identify the ownership structure of the identified railroad (e.g. holding company, public, single private, etc.).  
**Enter Response Here.**
  
4. How long has this line been under the current ownership and structure?  
**Select from Drop Down**
  
5. How long has this line operated as a short line railroad?  
**Select From Drop Down**
  
6. Please describe the means by which you came to own this railroad (e.g. acquired after Class I Abandonment, private purchase)?  
**Enter Response Here.**
  
7. What was the total revenue generated on this line in each of the last 5 years? Enter one value in each box

	2009	2010	2011	2012	2013
<b>Total Revenue</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>

8. Do you expect that the revenues reported in the previous question will increase, decrease, or remain the same over the next 5 years? Please explain.  
Enter Response Here.

**Rail Infrastructure Conditions**

We would now like to ask you a series of questions pertaining to the infrastructure and operating characteristics of the line identified in 1 above.

9. What is the total length of railroad *you own or operate* on this line (to the nearest mile)?  
Enter Response Here.
10. Does this line operate (possess trackage rights) on any additional lines? *Please indicate the name of the line and the number of miles operated.*  
Enter Response Here.
11. Are there any discontinuities in ownership or operation along the line in which you operate? (e.g. do you have any breaks in ownership along your railroad?) *If yes, please indicate the name of the other owner(s) and the length of their segment.*  
Enter Response Here.
12. Please indicate the number of each of the following items below, as they occur on your line:
- a. Bridges Enter Response Here.
  - b. At-grade crossings Enter Response Here.
  - c. Tunnels Enter Response Here.
13. Please briefly describe the type of services your short line is engaged in (i.e. shipper to destination, shipper to class I, shipper to river, intermodal connector, other)  
Enter Response Here.
14. What is the frequency of your service (trains per week)? Enter Response Here.
15. Please identify up to the top 5 commodities moved by your short line in the following table. Please identify the commodity in the cells labeled Comm 1-5 and fill in the carloads per month by commodity beginning in October of 2013.

	10/13	11/13	12/13	1/14	2/14	3/14	4/14	5/14	6/14	7/14	8/14	9/14
<b>Comm 1</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Comm 2</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Comm 3</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Comm 4</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Comm 5</b>	-	-	-	-	-	-	-	-	-	-	-	-

16. Based on your track and equipment *capacity*, how much of the above commodities could you move in total:
  - a. Carloads per month **Enter Response Here.**
  - b. Trains per day (or week) **Enter Response Here.**
  
17. How many major customers (shippers) does your line currently serve?  
**Enter Response Here.**
  
18. Please describe the current infrastructure characteristics, by segment or subdivision if able and applicable?
  - a. FRA Track Class (miles)  
**Enter Response Here.**
  
  - b. Jointed or Welded Rail (miles)  
**Enter Response Here.**
  
  - c. Rail Weight (miles)  
**Enter Response Here.**
  
  - d. Rail Age  
**Enter Response Here.**
  
  - e. Structure Sufficiency (capable of handling 286,000 pound cars)  
**Enter Response Here.**
  
19. Is your business actually constrained by any of the following factors (please describe):
  - a. Slow speeds due to track/tie condition  
**Enter Response Here.**
  
  - b. Bridges or other infrastructure not capable of handling 286,000 pound cars  
**Enter Response Here.**
  
  - c. Capacity to originate or terminate 110-car trains  
**Enter Response Here.**
  
  - d. Class I interchange condition  
**Enter Response Here.**
  
  - e. Car and/or Engine Availability  
**Enter Response Here.**
  
  - f. Other (please describe)

Enter Response Here.

20. Does your line possess any other at-risk infrastructure, such as sections of significant grade or curvature that requires unusually high degree of maintenance or inspection?

Enter Response Here.

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### **Rail Infrastructure Investment (Needs)**

We would now like to ask you a series of questions pertaining to the infrastructure investment that has or is currently being sought for this line.

21. What capital improvements to your railroad would be most beneficial to continued rail operations? *Please provide a ranking and estimated cost of those improvements.*

Enter Response Here.

22. Does your current maintenance plan address the improvements identified in the previous question?

Enter Response Here.

23. Please discuss any of the above improvements you have had to forego do to a lack of funding.

Enter Response Here.

24. How are you currently financing infrastructure improvements to your railroad? *Please identify by type (i.e. normalized maintenance, transportation trust funds, federal funds, revenue).*

Enter Response Here.

25. Have you ever sought funding from WSDOT through either the **Freight Rail Assistance Program** or the **Freight Rail Investment Bank**? If no, why not? If yes, please describe your experience as it pertains to the RFP process, approval process, WSDOT assistance during delivery, and the reimbursement process.

Enter Response Here.

26. If you answered yes to #25, please tell us how the programs met your needs overall and what improvements could be made to the programs.

Enter Response Here.

27. Are there other funding sources that you have sought, but have been unable to successfully obtain? *Please list.*

Enter Response Here.

**Regional Economic Role and Future Plans**

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In this final set of questions, we would like to understand how you view your line's economic position and contribution to your region's economy:

28. How many workers do you currently employ?
  - a. Full time. [Enter Response Here.](#)
  - b. Part time. [Enter Response Here.](#)
  
29. Are there shippers in your operating area that could use your railroad but do not? If so, do you feel that there are operating characteristics of your rail line that influence their decision not to?  
[Enter Response Here.](#)
  
30. How much would your business increase if those potential customers used your railroad?  
[Enter Response Here.](#)
  
31. Please describe the nature of the competition your line faces for customers. For example, do you directly compete with other short lines, Class I rail lines, or truck transport?  
[Enter Response Here.](#)
  
32. How would you describe the strengths of your short line?  
[Enter Response Here.](#)
  
33. How would you describe your short line's weaknesses? How are you attempting to address these weaknesses?  
[Enter Response Here.](#)
  
34. What other changes or improvements in your short line's service would you like to see that would benefit your customers? *Please elaborate on how these would benefit the customer.*  
[Enter Response Here.](#)
  
35. Are there scenarios in which you could envision abandonment of your railroad, or specific line segments?  
[Enter Response Here.](#)
  
36. In your opinion, what would be the regional impact to your region if you line was abandoned? (e.g. jobs lost, customers or other industries impacted)  
[Enter Response Here.](#)