Coos Bay Rail Line Rehabilitation and Coos Bay Rail Link Freight Rail Operations

2014 Economic Impact Study – FINAL DRAFT

PREPARED FOR

Oregon International Port of Coos Bay

PREPARED BY

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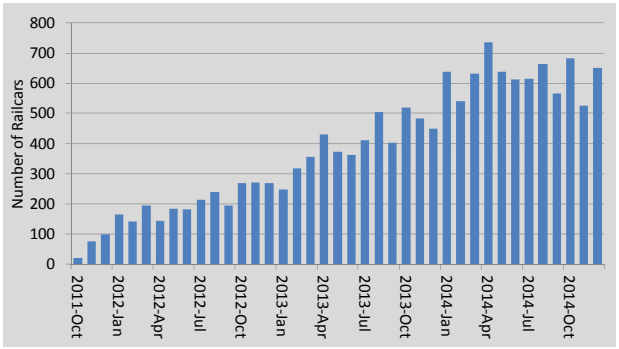
Executive Summary

The purpose of this analysis is to document the economic benefits associated with rehabilitation of the Coos Bay rail line, and with freight rail operations on the line by the Coos Bay Rail Link ("CBR") during calendar year 2014. The first full year of operations under the ownership of the Oregon International Port of Coos Bay was 2012, and the port has analyzed the economic benefits each year from 2012 through 2014. To the extent possible, this report compares the results from 2012 and 2013 with the latest results from 2014.

Operations and maintenance of the Coos Bay rail line provide a number of benefits to the region, including:

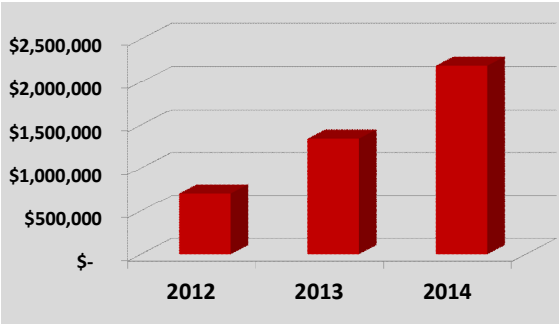
- Transportation options for local industries
- Jobs and income associated with construction projects
- Jobs and income associated with operations
- Reduced emissions, road damage, and vehicle accidents

Figure ES-1 – Traffic Trends



Traffic trends – Sustained growth in carload demonstrates the value that CBR brings to local customers. CBR makes it possible for local employers to compete in distant markets by providing a cost-effective way of shipping to those markets. With rail transportation, local mills send finished goods throughout North America, including to Canada and Mexico. Local customers, such as lumber mills and organic dairy farms, also receive shipments by rail.

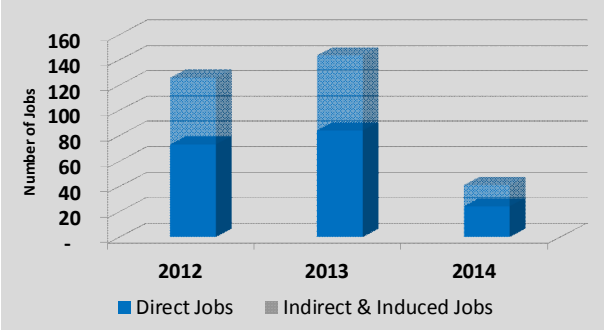
Figure ES-2 – Transportation Cost Savings



Transportation cost savings – Customers who ship via the Coos Bay rail line see substantial savings in their transportation costs. The amount saved has increased during each year the rail line has been under Port ownership, growing from approximately $700,000 in 2012 to $1.39 million in 2013, and to $2.2 million in 2014.

Impacts from Construction - The Port of Coos Bay invested approximately $3.1 million on rehabilitation of the Coos Bay rail line in 2014. That year marked the end of several multi-year projects on the line; spending in previous years totaled $8.4 million in 2011, $9.9 million in 2012, and $11.0 million 2013.

Figure ES-3 – Construction Impacts

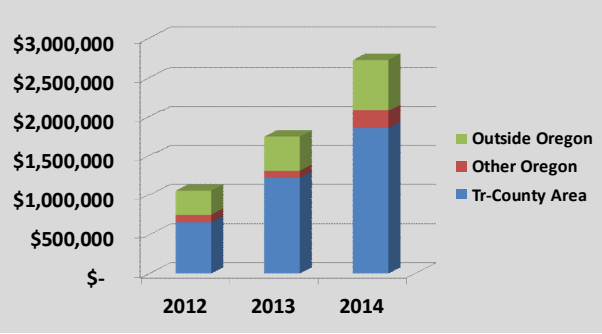


Construction spending 2014 generated direct employment of 24 jobs and direct income of $1.3 million in the tri-county region of Coos, Lane, and Douglas Counties. In the same region, Coos Bay rail line projects generated direct employment of 73 jobs in 2012 and 84 jobs in 2013, during the peak of construction. The income associated with these jobs was $3.2 million in 2012 and $4.5 million in 2013.

In the tri-county region, railroad construction spending generated estimated state and local taxes of $369,000 in 2012, $456,000 in 2013, and $118,000 in 2014. When spending in other Oregon counties is included, construction on the Coos Bay rail line generated state and local taxes of $470,000 in 2012, $571,000 in 2013, and $151,000 in 2014.

Impacts from Operations – During 2014, average employment at CBR was 14 and total employee compensation was $838,000. Payroll has grown during each year of Port ownership of the rail line, from $534,000 in 2012 to $799,000 in 2013. The average direct hourly compensation in 2014 was $27.90, or approximately $58,000 per full-time employee. All but one of these employees lives in the tri-county region.

Figure ES-4 – CBR Spending on Vendors



CBR strives to use local vendors, and approximately two-thirds of expenditures go to local businesses. CBR's purchases from vendors grew from $1.06 million in 2012 to $1.75 million in 2013 and to $2.73 million in 2014. Approximately one-fourth of expenditures went to out-of-state firms, with the remainder going to firms in Oregon outside of the tri-county region.

Operations of CBR has a strong impact on the tri-county region, with total employment of 40.0 jobs and income of nearly $1.8 million (includes direct, indirect and induced impacts) in the tri-county region. For every direct job at CBR, there are 2.1 additional jobs due to indirect and induced effects in the tri-county region.

The activities of CBR also generate state and local taxes, which are estimated at $337,000 in the tri-county area and $456,000 in Oregon (including the tri-county impacts).

Other Benefits – Annual road maintenance savings resulting from operations of the Coos Bay rail line grew from an estimated $174,000 in 2012 to nearly $766,000 in 2014. Annual savings from reduced collisions with trucks grew from an estimated $235,000 in 2012 to more than $1.06 million in 2014. The value of reduced emissions grew from an estimated $89,000 in 2012 to more than $453,000 in 2014. These benefits were calculated by multiplying the reduced number of vehicle miles travelled times a standard factor for each type of benefit.

Technical Report

The Oregon International Port of Coos Bay retained BST Associates to estimate the economic impact generated by the ongoing rehabilitation of the Coos Bay rail line and operations of the Coos Bay Rail Link ("CBR") during calendar year 2014, and to compare these results with those from 2012 and 2013.

History of the Coos Bay Rail Line

Rail service has been an essential transportation mode for southwest Oregon since 1906 when the Southern Pacific Railroad ("SP") purchased a small regional rail operation, the Coos Bay Roseburg & Eastern, and then went on to complete construction of the Coos Bay Branch Line from Marshfield (now Coos Bay) to Eugene in 1916. This rail line provided connections to the North American rail network for manufacturing operations in Coos, Douglas, and Lane Counties, and for marine terminals in the Coos Bay harbor. These connections opened new market opportunities for both domestic and international trade.

Southern Pacific continued to operate the Coos Bay line until the mid-1990s, when SP sold two Oregon branch lines to RailTex Inc., a shortline railroad operator, who then established the Central Oregon & Pacific (CORP) Railroad in December 1994. SP was merged into the Union Pacific (UP) Railroad in 1996, and RailAmerica Inc. acquired RailTex and the CORP in 2000. RailAmerica was then acquired by railroad holding company Genesee & Wyoming in October 2012.

Acquisition of the Coos Bay Rail Line

The Port of Coos Bay initially purchased the Coos Bay Swing-Span Rail Bridge in 2000. The bridge, which crosses Coos Bay from the North Spit to North Bend, provides the only route to move rail traffic from south of the bay to Eugene and rest of the mainline rail system. At the time the bridge was more than 90 years old and had deteriorated to the point that its future use was threatened.

In 2007, following decades of neglect and underinvestment by previous owners, RailAmerica and CORP closed the portion of the rail line that served Coos and western Douglas Counties, and provided only minimal service on the Lane County portion. CORP cited safety issues with failing tunnels as the reason for the shutdown. After consultations with local, state and federal officials and the impacted shippers on the line, the Port of Coos Bay led the effort to secure the Coos Bay line and then acquired funds to repair the infrastructure.

Acquiring the rail line was a lengthy process that was successful due to the unified effort of regional businesses and local, state and federal officials. In 2009/10, the Port acquired the freight rail line for $16.6 million. Funding was provided by a $5.4 million loan from the State to the Port, and $11.2 million that was reallocated from the Coos Bay Swing-Span Rail Bridge repair fund.

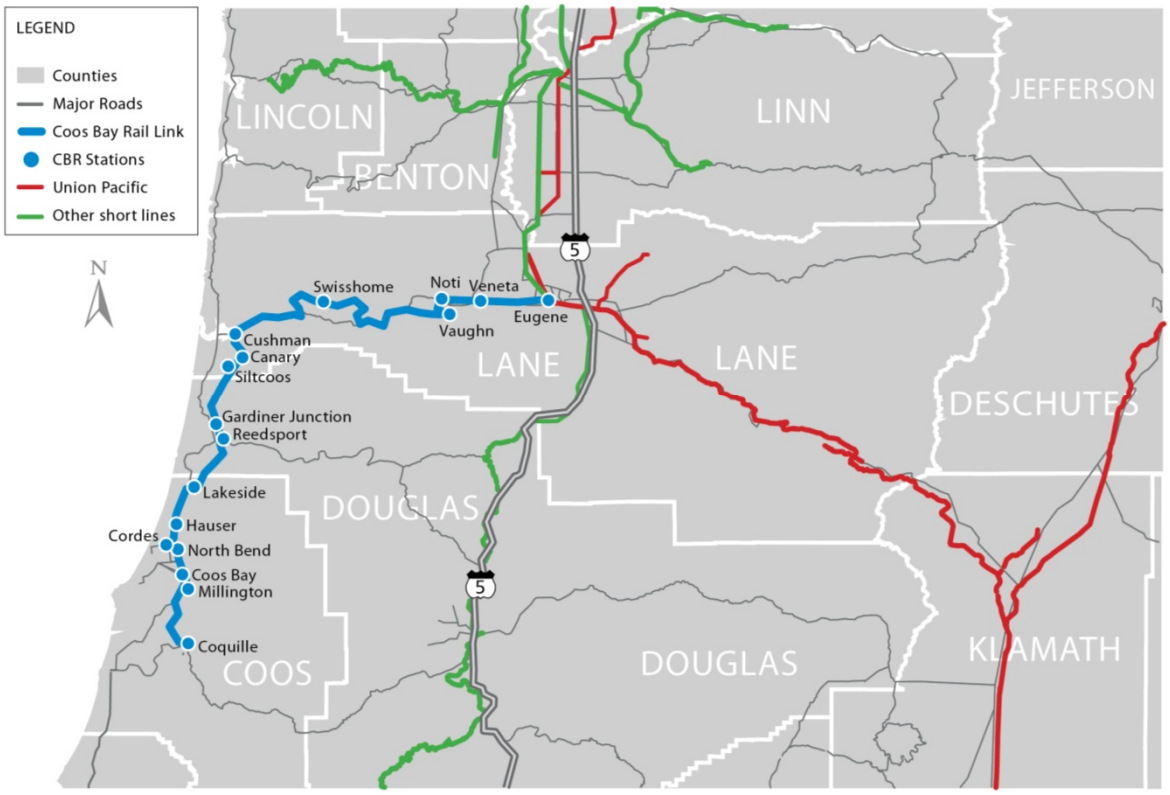
Rehabilitation of the Coos Bay Rail Line

In 2009, the Port was awarded a $2.5 million American Recovery & Reinvestment Act (ARRA) grant for tunnel repairs. The following year, 2010, the Port received a $7.8 million *Connect*Oregon III grant and a $13.5 million Transportation Infrastructure Generating Economic Recovery (TIGER) II grant to begin bridge and track rehabilitation of the rail line. In all, the Port

has raised more than $31 million to repair tunnels, bridges and trestles, track infrastructure – rail, ties, ballast and at-grade crossings, and yard facilities. Once this current phase of work is completed, the rail line will have been restored to a mix of Federal Railroad Administration Track Classifications 2 and 3. Maximum allowable speed for freight trains on Class 2 track is 25 mph, and maximum speed on Class 3 track is 40 mph.

The Coos Bay rail line now serves shippers from Coquille to Eugene. The Coos Bay rail line meets the Union Pacific and several shortline railroads at Eugene, where traffic is interchanged. The railroad is operated by the Coos Bay Rail Link ("CBR"), a division of ARG Trans Inc.

Figure 1 – Map of the Coos Bay Rail Link



During 2014, the Coos Bay line served 12 shippers (some with multiple locations):

- Lane County: three shippers
- Douglas County: one shipper
- Coos County: eleven shippers

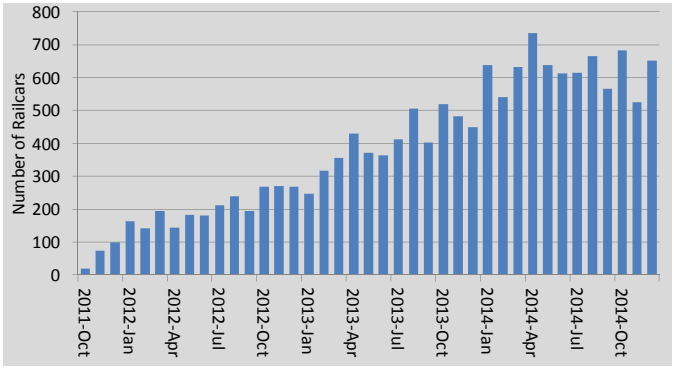
Economic Benefits

Support for Local Industry

Lower transportation cost for local industries is the most important benefit of the Port's efforts to restore rail service on the Coos Bay rail line. In order to compete for business in distant markets, employers on the Oregon Coast need cost-effective and reliable transportation options. The Coos Bay Rail Link provides such an option.

Customers of CBR rely on the railroad to ship products to market from local manufacturers, as well as to receive inputs for production. Steady growth in the number of revenue carloads handled by CBR demonstrates the value the railroad provides to these customers.

Figure 2 – CBR Revenue Railcar Loadings

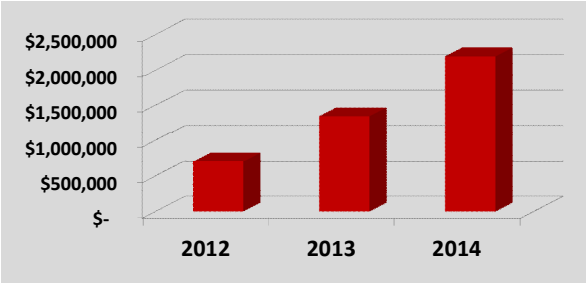


In 2012 (the first full year of service), CBR handled 2,480 revenue carloads. In 2013, the number of revenue carloads nearly doubled, reaching 4,845, and in 2014 revenue carloads jumped to 7,503.

As illustrated in Figure 2, growth slowed in 2014, but revenue railcar loadings remained high. Volumes averaged 625 revenue carloads per month in 2014, compared with 405 per month in 2013 and 206 per month in 2012. Although month-to-month variability increased in the second half of 2014, average monthly revenue carloads in the second half of 2014 (i.e. 618 per month) were only marginally lower than during the first half of 2014 (i.e. 633 carloads per month).

The shippers interviewed this analysis were all supportive of the Port's investment in the rail line, and all reported that CBR provides good service at an attractive price. Customer satisfaction is the key reason for the increase in the number of railcars handled by CBR.

Figure 3 – Transportation Cost Savings



Shipping via the Coos Bay rail line significantly reduces transportation costs for local industries. The amount saved has increased during each year of operation under Port ownership, growing from $700,000 in 2012 to more than $1.3 million in 2013, and to $2.2 million in 2014.[1] CBR carload volumes have reached sufficient levels that the railroad has been able to negotiate lower rates with the Class 1 railroads.

[1] The estimate is based upon surveys of the shippers, which described the equivalent number of trucks to handle the cargo times the average additional net cost by using CBR versus alternative trucking operations.

The firms that utilize CBR include manufacturers of forest products (lumber, plywood, woodchips, etc), dairy farmers, and others. These include:

"the restoration of the Coos Bay rail line and the service provided by Coos Bay Rail Link—CBR has caused us to increase our use of rail to meet growing customer needs"

- Forest products manufacturing
  - Allweather Wood
  - American Laminators
  - Georgia-Pacific
  - Roseburg Forest Products
  - Seneca Sawmill
  - Southport Forest Products
  - Swanson Brothers
- Dairy
  - Danish Dairy
  - Pozzi Dairy
  - Organic Valley
- Other
  - Applebee Aviation
  - Oregon Resources

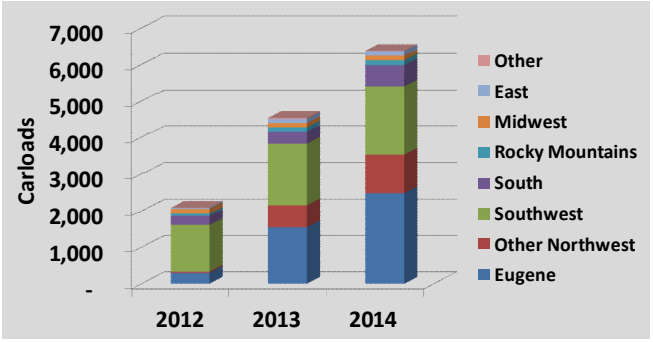
CBR provides a very important service to these firms, which was underscored by the loss of service prior to acquisition and rehabilitation of the Coos Bay rail line undertaken by the Port.

Figure 4 – CBR Handling Forest Products

In addition to shipping finished products outbound by rail, many of the customers also receive inputs by rail. For higher volume customers with rail access, shipping via the CBR is the best choice, because it maximizes efficiency at the lowest transportation cost.

Cargo that originates on the Coos Bay rail line is shipped throughout North America, as illustrated in Figure 5.

Figure 5 – Destination Region of CBR Traffic



The Southwest region (including California, Arizona, Nevada, and New Mexico) is the largest market for cargo originating on the Coos Bay rail line, accounting for approximately 30% of traffic in 2014. Eugene is reported as the first or second most important destination, but most of these cars are handed off to the UP for delivery throughout North America.

Approximately one out of six carloads originating on the Coos Bay rail line is headed to a destination in the Northwest (other than Eugene). The South accounts for approximately 10 percent of traffic, while other regions in the U.S., Canada, and Mexico account for the remainder.

"freight rail is a component of our mill operations and a much-needed competitive transportation option"

In order to compete for business in distant markets, shippers on the Oregon Coast need cost-effective and reliable transportation options. For manufacturers of forest products, the alternative to direct rail service is to truck the products to Eugene for transloading onto rail. This means that the product must be loaded onto trucks, driven to Eugene, unloaded from trucks, and loaded onto rail, which means substantially higher transportation costs.

For the dairy customers served by CBR, rail is used to receive feed such as organic corn and barley. During the period that rail service was unavailable, these products were shipped in by truck at a much higher cost. CBR provides the dairy business the flexibility to find and access quality alternative suppliers, at the most competitive price.

Figure 6 – CBR Transload Operations for Danish Dairy

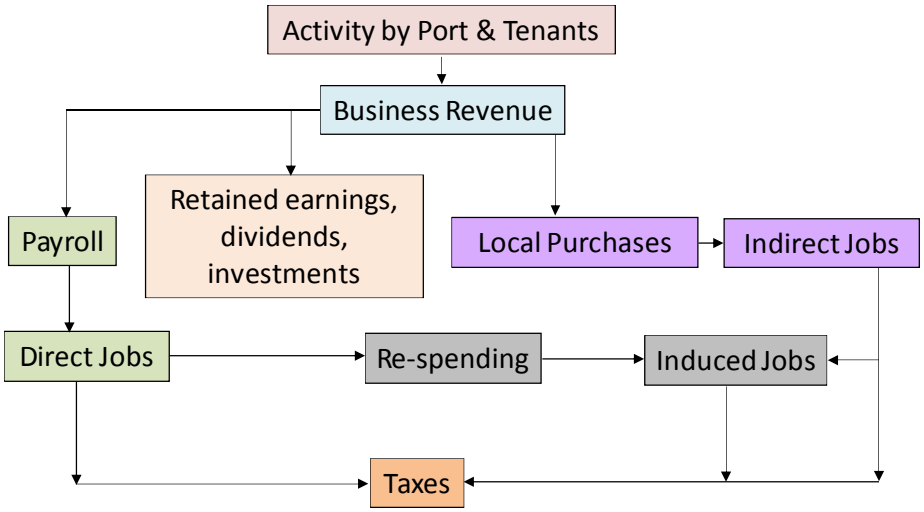
The local firms that ship via the Coos Bay rail line employ an estimated 760 workers, with payroll of approximately $37 million.

Economic Impacts

The flow of economic activities is illustrated in Figure 7. Business revenues are generated through construction activities on the rail line, as well as through the operation of the railroad. These revenues, in turn, create spending on payrolls for people working directly for contractors and the railroad, local purchases of supplies, materials, and outside labor, and retained earnings, dividends, and investments.

Indirect impacts are generated by the local purchases of goods and services by CBR and construction firms. Induced impacts result from employees (of CBR or the construction contractors) spending their income on food, transportation, housing, etc. Finally, the direct, indirect, and induced activities generate state and local taxes.

Figure 7 – Flow of Economic Impacts



For this analysis BST Associates used data from several sources as inputs to an economic impact model. The Port of Coos Bay provided information on spending for construction projects, while ARG Trans (the parent company of CBR) provided detailed information on payroll and expenditures.

The impact model was developed using IMPLAN software. The information provided by the Port and by ARG Trans was input into the software as the direct impacts, and the IMPLAN model estimated the indirect, induced, and total impacts.

Impacts were estimated for three geographic levels:

- Tri-county region (Coos County, Douglas County and Lane County)
- Oregon
- United States

BST Associates also interviewed key shippers that use CBR, seeking additional information on their activities and employment, and focusing on their alternatives without CBR rail service.

This report marks the third time that this economic analysis has been conducted, which allows the results from several years to be compared. Where possible, data for 2012 and 2013 are presented along with the 2014 results.

Impacts from Construction

Over the past several years the Port invested in rebuilding and rehabilitating the Coos Bay rail line. Projects have included repairs to tunnels, installation of new railroad ties, new ballast, upgrades to grade crossings, and rehabilitation of bridges and trestles.

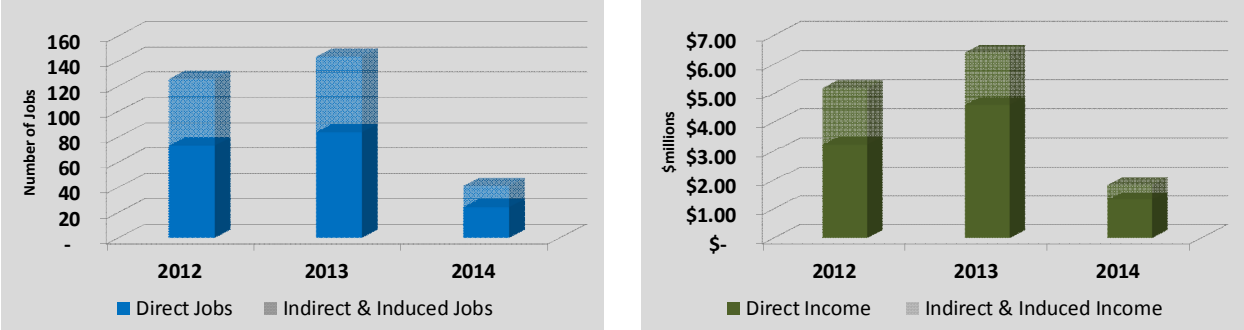
The port spent a total of $9.8 million in 2012 and $11.0 million in 2013, but construction spending dropped to $3.1 million in 2014 as projects wrapped up. Most of the spending occurred in the tri-county region, including $8.7 million in 2012, $9.7 million in 2013, and $2.8 million in 2014.

In the tri-county area, direct employment associated with rail line construction grew from 73 jobs in 2012 to 84 jobs at the peak of construction in 2013, and then dropped to 24 jobs in 2014. Including indirect and induced effects, the total employment impact in the region from

construction on the rail line grew from 125 jobs in 2012 to 143 jobs in 2013, and then dropped to 41 jobs in 2014. For every direct job related to rail line rehabilitation, there are 0.7 additional jobs due to indirect and induced effects in the tri-county region.

In the tri-county region, direct income associated with construction was $3.2 million in 2012, $4.6 million in 2013, and $1.3 million in 2014. Including indirect and induced effects, the total income impact in the region from rail line construction was $5.2 million in 2012, $6.4 million in 2013, and $1.8 million in 2014.

Figure 8 – Impact of Construction, Tri-County Region



In addition to the money spent on construction in the tri-county region, a portion of the funds were spent elsewhere in Oregon as well as other states. In Oregon, the total number of jobs associated with the Coos Bay rail construction was 136 in 2012, 162 in 2013, and 46 in 2014. In the U.S., the total jobs impact was estimated to be 189 in 2012, 217 in 2013, and 62 in 2014.

In Oregon, the total income associated with rail construction grew from $6.6 million in 2012 to $8.0 million in 2013, and then dropped to $2.3 million in 2014. In the U.S., total income associated with the construction grew from $10.3 million in 2013 to $11.3 million in 2013, and then dropped to $3.2 million in 2014.

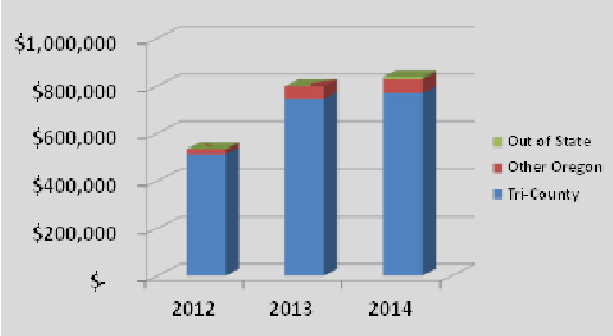
The activities associated with the Coos Bay rail line rehabilitation also generated state and local taxes, which are estimated at $132,000 in the tri-county area and $168,000 in Oregon (including the tri-county impacts). In 2013 construction-related taxes were estimated to be $456,000 in the tri-county area and $571,000 in Oregon; in 2012 they were estimated to be $369,000 in the tri-county area and $470,000 in Oregon.

Impacts from Operations

CBR had an average of 14 employees in 2014, all but one of whom lived in the tri-county region. In both 2012 and 2013 CBR had 13 employees, with all but one living in the tri-county area

Total payroll grew from approximately $534,000 in 2012 to $838,000 in 2014; payroll for local employees (in the tri-county region) grew from $512,000 in 2012 to $768,000 in 2014. The non-local payroll is earned employees from other parts of Oregon.

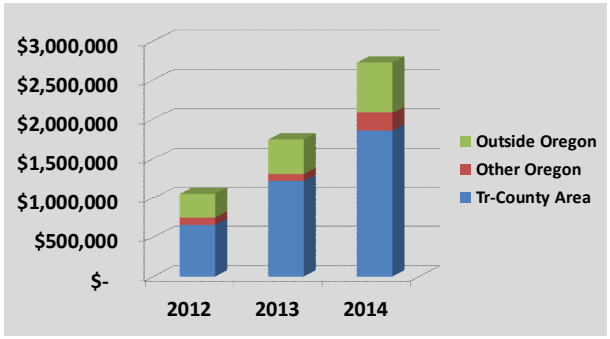
Figure 9 – CBR Employee Payroll



The average hourly compensation for CBR employees is approximately $27.80 per hour. This translates to annual compensation of $58,000, based on an average of 2,080 hours worked per year. In comparison, the median household income in Coos County is $37,940, in Douglas County is $40,524, and in Lane County is $42,931.

Direct spending on vendors by CBR grew from approximately $1.06 million in 2012 to $2.3 million in 2014. The majority of this spending went to vendors in the tri-county region; local spending grew from $0.66 million (62% of the total) in 2012, to $1.22 million (70% of total) in 2013, to $1.86 million (68% of total) in 2014.

Figure 10 – CBR Spending on Vendors



Vendors in the rest of Oregon accounted for 8.6% of CBR spending in 2012, 4.9% in 2013, and 8.1% in 2014, while the amount spent grew from $91,000 in 2012 to $222,000 in 2014.

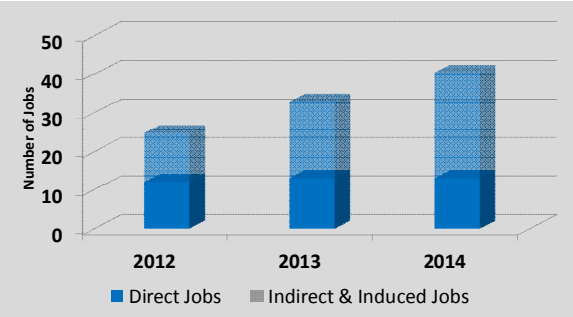
Spending on vendors outside of Oregon fell from approximately 29% of total expenditures in 2012 to 25% in 2013 and to 24% in 2014. The total amount spent on out-of-state vendors grew from $310,000 in 2012 to $443,000 in 2013 and to $653,000 in 2014.

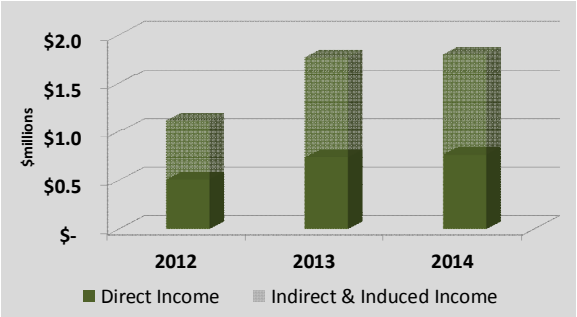
CBR has a strong impact on the region, with total[2] employment of 40.4 jobs and income of nearly $1.8 million. For every direct job at CBR, there are 2.3 additional jobs due to indirect and induced effects in the tri-county region.

The economic impact of CBR increases along with the size of the impacted region. The total impacts in Oregon are estimated at 46.3 jobs and income of $2.0 million. The total impacts in the U.S. are estimated at 64.0 jobs and income of $3.0 million.

[2] Includes direct, indirect and induced effects.

Figure 11 – Economic Impact in the Tri-County Region from CBR Operations





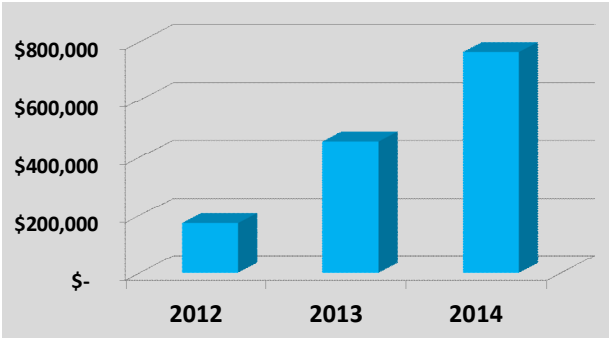
Source: BST Associates

Operation of CBR generates state and local taxes. In the tri-county area these grew from an estimated $152,000 in 2012 to $240,000 in 2013 and to $337,000 in 2014. In Oregon (including the tri-county impacts) they grew from an estimated $179,000 in 2012 to $303,000 in 2014 and to $456,000 in 2014.

Other Operational Benefits

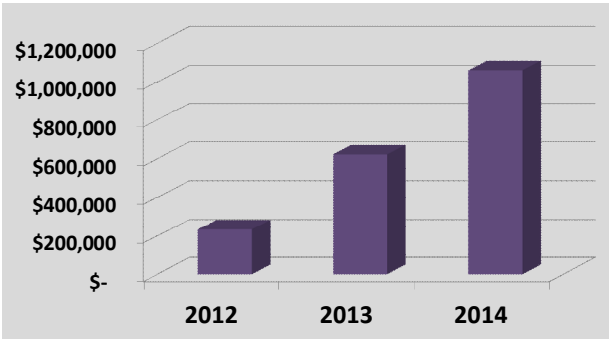
Operation of CBR provides several other types of benefits that can be quantified. In addition to the transportation cost savings discussed above, these include reduced highway maintenance costs resulting from decreased truck traffic, improved highway safety, and a net reduction in emissions.

Figure 12 – Reduced Highway Maintenance



Annual road maintenance savings resulting from operations of CBR grew from an estimated $174,000 in 2012 to nearly $766,000 in 2014. Road maintenance benefits were estimated by multiplying truck miles travelled times the estimated maintenance cost per vehicle mile travelled ($0.1714 per vehicle mile travelled, or VMT[3]) .

Figure 13 – Net Safety Benefit



Annual savings resulting from reduced collisions with trucks grew from an estimated $235,000 in 2012 to more than $1.06 million in 2014. Safety benefits were estimated by multiplying truck miles travelled times an estimated collision-reduction value ($220 per 1,000 VMT[4]).

[3] Source: FHWA Highway Cost Allocation Study.

[4] Source: Oregon Department of Transportation.

The EPA assigns a value to the emissions of various pollutants, and operations of CBR produce a net decrease in these emissions. Based on the EPA standard values and the reduction in truck miles travelled, the benefit of reduced emissions grew from an estimated $89,000 in 2012 to more than $453,000 in 2014.

Figure 14 – Value of Reduced Emissions

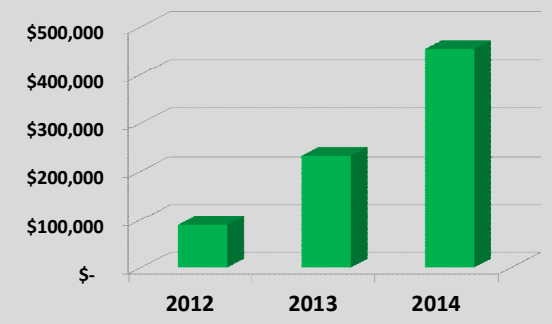
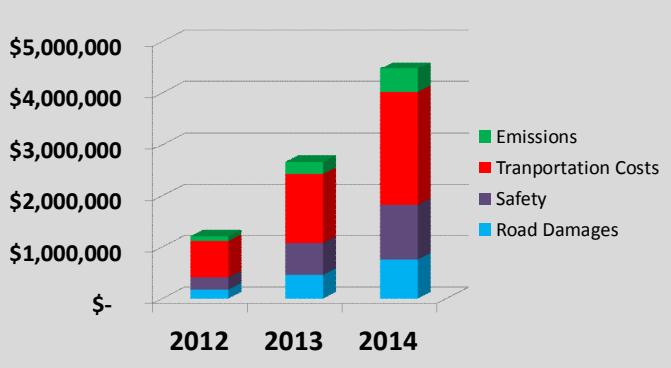


Figure 15 – Combined Value of Related Benefits



The combined value of transportation cost savings, reduced road damages, increased safety, and reduced emissions grew from an estimated $1.20 million in 2012 to $4.47 million in 2014.

Appendix

Description of Implan Model

Minnesota IMPLAN Group, Inc. or MIG, Inc. was founded in 1993 by Scott Lindall and Doug Olson as an outgrowth of their work at the University of Minnesota starting in 1984. This developmental work closely involved the U.S. Forest Service's Land Management Planning Unit in Fort Collins, Colorado, and Dr. Wilbur Maki at the University of Minnesota.

Creating regional input-output models requires a tremendous amount of data. The costs of surveying industries within each region to derive a list of commodity purchases (production functions) are prohibitive.

IMPLAN was developed as a cost-effective means to develop regional input-output models. The IMPLAN accounts closely follow the accounting conventions used in the "Input-Output Study of the U.S. Economy" by the Bureau of Economic Analysis (1980) and the rectangular format recommended by the United Nations.

The IMPLAN system was designed to serve three functions: (1) data retrieval, (2) data reduction and model development, and (3) impact analysis. Comprehensive and detailed data coverage of the entire United States by county and the ability to incorporate user-supplied data at each stage of the model building process provide a high degree of flexibility, both in terms of geographic coverage and model formulation.

The IMPLAN database, created by MIG, Inc., consists of two major parts: (1) a national-level technology matrix and (2) estimates of household and business sector activity for final demand, final payments, industry output, and employment for each county in the United States, along with state and national totals. MIG, Inc. develops a new database annually.

There are two components to the IMPLAN system: the software and the database. The database provides all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final demand changes.

There are more than 1,500 users of the IMPLAN model, including:

- Federal government (Agricultural Statistics Service, Animal & Plant Health Inspection Service, Appalachian Regional Commission, Argonne National Laboratory, Army Corps of Engineers, Bureau of Economic Analysis, Bureau of Land Management, Bureau of Reclamation, Economic Research Services, Environmental Protection Agency, and Federal Reserve Bank, among others).
- State government (several departments in Oregon State including the Department of Community Development, Department of Environmental Quality, Department of Health, Department of Revenue, Department of Transportation, and Office of Insurance Commissioner, among others).
- Colleges and universities (Oregon State University and Eastern Oregon University, among others).