Feasibility Study and Business Plan
for Potential Purchase of Short-Line Railroad

Prepared for:

Board of County Commissioners of Lewis County, Washington

Prepared by:

Tangent Services, Inc.

and

Ecological Land Services, Inc.

and

TBY, Inc.

March 22, 2016

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Contents

List of Appendices

List of Tables

List of Figures

List of Abbreviations and Definitions

BNSF	BNSF Railway
"Chehalis Extension"	Rail line from Maytown (MP 47.5) to Chehalis (MP 67.6) that is subject to a potential sale to Lewis County and the City of Chehalis
CBR	Columbia Basin Railroad
CBRL	Coos Bay Rail Link
CORP	Central Oregon and Pacific Railroad
"Curtis Line"	Rail line owned by the Port of Chehalis running between Chehalis and Curtis (WA)
FRAP	Freight Rail Assistance Program
FRIB	Freight Rail Investment Bank
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
"Milwaukee Road"	Chicago, Milwaukee & St. Paul Railway
MP	Milepost
MPH	Miles per Hour
NP	Northern Pacific Railroad
"Potential Owners"	Lewis County and the City of Chehalis
POVR	Pend Oreille Valley Railroad
PSAP	Puget Sound & Pacific Railroad
PVJR	Portland Vancouver Junction Railroad
RRIF	Railroad Rehabilitation and Improvement Financing
STB	Surface Transportation Board
TCRY	Tri-City Railroad
TIGER	Transportation Investment Generating Economic Recovery Grant Program
TRMW	Tacoma Rail Mountain Division
UP	Union Pacific Railroad
USDA	U.S. Department of Agriculture
USDOT	U.S. Department of Transportation
WSDOT	Washington Department of Transportation
WWR	Western Washington Railroad
YCR	Yakima Central Railway

1. INTRODUCTION

In March 2014, Lewis County, WA, and the City of Chehalis, WA (collectively, "**Potential Owners**"), entered into an agreement with the City of Tacoma, WA, that conveys the option to purchase a twenty-mile portion of the rail line owned by the City of Tacoma extending from Maytown, WA, to Chehalis ("**Chehalis Extension**"). The agreement expires in three years after its execution if the Potential Owners do not exercise or terminate the option.

1.1 STUDY PURPOSE

The purpose of this study to conduct an in-depth feasibility analysis focusing on the potential purchase and operation of the Chehalis Extension by the Potential Owners. The project has received strong interest from the local community and a local task force has made a preliminary review of the purchase. Based on the task force's work, the sponsors of this study desire and in-depth, comprehensive feasibility study of the potential purchase, and a detailed business plan.

1.2 STUDY TASKS

Under the scope of work for the study, Tangent Services and its consulting team partners — TBY, Inc. and Ecological Land Services, Inc. ("**ELS**") — are charged with the completion of the following study elements:

- Conduct a financial analysis of the purchase and operation of the rail line to assess profit/loss, break even, and return on investment.
- Identify possible funding opportunities/sources to complete the acquisition and finance the operation.
- Assess the environmental risks that would be assumed by the purchase.
- Assess the condition of the rail infrastructure.
- Estimate the cost to upgrade the rail line to Federal Rail Administration ("**FRA**") Class 1 track status.
- Identify potential sources of rail line revenue.
- Identify possible sites on the rail line suitable for rail-related development.
- Identify and evaluate different options and models for leases and operating agreements.
- Estimate the economic impact related to the operation of the rail line and rail-related businesses.

A "**Core Team**" of project sponsors has been formed to oversee the study. Members of the Core Team include representatives from the Lewis County Commission, the Chehalis City Council, the Port of

Chehalis, and Chehalis Community Renaissance Team. Other project stakeholders include representatives from Western Washington Railroad ("**WWR**"), the rail line's current operator, and the City of Centralia.

1.3 Desired Outcomes of Purchase

The members of the Core Team were interviewed to determine the desired outcomes of the proposed Chehalis Extension purchase.

Table 1: Core Team Members

Name / Title	Organization
Larry McGee	Chehalis Community Renaissance Team
David Hartz	Chehalis Community Renaissance Team
Daryl Lund, Council Member	City of Chehalis City Council
Randy Mueller Chief Executive	Port of Chehalis
Bill Schulte, Commissioner	Lewis County Board of Commissioners

These interviews revealed three desired outcomes of the potential purchase on which the Core Team had a consensus agreement:

1. Promote economic development and generate jobs.
2. The rail line must be financially self-sustaining with no local operating subsidy needed.
3. Establish local control of the rail line.

These three desired outcomes are described in more detail below:

1. Promote Economic Development

The Core Team was unanimous that economic development and the creation of jobs was a primary goal of the purchase. As noted above, it was believed that local control might lead to the development of more businesses on the rail line. It was agreed that freight was the primary focus area for future development.

Some, but not all, of the Core Team also felt ownership of the rail line might lead to the development of an excursion train and increased local tourism.

2. Financially Self-Sustaining

The Core Team agreed that the rail line should be financially self-sustaining. The definition of self-sustaining was that ownership of the rail line must not result a subsidy from local public government(s) to the rail line operator. Within that "no subsidy" requirement, it was acknowledged

that external public funds would be required to purchase the rail line and to fund future infrastructure replacements and upgrades to the line.

3. Establish Local Control

The Core Team agreed that a primary goal in acquiring the rail line would be to gain local control. The perceived advantage of control stemmed primarily from three concerns:

a) **Abandonment**. There was a concern that Tacoma Rail will, in the future, abandon the line, thereby stranding existing shippers and cutting off Port of Chehalis' rail line running between Chehalis and Curtis, WA. Abandonment would also cut off the Chehalis-Centralia Railroad, a heritage railroad operating on the Port of Chehalis' line.

b) **Use**. There was a concern that Tacoma Rail, or a successor owner of the line, will allow uses of the track are undesirable to the local community. The transport of coal and crude oil were mentioned as uses of the track the local community would seek to avoid.

c) **Local Focus**. It was perceived that the City of Tacoma/Tacoma Rail had little motivation to increase the use of the track for the betterment of Lewis County and the Chehalis/Centralia communities. It was believed that local control through ownership might lead to better utilization and development of the asset.

2. EXECUTIVE SUMMARY OF FINDINGS

This section summarizes the findings of the study by answering questions regarding whether the purchase of the Chehalis Extension will achieve desired outcomes. Pertinent sections of the study are referenced in the responses.

Will the purchase promote economic development?

The findings of the study indicate there is significant risk that the purchase will not result in significant economic development and job generation.

There is little doubt that local ownership of the rail line can contribute to increased freight activity on the line that exceeds historic levels. The more pertinent question is whether the rail line can be used to stimulate significant economic development and justify the use of public funds for its acquisition and long-term capital needs.

Historically, the 20-mile rail line was primarily used as a through corridor to transport logs to the Puget Sound (**Section 3.1 - History**). As a result, there is a very small base of existing freight activity from which to build.

In addition to this small existing freight base, the opportunity to use the rail line to generate future economic development and to create jobs is constrained by the lack of developable industrial property along the line (see **Potential Properties for Rail-Served Development**, page 33). The Curtis Industrial Site is the only large parcel accessible from the rail line that is currently available for development, but its rural location makes it a less desirable than competing sites in Chehalis and Centralia that are closer to the I-5 corridor.

It is worth noting that the Chehalis/Centralia area is not dependent on the Chehalis Extension for rail service. In fact, both the Ports of Chehalis and Centralia have industrial parks in the area within which there is available rail-served property and a variety of existing shippers (**Table 6: Chehalis/Centralia Area Rail Shippers**, page 19). It is therefore arguable that the purchase of the Chehalis Extension is needed to promote rail-related economic development in Lewis County.

In sum, the Chehalis Extension is poorly positioned to generate economic development for the Lewis County area, even if the line is purchased and controlled by local interests.

Will the Chehalis Extension be financially self-sustaining?

The findings of the study indicate there is significant risk that the operation of the Chehalis Extension will not be financially self-sustaining.

From the point of view of the Prospective Owners, the Chehalis Extension can be financially self-sustaining only if two conditions are met: 1) the rail line is operated profitably by a short line railroad

over the long-run, and 2) external funding is obtained to pay for capital replacement and improvements. The study finds that either of these conditions will be difficult to achieve.

As described in **Appendix 1: Public Short Line Railroads**, many publicly-owned short line railroads are unable to generate the cash flow needed to either breakeven operationally or to perform major maintenance or to make capital improvements. In most cases, the suboptimal financial situation of the railroad results from a lack of revenue-generating commercial freight activity. As is the case with the Chehalis Extension, many of these railroads have a substantial backlog of deferred maintenance.

The study findings indicate a short line railroad operating on the Chehalis Extension would likely find itself in a similar suboptimal financial situation in the long-run. As described in the study, the Chehalis Extension has little existing carload business (**Section 3.6 - Business Activity**) and suffers from a lack of developable land adjacent to the rail line with which more carload business could be generated in the future (**Section 5 - Market Analysis**). Although the rail line has a good base railcar storage business, increased carload business is needed to assure the future financial viability of the short line railroad serving the line.

The study's financial analysis (**Section 6**) illustrates how the low base of carload activity will create a financial challenge to a short line operator. The railroad's operation will break even only with a very significant increase in carload activity, which is considered unlikely, or by stringently controlling costs by deferring maintenance or by other measures, which is sustainable only over a short period of time.

What is the condition of the rail line?

The physical inspection of the track identified various condition deficiencies, including: the crossties are generally in poor condition, there are drainage and vegetation issues, and the bridge approaches need repair (**Section 4.2 - Physical Inspection**). The rail line has received a minimum of maintenance since it was a main line track for the Milwaukee Road in the 1970s. As a result, the track is now operated at an "excepted" FRA track standard, which restricts speeds to a maximum of 10 miles per hour and restricts hazardous cargos and passenger rail.

That being said, there appear to be no major problems with the track that would rule out its rehabilitation to an FRA Class 1 track standard. The estimated cost to upgrade the entire rail line to that standard is $3.1 million, or $133,000 per track mile (**Section 4.3 - Capital Program**).

Is external funding available to fund the purchase and future capital projects?

The study concludes that a direct appropriation from the Washington State Legislature is the most likely source of external funding for the purchase of the rail line. However, the 2015-17 budget was only recently approved and the next opportunity for a direct appropriation would be the 2017-19 biennium (see **Section 8.2** for information on state funding).

There are other possible state funding sources. Notably, the Washington State Department of Transportation administers competitive grant and loan programs for rail projects. These programs could be used for capital projects on the rail line at some point in the future.

Although the U.S. Department of Transportation offers a grant program and a loan program for rail projects, the probability of obtaining a loan or award under either of these programs is very low (see **Section 8.3** for information on federal funding).

What are the opportunities to increase rail activity and revenues on the line?

The primary activity on the Chehalis Extension is currently railcar storage, which accounts for about 90 percent of revenues. The storage business could be sustainable over the long term, but the opportunity to appreciably grow this business from current levels is limited (**Section 5.3**).

As noted above, the small existing base and the lack of developable property along the rail line limits the prospects for significantly growing carload business (**Section 5.2**).

It may be possible to establish an excursion train business on the line, assuming all or a section of the track can be improved to a FRA Class 1 track standard. However, there does not appear to be a compelling case to be made that an excursion train on the Chehalis Extension is in demand or would be successful (**Section 5.5**).

The study also looks at other ideas for new business for the rail line, including a container train shuttle to Tacoma marine terminals and the construction of new connections to the BNSF/UP main line. While these ideas have potential, they are far from fully formed at this time and we believe the Potential Owner should give little or no weight to them while considering the purchase of the rail line (**Section 5.6**).

What are the environmental risks associated with the purchase of the Chehalis Extension?

ELS performed an environmental feasibility assessment of the Chehalis Extension as part of the study effort (attached under separate cover). The assessment is an overview look at environmental risk to the potential purchase of this rail corridor; it is not an exhaustive or comprehensive study of all environmental risk.

The ELS assessment identifies 17 sites within 500-foot radius of the rail line from the EDR report for the client's consideration due to their proximity and unknown extent of soil/water contamination relative to the rail line. The ELS report relies on information contained in the EDR report, NWI maps, and WADNR maps and should in no way be considered a Phase I Environmental Site Assessment as outlined in ASTM E1527. The report does not address the environmental responsibilities of the future owner of the track. The responsibility of the track owner of any possible contamination would need further investigation and study in conjunction with environmental law professionals to address this question.

The ELS assessment also notes that the condition of most of the culverts on the track is unknown, which poses a risk to the purchase. Further study of culvert locations and conditions would provide a more accurate understanding of the type of costs associated with 1) immediate maintenance needs and 2) ongoing maintenance. The topographic positioning of the track has unavoidable interactions with streams and wetlands. Proper cleaning of ditches and culvert maintenance will be needed immediately in areas mentioned in the ELS assessment.

Which operating and management model would work best?

A lease to a private short line railroad, the current operating model for the Chehalis Extension, is preferred by members of the Core Team and is recommended by the consulting team (**Section 7.3**).

Publicly owned railroads are typically owned and managed by a single entity, in many instances a port authority. Under Washington law, the Port of Chehalis could not own the rail line without the consent of the Port of Centralia as the rail line traverses both port districts. There are two examples of joint ownership and/or joint management of publicly owned rail lines in the Pacific Northwest: the Palouse River & Coulee City Railroad (WA) and the Wallowa Union Railroad Authority (OR) (**Section 7.2**).

Will the purchase establish local control and thereby avoid abandonment?

The acquisition of the line would put the option of abandonment within the sole control of the Potential Owners. However, an attempted abandonment of the line by the City of Tacoma or any future owner would be subject to a Surface Transportation Board process wherein the Potential Owners (or any financially responsible party) would be provided the right to acquire the rail line (**Section 7.4** - Surface Transportation Board). This regulatory process reduces the risk of abandonment and the need by the Potential Owners to act on the purchase option currently in place.

Will the purchase establish local control and thereby avoid undesired uses of the rail line?

Ownership of the rail line would give the Potential Owners the ability to prohibit specific uses of the rail line. The primary risk in this area is that the City of Tacoma will work with the Puget Sound and Pacific Railroad and BNSF Railway to establish a new high-speed connection using the Chehalis Extension, most likely located near Chamber Way in Chehalis, to move unit trains to the Port of Grays Harbor (see **Section 5.6,** Chamber Way Connection**,** page 44). The construction of this connection has received strong public opposition in the past due to the likely impact to rail crossings in Centralia. There does not appear be any commercial demand or interest in constructing a Chamber Way connection at this time, but this could change with new port developments in Grays Harbor in the future.

3. BACKGROUND

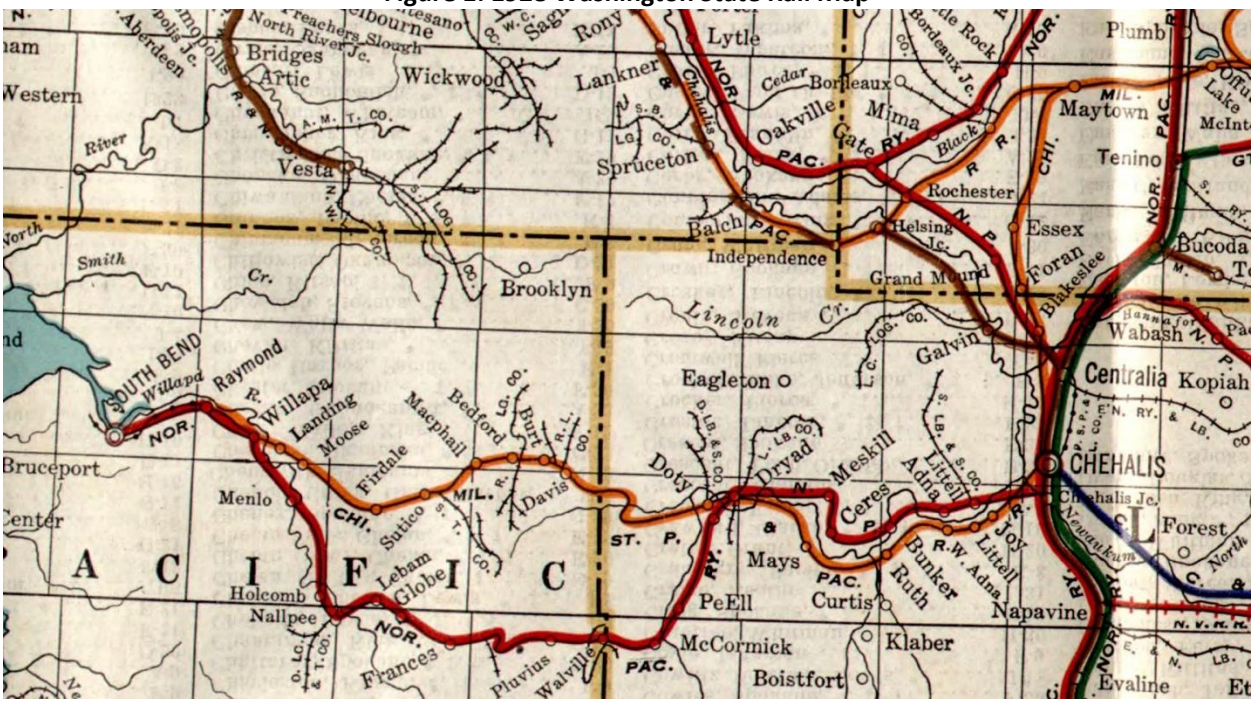
This section will describe the history of the Chehalis Extension, the assets of the rail line, trackage rights, interchanges, existing railroad operations and business, and describe the connecting Curtis Line.

3.1 HISTORY

Milwaukie Road (1915 – 1980)

The Chehalis Extension was constructed by the Puget Sound & Willapa Harbor Railway, a wholly owned subsidiary of the Chicago, Milwaukee & St. Paul Railway ("**Milwaukee Road**").[1] The new rail line, which opened for service in 1915, ran from Maytown to Chehalis, and then west to Raymond.[2] As suggested by its name, the primary purpose of the new rail line was to move products and passengers between the Washington Coast and the Puget Sound.

Figure 1: 1928 Washington State Rail Map



Milwaukee Road in orange, North Pacific Railway in red. Web link to full map.

[1] The Puget Sound & Willapa Harbor Railway was merged into the Milwaukee Road at the end of 1918, becoming part of the Milwaukee Road's Coast Division.

[2] The last 10 miles of railroad into Raymond were constructed and operated by the Pacific& Eastern Railroad Company in 1910. This railroad was purchased by the Puget Sound & Willapa Harbor Railway in 1915. Source: "Contract for Pacific & Eastern Railway Company's Property and Construction of Puget Sound & Willapa Harbor Railway." October 15, 1913.

Both freight and passenger trains ran on the new rail line, but the passenger trains would end operations in the 1930s:

> *The Milwaukee railroad operated the Maytown-Raymond passenger service without interruption until 1930, when the steady increase of automobiles and roads helped diminish the company's business. At that time the regular steam railroad service was stopped and replaced with a rail gas car service (similar to a trolley). A year later, on May 3, 1931, continuing declines led the company to terminate the gas car. After that, the logging camps along the line were provided passenger service on the regular freight trains. What had begun with great promise in 1915 had been put aside by the automobile and the poor economy of the Great Depression.*[3]

In 1931, the Milwaukee Road obtained trackage rights over the Northern Pacific Railroad from Chehalis to Longview Junction.[4]

In 1935, the Milwaukee Road sold the 18-mile section of the rail line between Chehalis and Dryad to Weyerhaeuser Co. and began operating over the parallel Northern Pacific branch to reach Raymond. Weyerhaeuser Co. formed the Chehalis Western Railroad as a common-carrier short line to operate over the former Milwaukee Road track.

The Chehalis Western only used the nine miles of track from Chehalis to Ruth and removed the track between Ruth and Dryad. A line was built from Ruth south to Curtis and then further south to Camp McDonald. The Chehalis Western also operated on trackage rights from the Milwaukee Road from Chehalis to Western Junction, where the trains would then go north then on a Weyerhaeuser Co. line (known as the "Vail Line") to a log dump at South Bay.[5]

After World War II, freight activity on the Chehalis Extension declined due to increased competition from trucking. This downward trend was reversed temporarily in the 1970s when the Milwaukee Road received trackage rights from Longview Junction to Portland as a condition of the Burlington Northern merger. This new connection elevated the track from a backwater branch line to a main line corridor, leading the Milwaukee Road to make improvements to the track. The first Milwaukee Road train crossed the Columbia River on March 23, 1971.[6]

The upswing in traffic on the line in the 1970s has been anecdotally described by a former Milwaukee Road brakeman:

> *The 68.8 mile long South Line (the 4th Sub, from Tacoma Jct to Chehalis Jct), was a throw-back to old time railroading. It had formerly been mainline, then lapsed into branch line status (slow track, poor maintenance, no schedules, and always dark), to be revived again for mainline service in 1970 when the Milwaukee was granted entry to Portland as a condition for the*

[3] Pacific County Historical Society. 2006. *Lewis County to Willapa Bay by Rail*. The Sou'wester, Summer & Fall, 2006.

[4] TrainsMag.com. 2010. *About that Milwaukee Road map*. http://trn.trains.com/railroads/2010/08/about-that-milwaukee-road-map

[5] Wikipedia. 2015. *Chehalis Western Railroad.*

[6] Trains.com. 2005. *The Milwaukee Road Mainline.* http://cs.trains.com/trn/f/507/t/44086.aspx.

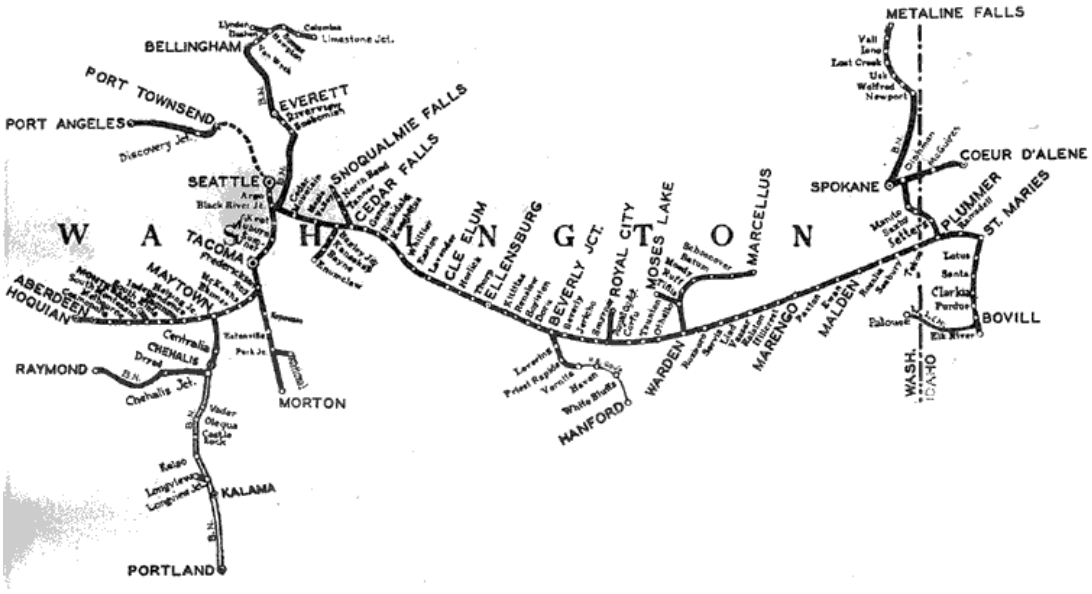
Northern Lines merger. While there were no schedules, there was plenty of action. Jobs running daily as extra trains included: Portland trains 900, 901, 902, 903; the WHAM train (Weyerhauser/Milwaukee logger; export logs from Chehalis to the Port of Tacoma); the Chehalis Local (a couple of daily round trips from Chehalis to Maytown); the Mineral Turn between Tacoma Jct and Frederickson; and any Hoquiam or Raymond turns from Tacoma Jct to Maytown or Chehalis.[7]

The resurgence of activity on the Chehalis Extension was to be short-lived. Following years of financial losses, the Milwaukee Road reorganized in 1977 and abandoned all trackage west of Miles City, Montana in 1980. From that point forward, activity on the Chehalis Extension decreased significantly.

Weyerhaeuser Co. (1980 – 1995)

In 1980, Weyerhaeuser Co. acquired all the Milwaukee Road trackage south of Tacoma (123 miles), including Chehalis Extension, for $4.4 million.[8] Weyerhaeuser Co. operated the trackage under a private carrier, once again named Chehalis Western Railroad, to transport logs from its sorting facilities located in Vail to the company's Tacoma Sort Yard.[9] However, changes in log sorting and delivery requirements caused the volume of logs transported on the line to drop significantly. Weyerhaeuser Co. discontinued operations on the rail line in 1992.

Figure 2: Map of Washington Division of the Milwaukee Road, circa 1978



[7] Crosby, J. *Milwaukee Road Coast Division*. http://www.mrcd.org/south_line_rule_99.html. Accessed 06/23/2015.

[8] Chicago Tribune Archives. 1980. http://archives.chicagotribune.com/1980/12/31/page/33/article/milwaukee-road-sells-more-of-line.

[9] Weyerhaeuser's existing rail carrier running between Chehalis and Curtis, the Curtis, Milburn & Eastern Railroad, which replaced the old Chehalis Western in 1975, was absorbed into the new Chehalis Western in 1980.

City of Tacoma (1995 – Present)

In 1995, City of Tacoma acquired the former Chehalis Western Railroad line, now 74 miles of track, from Weyerhaeuser Co. for $3.1 million. The City contracted with the Tacoma Eastern Railway to begin operations on the line, and in 1998 contracted with Tacoma Rail to operate the trackage as part of its Mountain Division. Tacoma Rail is a division of Tacoma Public Utilities.

In 2012, Tacoma Rail entered into a trial lease with WWR to operate and maintain the 20 miles of rail right-of-way between Maytown and Chehalis. Tacoma Rail was satisfied with WWR's performance during the trial lease and, in January 2014, the City of Tacoma entered into a five-year lease with WWR.[10]

In 2013, the City of Tacoma, Lewis County, and the City of Chehalis entered into an option agreement for the potential sale of the Chehalis Extension. The proposed purchase price is $3 million.

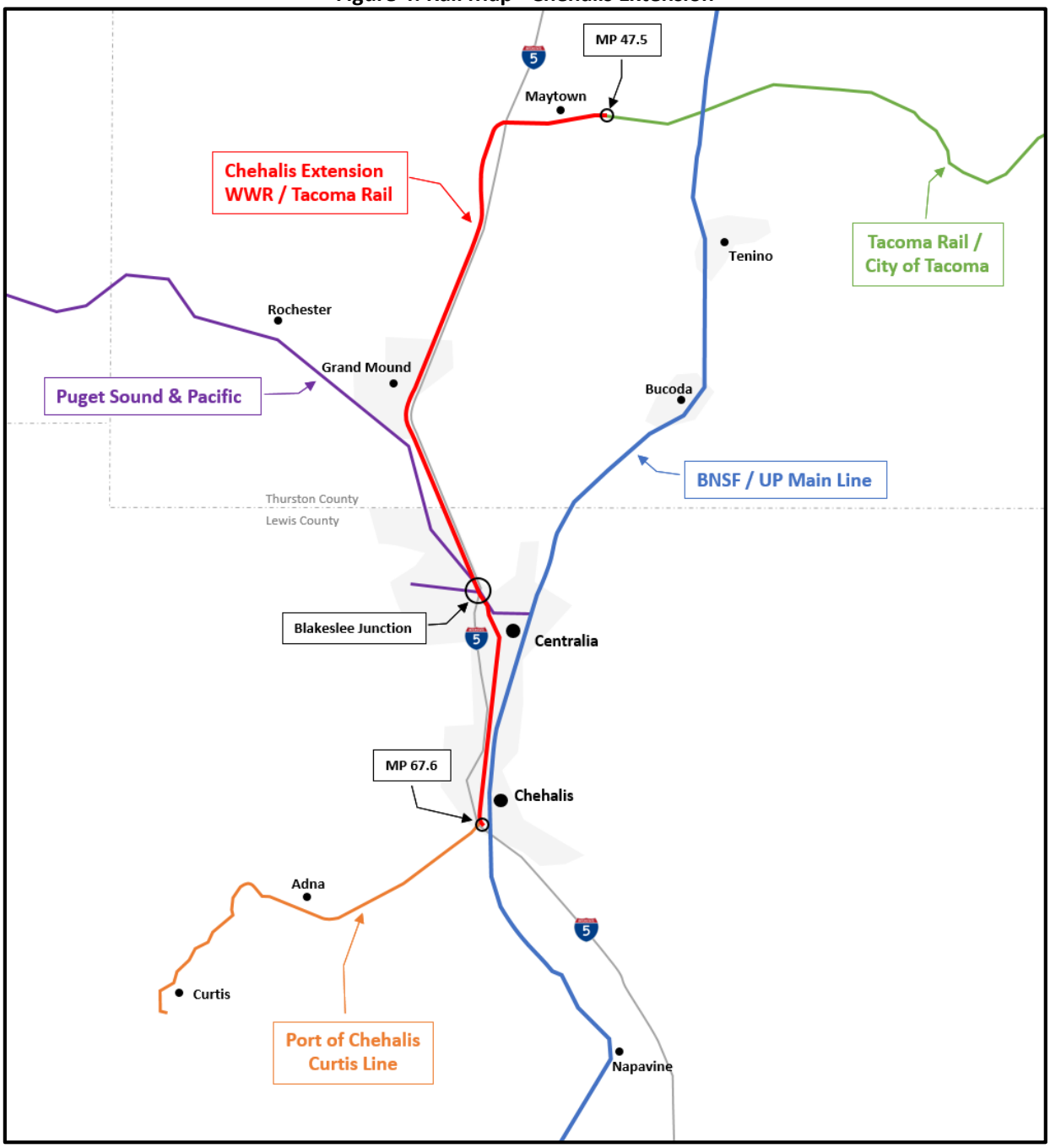
Figure 3: Tacoma Rail Map - 2015

[10] WWR lease trackage was increased by 15 miles from Maytown to Yelm in 2015.

3.2 Asset Description

The proposed purchase starts at Milepost ("**MP**") 47.5, about 1.5 miles east of the town of Maytown, in Thurston County, WA. The line runs due west for approximately two miles, until it crosses under Interstate 5, at which points it turns south and passes through the communities of Grand Mound, Centralia, and Chehalis. The line ends south of the Chehalis city center at MP 67.6.

Figure 4: Rail Map - Chehalis Extension



There is little elevation change along the line, which starts at 216 feet at MP 47.5, reaches a high point of 246 feet at about MP 52, hits a low point of 162 feet at about MP 58.0, and ends at an elevation of 177 feet at MP 67.6.

At Blakeslee Junction (MP 61.1), the line crosses onto the Puget Sound & Pacific Railroad ("**PSAP**") main line and shares about 2,000 feet of track. The normal position of switch at the PSAP junction is for the PSAP main and locked with PSAP switch locks.

Figure 5: Joint PSAP/WWR Track under I-5 Bridge (facing north)

At MP 67.0, there is a switch to the Port of Chehalis' Curtis Line. The normal switch position is for the Chehalis line.

Figure 6: Western Washington Railroad Timetable

Chehalis District - WWR

Southward ↓			System Time Table 2 April 27, 2014	Northward ↑	
Siding Cap'y	Rule 4.3	Rule 6.3	Stations	Mile Post	Sta. No.
		Yard Limits	**MILEPOST 48** (TRMW Connection) 1.0	48.0	
YARD			**MAYTOWN** 7.0	49.0	10492
2931			**ESSEX** 4.0	56.0	10560
1400			**LAKESIDE** 1.1	60.0	10600
	X		**BLAKESLEE JUNCTION** (PSAP & UP Connection) (PSAP CROSSING) 1.1	61.1	10611
2471			**CENTRALIA** 3.8	62.2	10622
YARD	B		**CHEHALIS** 1.0	66.0	10660
	J		**CURTIS JUNCTION** (Port of Chehalis Connection) 0.6	67.0	
			END OF TRACK (19.6)	67.6	
WWR Radio Channel Road 1 (AAR 10-10) in service Chehalis District					
MAXIMUM AUTHORIZED SPEED - 10 MPH ENTIRE DISTRICT					

Chehalis District - Special Rules and Instructions

1. **Rule 6.12 - FRA Excepted Track:**
   Entire District MP 48.0 - 67.6 and all auxiliary and industry tracks.
2. **Rule 6.13 - Yard Limits** are established MP 48.0 - 67.6
3. **Rule 6.17 - Main Track switches:**
   Blakeslee Jct. - Normal position of switch at junction of Chehalis District and PSAP Main will be for PSAP Main and locked with PSAP switch locks.
   Curtis Jct. - Normal position of switch at junction of Chehalis District and Curtis District will be for Chehalis District locked with WWR switch lock. Switch may be left lined and locked in reverse position when WWR train is occupying Curtis District.
4. **Rule 6.19 - Flag Protection** is not required on Chehalis District.
5. **Rule 8.20 Derail Location and Position:**
   Milepost 48: Tacoma Rail derail and lock installed at MP 48.0

Line Statistics

There are differing estimates of the length of the Chehalis Extension's main line and auxiliary tracks. WWR placed the length of the main track at 19.6 miles and the auxiliary track at 4.0 miles. Tacoma Rail reported 19.5 miles for the main track and 3.5 miles for the auxiliary track.

Using a starting point of MP 47.5 and an ending point of MP 67.6, the apparent length of the main line length is 20.1 miles.[11] This is consistent with measurements using Google Earth. This study assumes the total length if the main line is 20.1 miles. However, a 0.6-mile section of the main line at Blakeslee Junction appears to be owned by PSAP. Thus, the length of main line track to be purchased is about 19.5 miles.

Not all of the 4.0 miles of auxiliary track is in service today and some sections are unlikely to be restored in the future. This report therefor assumes the Tacoma Rail estimate of 3.5 miles of auxiliary track.

Table 2: Chehalis Extension Statistics

Inventory	Quantity
Main Track	20.1 miles (approx.)
Main Track to be Purchased	19.5 miles (approx.)
Side Track	3.5 miles (approx.)
Public At Grade Crossings	17
Bridges	10

Track Class

The baseline for track maintenance recommendations in this report is the Federal Railroad Administration's ("**FRA**") Track Safety Standards. The Track Safety Standards provide *minimum* standards for track safety, which effectively establishes multiple levels (or "Classes") of track maintenance with corresponding maximum train speeds.

Table 3: FRA Track Class

Track Class	Freight (MPH)	Passenger (MPH)
Excepted	10	N/A
1	10	15
2	25	30
3	40	60
4	60	80
5	80	90
6 to 9	110 to 200	

[11] The difference is likely due to the assumption of difference starting points. WWR's lease with the City of Tacoma started at MP 48.0, whereas the option agreement places the starting point at MP 47.5.

The Chehalis Extension is currently classified as excepted track. As such, in addition to a 10 mile per hour ("**MPH**") speed limitation, no passenger trains can operate on the track and no freight train can contain more than five cars of hazardous materials. Excepted track must be inspected at the same frequency as Class 1 track.[12]

Both Tacoma Rail and WWR identified tie condition as the primary factor keeping the line from being classified as Class 1.[13] WWR reports that much of the track is "just below" Class 1 and that no track-caused derailments have occurred since it started operations.

Bridges

There are 10 bridges on the Chehalis Extension. Eight of these bridges are timber pile trestles and one is a decommissioned scale. The Skookumchuck River Bridge, the longest bridge on the line, has a steel girder center span with timber trestle approaches.

Table 4: Bridges

Mile Post	Bridge #	Section	Length (feet)	Section Name	Spans	Type	Intersects
49.00	10	1	64		4	ODPT	Beaver Creek
49.80	09	1	79	Main Line	5	ODPT	Beaver Creek
49.80	09	2	79	Siding (Track 1)	5	ODPT	Beaver Creek
49.80	09	3	79	Side Track (Track 2)	5	ODPT	Beaver Creek
51.00	08	1	124		9	ODPT	Beaver Creek
54.60	07	1	111		9	ODPT	Scatter Creek
57.00	06	1	69		5	ODPT	Prairie Creek
61.60	05	1	86	South Approach	3	ODPT	Skookumchuck River
61.60	05	2	94	Main Span	1	TPG	Skookumchuck River
61.60	05	3	52	North Approach	5	ODPT	Skookumchuck River
62.25	04	1	50		1	Scale - Fulcrum	N.A.
62.75	03	1	54		4	ODPT	China Creek
64.75	02	1	127		8	ODPT	Salzer Creek & gravel road
66.80	01	1	182		13	ODPT	Dillenbaugh Creek

ODPT – Open Deck Pile Trestle (timber); TPG = Through Plate Steel Girder (steel); Scale – Fulcrum = In-Track Scale - Fulcrum Type (steel, cast iron, etc.)

286,000 lb. Cars

Per the 2014 Bridge Inspection Report from WWR, based upon member sizes, span lengths and condition, it is the opinion of the WWR's contract bridge engineer that the bridges are likely to rate adequately for 286,000 lb. freight cars. The railroad's bridges are scheduled to be rated prior to the FRA's 2017 deadline.[14] At this time, however, they have not yet been formally rated. The WWR

[12] Main track and sidings: weekly with at least three calendar day interval between inspections, or before use, if the track is used less than once a week.

[13] Tangent Services interviewed representatives from Tacoma Rail (Dale King, Superintendent; Alan Matheson, Chief Mechanical Officer; and Kyle Kellem, Roadmaster) on July 23, 2015, and Toby J. Van Altvorst, WWR Owner & General Manager, on July 24, 2015.

[14] Western Washington Railroad. 2014. *Bridge Management Program*. Page 6.

currently requires 30-day advance notification of any cars in excess of 286,000-lb gross weight, inbound or outbound.

Highway-Rail Crossings

There are 18 public at-grade crossings on the Chehalis Extension. One of these at grade crossings, W. Reynolds Ave., is owned by PSAP. The other 17 are owned by the City of Tacoma.

Table 5: Public At-Grade Crossings

Street/Crossing	Mile Post	Type
Shelley St SW	48.9	Crossbucks
Reeder Rd SW	49.1	Crossbucks
Maytown Rd SW (SR 121}	49.7	Gates, Bridge Lights
Case Rd	49.9	Crossbucks
140th Ave SW	50.7	Crossbucks
Case Rd	51.7	Crossbucks
W Reynolds Ave (PSAP Xing)	61.3	Gates, Bridge & Mast Lights
W Third St (Centralia}	62.0	Crossbucks, Stop Sign
W First St (Centralia)	62.2	Gates, Mast Lights
W Main St (Centralia)	62.4	Gates, Bridge & Mast Lights
W Locust St (Centralia)	62.5	Gates, Bridge & Mast Lights
W Pear St (Centralia)	62.7	Crossbucks, Stop Sign
W Cherry St (Centralia}	62.8	Crossbucks, Stop Sign
W Alder St (Centralia SR 507}	62.9	Gates, Bridge & Mast Lights
W South St (Centralia)	63.4	Crossbucks
NW West St (Chehalis)	66.1	Gates, Mast Lights
NW Prindle St (Chehalis)	66.2	Gates, Mast Lights
W Main St (Chehalis)	66.3	Gates, Bridge & Mast Lights

In addition to the 18 public at grade crossings, there are six private at-grade crossings and nine grade-separated crossings (see **Appendix 4** for list of all crossings).

Floodplain

According to Federal Emergency Management Agency maps, the Chehalis Extension is in the 100-year floodplain in three areas:

- To the south of W. Main Street, Chehalis (MP 66.3) to the end of the line (MP 67.6),
- From about South Street, Centralia (MP 63.4) to Chamber Way, Chehalis (MP 65.5), and
- In the Skookumchuck River area between W. 3rd Street, Centralia (MP 62) and Blakeslee Junction.

Tacoma Rail noted that the 2007 floods caused only minor damage to the line ("a couple of minor washouts") and that flood-related repairs included clearing debris from the tracks when the water subsided (likely in the Dillenbaugh Creek area). WWR noted that there had been washouts at various locations between MP 64 and MP 65 (Salzer Creek area).[15]

3.3 TRACKAGE RIGHTS

WWR currently leases the track from the City of Tacoma (dba Tacoma Rail) from MP 33.0 (Yelm, WA) to MP 67.6 (Chehalis). All commercial rights on the line are included in the lease. The lease does not contain any provision that prohibits WWR from interchanging traffic with a third party or that limits WWR's ability to interchange with a third party. The lease terminates on January 17, 2019.

In the lease, Tacoma Rail has preserved trackage rights to Blakeslee Junction in order to interchange with the WWR, PSAP, BNSF Railway ("**BNSF**"), and Union Pacific Railroad ("**UP**"), and over the entire line for emergency routing.

Other related trackage rights include

- PSAP has trackage rights from Tacoma Rail from just north of Blakeslee Junction (Lakeside Siding, MP 60.0) to the connection to the Port of Chehalis' Curtis Line (MP 67.0). PSAP is currently using these rights to place, on occasion, railcars north of Blakeslee Junction.[16]
- Tacoma Rail has trackage rights on the PSAP between Blakeslee Junction and the BNSF Centralia Yard. WWR uses these rights for interchanges. **Lewis County and the City of Centralia should obtain a copy of this trackage rights agreement to confirm that these rights can be conveyed in a sale.**

3.4 INTERCHANGES

Interchange Operations

All traffic currently handled by the WWR is interchanged through the BNSF Centralia Yard using trackage rights over PSAP between Blakeslee Junction and the Centralia Yard.

WWR notes that its interchanges with BNSF are working very well at this time. There have been no congestion or holdout issues.

WWR hands off UP cars to BNSF at the Centralia Yard. The UP cars then go to PSAP at Blakeslee Junction where they are interchanged to UP. WWR notes that because UP cars sometimes get lost in the exchange, it would rather interchange the UP cars directly with PSAP at Blakeslee Junction. WWR has not been successful in obtaining PSAP's agreement to do this, however.

[15] WWR noted that poor repair work had been done on the washouts.

[16] STB Finance Docket No. 33832, December 17, 1999. From 1999 to 2007, the PSAP also had an agreement with the Port of Chehalis to operate over the Curtis Line, but this contract was terminated in 2007.

BNSF interchanges have also historically occurred at the Chehalis Yard where there is a transfer track connection. The Chehalis Yard is no longer used for interchanges, however.

There is no Interline Service Agreement in place at this time due to the irregularity of the interchanges.

Open to Both Class I Railroads

The Chehalis Extension is open to both BNSF and UP. Access to two Class 1 carriers is a commercial and competitive advantage that potential rail users will consider when siting their facilities.

Locally, the BNSF trackage to the east of the main line is open to both BNSF and UP, but is switched by the BNSF. The PSAP trackage in Centralia is open only to the BNSF (coast branch to Grays Harbor) or the UP (UP-owned track along Galvin Road). See **Section 3.7** for more information on local rail users.

3.5 Railroad Operations

WWR has one 1951 SW9 1200 HP locomotive (provided by WWR co-owner Paul Didelius), a tamper/regulator, a high rail excavator, and caboose. Operations are based in the Chehalis Yard.

In addition to owner and general manager Toby Van Altvorst, WWR has two full-time employees who handle rail operations and maintenance. The railroad also has part-time staff for administration, grant-writing, and other functions. A contractor is used for major mechanical work.

Figure 7: WWR Locomotive

Storage Operations

WWR receives BNSF trains destined for storage or chambering at the Centralia Yard. When coming out of storage, WWR sometimes hands the train to BNSF either at Blakeslee Junction or the Centralia Yard.

It generally takes WWR about two days to store a train using its own power. This process is reduced to about 10 hours when using BNSF power.

3.6 Business Activity

WWR reports that it handled 29 revenue carloads in 2014 and 30 revenue carloads though the first six months of 2015. Carload customers included McFarland Cascade (poles), Roadwise (lignin), and Wilco Winfield (fertilizers and grain). WWR also transloaded two railcars.

The primary use of the line is the storage of empty railcars — the track to the north of Blakeslee Junction is well suited for this business due to the distance between grade separations. The demand for storage track is usually strongest during economic downturns, as was the case during the 2009-12 period. More recently, WWR reports it is assembling empty intermodal trains for BNSF. PSAP also uses its trackage rights to store railcars on the track. WWR reports that more than 90 percent of its revenues are derived from storage activity.

3.7 Local Area Rail Shippers

The Chehalis/Centralia area has a well-established rail user network that has developed off the BNSF/UP main line.

Table 6: Chehalis/Centralia Area Rail Shippers

Serving Carrier	Customer Name	City	Class I Access
BNSF	CalPortland Co	Chehalis	Open to BNSF & UP
BNSF	Cascade Hardwoods Inc.	Chehalis	Open to BNSF & UP
BNSF	Cascade Warehouse Co	Chehalis	Open to BNSF & UP
BNSF	Cresline NW LLC	Chehalis	Open to BNSF & UP
BNSF	Darigold Inc.	Chehalis	Open to BNSF & UP
BNSF	Draper Valley Farms	Chehalis	Open to BNSF & UP
BNSF	GBW Railcar Services LLC	Chehalis	Open to BNSF & UP
BNSF	Hardel Mutual Plywood Corp	Chehalis	Open to BNSF & UP
BNSF	National Frozen Foods Corp	Chehalis	Open to BNSF & UP
BNSF	Pryor Giggey	Chehalis	Open to BNSF & UP
BNSF	Lafarge North America Inc.	Centralia	Open to BNSF & UP
BNSF	Transalta Centralia Generation LLC	Centralia	Open to BNSF & UP
BNSF	The Willamette Valley Co	Centralia	Open to BNSF & UP
PSAP	Lafarge North America Inc.	Centralia	Open to BNSF
PSAP	Lowes FDC	Centralia	Open to BNSF
PSAP	Millard Refrigerated Services Inc.	Centralia	Open to BNSF
PSAP	Plastic Services & Products Co	Centralia	Open to BNSF
PSAP	Sierra Pacific Industries	Centralia	Open to BNSF
PSAP	Universal Cylinder Exchange Inc.	Centralia	Open to BNSF
PSAP	Northwest Hardwoods Inc.	Centralia	Open to UP
PSAP	Plastic Services & Products Co	Centralia	Open to UP
WWR	Agco Corp	Chehalis	Open to BNSF & UP
WWR	BP Energy Co	Chehalis	Open to BNSF & UP
WWR	Reed Dust Control	Chehalis	Open to BNSF & UP

Serving Carrier	Customer Name	City	Class I Access
WWR	Viper Rail Car Storage	Chehalis	Open to BNSF & UP
WWR	Wilco-Winfield LLC	Chehalis	Open to BNSF & UP
WWR	McFarland Cascade Holdings Inc.	Curtis	Open to BNSF & UP

Source: BNSF Serving Carrier Reciprocal Switch Inquiry Tool

3.8 CURTIS LINE

A rail line owned by the Port of Chehalis branches off the Chehalis Extension at MP 67.0, winds its way through rural countryside along the Chehalis River, and ends at an industrial spur (McFarland Cascade pole yard) in Curtis, WA ("**Curtis Line**"). The primary user of the Curtis Line is the Chehalis-Centralia Railroad, a heritage railway, which started running on the line in 1990.[17] WWR has obtained the rights to operate over the Curtis Line and has switched about one dozen carloads for McFarland Cascade, which operates a pole yard in Curtis, in 2014 and 2015.

The Chehalis Extension is the Curtis Line's sole rail connection the greater rail network.

The Port of Chehalis acquired the line from Weyerhaeuser Co. in 1996 in part to preserve access to the Curtis Industrial Site. For more information on the history of the Curtis Line, please see **Appendix 7**.

The Curtis Line suffered significant flood damage in 2007. The track has since been restored.

[17] Chehalis-Centralia Railroad operations are currently on hold pending repairs to its locomotive.

4. PHYSICAL INSPECTION AND CAPITAL PROGRAM

This section assesses the condition of the rail infrastructure and estimates the cost to upgrade the rail line to FRA Class 1 track status.

4.1 SUMMARY OF FINDINGS

- The general condition of the track is consistent with its history of limited activity and low maintenance.
  - The crossties are in poor condition.
  - Much of the ballast is suboptimal round river rock that needs re-profiling.
  - There are drainage and vegetation problems at multiple locations on the rail line.
  - The main line rail is primarily 100 lb., but the auxiliary tracks are 90 lb. or less.
  - The approaches to all the bridges need repair.
- The estimated cost to upgrade the entire length of main line and auxiliary track from excepted status to an FRA Class 1 standard is $3.1 million ($133,000 per track mile).
  - The upgrade would resolve many of the condition deficiencies noted above.

4.2 PHYSICAL INSPECTION

The FRA, the branch of the US Department of Transportation that is tasked with regulating railroads, enforces the specifications for track conditions prescribed in the Code of Federal Regulation ("**CFR**") Title 49, Part 213 — Track Safety Standards.[18] Copies of pertinent CFRs and FRA guidance are provided in **Appendix 5**. All of the Chehalis Extension is currently classified as excepted track, which allows for freight operations at or below 10 miles per hour and no passenger or hazardous material operations.

A Field/HiRail Trip was conducted by the consulting team along with the WWR on July 29, 2015. The trip covered the entire corridor under consideration from Mile Post 47.7 near station Maytown, WA, south to the terminus at Mile Post 67.6 in Chehalis, WA, via Blakeslee Junction and Centralia, WA. The purpose of the trip was, in part, to analyze bringing the track from excepted class to Class 1.

The observations from the trip are focused on the condition of the track infrastructure. The different elements of the railroad infrastructure, such as crossties and ballast, support the tracks so they conform to the specifications of safe railroad operations within the designated class of track. The observations show where there are variances and other conditions that determine the current designation of excepted track.

[18] Electronic Code of Federal Regulations. 2015. *Part 213—Track Safety Standards*. http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=49:4.1.1.1.8

Crossties

Crossties serve to support the vertical and lateral loads transmitted to the tie through the rails. Once the ties begin to break down, they can only support the loads at lower speeds.

The tie inspection was visual and non-intrusive. The general appearance on the outside of the crossties looked satisfactory, but it is suspected that a majority of the crossties are predominately rotted inside.

A more in-depth field inspection of the ties and the number of adjacent good and/or marginal crossties would provide a more exact estimate of the number of ties that would need replacement. Due to the time restraints on the inspection of July 29, 2015, only a cursory inspection of the total crosstie condition was conducted.

Figure 8: Crosstie Variant

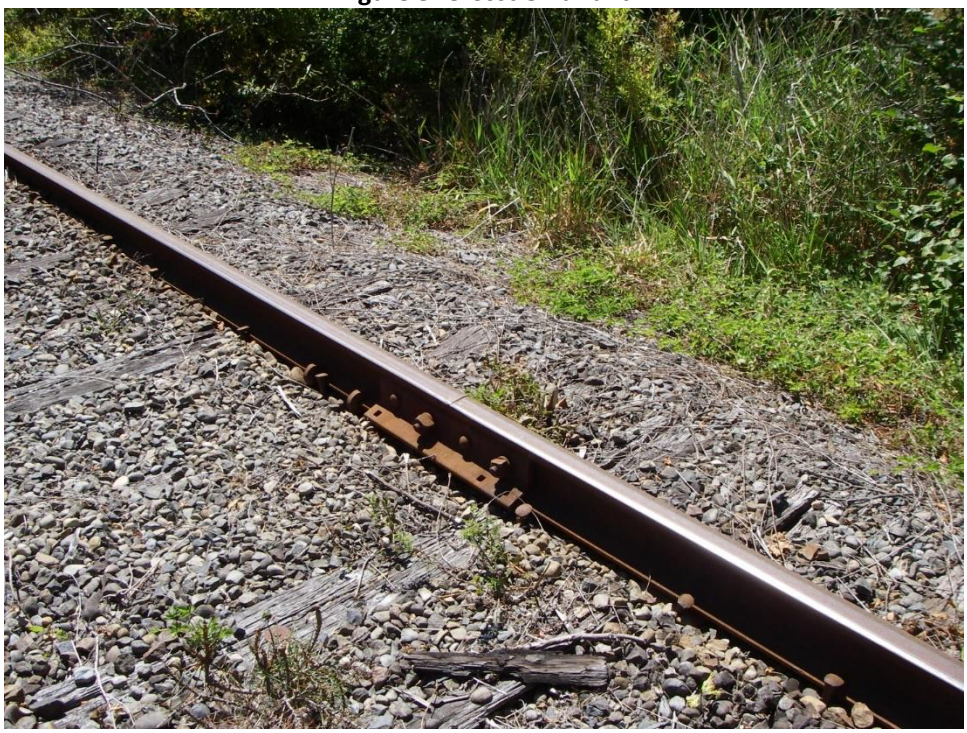


Figure 8 *illustrates crossties that are in poor condition and covered by the ballast. With a higher class of track, the crossties would be supported by the roadbed and more visible, riding higher on the ballast, and would be more solid and secure in appearance.*

Ballast

Quality ballast readily transmits and helps the ties distribute the load of the railroad rolling equipment to a secure subgrade, as well as restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad rolling equipment as well as the thermal stress exerted by the rails. The ballast also provides drainage for the track with the underlying subgrade sloped towards the longitudinal ditch lines that are typically on both sides of the track in a rail corridor. Only ballast with fractured faces should be used for track construction.

The ballast in the rail corridor is crushed stone and/or smooth river run gravel. The smooth gravel is less desirable than ballast with fractured faces.

Figure 9: Profile Variant

*In **Figure 9**, it can be observed that much of the ballast is round and smooth. In addition, the ballast is not even alongside the tracks; rather, there are "waves" which account for the undulating variance.*

Rail

Rail is categorized by its weight per yard, i.e. one yard of 90 lb. rail weighs 90 lbs., and so on, up to the typical 136 lbs. used by most Class I carriers along their main lines. The heavier the rail, the heavier and faster the trains can operate on it (assuming the underlying support infrastructure is high quality). Industry standard today is that rail infrastructure be able to support 286,000 lb. rail cars.

The rail along Chehalis branch is a mixture of 100 lb., 90 lb., and some lesser weights on certain auxiliary tracks. The weight of the rail is not high priority at this time.

According to the existing condensed profile track chart, the last major rail relays were in the 1970's, when sections of track were upgraded to SH (second hand) 100 lb. rail.

Figure 10: Alignment Variant

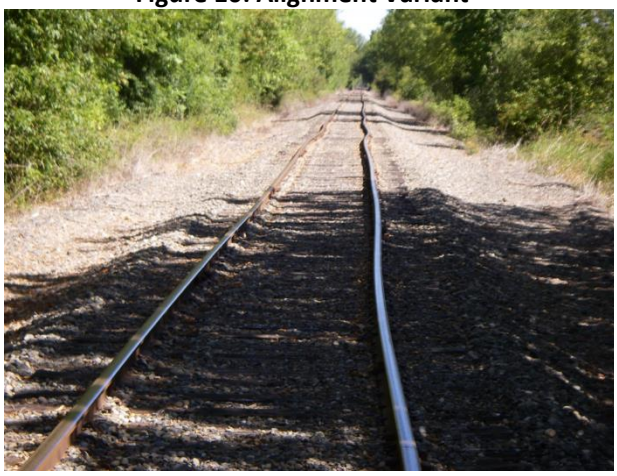


Figure 11: Switch Tie – Rail Fastener - Variant

*The alignment variant in **Figure 10** is due to the poor condition of the subgrade, ballast, and ties. In **Figure 11,** the fasteners by the switch are fastened to ties that are in extremely poor condition.*

Drainage

One of the most essential elements of track maintenance is a comprehensive drainage system flow for the area concerned. Part 213.33 requires each drainage or other water carrying facility under or immediately adjacent to the roadbed shall be maintained and kept free of obstruction in order to accommodate expected water.

Due to antiquated alignment maps, lack of milepost markers, and enormous vegetation over growth, the inspection of existing culverts was minimal.

It is recommended a more thorough inspection of culverts and ditches be conducted whereby their size, make (corrugated metal pipe, wooden, concrete, etc.), condition, and length can be incorporated on an updated track chart. Once the inspection is concluded, a repair analysis can be complied for budgetary and estimating purposes.

Figure 12: Clogged Culvert Conditions

During the track inspection, a wetland area was noted on the track at a location to the north of Blakeslee Junction at about MP 61 and a large beaver pond was seen along the track in the area of MP 51.5.[19]

[19] Aerial photographs from Google Earth show the lake in the MP 51.5 area forming over the past 10 years.

Vegetation

Part 213.37 requires vegetation on railroad property that is on or immediately adjacent to roadbed shall be controlled so that it does not:

1. Become a fire hazard to track-carrying structures;
2. Obstruct visibility of railroad signs and signals:
    a. Along the right-of-way and
    b. At highway-rail crossings
3. Interfere with railroad employees performing normal trackside duties;
4. Prevent proper functioning of signal and communication lines; or
5. Prevent railroad employees from visually inspecting moving equipment from their normal duty stations

During the inspection, it was observed that vegetation running parallel to the track is not sufficiently trimmed back and that vegetation is growing through the ties at various locations.

Figure 13: Vegetation Variant

Figure 14: Vegetation - Drainage - Variant

We recommend working with a reputable high-rail spray applicator for controlling vegetation and brush from the mainline, sidings, yards, and crossing areas in the rail corridor. High-rail equipment should be equipped with GPS tracking and spray system recording for spray verification.

ADDITIONAL CONSIDERATIONS

Bridges

All bridges were visually reviewed during the inspection. According to WWR, the railroad's bridges are scheduled to be rated prior to the FRA's 2017 deadline.[20]

Although a thorough bridge inspection was not part of this scope of work, the following should be given attention:

1. Approaches (profile) to all bridges. Inspecting and correcting the profile at bridge approaches would be part of the tie replacement program.
2. Backwall timbers. Where the ties and ballast end the timbers are stacked up at the end or face of the bridge and keep the ballast from going under the bridge. Part of bridge structure.
3. MP 50.3 Beaver Creek Bridge. Bridge ties were replaced but gaps were left between the base of rail and tie. Gage bars have been used to keep the rail in place, which is not the desired repaired. All the new ties that were installed should be pulled, measured, and correctly positioned. This bridge in particular needs repair and regular inspections.

Figure 15: Bridge Backwall Deterioration

*In **Figure 15**, the top beam of the backwall timber of this bridge is deteriorating. This allows the ballast to leak under the track and ties, weakening the bridge.*

[20] Western Washington Railroad. 2014. *Bridge Management Program*. Page 6.

Figure 16: Profile - Bridge Dump - Variant

Figure 16 *further illustrates the leakage of ballast under the bridge where the ties and the backwall timbers are not sufficient to support the ballast staying in place.*

Track Charts & Alignment Maps

The existing track charts are antiquated and lack sufficient detail. We recommend updating the original Milwaukee Road Track Charts (condensed profile) with updated information, included but not limited to bridges, grades, grade crossings, signals, speeds, track, curves, rail, ties, culverts, and surface condition. An example draft can be submitted for review.

We also recommend updating an Alignment Drawing reflecting engineering stationing, milepost stationing, and curve data.

Material on Hand

The WWR has about 2,000 relay ties on hand. During the track inspection, ties piles were observed at various locations along the line.

Figure 17: Stockpiled Crossties at Chehalis Yard

Comments from WWR

The WWR was the host of the HiRail inspection trip. In addition, the WWR was interviewed separately as a part of the study. WWR reports that the line's most urgent condition deficiencies are as follows:

- MP 50 - needs ties (250)
- S. Case Road Crossing - Needs renewal (gage in crossing)
- S. Essex siding switch - needs switch tie renewal
- S. Essex - Prairie Creek - needs ties (1000)
- Blakeslee Jct - Lewis County Line - Needs ties (3000)
- Centralia Curve - Needs ties (500)
- Chamber Way - Salzer Creek - Needs some ties, surfacing
- Dillenbaugh Cr. Bridge - Needs bridge ties.

4.3 Capital Program

For budgetary purposes, minimum ties required for Class 1 Track equates to a count of two crossties total for both rail joint ends of a 39 feet segment of rail, plus three more crossties for span areas between the rail joints ends, in order to fulfill the requirement of Part 213.109(c) for Class 1 Track.

Using 5,280 feet to a mile divided by 39 feet for a segment of rail times 5 ties per rail segment totals 677 crossties (rounded) per track mile. Mile Post 47.7 near Maytown to Mile Post 67.3 at Chehalis tabulates to 19.5 track miles, times 677 ties per mile equals a sub-total of 13,202 crossties needed for the mainline, plus 3.5 track miles of siding for a sub-total of 2,370 crossties, for a grand total of 15,571 crossties (rounded).

Additionally, the above analysis assumes the condition of adjacent crossties to the proposed new installation of crossties are sound and can work in conjunction with the new crossties to withstand the normal railcar loadings needed to sustain the Class 1 rack

The ballast section, together with the crossties and rail fasteners, combine to maintain proper track cross level, surface, and alignment of the track. Generally, there is economy of scale to perform out of face surfacing of track behind production tie installation programs, since extraction of scrap tie and installation of a new tie disturbs the consolidated ballast section holding the track alignment. In this manner, the preferred crushed stone or angular rock can displace the less desirable river run gravel in order to attain preferred surfacing cycles to sustain proper cross level, surface, and alignment of the track.

For budgetary purposes, it is recommended to use an average two-inch out of face ballast raise for the rail corridor, taking into consideration the need for run-offs or adjustments at bridges, highway overpasses, platforms, and highway at-grade crossings.

The estimated total cost to rehabilitate the Chehalis Extension to a FRA Class 1 track standard is $3.1 million (see **Table 7**).

If the contractor-bidding environment were especially competitive, this cost estimate could be reduced by 10 percent to 15 percent.

Table 7: Cost Estimate – Rehabilitate to Class 1 Track

	TIE REPLACEMENT[1]	Value	*Calculation*
a.	Feet per Track Segment	39	
b.	Segments per Track Mile	135.4	*5,280' / a*
c.	# of Replacement Ties / Segment	5.0	
d.	# of Replacement Ties / Mile	677	*b * c*
e.	Miles of Main Line Track	19.5	
f.	Miles of Siding Track	3.5	
g.	Total Track Miles	23.0	*e + f*
h.	# of Ties Replaced	15,571	*d * g*
i.	Cost Per Replacement Tie	$150.00	
j.	**Tie Replacement Cost**	**$2,335,650**	***h * i***
	SURFACE AND LINING[2]		
k.	Miles of Main Line Track	19.5	
l.	Miles of Siding Track	3.5	
m.	Total Track Miles	23.0	*k + l*
n.	Total Track Feet	121,440	*m * 5,280'*
o.	Surface & Lining Cost / TF	$6.00	
p.	**Surface & Lining Cost**	**$728,640**	***n * o***
q.	**Total Cost**	**$3,064,290**	***j + p***
r.	Cost per Track Mile	$133,230	*q / g*

[1]Tie replacement includes removal of old ties, gaging, and Class 1 compliance at all rail joints.

[2]Surface and lining includes two-inch ballast lift, tamping and cross leveling, and brooming.

This estimate does not take into account the sections of track that may have been improved by WWR.

5. MARKET ANALYSIS

This section describes the current and potential sources of revenue for the Chehalis Extension. The findings of this section relate to the desired outcome of the rail line providing economic development opportunities.

5.1 SUMMARY OF FINDINGS

- The existing storage business provides a good revenue base for the rail line.
  - Railcar storage and related switching currently account for more than 90 percent of revenues from the rail line.
- There is very little freight (carload) activity on the line and the opportunity to increase this business segment is constrained by a number of factors, including the limited availability of developable property along the rail line.
- It is unclear whether there is space in the local transload market, in terms of either demand or supply, for a substantial new transloading operation that would generate meaningful revenue.
- A number of stakeholders expressed interest in the rail line for an excursion train operation.
  - As a threshold matter, all or a portion of the track would need to be brought up to a FRA Class 1 track standard before passenger trains could operate on it.
  - Assuming the needed upgrades are made to the track, there is still uncertainty as to whether an excursion train venture on the line is commercially viable.
  - Even if viable, the financial return to the Potential Owners from an excursion train operation is likely to be small.
- The study looks at other ideas for new business for the line, such as a container train shuttle to Tacoma marine terminals and the construction of new connections to the BNSF/UP main line. While these ideas have potential, they are far from fully formed at this time and we believe the Potential Owner should give little or no weight to them while considering the purchase of the rail line.

5.2 CARLOAD MARKET

WWR reports that it handled 29 carloads in 2014 and 30 carloads though the first six months of 2015.

Carload customers over the past two years include McFarland Cascade (poles outbound), Roadwise (lignin inbound), and Wilco (fertilizers inbound, grain outbound). In addition to these customers, WWR transloaded two railcars.

There are only four industrial spurs serving the line: Wilco, the transload track off the Chehalis Yard, Weyerhaeuser Co., and McFarland Cascade (the latter two locations are on the Curtis Line). The small

number of industrial spurs is indicative of the historically weak carload market on the Chehalis Extension.

The weakness of the rail line's carload market can be illustrated by considering the "Rule of 100," a rule of thumb used by some industry experts that states that a small railroad must move 100 revenue freight cars through its system per year per mile of track to make a reasonable profit. The "Rule of 100" suggests that 2,000 revenue carloads are needed to operate the 20-mile-long Chehalis Extension profitably. Table 8 shows how the carloads per track mile for the Chehalis Extension compares to some other selected short lines in the region.

Table 8: Carloads per Track Mile – Examples of Other Railroads

Railroad	Location	Track Miles	Annual Carloads	Carloads / Track Mile	Other Business Lines
Western Washington Railroad	Maytown-Chehalis	20	~60	3	Railcar storage
Tri-City Railroad	Richland area	11	2,500	227	Property rents
Columbia Basin Railroad	Connell-Moses Lake	86	10,000	116	
Pend Oreille Valley Railroad	NE Washington / Idaho	40	2,285	57	Rail equipment repair
City of Prineville Railroad	Central Oregon	18	900	50	Transloading & railcar storage
PCC – Washington State	E. Washington / Idaho	297	9,000	30	

Recent events at the Port of Royal Slope demonstrate the importance of carload density to the viability of a short line railroads. The ownership of the 26-mile line Royal Slope rail line was transferred from WSDOT to the Port of Royal Slope in May 2015. Prior to the ownership transfer, WSDOT had reached an agreement with ARG Trans to operate the line. ARG Trans backed out of agreement, however, when it determined that it could generate only 200 carloads annually. The company believed it would need 750 annual carloads (29 carloads/mile) to break even.[21] The Royal Slope Railroad is currently not in operation.

The "Rule of 100" may not be applicable to the Chehalis Extension given the strength of its existing railcar storage business. However, the development of a stronger revenue carload business is important to the survival of the rail line. WWR has expressed awareness of this fact in our interviews and has been aggressively seeking new carload business since taking over the line in 2012.

Potential Properties for Rail-Served Development

The opportunity to grow revenue carloads over the long term depends in large part on the availability of land on which new carload shippers can locate. The amount of developable acreage needed to generate a specific amount of carload business varies widely according to the type of business. On

[21] The Royal Register. 2015. *Royal Slope Railroad a No Go, Port Seeking Control*. http://www.theroyalregister.com/news/article_cbcdea68-ce72-11e4-b35b-836cf80fb745.html.

the high end, unit train shippers can generate 500 carloads per acre or more, but the Chehalis Extension has no sites large enough to support rail operations of this scale.

Table 9 provides other more pertinent examples of the intensity of carload activity for small- to medium-sized shippers.

Table 9: Carload per Acre Examples

Rail User	Annual Carloads	Acres	Annual Carload per Acre
Molasses Distributor	170	2	85.0
Grain / Cattle Feed (inbound)	209	3	69.6
Animal Feed (inbound)	761	11	69.1
Dairy	718	18	39.9
Propane Distributor #1	113	3	37.6
Propane Distributor #2	25	1	25.0
Fruit Juice Producer	133	8	16.6
Food Cannery	130	12	10.8
Plastic Packaging Manufacturer	50	8	8.3
Plastic Pipe Manufacturer	42	10	4.2

Source: Tangent Services' work with regional rail shippers

Table 10 lists significant properties, possibly accessible from the Chehalis Extension, that are available for development today or at some point in the future.

Table 10:Potential Rail-Served Properties

Property	Acres	Comment
Curtis – Port of Chehalis	20 - 25	*Curtis Line. 47 acres total, only 20-25 acres developable*
Curtis – McFarland Cascade	80+	*Curtis Line. 80 acres northeast property best situated for future development*
Chehalis – Weyerhaeuser Co.	11	*Curtis Line. 2 parcels; existing rail spur.*
Chehalis – City of Chehalis	8	*Curtis Line. Significant portion of property is wetlands.*
Centralia – Lakeside Industries	50+	*Permits to fill over 20+ year period*
Grand Mound	16	*2 parcels, different owners.*
Maytown – Port of Tacoma	745	*½ mile east of MP 47.5 (start of purchase) on Tacoma Rail. Permitted for aggregate mining. Port has issued request for offers (due 12/31/2015).*

These properties are discussed in more detail below.

Curtis Industrial Site

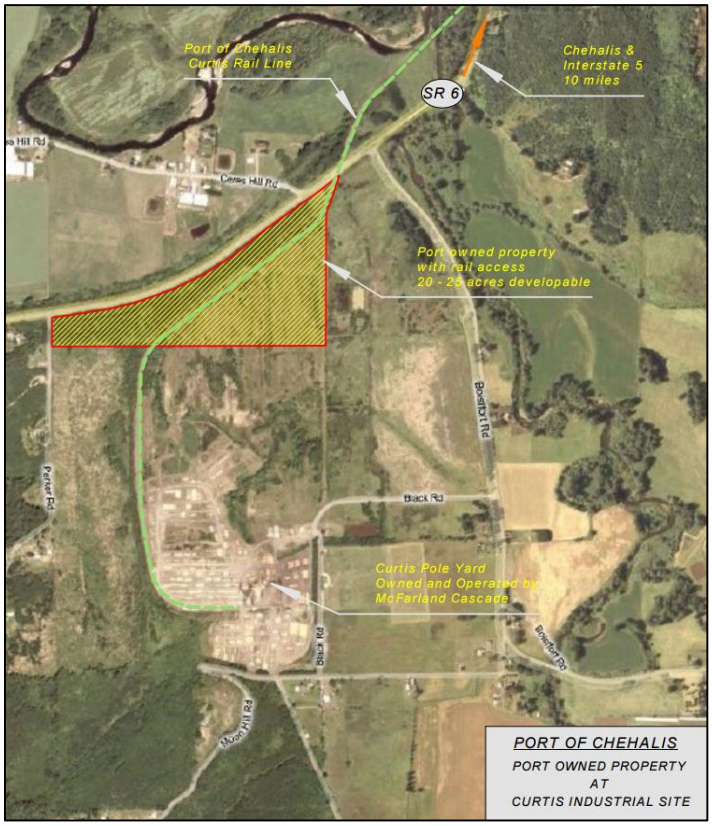
The Curtis Industrial Site, approximately 350 acres in total area, is located about 10 miles west of Chehalis off State Route 6. The site is zoned for Limited Area of More Intense Rural Development, making it suitable for a variety of rail uses. Rail access to the site exists via the Port of Chehalis' Curtis Line.

According to a 1999 study prepared for the Port of Chehalis, there are approximately 265 developable acres on the site (including an existing pole yard).[22] The development plan from the study provides blocks of 40-100 acres, with an emphasis on rail-oriented uses. The recommended first phase of development is for about 80 acres in the northeast quadrant of the site, either for a single large tenant or for multiple smaller tenants.

The Port of Chehalis owns 47 acres of the site, of which 20 to 25 acres are developable. The Port is considering the long-term development opportunities for its property.[23]

The remainder of the Curtis Site is owned by McFarland Cascade, which purchased the property from Weyerhaeuser Co. in 2005. McFarland Cascades has a pole yard, about 60 acres in area, and a rail siding on the site.

Figure 18: Port of Chehalis Property at Curtis



[22] RCA/Huit-Zollars. 1999. *Curtis Site, Proposed Industrial Development District Development Plan*. Port of Chehalis.

[23] Port of Chehalis. 2012. *Port of Chehalis Comprehensive Scheme of Harbor Improvements*.

Weyerhaeuser Co. Property

Weyerhaeuser Co. owns an 11-acre property (contiguous parcels of 3.94 and 7.06 acres) on SW Riverside Drive in Chehalis. The property has a small siding with a switch to the Curtis Line. The site appears to have been used for reload operations in the past, although, based on a site visit, there has been little activity there in recent times.

Figure 19: Weyerhaeuser Co. Property - Curtis Line

Figure 20: Weyerhaeuser Co. Property - Ground Level (facing north)

City of Chehalis Property

The City of Chehalis owns a 7.8-acre property on SW Hillburger Road to the south of the Curtis Line, across track from the Weyerhaeuser Co. site. A large portion of the site is a wetland that would need to be mitigated for if developed. It might be possible to use this property in conjunction with Weyerhaeuser Co. site, perhaps as a satellite storage yard.

Figure 21: City of Chehalis Property - Curtis Line

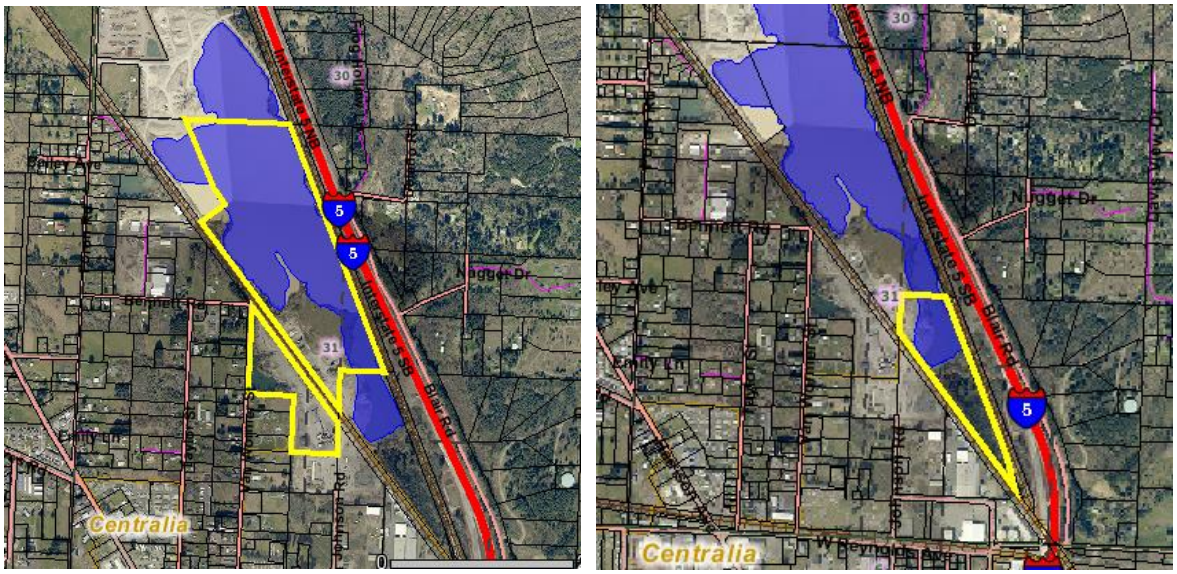
Figure 22: City of Chehalis Property - Ground View (facing east)

Lakeside Industries

Lakeside Industries operates an asphalt plant on a 100-acre site in Centralia on Johnson Road. The site is bounded by the Chehalis Extension along the eastern perimeter and the PSAP along western perimeter. Lakeside has fill and grading permits from the City of Centralia in 2010 to start filling a large pit on the site. The permits anticipate filling the pit over a period of 20 years or more.[24]

Once the pit is filled, the Lakeside site could be converted into a large rail-served industrial property. However, this will not occur for another 20 years or more. In the meantime, it is possible that the Chehalis Extension and its Lakeside siding, which runs along the pit, could be used to deliver fill material.

Figure 23: Lakeside Industries Property in Centralia



[24] The Chronicle. 2010. *Lakeside Industries Will Fill Gravel Pits.* http://www.chronline.com/news/article_936d6260-9683-11df-a110-001cc4c03286.html.

Grand Mound Property

Although there are no large industrial sites along the Chehalis Extension in Grand Mound, there are certain parcels that might be combined create a property large enough to host a small- to medium-sized rail shipper. The illustration below shows two vacant parcels (with different owners) in Grand Mound that could be combined to create a 16-acre property adjacent to the Chehalis Extension. This site has the advantage of close proximity to the SR 12/I-5 interchange.

Figure 24: Grand Mound Property

Maytown Property

The Port of Tacoma's Maytown property consists of approximately 745 acres located east of Maytown, approximately one mile west of the start of the Chehalis Extension.[25] The rail line serving the property is owned by the City of Tacoma and operated by Tacoma Rail. The property is currently zoned Rural Residential (R 1/20) and is permitted for mining up to 20,600,000 cubic yards of aggregate over a term of 20 years.

The Port of Tacoma bought the property in 2006 with a plan to use it as a rail yard for unit trains. The property is about one half mile from the BNSF/UP main line. Opposition to the plan and the withdrawal of support from its project partner, the Port of Olympia, forced the Port of Tacoma to back away from the rail yard plan in 2008, at which time it put the Maytown property back on the market.[26] In 2010, Maytown Sand and Gravel agreed to buy the property, but the mining company withdrew from the deal in 2013 after failing to get the needed permits from Thurston County. The Port has been marketing the property without success since 2013. It recently issued a new Request for Offers to Purchase for the property. Proposals are due December 31, 2015.[27]

To this point, the Port of Tacoma has had little success marketing the property and its most likely future use is aggregate mining. The Chehalis Extension could conceivably be used to deliver aggregate from the site to the Chehalis/Centralia area, but, given the short distance, delivery by truck is much more likely.

Even though the Maytown property may offer little opportunity to generate activity on the Chehalis Extension in the near-term, the Lewis County should try to obtain for trackage rights to the property.

[25] Port of Tacoma. 2015. *Maytown Mine Site: Request for Offer to Purchase.* http://portoftacoma.com/maytown-mine-site-request-offer-purchase.

[26] JOC.com. 2015. *Tacoma Drops Logistics Center Plan*. http://www.joc.com/maritime-news/tacoma-drops-logistics-center-plan_20080626.html.

[27] The News Tribune. 2015. *Port of Tacoma Puts Maytown Tract on The Market Again*. http://www.thenewstribune.com/2015/06/22/3850854/port-of-tacoma-once-again-puts.html.

5.3 Railcar Storage / Switching Market

Railcar storage has been the primary use of the Chehalis Extension in recent years. Storage use boomed following 2008/2009 when the recession caused a rapid decline in intermodal rail activity, forcing railcar-leasing companies to idle many intermodal railcars. Aerial photographs show that between 2009 and 2012, as many as 10 miles of track between Blakeslee Junction and Maytown were used for storage at any one time. Since 2012, intermodal rail activity has rebounded and the leasing companies have sold for scrap or refurbishment many of the intermodal platforms once stored on the rail line.

Even though the recession-caused storage use has waned, about 90 percent of WWR's revenues still come from storage and storage-related switching. WWR's primary storage activity today is the receipt of intermodal trains from BNSF for re-assembly, short-term storage, and then delivery back to the network when needed.

Generally, the demand for railcar storage is prone to peaks and valleys depending on events such as an economic downturn or the phasing/refurbishment out of an equipment type. For this reason, railcar storage is typically an opportunistic rather than a core business for short line railroads.

A rail operator on the Chehalis Extension may be able to make railcar storage a more stable and consistent business. The rail line is in close proximity to the I-5 main line rail corridor and the seaport complexes in the Puget Sound. The intermodal train cargo flow to and from the Pacific Northwest is imbalanced, creating an ongoing demand to reassemble and chamber empty intermodal trains. The track to the north of Blakeslee Junction is in a good location to provide this service to the Class I railroads. The line is also well situated to store other types of rail equipment, such as empty oil railcars.

5.4 Transloading Market

The primary demand for rail reload/transload services in the Pacific Northwest is for the handling of construction-related materials. These materials include, but are not limited to, lumber, cement, steel products, roofing materials, and pipes.

During the 2008/2009 recession, the construction market suffered one of its worst downturns on record. Our discussions with the Class I railroads confirm that their reload partners in the Pacific Northwest saw significant drops in business during the recession. There has been some recovery in lumber and other products the past couple of years, but volumes are generally still below pre-recession levels.

Transload facilities typically fill a void for companies which do not have direct rail access via a spur to their facility or who are captive to one railroad and desire to access another railroad. In order for a Chehalis Extension transloader to be successful, there needs to be a pool of shippers in proximity to Chehalis that do not have rail access but want to ship by rail.

Demand for transload services from within the immediate Chehalis/Centralia area is limited, however, as the local market is already well served by rail. Many of the area's major shippers already have rail access.

There is, however, a relatively high concentration of potential shippers without rail access in the geographic area between Longview and Tacoma, generally along the axes of I-5 (north/south) and Highway 12 (east/west). However, existing transloaders — such as Cascade Warehouse, Swanson Bark, and Skog Loading — are well situated to serve demand in this market.

WWR observed that the transload market for forest products is well covered by existing transloaders and stated that they would instead focus on non-forest products such as bulks, plastics, steel, tractors, etc.

5.5 Excursion Train

Some stakeholders have expressed interest in using the Chehalis Extension for an excursion train. Some noted that the existing heritage railroad, the Chehalis-Centralia Railroad, which runs excursions on the Curtis Line, might expand operations onto the track. Others noted that the rail line runs adjacent to the Great Wolf Lodge, a destination family-themed water park in Grand Mound, and that it might be possible to set up train excursions from that facility.

This study does not analyze the commercial viability of an excursion train on the Chehalis Extension. We will note, however, that establishing a high-quality excursion train capable of sustaining itself over the long run is a challenging proposition.

Our conversations with an experienced excursion train operator indicate the following is needed to be successfully run a high-end operation:

- An FRA Class 2 track standard.
- $50 million in liability coverage.
- Rehabbed rail cars that will cost, all in, about $1 million each.
- A high quality experience to keep people coming back once the novelty factor has worn off.
- It is helpful to have a strong local tourism industry from which to draw. For example, a successful excursion train in the Napa Valley area benefits from an existing annual base of 3 million visitors to the wine country.

The requirements for a smaller excursion operation, such as the Chehalis-Centralia Railroad, can be much less than the above.

Ultimately, whether or not an excursion train on the Chehalis Extension is commercially viable, a key question for the Potential Owners is whether an excursion train operation can make a material contribution to the financial sustainability of the line.

In many locations, excursions train operators lease or own the line that they run on and are responsible for maintenance of the line. In the case of the Chehalis Extension, we assume a different model wherein the excursion train operator would pay the Potential Owners or the short line railroad a fee for the rights to operate on the track. This fee could be structured in a number of different ways: fixed monthly payment, payment per roundtrip, payment by passenger, percent of gross revenue, etc. It might be possible to waive the fees for operating rights in return for a contribution to the maintenance of the railroad.[28] The ultimate revenue potential to the Potential Owners or rail operator would depend on type and size of the excursion train operation.

Nearby Excursion Trains

Chehalis–Centralia Railroad

The Chehalis-Centralia Railroad runs excursions with a 1916-vintage steam locomotive between Chehalis and Curtis. The volunteer-based operation had $202,150 in revenues in 2013, of which $132,356 were from ticket sales. Total expenses were $192,978 and net income was $9,172. These financial results were similar in 2011 and 2012.[29] The Port of Chehalis noted that the Curtis Line operates at a loss to the Port.[30]

Mount Rainier Scenic Railroad

The City of Tacoma leases the line between Eatonville and Morton to Western Forest Industries to operate the Mount Rainier Scenic Railroad. Ridership is reported to be 25,000 passengers per year. The specific terms of the lease are not known, but City of Tacoma documents indicate that the lease will reduce the City's maintenance obligations by $90,000 per year, although the City will contribute $30,000 per year over the first five years to help in the transition of the maintenance obligation. Importantly, the excursion train operation on that line protects the City from the obligation to repay federal grants should operations cease on that line.[31] Western Forest Industries reported "train revenues" of $715,403 and track maintenance expenses of $89,011 for the 2013 tax year.

"Train to the Mountain"

The City of Tacoma purchased its Mountain Division track from Weyerhaeuser Co. in 1995 with the goal of using the track to run an excursion train between Tacoma and Mount Rainier National Park.

[28] The Oregon Coast Scenic Railroad signed a lease with the Port of Tillamook in 2012 wherein for the first five years of the lease, the fund the railroad would pay the Port to lease the line are to be used by the railroad to repair the line.

[29] Chehalis Centralia Railroad Association, Form 990 Tax Return, 2013.

[30] Interview with Randy Mueller, Chief Executive, Port of Chehalis (07/13/2015).

[31] Tacoma Rail confirmed that there were no federal grant encumbrances on the Chehalis Extension (email communication with Dale King, September 11, 2015).

It was believed that the carload business in the Frederickson area would offset any potential losses from the excursion train. All attempts to establish a "Train to the Mountain" failed, however. In one of these attempts, in 2007, the Tacoma Rail sold operating rights to the Spirit of Washington Dinner Train to run between Tacoma and Lake Kapowsin (Eatonville), a distance of about 20 miles, for $2,800 per month (equivalent to $33,600 annually).[32] The train was shut down after three months due to poor ticket sales. In 2008, Tacoma Rail and the Metropolitan Park District joined to run a weekend, summertime only train from Tacoma to Eatonville to visit a wildlife park. This train operation was discontinued after three years when it became unprofitable.

5.6 Other Potential Market Opportunities

In our interviews and conversations with stakeholders, various ideas were offered for potential business opportunities on the line. The following describes in summary some of these ideas.

Tacoma Container Train Shuttle. In this concept, international containers would be shuttled between Chehalis and terminals in Tacoma by WWR and Tacoma Rail over the Chehalis Extension. The shuttle trains would be interchanged by WWR and Tacoma Rail at McKenna, WA. Tacoma Rail would be responsible for the distribution of the railcars to and from the marine terminal(s).

WWR would receive and deliver containers to/from truck at a location in Chehalis. The Weyerhaeuser Co. property, possibly in conjunction with the nearby City of Chehalis property, was noted as a possible site.

The advantage of the train shuttle to container shippers is the reduction of truck travel time by avoiding delays related to Puget Sound highway congestion and terminal gate/in-terminal processing. This could significantly reduce truck-turn times and trucking costs.

The shuttle train idea would need to overcome certain obstacles before it can be implemented.

- Importantly, the shuttle train involves more container handling cost (moving containers to and from the train) than direct drayage to the marine terminal. The reduction in trucking costs must be sufficient to cover these additional handling costs.
- Finding a suitable location in Chehalis may also be an obstacle. The Weyerhaeuser Co. site on the Curtis Line is probably the best site for this type of operation, but it is small for this type of operation.
- Obtaining the needed support from ocean container carriers and Tacoma-area terminal operators will likely be a challenge.

Chamber Way Connection. The concept of the Chamber Way Connection is to build a new high-speed connection travelling north from the BNSF/UP main line onto the Tacoma Rail line in the area of Chamber Way in Chehalis. This new connection would be faster and more efficient than the existing

[32] The dinner train had run on previously on the BNSF Woodinville Subdivision for 15 years until BNSF cancelled their contract.

connection in Centralia where train speed must be reduced to 5 or 10 MPH to travel through the existing rail wye. A new connection would free capacity on the BNSF/UP main line for both freight and passenger rail.

Specifically, the new connection would facilitate the handling of unit trains destined for the Port of Grays Harbor via the PSAP. The Grays Harbor port area receives by rail about 1.4 million tons of grain and 100,000 auto units for export each year. In addition to this existing rail activity, three groups — Grays Harbor Rail Terminal (US Development Group), Westway Terminals, and Imperium Terminals — are each working on projects to develop crude oil terminals in Grays Harbor. If successful, any one of these projects could drive increased interest in a faster, more efficient interchange.

The concept of the Chamber Way Connection has been circulating in public forums for a decade or more. There has been strong public opposition to the proposal, primarily due to extended blockages of road crossings in Centralia, particularly those that lead to the local hospital.

If Chamber Way were ever implemented, the capital costs of the new connection and the required upgrades to the track would presumably be paid for the benefiting Class I carrier(s) and/or PSAP. The Potential Owners or its rail operator might charge for the rights to operate over the right of way.

Great Wolf Lodge Connection. Another concept introduced during our research was to build a connecting crossover track between the Chehalis Extension and the PSAP near MP 58 (to the south of Great Wolf Lodge). This connection would allow the line to be used to chamber trains for the PSAP or to create a new main line bypass track for the PSAP. Similar to the Chamber Way Connection idea, the capital costs of the new connection and would presumably be paid by the benefiting Class I carrier(s) and/or PSAP. The Potential Owners or its rail operator might charge for the rights to operate over the right of way.

Waste Train. Waste containers are currently railed from Everett, Centralia, and Seattle to a landfill in Roosevelt, WA, on a daily basis. During our interviews, an idea to develop a new rail transfer facility on the Chehalis Extension was offered. Under this concept, a new turnout off the BNSF/UP mainline to the Chehalis Extension and a rail transfer facility between Chehalis and Centralia would be developed.

Grain Elevator. It was mentioned during our interviews that there might be sufficient demand to support the construction of a new grain facility on the line.

Wetland Mitigation Bank

ELS evaluated the potential use of the rail corridor as a wetland mitigation bank. This evaluation supposes the corridor would no longer be used for rail and that the track and related rail improvements would be removed. It is understood that the Potential Owners are interested in the property for only for use as a rail line. This information is provided solely as background.

ELS estimates that the rail line has between 30 and 45 acres of wetlands fill in jurisdictional waters and wetlands of the United States. These acres of existing wetland fill, if removed from the wetlands and waters it now occupies, offers an opportunity to restore wetlands/waters through a mitigation banking approach in compliance with the 2008 Federal Rule 33 CFR Part 332, Compensatory Mitigation for Losses of Aquatic Resources (Federal Rule). According to the Federal Rule, mitigation bank credits are obtained from a site or suite of sites where resources are restored, established, enhanced, and/or preserved by a bank sponsor, or proposer for the bank. In general, a mitigation bank sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the mitigation bank sponsor.

A very high-level, preliminary estimate of the cost to convert 45 acres of the rail line to wetlands is $2.55 million. Current wetland mitigation bank credits (1 credit per acre) in Western Washington range from $75,000 to $200,000 per credit. Using an average of this range is $137,500 per credit. After subtracting total costs above, net revenue could range from $1,575,000 (30 credits) to $3,637,500 (45 credits).

ELS is not held to this preliminary estimate, but rather provides this analysis for the client's perspective regarding opportunities ownership of the rail line corridor may offer. Currently, ELS does not know of another wetland mitigation bank that acts as a corridor such as the proposed track line for purchase. This could provide a unique opportunity, but also brings uncertainty in the ability to establish the corridor as a mitigation bank. ELS is well-versed in mitigation bank establishment and does not consider the possibility too far-fetched in establishing the corridor for mitigation credits.[33]

[33] Ecological Land Services. 2015. *Lewis County Short Line Railroad Feasibility Study: Environmental Risk*.

6. FINANCIAL ANALYSIS

This section provides an overview of financial considerations for ownership of a rail line. These considerations include the revenues and expenses associated with ownership and describes financial analyses of the purchase and operation of the rail line. The findings for this section relate to the desired outcome of the rail line being financially self-sustaining.

6.1 SUMMARY OF FINDINGS

- The existing storage business provides a good financial base for the rail line, but is cyclical and variable over time.
- Freight activity (carload) needs to grow substantially to create a positive financial outlook.
- A short line operator might generate a positive cash flow on low freight volumes by limiting spending on maintenance and other expenses.
- Even in an optimistic scenario wherein freight revenues are significantly increased, the operation is very unlikely to generate the cash flows needed to address maintenance backlogs or to fund capital upgrade or replacement needs.
- Based on the results of the financial analysis, there is significant risk that the purchase will not meet the goal of financial sustainability.

6.2 METHODOLOGY

This objective of the financial analysis is to assess the financial viability of a rail operation on the Chehalis Extension. The underlying premise of the analysis is that the Potential Owners will continue to operate the rail line as a railroad and that a short line operator will provide the freight rail services.

The financial analysis compares annual projections of operating revenues to operating expenses to determine the annual operating income/loss of the short line operator. Operating income/loss as a cash flow is used to estimate the present value of future cash flows over a 25-year period. This calculation represents the “going concern value” of the Chehalis Extension. A 3 percent discount is used to reflect that a dollar earned in the future is worth less than a dollar earned today.

The analysis also estimates the number of revenue carloads the short line operator will need to break even, assuming the storage business is held constant.

The basic assumptions of the financial analysis include:

- The short line railroad is a self-contained private entity.
- All freight revenue accrues to the short line.
- All trackage rights revenue accrues to the short line.

- All other revenues (leases, easements, etc.) accrue to the Owners.
- The short line railroad acquires the needed rail equipment, such as a locomotive.
- The short line is responsible for maintenance of the line to its current condition and operational capacity.
- The short line railroad has no obligation to upgrade or rehabilitate the line.
- The Potential Owners are responsible for capital improvements and major replacement projects as needed.
- The short line pays the Potential Owners a rent fee for the use of the line.

The analysis shows the expected financial results for a typical short line operation. To the extent possible, assumptions and model inputs are tailored to the traffic, operations, and maintenance of the Chehalis Extension. It is important to note, however, that the financial analysis does not attempt to exactly replicate financial performance of the current Chehalis Extension short line operator, WWR. It is instead a pro forma analysis of a typical short line operator.

Importantly, the analysis does not include cash flows related to the acquisition or capital improvement of the rail line. It is base assumption that external sources will be used to fund capital projects.

6.3 SCENARIOS

Three financial scenarios are analyzed: the Base Scenario, the Growth Scenario, and the Low Expense Scenario.

The **Base Scenario** assumes that short line railroad operations and business look much as they do today under WWR. The short line railroad will operate a locomotive, will switch carload business, will switch railcars in and out of storage, and will maintain the line to the FRA excepted track standard. Carload volumes are projected to grow in an organic manner.

The **Growth Scenario** is more aggressive on revenues than the Base Scenario, assuming carloads will increase to 500 by Year 5 and that there will be revenue from an excursion train.

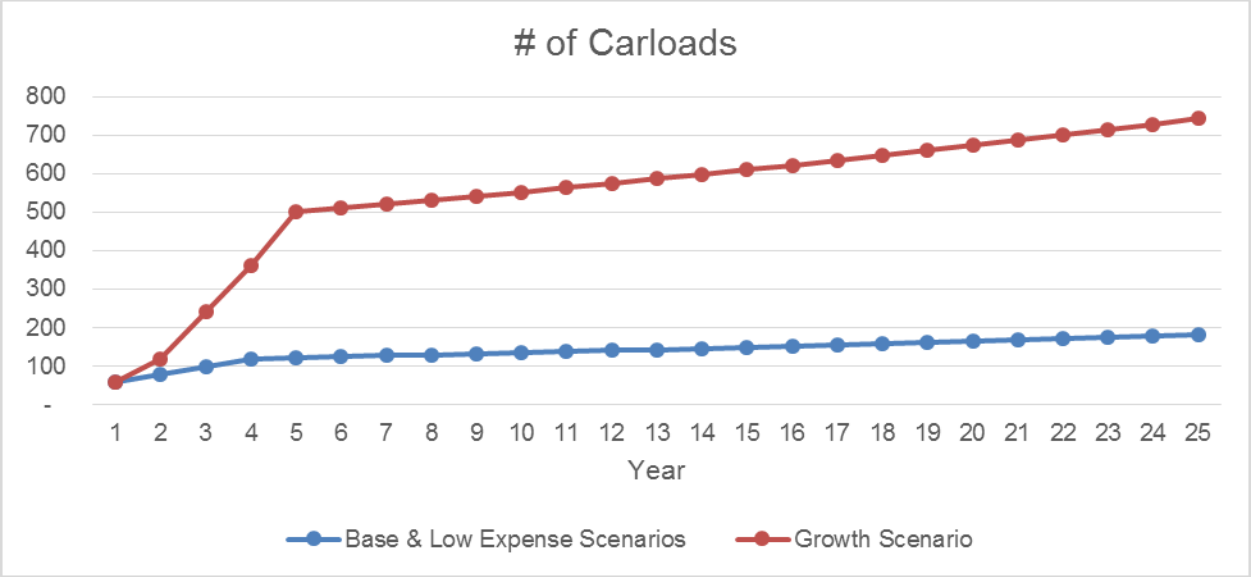
The **Low Expense Scenario** makes the same revenue assumptions as the Base Scenario, but reduces the expenses for maintenance of way, insurance, the locomotive lease, and the General Manager's salary, each by 50 percent. The Low Expense Scenario simulates a situation where these expenses are shared with a parent company or partner.

6.4 Operating Revenues

Carload

All the scenarios assume assumes 60 carloads in Year 1. In the Base Scenario, volumes double to 120 carloads by Year 4, and then grow at a rate of 2 percent per year over the remaining 21 years (**Figure 25**). In the Growth Scenario, carloads increase from 60 in Year 1 to 500 in Year 5, then increase at a rate of 2 percent per year over the remaining 20 years. The Low Expense Scenario uses the same carload volume assumption as the Base Scenario. Carload volume includes transload-related activity.

Figure 25: Carload Assumptions



Based on current switching rates per the WWR tariff and the slate of existing business, the average switching revenue per carload is between $400 and $450. The model assumes $450 per carload in the Year 1 all scenarios; this is escalated annually by 2 percent.

Storage

It is difficult to forecast railcar storage and switching revenues given the wide range of possible combinations of switch events and storage time. The model makes a simplifying assumption that an intermodal unit train is put into and removed from storage each week. We estimate this would generate between $300,000 and $350,000 in revenue annually. This revenue number is consistent with information provided by WWR that railcar storage/switching currently accounts for about 90 percent of about $350,000 in total annual revenues. The model assumes $320,000 in revenue in the first year and a growth rate of 2 percent over the 25-year period. This storage revenue assumption is the same in all scenarios.

Excursion Train

Excursion train revenues are included in the Growth Scenario but not in the Base or Low Expense scenarios. The model assumes a relatively small- to medium-sized excursion operation — about 25,000 riders per year — paying the short line railroad $25,000 per year for use of the line. This is equivalent to $1.00 per rider, or about $250 per roundtrip assuming 100 excursions each year.[34]

Revenue Escalator

An inflation escalator of 2.0 percent per year is applied to the revenue per carload, storage revenue, and the excursion train revenue.

6.5 Operating Expenses

Maintenance of Way Expense

The maintenance of way ("**MOW**") expense is the cost to perform routine maintenance on the line. It does not include the cost to improve its condition materially and to bring it to a minimum FRA Class 1 standard (these costs are described in the Capital Program section of the report).

Ongoing MOW activities include regular track inspections, addressing minor issues (such as loose track bolts, clearing fallen trees, spot surfacing, etc.), inspection and maintenance of crossing signals, vegetation control, and ditching. These activities should be performed to maintain the line even when there is very little activity.

For the purposes of this analysis, MOW expenses are assumed the same for either track maintained to excepted class or, after an upgrade, to Class 1.

Our calculations suggest that about $6,300 per track mile per year should be budgeted to perform ongoing inspection and maintenance to the line. This budget assumption is consistent with what similar short line operations budget per track mile for MOW, which is typically between $5,000/mile and $10,000/mile.[35]

Tacoma Rail suggested that the annual maintenance cost for the Chehalis Extension is $2,000 per track mile per year. However, the numerous condition deficiencies currently seen on the line (excessive vegetation, poor ditching, drainage issues, loose joints, rotted ties, etc.) provide evidence that $2,000 per mile is unlikely to be sufficient to maintain the track in good condition over time. The model therefore assumes an annual budget of $5,000 per track mile in the Base and Growth scenarios, and $2,500 per track mile in the Low Expense Scenario.

[34] Even though the cost to improve the line to FRA Class 1 is likely to be on the account of the Owners, the model assumes the excursion train makes payments to short line railroad.

[35] This is based on our work with our work with other short line railroad operators and owners, and on other studies of short line operations.

Maintenance of Equipment Expense

This is primarily the cost to maintain the locomotive(s) used to haul railcars. The analysis assumes that major maintenance will be contracted out and that routine maintenance can be performed by the train crew(s). The model assumes $20,000 per year for equipment maintenance in all scenarios.

Transportation Expense

Transportation expense includes the expenses to operate the locomotive and rolling stock to service carload and storage operations. Expense items include crew labor cost, equipment rent, fuel, lube, and oil, insurance for the locomotive, and materials and supplies. Transportation expense increases with the growth of carload activity in all scenarios. The model assumes the locomotive is leased at a cost of $25,000 annually ($250,000 at a 10 percent lease rate) in the Base and Growth scenarios; this is reduced by 50 percent in the Low Expense Scenario.

General and Administrative Expense

The key expense lines in General and Administrative are the salary and benefits of the General Manager and office staff, insurance for the entire operation, and office rent. Other items in this category include office supplies, utilities, telephone / communications, accounting, and legal expenses. In the Base Scenario and Growth Scenario, it is assumed that there is a General Manager (with benefits) and the equivalent of one full-time worker of office help (without benefits). Rent payments to the Potential Owners is set to 10 percent of gross revenues.[36] General insurance expense is $50,000 per year in the Base and Growth scenarios. Insurance and the salary/benefits of the General Manager are reduced by 50 percent in the Low Expense Scenario.

Taxes

In all scenarios, the short line railroad will pay a Washington Public Utility Tax equal to .01926 of gross and a Leasehold Excise Tax equal to 0.1284 of the rent paid for the property.

Interest Expense

The short line railroad may have interest expense related to loans for startup expenses and/or a locomotive purchase, but we assume zero interest expense in all scenarios.

Expense Escalator

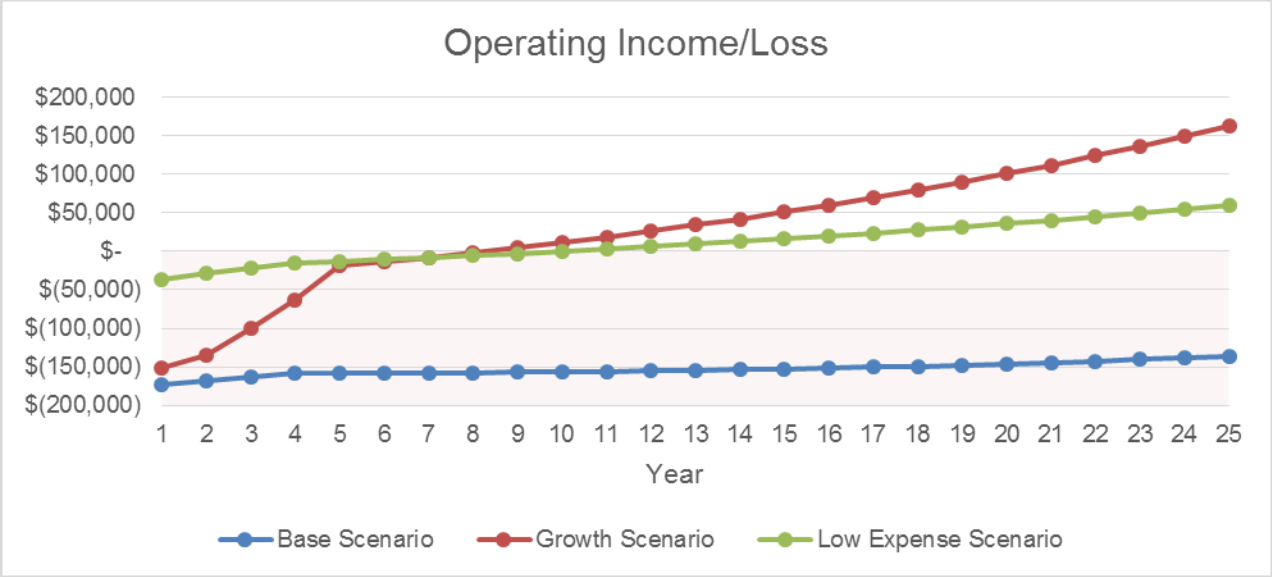
An inflation escalator of 1.5 percent per year is applied to operating expenses. This expense escalator is intentionally less than the revenue escalator of 2.0 percent per annum to capture the long-term impact on profitably that can result from efficient short line operations.

[36] WWR currently makes a fixed payment of $50,000 per year to the City of Tacoma for its lease. This is equivalent to approximately 14 percent of current revenue.

6.6 Model Results

As depicted in **Figure 26**, the Base Scenario projects a consistent operating loss over the forecast period. The Growth Scenario projects substantial operating losses in the initial years, shifting to strong annual operating incomes towards the end of the forecast period due to the growth of carload business. The Low Expense Scenarios projects relatively small operating losses shifting to modest operating income gains over the forecast period.

Figure 26: Operating Income/Loss



The results for each scenario are summarized below. See **Appendix 8** for more detailed breakdowns of the financial model results.

Base Scenario Results

In the Base Scenario, the short line railroad has an operating loss of -$158,018 in Year 5. At no point in the 25-year pro forma analysis is there a positive operating income. The net present value of the 25-year operating income/loss stream is -$2,693,593. Assuming the existing base of storage activity, the number of carloads would need to increase to 676 in order to break even ($0 operating income/loss).

Table 11: Base Scenario Results

Net Present Value (25 years, 3% discount rate)	**-$2,693,593**
Carload Volume needed to Break Even	**676**

	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
Carloads	**60**	**80**	**100**	**120**	**122**	**19.5%**
% Growth	-	*33.3%*	*25.0%*	*20.0%*	*2.0%*	
Carload Revenue	$27,000	$36,720	$46,818	$57,305	$59,620	
Storage Revenue	$320,000	$326,400	$332,928	$339,587	$346,378	
Excursion Revenue	$0	$0	$0	$0	$0	
Total Revenue	**$347,000**	**$363,120**	**$379,746**	**$396,892**	**$405,999**	**4.0%**
% Growth	-	*4.6%*	*4.6%*	*4.5%*	*2.3%*	
Maintenance of Way	$97,500	$98,963	$100,447	$101,954	$103,483	
Maintenance of Equipment	$20,000	$20,300	$20,605	$20,914	$21,227	
Transportation	$162,202	$166,871	$171,644	$176,523	$179,452	
General and Administrative	$229,000	$233,527	$238,147	$242,864	$246,823	
Taxes	$11,139	$11,656	$12,190	$12,740	$13,033	
Operating Expenses	**$519,841**	**$531,317**	**$543,033**	**$554,995**	**$564,017**	**2.1%**
% Growth	-	*2.2%*	*2.2%*	*2.2%*	*1.6%*	
Operating Income	**-$172,841**	**-$168,197**	**-$163,287**	**-$158,103**	**-$158,018**	

Growth Scenario Results

In the Growth Scenario, the short line railroad has an operating loss of -$19,055 in Year 5. Operating income becomes positive in Year 9 of the 25-year pro forma analysis. The net present value of the 25-year operating income/loss stream is $249,010. Assuming the existing base of storage activity and the addition of an excursion train, the number of carloads would need to increase to 599 in order to break even ($0 operating income/loss).

Table 12: Growth Scenario Results

Net Present Value (25 years, 3% discount rate)	**$249,010**
Carload Volume needed to Break Even	**599**

	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
Carloads	**60**	**120**	**240**	**360**	**500**	**69.9%**
% Growth	-	*100.0%*	*100.0%*	*50.0%*	*38.9%*	
Carload Revenue	$27,000	$55,080	$112,363	$171,916	$243,547	
Storage Revenue	$320,000	$326,400	$332,928	$339,587	$346,378	
Excursion Revenue	$25,000	$25,500	$26,010	$26,530	$27,061	
Total Revenue	**$372,000**	**$406,980**	**$471,301**	**$538,032**	**$616,986**	**13.5%**
% Growth	-	*9.4%*	*15.8%*	*14.2%*	*14.7%*	
Maintenance of Way	$97,500	$98,963	$100,447	$101,954	$103,483	
Maintenance of Equipment	$20,000	$20,300	$20,605	$20,914	$21,227	
Transportation	$162,202	$171,344	$187,534	$204,171	$223,604	
General and Administrative	$231,500	$237,913	$247,303	$256,979	$267,922	
Taxes	$11,941	$13,064	$15,129	$17,271	$19,805	
Operating Expenses	**$523,143**	**$541,583**	**$571,017**	**$601,288**	**$636,041**	**5.0%**
% Growth	-	*3.5%*	*5.4%*	*5.3%*	*5.8%*	
Operating Income	**-$151,143**	**-$134,603**	**-$99,716**	**-$63,255**	**-$19,055**	

Low Expense Scenario Results

In the Low Expense Scenario, the short line railroad has an operating loss of -$12,744 in Year 5. Operating income becomes positive in Year 10 of the 25-year pro forma analysis. The net present value of the 25-year operating income/loss stream is $107,969. Assuming the existing base of storage activity, the number of carloads would need to increase to 188 in order to break even ($0 operating income/loss).

Table 13: Low Expense Scenario Results

Net Present Value (25 years, 3% discount rate)	**$107,969**
Carload Volume needed to Break Even	**188**

	Year 1	Year 2	Year 3	Year 4	Year 5	CAGR
Carloads	**60**	**80**	**100**	**120**	**122**	**19.5%**
% Growth	-	*33.3%*	*25.0%*	*20.0%*	*2.0%*	
Carload Revenue	$27,000	$36,720	$46,818	$57,305	$59,620	
Storage Revenue	$320,000	$326,400	$332,928	$339,587	$346,378	
Excursion Revenue	$0	$0	$0	$0	$0	
Total Revenue	**$347,000**	**$363,120**	**$379,746**	**$396,892**	**$405,999**	**4.0%**
% Growth	-	*4.6%*	*4.6%*	*4.5%*	*2.3%*	
Maintenance of Way	$48,750	$49,481	$50,223	$50,977	$51,741	
Maintenance of Equipment	$20,000	$20,300	$20,605	$20,914	$21,227	
Transportation	$149,702	$154,184	$158,767	$163,452	$166,185	
General and Administrative	$153,375	$156,767	$160,237	$163,785	$166,557	
Taxes	$11,139	$11,656	$12,190	$12,740	$13,033	
Operating Expenses	**$382,966**	**$392,388**	**$402,021**	**$411,868**	**$418,743**	**2.3%**
% Growth	-	*2.5%*	*2.5%*	*2.4%*	*1.7%*	
Operating Income	**-$35,966**	**-$29,268**	**-$22,275**	**-$14,976**	**-$12,744**	

6.7 Other Valuations

Appraised Value

The City of Tacoma commissioned an appraisal of the Chehalis Extension from MP 60 to the end of the line in Chehalis.[37] The appraisal concluded the 7.5-mile corridor had an "Across the Fence" market value of $6.2 million and a "Corridor" market value of $7.45 million. According to the appraisal, "Given that the highest and best use is for continued corridor use, the most probable buyer would be another rail operator, a utility company, such as Puget Sound Energy for a power line corridor, or a government agency for a right-of-way use."

The appraisal of rail corridors is a challenging process and different appraisals of the same railroad corridor property will often result in significantly different valuations. For a good description of some of the issues involved in railroad property appraisal, we recommend reading the article "Appraising Railroad Corridors – Misconceptions about Across-the-Fence Methodology," which appeared in Right of Way Magazine (March/April 2013).[38]

Value Based on Past Sales

The Chehalis Extension was sold to Weyerhaeuser Co. in 1980 and to the City of Tacoma in 1995. These sales can give an indication of the historical value of the property.

The 1980 sale to Weyerhaeuser Co. included 123 miles of track at $4.4 million. This equates to $35,772 per track mile in 1980 dollars or $103,599 per track mile in inflation-adjusted dollars.[39] Applied to 19.5 miles of rail line, this suggests a current price of $2,020,181 for the Chehalis Extension.

The 1995 sale to the City of Tacoma included 74 miles of track at $3.1 million. This equates to $41,892 per track mile in 1980 dollars or $65,597 per track mile in inflation-adjusted dollars. Applied to 19.5 miles of rail line, this suggests a current price of $1,279,142 for the Chehalis Extension.

Value Based on Lease Income

Another method to value the Chehalis Extension property is to use an income approach based on the current annual lease payment of $50,000 by WWR to the City of Tacoma. Assuming this payment over a 25-year period and discounting at a rate of 3 percent per year, the net present value of this income stream would be $870,657. The WWR lease is only for five years, however. In addition, the income stream would need to be offset by ownership costs, such as the need to replace capital improvements as they are worn out.

[37] "Appraisal of Real Property, 7.5 Mile – Tacoma Rail Mountain Division Corridor," by Integra Realty Resources, dated October 30, 2012.

[38] Right of Way Magazine. 2013. https://www.irwaonline.org/eweb/upload/web_mar_apr_13_AppraisingRRCorridors.pdf.

[39] Using the CPI calculation from the BLS.

6.8 Ownership Costs and Revenues

The cost of ownership includes, of course, the purchase of the asset, but it can also include other costs that are not as evident.

Table 14 lists and describes various ownership costs Although leasing the asset to a short line operator transfers a portion of these ownership costs to another party, the Potential Owners will still retain some costs, some of which may not be readily apparent.

Table 14: Total Cost of Ownership

Cost	Comment
Purchase	The purchase of the rail line is solely the Potential Owners' cost.
Routine Maintenance	The short line railroad will be responsible for all cost related to the routine, day-to-day maintenance of the line.
Upgrade / Enhancement / Refurbishing	Unless otherwise specified by the lease or a separate agreement, the Potential Owners will be responsible for all costs related to upgrading, enhancing, refurbishing, or replacing the rail infrastructure.
Environmental	The Potential Owners' potential environmental costs could come from a number of sources. For example, although, under the lease, the operator will indemnify the Potential Owners for accidental releases of hazardous materials, the Potential Owners should nonetheless expect to incur management and legal costs if such an event were to occur. The Potential Owners might also incur costs over the long run related to new environmental regulations and standards that might require modifications to the existing rail infrastructure.
Community	Generally, the short line railroad will be expected to maintain good relations with the local community. However, when there are complaints from the community on issues such as noise or road blockages, the Potential Owners are likely to become involved to resolve the problem and potentially to provide mitigation.
Management	While the short line railroad will be responsible for the day-to-day management of the rail line, the Potential Owners will also incur ongoing costs related to the overall management of the lessee and asset. This will include the leadership and staff to manage the lease and to perform assorted other duties, such as billing and collecting payments for easements and permits on the rail property.
Insurance	The lease will contain insurance requirements for the short line operator, but the Potential Owners will also want to include the rail line in its own general property insurance coverage.
Disposal / Decommission	Typically, when a leased asset reaches the end of its useful like, it is the Potential Owners' responsibility to remove, dispose, and, if needed, replace the asset.

The above ownership costs can be offset, in part, by the collection of lease payments and permit fees by the Potential Owners. As shown in **Table 15**, revenues from permits and leases collected from the Chehalis Extension by Tacoma Rail totaled $57,480 in 2014. These permit revenues will flow directly to the Potential Owners rather than to the short line railroad.

Table 15: TRMW - 2014 Permit/Lease Revenue - MP 47.5C to End of C-Line

Permittee/Lessee	Document Number	Bill. Date	Annual Fee
Western Washington Railroad LLC	Lease 174	1/9/2014	$ 50,000.00
Fatbeam LLC	Permit 2233	1/21/2014	$ 420.00
Valley Freightliner Inc.	Permit 2174	1/28/2014	$ 1,000.00
Northwest Open Access Network	Permit 2114	3/14/2014	$ 580.00
Valley Nut & Bolt Co Inc.	Permit 2022	3/16/2014	$ 500.00
Qwest Communications	Permit 2147	6/30/2014	$ 550.00
Thurston County Public Works - Util	Permit 2009-003	7/18/2014	$ 500.00
Puget Sound Energy Inc.	Permit 2041	9/13/2014	$ 300.00
City of Centralia	Permit 2007-012	12/1/2014	$ 500.00
City of Centralia	Permit 2007-013	12/1/2014	$ 500.00
National Frozen Foods Corp	Permit 2005-016	12/1/2014	$ 1,000.00
Puget Sound Energy Inc.	Permit 2008-009	12/1/2014	$ 500.00
Puget Sound Energy Inc.	Permit 2008-041	12/1/2014	$ 630.00
Qwest Communications	Permit 2008-004	12/1/2014	$ 500.00
Thurston County Public Works - Util	Permit 98.002	12/1/2014	$ 250.00
		TOTAL:	**$ 57,480.00**

Source: Tacoma Rail

It may be possible to pledge the above revenue streams to help finance the purchase of the rail line. However, the quality of the lease revenue stream may not be viewed positively by lenders. The current lease with WWR expires in 2019. Even if a longer-term lease were agreed to with a short line operator, it would be unlikely that the short line operator could offer any meaningful security for its lease payment obligation.

Assuming a lender is willing to accept the available revenue streams as support a loan, it would require a loan period of approximately 20 years at 0 percent interest. Loans of this term may not be readily available, however. For example, WSDOT rail loan program, the Freight Rail Investment Bank, has a maximum loan term of 10 years.

7. MANAGEMENT

This section identifies and evaluates different options and models for leases and operating agreements. Much of the supporting information for this section can be found in **Appendix 1 – Public Short Line Railroads**.

7.1 SUMMARY OF FINDINGS

- In the Pacific Northwest, ownership and management of a publicly owned rail line is typically by a single public agency, most often a port authority.
- Under Washington law, the Port of Chehalis would need the consent of the Port of Centralia to purchase the Chehalis Extension.
- There are two examples of joint ownership and/or joint management of publicly owned rail lines in the Pacific Northwest: the Palouse River & Coulee City Railroad (WA) and the Wallowa Union Railroad Authority (OR).
- A lease to a private short line railroad, the current operating model for the Chehalis Extension, is preferred by members of the Core Team and is recommended by the consulting team.
- Acquisition of the Chehalis Extension would require Surface Transportation Board approval. The approval process would take 30 days or more and would cost between $5,000 and $8,000. However, depending on titles, operating rights, and opposition, the timeline and cost could be significantly more.
- To abandon the Chehalis Extension, the City of Tacoma would need to file an application with the Surface Transportation Board. Other parties, including the Potential Owner, would then be allowed to make an offer of financial assistance to keep the line open or offer to purchase the line. Any dispute regarding the terms of sale would be adjudicated by the Surface Transportation Board.

7.2 OWNERSHIP / MANAGEMENT STRUCTURE

Both Lewis County and the City of Chehalis are signatories to the option agreement to purchase the Chehalis Extension. The option agreement notes that other local public agencies — the City of Centralia and the Ports of Chehalis and Centralia — might also wish to participate in the purchase. This raises the question of how the ownership and management of the rail line should be structured if more than one public agency is involved.

In the Pacific Northwest, there are two examples of joint ownership and joint management of rail lines involving public agencies:

- In Washington, an example of sole ownership with joint management is the Palouse River & Coulee City Railroad ("**PRCCR**"). The PRCCR is owned by Washington State and managed by a

joint management authority consisting three counties (Grant, Spokane, and Lincoln) and the Port of Whitman County.

- There is also an example of joint ownership with joint management in the Pacific Northwest. In Oregon, the Wallowa Union Railroad is jointly owned by Wallowa County and Union County. The two counties have formed a joint management authority, the Wallowa Union Railroad Authority, to manage the railroad.

In almost all cases, the public owner of a rail line is a sole public agency and is managed by the same sole agency (either directly or through an operator). Ports are most commonly the owners a publicly owned rail lines in Washington and Oregon (see **Table 16**). Public ports often have missions and expertise that incorporate both transportation and economic development, making rail lines a natural addition to their portfolios.

Table 16: Public Authority Type and Operating Model

Authority Type	Operating Model		
	Lease	**Operate Directly**	**Management Agreement**
Port District	• Port of Benton / Tri-City RR • Port of Columbia / Frontier • Port of Royal Slope / Royal Slope RR • Port of Seattle / Eastside Community Rail • *Port of Coos Bay / Coos Bay Rail Link* • *Port of Tillamook Bay / Port of Tillamook Bay RR*	• Port of Pend Oreille / Pend Oreille Valley RR	
County	• Clark County / Portland Vancouver Junction RR • Yakima County / Yakima Central Railway • *Lake County / Lake County Railway*	• *Wallowa Union Railroad Authority / Wallowa Union RR*	
City		• Tacoma Public Utilities / Tacoma Rail • *City of Prineville / City of Prineville Railway*	• City of Tacoma Public Works / Tacoma Rail Mountain Division
State	• State of Washington / Palouse River & Coulee City RR		

Oregon railroads in italic font.

Given the above, the Port of Chehalis might be an apparent choice to own the Chehalis Extension. However, under Washington State law, a port district "…shall not acquire any real property or real property rights in any other port district without the consent of such district."[40]

Since the Chehalis Extension runs through the port districts of both Chehalis and Centralia, the Port of Chehalis would need the consent of the Port of Centralia to acquire the line. Another alternative is for the two ports to acquire the rail line jointly. We do not know whether the law would prohibit the Port of Chehalis to acquire the line jointly with another public agency or group of agencies that does not include the Port of Centralia.

For the sake of simplicity and efficiency, a sole ownership with sole management is preferable to a situation where ownership and management is jointly shared. However, joint ownership and management offers the benefit of distributing the risks and costs of ownership among multiple agencies. It also provides a larger cross-section of the community a say in setting policy and direction for the rail line.

A joint rail authority might also manage the Curtis Line in addition to Chehalis Extension.

7.3 Operating Models

Regardless of how ownership and management of the rail line is structured, a decision would need to be made on how to operate the railroad. There are three basic operating models to consider — Operate (directly), Management Agreement, and Lease.

- **Operate**. In certain situations, public authority owners of rail lines have chosen to operate their rail lines directly. Under the "operate" model, the public authority hires the employees of the rail operation, owns the rail equipment, and oversees all aspects of the rail line. In Washington, examples of the operate model include the Port of Pend Oreille (Pend Oreille Valley Railroad) and Tacoma Public Utilities (Tacoma Rail). In Oregon, the City of Prineville owns and operates the City of Prineville Railway and the Wallowa Union Railroad Authority (Wallowa and Union counties, Wallowa Union Railroad).

- **Management Agreement**. Another possible operating model for public authorities is a management agreement wherein the public authority contracts with an operator on a cost or "cost-plus" basis. Under this model, the public authority retains all rail line revenues and substantial control of the asset, and pays private operator to hire labor and perform operations. The operator is reimbursed for its contract-related costs by the public authority. The public authority could provide the equipment (locomotive, etc.), or the equipment could be provided by the operator (the cost for which billed to the public authority). In Washington, the only example of the management agreement is the Tacoma Rail Mountain Division, which is managed by Tacoma Rail under contract to the City of Tacoma's Public Works Division.

[40] RCW 53.08.240, Joint exercise of powers and joint acquisition of property — Contracts with other governmental entities.

- **Lease**. A third operating model is to lease the rail line. Under this model, the lessee (usually a short line railroad) is given commercial and operating rights to the rail property and, in return, makes rent payments to the public authority. The rent payments can be a fixed fee, or a fee based on revenue or volume, or a combination thereof. There is usually a minimum rent fee required. The short line railroad is usually responsible for the maintaining the rail line and for providing labor and equipment. The short line operator retains the revenues associated with the line's operation. In Washington, six of the ten publicly owned railroads use a "lease" operating model wherein the line is leased to a short line operator. The relative advantages and disadvantages of each operating model are summarized in **Table 17**.

Table 17: Operating Models - Advantages and Disadvantages

Operating Model	Advantages	Disadvantages
Operate	• Retain complete control of marketing, maintenance, operations, etc. • Most financial upside (if the line is profitable)	• Retain all ownership risk (market, operational, financial, etc.) • Requires investment in operating capital (locomotive, etc.) and labor • Rail operations not a core competency of public authorities
Management Agreement	• Retain a high level of control • Retain financial upside (if profitable) • Rail line is managed by qualified operator • Typically, less difficult to change operator as compared to a lease	• Owner retains essentially all of the ownership risk • Difficult to incent operator to keep operating costs low under a "cost-plus" arrangement • May require owner investments in operating capital
Lease	• Transfers much of the ownership risk • Rail line is managed by qualified operator • Stable revenue stream (possible)	• Owner cedes most control of the rail line • Financial upside is typically limited

The operating model currently employed on the Chehalis Extension is a lease. During interviews, Core Team members expressed the belief that a lease would continue to be the preferred method of operation if the rail line were purchased. **Appendix 9** summarizes the essential terms of the WWR's existing lease with the City of Tacoma.

7.4 Surface Transportation Board

The Surface Transportation Board ("**STB**") has regulatory authority over the acquisition and abandonment of rail lines.

Acquisition

Since the Chehalis Extension is currently being operated and has customers, STB approval will be required to transfer ownership. There are several ways that such a transaction could be crafted and legal counsel will be needed to determine the best course of action for filing. The level of counsel

needed will depend in part on City of Tacoma deeds and the quality of their title. Depending on the method of transfer, there also could be both State and Federal issues to address

A basic STB transfer filing could be done as quickly as 30 days and legal cost of between $5,000 and $8,000. However, depending on titles, operating rights, and opposition, the timeline and cost could to be significantly more.

Abandonment

To abandon a railroad line or discontinue operation of rail service on a rail line, a rail carrier must file an application with the STB seeking prior approval or an exemption (49 U.S.C. § 10903).

If the current owner or a future owner of the Chehalis Extension were to file an application for abandonment, the Potential Owners would be allowed to make an offer of financial assistance ("**OFA**") to avoid the abandonment and for the purchase of the line, subject to conditions imposed by the STB (49 U.S.C. § 10904). The OFA provisions of the law guarantee any "financially responsible" party the right to acquire a rail line to provide for continued rail service. Offers to subsidize or purchase a rail line must be file with the STB within four months after the abandonment application has been filed.

The abandonment of the rail line is postponed until the line owner and the prospective OFA purchaser have come to an agreement on the terms of sale, or until the STB sets the terms of sale upon the request of either the line owner or purchaser.

If there is a dispute regarding purchase price, the STB will set the "constitutional minimum value" or the railroad line. The constitutional minimum value is the greater of the net liquidation value (salvage value plus its land value) of the line or the going concern value of the line.

8. FUNDING OPPORTUNITIES

This section identifies possible funding opportunities/sources to fund the acquisition and future improvements.

8.1 SUMMARY OF FINDINGS

- A direct appropriation from the Washington State Legislature is the most likely source of funding for the Chehalis Extension.
  - However, the 2015-17 budget was only recently approved and the next opportunity for a direct appropriation would be the 2017-19 biennium.
- WSDOT administers a grant program — the Freight Rail Assistance Program — for rail projects.
  - This program might provide partial funding for the acquisition and/or improvement of the Chehalis Extension in the future. The typical award size is between $200,000 and $500,000.
- WSDOT also administers a loan program — the Freight Rail Investment Bank — for rail projects.
  - The maximum loan size is $250,000 although larger amounts are possible depending on the project and the availability of funds. A 20 percent match is required.
- The Chehalis Extension acquisition is likely eligible for funding under the USDOT's TIGER Discretionary Grant Program.
  - This program is highly competitive, however, and the chances of receiving a TIGER grant award should be considered very slim.
- USDOT also has a loan program for rail projects, the Railroad Rehabilitation & Improvement Financing ("RRIF") Program.
  - This program has been used by short line railroads to finance improvements and, on one or two occasions, the purchase of rail lines. Potential borrowers often turn away from the RRIF program due to a lengthy application process, collateral requirements, and potentially high finance charges.

8.2 STATE FUNDING

State Direct Appropriation

Port and other public agencies have been successful in obtaining direct appropriations from the Washington State Legislature to fund rail projects. Direct appropriations to rail projects in the 2015-17 budget include:

- The Northern Columbia Basin Railroad project received $20.9 million in funding to enhance and improve rail access to industries in the northern Columbia Basin area near Moses Lake.
- The Port of Warden received $2 million in funding to construct a mile of new storage siding tack along a Columbia Basin line.
- The Connell rail interchange project received $10 million in funding to upgrade and improve the key interchange in eastern Washington, where a Columbia Basin Railroad line intersects with BNSF Railway's Lakeside Subdivision line that runs between Spokane and Pasco.

Rail-related projects receiving direct appropriations in previous funding cycles include $2.2 million to the Port of Benton to replace a rail bridge and $3.2 million to the Port of Pasco to build a rail spur to the Heritage Industrial Park and to expand the Big Pasco Industrial Park rail track system.

Also of note, WSDOT used $15.5 million of direct appropriations to purchase the Palouse and Coulee City rail system, 297 miles in length, in 2007.

Washington's State has a biannual finding cycle. As the 2015-17 budget is now complete and approved, the next opportunity for a direct appropriation would be the 2017-19 biennium.[41]

Freight Rail Investment Bank

The Freight Rail Investment Bank ("**FRIB**") is a loan program to support freight rail capital needs and investments. It is administered by WSDOT. The loan maximum is $250,000 but could be higher depending on the availability of funds and the caliber of proposed project.

Loan recipients need to demonstrate the ability to repay the loan. Other loan recipients have been able to pledge business revenues, e.g., the Port of Walla Walla with wheelage fees from Railex and the Tacoma Rail from port business revenues. Tacoma Rail has been a frequent user of the loan program. The list of 2015-2017 FRIB loans is provided in **Appendix 2**.

Table 18: Freight Rail Investment Bank (FRIB)

Loan/Grant	Loan.
Objective	Support branch lines and light density rail lines, provide or improve rail access to ports, maintain adequate mainline capacity and preserve or restore rail corridors and infrastructure.
Applicant	Publicly owned railroads, port districts, rail districts, and local governments. Apply to WSDOT.
Uses	Rehabilitate or upgrade tracks, provide rail connection, repair damages rail, increase rail capacity/velocity; preserve a corridor, purchase equipment, etc.
Terms/Conditions	At least a 20 percent match. 10-year payback. Interest rate is low.
Program Status	Open – applications due October 9, 2015. $876,000 is available.

[41] Our conversations with WSDOT indicate the introduction a new project in the 2016 supplemental budget is very unlikely.

Web Site	http://www.wsdot.wa.gov/Freight/Rail/GrantandLoanPrograms.htm

In the 2015-17 funding cycle, there were six FRIB applications requesting nearly $6 million. In November 2014, WSDOT recommended loans to seven projects for $2.76 million.[42] The largest loan amount was $810,085 and the average award amount was $395,332.

Freight Rail Assistance Program

The Freight Rail Assistance Program ("**FRAP**") is a grant program directed toward larger projects where it is difficult to gain a contribution and where the rail location or the project is of strategic importance to the local community and the state. The program and is open to cities, county rail districts, counties, economic development councils, port districts, and privately or publicly owned railroads. Projects must be shown to maintain or improve the freight rail system in the state and benefit the state's interests.

Table 19: Freight Rail Assistance Program (FRAP)

Loan/Grant	Grant.
Objective	Support branch lines and light density rail lines, provide or improve rail access to ports, maintain adequate mainline capacity and preserve or restore rail corridors and infrastructure.
Applicant	Open to cities, county rail districts, counties, economic development councils, port districts, and privately or publicly owned railroads. Apply to WSDOT.
Uses	Rehabilitate or upgrade tracks, provide rail connection, repair damages rail, increase rail capacity/velocity; preserve a corridor, purchase equipment, etc.
Terms/Conditions	
Program Status	Open – applications due October 9, 2015. $970,000 available this round.
Web Site	http://www.wsdot.wa.gov/Freight/Rail/GrantandLoanPrograms.htm

In the 2015-17 funding cycle, in which $2.75 million of FRAP funding was available, there were 23 FRAP applications requesting $23 million. Of the 23 applications, 14 were from the private sector. In November 2014, WSDOT recommended award for seven projects. The largest award amount was $538,000 and the average award amount was $393,000.

The list of 2015-2017 FRAP awards is provided in Appendix 1.

8.3 Federal Funding

TIGER Program

Since 2009, Congress has dedicated more than $4.1 billion for six rounds to fund the Transportation Investment Generating Economic Recovery Program, or "TIGER" Discretionary Grant program. Of the

[42] One additional project has converted from the Freight Rail Assistance Program grant program to the loan program.

$4.1 billion of TIGER funding to date, $810 million has gone to freight rail projects. Short line railroads have received over $270 million, principally for capacity enhancements, track improvements, and bridge repairs.

Table 20: Tiger Grant Program

Loan/Grant	Grant.
Objective	Improve and modernize the nation's transportation infrastructure.
Applicant	Eligible applicants include a wide range of public entities, including states, cities, counties, tribal governments, metropolitan planning organizations, and port and transit authorities. Applications are made to the U.S. Department of Transportation.
Uses	Capital projects that include, but are not limited to: (1) Highway or bridge projects eligible under title 23, United States Code (including bicycle and pedestrian related projects); (2) public transportation projects eligible under chapter 53 of title 49, United States Code; (3) passenger and freight rail transportation projects; (4) port infrastructure investments (including inland port infrastructure); and (5) intermodal projects.
Rural/Urban	The Chehalis rail line is located in a rural area as defined by TIGER grant guidance. Accordingly, the minimum request amount for a rural project is $1 million and there is no minimum match requirement (urban projects have a $10 million minimum and 20 percent match requirement). Typically, the TIGER programs requires 20 percent of the available funds be spent on projects located in rural areas.
Terms/Conditions	Typically, funds must be obligated within two years of an award.
Program Status	Closed. FY 2015 application deadline was June 5, 2015. Future appropriations are not known at this time.
Web Site	https://www.fra.dot.gov/Page/P0128

The TIGER grant program highly competitive — only about five percent of all applications are successful.

Prior PNW TIGER Awards

On average, the state of Washington has received two TIGER grant awards each round (12 awards over six rounds). Only one of these awards has been to a freight rail project: the Port of Vancouver's West Vancouver Freight Access project ($10 million, 2010). In Oregon, two freight rail projects (both rural) have received awards: the Coos Bay Rail Line Rehabilitation ($13.6 million, 2010) and the Siskiyou Summit Railroad Revitalization ($7 million, 2012). The two Oregon projects involved the repair and/or upgrade of existing lines and did not include right of way acquisitions.

A future round of TIGER grant funding appears likely, as the program is generally popular in Congress. However, the House approved an appropriations bill in June 2015 that reduced funding to $100 million from $500 million. A JOC.com article noted, "Republicans, particularly those in the House, have criticized the lack of transparency in the awarding of TIGER grants and accused the Obama administration of using them to reward loyal legislators. Fierce TIGER grant supporter Sen. Patty

Murray's exit as chair of the Senate Budget Committee earlier this year has further clouded the outlook for more robust TIGER funding."[43]

When would the Next Round of TIGER Funds Be Available?

The next round of TIGER would occur earliest in 2016. Given the normal time needed for the application process, the award, NEPA review, and the execution of a grant agreement, it is our opinion that the earliest TIGER funds could be available would be November or December 2016.

Would a Short Line Acquisition Be Eligible for TIGER Funding?

We asked a USDOT representative from the TIGER program this question and the response was, yes, on its face a short line acquisition would be eligible.[44] There is nothing in TIGER program rules excluding purchases of this type. In fact, right of way purchases needed for larger improvement projects are often part of TIGER projects. However, we were unable to identify a past TIGER grant award for the purchase of a short line railroad.

We also asked a representative from the USDOT whether it would be possible to purchase the line and apply for reimbursement funds from TIGER. The response was that this scenario was "difficult to perceive." Even if a reimbursement was technically allowable (and there was uncertainty on this point), a proposal for a reimbursement of this type was seen as generally not in alignment with a TIGER program goal, which is to help projects that are in need of a final piece of funding.

Could a Short Line Acquisition Compete Eligible for TIGER Funding?

The Chehalis Extension purchase faces two large hurdles it needs to overcome to compete well. First, an acquisition by itself does little to address the primary selection criteria of the TIGER program. These criteria include economic competitiveness, state of good repair, and environmental sustainability. A simple transfer of ownership does not advance the public good in any of these areas.

The other large hurdle is the low level of freight activity currently on the rail line. The TIGER program requires an analysis that shows the benefit of the project is equal to or exceeds its cost. With little railcar activity on the line (aside from storage, which does not help), it will be difficult to show a positive benefit to cost ratio.

How Can the Competitiveness of a TIGER Grant Application Be Improved?

As noted above, a project to acquire a rail line only transfers ownership and by itself does not produce any benefit. Therefore, to improve an applications competitiveness, the Chehalis Extension project could include both the acquisition and improvements to the line. This would increase the overall cost of the project, say, from $2 million to $3 million, but would allow the application to claim additional

[43] Szakonyi, M. JOC.com. 2015. *Future TIGER Grants in Jeopardy After House Cuts Funding.* http://www.joc.com/regulation-policy/transportation-policy/us-transportation-policy/future-tiger-grants-jeopardy-after-house-cuts-funding_20150610.html.

[44] Interview with Howard Hill, Office of the Secretary of Transportation, June 29, 2015.

benefits related to the improvements. The benefit cost analysis would need to show increasing volumes on the line because of these improvements.

RRIF Loan Program

Under the Railroad Rehabilitation & Improvement Financing ("**RRIF**") program, the FRA is authorized to provide direct loans and loan guarantees up to $35.0 billion. Up to $7.0 billion is reserved for projects benefiting short line railroads. RRIF is vastly under-subscribed. Of the $35 billion at its disposal, it has spent just $2 billion since 1998.

Table 21: Railroad Rehabilitation & Improvement Financing Program

Loan/Grant	Direct loan.
Objective	Finance the development of railroad infrastructure
Applicant	Eligible borrowers include railroads, state and local governments, and government-sponsored authorities and corporations. Applications are made to the FRA.
Uses	Funding may be used to acquire, improve, or rehabilitate intermodal or rail equipment or facilities, including track, components of track, bridges, yards, buildings and shops.
Terms/Conditions	Direct loans can fund up to 100% of a railroad project with repayment periods of up to 35 years and interest rates equal to the cost of borrowing to the government. Borrowers must pay a credit risk premium that is held by the government over the life of the loan. Applicants are also responsible for paying for FRA's financial analysts; this fee cannot exceed one-half of one percent of the loan amount.
Program Status	Open.
Web Site	https://www.fra.dot.gov/Page/P0128

Funding for Short Line Rail Carriers

The RRIF program has been popular source of funding for Class II and III rail carriers. In total, the RRIF program has executed 27 loan agreements of nearly $700 million to 20 short line railroads. To date, overall executed loan agreements under the program (including Class I carriers and Amtrak) total over $1.725 billion with 40 percent of that going to Class II and Class III railroads.[45]

An FRA assessment of RRIF loans to short line railroads shows that slightly over 78 percent went to infrastructure (bridges and track) while 18 percent went to equipment. [46] About 2 percent of RRIF loans to short line went to refinancing and another 2 percent went to a combination of line purchases and infrastructure rehabilitation. Loans for a combination of refinancing and equipment purchases accounted less than 1 percent.

[45] Federal Railroad Administration. 2014. *Summary of Class II and Class III Railroad Capital Needs and Funding Sources*.

[46] Federal Railroad Administration, 2014.

Why is the RRIF Program So Undersubscribed?

There are two reasons that frequently cited to explain why more RROF loans have not been made: a difficult and long application process, and the credit risk premium.

- **Application Process**. Even though there is a statutory deadline to approve or disapprove a loan within 90 days of a completed application being submitted, according to the FRA it takes on average 13.5 months to process a RRIF loan application. The NEPA review, scope changes by the applicant, limited personnel and technical sophistication on behalf of the applicant, and the complexity of some loans are cited by the FRA as the most common factors in slowing down the process.[47]

- **Credit Risk Premium**. RRIF borrowers must pay a credit risk premium that is held by the government over the life of the loan. If the applicant can produce collateral equal to 120 percent of the loan amount and an independent financial analyst working for the FRA returns a favorable finding of on ability to repay, the risk premium is usually one or two percent. If the collateral at 80 percent, the credit risk premium can rise to 15 or 20 percent of the loan amount. This often discourages applicants from pursuing loans.

How the RRIF Application Process Works

The RRIF application starts with the applicant scheduling an informational session with the FRA to review program objectives, requirements, and the application process. This can be done at any time.

If the County is potentially interested in a RRIF loan, it should schedule an informational session with the FRA as soon as possible. Per the FRA's materials, to schedule a session, contact Natalie Williford via email (natalie.williford@dot.gov) or phone (202) 493-0279. Following the informational session, the County can determine whether it wants to proceed with the application process.

The next steps are submittal of a draft application, a meeting to review the draft application, submitting of a final application, acceptance of the final application for review by the FRA, application review and approval, and closing. [48] During this process, the application will also be reviewed by the DOT Credit Council and the Office of Budget Management.

[47] U.S. House of Representatives, Committee on Transportation and Infrastructure. 2011. *Sitting on our Assets: Rehabilitating and Improving our Nation's Rail Infrastructure*. http://archives.republicans.transportation.house.gov/Media/file/112th/Railroads/SSM/2011-02-17BriefingMemo.pdf

[48] Federal Railroad Administration. 2015. *Railroad Rehabilitation and Improvement Financing (RRIF) Application and Evaluation Process Quick Guide | Federal Railroad Administration*. Retrieved 29 June 2015, from https://www.fra.dot.gov/eLib/Details/L04914

Past Washington State RRIF Loans and Applications

In 2008, the Columbia Basin Railroad received a $3 million RRIF loan to purchase 73 miles of track it leased from the BNSF Railway between Connell and Moses Lake.

In 2013, the Port of Vancouver, WA, applied for a RRIF loan to help fund its $230 million West Vancouver Freight Access project. The Port worked with the FRA over the period of a year or so on the application. The Port, however, eventually abandoned the loan application as it was unable to come to mutually agreeable terms. The primary issue involved collateral requirements and the credit risk premium.

How Does the FRA Prioritize RRIF Loans?

In 2010, the FRA published a notice explaining priorities for consideration of RRIF applications.[49] FRA will give priority to projects that:

- Enhance public safety
- Enhance the environment
- Promote economic development
- Are endorsed by state transportation plans
- Preserve or enhance rail or rail-related intermodal service to small communities or rural areas
- Enhance service and capacity in the national rail system
- Materially alleviate rail capacity problems
- Enable United States companies to be more competitive in international markets

The FRA notice also includes language regarding rail line acquisitions that is cautionary:

> *FRA is concerned that the potential for long-term, low-cost federal refinancing of short-term, high-cost acquisition debt might skew the true value of the assets being acquired, and perhaps even have an inflationary impact in the rail industry as a whole. RRIF financial assistance for refinancing the acquisition of eligible railroad property might encourage transactions that otherwise would not be made or transactions by entities that might lack the full knowledge of the rail industry that will be needed to assure the sustainability of the railroad. In considering proposed financing or refinancing debt, in particular short term debt, used for the acquisition of a significant amount of rail assets, FRA will require the applicant to demonstrate significantly more than minimal public benefit from the transaction. Circumstances where the acquisition is required to preserve essential*

[49] Federal Railroad Administration. 2010. *Notice Regarding Consideration and Processing of Applications for Financial Assistance Under the Railroad Rehabilitation and Improvement Financing (RRIF) Program*, Federal Register / Vol. 75, No. 188 / Wednesday, September 29, 2010 / Notices, p. 60165

rail service or where a public agency is acquiring a rail property for direct public benefit (e.g. use for public transportation) are more favorably considered.

USDA Rural Development Programs

United State Department of Agriculture ("**USDA**") Rural Development operates over fifty financial assistance programs for a variety of rural applications. Our research identified five programs that may have application to the Chehalis Extension purchase:

- Community Facilities Direct Loan & Grant
- Community Facilities Loan Guarantees
- Business & Industry Loan Guarantee
- Intermediary Relending Program
- Rural Business Enterprise Grants

Information on each these programs is provided in **Appendix 6**.

USDA Contact

As part of our research into potential USDA programs, we contacted Debbie Harper from USDA Rural Development in Olympia, WA. Ms. Harper is the local area representative covering Washington's Southwest Area - Pierce, Thurston, Mason, Grays Harbor, Pacific, Lewis, Cowlitz and Clark counties. For questions and/or to initiate an application, contact Ms. Harper at the local area Rural Development office:

Debbie Harper
Community Programs Specialist | Olympia Area Office
Rural Development
U.S. Department of Agriculture
1835 Black Lake Blvd SW, Suite C | Olympia, WA 98512
Phone: 360-704-7764 | Fax: 855-847-5490
Email: debbie.harper@wa.usda.gov
www.rd.usda.gov/wa

Is the Chehalis Extension Purchase Eligible?

In a July 7, 2015, email, Debbie Harper of the USDA questioned the eligibility of the Chehalis Extension purchase for funding under Community Facilities Direct Loan & Grant programs, "After discussing the 20-mile rail line project, we decided it does not seem to be a fit for the Essential Community Facilities program, see attached eligible uses of these funds." (See **Attachment 11** for email and email attachments.)

However, our reading eligibility rules seem to indicate the rail line purchase would be eligible.[50] The USDA is currently considering a loan for the purchase of a short line in Arizona.[51]

Does the Chehalis Extension Project Qualify as Rural?

The USDA programs are targeted towards small rural communities. It is unclear whether a project sponsored by Lewis County and/or the City of Chehalis would qualify as "rural" given the population limits imposed by the USDA programs. In her July 7, 2015, email to Tangent Services, Debbie Harper of the USDA wrote, "It is very difficult to determine the rural community that will benefit from the purchase of this rail line. What are the rural communities served by this segment of line?"

[50] According to enabling legislation, funds may be used to "construct, enlarge, extend, or otherwise improve water or waste disposal and other essential community facilities." The term "otherwise improve" includes "The purchase of existing facilities when it is necessary either to improve or to prevent a loss of service." The definition of an "essential community facility includes "Transportation facilities, such as streets, roads, and bridges." See Code of Federal Regulations 7 CFR, Part 1942.17(d) for loans.

[51] Stech, K. WSJ. 2015. *Arizona Railroad Approaches a Potential Final Chapter.* http://www.wsj.com/articles/arizona-railroad-approaches-a-potential-final-chapter-1436312341.

1. APPENDIX: PUBLIC SHORT LINE RAILROADS

This appendix provides background information on the state of short line railroads and the operations of publicly owned short line railroads in Washington and Oregon.

Summary of Findings

The Staggers Act and the deregulation of the railroad industry in the 1980s allowed Class I railroads to divest themselves of unprofitable branch lines. While many of these branch lines were abandoned, the more viable lines were sold or leased to private Class II or III railroads. Some of the less viable lines that were of no interest to private railroads were sold state and local governments. The goal of public ownership of a short line is usually to preserve rail service on a line that would otherwise be abandoned.

Most publicly owned railroads are operated under contract by private operators. Private short line operators can operate publicly owned rail lines profitably, at least in the short run, by keeping overhead and labor costs low (in comparison to Class I railroads) and by allocating working capital efficiently.

Over the long run, however, many publicly owned short lines do not generate cash flow to fund major maintenance and improvement on their rail lines. Because they can only perform the most basic maintenance to keep the line open, many publicly owned short lines have a large backlog of deferred maintenance. Some short lines railroads have been forced to cease operations on major sections of their lines (e.g., Port of Columbia, Pend Oreille Valley Railroad, Port of Royal Slope, and Port of Tillamook Bay) due to condition deficiencies. For publicly owned short lines (and private short lines as well), public loans and grants are the only means by which capital projects can be funded.

It is also important to note that the many publicly owned short lines must receive operating subsidies to “keep the doors open.” In most of these situations, the subsidized short line lacks the density of carload business needed to meet business overhead requirements and to maintain the track for which it is responsible.

Short Line Railroads

Short line railroads have been around since the birth of railroading in the 1800s. Businesses and small communities built many local railroads to provide a connection to a growing national rail system. In 1916, there were over 700 short lines. However, during the 1920s, competition from trucking intensified and the short lines started a long period of decline. By the 1970s, the number of operating short lines had been reduced to about 200.

Short line railroading began a resurgence in the 1980s with the passage of the Staggers Act and the deregulation of the industry. This allowed the Class I railroads to exit from unprofitable branch lines, and many of these lines were sold to short line operators. Nearly 2,000 miles of rail line had been

abandoned in Washington State before the late 1990's, and another 70 have been abandoned since.[52] Short line trackage increased from 8,000 miles in 1980 to about 50,000 miles in 2000. According to the Association of American Railroads, there were more than 550 short line and regional railroads in the U.S. in 2010.

Short lines can provide value-added service to both rail shippers and to the Class I railroads. Short lines act as a feeder network, allowing the Class Is to move away from retail switching services to focus on network utilization and velocity.

For shippers, the availability of short lines can provide more timely switching, thus assuring a more reliable and consistent stream of product and demurrage cost reductions.

Of the short lines operating today, some are owned by the Class I railroads (mostly switching and terminals railroads such as the Portland Terminal Railroad in northwest Portland, OR) and some are owned by industries. Most are non-affiliated, not connected to either a Class I railroad or an industry. Within the non-affiliated short lines, there are independents and lines that are part of holding companies. Tacoma Rail is an example of an independent operator, while the PSAP, part of the Genesee & Wyoming, belongs to a holding company.

The current operator of the Chehalis Extension is a bit of a hybrid – an independent short line enjoys some of the benefits of belonging to a holding company due to the ownership interest of Paul Didelius, the owner of Frontier Rail. Mr. Didelius contributes a locomotive and insurance coverage to WWR.

Short lines can be profitable in the short run by acquiring the rights to rail lines at reduced rates, lowering costs by operating second-hand locomotives and rolling stock, and by emphasizing workforce flexibility. The key to short line success is to operate without large overheads, especially when compared to major railroads. In addition, many state and local governments are willing to provide subsidies to short lines to ensure the continuation of local rail service.

Washington Publicly Owned Railroads

There are 10 publicly owned railroads in Washington (counting the three branch lines of the Palouse River & Coulee City Railroad owned by Washington State as one). Of these, three have publicly owned operators.

Tacoma Public Utilities / Tacoma Rail

Tacoma Rail is one of three operating divisions of Tacoma Public Utilities (the other two are Tacoma Power and Tacoma Water). It is 100 percent self-supported – there is no taxpayer subsidy.[53]

[52] Sage, J., Casavant, K., Eustice, J.B. 2015. *Washington State Short Line Rail Inventory and Needs Assessment.*

[53] Tacoma Rail: https://www.mytpu.org/tacomarail/about/

Tacoma Rail has three divisions. The Tideland Division, which is the largest, serves the Port of Tacoma. The Capital Division consists of three branch lines in Pierce and Thurston counties. The Mountain Division has track in Pierce, Thurston and Lewis counties. The Mountain Division line is not owned by Tacoma Public Utilities but is instead owned directly by the City of Tacoma.

Tacoma Rails primary business is the Tideland Division, where it handles more than 125,000 intermodal and commercial carloads annually. The Capital Division is far smaller and Tacoma Rail is considering discontinuing the lease of Belmore branch from the BNSF, thereby ending service to the Port of Olympia. The railroad recently experienced a fuel spill (due to vandalism) on the line that cost $430,000 to remediate. Volumes on the line have been in decline as imports of ceramic proppant through the Port of Olympia have dropped off.[54]

City of Tacoma Public Works / Tacoma Rail Mountain Division

The Tacoma Rail Mountain Division ("**TRMW**") is distinct from the rest of Tacoma Rail. It is considered a separate railroad, as the 132-mile line is owned directly by the City of Tacoma — not by Tacoma Public Utilities — and is operated by Tacoma Rail under contract with the City's Department of Public Works. The agreement states that City of Tacoma will fund Tacoma Rail for any operations on the Mountain Division.

Most of the Mountain Division's customers are in the Frederickson area. The railroad has operationally withdrawn from the southern branches of its network, leasing the Maytown-to-Chehalis trackage to WWR and the Eaton-to-Morton section to a scenic railroad operator.

In 2014, the Mountain Division reported revenues of $982,477 and an operating loss of ($816,197) before taxes and depreciation. The Mountain Division's cash flow has been negative since at least 2004. In 2007, the City approved a $6.25 million loan from the General Fund to the Mountain Division to be repaid in one installment in December 2017. In 2012, state auditors warned that the railroad might never be able to repay the loan from the City's general fund.[55]

State of Washington / Palouse River & Coulee City Railroad

The Palouse River and Coulee City ("**PCC**") rail system is owned by Washington State, managed by WSDOT, and operated by private industry. The State completed purchase of the segments of the 297-mile line in 2007 at a cost of $15.5 million. Three different branches of the line are now operated by three different private operators. The Palouse River Coulee City Rail Authority, consisting of representatives from three counties (Grant, Spokane, and Lincoln) and from the Port of Whitman County, has responsibility for the management and oversight of the leases.

[54] The Olympian. 2015. *Vandalism Threatens Tacoma Rail Service in Olympia and Tumwater*. http://www.theolympian.com/news/local/article26131267.html.

[55] Washington State Auditor's Office. 2012. http://portal.sao.wa.gov/ReportSearch/Home/ViewReportFile?arn=1007522&isFinding=true&sp=false

The PCC system handles about 9,000 carloads each year.

In 2015, WSDOT completed strategic plan for the PCC that identified $58 million of projects needed to address condition deficiencies and to upgrade the line to handle 286,000-pound railcars.

Port of Columbia / Frontier

The Port of Columbia assumed ownership of the rail line between Dayton and Walla Walla in 1996. The line was donated to the Port by the Union Pacific Railroad. The section owned by the Port of Columbia is part of a 67-mile stretch of rail from Wallula to Dayton. The Wallula to Walla Walla portion is still owned by Union Pacific.

The Port is currently in the process of changing operators from Watco Companies Rail Services to Frontier Railroad Services LLC.[56]

Shippers on the line include Seneca Foods in Dayton and grain growers accessing a barge loading facility in Wallula. In 2008, about 500 carloads of wheat and 65 to 90 carloads from Seneca.

The line is currently not functional because of repairs needed to the railroad bridges between Dayton and Prescott. The Port has been awarded a $273,000 WSDOT grant to make repairs. The change in operators was reportedly related to a disagreement between Watco and the Port over the amount of money needed to make the bridge repairs, with Watco arguing that $1 million was needed.

Port of Pend Oreille / Pend Oreille Valley Railroad

The Port of Pend Oreille was created in 1979 for the purpose of owning and operating the Pend Oreille Valley Railroad ("**POVR**"). The Port owns 61 miles of track in Washington, leases 24 miles of track in Idaho, on which the POVR operates.

In 12 months ending September 2014, the railroad handled 2,285 carloads consisting primarily of outbound lumber and newsprint.[57]

The Pend Oreille Valley Railroad interchanges with the Burlington Northern Santa Fe Railway Company at Sandpoint, Idaho to ship and receive cars from the BNSF and UP.

The Port generates about $2 million in revenues each year, of which about 60 percent comes from freight activities and the rest from repair and other services. It operates with a small positive net income.[58]

[56] Union-Bulletin.com. 2015. *Dayton-to-Walla Walla train line changing operators*. http://m.union-bulletin.com/news/2015/jul/13/dayton-walla-walla-train-line-changing-operators/

[57] *Washington State Short Line Rail Inventory and Needs Assessment*, p 35.

[58] Washington State Auditor's Office. 2014. Financial Statements Audit Report, Port of Pend Oreille, (Pend Oreille Valley Railroad).http://portal.sao.wa.gov/ReportSearch/Home/ViewReportFile?isFinding=false&arn=1013030

Presently, about 40 miles of POVR track is non-operational due to the need for repairs. The railroad has also identified the need to upgrade its track to heavier rail if it is to continue to handle 286K cars. However, current revenue streams are only sufficient to maintain the track and are not enough to fund needed improvements.[59] The railroad has been exploring grant funding.

Clark County / Portland Vancouver Junction Railroad Company

Clark County owns a 33-mile line running from Vancouver, WA, to Chelatchie, WA. The line is operated by the Portland Vancouver Junction Railroad Company ("**PVJR**"), a private operator, under a 30-year lease (signed 2005).

Under the lease, until carloads exceed 1,000, the PVJR does not need to pay rent. Once volumes exceed 1,000 carloads, PVJR pays rent of $10 to $30 per car depending on traffic. Traffic is currently less than 100 carloads/year.

Port of Royal Slope / Royal Slope Railroad

The Royal Slope Railroad is currently not in operation. The ownership of the 26-mile line was transferred from WSDOT to the Port of Royal Slope in May 2015. Prior to the ownership transfer, WSDOT had reached an agreement with ARG Trans to operate the line. ARG Trans backed out of agreement, however, when it determined that it could generate only 200 carloads annually; the company believes it would need 750 to break even. An unanticipated interchange cost with CBR to reach BNSF main line was also a factor.[60]

The Port must contract with an operator to oversee the right-of-way. If the Port cannot find an operator for the line within five years, ownership of the line reverts to WSDOT.[61]

Yakima County / Yakima Central Railway

Yakima County owns a 21-mile rail line between Toppenish and White Swan, WA. The line is operated by the Yakima Central Railway ("**YCR**"), which is owned by Frontier Rail. Traffic on the line consists primarily of lumber and wood products. Volumes are not known.

The line was acquired by Yakima County in 1992 after it was authorized for abandonment. The County first leased the line to the Yakima Valley Rail and Steam Museum Association in 1994, but that lease was terminated in 2005 and an agreement was made with Columbia Basin Railroad ("**CBR**") to

[59] *Washington State Short Line Rail Inventory and Needs Assessment*, page 37.

[60] The Royal Register. 2015. *Royal Slope Railroad a No Go, Port Seeking Control.* http://www.theroyalregister.com/news/article_cbcdea68-ce72-11e4-b35b-836cf80fb745.html.

[61] iFIBER One News. 2015. *Railroad Right-Of-Way Shifted from State to Port of Royal Slope*. http://www.ifiberone.com/news/railroad-right-of-way-shifted-from-state-to-port-of/article_69584112-ff19-11e4-b000-5b1a239bbb0c.html.

operate the line. The CBR lease was terminated in 2009 and a new lease was given to YCR that same year.[62]

Port of Seattle / Eastside Community Rail

The Port of Seattle owns a 12-mile line currently operated by Eastside Community Rail. Snohomish County had been interested in acquiring the line and had approved $5 million for the purchase. The County's intent was to make the line into a combination passenger rail line and bike/pedestrian path. The County backed away from the deal in April 2015 when it was determined that $10 million would be needed to upgrade it for passenger rail and that some bridges could not accommodate both a rail line and a bike/pedestrian path.[63]

Port of Benton / Tri-City Railroad

The Port of Benton owns an 11-mile rail line (about 16 miles of track in total) in the Richland, WA area. The rail line is operated by the Tri-City Railroad ("**TCRY**") under a 20-year lease (ending 2022 assuming options are exercised). TCRY pays the Port rents of about $400,000 per year. Included in the lease are Port properties that TCRY re-leases for about $800,000 per year. The difference between the lease revenues and the rents paid to the Port is intended to go towards maintenance of the track. TCRY also handles about 2,500 carloads per year for additional revenues.

The Port has replaced two bridges on the railroad since it took over the line from the Department of Energy in 1998. In 2001, a timber pile bridge was destroyed by fire and replaced with the use of insurance funds. In 2015, the timber trestle Columbia Park Trail Bridge was replaced with a steel span using a $2.3 million state grant.

Oregon Publicly Owned Railroads

There are five publicly owned railroads in Oregon. Of these, three have publicly owned operators.

Port of Coos Bay / Coos Bay Rail Link

The Port of Coos Bay owns a 134-mile rail line that runs from West Eugene, OR, to Coquille, OR. The Port acquired the line from the Central Oregon and Pacific Railroad ("**CORP**") in 2008 for $16.6 million after CORP elected to shut down most of its Coos Bay branch in 2007. The Port is spending more than $30 million, mostly from state and federal grants, to rehabilitate the line. Full service on the line was restored in 2013.

The Port's railroad, Coos Bay Rail Link ("**CBRL**"), is operated by ARG Trans under a management agreement. Under the terms of the agreement, CBRL retains 82.5% to 90.0% of the gross revenues received from customers for freight rail service as a management fee. The balance of the gross

[62] GPO.gov. 2015. *Federal Register, Volume 75 Issue 10 (Friday, January 15, 2010).* http://www.gpo.gov/fdsys/pkg/FR-2010-01-15/html/2010-651.htm.

[63] HeraldNet. 2015. *Snohomish-Woodinville rail trail plan on hold.* http://www.heraldnet.com/article/20150414/NEWS01/150419590.

revenues (10.0% to 17.5%) is paid to the Port. In addition, CBRL collects and pays to the Port a surcharge of 12.5% to 15.0% above the base rates from rail customers. This surcharge is dedicated toward capital projects on the rail line. The Port also receives some revenue from easements and crossing agreements along the rail line.

Estimated revenue to the Port during FY 2013-14 from the railroad fees, surcharges and crossing agreements is $750,000.[64]

The CBRL moved 7,509 revenue carloads during 2014[65].

Port of Tillamook Bay / Port of Tillamook Bay Railroad

The Port of Tillamook, OR, owns a 101-mile rail line that it purchased from the Southern Pacific Railroad in 1990 for $2.9 million. The railroad had been used to transport lumber and agricultural products between the Oregon Coast and the Portland area.

In 1996, a storm damaged the line and it was repaired with State of Oregon fund for about $5 million. In 2007, the line was again significantly damaged by a storm. The repair cost was estimated at over $50 million and the Port opted not repair the damaged track. Today, the Port leases 3.5 miles of the line to the Portland and Western Railroad and leases the coastal section of the line to the Oregon Coast Scenic Railroad.[66]

City of Prineville / City of Prineville Railway

The City of Prineville, OR, owns and operates an 18-mile short line railroad between Redmond and Prineville, OR. Opened in 1916 by the City, it is one of the oldest municipal railroads in the country. In the mid-1970s, the railroad served five mills and had over 10,000 revenue carloads annually. By 2004, all the mills had closed and only 84 carloads were handled. In 2005, with the help of State of Oregon grants, the City started to develop a 33-acre site on the line as a transload center and freight depot. As of 2012, business had grown back to 900 carloads per year. The railroad has not been profitable for more than 20 years, but hopes to reach break-even in the near future.[67]

Lake County / Lake County Railway

Lake County, OR, owns a 55-mile rail line between Lakeview, OR, and Alturas, CA. The line has been operated by Lake Railway since 2009. Lake Railway is owned by Frontier Rail (Paul Didelius). The railroad hauls products for both a perlite mine and lumber mill. Lake Railway pays the County a monthly lease fee of $1,000 or one percent of the operator's gross revenue, whichever is greater.

[64] Oregon International Port of Coos Bay. 2013. *Regular Commission Meeting, Thursday, March 21, 2013.* http://portofcoosbay.com/minutes/032113draftmins.pdf

[65] Oregon International Port of Coos Bay. 2015. *Coos Bay Rail Link continues to increase revenue carload traffic.* http://portofcoosbay.com/OIPCB%20-%20CBR%202014%20revenue%20carloads%20012715.pdf

[66] Wikipedia

[67] Cascade Business News. 2015. *Future Looks Bright for Prineville Railway - Cascade Business News.* http://cascadebusnews.com/future-looks-bright-for-prineville-railway/.

The railroad has received State of Oregon grants to maintain and upgrade the line. The line handles about 1,500 carloads each year.

Wallowa Union Railroad Authority / Wallowa Union Railroad

In 2001, Wallowa County and Union County in Oregon formed the Wallowa Union Railroad Authority and purchased 63 miles of track from the Idaho Northern & Pacific, which had received STB permission to abandon the track. The purchase price was $6.3 million. Some rail equipment was included in the sale. [68]

Repairs were made to the track and the Wallowa Union Railroad began limited freight operations in 2002, carrying lumber from a local sawmill. In 2003, excursion trains started running on the line. In 2008, the local sawmill closed and freight operations came an end, but the passenger train continued operations. The financial condition of the railroad was poor, however, with low ridership and a $2.3 million debt burden. In 2009, the situation improved when the UP began leasing the track for railcar storage ($50,400 per month plus a $75/railcar switch fee). The debt had been erased by 2011. Today, the excursion train still operates but requires a subsidy to stay in business.[69]

[68] Trainweb.org. *Wallowa Union Railroad.* http://www.trainweb.org/highdesertrails/wurr.html

[69] The Observer. 2011. *Free of debt and stored rail cars, railroad sees clear tracks ahead.* http://www.lagrandeobserver.com/2011072870874/News/Local-News/Free-of-debt-and-stored-rail-cars-railroad-sees-clear-tracks-ahead

2. APPENDIX: FRIB & FRAB PROJECT LISTS – 2015 - 2017

2015-2017 Freight Rail Investment Bank Project List

Applicant - Project	Loan Amount	Match %	Project Description
Port of Whitman County – Wilma Rail Terminal Improvements	$500,000	33%	The project creates a second rail connection between the port and the rail line and improves mobility and safety of trucks and trains in and around the port facility by installing concrete crossings.
Tacoma Rail – Transfer Yard Connection	$150,000	57%	Install 150 feet of track, a #9 turnout and a new diamond track crossing that will connect to existing rail track along Lincoln Ave and lead to the Transfer Yard.
Tacoma Rail – Edwards Crossover Rehabilitation	$156,997	30%	This project will remove and replace two #9 turnouts and replace 1,100 feet of rail with new 115-pound rail.
Tacoma Rail – Taylor Wye Rehabilitation	$311,457	30%	The CBRR proposes to replace 3,139 track feet of rail with 100-pound rail and install new ties and crossing planks.
Tacoma Rail – West Lead High Side Rebuild	$369,518	30%	This project removes and replaces five deteriorated rail turnouts in the main classification yard's west end.
Tacoma Rail – East Lead Low Side Rebuild	$469,270	30%	This project will replace worn 1,200 feet of worn 112-pound rail in the main classification yard. This project will also replace seven turnouts.
Port of Walla Walla – Wallula Gap Business Park Lead Track	$810,085	39%	The project will acquire right-of-way, construct a new connection track, and an additional 1,000 feet of track.
Total	$2,767,327		

2015-2017 Freight Rail Assistance Program Project List

Applicant - Project	Grant Amount	Match %	Project Description
Mount Vernon Terminal Railway/Whole Energy Fuels Corp – Railway Expansion – Phase I	$392,000	72%	The project is the first of multiple phases that will expand railcar capacity in the Mount Vernon terminal. This will increase multimodal transloading capability in Skagit County and reduce congestion on the adjacent mainline rail line.
Port of Whitman County – Wilma Rail Terminal Improvements	$500,000	33%	The project creates a second rail connection between the port and the rail line and improves mobility and safety of trucks and trains in and around the port facility by installing concrete crossings.
Tidewater Transportation – Pasco Rail-to-Barge Transload Facility	$346,412	72%	This project upgrades Tidewater's Pasco facility to be able to handle unit trains by improving nearly 8,000 feet of existing rail infrastructure.
Columbia Basin Railroad (CBRR) – Schrag Rail & Tie Replacement – Phase II	$206,109	32%	The CBRR proposes to replace 3,139 track feet of rail with 100-pound rail and install new ties and crossing planks.
Palouse Grain Growers – Palouse Rail Loadout Improvements	$538,300	34%	This project allows the applicant to begin shipping by rail by repurposes an underutilized rail spur and constructing a new rail load-out and conveyor system.
Watco Incorporated – PCC Railroad Bridge Repairs	$366,440	10%	Repair 30 bridges on the following sections of the PCC: MP 14.21 and MP 50.17 on the Wallula subdivision, between MP 33.17 and MP 77.27 on the Hooper subdivision, and MP 8.72 and MP 25.51 on the Pleasant Valley subdivision.
Cascade & Columbia River Railroad – Wenatchee to Entiat Track Rehabilitation	$400,739	19%	Cascade & Columbia (CSCD) requests funds to replace 4,900 ties, place 2,100 tons of ballast and resurface the mainline from milepost 6 through milepost 13.

3. APPENDIX: RAILROAD REHABILITATION & IMPROVEMENT FINANCING (RRIF)

Organization	Borrower	Mode	Year	Amt. ($millions)
The Arkansas and Missouri Railroad Company	Private	Freight	2015	$6.81
Metropolitan Transportation Authority	Public	Passenger	2015	$967.10
Alameda Corridor Transportation Authority	Public	Freight	2012	$83.70
Kansas City Southern Railway Company	Private	Freight	2012	$56.60
NW Pacific Railroad Company/North Coast RR Auth.	PPP	Freight	2011	$3.20
Amtrak	Public	Passenger	2011	$562.90
C&J Railroad	Private	Freight	2011	$0.06
Denver Union Station Project Authority	Public	Passenger	2010	$155.00
Great Lakes Central Railroad	Private	Freight	2010	$17.00
Georgia & Florida Railways	Private	Freight	2009	$8.10
Permian Basin Railways, Inc.	Private	Freight	2009	$64.40
Iowa Interstate Railroad	Private	Freight	2008	$31.00
Nashville and Eastern Railroad	Private	Freight	2007	$4.00
Nashville and Eastern Railroad	Private	Freight	2007	$0.60
Columbia Basin Railroad	Private	Freight	2007	$3.00
Great Western Railway	Private	Freight	2007	$4.00
Virginia Railway Express	Public	Passenger	2007	$72.50
R.J. Corman Railway	Private	Freight	2007	$11.80
R.J. Corman Railway	Private	Freight	2007	$47.10
Dakota, Minnesota & Eastern Railroad	Private	Freight	2007	$48.00
Iowa Northern Railroad	Private	Freight	2006	$25.50
Wheeling & Lake Erie Railway	Private	Freight	2006	$14.00
Iowa Interstate Railroad	Private	Freight	2006	$9.35
Great Smoky Mountains Railroad	Private	Freight	2005	$7.50
Riverport Railroad	Private	Freight	2005	$5.50
The Montreal, Maine & Atlantic Railway	Private	Freight	2005	$34.00
Tex-Mex Railroad	Private	Freight	2005	$50.00
Iowa Interstate Railroad	Private	Freight	2005	$32.70
Stillwater Central Railroad	Private	Freight	2004	$4.60
Wheeling & Lake Erie Railway	Private	Freight	2004	$25.00
Arkansas & Missouri Railroad	Private	Freight	2003	$11.00
Nashville and Western Railroad	Private	Freight	2003	$2.30
Dakota, Minnesota & Eastern Railroad	Private	Freight	2003	$233.00
Amtrak	Public	Passenger	2002	$100.00
Mount Hood Railroad	Private	Freight	2002	$2.10

4. APPENDIX: CROSSINGS

Public At-Grade Crossings			
Crossing Numbers	**Milepost**	**Street/Crossing**	**Type**
396752T	48.9C	Shelley St SW	Crossbucks
396753A	49.1C	Reeder Rd SW	Crossbucks
396756V	49.7C	Maytown Rd SW (SR 121}	Gates, Bridge Lights
396757C	49.9C	Case Rd	Crossbucks
396759R	50.7C	140th Ave SW	Crossbucks
396760K	51.7C	Case Rd	Crossbucks
396764M	61.3C	W Reynolds Ave (PSAP Xing)	Gates, Bridge & Mast Lights
396767H	62.0C	W Third St (Centralia}	Crossbucks, Stop Sign
396768P	62.2C	W First St (Centralia)	Gates, Mast Lights
396769W	62.4C	W Main St (Centralia)	Gates, Bridge & Mast Lights
396770R	62.5C	W Locust St (Centralia)	Gates, Bridge & Mast Lights
396772E	62.7C	W Pear St (Centralia)	Crossbucks, Stop Sign
396774T	62.8C	W Cherry St (Centralia}	Crossbucks, Stop Sign
3967766	62.9C	W Alder St (Centralia SR 507}	Gates, Bridge & Mast Lights
396778V	63.4C	W South St (Centralia)	Crossbucks
3967810	66.1C	NW West St (Chehalis)	Gates, Mast Lights
396782K	66.2C	NW Prindle St (Chehalis)	Gates, Mast Lights
3967835	66.3C	W Main St (Chehalis)	Gates, Bridge & Mast Lights
Private Crossings			
Crossing Numbers	**Milepost**	**Street/Crossing**	**Type**
396750E	47.6C	Private (between Tilley Rd & Park Rd)	Private
396751L	47.9C	Park Rd SW (private)	Private
932807H	49.38C	Valley Nut & Bolt (private)	Private
932824Y	49.8C	Ritchie Bros (two crossings)	Private
396758J	50.2C	Private driveway (off Case Rd)	Private
Grade Separated Crossing			
Crossing Numbers	**Milepost**	**Street/Crossing**	**Type**
3967546	49.5C	1-5 Northbound (Maytown)	RR Under
396755N	49.5C	1-5 Southbound (Maytown)	RR Under
396761S	55.0C	183rd Ave SW	RR Under
396762Y	56.5C	SR12	RR Under
396763F	58.5C	216th Ave SW	RR Under
396765U	61.4C	1-5 Southbound	RR Under
396766B	61.45C	1-5 Northbound	RR Under
396779C	64.4C	Private (RR over WH 16}	RR Over
396780W	65.5C	NW Chamber of Commerce Way	RR Under

5. APPENDIX: TRACK SAFETY STANDARDS AND FRA GUIDANCE

Excerpts from Code of Federal Regulation "CFR" Title 49, Part 213, Track Safety Standards and FRA Track and Rail Compliance Manual CM Vol II Ch1 2014 Rev

Part 213.4 Excepted track.

A track owner may designate a segment of track as excepted track provided that—

(a) The segment is identified in the timetable, special instructions, general order, or other appropriate records which are available for inspection during regular business hours;

(b) The identified segment is not located within 30 feet of an adjacent track which can be subjected to simultaneous use at speeds in excess of 10 miles per hour;

(c) The identified segment is inspected in accordance with 213.233(c) and 213.235 at the frequency specified for Class 1 track;

(d) The identified segment of track is not located on a bridge including the track approaching the bridge for 100 feet on either side, or located on a public street or highway, if railroad cars containing commodities required to be placarded by the Hazardous Materials Regulations (49 CFR part 172), are moved over the track; and

(e) The railroad conducts operations on the identified segment under the following conditions:

(1) No train shall be operated at speeds in excess of 10 miles per hour;

(2) No occupied passenger train shall be operated;

(3) No freight train shall be operated that contains more than five cars required to be placarded by the Hazardous Materials Regulations (49 CFR part 172); and

(4) The gage on excepted track shall not be more than 4 feet 10¼ inches. This paragraph (e)(4) is applicable September 21, 1999.

(f) A track owner shall advise the appropriate FRA Regional Office at least 10 days prior to removal of a segment of track from excepted status.

§ 213.4 Excepted track

A track owner may designate a segment of track as excepted track provided that-

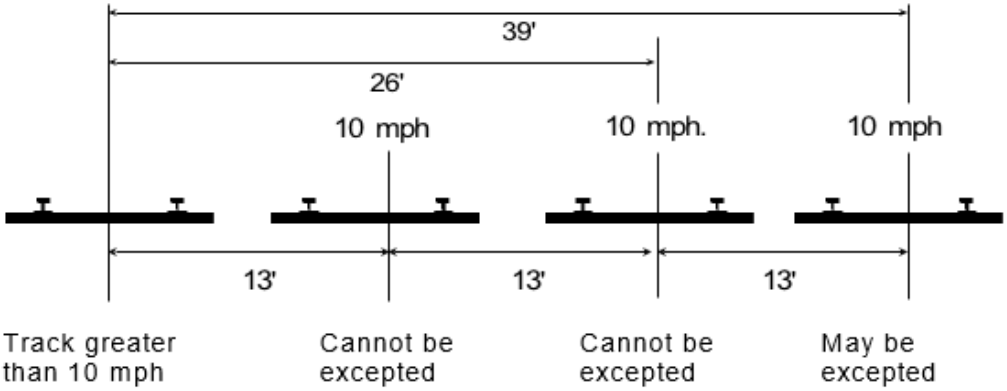
4(a) The segment is identified in the timetable, special instructions, general order, or other appropriate records which are available for inspection during regular business hours;

Guidance: The intent of this section is to permit portions of certain low density main tracks and associated yard tracks and sidings to be allowed excepted status and not comply with Subparts B, C, D, and E of the TSS unless otherwise expressly stated. However, by designating a track as excepted, the owner must meet the requirements specified in paragraphs 4(b) through to 4(f).

4(b) The identified segment is not located within 30-feet of an adjacent track which can be subjected to simultaneous use at speeds in excess of 10 miles per hour;;

Guidance: This paragraph prohibits excepted track designation of any track located within a 30-foot envelope of a track that can be subjected to simultaneous use at speeds in excess of 10 mph. As shown in the following figure, the 30-foot dimension is measured between track centerlines and applies to all tracks within that envelope (e.g., tracks converging at turnouts and rail crossings). In this example, since the far left track operate at greater than 10 m.p.h., only the far right track may be excepted. Simultaneous use means movement of cars or locomotives on both tracks at the same time.

Note: "adjacent track" means any track in proximity to the track in question



Operation on any track located within 30 feet of excepted track may be restricted to 10 mph by the physical layout of the tracks, or by definite restrictions placed by the track owner by rule, timetable, special instruction, or other positive instruction or order. These criteria provide the positive protection of trains on higher speed track against a collision with fouling equipment from a potential derailment on the excepted track.

The term "train" is defined in 49 CFR § 236.832 as, "A locomotive or more than one locomotive coupled, with or without cars". That definition applies to this rule.

A designation of excepted track need only be recorded by the track owner and implemented by issuance of appropriate instructions to all affected employees. The designation need not be filed with FRA. The TSS do not specify which employees the railroad or track owner must notify of excepted track designations; however, in order to ensure maximum safety and compliance with the requirements of this part, FRA recommends that railroad or track owner notify all employees who are involved with the operation of trains or with engineering functions on excepted track.

Part 213.53 Gage

(a) Gage is measured between the heads of the rails at right-angles to the rails in a plane five-eighths of an inch below the top of the rail head.

(b) Gage shall be within the limits prescribed in the following table—

Class of track	The gage must be at least—	But not more than—
Excepted track	N/A	4′101/4″.
Class 1 track	4′8″	4′10″.
Class 2 and 3 track	4′8″	4′93/4″.
Class 4 and 5 track	4′8″	4′91/2″.

Part 213.55 Track alinement.

(a) Except as provided in paragraph (b) of this section, alinement may not deviate from uniformity more than the amount prescribed in the following table:

Class of track	Tangent track	Curved track	
	The deviation of the mid-offset from a 62-foot line[1] may not be more than—(inches)	The deviation of the mid-ordinate from a 31-foot chord[2] may not be more than—(inches)	The deviation of the mid-ordinate from a 62-foot chord[2] may not be more than—(inches)
Class 1 track	5	[3]N/A	5
Class 2 track	3	[3]N/A	3
Class 3 track	1-3/4	1-1/4	1-3/4
Class 4 track	1-1/2	1	1-1/2
Class 5 track	3/4	1/2	5/8

[1] The ends of the line shall be at points on the gage side of the line rail, five-eighths of an inch below the top of the railhead. Either rail may be used as the line rail, however, the same rail shall be used for the full length of that tangential segment of track.

[2] The ends of the chord shall be at points on the gage side of the outer rail, five-eighths of an inch below the top of the railhead.

[3] N/A—Not Applicable.

Part 213.63 Track surface.

(a) Except as provided in paragraph (b) of this section, each track owner shall maintain the surface of its track within the limits prescribed in the following table:

Track surface (inches)	Class of track				
	1	2	3	4	5
The runoff in any 31 feet of rail at the end of a raise may not be more than	3 1/2	3	2	1 1/2	1
The deviation from uniform profile on either rail at the mid-ordinate of a 62-foot chord may not be more than	3	2 3/4	2 1/4	2	1 1/4
The deviation from zero crosslevel at any point on tangent or reverse crosslevel elevation on curves may not be more than	3	2	1 3/4	11/4	1
The difference in crosslevel between any two points less than 62 feet apart may not be more than* [1, 2]	3	2 1/4	2	1 3/4	1 1/2
*Where determined by engineering decision prior to June 22, 1998, due to physical restrictions on spiral length and operating practices and experience, the variation in crosslevel on spirals per 31 feet may not be more than	2	1 3/4	1 1/4	1	3/4

[1] Except as limited by § 213.57(a), where the elevation at any point in a curve equals or exceeds 6 inches, the difference in crosslevel within 62 feet between that point and a point with greater elevation may not be more than $1^1/_2$ inches. (Footnote 1 is applicable September 21, 1999.)

[2] However, to control harmonics on Class 2 through 5 jointed track with staggered joints, the crosslevel differences shall not exceed $1^1/_4$ inches in all of six consecutive pairs of joints, as created by 7 low joints. Track with joints staggered less than 10 feet shall not be considered as having staggered joints. Joints within the 7 low joints outside of the regular joint spacing shall not be considered as joints for purposes of this footnote. (Footnote 2 is applicable September 21, 1999.)

Part 213.103 Ballast; general.

Unless it is otherwise structurally supported, all track shall be supported by material which will—

(a) Transmit and distribute the load of the track and railroad rolling equipment to the subgrade;

(b) Restrain the track laterally, longitudinally, and vertically under dynamic loads imposed by railroad rolling equipment and thermal stress exerted by the rails;

(c) Provide adequate drainage for the track; and

(d) Maintain proper track crosslevel, surface, and alinement.

Part 213.109 Crossties

(a) Crossties shall be made of a material to which rail can be securely fastened.

(b) Each 39 feet segment of track shall have---

(1) A sufficient number of crossties which in combination provide effective support that will---

(i) Hold gage within the limits prescribed in Part 213.53(b);

(ii) Maintain surface within the limits prescribed in Part 213.63; and

(iii) Maintain alinement within the limits prescribed in Part 213.55.

(c) Each 39 segment of class 1 track shall have (5) five crossties and shall be increased to (6) six crossties in turnouts and curved track over (2) two degrees, which crossties are not:

(1) Broken through:

(2) Split or otherwise impaired to the extent the crossties will allow the ballast to work through, or will not hold spikes or rail fasteners;

(3) So deteriorated that the tie plate or base of rail can move laterally more than ½ inch relative to the crossties; or

(4) Cut by the tie plate through more than 40 percent of a ties thickness.

e) Class 1 and 2 track shall have one crosstie whose centerline is within 24 inches of each rail joint (end) location.

(1) Each rail joint in Class 1 and 2 track shall be supported by at least one crosstie specified in paragraphs (c) of this section whose centerline is within 48 inches as shown in Figure 1.

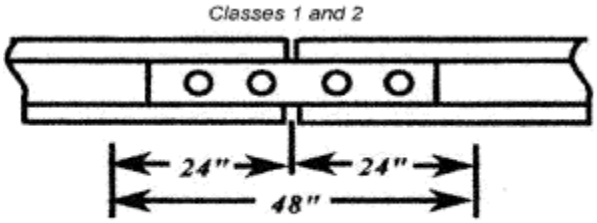


Figure 1

FRA track class	Tangent track, turnouts, and curves	
	Tangent track and curved track less than or equal to 2 degrees	Turnouts and curved track greater than 2 degrees
Class 1	5	6
Class 2	8	9
Class 3	8	10
Class 4 and 5	12	14

Part 213.115 Rail end mismatch.

Any mismatch of rails at joints may not be more than that prescribed by the following table—

Class of track	Any mismatch of rails at joints may not be more than the following—	
	On the tread of the rail ends (inch)	On the gage side of the rail ends (inch)
Class 1 track	1/4	1/4
Class 2 track	1/4	3/16
Class 3 track	3/16	3/16
Class 4 and 5 track	1/8	1/8

Part 213.121 Rail joints.

(a) Each rail joint, insulated joint, and compromise joint shall be of a structurally sound design and dimensions for the rail on which it is applied.

(b) If a joint bar on Classes 3 through 5 track is cracked, broken, or because of wear allows excessive vertical movement of either rail when all bolts are tight, it shall be replaced.

(c) If a joint bar is cracked or broken between the middle two bolt holes it shall be replaced.

(d) In the case of conventional jointed track, each rail shall be bolted with at least two bolts at each joint in Classes 2 through 5 track, and with at least one bolt in Class 1 track.

(e) In the case of continuous welded rail track, each rail shall be bolted with at least two bolts at each joint.

(f) Each joint bar shall be held in position by track bolts tightened to allow the joint bar to firmly support the abutting rail ends and to allow longitudinal movement of the rail in the joint to accommodate expansion and contraction due to temperature variations. When no-slip, joint-to-rail contact exists by design, the requirements of this

paragraph do not apply. Those locations when over 400 feet in length, are considered to be continuous welded rail track and shall meet all the requirements for continuous welded rail track prescribed in this part.

(g) No rail shall have a bolt hole which is torch cut or burned in Classes 2 through 5 track. For Class 2 track, this paragraph (g) is applicable September 21, 1999.

(h) No joint bar shall be reconfigured by torch cutting in Classes 3 through 5 track.

Part 213.127 Rail fastening systems.

(a) Track shall be fastened by a system of components that effectively maintains gage within the limits prescribed in §213.53(b). Each component of each such system shall be evaluated to determine whether gage is effectively being maintained.

(b) If rail anchors are applied to concrete crossties, the combination of the crossties, fasteners, and rail anchors must provide effective longitudinal restraint.

(c) Where fastener placement impedes insulated joints from performing as intended, the fastener may be modified or removed, provided that the crosstie supports the rail.

Part 213.135 Switches.

(a) Each stock rail must be securely seated in switch plates, but care shall be used to avoid canting the rail by overtightening the rail braces.

(b) Each switch point shall fit its stock rail properly, with the switch stand in either of its closed positions to allow wheels to pass the switch point. Lateral and vertical movement of a stock rail in the switch plates or of a switch plate on a tie shall not adversely affect the fit of the switch point to the stock rail. Broken or cracked switch point rails will be subject to the requirements of §213.113, except that where remedial actions C, D, or E require the use of joint bars, and joint bars cannot be placed due to the physical configuration of the switch, remedial action B will govern, taking into account any added safety provided by the presence of reinforcing bars on the switch points.

(c) Each switch shall be maintained so that the outer edge of the wheel tread cannot contact the gage side of the stock rail.

(d) The heel of each switch rail shall be secure and the bolts in each heel shall be kept tight.

(e) Each switch stand and connecting rod shall be securely fastened and operable without excessive lost motion.

(f) Each throw lever shall be maintained so that it cannot be operated with the lock or keeper in place.

(g) Each switch position indicator shall be clearly visible at all times.

(h) Unusually chipped or worn switch points shall be repaired or replaced. Metal flow shall be removed to insure proper closure.

(i) Tongue & Plain Mate switches, which by design exceed Class 1 and excepted track maximum gage limits, are permitted in Class 1 and excepted track.

Part 213.137 Frogs.

(a) The flangeway depth measured from a plane across the wheel-bearing area of a frog on Class 1 track shall not be less than 1⅜ inches, or less than 1½ inches on Classes 2 through 5 track.

(b) If a frog point is chipped, broken, or worn more than five-eighths inch down and 6 inches back, operating speed over the frog shall not be more than 10 m.p.h.

(c) If the tread portion of a frog casting is worn down more than three-eighths inch below the original contour, operating speed over that frog shall not be more than 10 m.p.h.

(d) Where frogs are designed as flange-bearing, flangeway depth may be less than that shown for Class 1 if operated at Class 1 speeds.

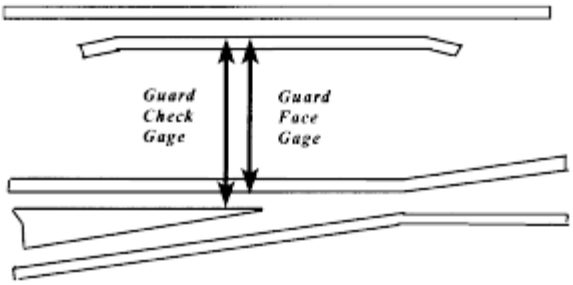
Part 213.143 Frog guard rails and guard faces; gage.

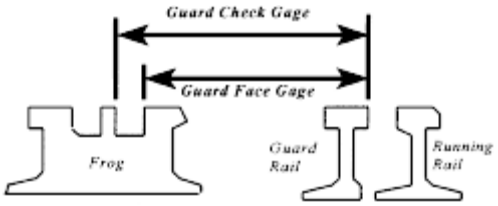
The guard check and guard face gages in frogs shall be within the limits prescribed in the following table—

Class of track	Guard check gage The distance between the gage line of a frog to the guard line[1] of its guard rail or guarding face, measured across the track at right angles to the gage line[2], may not be less than—	Guard face gage The distance between guard lines[1], measured across the track at right angles to the gage line[2], may not be more than—
Class 1 track	4′61/8″	4′ 51/4″
Class 2 track	4′61/4″	4′ 51/8″
Class 3 and 4 track	4′ 63/8″	4′51/8″
Class 5 track	4′61/2″	4′ 5″

[1]A line along that side of the flangeway which is nearer to the center of the track and at the same elevation as the gage line.

[2]A line 5/8 inch below the top of the center line of the head of the running rail, or corresponding location of the tread portion of the track structure.





Part 213.233 Track inspections.

(a) All track shall be inspected in accordance with the schedule prescribed in paragraph (c) of this section by a person designated under Part 213.7.

(b) Each inspection shall be made on foot or by riding over the track in a vehicle at a speed that allows the person making the inspection to visually inspect the track structure for compliance with this part. However, mechanical, electrical, and other track inspection devices may be used to supplement visual inspection. If a vehicle is used for visual inspection, the speed of the vehicle may not be more than 5 miles per hour when passing over track crossings and turnouts, otherwise, the inspection vehicle speed shall be at the sole discretion of the inspector, based on track conditions and inspection requirements. When riding over the track in a vehicle, the inspection will be subject to the following conditions—

(1) One inspector in a vehicle may inspect up to two tracks at one time provided that the inspector's visibility remains unobstructed by any cause and that the second track is not centered more than 30 feet from the track upon which the inspector is riding;

(2) Two inspectors in one vehicle may inspect up to four tracks at a time provided that the inspectors' visibility remains unobstructed by any cause and that each track being inspected is centered within 39 feet from the track upon which the inspectors are riding;

(3) Each main track is actually traversed by the vehicle or inspected on foot at least once every two weeks, and each siding is actually traversed by the vehicle or inspected on foot at least once every month. On high density commuter railroad lines where track time does not permit an on track vehicle inspection, and where track centers are 15 foot or less, the requirements of this paragraph (b)(3) will not apply; and

(4) Track inspection records shall indicate which track(s) are traversed by the vehicle or inspected on foot as outlined in paragraph (b)(3) of this section.

(c) Each track inspection shall be made in accordance with the following schedule—

Class of track	Type of track	Required frequency
Excepted track and Class 1, 2, and 3 track	Main track and sidings	Weekly with at least 3 calendar days interval between inspections, or before use, if the track is used less than once a week, or twice weekly with at least 1 calendar day interval between inspections, if the track carries passenger trains or more than 10 million gross tons of traffic during the preceding calendar year.
Excepted track and Class 1, 2, and 3 track	Other than main track and sidings	Monthly with at least 20 calendar days interval between inspections.
Class 4 and 5 track		Twice weekly with at least 1 calendar day interval between inspections.

(d) If the person making the inspection finds a deviation from the requirements of this part, the inspector shall immediately initiate remedial action.

NOTE TO PART 213.233: Except as provided in paragraph (b) of this section, no part of this section will in any way be construed to limit the inspector's discretion as it involves inspection speed and sight distance.

Part 213.235 Inspection of switches, track crossings, and lift rail assemblies or other transition devices on moveable bridges.

(a) Except as provided in paragraph (c) of this section, each switch, turnout, track crossing, and moveable bridge lift rail assembly or other transition device shall be inspected on foot at least monthly.

(b) Each switch in Classes 3 through 5 track that is held in position only by the operating mechanism and one connecting rod shall be operated to all of its positions during one inspection in every 3 month period.

(c) In the case of track that is used less than once a month, each switch, turnout, track crossing, and moveable bridge lift rail assembly or other transition device shall be inspected on foot before it is used.

The following table shows examples of those sections in the TSS that are "class specific," "speed defined" and "non-class-specific." This table is not all-inclusive and is only a reference instrument. Inspectors should refer to the specific guidance under each section for further details and instructions on each item listed in the table.

Section	Topic	Class specific	Speed defined	Non-class-specific [1]
213.33	Drainage			X
213.37	Vegetation			X
213.57(b)	Curves; elevation and speed limitations (V-Max)		X	
213.103	Ballast; general			X
213.109(b)	Crossties not effectively distributed			X
213.110	Gage Restraint Measurement Systems	X		
213.113	Defective rails		X	
213.119	Continuous welded rail; general			X
213.121 (a)	Each rail joint, insulated joint, and compromise joint shall be of a structurally sound design and dimensions for the rail on which it is applied			X
213.121 (c)	If a joint bar is cracked or broken between the middle two bolt holes it shall be replaced	X[3]		
213.121 (d)	In the case of conventional jointed track, each rail shall be bolted…, and with at least one bolt on Class 1 track	X		
213.121 (e)	In the case of continuous welded rail track, each rail shall be bolted with at least two bolts at each joint	X[3]		

Section	Topic	Class specific	Speed defined	Non-class-specific [1]
213.121 (f)	Each joint bar shall be held in position by track bolts tightened to allow the joint bar to firmly support the abutting rail ends…..			X
213.127	Rail fastenings			X
213.133 (a)	Turnouts and track crossings generally			X [2]
213.133(b)	Classes 3 through 5 … shall be equipped with anchors on each side of track crossings and turnouts…	X		
213.133(c)	Each flangeway at turnouts and track crossings shall be at least 1½ inches wide	X		
213.135(a)	Each stock rail must be securely seated in switch plates…			X
213.135(b)	Each switch point shall fit its stock rail		X	X
213.135(c)	Each switch shall be maintained so that the outer edge of the wheel tread cannot contact the gage side of the stock rail.			X[2]
213.135(d)	The heel of each switch rail shall be secure….			X
213.135(e)	Each switch stand and connecting rod shall be securely fastened….			X
213.135(f)	Each throw lever shall be maintained so that it cannot be operated with the lock or keeper in place.			X [2]
213.135(g)	Switch position indicator			X
213.135(h)	Unusually worn or chipped switch points…			X [2]
213.135(i)	Tongue and plain mate switches…	X		
213.137(b)	If a frog point is chipped, broken, or worn more than ⅝ inch down and 6 inches back, operating speed over that frog may not be more than 10 mph		X	
213.137(c)	If the tread portion of a frog casting is worn down more than ⅜ inch below the original contour, operating speed over that frog may not be more than 10 mph …		X	
213.139(a)	The outer edge of a wheel shall not contact the gage side of a spring wing rail.			X [2]
213.139(b)	The toe of each wing rail shall be solidly tamped…			X
213.139(c)	Each frog with a bolt hole defect or head-web separation shall be replaced.	X		
213.139(d)	Each spring shall have compression…			X

Section	Topic	Class specific	Speed defined	Non-class-specific [1]
213.139(e)	The clearance between the holddown housing and horn…			X
213.141	Self-guarded frogs	X		
213.205	Derails			X

[1] Non-class-specific defects found during an inspection by a qualified railroad inspector and not immediately repaired must be noted on the track inspection form. If not immediately repaired, remedial action shall be taken by an individual qualified under § 213.7 (a). The 30-day period represents the maximum duration that FRA permits any non-class-specific defect(s) to remain in the track. Furthermore, it is not intended to create a 30-day timeline for all types of defects as immediate repair or a more restrictive appropriate action may be required at the time of the defect(s) discovery.

[2] While Part 213 does not require the railroad to take the track out of service, due to the severity of these defects, FRA recommends that railroads take the track out of service. At a minimum, however, the railroad should invoke § 213.9(b).

[3] This class specific defect requires remedial action § 213.9(b).

§213.113 Defective rails.

(a) When an owner of track learns that a rail in the track contains any of the defects listed in the table contained in paragraph (c) of this section, a person designated under §213.7 shall determine whether the track may continue in use. If the designated person determines that the track may continue in use, operation over the defective rail is not permitted until—

(1) The rail is replaced or repaired; or

(2) The remedial action prescribed in the table contained in paragraph (c) of this section is initiated.

(b) When an owner of track learns that a rail in the track contains an indication of any of the defects listed in the table contained in paragraph (c) of this section, the track owner shall verify the indication. The track owner must verify the indication within four hours, unless the track owner has an indication of the existence of a defect that requires remedial action A, A2, or B identified in the table contained in paragraph (c) of this section, in which case the track owner must immediately verify the indication. If the indication is verified, the track owner must—

(1) Replace or repair the rail; or

(2) Initiate the remedial action prescribed in the table contained in paragraph (c) of this section.

(c) A track owner who learns that a rail contains one of the following defects shall prescribe the remedial action specified if the rail is not replaced or repaired, in accordance with this paragraph's table:

REMEDIAL ACTION TABLE

Defect	Length of defect (inch(es))		Percentage of existing rail head cross-sectional area weakened by defect		If the defective rail is not replaced or repaired, take the remedial action prescribed in note
	More than	But not more than	Less than	But not less than	
Compound Fissure	…… …… ……	…… …… ……	70…… 100…… ……	5…… 70…… 100……	B. A2. A.
Transverse Fissure Detail Fracture Engine Burn Fracture Defective Weld	…… …… …… ……	…… …… …… ……	25 …… 60 …… 100 …… ……	5…… 25…… 60…… 100……	C. D. A2, or [E and H]. A, or [E and H].
Horizontal Split Head Vertical Split Head Split Web Piped Rail Head Web Separation Defective Weld (Longitudinal)	1…… 2…… 4…… (1)……	2…… 4…… …… (1)……	…… …… …… ……	…… …… …… ……	H and F. I and G. B. A.
Bolt Hole Crack	½…… 1…… 1½ …… (1)……	1…… 1½…… …… (1)	…… …… …… ……	…… …… …… ……	H and F. H and G. B. A.
Broken Base	1…… 6 (2)……	6…… ……	…… ……	…… ……	D. A, or [E and I].
Ordinary Break	……	……	……	……	A or E.
Damaged Rail	……	……	……	……	C.
Flattened Rail Crushed Head	Depth ≥ ⅜ and Length ≥ 8……	……	……	……	H.

(1) Break out in rail head.

(2) Remedial action D applies to a moon-shaped breakout, resulting from a derailment, with length greater than 6 inches but not exceeding 12 inches and width not exceeding one-third of the rail base width.

Notes:
A. Assign a person designated under § 213.7 to visually supervise each operation over the defective rail.

A2. Assign a person designated under § 213.7 to make a visual inspection. After a visual inspection, that person may authorize operation to continue without continuous visual supervision at a maximum of 10 m.p.h. for up to 24 hours prior to another such visual inspection or replacement or repair of the rail.

B. Limit operating speed over the defective rail to that as authorized by a person designated under § 213.7(a), who has at least one year of supervisory experience in railroad track maintenance. The operating speed cannot be over 30 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower.

C. Apply joint bars bolted only through the outermost holes to the defect within 10 days after it is determined to continue the track in use. In the case of Class 3 through 5 track, limit the operating speed over the defective rail to 30 m.p.h. until joint bars are applied; thereafter, limit the speed to 50 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower. When a search for internal rail defects is conducted under § 213.237, and defects are discovered in Class 3 through 5 track that require remedial action C, the operating speed shall be limited to 50 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower, for a period not to exceed 4 days. If the defective rail has not been removed from the track or a permanent repair made within 4 days of the discovery, limit operating speed over the defective rail to 30 m.p.h. until joint bars are applied; thereafter, limit speed to 50 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower. When joint bars have not been applied within 10 days, the speed must be limited to 10 m.p.h. until joint bars are applied.

D. Apply joint bars bolted only through the outermost holes to the defect within 7 days after it is determined to continue the track in use. In the case of Class 3 through 5 track, limit operating speed over the defective rail to 30 m.p.h. or less as authorized by a person designated under § 213.7(a), who has at least one year of supervisory experience in railroad track maintenance, until joint bars are applied; thereafter, limit speed to 50 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower. When joint bars have not been applied within 7 days, the speed must be limited to 10 m.p.h. until the joint bars are applied.

E. Apply joint bars to the defect and bolt in accordance with § 213.121(d) and (e).

F. Inspect the rail within 90 days after it is determined to continue the track in use. If the rail remains in the track and is not replaced or repaired, the reinspection cycle starts over with each successive reinspection unless the

reinspection reveals the rail defect to have increased in size and therefore become subject to a more restrictive remedial action. This process continues indefinitely until the rail is removed from the track or repaired. If not inspected within 90 days, limit speed to that for Class 2 track or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower, until it is inspected.

G. Inspect rail within 30 days after it is determined to continue the track in use. If the rail remains in the track and is not replaced or repaired, the reinspection cycle starts over with each successive reinspection unless the reinspection reveals the rail defect to have increased in size and therefore become subject to a more restrictive remedial action. This process continues indefinitely until the rail is removed from the track or repaired. If not inspected within 30 days, limit speed to that for Class 2 track or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower, until it is inspected.

H. Limit operating speed over the defective rail to 50 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower.

I. Limit operating speed over the defective rail to 30 m.p.h. or the maximum allowable speed under § 213.9 for the class of track concerned, whichever is lower.

(d) As used in this section—

(1) *Bolt hole crack* means a crack across the web, originating from a bolt hole, and progressing on a path either inclined upward toward the rail head or inclined downward toward the base. Fully developed bolt hole cracks may continue horizontally along the head/web or base/web fillet, or they may progress into and through the head or base to separate a piece of the rail end from the rail. Multiple cracks occurring in one rail end are considered to be a single defect. However, bolt hole cracks occurring in adjacent rail ends within the same joint must be reported as separate defects.

(2) *Broken base* means any break in the base of the rail.

(3) *Compound fissure* means a progressive fracture originating from a horizontal split head that turns up or down, or in both directions, in the head of the rail. Transverse development normally progresses substantially at a right angle to the length of the rail.

(4) *Crushed head* means a short length of rail, not at a joint, which has drooped or sagged across the width of the rail head to a depth of ⅜ inch or more below the rest of the rail head and 8 inches or more in length. Unlike flattened rail where the depression is visible on the rail head only, the sagging or drooping is also visible in the head/web fillet area.

(5) *Damaged rail* means any rail broken or otherwise damaged by a derailment, broken, flat, or unbalanced wheel, wheel slipping, or similar causes.

(6) *Defective weld* means a field or plant weld containing any discontinuities or pockets, exceeding 5 percent of the rail head area individually or 10 percent in the aggregate, oriented in or near the transverse plane, due to incomplete penetration of the weld metal between the rail ends, lack of fusion between weld and rail end metal, entrainment of slag or sand, under-bead or shrinkage cracking, or fatigue cracking. Weld defects may originate in the rail head, web, or base, and in some cases, cracks may progress from the defect into either or both adjoining rail ends. If the weld defect progresses longitudinally through the weld section, the defect is considered a split web for purposes of remedial action required by this section.

(7) *Detail fracture* means a progressive fracture originating at or near the surface of the rail head. These fractures should not be confused with transverse fissures, compound fissures, or other defects which have internal origins. Detail fractures may arise from shelled spots, head checks, or flaking.

(8) *Engine burn fracture* means a progressive fracture originating in spots where driving wheels have slipped on top of the rail head. In developing downward these fractures frequently resemble the compound or even transverse fissures with which they should not be confused or classified.

(9) *Flattened rail* means a short length of rail, not at a joint, which has flattened out across the width of the rail head to a depth of ⅜ inch or more below the rest of the rail and 8 inches or more in length. Flattened rail occurrences have no repetitive regularity and thus do not include corrugations, and have no apparent localized cause such as a weld or engine burn. Their individual length is relatively short, as compared to a condition such as head flow on the low rail of curves.

(10) *Head and web separation* means a progressive fracture, longitudinally separating the head from the web of the rail at the head fillet area.

(11) *Horizontal split head* means a horizontal progressive defect originating inside of the rail head, usually ¼ inch or more below the running surface and progressing horizontally in all directions, and generally accompanied by a flat spot on the running surface. The defect appears as a crack lengthwise of the rail when it reaches the side of the rail head.

(12) *Ordinary break* means a partial or complete break in which there is no sign of a fissure, and in which none of the other defects described in this paragraph (d) is found.

(13) *Piped rail* means a vertical split in a rail, usually in the web, due to failure of the shrinkage cavity in the ingot to unite in rolling.

(14) *Split web* means a lengthwise crack along the side of the web and extending into or through it.

(15) *Transverse fissure* means a progressive crosswise fracture starting from a crystalline center or nucleus inside the head from which it spreads outward as a smooth, bright, or dark round or oval surface substantially at a right angle to the length of the rail. The distinguishing features of a transverse fissure from other types of fractures or defects are the crystalline center or nucleus and the nearly smooth surface of the development which surrounds it.

(16) *Vertical split head* means a vertical split through or near the middle of the head, and extending into or through it. A crack or rust streak may show under the head close to the web or pieces may be split off the side of the head.

6. APPENDIX: USDA RURAL DEVELOPMENT GRANTS & LOANS

Community Facilities Direct Loan & Grant

The USDA's Community Facilities Direct Loan & Grant program provides affordable funding to develop essential community facilities in rural areas.

Community Facilities Direct Loan & Grant

Loan/Grant	Direct loan and/or grant.
Objective	Provide essential community facilities for rural communities.
Applicant	Public bodies and non-profit organizations, and Indian tribes. Applications are made to USDA Rural Development.
Uses	To build facilities and purchase equipment for fire and rescue, telecommunications, schools, libraries, hospitals, etc.
Population	Rural areas with populations of 20,000 or less.
Terms/Conditions	Up to 100% of market value. Up to 40 years or life of security. Maximum grant based on median household include, population, and state allocation.
Program Status	Open.
Web Site	http://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program

Program funding for grants is limited and only small grant awards are made. The average grant award is about $30,000. A direct loan is an option that is more viable. The average size of a direct loan under the program exceeds $2 million. [70]

Community Facilities Loan Guarantees

The USDA's Community Facilities Loan Guarantees program provides loan guarantees to eligible private lenders to help build essential community facilities in rural areas. Under this program, a loan would be obtained from a USDA-approved intermediary lender. The USDA would guarantee the loan. The private lender would service the loan.

Community Facilities Loan Guarantees

Loan/Grant	Loan guarantee.
Objective	Provide essential community facilities for rural communities.
Applicant	Public bodies and non-profit organizations, and Indian tribes. Applications are made through approved intermediaries (approved banks).
Uses	To build facilities and purchase equipment for fire and rescue, telecommunications, schools, libraries, hospitals, etc.
Population	Rural areas with populations of 20,000 or less.

[70] Catalog of Federal Domestic Assistance. 2015. *USDA Community Facilities Loans and Grants.* https://www.cfda.gov/index?s=program&mode=form&tab=core&id=95d3fb80782939d9412320e79d722729.

Terms/Conditions	Maximum guarantee = 90% of the eligible loss. One-time guarantee fee = 1% of principal loan amount times the % of guarantee. Repayment term: useful life of the facility, state statute, or 40 years, whichever is less and is negotiated between the lender/borrower, subject to USDA approval. Interest rates: fixed or variable as negotiated between the lender/borrower, subject to USDA approval.
Program Status	Open.
Web Site	http://www.rd.usda.gov/programs-services/community-facilities-guaranteed-loan-program

Business & Industry Loan Guarantee

The USDA's Business & Industry Loan Guarantee program bolsters the existing private credit structure through the guaranteeing of loans for rural businesses, allowing private lenders to extend more credit than they would typically be able to. Under the program, loan would be obtained from a USDA-approved intermediary lender. The USDA would guarantee the loan. The private lender would service the loan.

Business & Industry Loan Guarantee

Loan/Grant	Loan guarantee.
Objective	Create jobs and stimulate rural economies by providing financial backing for rural businesses.
Applicant	For-profit businesses, nonprofits and cooperatives, federally recognized tribes, public bodies, and individuals. Application made through Federal or State Chartered banks, credit unions, savings & loan associations.
Uses	Most legal business purposes except production agriculture Acquisition, start-up and expansion of businesses that create rural employment.
Population	All areas except cities of more than 50,000 and their contiguous and adjacent urbanized area.
Terms/Conditions	Lender and borrower negotiate terms. Maximum amount of loan guarantee is 80% for loans of $5 million or less. Maximum term on real estate is 30 years. Interest rates are negotiated between the lender and borrower, subject to Agency review. There is an initial guarantee fee equal to 3% of the guaranteed amount. There is an annual renewal fee, currently 0.5% of outstanding principal.
Program Status	Open.
Web Site	http://www.rd.usda.gov/programs-services/business-industry-loan-guarantees

Intermediary Relending Program

The Intermediary Relending Program provides low-interest loans to local intermediaries that re-lend to businesses and for community development projects in rural communities.

Intermediary Relending Program

Loan/Grant	Direct loan.
Objective	Finance business facilities and community development projects in rural areas.
Applicant	Public bodies, nonprofit corporations, Native American tribes, and cooperatives. Apply to Rural Development.
Uses	Community development projects, establishment or expansion of businesses, creation or saving rural jobs. Uses include the acquisition, construction,

	conversion, enlargement, or repair of a business or business facility, particularly when jobs will be created or retained. Also the purchase or development of land (easements, rights of way, buildings, facilities, leases, materials).
Population	Rural areas and incorporated places with populations of less than 25,000.
Terms/Conditions	The intermediary makes loans to businesses from its revolving loan fund on terms consistent with security offered. The maximum loan amount available to ultimate recipients is $250,000. Interest rate is fixed at 1%. Maximum term is 30 years. Interest-only payments may be permitted for the first 3 years
Program Status	FY2015 application window to be announced. Notice of Solicitation of Applications – to be determined.
Web Site	http://www.rd.usda.gov/programs-services/intermediary-relending-program

Rural Business Enterprise Grants

The Rural Business Enterprise Grants program funds projects that facilitate the development of small and emerging rural businesses, distance learning networks, and employment-related adult education programs. There is no maximum grant amount for enterprise type grants; however, smaller requests are given higher priority. Generally, grants range from $10,000 up to $500,000.

Rural Business Enterprise Grants

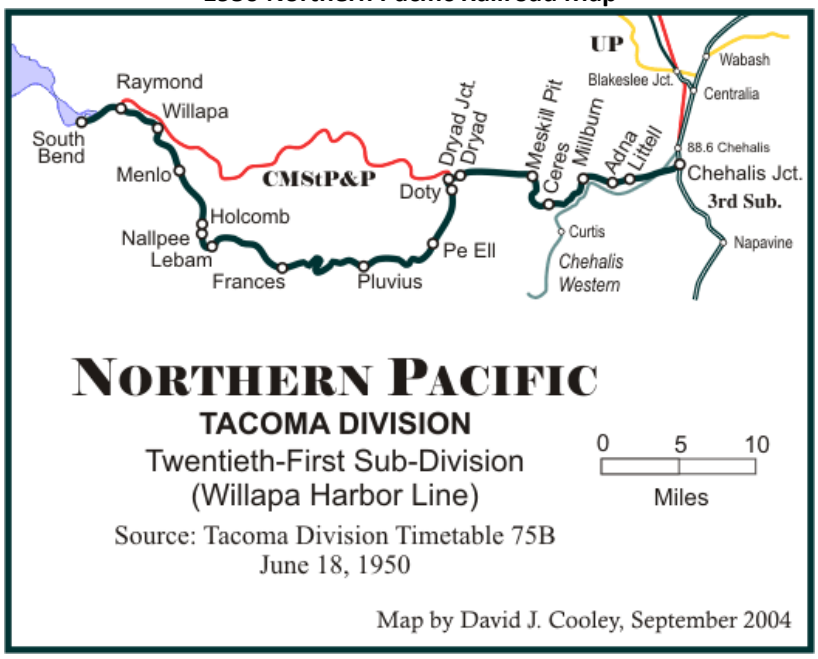
Loan/Grant	Grant.
Objective	Finance and facilitate the development of small and emerging private business enterprises.
Applicant	Public bodies; private nonprofit corporations and federally recognized Native American tribal groups. Apply to Rural Development.
Uses	Buy and develop land, construct buildings, plants, equipment, access streets and roads, parking areas, utility and service extensions, rural distance learning networks, and establish a revolving loan.
Population	All areas except cities of more than 50,000 and their contiguous and adjacent urban or urbanizing areas.
Terms/Conditions	There is no cost-sharing requirement.
Program Status	Open. Notice of Solicitation of Application (pdf) | Posted: March 25, 2015
Web Site	http://www.rd.usda.gov/programs-services/intermediary-relending-program

7. APPENDIX: CURTIS LINE HISTORY

The Port of Chehalis acquired the line in 1996 from Weyerhaeuser Co. Weyerhaeuser Co. had purchased the line between Chehalis and Dryad from Milwaukee Road in 1935 and soon thereafter formed the Chehalis Western Railroad as a common-carrier short line. The Milwaukee Road began using the Northern Pacific Railroad line between Dryad and Chehalis to connect with its own line north to Maytown and Tacoma.

The Chehalis Western only used the nine miles of track from Chehalis to Ruth and removed the track between Ruth and Dryad. A line was built from Ruth south to Curtis and then further south to Camp McDonald. The Chehalis Western operated on trackage rights from the Milwaukee Road from Chehalis to Western Junction, where the trains would then go north then on a Weyerhaeuser Co. line (known as the "Vail Line") to a log dump at South Bay.[71]

1950 Northern Pacific Railroad Map



"CMStP&P" = Milwaukee Road

In 1975, Weyerhaeuser Co. reorganized the Chehalis Western under a new name, the Curtis, Milburn & Eastern Railroad, to operate between Chehalis and Curtis. A log reload was established at Curtis and the track between Curtis and Camp Raymond was abandoned.

After Weyerhaeuser Co. purchased the Milwaukee Road trackage south of Tacoma in 1980, the Curtis, Milburn & Eastern Railroad was absorbed by Weyerhaeuser Co.'s private rail line, the Chehalis Western Railroad.

[71] Wikipedia. *Chehalis Western Railroad.*

Weyerhaeuser Co. ended freight operations on the Curtis Line in 1992. The line was formally abandoned in 1993 and sold to the Port of Chehalis in 1996.

8. APPENDIX: FINANCIAL ANALYSES

Base Scenario

		1	2	3	4	5	6	7	8	9	10	15	20	25
	Other Factors	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 15**	**Year 20**	**Year 25**
Volumes														
Revenue Carloads														
Base Case		60	80	100	120	122	125	127	130	132	135	149	165	182
Growth Case		60	120	240	360	500	510	520	531	541	552	609	673	743
Used in Model	**Base Scenario**	**60**	**80**	**100**	**120**	**122**	**125**	**127**	**130**	**132**	**135**	**149**	**165**	**182**
Revenue														
Carload	**$450** per carload	27,000	36,720	46,818	57,305	59,620	62,029	64,535	67,142	69,855	72,677	88,593	107,994	131,644
Railcar Storage/Switching		320,000	326,400	332,928	339,587	346,378	353,306	360,372	367,579	374,931	382,430	422,233	466,180	514,700
Excursion Train	**$25,000** per year	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue		**$ 347,000**	**363,120**	**379,746**	**396,892**	**405,999**	**415,335**	**424,907**	**434,722**	**444,786**	**455,107**	**510,826**	**574,174**	**646,344**
Expenses														
Maintenance of Way	**$5,000** per track mile	97,500	98,963	100,447	101,954	103,483	105,035	106,611	108,210	109,833	111,481	120,096	129,378	139,377
Maintenance of Equipment		20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868	24,635	26,539	28,590
Transportation		162,202	166,871	171,644	176,523	179,452	182,434	185,471	188,565	191,716	194,925	211,898	230,545	251,062
Crew		66,202	68,315	70,476	72,687	73,918	75,172	76,451	77,753	79,081	80,434	87,606	95,514	104,248
Fuel, Oil, Lube		58,500	60,367	62,277	64,231	65,318	66,427	67,556	68,707	69,881	71,077	77,414	84,402	92,120
Insurance		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Locomotive Lease		25,000	25,375	25,756	26,142	26,534	26,932	27,336	27,746	28,162	28,585	30,794	33,174	35,738
Materials and Supplies	**$50** per loco. day	7,500	7,739	7,984	8,235	8,374	8,516	8,661	8,809	8,959	9,112	9,925	10,821	11,810
General and Administrative		229,000	233,527	238,147	242,864	246,823	250,850	254,947	259,115	263,356	267,671	290,413	315,244	342,387
Salary, Wages, & Benefits		132,450	134,437	136,453	138,500	140,578	142,686	144,827	146,999	149,204	151,442	163,146	175,755	189,338
Office Rent		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Lease Payment to Owners	**10%** of revenue	34,700	36,312	37,975	39,689	40,600	41,533	42,491	43,472	44,479	45,511	51,083	57,417	64,634
Office Supplies		250	254	258	261	265	269	273	277	282	286	308	332	357
Utilities		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Telephone/Communication		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Travel/Entertainment		-	-	-	-	-	-	-	-	-	-	-	-	-
Dues/Subscription		-	-	-	-	-	-	-	-	-	-	-	-	-
Accounting/Tax/Auditing		1,500	1,523	1,545	1,569	1,592	1,616	1,640	1,665	1,690	1,715	1,848	1,990	2,144
Marketing		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Legal Service/STB Fee		2,000	2,030	2,060	2,091	2,123	2,155	2,187	2,220	2,253	2,287	2,464	2,654	2,859
Insurance		50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169	61,588	66,348	71,475
Other Misc. Items		100	102	103	105	106	108	109	111	113	114	123	133	143
Taxes		11,139	11,656	12,190	12,740	13,033	13,332	13,640	13,955	14,278	14,609	16,398	18,431	20,748
Depreciation		-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses		**$ 519,841**	**$ 531,317**	**$ 543,033**	**$ 554,995**	**$ 564,017**	**$ 573,197**	**$ 582,537**	**$ 592,041**	**$ 601,712**	**$ 611,554**	**$ 663,440**	**$ 720,136**	**$ 782,163**
Operating Income		**$ (172,841)**	**$ (168,197)**	**$ (163,287)**	**$ (158,103)**	**$ (158,018)**	**$ (157,862)**	**$ (157,630)**	**$ (157,319)**	**$ (156,926)**	**$ (156,447)**	**$ (152,614)**	**$ (145,963)**	**$ (135,819)**

Base Scenario

	Other Factors	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 15	Year 20	Year 25
Locomotive Days Per Year	8 Carloads/Day	150	153	155	158	158	158	158	159	159	159	161	163	165
Crew														
Operator 1 Annual Salary		50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169	61,588	66,348	71,475
Operator 1 Annual Benefits	**35%** of Salary	17,500	17,763	18,029	18,299	18,574	18,852	19,135	19,422	19,714	20,009	21,556	23,222	25,016
Operator 2 Annual Salary		35,000	35,525	36,058	36,599	37,148	37,705	38,271	38,845	39,427	40,019	43,111	46,443	50,033
Operator 2 Annual Benefits	**35%** of Salary	12,250	12,434	12,620	12,810	13,002	13,197	13,395	13,596	13,800	14,007	15,089	16,255	17,511
Total Annual Cost		114,750	116,471	118,218	119,992	121,791	123,618	125,473	127,355	129,265	131,204	141,344	152,268	164,035
Annual Hours		2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080
Crew Cost Per Hour		55.17	56.00	56.84	57.69	58.55	59.43	60.32	61.23	62.15	63.08	67.95	73.21	78.86
Hours Per Day		8	8	8	8	8	8	8	8	8	8	8	8	8
Annual Crew Hours		1,200	1,220	1,240	1,260	1,262	1,265	1,267	1,270	1,272	1,275	1,289	1,305	1,322
Total Crew Cost		**$ 66,202**	**$ 68,315**	**$ 70,476**	**$ 72,687**	**$ 73,918**	**$ 75,172**	**$ 76,451**	**$ 77,753**	**$ 79,081**	**$ 80,434**	**$ 87,606**	**$ 95,514**	**$ 104,248**
Fuel														
Locomotive Days Per Year	from above	150	153	155	158	158	158	158	159	159	159	161	163	165
Operating hours Per Day		6	6	6	6	6	6	6	6	6	6	6	6	6
Idling Hours per Day		2	2	2	2	2	2	2	2	2	2	2	2	2
Fuel Consumption / Hr Operating		20	20	20	20	20	20	20	20	20	20	20	20	20
Fuel Consumption / Hr Idling		5	5	5	5	5	5	5	5	5	5	5	5	5
Annual Gallons		19,500	19,825	20,150	20,475	20,514	20,554	20,594	20,636	20,678	20,721	20,950	21,202	21,481
Price Per Gallon		3.00	3.05	3.09	3.14	3.18	3.23	3.28	3.33	3.38	3.43	3.70	3.98	4.29
Total Fuel Cost		**$ 58,500**	**$ 60,367**	**$ 62,277**	**$ 64,231**	**$ 65,318**	**$ 66,427**	**$ 67,556**	**$ 68,707**	**$ 69,881**	**$ 71,077**	**$ 77,414**	**$ 84,402**	**$ 92,120**
Locomotive														
Locomotive Cost	**$250,000** Loco. Cost	250,000	253,750	257,556	261,420	265,341	269,321	273,361	277,461	281,623	285,847	307,939	331,738	357,376
# of Locomotives	**260** days/year	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Lease Rate	**10%** of loco. cost	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Locomotive Cost		**$ 25,000**	**$ 25,375**	**$ 25,756**	**$ 26,142**	**$ 26,534**	**$ 26,932**	**$ 27,336**	**$ 27,746**	**$ 28,162**	**$ 28,585**	**$ 30,794**	**$ 33,174**	**$ 35,738**
Taxes														
Public Utility Tax		6,683	6,994	7,314	7,644	7,820	7,999	8,184	8,373	8,567	8,765	9,839	11,059	12,449
Rate		*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*
Leasehold Excise Tax		4,455	4,662	4,876	5,096	5,213	5,333	5,456	5,582	5,711	5,844	6,559	7,372	8,299
Rent Amount		*34,700*	*36,312*	*37,975*	*39,689*	*40,600*	*41,533*	*42,491*	*43,472*	*44,479*	*45,511*	*51,083*	*57,417*	*64,634*
Rate		*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*
Total Taxes		**$ 11,139**	**$ 11,656**	**$ 12,190**	**$ 12,740**	**$ 13,033**	**$ 13,332**	**$ 13,640**	**$ 13,955**	**$ 14,278**	**$ 14,609**	**$ 16,398**	**$ 18,431**	**$ 20,748**

Growth Scenario

		1	2	3	4	5	6	7	8	9	10	15	20	25
	Other Factors	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 15**	**Year 20**	**Year 25**
Volumes														
Revenue Carloads														
Base Case		60	80	100	120	122	125	127	130	132	135	149	165	182
Growth Case		60	120	240	360	500	510	520	531	541	552	609	673	743
Used in Model	**Growth Scenario**	**60**	**120**	**240**	**360**	**500**	**510**	**520**	**531**	**541**	**552**	**609**	**673**	**743**
Revenue														
Carload	**$450** per carload	27,000	55,080	112,363	171,916	243,547	253,387	263,623	274,274	285,354	296,883	361,898	441,152	537,762
Railcar Storage/Switching		320,000	326,400	332,928	339,587	346,378	353,306	360,372	367,579	374,931	382,430	422,233	466,180	514,700
Excursion Train	**$25,000** per year	25,000	25,500	26,010	26,530	27,061	27,602	28,154	28,717	29,291	29,877	32,987	36,420	40,211
Total Revenue		**$ 372,000**	**406,980**	**471,301**	**538,032**	**616,986**	**634,294**	**652,149**	**670,570**	**689,577**	**709,190**	**817,119**	**943,752**	**1,092,673**
Expenses														
Maintenance of Way	**$5,000** per track mile	97,500	98,963	100,447	101,954	103,483	105,035	106,611	108,210	109,833	111,481	120,096	129,378	139,377
Maintenance of Equipment		20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868	24,635	26,539	28,590
Transportation		162,202	171,344	187,534	204,171	223,604	228,145	232,796	237,560	242,440	247,440	274,360	304,838	339,427
Crew		66,202	70,555	78,433	86,532	96,028	98,063	100,149	102,288	104,482	106,732	118,885	132,717	148,497
Fuel, Oil, Lube		58,500	62,346	69,308	76,465	84,856	86,654	88,498	90,388	92,327	94,315	105,054	117,277	131,221
Insurance		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Locomotive Lease		25,000	25,375	25,756	26,142	26,534	26,932	27,336	27,746	28,162	28,585	30,794	33,174	35,738
Materials and Supplies	**$50** per loco. day	7,500	7,993	8,886	9,803	10,879	11,109	11,346	11,588	11,837	12,092	13,468	15,035	16,823
General and Administrative		231,500	237,913	247,303	256,979	267,922	272,746	277,671	282,700	287,835	293,080	321,042	352,202	387,020
Salary, Wages, & Benefits		132,450	134,437	136,453	138,500	140,578	142,686	144,827	146,999	149,204	151,442	163,146	175,755	189,338
Office Rent		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Lease Payment to Owners	**10%** of revenue	37,200	40,698	47,130	53,803	61,699	63,429	65,215	67,057	68,958	70,919	81,712	94,375	109,267
Office Supplies		250	254	258	261	265	269	273	277	282	286	308	332	357
Utilities		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Telephone/Communication		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Travel/Entertainment		-	-	-	-	-	-	-	-	-	-	-	-	-
Dues/Subscription		-	-	-	-	-	-	-	-	-	-	-	-	-
Accounting/Tax/Auditing		1,500	1,523	1,545	1,569	1,592	1,616	1,640	1,665	1,690	1,715	1,848	1,990	2,144
Marketing		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Legal Service/STB Fee		2,000	2,030	2,060	2,091	2,123	2,155	2,187	2,220	2,253	2,287	2,464	2,654	2,859
Insurance		50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169	61,588	66,348	71,475
Other Misc. Items		100	102	103	105	106	108	109	111	113	114	123	133	143
Taxes		11,941	13,064	15,129	17,271	19,805	20,361	20,934	21,525	22,135	22,765	26,230	30,294	35,075
Depreciation		-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses		**$ 523,143**	**$ 541,583**	**$ 571,017**	**$ 601,288**	**$ 636,041**	**$ 647,832**	**$ 659,880**	**$ 672,192**	**$ 684,773**	**$ 697,633**	**$ 766,363**	**$ 843,250**	**$ 929,488**
Operating Income		**$ (151,143)**	**$ (134,603)**	**$ (99,716)**	**$ (63,255)**	**$ (19,055)**	**$ (13,538)**	**$ (7,731)**	**$ (1,621)**	**$ 4,803**	**$ 11,557**	**$ 50,756**	**$ 100,502**	**$ 163,185**

Growth Scenario

	Other Factors	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 15	Year 20	Year 25
Locomotive Days Per Year	8 Carloads/Day	150	158	173	188	205	206	208	209	210	212	219	227	235
Crew														
Operator 1 Annual Salary		50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169	61,588	66,348	71,475
Operator 1 Annual Benefits	**35%** of Salary	17,500	17,763	18,029	18,299	18,574	18,852	19,135	19,422	19,714	20,009	21,556	23,222	25,016
Operator 2 Annual Salary		35,000	35,525	36,058	36,599	37,148	37,705	38,271	38,845	39,427	40,019	43,111	46,443	50,033
Operator 2 Annual Benefits	**35%** of Salary	12,250	12,434	12,620	12,810	13,002	13,197	13,395	13,596	13,800	14,007	15,089	16,255	17,511
Total Annual Cost		114,750	116,471	118,218	119,992	121,791	123,618	125,473	127,355	129,265	131,204	141,344	152,268	164,035
Annual Hours		2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080
Crew Cost Per Hour		55.17	56.00	56.84	57.69	58.55	59.43	60.32	61.23	62.15	63.08	67.95	73.21	78.86
Hours Per Day		8	8	8	8	8	8	8	8	8	8	8	8	8
Annual Crew Hours		1,200	1,260	1,380	1,500	1,640	1,650	1,660	1,671	1,681	1,692	1,749	1,813	1,883
Total Crew Cost		**$ 66,202**	**$ 70,555**	**$ 78,433**	**$ 86,532**	**$ 96,028**	**$ 98,063**	**$ 100,149**	**$ 102,288**	**$ 104,482**	**$ 106,732**	**$ 118,885**	**$ 132,717**	**$ 148,497**
Fuel														
Locomotive Days Per Year	from above	150	158	173	188	205	206	208	209	210	212	219	227	235
Operating hours Per Day		6	6	6	6	6	6	6	6	6	6	6	6	6
Idling Hours per Day		2	2	2	2	2	2	2	2	2	2	2	2	2
Fuel Consumption / Hr Operating		20	20	20	20	20	20	20	20	20	20	20	20	20
Fuel Consumption / Hr Idling		5	5	5	5	5	5	5	5	5	5	5	5	5
Annual Gallons		19,500	20,475	22,425	24,375	26,650	26,813	26,978	27,147	27,320	27,496	28,429	29,460	30,598
Price Per Gallon		3.00	3.05	3.09	3.14	3.18	3.23	3.28	3.33	3.38	3.43	3.70	3.98	4.29
Total Fuel Cost		**$ 58,500**	**$ 62,346**	**$ 69,308**	**$ 76,465**	**$ 84,856**	**$ 86,654**	**$ 88,498**	**$ 90,388**	**$ 92,327**	**$ 94,315**	**$ 105,054**	**$ 117,277**	**$ 131,221**
Locomotive														
Locomotive Cost	**$250,000** Loco. Cost	250,000	253,750	257,556	261,420	265,341	269,321	273,361	277,461	281,623	285,847	307,939	331,738	357,376
# of Locomotives	**260** days/year	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Lease Rate	**10%** of loco. cost	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Locomotive Cost		**$ 25,000**	**$ 25,375**	**$ 25,756**	**$ 26,142**	**$ 26,534**	**$ 26,932**	**$ 27,336**	**$ 27,746**	**$ 28,162**	**$ 28,585**	**$ 30,794**	**$ 33,174**	**$ 35,738**
Taxes														
Public Utility Tax		7,165	7,838	9,077	10,363	11,883	12,217	12,560	12,915	13,281	13,659	15,738	18,177	21,045
Rate		*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*
Leasehold Excise Tax		4,776	5,226	6,052	6,908	7,922	8,144	8,374	8,610	8,854	9,106	10,492	12,118	14,030
Rent Amount		*37,200*	*40,698*	*47,130*	*53,803*	*61,699*	*63,429*	*65,215*	*67,057*	*68,958*	*70,919*	*81,712*	*94,375*	*109,267*
Rate		*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*
Total Taxes		**$ 11,941**	**$ 13,064**	**$ 15,129**	**$ 17,271**	**$ 19,805**	**$ 20,361**	**$ 20,934**	**$ 21,525**	**$ 22,135**	**$ 22,765**	**$ 26,230**	**$ 30,294**	**$ 35,075**

Low Expense Scenario

		1	2	3	4	5	6	7	8	9	10	15	20	25
	Other Factors	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 15**	**Year 20**	**Year 25**
Volumes														
Revenue Carloads														
Base Case		60	80	100	120	122	125	127	130	132	135	149	165	182
Growth Case		60	120	240	360	500	510	520	531	541	552	609	673	743
Used in Model	**Low Expense Scenario**	**60**	**80**	**100**	**120**	**122**	**125**	**127**	**130**	**132**	**135**	**149**	**165**	**182**
Revenue														
Carload	**$450** per carload	27,000	36,720	46,818	57,305	59,620	62,029	64,535	67,142	69,855	72,677	88,593	107,994	131,644
Railcar Storage/Switching		320,000	326,400	332,928	339,587	346,378	353,306	360,372	367,579	374,931	382,430	422,233	466,180	514,700
Excursion Train	**$25,000** per year	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Revenue		**$ 347,000**	**363,120**	**379,746**	**396,892**	**405,999**	**415,335**	**424,907**	**434,722**	**444,786**	**455,107**	**510,826**	**574,174**	**646,344**
Expenses														
Maintenance of Way	**$2,500** per track mile	48,750	49,481	50,223	50,977	51,741	52,518	53,305	54,105	54,917	55,740	60,048	64,689	69,688
Maintenance of Equipment		20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868	24,635	26,539	28,590
Transportation		149,702	154,184	158,767	163,452	166,185	168,968	171,803	174,692	177,634	180,633	196,501	213,958	233,194
Crew		66,202	68,315	70,476	72,687	73,918	75,172	76,451	77,753	79,081	80,434	87,606	95,514	104,248
Fuel, Oil, Lube		58,500	60,367	62,277	64,231	65,318	66,427	67,556	68,707	69,881	71,077	77,414	84,402	92,120
Insurance		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Locomotive Lease		12,500	12,688	12,878	13,071	13,267	13,466	13,668	13,873	14,081	14,292	15,397	16,587	17,869
Materials and Supplies	**$50** per loco. day	7,500	7,739	7,984	8,235	8,374	8,516	8,661	8,809	8,959	9,112	9,925	10,821	11,810
General and Administrative		153,375	156,767	160,237	163,785	166,557	169,380	172,255	175,183	178,165	181,202	197,261	214,893	234,281
Salary, Wages, & Benefits		81,825	83,052	84,298	85,563	86,846	88,149	89,471	90,813	92,175	93,558	100,788	108,578	116,969
Office Rent		5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717	6,159	6,635	7,148
Lease Payment to Owners	**10%** of revenue	34,700	36,312	37,975	39,689	40,600	41,533	42,491	43,472	44,479	45,511	51,083	57,417	64,634
Office Supplies		250	254	258	261	265	269	273	277	282	286	308	332	357
Utilities		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Telephone/Communication		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Travel/Entertainment		-	-	-	-	-	-	-	-	-	-	-	-	-
Dues/Subscription		-	-	-	-	-	-	-	-	-	-	-	-	-
Accounting/Tax/Auditing		1,500	1,523	1,545	1,569	1,592	1,616	1,640	1,665	1,690	1,715	1,848	1,990	2,144
Marketing		1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143	1,232	1,327	1,430
Legal Service/STB Fee		2,000	2,030	2,060	2,091	2,123	2,155	2,187	2,220	2,253	2,287	2,464	2,654	2,859
Insurance		25,000	25,375	25,756	26,142	26,534	26,932	27,336	27,746	28,162	28,585	30,794	33,174	35,738
Other Misc. Items		100	102	103	105	106	108	109	111	113	114	123	133	143
Taxes		11,139	11,656	12,190	12,740	13,033	13,332	13,640	13,955	14,278	14,609	16,398	18,431	20,748
Depreciation		-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Expenses		**$ 382,966**	**$ 392,388**	**$ 402,021**	**$ 411,868**	**$ 418,743**	**$ 425,744**	**$ 432,872**	**$ 440,131**	**$ 447,523**	**$ 455,052**	**$ 494,843**	**$ 538,510**	**$ 586,500**
Operating Income		**$ (35,966)**	**$ (29,268)**	**$ (22,275)**	**$ (14,976)**	**$ (12,744)**	**$ (10,409)**	**$ (7,965)**	**$ (5,409)**	**$ (2,738)**	**$ 54**	**$ 15,983**	**$ 35,664**	**$ 59,844**

Low Expense Scenario

	Other Factors	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 15	Year 20	Year 25
Locomotive Days Per Year	8 Carloads/Day	150	153	155	158	158	158	158	159	159	159	161	163	165
Crew														
Operator 1 Annual Salary		50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169	61,588	66,348	71,475
Operator 1 Annual Benefits	**35%** of Salary	17,500	17,763	18,029	18,299	18,574	18,852	19,135	19,422	19,714	20,009	21,556	23,222	25,016
Operator 2 Annual Salary		35,000	35,525	36,058	36,599	37,148	37,705	38,271	38,845	39,427	40,019	43,111	46,443	50,033
Operator 2 Annual Benefits	**35%** of Salary	12,250	12,434	12,620	12,810	13,002	13,197	13,395	13,596	13,800	14,007	15,089	16,255	17,511
Total Annual Cost		114,750	116,471	118,218	119,992	121,791	123,618	125,473	127,355	129,265	131,204	141,344	152,268	164,035
Annual Hours		2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080	2,080
Crew Cost Per Hour		55.17	56.00	56.84	57.69	58.55	59.43	60.32	61.23	62.15	63.08	67.95	73.21	78.86
Hours Per Day		8	8	8	8	8	8	8	8	8	8	8	8	8
Annual Crew Hours		1,200	1,220	1,240	1,260	1,262	1,265	1,267	1,270	1,272	1,275	1,289	1,305	1,322
Total Crew Cost		**$ 66,202**	**$ 68,315**	**$ 70,476**	**$ 72,687**	**$ 73,918**	**$ 75,172**	**$ 76,451**	**$ 77,753**	**$ 79,081**	**$ 80,434**	**$ 87,606**	**$ 95,514**	**$ 104,248**
Fuel														
Locomotive Days Per Year	from above	150	153	155	158	158	158	158	159	159	159	161	163	165
Operating hours Per Day		6	6	6	6	6	6	6	6	6	6	6	6	6
Idling Hours per Day		2	2	2	2	2	2	2	2	2	2	2	2	2
Fuel Consumption / Hr Operating		20	20	20	20	20	20	20	20	20	20	20	20	20
Fuel Consumption / Hr Idling		5	5	5	5	5	5	5	5	5	5	5	5	5
Annual Gallons		19,500	19,825	20,150	20,475	20,514	20,554	20,594	20,636	20,678	20,721	20,950	21,202	21,481
Price Per Gallon		3.00	3.05	3.09	3.14	3.18	3.23	3.28	3.33	3.38	3.43	3.70	3.98	4.29
Total Fuel Cost		**$ 58,500**	**$ 60,367**	**$ 62,277**	**$ 64,231**	**$ 65,318**	**$ 66,427**	**$ 67,556**	**$ 68,707**	**$ 69,881**	**$ 71,077**	**$ 77,414**	**$ 84,402**	**$ 92,120**
Locomotive														
Locomotive Cost	**$250,000** Loco. Cost	125,000	126,875	128,778	130,710	132,670	134,661	136,680	138,731	140,812	142,924	153,969	165,869	178,688
# of Locomotives	**260** days/year	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Lease Rate	**10%** of loco. cost	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Locomotive Cost		**$ 12,500**	**$ 12,688**	**$ 12,878**	**$ 13,071**	**$ 13,267**	**$ 13,466**	**$ 13,668**	**$ 13,873**	**$ 14,081**	**$ 14,292**	**$ 15,397**	**$ 16,587**	**$ 17,869**
Taxes														
Public Utility Tax		6,683	6,994	7,314	7,644	7,820	7,999	8,184	8,373	8,567	8,765	9,839	11,059	12,449
Rate		*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*	*0.01926*
Leasehold Excise Tax		4,455	4,662	4,876	5,096	5,213	5,333	5,456	5,582	5,711	5,844	6,559	7,372	8,299
Rent Amount		*34,700*	*36,312*	*37,975*	*39,689*	*40,600*	*41,533*	*42,491*	*43,472*	*44,479*	*45,511*	*51,083*	*57,417*	*64,634*
Rate		*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*	*0.12840*
Total Taxes		**$ 11,139**	**$ 11,656**	**$ 12,190**	**$ 12,740**	**$ 13,033**	**$ 13,332**	**$ 13,640**	**$ 13,955**	**$ 14,278**	**$ 14,609**	**$ 16,398**	**$ 18,431**	**$ 20,748**

9. APPENDIX: WWR – CITY OF TACOMA LEASE

The City of Tacoma ("**Lessor**") leased the line to Western Washington Railroad ("**Lessee**") on January 17, 2014. Key provisions of the lease agreement include:

Summary of WWR - City of Tacoma Lease

Topic	Description
Premises	Lease premises includes rail operations and all real and personal property in rail corridor from Mile Post 48C in Thurston County to terminus of right of way in Lewis County. (Section 2.1)
Lessee Entitled to Rents/Revenues	Lessee is entitled to all rents and revenues relating to operational agreements that Lessee enters into during lease term. (Sections 2.3 & 2.11)
Lessor Retains Trackage Rights	Lessor retains trackage rights from Mile Post 48C to end of the line for the purpose of interchange. The Lessor also retains trackage rights over entire Premises for emergency routing. (Section 2.6)
Lessor's Property Revenues	Lessor retains all rents and revenues relating to property agreements, leases, easements, permits, licenses, etc. (Section 2.6)
Annual Fee	Lessee shall pay Lessor a fee of $50,000 each year. (Section 2.7)
Term	The lease is in effect until January 16, 2019. There are no options or extensions. Either party has option to terminate for a material breach with 30 days' notice. (Sections 3.1 & 3.2)
Maintenance Obligation	Lessee maintains at its sole cost the Premises to its current condition or better as necessary to conform industry standards, specifications, and legal requirements. Lessee is solely responsible for maintaining grade crossings and signals. (Section 4)
Condition Assessment	The will be a joint inspection within 90 days of Effective Date of lease; condition assessment to be attached to lease. (Section 4)
Insurance	Lessee maintains insurance for itself and Lessor. Commercial General Liability: $5M per occurrence; $50M aggregate; Commercial Auto Liability: $5M per occurrence; Railroad Accident Pollution Liability: $5M per occurrence; $50M aggregate; Workers Compensation. (Section 8)
Assignment	If Lessors sells the Premises, it can assign the lease to a third party without Lessee's consent. (Section 12)

10. APPENDIX: NOTES FROM HIRAIL INSPECTION TRIP

MP 67. Begin Purchase.

90# ml rail. 85# siding. Ties deteriorated. Although they may look satisfactory on the outside, they are predominately rotted inside.

MP 66.5 – 66.3 Dillenbaugh Creek – W. Main St. New ties have been inserted.

NOTE:

All of the bridges on this project must have the approaches rehabilitated with new ties & ballast. Examination of the pictures of selected bridge approaches will show the profile discrepancy. Several of the bridges have deteriorated backwall timbers, allowing ballast to collapse under track below bridge.

The entire purchase must be sprayed with defoliant—reminds me of the bottleneck north of Albany—yuck.

The entire purchase must be re-gaged with satisfactory ties to meet CLS 1 standards.

Picture 23 shows an existing CMP culvert. The bottom is rusted out. Almost all of the culverts on this rail purchase were either covered with vegetation or collapsed. A more thorough inspection of culverts will be necessary at later date.

MP 66.1. The switches north of NW West Street (MP 66.1) must be raised to match existing T/R profile.

MP 66 - 64. Surface & line track.

MP 62.5 China Creek. Cap repaired previously on bridge.

MP 64 - 62. Ballast lift required.

Centralia Siding. Replace switch points

Scale Track - Scale. Not being used- could be rehabilitated for future use.

MP 62 West 3rd Street crossing. Upgrade crossing remove wood planks.

The track section north of Blakeslee Jct must be reconditioned the reestablish the ditch sections. There a many areas where water ponds next to the tracks. This is caused by lack of ditches, excess vegetation, and possibly blocked or collapsed culverts that do not allow standing water to “equalize” on either side of the tracks. There are wetland areas adjacent to the tracks. Rachel Allison will be addressing these wetland issues.

Lakeside Siding +/- MP 61. Rehab switch ties—concurrent with ties gaging.

MP 61 - 47. Ballast lift required. Track section conformance.

MP 50.3 Beaver Creek Bridge. Bridge ties were replaced but gap was left between base of rail and tie. Gage bars have been used to keep rail in place. All new ties must be pulled and measured.

Beaver Creek (3 bridges—Maytown Siding). Profile must be corrected. ML rail 100#, siding 75#.

End of inspection.

11. APPENDIX: USDA RURAL DEVELOPMENT EMAIL

Jim Daly

From: Harper, Debbie - RD, Olympia, WA <debbie.harper@wa.usda.gov>
Sent: Tuesday, July 7, 2015 1:59 PM
To: Jim Daly
Cc: McMillin, Peter - RD, Olympia, WA
Subject: RE: Community Facilities Direct Loan & Grant Program
Attachments: All RD Programs Matrix.doc; Eligibility.doc

Hello Jim,

Thank you for contacting USDA Rural Development. After discussing the 20-mile rail line project, we decided it does not seem to be a fit for the Essential Community Facilities program, see attached eligible uses of these funds.

It is very difficult to determine the rural community that will benefit from the purchase of this rail line. What are the rural communities served by this segment of line? What will be the impact to these communities if the rail line is, or is not, purchased?

USDA Rural Development has over 40 programs that assist rural communities. There is a possibility that one of the Business Programs can be a fit. Attached is the USDA Rural Development financing matrix. Please review this and see if there is a Business program that could work for you.

Let me know if you have additional questions.

Debbie Harper
Community Programs Specialist | Olympia Area Office
Rural Development
U.S. Department of Agriculture
1835 Black Lake Blvd SW, Suite C | Olympia, WA 98512
Phone: 360-704-7764 | Fax: 855-847-5490
Email: debbie.harper@wa.usda.gov
www.rd.usda.gov/wa

"Committed to the future of rural communities"
"Estamos dedicados al futuro de las comunidades rurales"

Stay Connected with USDA:

USDA is an equal opportunity provider and employer

From: Jim Daly [mailto:daly@tangentservicesinc.com]
Sent: Monday, July 06, 2015 10:23 AM

To: Harper, Debbie - RD, Olympia, WA
Subject: Community Facilities Direct Loan & Grant Program

Dear Ms. Harper,

I am writing to inquire about a point of contact for the Community Facilities Direct Loan & Grant Program. Tangent Services is working for Lewis County, the City of Chehalis, and the Port of Chehalis on a study of the feasibility of purchasing a rail line that runs from Maytown to Chehalis. As part of our study, we are identifying potential sources of financing. The Community Facilities Direct Loan & Grant Program looks like a possibility, but we are not sure about the eligibility of the applicant(s) or the project.

I saw you listed as a contact for Lewis County on program web site. Would it be possible to set up a time for a phone call if you are the right person to speak with?

Thanks and regards,

Jim Daly
Tangent Services, Inc.
(503) 928-0731

Committed to the future of rural communities.

USDA Rural Development Programs
for
Community and Economic Development

www.rurdev.usda.gov/wa

USDA Rural Development Programs

Program	Objective	Applicant	Uses	Population	Loan/Grant	Terms/Conditions
Single Family Home Ownership Direct Loans	Safe, well-built, affordable homes for rural Americans.	Families and individuals apply to Rural Development.	Buy, build, improve, repair or rehabilitate rural homes as the applicant's permanent residence.	Rural areas with populations of 10,000 or less (under certain circumstances may be up to 25,000).	Direct loan	Up to 100% of market value or cost, whichever is less. Loan amortized for 33/38 years. Applicant may be eligible for payment assistance (subsidy) on the loan.
Single Family Home Ownership Direct Repair Loans and Grants	To help very-low income applicants remove health and safety hazards or repair their homes.	Families and individuals who currently own their home apply to Rural Development.	Loan and grant purposes include: repair/replace roofs, winterizing, purchase or repair of heating system, structural repair, water/sewage connect fees, and similar uses.	Rural areas with populations of 10,000 or less (under certain circumstances may be up to 25,000).	Direct loan and grant	Loan terms to 20 years at 1%. Assistance to individual may not exceed $20,000. Grants only available to very-low income applicants 62 years or older who cannot afford to pay 1% loan.
Single Family Home Ownership Guaranteed Loans	Assist eligible applicants in buying their homes by guaranteeing private lenders' loans.	Families and individuals apply to lender.	Loans may be made to purchase new or existing homes.	Rural areas with populations of 10,000 or less (under certain circumstances may be up to 25,000).	Loan guarantee	30 year, fixed rate. Interest rate negotiated between lender and borrower . Loans to 100 % of market value.
Mutual Self-Help Home Ownership Loans	Individual homes built by a group of applicants, with construction guidance of a non-profit organization.	Families and individuals apply to Rural Development.	Loan applications are processed on an individual basis for each participating family.	Rural areas with populations of 10,000 or less (under certain circumstances may be up to 25,000).	Direct loan	The individual families receive a direct loan from Rural Development. The non-profit housing organization gets grant to hire a supervisor and pay other administrative expenses.
Mutual Self-Help Housing Grants	Assist lower income families in building their own homes.	Nonprofits and Public Bodies.	Technical assistance to qualify and supervise small groups of families to build each other's homes.	Rural areas with populations of 10,000 or less (under certain circumstances may be up to 25,000).	Grant	Grant Agreement.
Rental Housing for Families and Elderly Direct Loans and Loan Guarantees	Safe, well-built affordable rental housing for very low income individuals and families.	Individuals, limit profit and non-profit organizations. For guarantees, apply to intermediary lender; for direct, apply to Rural Development.	New construction or substantial rehabilitation of rental housing.	Rural areas with populations of 10,000 or less.	Direct loan or loan guarantee	Up to 100% of total development cost (non-profits) ; 97% (for profit) 30 year term with up to 50 year amortization. 95% of total development costs (for profit organizations) with Low-Income Housing Tax Credits.
Housing Preservation Grants	Repair and rehabilitate housing owned or occupied by very low and low income rural families.	Public bodies and non-profit organizations apply to Rural Development.	Operate a program which finances repair and rehabilitation activities for single family and small rental properties.	Rural areas with populations of 20,000 or less.	Grant	Grant Agreement.
Community Facilities Programs	Provide essential community facilities for rural communities.	Public bodies and non-profit organizations, and Indian tribes. Apply to Rural Development.	To build facilities and purchase equipment for fire and rescue, telecommunications, schools, libraries, hospitals, etc.	Rural areas with populations of 20,000 or less.	Direct loan and/or loan guarantee. Grant	Up to 100% of market value Up to 40 years or life of security Maximum grant based on MHI/Pop & State Allocation
Farm Labor Housing	Safe, well-built affordable rental housing for farm workers.	Individuals, public and private non-profit organizations apply to Rural Development.	New construction or substantial rehabilitation of rental housing.	None	Direct loan and grant	Up to 102% of total development cost. Up to 33 years to repay @ 1% interest.

Direct Loans and Grants - Apply to Rural Development Loan Guarantees - Apply to Intermediary (approved banks, mortgage companies)

USDA Rural Development Programs

Program	Objective	Applicant	Uses	Population	Loan/Grant	Terms/Conditions
Business and Industry Guarantee Loans	Create jobs and stimulate rural economies by providing financial backing for rural businesses.	Business applies through Federal or State Chartered banks, credit unions, savings & loan associations.	Most legal business purposes except production agriculture Acquisition, start-up and expansion of businesses that create rural employment.	All areas except cities of more than 50,000 and their contiguous and adjacent urbanized area.	Loan guarantee	Lender and borrower negotiate terms Interest rate tied to published rate that may change no more often than quarterly.
Rural Business Enterprise Grants	Finance and facilitate the development of small and emerging private business enterprises.	Public bodies; private nonprofit corporations and federally recognized Native American tribal groups apply to Rural Development.	Buy and develop land, construct buildings, plants, equipment, access streets and roads, parking areas, utility and service extensions, rural distance learning networks, and establish a revolving loan.	All areas except cities of more than 50,000 and their contiguous and adjacent urban or urbanizing areas.	Grant	When grant funds are used for revolving loan fund (RLF) the intermediary makes loans to businesses from its RLF on terms consistent with security offered.
Intermediary Relending Program Loans	Finance business facilities and community development projects in rural areas.	Public bodies, nonprofit corporations, Native American tribes, and cooperatives apply to Rural Development.	Community development projects, establishment or expansion of businesses, creation or saving rural jobs.	Rural areas and incorporated places with populations of less than 25,000.	Direct loan	The intermediary makes loans to businesses from its revolving loan fund on terms consistent with security offered. Intermediary pays 1% for 30 years.
Rural Economic Development Loans and Grants	Finance economic development and job creation in rural areas.	RUS financed electric and telephone utilities apply to Rural Development.	Business startup or expansion projects that create rural jobs.	Rural areas and places with populations of 2,500 or less.	Direct loan and revolving loan fund grant	The intermediary, electric or telephone utilities, make loans to profit or non-profit business and public bodies for rural economic development and/or job creation projects. Loans are 0% for 10 years.
Rural Cooperative Development Grants	Establish and operate centers for cooperative development to improve the economic condition of rural areas through the development of new cooperatives and improving operations of existing cooperatives.	Nonprofit corporations and institutions of higher education apply directly to Rural Development National Office.	Establish operating centers for development of rural cooperatives.	All areas.	Grant	Applicants must meet specific selection criteria including a minimum 25 percent fund match. Grants are awarded on a competitive basis. Some funds reserved for applicants that focus on assistance to small, minority producers through their cooperative businesses (governing board or membership at least 75 percent minority).
Value-Added Agricultural Product Market Development Grant Program	To assist independent agricultural producers enter into value-added activities.	Independent producers, farmer and rancher cooperatives, agricultural producer groups, and majority-controlled producer-based business ventures can apply to Rural Development State Office.	Funds can be used for planning purposes such as conducting feasibility studies or feasibility business plans or it can be used as working capital to help start the operations of a venture.	All areas	Grant	Applicants must meet specific selection criteria. Grants are awarded on a competitive basis. Funds cannot be used to build facilities or purchase equipment. There is a dollar for dollar matching requirement.
Rural Business Opportunity Grant	Finance technical assistance for business development planning in rural areas.	Public bodies, non-profit corporations, Indian tribes on Federal or state reservations and cooperatives with members that are primarily rural residents.	Technical assistance, leadership training, establish business support centers, economic development plans.	All areas except cities of more than 50,000 and their contiguous and adjacent urbanized area.	Grant	Must be completed within two years after project has begun.

Direct Loans and Grants - Apply to Rural Development Loan Guarantees - Apply to Intermediary (approved banks, credit unions, etc)

USDA Rural Development Programs

Program	Objective	Applicant	Uses	Population	Loan/Grant	Terms/Conditions
Water and Waste Disposal Loans and Grants	Providing infrastructure for rural areas.	Public entities, tribes and non-profit corporations apply to Rural Development.	Build, repair, improve public water systems, and waste collection and treatment systems, and other related costs.	Rural areas, cities, and towns with up to 10,000 population.	Direct loan and grant	Interest rates are set quarterly based on an index of current market yields for municipal obligations. Repayment period is a maximum of 40 years. Grant funds may be available.
Water and Waste Disposal Loan Guarantees	Providing infrastructure for rural areas.	Public entities, tribes and non-profit corporations apply to Rural Development.	Construct, repair, modify, expand, improve water supply and distribution systems, and waste collection and treatment systems, and other related costs.	Rural areas, cities, and towns with up to 10,000 population.	Loan guarantee	Eligible lenders obtain up to a 90% guarantee for loans made and serviced by them. Lenders should contact Rural Development Area or State Office.
Solid Waste Management Grants	Provide technical assistance and/or training to help communities reduce the solid waste stream.	Non-profit organizations and public bodies. Apply to Rural Development.	Provide technical assistance and training to reduce pollution of water resources and improve management of solid waste facilities, reduction of solid waste in streams.	Rural areas, cities and towns with up to 10,000 population.	Grant	Projects funded based on selection at National Level – applications are accepted from October 1st to December 31st of each year.
Electric and Telecommunication	Provide financial aid through direct and guaranteed loans.	Non-profit and cooperative associations, public bodies and other utilities. Contact USDA-RUS Administrator, STOP 1510, 1400 Independence Ave. SW, Washington, DC 20250-1510.	Generation, bulk transmission facilities and distribution of electric power. Enhance 911 emergency service, digital switching equipment, fiber optic cable along with traditional main system, telecommunication service.	Rural areas	Direct loan or loan guarantee	Interest rates are established in accordance with 7CFR 17145.
Rural Broadband Loan and Loan Guarantee	The deployment of broadband service to eligible rural communities.	Legally organized entities providing or proposing to provide broadband service in eligible rural communities. Cannot serve more than 2% of the telephone subscriber lines installed in the U.S.	The construction, acquisition, and improvement of broadband transmission facilities and equipment; land and buildings used in providing broadband service; and the refinancing of Telecommunications Program debt.	Eligible rural communities with a population of 20,000 inhabitants or less. The community cannot be located in a standard metropolitan statistical area.	Direct loans and loan guarantee	Loans are made at the Treasury rate of interest at the time of the advance for a period equal to expected composite economic life of the assets financed. Loans are guaranteed at the interest rate set by the private lender for no more than 80% of the principal amount.
Distance Learning and Telemedicine	Development and deployment of advanced telecommunication services throughout rural America.	An incorporated entity, including a municipal corporation or a for-profit or not for profit basis, which operates Rural schools, libraries, health care clinics and other organizations that operate educational or health care facilities.	Equipment for classrooms: cameras, videomonitors computers and LAN; and for physician consultation, radiology, x-ray scanners and digital microscopes.	Rural areas	Direct loan and/or grant	Matching funds are required.

Direct Loans and Grants - Apply to Rural Development Loan Guarantees - Apply to Intermediary (eligible banks, etc)

USDA Rural Development Programs

Summary of Program Purposes

	Land & Building	Machinery & Equipment	Working Capital	Infrastructure	Training/ Technical Asst
RURAL HOUSING					
Single Family Housing - Direct loan	●				
Single Family Housing - Guaranteed loan	●				
Single Family Housing Repair - Loan/grant	●				
Rural rental housing - Guaranteed loan	●			●	
Rural rental housing - Direct loan	●			●	
Farm labor housing - Loan/grant	●			●	
Community facilities - Direct loan/grant	●	●	●	●	
Community facilities - Guaranteed loan	●	●	●	●	
Housing preservation –Grant	●	●	●	●	●
www.rurdev.usda.gov/rhs/index.html					
RURAL BUSINESS					
Business & Industry - Guaranteed loan	●	●	●	●	
Rural Business Enterprise Grant	●	●	●	●	●
Intermediary Relending – Loan	●	●	●	●	
Rural Economic Development Loan and Grant	●	●	●	●	●
Rural Cooperative Development Grant				●	●
Value-Added Agricultural Product Market Dev Grant			●	●	●
Rural Business Opportunity Grant					●
www.rurdev.usda.gov/rbs/index.html					
RURAL INFRASTRUCTURE					
Water and sewer - Loan/grant	●	●	●	●	
Water and sewer - Guaranteed loan	●	●	●	●	
Solid waste management grant					●
Electric and Telecommunications – Direct/Guar Loan	●	●		●	
Rural Broadband Loan and Loan Guarantee	●	●		●	
Distance Learning & Telemedicine - Loan/grant		●		●	
www.rurdev.usda.gov/rus/index.html					

(d) Eligible loan purposes.
(1) Funds may be used:
(i) To construct, enlarge, extend, or otherwise improve water or waste disposal and other essential community facilities providing essential service primarily to rural residents and rural businesses. Rural businesses would include facilities such as educational and other publicly owned facilities.

(A) "Water or waste disposal facilities” include water, sanitary sewerage, solid waste disposal, and storm wastewater facilities.
(B) "Essential community facilities" are those public improvements requisite to the beneficial and orderly development of a community operated on a nonprofit basis including but not limited to:
(1) Health services;
(2) Community, social, or cultural services;
(3) Transportation facilities, such as streets, roads, and bridges;
(4) Hydroelectric generating facilities and related connecting systems and appurtenances, when not eligible for Rural Electrification Administration (REA) financing;
(5) Supplemental and supporting structures for other rural electrification or telephone systems (including facilities such as headquarters and office buildings, storage facilities, and maintenance shops) when not eligible for Rural Electrification Administration financing:
(6) Natural gas distribution systems; and
(7) Industrial park sites, but only to the extent of land acquisition and necessary site preparation, including access ways and utility extensions to and throughout the site. Funds may not be used in connection with industrial parks to finance on-site utility systems, or business and industrial buildings.
(C) "Otherwise improve" includes but is not limited to the following:
(1) The purchase of major equipment, such as solid waste collection trucks, and X-ray machines, which will in themselves provide an essential service to rural residents;
(2) The purchase of existing facilities when it is necessary either to improve or to prevent a loss of service;
(3) Payment of tap fees and other utility connection charges as provided in utility purchase contracts prepared under section 1942.18(f) of this subpart.
(ii) To construct or relocate public buildings, roads, bridges, fences, or utilities, and to make other public improvements necessary to the successful operation or protection of facilities authorized in paragraph (d)(l)(i) of this section.
(iii) To relocate private buildings, roads, bridges, fences, or utilities, and other private improvements necessary to the successful operation or protection of facilities authorized in paragraph (d)(l)(i) of this section.
(iv) To pay the following expenses, but only when such expenses are a necessary part of a loan to finance facilities authorized in paragraphs (d)(l)(i), (d)(l)(ii), and (d)(l)(iii) of this section:
(A) Reasonable fees and costs such as legal, engineering, architectural, fiscal advisory, recording, environmental impact analyses, archaeological surveys and possible salvage or other mitigation measures, planning, establishing or acquiring rights.
(B) Interest on loans until the facility is selfsupporting, but not for more than three years unless a

longer period is approved by the National Office; interest on loans secured by general obligation bonds until tax revenues are available for payment, but not for more than two years unless a longer period is approved by the National Office; and interest on interim financing, including interest charges on interim financing from sources other than Rural Development.

(C) Costs of acquiring interest in land; rights, such as water rights, leases, permits, rights-of-way; and other evidence of land or water control necessary for development of the facility.

(D) Purchasing or renting equipment necessary to install, maintain, extend, protect, operate, or utilize facilities.

(E) Initial operating expenses for a period ordinarily not exceeding one year when the borrower is unable to pay such expenses.

(F) Refinancing debts incurred by, or on behalf of, a community when all of the following conditions exist:

(1) The debts being refinanced are a secondary part of the total loan;

(2) The debts are incurred for the facility or service being financed or any part thereof;

(3) Arrangements cannot be made with the creditors to extend or modify the terms of the debts so that a sound basis will exist for making a loan.