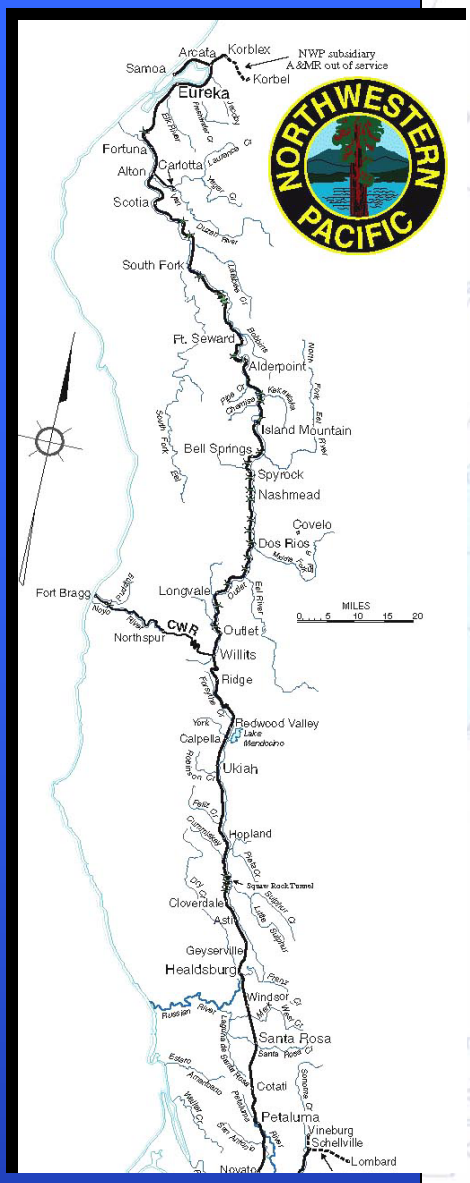


The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad

FINAL

Humboldt Bay Harbor, Recreation and Conservation District

PB Ports & Marine

Parsons Brinckerhoff Quade & Douglas, Inc.

In Association with
BST Associates

January 2003

PB 100 YEARS

EXECUTIVE SUMMARY

Introduction

The North Coast Railroad Authority (NCRA) and the Humboldt Bay Harbor, Recreation and Conservation District (Port) operate in a unique, interdependent relationship on California's north coast, between the Bay Area and Eureka/Arcata. The Port views the rail line as vital to its long-term success as a maritime center, and the NCRA views the Port as a key potential market for its operation as well. With Port volumes in decline and the rail line currently out of service, both agencies are interested in identifying market and operating scenarios that will enable them to restore service for the benefit of the region.

As a result, two companion studies have been commissioned to evaluate feasible scenarios for revitalizing each operation: the *Port of Humboldt Bay Harbor Revitalization Plan*, which will be completed in February 2003, and this study, *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad.* The Humboldt Bay Harbor, Recreation and Conservation District is the contracting agency for the two studies; however, numerous other funding agencies and stakeholders are participating in the study efforts.

Northwestern Pacific Railroad Background

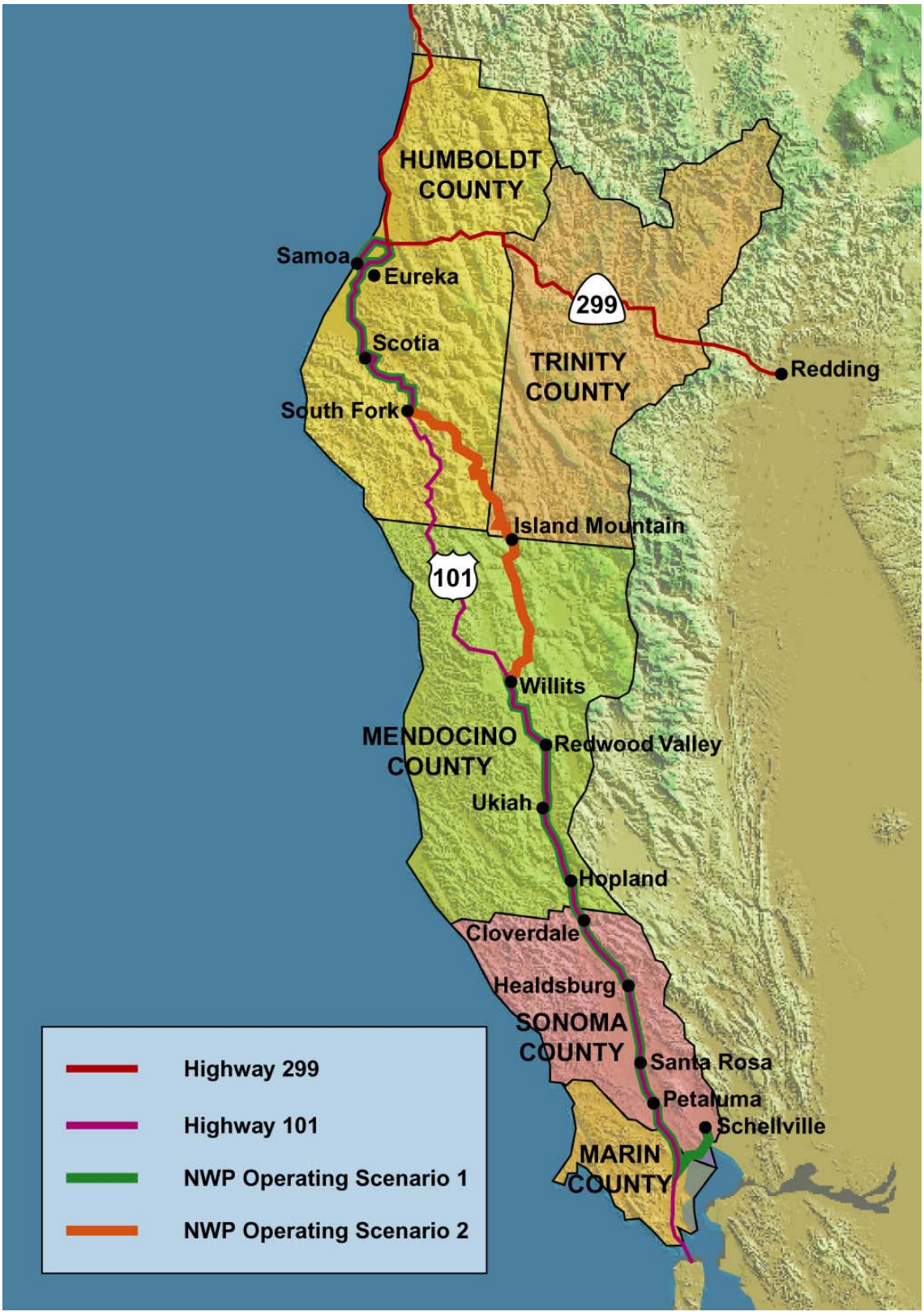
As stated in the North Coast Railroad Authority's Strategic Plan for Resumption of Viable Rail Service for California's North Coast (April, 2001):

> Rail service on the North Coast dates well back into the 19th century. Completion of the connection between Eureka and San Francisco was attained in 1914. Designated the Northwestern Pacific Railroad (NWP), it was jointly owned by Santa Fe and Southern Pacific and operated independently until 1929 when it became exclusively part of Southern Pacific.
>
> Southern Pacific sold the portion of the railroad north of Willits in 1984. Named the Eureka Southern, it operated until December 1986 when it declared bankruptcy. A Federally appointed bankruptcy trustee managed the railroad until 1992. Southern Pacific continued to operate the NWP south of Willits through an operating agreement with the California Northern Railroad.
>
> In 1989 the California Legislature created the North Coast Railroad Authority (NCRA). Utilizing State provided funding this new authority acquired the former Eureka Southern out of bankruptcy in 1992. The NCRA acquired that portion of the NWP between Willits and Healdsburg from Southern Pacific in 1996.
>
> The remaining portion of the NWP south of Healdsburg is now owned by the Northwestern Pacific Railroad Authority (NWPRA), a joint powers agency comprised of NCRA, the Golden Gate Bridge, Highway, and Transportation District, and the County of Marin. Freight service and related maintenance of this

portion of the railroad is the responsibility of NCRA under an agreement with NWPRA**.**

With the exception of sporadic service provided through 2001 on the southern end of the railroad between Penngrove and Schellville, there has not been significant freight activity along the corridor since 1997, which was the last year the entire 300-mile line was in operation.

Figure S-1
The Northwestern Pacific Railroad and Operating Scenarios



Intercity passenger service has operated in this corridor since the early 1900's. However, the service began to wane in the 1920's as the roadway system expanded and automobile usage increased. In 1941, most of the train service was replaced by buses that could cross the Golden Gate Bridge into San Francisco. Any remaining intercity passenger train service was eliminated in 1971. Since then, the only passenger service in the corridor has been the operation of excursion trains.

Due to its topography, remoteness and other factors, the Northwestern Pacific Railroad is one of the most difficult railroads in the United States to maintain. When the Southern Pacific Railroad entered abandonment proceedings for the line in 1982, they estimated that the Northwestern Pacific cost them 2 to 3 times their normalized maintenance costs for all other Southern Pacific railroads across the country. Over the ensuing 20 years there was no evidence that the railroad became any less expensive to maintain. In fact, given the deferred maintenance on much of the line, the capital and maintenance costs that are currently under development by the NCRA will reflect these higher capital and maintenance costs.

Given the recent state of disrepair, the Northwestern Pacific Railroad has had a very difficult time keeping the line open and providing consistent freight service. In the last few years (1996-1997) of operation of the complete 300-mile line (Samoa to Shellville), the railroad handled approximately 6,800 cars for one year. The service was considered to be unreliable and slow. In fact, when the storms in 1998 hit, several customers' shipments were trapped on the railroad, never making it to market.

Market Analysis

Economic Setting

The economic setting along the NWP corridor is marked by low growth and decline in the northern end and relatively robust growth to the south. The region's (Humboldt, Mendocino and Sonoma counties) population base is expected to reach 962,850 persons in 2030, which amounts to annual growth of 1.0% to 1.5%, depending on the decade being evaluated. Humboldt County is expected to grow much slower than the other two counties (i.e., 0.3% to 0.5% versus 1.1% to 1.7% per year).

In Humboldt County, employment in the manufacturing sector increased from 5,700 jobs in 1983 to a peak of 7,000 in 1996 before falling significantly to 5,300 in 2001. Most (64%) of the manufacturing base is composed of forest products manufacturing. However, the manufacturing sector is diversifying into other miscellaneous durable (9% of manufacturing employment) and non-durable (26% of manufacturing employment) goods production.

In Mendocino County, employment in the manufacturing sector increased slightly from 4,700 jobs in 1983 to 4,820 in 2001. A substantial portion (42%) of the manufacturing base is also composed of forest products manufacturing. However, the manufacturing

sector is more diversified in Mendocino County than in Humboldt County. Approximately 22% of manufacturing employment is in other durable manufacturing and 36% in non-durable (including 1,700 jobs in food processing).

Sonoma County's proximity to San Francisco Bay has resulted in a different, more diverse employment base. Employment in the manufacturing sector increased substantially from 15,600 jobs in 1983 to 32,300 in 2001 or at a rate of 4.1% per year. Lumber and wood products only represented 1,000 jobs in 2001, down from a peak of 2,200 in the late 1980s/early 1990s. Most of the manufacturing base is in high-tech (10,600 jobs in scientific instruments and 2,900 in electronics) and food processing (8,700).

Methodology

The objective of the freight rail demand assessment was to develop estimates and forecasts of potential freight rail service on the NWP, and identify potential key users of the freight rail service. The first step in analyzing the freight rail market is data analysis. The objective of this task was to summarize the economic conditions within the corridor and to identify potential freight shipment generating sectors. The second step was to identify and conduct interviews with existing shippers and likely future candidates along the corridor. A survey form was developed, reviewed with the TAC and refined (see Appendix A for the interview questions). An interview list was prepared and then screened to identify the most likely users of the system. As a third step, interviews were undertaken with truckers and rail carriers serving or connecting to the system to determine existing levels of service to the impacted area and the potential for additional service.

Freight Demand

Low, Medium, High and "Most Likely" Demand

As a part of the interviews, shippers were asked to define how many rail cars they would be willing to move on the NWP system if the service provided a consistent, reliable, and cost effective level of service. They were asked for a specific number of rail cars that they would ship, which then became their "medium" forecast, and then bounded that estimate with "low" and "high" estimates. Accordingly, the low, medium and high demands have an implicit probability assigned to them:

- **The low demand** probability is conservative,
- **The medium demand** probability is consistent with what could be expected from the shipper in the short term,
- **The high demand** probability is an optimistic forecast, including:
  - Products that had not previously moved by rail in significant volumes (i.e., solid waste, aggregates, port traffic) were only included in the high scenario.

  - The high scenario assumed that mills that had been recently shut down (Blue Lake Forest Products and Eel River Sawmill) would be restarted.
- **The most likely demand** is calculated based on the following assignment of probability:
  - 20% probability of the low scenario occurring,
  - 70% probability of the medium scenario occurring, and,
  - 10% probability of the high scenario occurring.

These probability estimates are based upon interview results and consultant judgment. The highest probability is assigned to the medium scenario, since these estimates were the mean response of the interviews. The lowest probability was assigned to the high scenario because of the increased uncertainty of its occurrence, especially with respect to the large potential volumes that are imbedded in the high forecast, as discussed above.

Freight Demand Summary

The following table summarizes the commodities that would most likely be shipped over the Northwestern Pacific. Descriptions of the following market sectors follow.

Table S-1 – Estimated Rail Traffic from Rail Shippers by Commodity (full rail cars)

Category	Actual 96/97*	Low	Medium	High	Most Likely
Feed Mills	435	724	892	1,060	875
Forest Products Mills	5,324	6,933	9,979	13,049	9,676
Aggregates	834	500	1,153	7,270	1,634
Solid Waste[1]	3	-	-	1,008	101
Miscellaneous	257	244	367	3,481	654
Total	6,853	8,401	12,391	25,868	12,940

Source: Interviews, BST Associates

*Total Railcars for 96/97 are a best estimate based on records from the operating railroads. At that time there were two operating railroads the Eureka Southern Railroad and the California Northern.

[1] The solid waste carloads were not included in the financial analysis due to the direct capital and operating expenses associated with the service.

The market study assumes that the level of service provided by the newly proposed rail service would be superior to the service provided in 1996/97 and at rates that provided benefit (i.e., cost savings) to local shippers. The analysis assumes that it would take a few years to demonstrate that the service was improved and that during these years, market share would increase to 100% of market potential under low, medium and high scenario estimates.

Forest Products

Forest products mills are expected to continue to be the mainstay of the railroad for the foreseeable future because of the volumes, commodity characteristics and distances involved. Forest products generated 4,482 outbound and 756 inbound rail cars in

1996/97 or more than 75% of all traffic. Survey results indicate that these firms could generate between 7,000 and 13,000 railcars per year, depending on the operating scenario. The potential traffic in this report includes both inbound and outbound traffic and assumes that the level of service and rates that the NWP would offer would capture a larger market share than the operating railroad did in 1996/97.

Feed Mills

The feed mills are located in the south end of the corridor at Petaluma and Novato. These mills obtain grain from the Midwest (mostly corn, but also soy, barley, etc.) and Canada (canola) in bulk hopper cars. Most of the product comes via the Union Pacific (UP) Railroad to Napa Junction with transit to Petaluma by California Northern Railroad and the NWP. The surveys indicate that feed mill operators could generate 724 to 1,060 railcars per year of freight traffic on the NWP.

Aggregates

Aggregate production along the NWP corridor in Humboldt and Mendocino Counties has typically been used to serve local community demand in the past. Small volumes of aggregate moved on the railroad in 1996/97, mainly serving the local communities and industries. A market could exist in the Bay Area for aggregates from the North Coast, depending on a variety of environmental, economic and competitive factors. On the high side, aggregate shippers could generate up to 400,000 cubic yards or 7,270 railcars per year of traffic.

While there are at least two proposals to restart service on the NWP based on aggregate carloads, given the confidential nature of these proposals this study was not able to include these forecasted volumes in the financial analysis, however this study does explore the influence of significantly higher aggregate volumes in the Sensitivity Analysis section (Section 11.2 and later in this summary). The study goes as far as it can to identify the potential for aggregates but there are significant uncertainties, including environmental issues and price of the delivered product. Due to these uncertainties, the potential for aggregates was only placed in the high scenario and was limited to the known potential quantities that are permitted and above the level of local demand.

Solid Waste

Humboldt County generates 80,000 tons of solid waste per year (approximately 200 tons per day Monday through Friday), which is growing at the same rate as population growth. The County was interested in having all of this product move by rail. However, the existing facility is not served by rail and there is no way to bring rail to the existing facility without relocating other businesses or crossing a wetland. If logistical, economic and environmental issues can be addressed, solid waste from Humboldt County could generate up to 1,000 railcars per year of freight traffic.

The solid waste authority and its vendor indicate that they could use rail if it were available and cost effective (including all costs such as drayage to rail served locations). Due to these uncertainties, the potential for solid waste was only placed in the high scenario. However, the shift to rail would be expensive and would require a long-term commitment (approximately $6 million capital outlay). The County would put waste in 12-foot high containers (64 cubic yards per container) and could get 4 containers per flatcar. They would need service 5 or 7 days per week. It is uncertain whether rail is still viable but, if it were, it would require direct access to Eureka, not a reload facility at Willits. Due to the high capital and operations costs associated with providing service, solid waste was not carried forward in the financial and economic analysis.

Freight Competition Issues

The success of the NWP depends significantly upon its relationship with the UP Railroad. In discussions with the UP Shortline coordinator, it was indicated that the UP supports re-establishing rail on NWP. UP is, however, concerned about outstanding expenses on the railcars that have been trapped on the north end of the rail line since the Eel River Canyon section was washed out. UP wants to negotiate a solution for this problem in the near-term future. UP's Redding reload facility serves much of Northern California in addition to the Humboldt area, including lumber shippers north and east of Redding. Consequently, the operation likely enjoys substantial economies of scale, both in the reload operation itself and in terms of UP's train operations. The development of a Willits reload operation could likely expect significant competition from Redding, based on that operation exercising and protecting its economies of scale. The only way to attract shippers from Humboldt to a reload facility at Willits/Redwood Valley would likely be with major price incentives.

Truck Competition

Overall given the inactivity of the NWP over the last few years, many of the current shippers have come to rely on trucking as their primary mode of transportation. This has been accounted for in the revenue estimates for the NWP in that there is a "ramp-up" period for the transfer of shipments from truck to rail. The overriding assumption for this financial analysis is that the rail tariff is competitive with the trucking industry. Regional trucking companies do not see the overall transportation market growing and would see the reintroduction of the NWP as direct competition.

Port-related Freight Opportunities

Based on the trade and competitive conditions in West Coast marine cargo markets and the rail shipper surveys, the most likely areas of opportunity for rail-related port traffic are marine industrial cargoes, inbound forest products, and outbound aggregates. Given the availability of the 38-foot channel access, waterfront sites, relatively low-cost land, utilities, labor, a highly livable environment, and serviceable highway and rail access, the Port of Humboldt Bay should be competitive for certain marine industrial project opportunities. While rail and highway access may be more limited than at some other

locations, it should be sufficiently serviceable for industries attracted to Humboldt Bay's other positive attributes for manufacturing. Success in attracting a new marine industrial tenant will not necessarily come quickly, requiring three to five years or more for site preparation, marketing and the right opportunity to materialize. Rail volumes from a marine industrial plant could range up to about 400,000 tons, or 3,000 railcars per year.

Passenger Demand Methodology

In general, the process for evaluating the feasibility of each type of passenger service was based upon characteristics of the NWP corridor and the comparison of these characteristics to similar service that operates elsewhere in California or previously within the NWP corridor. Traditionally, viability of intercity and commuter rail is influenced by travel patterns, population densities and travel times. This evaluation utilizes the work previously completed for the Sonoma Marin Area Rail Transit (SMART) Commission corridor in March 2002 and on *the Feasibility of Intercity Rail Passenger Service on San Francisco Bay Area – Eureka Corridor, No. 01D290, Phase I Final Report*. The viability of excursion rail was also considered. The market for excursion rail is different than the market for intercity and commuter. Excursion rail focuses on trips that are made for the experience itself, not for travel between one point and another. An excursion trip should be considered "recreation" instead of "transportation." These trips are less time - and cost-sensitive. Also, the equipment used as well as entertainment/attractions on-board and off-train are important.

Passenger/Excursion Opportunities

The estimation of ridership levels for each of the operating scenarios was based on the ridership levels experienced by the other excursion railroads profiled in this report. Passenger volumes at six other excursion operations in Northern California ranged from about 90 to over 300 per day, or 7,000 to 200,000 per year. Based on this data and other analyses, excursion demand was estimated to range from less than 6,000 passengers per year to over 100,000 depending on the operating scenario and marketing outlook. Due to the relatively low population density along travel times on the NWP corridor, intercity passenger service demand was not found to be sufficient to warrant further analysis.

Market Analysis Conclusions

The freight market potential along the NWP corridor is relatively flat. Overall the greatest opportunity for growth in rail related shipments are in solid waste, aggregate and port-related marine industrial activities. The demand for intercity passenger rail on the corridor is fairly limited and would not prove to be a cost effective endeavor. Commuter rail is currently under study by the SMART commission and could prove to be viable at some level. However, there is little viability for commuter rail outside of the San Rafael to Cloverdale corridor. Excursion rail would be the most viable form of passenger related rail service in the NWP corridor besides the above-mentioned commuter. There are several opportunities for excursion routes throughout the NWP corridor.

Operations Analysis

Operating Scenarios

Throughout the document there are references to "FRA Class 1, 2 and 3" conditions, these classes are dictated by the federal law CFR 213.9. These classes are a reference to the condition of the track, its geometry and its associated maximum allowable speed. The following table summarizes the FRA classes and their associated speeds.

FRA (CFR 213.9) Classes of Track and Associated Maximum Speeds

FRA Class of Track	Max. Freight Train Speed	Max. Passenger Train Speed
Class 1	10 mph	15 mph
Class 2	25 mph	30 mph
Class 3	40 mph	60 mph
Class 4*	60 mph	80 mph
Class 5	80 mph	90 mph

*Under federal regulation, signalization is required if freight trains operating at speeds greater than fifty miles per hour and passenger trains greater than 60 miles per hour. Since the NWP currently does not have signalization, it would have to comply with these speed restrictions, regardless of the class of track.

In conjunction with the NCRA, two operating scenarios were developed and applied to the market forecasts.

- **Operating Scenario I (OS I):** involves a split operation, with rail service from Willits south and South Fork north, leaving the majority of the Eel River canyon out of service. Under this operating scenario, there would be direct train service to all shippers between Willits and Schellville and customers north of Willits with a transload facility in the Redwood Valley area. On the north end of the railroad there would be service provided between South Fork and Samoa. This would allow for excursion operations and enable any shipper along the corridor to connect with the Port of Humboldt Bay to ship to other destinations by water. OS I would be the easiest to start up and consequently it will be starting up in a relatively short time frame. For the financial model it is assumed that service on this section of the railroad would begin operating in the fourth quarter of 2003. (See Figure S-1)

- **Operating Scenario II (OS II):** the entire route from Schellville to Samoa would be restored. This would allow basic operations through the Eel River Canyon connecting both outbound and inbound freight to the region. (See Figure S-1)

RTC Operations Modeling

Using track charts provided by the NCRA and train movements assumptions derived from the operating scenarios above, PB built a dynamic rail simulation model using the Berkeley Simulation Software Rail Traffic Controller (RTC). This model accurately replicates the physical characteristics of the rail infrastructure (track lengths, grade,

curvature, and switch geometry), replicates the track-train dynamics over the infrastructure, and simulates train operations based on actual meet, pass and overtake logic used by railroad dispatchers. The simulation was used to model train operations, train miles, train speeds, fuel consumption and other factors used in the analysis.

Financial Analysis

All of the market data, operating scenario data, revenues and O&M costs were built into a financial analysis model that was used to assess financial results under a variety of operating and market scenarios. Volumes were converted to revenues using previous tariff rates and O&M costs were developed based on industry standard costs, regional railroad costs and other factors.

Revenue Assumptions

Freight

Given that there has not been freight service on the railroad for several years, it is assumed that it will take time to regain freight volumes from the shippers based on proven, consistent service. To this end, this study has discounted the forecasted carloads in the first five years for each operating scenario to reflect this period of market penetration. A percentage discount was applied to each year's forecasted volume, for example under Operating Scenario I, in 2005 the total carloads would be 75% of the forecasted total. This market penetration period is summarized in the table below:

Table S-2
Carload Increase Schedule for Freight Service

Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'28
OS I	40%	50%	75%	75%	100%	100%	100%	100%	100%	100%
OS II				40%	50%	75%	75%	100%	100%	100%

For the years beyond 2010, 0% annual growth in carload volumes was assumed for the next 20 years. This 0% growth rate is based on the economic analysis that shows a stagnant or diminishing amount of freight being produced by the three county region. The revenue forecast is based on the January 2000 Freight Tariff NWPY 8000, the January 2001 Freight Tariff NWPY 1000, and interviews with NWPY marketing staff[1]. Consistent with the zonal system used in the above freight analysis, the revenue rates for each of the cars by type and destination were calculated. For years 2010 and on, based on a FRA study of Class 1 railroad tariff growth, a 2.85% per year increase in tariff rates was applied to be consistent with the Revenue Cost Adjustment Factor of the Surface Transportation Board.

Passenger

[1] Interview with Bill Bremer, NWPY, 11/26/02

For all excursion trips between Eureka and Samoa, the fare was assumed to be $15 for adults and $10 for children. From Eureka to South Fork, the fare was assumed to be $30 for adults and $16 for children. This fare structure was based on interviews and analysis of other excursion railroads throughout Northern California. It was assumed that there would be 1% growth in ridership per year. Additionally, it was assumed that inflation would be 2.85% and fares would track with inflation.

O&M Cost Assumptions

In order to create a representative cost model for the Northwestern Pacific Railroad, this study, created a railroad organization that would represent the necessary positions to operate the railroad. These assumptions have been refined and revisited throughout the study process to reflect changes in staffing and service levels.

In addition to organizing the railroad geographically, the railroad was organized into the following 'cost centers': transportation, mechanical, equipment/vehicles, maintenance of way, insurance, general and administrative, fuel, locomotive leases and car hire/demurrage.

The following elements were not included in the cost model:

- Current or past financial obligations of the NCRA, such as interest;
- Ownership of any equipment;
- Depreciation; and
- Any revenues from miscellaneous sources such as easement leases.

In order to make the cost model represent the most current wage and per unit costs, the study drew upon the following sources:

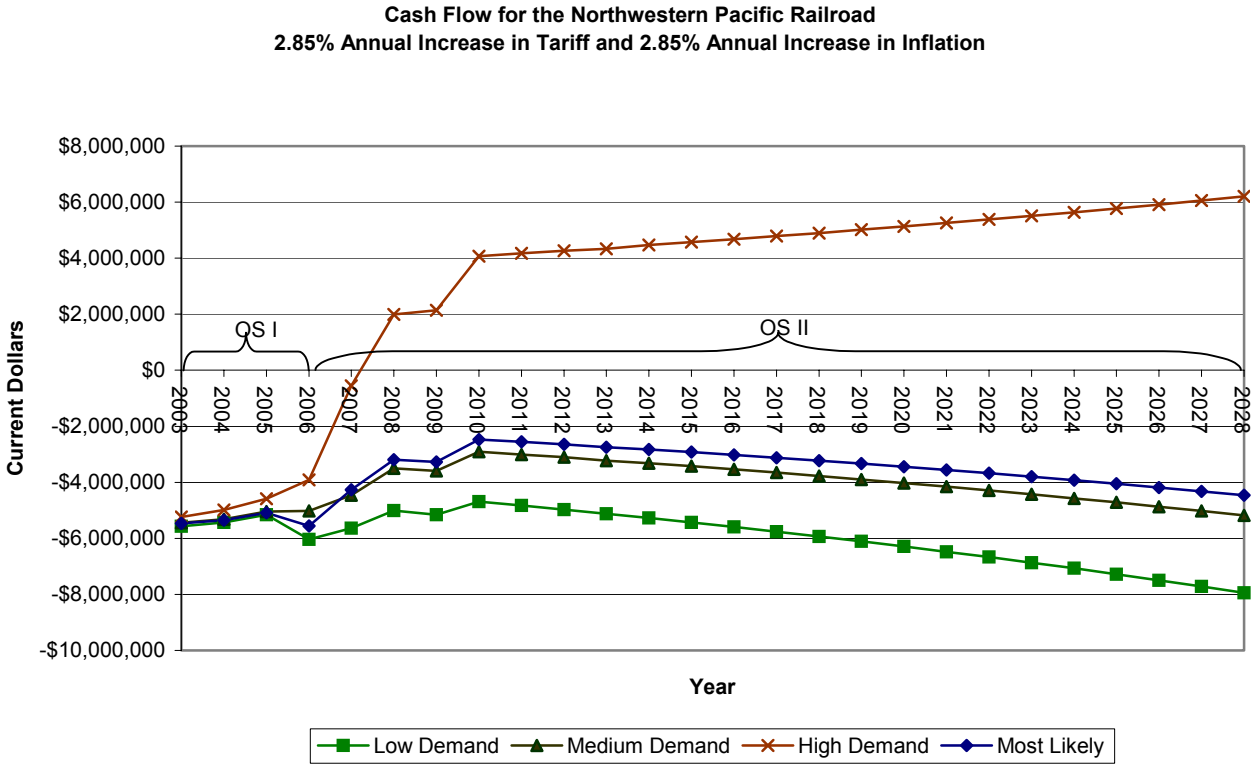
- The Sonoma Marin Rail Plan, 1999;
- The Northwestern Pacific Year 2000 Budget;
- 1998 Metro North (NY) Budget;
- Interviews with industry experts;
- Parsons Brinckerhoff staff expertise;
- NCRA staff expertise;
- Amtrak; and
- Willdan/HNTB, Northwestern Pacific Capital Assessment.

Since the excursion rail service is based on the use of NWP crews and dispatching, and locomotive rental, the costs are fairly straightforward. It will just be an incremental cost for the use of the above-mentioned cost centers (e.g. transportation and equipment expense) that will be passed along to the passenger franchisee.

Conclusions

Using the above low, medium, high and most likely demand levels, combined with operating scenarios one and two, the "pro-forma" results are represented in the following chart:

Figure S-2



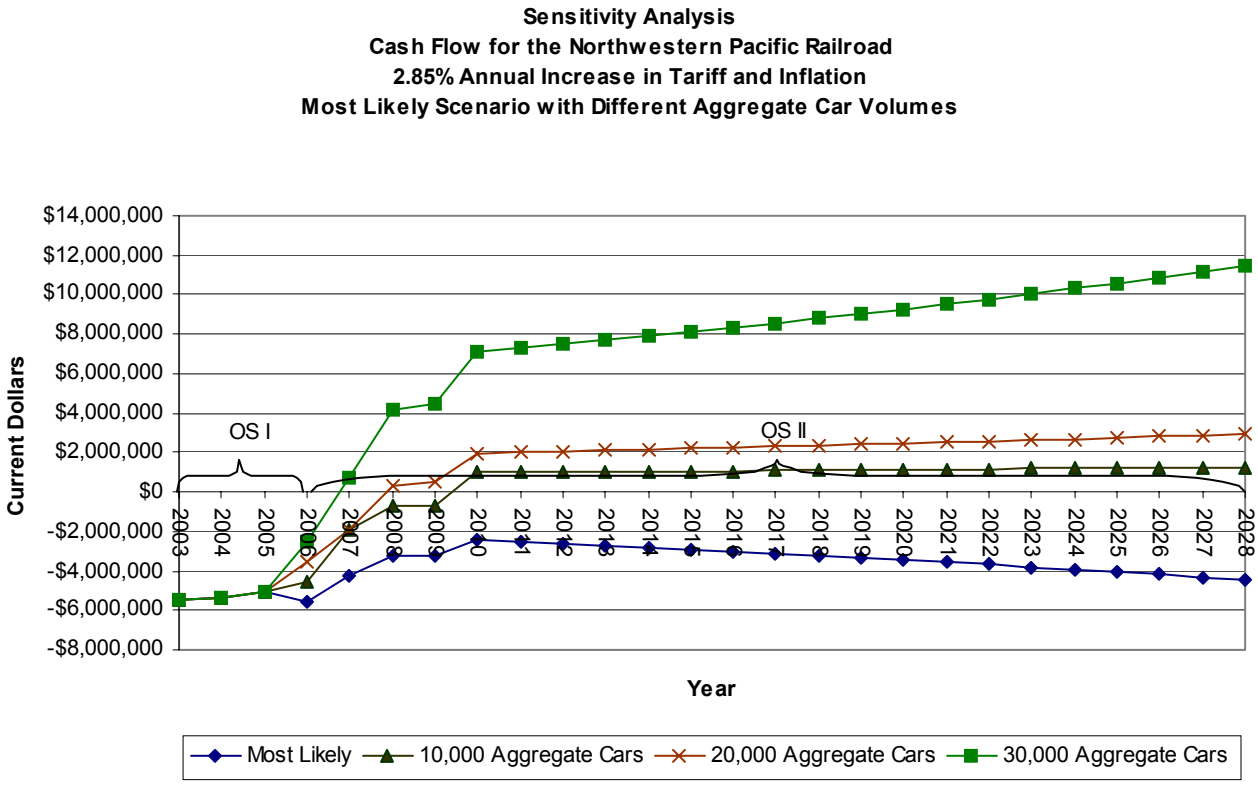
Under the low demand scenario, the railroad will not breakeven for the life of this analysis. If the low demand stays at the same level for the next 25 years, it will not be able to overcome the fixed or variable costs of operating the railroad. Under all three operating scenarios there will be a net negative cash flow under Operating Scenario I. If the medium demand stays at the same level for the next 25 years, it will not be able to overcome the fixed or variable costs of operating the railroad. Under the high demand scenario once the north end of the railroad connects to the south, the railroad is net cash flow positive.

Given the results outlined in the chart above, the financial model demonstrates that without both aggressive market penetration and a reasonable increase in tariff that is on pace with inflation, it is very difficult to make it to a breakeven point. It is also critical to understand that the railroad is cash flow positive only with the most optimistic projections.

Sensitivity Analysis

The above financial analysis is based on a model that allows for playing out "what-if" scenarios. Given that this analysis was asked to forecast out over a 25 year period, several assumptions could and will change over that time. Some of the factors that could change are inflation rates, tariff rates, prevailing wages and market conditions. Each one of these factors could have a profound impact on the financial viability of the railroad. One such analysis that is of particular interest to the NCRA and various public and private entities is what would happen if the number of cars carrying aggregate were increased by an order of magnitude. Below Figure S-3 shows the impact that 30,000 aggregate cars would have on the financial performance of the railroad.

Figure S-3



While this analysis is a gross simplification of the impacts of adding 30,000 cars to the system, it does illustrate the overwhelming role that a large number of aggregate cars would play with the financial feasibility of the railroad. In fact, under the low, medium and most likely scenarios, all other commodities are marginalized in comparison to the other freight traffic.

Financial Conclusions

There are several key issues affecting the financial feasibility of the Northwestern Pacific Railroad. These items can be summarized as follows:

1. **300 Miles of Operating Railroad**: The railroad has to operate the entire 300 miles in order to have a positive cash flow. Under Scenario I for all three demand categories, the railroad operated at a loss. The fixed costs of operating a railroad are too high to support the proposed 141-mile route between Willits and Schellville. While the initiation of the SMART commuter service might lead to cost sharing opportunities with the NWP for the south end of the railroad and therefore reduced costs, there would still need to be a significant increase in freight volumes to make the railroad cash flow positive.

2. **Consistency and Reliability:** It will be critical for the railroad to operate consistently for several years to prove that it is a viable operation. Both the NCRA and the shippers that were interviewed expressed this as a significant issue relative to future market penetration. The railroad does not have to be fast and it does not have to be daily, but it does have to be reliable.

3. **Price:** The NWP is wholly dependent on the cooperation of the California Northern Railroad and the Union Pacific Railroad. The rates that the NWP will be able to charge are interdependent with the rates the UPRR and the CNRR will want to negotiate. Additionally it will be critical for the railroad to be price competitive with the trucking industry.

4. **New Markets**: As was underscored in the freight feasibility chapter, it is clear that the addition of new commodities such as aggregates or new activity from the Port of Humboldt Bay, (which represent 45% of the high demand), could have a profound impact on the feasibility of the railroad. However, all three of these commodities would require substantial investment in environmental review, facilities and equipment. This type of investment of time and resources would only be put forward if the interested parties were assured of the long-term commitment of the railroad.

5. **Political Capital of Excursion Rail:** While excursion rail service contributes a relatively small amount financially to the bottom line (approximately seven percent), it can provide a positive image of the railroad to the community, possible shippers and government. It could also have a positive multiplier effect on regional tourism revenues.

Economic Analysis

It is important to look at the railroad in other terms besides the financial. The railroad also plays an economic role in the region and the state. As a second part of this analysis, this report examines the benefits that the railroad brings to the shippers and the reduced wear and tear on the highway system. The purpose of this study is to estimate the economic impact of the Northwestern Pacific Railroad on the communities that it serves and to the State of California.

There are two types of impacts that may accrue from diverting freight traffic from trucks to the NWP railroad:

- Highway Use Impacts - Reduction of truck trips may represent a decrease in associated highway costs, including pavement rehabilitation, pavement

maintenance and accident reduction, among other benefits. However, these benefits are partially offset by the taxes and fees generated by truckers on the system.

- Shipper Impacts - Decreased transportation costs may improve the viability of local producers by improving profit margins and local income levels. In addition, rail service may enable new economic opportunities to occur (i.e., non-local aggregate shipments and port-related industrial development).

Highway Use Impacts

The methodology for determining highway use impacts consists of estimating the number of miles that the trucks would travel under different scenarios of use and then applying factors associated with truck use, including pavement rehabilitation and maintenance costs, decreased accidents and noise.

Table S-2 summarizes the number of miles of truck traffic by type of product, which is expected to range between 10.3 million miles (low estimate) and 17.4 million miles (high estimate) per year after NWP rail service is re-established.

Table S-3 – Estimated Decrease in Truck Miles

Truck miles RT	Low	Medium	High	Most Likely[2]
Feed Grain	196,907	242,598	288,289	238,029
Lumber	7,663,636	11,018,182	14,400,000	10,685,455
Pulp	2,438,212	2,579,497	2,720,782	2,565,368
Aggregates	Not included	Not included	Not included	Not included
Port industry	Not included	Not included	Not included	Not included
Subtotal	10,298,755	13,840,276	17,409,071	13,488,852

Source: BST Associates

The estimated annual reduction in highway costs associated with rail service is:

- Using FHWA factors, the highway cost impact ranges from $668,000 (under the low estimate) to $1.1 million (under the high estimate) as shown in table 12-2.
- Using Caltrans factors, the highway cost impact ranges from $1.8 million (under the low estimate) to $3.0 million (under the high estimate).
- The midpoint of these estimates ranges from $1.2 million (under the low estimate) to $2.1 million (under the high estimate) with a most likely estimate of $1.6 million.

[2] The most likely case is calculated based upon the following assignments of probability – low scenario (20%), Medium scenario (70%) and high scenario (10%).

Table S-4 – Estimated Annual Highway Cost Reduction per Year (2002 dollars)

Cost Summary	Low	Medium	High	Most Likely
FHWA Factors	$668,000	$897,000	$1,128,000	$874,300
Midpoint	$1,225,000	$1,646,000	$2,070,000	$1,604,200
Caltrans Factors	$1,782,000	$2,394,000	$3,012,000	$2,333,400

Note: FHWA factors assume 60 kip 5-axle Comb/Rural Interstate highway based on 1997 Federal Highway Cost Allocation Study, updated to 2002 dollars
Source: BST Associates using data from FHWA, Caltrans

The tax revenues generated by trucks are insufficient to cover highway impact costs. The net savings (cost reductions) from diverting trucks from the highway system range from $500,000 per year (under the low estimate) to $845,000 per year (under the high estimate), with a most likely estimate of $654,900 per year.

Table S-5 – Net Highway Impact Costs

Category	Low	Medium	High	Most Likely
Costs - Midpoint	$1,225,000	$1,646,000	$2,070,000	$1,604,200
Revenues	$725,000	$974,000	$1,225,000	$949,300
Net Impacts	($500,000)	($672,000)	($845,000)	($654,900)

Source: BST Associates using data from FHWA

Income and Employment

The following section provides a comparison of the total income and employment effects (i.e., direct, indirect and induced effects) of resuming rail service on the NWP Railroad as a percent of income and employment in the state and the three county region.

Income

Under the low and medium scenarios, the income impacts in Humboldt Bay are slightly higher more than in the other two counties. However, under the high scenario, most of the local impacts would be experienced in Humboldt County because of the development of port-related industry.

Table S-6 – Total Income Generated by NWP Railroad Resumption as a Percent of Total Area Personal Income

Impacts	State	Region	Humboldt	Mendocino	Sonoma
Total Income generated by Resumption of NWP Railroad					
Low	$2,587,000	$2,343,000	$851,000	$210,000	$793,000
Medium	$1,923,000	$1,726,000	$440,000	$102,000	$513,000
High	$37,293,000	$29,749,000	$20,256,000	$634,000	$745,000
Most Likely	$5,592,800	$4,651,700	$2,503,800	$176,800	$592,200
Percent of NWP-related Income of Total Personal Income by area					
Low	0.0002%	0.0106%	0.0264%	0.0091%	0.0048%
Medium	0.0002%	0.0078%	0.0137%	0.0044%	0.0031%
High	0.0032%	0.1343%	0.6295%	0.0274%	0.0045%
Most Likely	0.0005%	0.0210%	0.0778%	0.0076%	0.0036%

Source: BST Associates

Employment

Under the low and medium scenarios the most employment generated is in Humboldt County. Under the high scenario, due to the development of port-related industry Humboldt County experiences an order of magnitude increase in local employment.

Table S-7 – Total Employment Generated by NWP Railroad Resumption as a Percent of Total Area Personal Employment

Impacts	State	Region	Humboldt	Mendocino	Sonoma
Total Employment generated by Resumption of NWP Railroad					
Low	63	97	43	17	31
Medium	33	78	31	19	22
High	1,027	873	826	30	23
Most Likely	138	161	113	20	24
Percent of NWP-related Employment of Total Employment by area					
Low	0.000%	0.028%	0.077%	0.042%	0.012%
Medium	0.000%	0.022%	0.056%	0.047%	0.009%
High	0.006%	0.249%	1.488%	0.075%	0.009%
Most Likely	0.001%	0.046%	0.203%	0.049%	0.009%

Source: BST Associates

Overall Conclusions

The restarting of the Northwestern Pacific railroad is contingent on several factors ranging from the securing of state and federal funds for capital improvements to the selection of a viable operator. What this analysis shows is that the railroad could play a positive role in the economies of Humboldt, Mendocino and Sonoma Counties. However how much of a role is largely dependent on the success of the NWP operator to attract customers to the service and to provide excellent rail freight transportation.

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Appendices

1.0 INTRODUCTION AND BACKGROUND

1.1 Introduction

The North Coast Railroad Authority (NCRA) and the Humboldt Bay Harbor, Recreation and Conservation District (Port) operate in a unique, interdependent relationship on California's north coast, between the Bay Area and Eureka/Arcata. While the Port views the rail line as vital to its long-term success as a maritime center, the NCRA views the Port as a key potential market for its operation as well. With Port volumes in decline and the rail line currently out of service, both agencies are interested in identifying market and operating scenarios that will enable them to restore service for the benefit of the region.

As a result, two companion studies have been commissioned to evaluate feasible scenarios for revitalizing each operation: the *Port of Humboldt Bay Harbor Revitalization Plan*, which will be completed in February 2003, and this study, the *Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*. The Humboldt Bay Harbor, Recreation and Conservation District is the contracting agency for the two studies; however, numerous other funding agencies and stakeholders are participating in the two study efforts.

The Port along with the City of Eureka, HCOAG, MCOAG and the County of Humboldt, with grant funding from Caltrans commissioned this analysis to determine the current and potential market demand for and revenue generating capacity of rail services on the Northwestern Pacific Railroad. All serve on a Technical Advisory Committee (TAC) guiding the rail feasibility study, with the NCRA serving as TAC leader. A complete list of TAC members can be found in Appendix F.

This study serves as one element, in a broader business plan the NCRA is preparing. Other studies being conducted by the NCRA address the physical condition and capital improvement plan for the rail line, an environmental analysis, as well as a search for a new operator. In directing this financial feasibility analysis, the goal of the TAC has been to provide a realistic assessment of the rail line's financial feasibility, suitable for use in a business plan or investment-banking proposal.

The following report is a summary of the findings of this analysis and provides a 25-year financial horizon for the reestablishment of freight and passenger rail service to Humboldt, Mendocino and Sonoma Counties.

1.2 Background

The following information is taken from the North Coast Railroad Authority's Strategic Plan for Resumption of Viable Rail Service for California's North Coast (April, 2001):

> Rail service on the North Coast dates well back into the 19th century. Completion of the connection between Eureka and San Francisco was attained in 1914.

Designated the Northwestern Pacific Railroad (NWP), it was jointly owned by Santa Fe and Southern Pacific and operated independently until 1929 when it became exclusively part of Southern Pacific.

The NWP was the only means of transportation within the corridor prior to completion of Highway 101 and remained the sole means of substantial freight movement for decades. It is worthy of note that the railroad has survived many natural disasters and was restored much sooner than State Highway 101 after the devastating and record setting storm of December 1964.

Southern Pacific sold the portion of the railroad north of Willits in 1984. Named the Eureka Southern, it operated until December 1986 when it declared bankruptcy. A Federally appointed bankruptcy trustee managed the railroad until 1992. Southern Pacific continued to operate the NWP south of Willits through an operating agreement with the California Northern Railroad.

In 1989 the California Legislature created the North Coast Railroad Authority (NCRA). Utilizing State provided funding this new authority acquired the former Eureka Southern out of bankruptcy in 1992. The NCRA acquired that portion of the NWP between Willits and Healdsburg from Southern Pacific in 1996.

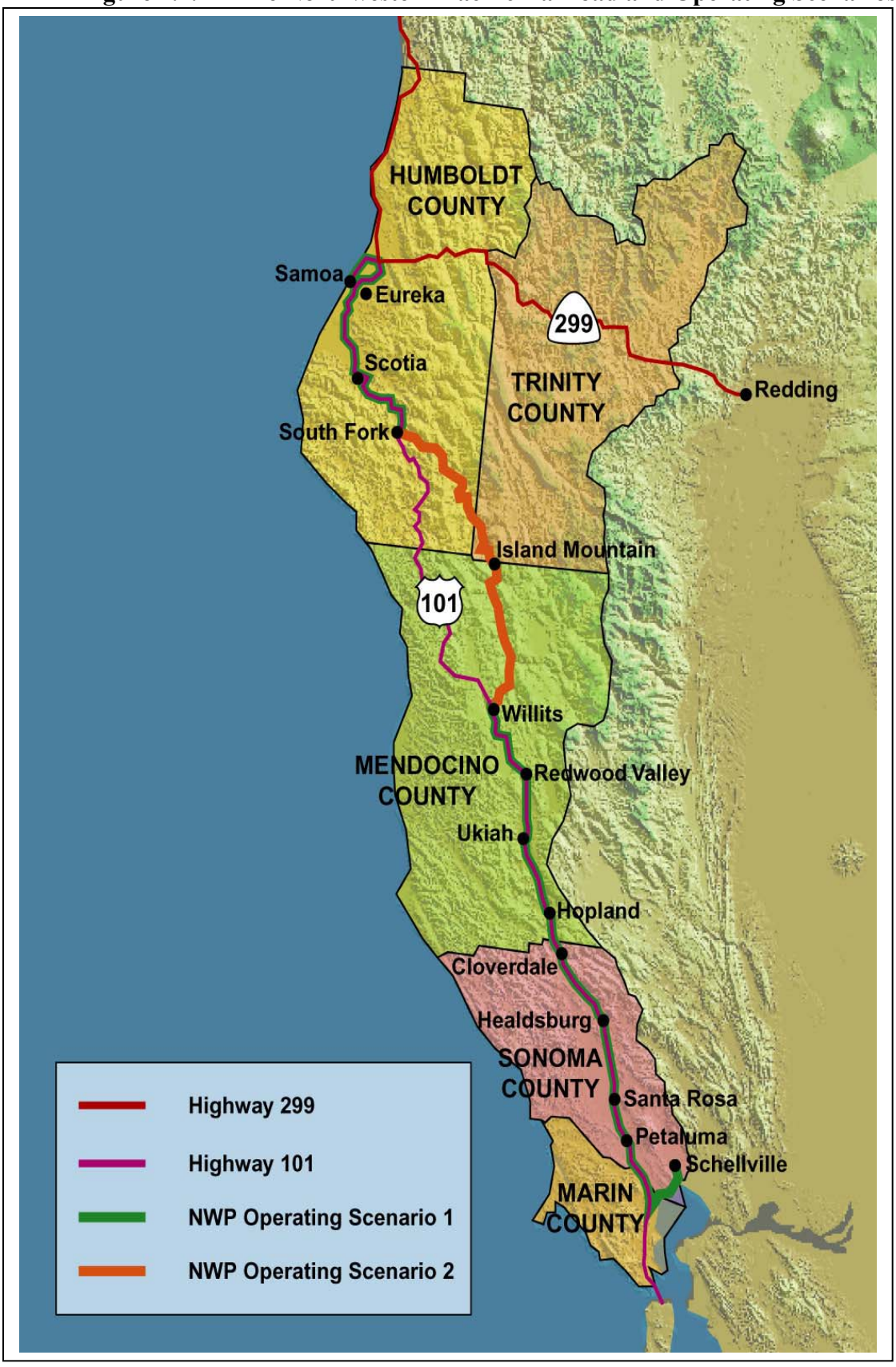
The remaining portion of the NWP south of Healdsburg is now owned by the Northwestern Pacific Railroad Authority (NWPRA), a joint powers agency comprised of NCRA, the Golden Gate Bridge, Highway, and Transportation District, and the County of Marin. Freight service and related maintenance of this portion of the railroad is the responsibility of NCRA under an agreement with NWPRA**.**

In 1997 the NCRA Board chose to seek a private sector agreement to provide the freight service operations and maintenance of the railroad. Proposals were received and Rail-Ways, Inc. of Elgin, IL was as for the operator. Within weeks of reaching an agreement the El Nino storms of 1998 closed the railroad north of Willits with a series of major landslides. Decades of deferred maintenance left the railroad in a serious state of disrepair. Rail-Ways operated freight service south of Willits until the Federal Railroad Administration (FRA) issued Emergency Order 21, which closed the entire railroad in November 1998 for their failure to meet federal standards.

With the exception of sporadic service provided through 2001 on the southern end of the railroad between Penngrove and Schellville, there has not been significant freight activity along the corridor since 1997.

Since operations ceased along the upper portion of the railroad in 1998 and the lower portion in 2001, the NCRA has been assessing the capital and operating feasibility of reopening segments of the railroad to freight service. Humboldt Bay's economy was historically based on natural resources and the port. Both of these economic elements were connected and dependent on rail service. Given this history, this railroad has been studied or evaluated almost every two years since the Southern Pacific attempted to abandon it in 1982.

Figure 1.2.1 – The Northwestern Pacific Railroad and Operating Scenarios



2.0 REVIEW OF PAST STUDIES

Approximately 15 previous studies relating to rail transportation and related economic condition on the North Coast were reviewed as a part of this study effort. The nine most salient reports for this feasibility analysis are reviewed below. Some of these reports provided important background information regarding past activity on the railroad and also provided valuable demographic and statistical information for market analysis. However, they were primarily used as background material. In fact, given the age of these reports, it is important to note that some of the following background information may be dated especially if related to financial or market information. If a report was used specifically in the market or financial analysis for this study, it has been noted accordingly.

Prosperity! The North Coast Strategy
Humboldt Economic Development Forum, 1999/2000

This plan was written in order to qualify for federal funds. It is Humboldt County's Comprehensive Economic Development Strategy (CEDS).

The plan contains the following elements: economic and demographic data, the identification of strategies for economic development, and a list of projects essential to accomplish these strategies.

The *Prosperity* strategy uses an industry cluster model of the economy as a framework for analysis, planning and implementation. Nine clusters have been identified: lumber and wood products; education and research; tourism; dairy and dairy processing; fisheries, processing and aquaculture; specialty agriculture horticulture; manufacturing, arts and culture; and information and technology. Key issues, future opportunities, industry needs and industry specific products were identified for each industry cluster. They were reviewed to determine if any of the information was transportation related.

The discussion on the Lumber and Wood Products notes that transportation availability and cost is a "key element for competitive positioning of local lumber products." The report specifically cites the tractor-trailer length restrictions and lack of dependable rail service as problems. The report predicts that transportation will become an even greater problem when the timber harvest reaches its peak in 10-15 years. The report does not identify specific opportunities or projects to alleviate these problems.

The discussion on the tourism industry cluster makes many references to transportation. It identifies as key issues that many foreign flag cruise ships are restricted from docking in Humboldt Bay (due to restrictions in consecutive port calls) and that much of Humboldt County is not pedestrian friendly. It does not specifically identify rail service as a future opportunity, industry need or industry specific project. However, many of the items listed in this section could possibly be extended to rail service, such as tours of manufacturing facilities and festivals.

The Small Manufacturing profile states that Humboldt County's distance from urban centers poses challenges for transportation. The discussion notes that entities with the greatest success include those that pass on the extra transportation cost in the high value of the manufactured goods. Key issues include challenges in getting employees to work due to lack of public transportation and the low concentration of workers throughout the County. It also notes that transportation is expensive and difficult to arrange.

The report notes that a system for maximizing truck transportation is needed.

The remaining profiles on education and research; dairy and dairy processing; fisheries, processing and aquaculture; specialty agriculture horticulture; arts and culture; and information and technology do not identify transportation as either a key issue or an opportunity.

2000-2 Regional Transportation Plan for Humboldt County
Humboldt Association of Governments, Adopted August 30, 2001

The Regional Transportation Plan (RTP) describes Humboldt County's existing transportation systems and future needs for short-term (0-10 years) and long-term (11-20 years) horizons. The horizon year for this RTP is 2025.

The RTP contains five elements: Needs Assessment (identifies existing operations and deficiencies), Policy (makes recommendations for implementing 10-year and 20-year objectives and includes program level performance measures), Action (recommends specific improvements for short-range and long-range capital programs, cost estimates and responsible agencies), Financial (gives an inventory of existing and potential transportation funding sources and shortfalls and lists financially constrained and unfunded projects), and Environmental (describes environmental impacts and compliance).

Rail transportation is addressed in each element. In the Needs Assessment section, the RTP describes rail service in the NWP corridor prior to the 1998 FRA Emergency Order. This section also notes that there are economic development opportunities associated with the rail line, and that operation of the rail line could keep truck volumes on Highway 101 and State Route 299 from producing undesirable congestion.

In terms of passenger rail, the RTP notes that the North Coast Logging Interpretive Association has plans to operate a steam-powered excursion train.

The RTP identifies the following sources of future funding to the NCRA:

- Rehabilitation: about $8.6 million (ISTEA);
- Grant funds: $120,000 (California Department of Fish and Game);
- Rehabilitation: $35 million (Governor's Transportation Congestion Relief Program); and

- Grade crossing improvements: (amounts not specified in RTP) (Humboldt and Mendocino Counties).

In the Policy Element, the RTP defines three policies associated with rail transport:

1. Support re-establishment of rail service (Policy 5.04)
2. Encourage modernized rail for improved freight and passenger service (Policy 5.05)
3. Support NCRA efforts to maintain safe rail crossings (Policy 5.06)

The RTP also identifies the development of recreational travel within the region as a goal and specifies development of excursion rail as a policy to support this goal (Policy 6.04).

The Action Element of the RTP identifies short-term and long-term improvements for addressing the existing deficiencies of the County's transportation system and to meet future demand. The report notes that damage repair for the NWP corridor in Humboldt County has been identified as a need for the transportation system but that the $52.5 million required for this project is unfunded. However, the RTP also acknowledges that $35 million has been allocated to NCRA for corridor rehabilitation.

Study of excursion rail service around the Bay is identified in the RTP as a recommended short-term action. An update of the NCRA Master Plan and completion of improvements to the NWP tracks between Willits and Eureka have also been defined as short-term actions.

Finally, the Financial Element of the RTP identifies potential funding sources for resumption of rail service in the NWP corridor. Public subsidy and operating revenue is expected to fund the railroad for the first five years, after which the subsidy will be phased out. The public subsidy is to be provided by California Assembly Bill 2782 (1998). It provided $2 million to the California Transportation Commission (CTC) for the NCRA. AB 2782 identifies some projects that would be eligible for this funding including an accounting system, payment to contractors and vendors and actions necessary to meet the requirements of the FRA compliance order. Other projects may also be eligible. The NCRA's Five-Year Plan and Strategic Plan notes other goals that would require funding such as:

- Assessment of entire line;
- Reopening South of Willits to FRA Class 1 Standards;
- Reopening Willits to Arcata to FRA Class 1 Standards;
- Upgrade to FRA Class 2 and 3 and stabilization South of Willits;
- Upgrade to FRA Class 2 and 3 and track structure stabilization North of Willits; and
- Future additional stabilization.

The RTP lists other potential funding sources but it is not likely that any of these could be used for rail service.

The Environmental Element of the RTP focuses on the environmental documentation required for the RTP and coordination with the North Coast Unified Air Quality Management District. It does not address specific projects.

Tourist Travel Triangle Feasibility Study
Prepared for the City of Fort Bragg, May 1995

This report was prepared to determine if it would be possible to expand tourism opportunities in the cities of Fort Bragg, Willits and Eureka (the "Tourist Travel Triangle") using a variety of transportation services including the California Western "Skunk Train," the revival of passenger rail service in the Northwestern Pacific Rail corridor, a sea link between Fort Bragg and Eureka, and the state highway system connecting the cities.

The preferred scenario consists of three phases using these elements:

Phase 1 has a short-term horizon of zero to three years. Passenger service would be reestablished originating in Eureka and terminating in Willits and would be coordinated with the Skunk Train service. The trip between Eureka and Willits is assumed to take eight hours (one-way). An optional one-way bus trip between Eureka and Willits is also part of this phase.

Phase 2 would occur in a four to six years timeframe. The Eureka to Willits service would be supplemented with a return rail trip. Sea link service between Fort Bragg and Eureka would commence.

Phase 3 would occur in the seven to ten year timeframe. Skunk Train service and two-way rail service between Eureka and Willits would continue and may be extended to the Bay Area. Sea link service would be expanded to include stops at San Francisco and along the Oregon coast.

A preliminary business plan for the new rail element (Eureka to Willits) is included in this study. The plan acknowledges that car renovations, track repair and maintenance are critical to initiating and sustaining passenger rail service in this corridor. Several potential state and federal funding sources were identified but none of these funds were committed to this project at the time of the report. The report states that $1,992,500 would be needed to start up service and about $16 million would be needed to maintain service ($14,500,000 was estimated to be needed to do long-term track work and overall general maintenance).

For this business plan, the first full year of operation was assumed to be 1996. Service would consist of one northbound train and one southbound train over the weekend. Riders would have the option of buying one-way tickets. For the 1996 season, total revenue from fares and other sources would be about $33,000. Total costs (operating and other) were estimated to be about $25,500. Therefore, the profit per weekend would be $7,500. The highest operating costs were identified as expendables ($1,500/day);

insurance ($675/day); and catering ($5,000/weekend). The locomotive operating cost was estimated at $100/day.

Over a maximum 15-weekend season, the service was estimated to result in a revenue of $495,000, total costs of $383,000 and profits of $112,000.

Northwestern Pacific Railroad Business Plan
North Coast Railroad Authority, August 1996

This report outlines the various capital expenses that are required to make the railroad operational. It identifies just over $10 million for the rehabilitation of the railroad.

It also outlines specific long-term goals for the operation of the railroad with a variety of freight options. Specifically, the report identifies the following potential markets:

Lumber
Railroad Crossties
Unit Trains
Sand, Gravel and Riprap
Scrap Metal and Paper
Coil and Plate Steel
Food Products (Wine and Beer)
Roofing Materials
Automotive Parts
Solid Waste – Garbage
Fertilizer
Heavy Equipment
Feed Grains

These markets would equate to approximately 104 cars a day along the railroad. However, the business plan states that three quarters of the cars have roughly a 55% probability of occurring (the remaining quarter being solid orders).

The Business Plan noted that freight tariff effective July 1, 1996 was implemented for lumber products. It also included an organizational chart for the Northwestern Pacific Railroad Company.

The North Coast Railroad Authority and the New Northwestern Pacific Railroad – A Public-Private Partnership
North Coast Railroad Authority, October 1998

This business plan is focused on the separation of the operating entity and the capital element, which is considered more of a "public good." The plan introduces Rail-Ways, Inc., as the potential operator of the railroad, with the NCRA maintaining control of the right-of-way. It outlines many of the financial liabilities that the NCRA are still responsible for and it identifies possible sources to cover those capital needs.

The business plan also included various commitments (letters of commitment) from shippers that would use the rail line. Shippers with signed contracts or exempt quotations for local freight service include:

ECDC Environmental, L.C. (Humboldt County Waste Authority)
Shamrock Materials, Inc.
Parnum Paving, Inc.

Other shippers using exempt quotes, circulars and/or interline transportation contracts (presently held by Union Pacific Railroad), and using the NWP, include:

Blue Lake Forest Products
Dairyman's Feed & Supply Co-op.
Dairyman's Milling
Eel River Saw Mills
Georgia Pacific Corp.
Hunt & Behrens
Louisiana Pacific Corp.
Masonite Corp.
Mead Clark Lumber
Pacific Lumber Co.
Schmidbauer Lumber Co.
Sierra Pacific Industries
Simpson Timber
Skip Gibbs Rail Bridges
Standard Structures, Inc.

Appendix F of the business plan is the business plan for Rail-Ways operation of the Northwestern Pacific. This plan has interesting information regarding the proposed service for the railroad, the forecasted revenues and expenses for "year-one" operation and a list of possible shippers that would use the service.

Appendix H of the business plan is an independent analysis of the Rail-Ways Business Plan, performed by Professor Gregory Bereskin of St. Ambrose University. He found that the assumptions used for the Rail-Ways business plan were reasonable and that overall, the "…plan is reasonably well developed." However, he did express some disappointment in the fact that the plan only addressed the year-one analysis and did not address the future year forecasts.

North Coast Rail Authority: The Five-Year Plan
North Coast Railroad Authority, July 1, 1999

This plan is an update of the 1998 plan. It addresses the critical condition of the railroad infrastructure and its inability to reinvent itself because of the accounting requirements for the disbursement of state and federal funds.

It outlines the continued efforts of Rail-Ways, Inc. and the NCRA staff to ready the line for use, however the over-riding issues regarding capital funding for the project are the biggest issue in this report.

The appendices of the report hold letters of support from government, business and convention and visitor bureaus.

Draft Route Concept Report: Route 101 Corridor
Caltrans District 1, February 2002

This report gives an overview of Highway 101 from Hopland to the Oregon border. What is of particular relevance to the rail study are the future projections of traffic on certain segments that parallel the NWP corridor. The Highway 101 corridor is severely constrained by the topography and the environmental conditions that the route traverses. There are very limited opportunities for expansion of the Highway throughout the corridor, and in locations where expansion is possible, it will be very costly. Over the 20-year horizon certain segments of the Highway will experience low (D and F) levels of service. The railroad is mentioned in the report, however there is little detail regarding the interaction between the highway and the railroad.

Evaluation of the North Coast Railroad: Contributions to the Regional Economy and to the Transportation Network
Transportation Planning Program of Caltrans, August 1, 1995

This study looked at the economic impact of NWP non-operation in the North Coast. It found that there would be a net increase in costs to travelers on the Highway 101 corridor of approximately $345,000. At the time of writing the report, the NWP had 43 employees, which represented less that 1% of the regional work force. It notes that any loss of jobs in the railroad shipping of lumber would be made up in the trucking sector.

Additionally it notes that the net impact on the cost of lumber for the consumer is barely affected by the lack of rail access. It would have a net impact of one cent per board foot from that region.

The report concludes that the NWP has no substantial positive or negative economic impact on the North Coast region.

Overview of the Northwestern Pacific Railroad
California Public Utilities Commission, October 1, 1997

This document addresses the history of public expenditure on the line. It also describes the economic impacts of the closure of the NWP. The report states that 100 jobs directly related to the Railroad would be lost and that there would be other ramifications to other companies along the corridor as a result of the loss of inexpensive transportation. Specifically, it mentions Masonite Corp. in Ukiah that was "critically dependent on rail" as a primary victim (the Masonite factory closed in 2001).

3.0 CAPITAL OVERVIEW

The Northwestern Pacific Railroad is one of the most difficult railroads in the United States to maintain. When the Southern Pacific Railroad entered the abandonment

proceedings in 1982, they estimated that the Northwestern Pacific cost them 2 to 3 times their normalized maintenance costs for all other Southern Pacific railroads across the country. Over the ensuing 20 years there was no evidence that the railroad became any less expensive to maintain. In fact, given the deferred maintenance on much of the line, the capital and maintenance costs that are currently being developed by the NCRA will reflect higher capital and maintenance costs. The high cost of capital and maintenance of this railroad can be attributed to the following characteristics:

- Remoteness of the railroad;
- The physical characteristics of the railroad;
- The number of tunnels (40) and structures (206); and
- The construction methods that will have to be employed in order to be compliant with environmental regulations.

The eighty miles of the Eel River Canyon present the most difficult section of the railroad to maintain. In December 1964, the NWP experienced the worst flooding of the Eel River in its history. This 1,000-year storm virtually wiped out one hundred miles of track and bridges requiring an almost complete rebuild from Dos Rios to Fortuna.

Most recently the "El Niño Storms" in 1998 caused the closing of the NWP from Dos Rios north due to extensive washouts, landslides and embankment erosion. As a result, the railroad today remains impassable to train traffic in this area.[3]

3.1 Recent History of Freight Service on the Northwestern Pacific Railroad

Given the recent state of disrepair, the Northwestern Pacific Railroad has had a very difficult time keeping the line open and providing consistent freight service. In the last few years of operation of the complete 300-mile line (Samoa to Shellville), the railroad handled approximately 6,800 cars[4]. The service was considered to be unreliable and slow. In fact, when the storms in 1998 hit, several customers' shipments were trapped on the railroad, never making it to market.

In addition to the operating difficulties, the railroad had difficulties with its accounting practices and there are very few audited accounting records for the railroad and those that do exist do not outline, in any detail, the expenses related to the operation of the railroad.

The poor condition of the physical plant had a direct impact on the operations of the railroad. The degraded track speeds and uncoordinated operations occasionally forced crews to "outlaw", meaning that they exceeded the FRA work rules regulation governing hours per day that crews can operate. As a result, train operations would be stopped until new crews were available or existing crews got sufficient rest.

[3] NCRA Capital Assessment Report, Willdan/HNTB, 2002

[4] North Coast Railroad Authority, *The North Coast Railroad Authority and the New Northwestern Pacific Railroad: A Public Private Partnership*, October, 1998.

4.0 FREIGHT RAIL MARKET METHODOLOGY

The methodology for the freight rail demand assessment is presented in this section. The objective of the freight rail demand assessment is to develop estimates and forecasts of potential freight rail service on the NWP, and identify potential key users of the freight rail service.

The first step in analyzing the freight rail market is data analysis. The objective of this task was to develop a summary of the changing economic conditions within the corridor and to specify potential freight generating sectors. Data sources evaluated during the process of this study included:

- NCRA and NWP business plans, and other relevant documents;
- Reports provided by the Port of Humboldt Bay, Humboldt County, Humboldt Council of Governments and other local sources;
- California Department of Agriculture and California Forest Products Commission;
- U.S. Censuses of Agriculture, Manufacturing, and Retail & Wholesale Trade for all counties along the corridor;
- California State Rail Plan; and
- California Highway Statistics.

The second step was to identify and conduct interviews with existing shippers and likely future candidates along the corridor. A survey form was developed and refined after review with the TAC (see Appendix A for the interview questions). An interview list was developed and then screened to identify the most likely users of the system. A total of 34 shipper interviews were conducted to assess shipper needs with respect to:

- Commodity;
- Tonnage;
- Characteristics of service by handling type;
- Frequency of service;
- Origins/destinations;
- Rate expectations; and
- Volumes of cargo by type and system requirements.

As a third step, interviews were undertaken with truckers and rail carriers serving or connecting to the system to determine existing levels of service to the impacted area and the potential for additional service. Rail carriers connecting to the North Coast line (California Northern, Union Pacific and BNSF) were interviewed to assess their needs with respect to new service.

Low, Medium, High and Most Likely Demand

As a part of the interviews, shippers were asked to define how many rail cars they would be willing to move on the NWP system if the service provided a consistent, reliable, and

cost effective level of service. They were asked for a specific number of rail cars that they would ship, which then became their "medium" forecast, and then bounded that estimate with "low" and "high" estimates. Accordingly, the low, medium and high demands have an implicit probability assigned to them:

- **The low demand** probability is conservative,
- **The medium demand** probability is consistent with what could be expected from the shipper in the short term,
- **The high demand** probability is an optimistic forecast, including:
    - Products that had not previously moved by rail in significant volumes (i.e., solid waste, aggregates, port traffic) were only included in the high scenario.
    - The high scenario assumed that mills that had been recently shut down (Blue Lake Forest Products and Eel River Sawmill) would be restarted.
- **The most likely demand** is calculated based on the following assignment of probability:
    - 20% probability of the low scenario occurring,
    - 70% probability of the medium scenario occurring, and,
    - 10% probability of the high scenario occurring.

These probability estimates are based upon interview results and consultant judgment. The highest probability is assigned to the medium scenario, since these estimates were the mean response of the interviews. The lowest probability was assigned to the high scenario because of the increased uncertainty of its occurrence, especially with respect to the large potential volumes that are imbedded in the high forecast, as discussed above.

The scope of this study did not include an examination of the potential markets of national defense or nuclear waste.

5.0 ECONOMIC SETTING

It is important to understand the changing economic and demographic dynamics of the communities along the corridor. The following section evaluates employment and population trends and forecasts.

5.1 Population

5.1.1 Incorporated/Unincorporated Areas

The population of the tri-county[5] area bordering the corridor was estimated to be 683,675 persons in 2001. Slightly more than two-thirds of the population base was in Sonoma County, 19% in Humboldt County and 13% in Mendocino County. Approximately 41% of the population base lives in unincorporated areas (280,000 persons). The remainder

[5] There is also at least one potential shipper located in Marin County. However, Marin County is not included because the NWP is less important than to its neighbors to the north.

lives in cities ranging from very small (Trinidad at 310 persons) to relatively large (Santa Rosa at 150,900 persons). See Table 5-1.

Table 5-1 – Population by County/City in 2001

Cities	Population	% Total	Cities	Population	% Total	Cities	Population	% Total
Sonoma	468,725	68.6%	**Mendocino**	87,230	12.8%	**Humboldt**	127,720	18.7%
Santa Rosa	150,900	22.1%	Ukiah	15,650	2.3%	Eureka	26,250	3.8%
Petaluma	55,900	8.2%	Fort Bragg	7,100	1.0%	Arcata	16,950	2.5%
Rohnert Park	42,650	6.2%	Willits	5,100	0.7%	Fortuna	10,600	1.6%
Windsor	23,700	3.5%	Point Arena	480	0.1%	Rio Dell	3,190	0.5%
Healdsburg	11,300	1.7%	Unincorporated	58,900	8.6%	Ferndale	1,370	0.2%
Sonoma	9,400	1.4%				Blue Lake	1,150	0.2%
Sebastopol	7,850	1.1%				Trinidad	310	0.0%
Cloverdale	7,150	1.0%				Unincorporated	67,900	9.9%
Cotati	6,675	1.0%						
Unincorporated	153,200	22.4%						

Source: California State Department of Finance, BST Associates

5.1.2 Forecast

In 1998, the California State Department of Finance prepared long-range population forecasts for counties. These forecasts projected that the tri-county area would grow from 590,633 in 1990 to 678,119 in 2000. The forecast was reasonably accurate, missing the actual growth that occurred by only 5,556 persons or less than 1%.

The region's population base is expected to reach 962,850 persons in 2030, which amounts to annual growth of 1.0% to 1.5%, depending on the decade being evaluated. Humboldt County is expected to grow much more slowly than the other two counties (i.e., 0.3% to 0.5% versus 1.1% to 1.7% per year).

The median age in Humboldt County is expect to increase from 33 in 1990 to 42 in 2030, in Mendocino County from 35 to 37 and in Sonoma County from 37 to 40.

Table 5-2 – Population Forecasts

Summary	1990	2000	2010	2020	2030
Humboldt	119,500	128,419	135,602	141,092	145,099
Mendocino	80,908	90,442	105,225	118,804	133,440
Sonoma	390,225	459,258	544,513	614,173	684,311
Summary	590,633	678,119	785,340	874,069	962,850
Compound Growth Rates		**90-00**	**00-10**	**10-20**	**20-30**
Humboldt		0.7%	0.5%	0.4%	0.3%
Mendocino		1.1%	1.5%	1.2%	1.2%
Sonoma		1.6%	1.7%	1.2%	1.1%
Summary		1.4%	1.5%	1.1%	1.0%
	1990	**2000**	**2010**	**2020**	**2030**
Humboldt	33	36	39	40	42
Mendocino	35	37	35	36	37
Sonoma	34	37	39	39	40

Source: California State Department of Finance, BST Associates

5.2 Income

Personal income trends, which include income from earnings, investment (i.e., dividends, interest and rent), and transfer payments (retirement accounts and public assistance), are reported in this section.

5.2.1 Humboldt County

Personal income in Humboldt County grew from $402.8 million in 1970 to $2.9 billion in 2000, or at a nominal rate of 6.8% per year. Adjusting for inflation, real growth was 1.6% per year. However the rate of growth was not uniform between the different types of income. Income from earnings increased at 0.8% per year during the period as compared with 3.1% for transfer payments and 3.2% for dividends and other investments. As a result, earnings have declined steadily as a share of personal income from 74% of personal income in 1970 to 59% in 2000.

Table 5-3 – Income Trends in Humboldt County ($1,000 current dollars)

	Personal Income				% of Personal Income		
Year	Earnings	Dividends etc.	Transfer Payments	Total	Earnings	Dividends etc.	Transfer Payments
1970	297,555	53,079	52,163	402,797	74%	13%	13%
1975	444,942	87,525	101,030	633,497	70%	14%	16%
1980	708,630	194,929	176,534	1,080,093	66%	18%	16%
1985	882,366	306,133	238,106	1,426,605	62%	21%	17%
1990	1,194,996	424,422	346,694	1,966,112	61%	22%	18%
1995	1,348,553	486,552	493,852	2,328,957	58%	21%	21%
2000	1,744,188	611,074	580,766	2,936,028	59%	21%	20%
Compound Annual Growth Rates							
70-00	6.1%	8.5%	8.4%	6.8%	-0.7%	1.5%	1.4%
Inflation	5.3%	5.3%	5.3%	5.3%			
Real Change	0.8%	3.2%	3.1%	1.6%			

Source: US Bureau of Economic Analysis, BST Associates

The loss of jobs in manufacturing, wholesale trade and transportation and public utilities, which are typically higher paying than most jobs in the retail trade and service sectors, partially explains the relative decline in share by earnings. As is occurring in many other coastal counties, Humboldt County is transforming from a largely industrial resource-based economy to a more diversified economy based on retirement and tourism as well as resource-based industrial jobs.

As shown in Table 5-4, the most rapid growth in earnings in Humboldt County occurred in finance, insurance and real estate (4.4% annual growth after adjusting for inflation) and services (3.4% per year). Services accounted for 28% of earned income in 2000, up from just 16% in 1970.

The government sector, which now accounts for 25% of earnings, grew at 1.2% per year, after adjusting for inflation.

Agricultural services (including income from forestry and fishing) increased at 1.4% per year and accounted for 3% of earnings in 2000.

Construction earnings, which have grown cyclically in response to public and private construction projects, ranged between 5% and 9% of income from earnings.

Earnings from manufacturing declined at -1.9% per year and transportation/public utilities and wholesale trade experienced minimal growth (0.1% per year in each sector). Manufacturing has declined from 30% of earnings in 1970 to just 14% in 2000. The forest products industry accounted for 86% of earnings in manufacturing in 1970 but has

fallen to 70% in 2000. Other manufacturing sub sectors have increased but not rapidly enough to stem the losses in the forest products industry.

Table 5-4 – Distribution of Income from Earnings by Sector in Humboldt County ($1,000 current dollars)

Year	Ag. Services etc	Construction	Manufacturing	Transp & public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government
1970	6,711	15,605	88,752	24,826	11,480	37,379	6,689	40,836	65,760
1975	9,519	26,178	117,513	37,964	19,443	57,226	10,959	70,001	107,931
1980	12,350	36,907	161,684	58,260	36,763	95,474	22,104	135,607	170,618
1985	14,398	51,952	179,550	73,806	35,067	132,008	27,346	188,274	219,000
1990	25,475	104,564	218,904	94,352	52,779	173,439	39,377	275,573	304,245
1995	37,449	97,616	255,849	93,458	39,592	188,948	63,626	352,292	341,469
2000	46,942	119,284	242,244	119,391	55,000	241,045	107,646	490,711	432,729
Compound Annual Growth Rates									
70-00	6.7%	7.0%	3.4%	5.4%	5.4%	6.4%	9.7%	8.6%	6.5%
Inflation	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Change	1.4%	1.7%	-1.9%	0.1%	0.1%	1.1%	4.4%	3.4%	1.2%
Share of Earned Income									
1970	2%	5%	30%	8%	4%	13%	2%	14%	22%
1975	2%	6%	26%	9%	4%	13%	2%	16%	24%
1980	2%	5%	23%	8%	5%	13%	3%	19%	24%
1985	2%	6%	20%	8%	4%	15%	3%	21%	25%
1990	2%	9%	18%	8%	4%	15%	3%	23%	25%
1995	3%	7%	19%	7%	3%	14%	5%	26%	25%
2000	3%	7%	14%	7%	3%	14%	6%	28%	25%
Change	0%	2%	-16%	-1%	-1%	1%	4%	14%	3%

Source: US Bureau of Economic Analysis, BST Associates

5.2.2 Mendocino County

Personal income in Mendocino County has behaved similarly to Humboldt County but the distribution of income by sector is quite different. In Mendocino County, personal income grew from $204.2 million in 1970 to $2.2 billion in 2000, or at a real growth rate of 3.0% per year.

Income from earnings increased at 2.3% per year during the period as compared with 4.1% for transfer payments and 4.3% for dividends and other investments. Earnings declined steadily as a share of personal income from 73% in 1970 to 60% in 2000.

Table 5-5 – Income Trends in Mendocino County ($1,000 current dollars)

	Personal Income				% of Personal Income		
Year	Earnings	Dividends etc.	Transfer Payments	Total	Earnings	Dividends etc.	Transfer Payments
1970	144,712	32,046	27,457	204,215	73%	16%	14%
1975	226,162	58,613	58,522	343,297	68%	18%	18%
1980	428,732	143,212	106,370	678,314	65%	22%	16%
1985	578,216	227,271	163,572	969,059	61%	24%	17%
1990	826,068	339,103	237,576	1,402,747	61%	25%	17%
1995	915,771	403,620	344,456	1,663,847	57%	25%	21%
2000	1,286,730	505,595	408,116	2,200,441	60%	24%	19%
Compound Annual Growth Rates							
70-00	7.6%	9.6%	9.4%	8.2%	-0.7%	1.3%	1.1%
Inflation	5.3%	5.3%	5.3%	5.3%			
Real Change	2.3%	4.3%	4.1%	3.0%			

Source: US Bureau of Economic Analysis, BST Associates

As shown in Table 5-6, growth in earnings in Mendocino County occurred in:

- Agricultural services (including income from forestry and fishing) increased at 5.2% per year and accounted for 3% of earnings in 2000,
- Services grew at 4.7% per year (after inflation) and represented 27% of earnings in 2000, up from 14% in 1970,
- Construction earnings grew at 4.4% per year, and accounted for 8% of income from earnings in 2000.
- Finance, insurance and real estate grew at 3.9% per year and accounted for 4% of earned income in 2000.
- Wholesale trade grew at 2.9% per year and accounted for 2% of earned income in 2000.
- Retail trade grew at 2.4% per year and accounted for 14% of earned income in 2000.
- Government grew at 2.0% per year and accounted for 18% of earned income in 2000.
- Transportation and public utilities grew at 0.7% per year and accounted for 5% of earned income in 2000.
- Earnings from manufacturing, which did not grow during the period (0.0%), accounted for 16% of earned income in 2000, down from 31% in 1970. The loss of manufacturing jobs, particularly in the forest products industry, was a prime cause of this downward trend.

Table 5-6 – Distribution of Income from Earnings by Sector in Mendocino County ($1,000 current dollars)

Year	Ag. Services etc	Construction	Manufacturing	Transp & public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government
1970	2,065	6,421	44,754	11,129	2,691	19,058	3,600	19,678	28,493
1975	5,086	9,673	59,975	17,339	6,431	29,121	6,369	37,567	46,024
1980	6,225	20,600	114,962	30,422	13,093	55,252	13,251	75,769	77,784
1985	10,486	36,763	138,048	34,383	19,227	86,067	17,364	115,829	108,597
1990	15,897	55,519	182,039	48,210	28,793	114,397	26,364	186,261	155,737
1995	23,233	60,392	157,945	52,100	24,857	133,576	30,719	238,603	183,197
2000	41,009	103,509	210,441	64,176	28,821	178,114	50,536	345,782	233,640
Compound Annual Growth Rates									
70-00	10.5%	9.7%	5.3%	6.0%	8.2%	7.7%	9.2%	10.0%	7.3%
Inflation	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Change	5.2%	4.4%	0.0%	0.7%	2.9%	2.4%	3.9%	4.7%	2.0%
Share of Earned Income									
1970	1%	4%	31%	8%	2%	13%	2%	14%	20%
1975	2%	4%	27%	8%	3%	13%	3%	17%	20%
1980	1%	5%	27%	7%	3%	13%	3%	18%	18%
1985	2%	6%	24%	6%	3%	15%	3%	20%	19%
1990	2%	7%	22%	6%	3%	14%	3%	23%	19%
1995	3%	7%	17%	6%	3%	15%	3%	26%	20%
2000	3%	8%	16%	5%	2%	14%	4%	27%	18%
Change	2%	4%	-15%	-3%	0%	1%	1%	13%	-2%

Source: US Bureau of Economic Analysis, BST Associates

5.2.3 Sonoma County

The Sonoma County economy is quite different than its neighbors to the north and has more in common with the economy in San Francisco Bay.

In Sonoma County, personal income grew from $809.3 million in 1970 to $14.8 billion in 2000, or at a real growth rate of 4.9% per year. Income from earnings and from investments both increased at 5.0% per year (after adjusting for inflation) but income from transfer payments only increased at 3.8% per year during the period. See Table 5-7.

Table 5-7 – Income Trends in Sonoma County ($1,000 current dollars)

	Personal Income				% of Personal Income		
Year	Earnings	Dividends etc.	Transfer Payments	Total	Earnings	Dividends etc.	Transfer Payments
1970	515,261	178,207	115,834	809,302	56%	19%	12%
1975	897,986	318,626	242,157	1,458,769	52%	19%	14%
1980	1,791,793	778,738	418,353	2,988,884	51%	22%	12%
1985	3,003,358	1,363,667	622,238	4,989,263	52%	24%	11%
1990	4,838,019	2,124,677	922,902	7,885,598	55%	24%	10%
1995	5,928,445	2,623,399	1,332,089	9,883,933	55%	24%	12%
2000	9,834,626	3,389,134	1,557,072	14,780,832	61%	21%	10%
Compound Annual Growth Rates							
70-00	10.3%	10.3%	9.0%	10.2%	0.3%	0.3%	-0.8%
Inflation	5.3%	5.3%	5.3%	5.3%			
Real Change	5.0%	5.0%	3.8%	4.9%			

Source: US Bureau of Economic Analysis, BST Associates

As shown in Table 5-8, growth in earnings in Sonoma County occurred in all sectors:

- Earnings from manufacturing grew the most rapidly of all sectors during the period at 7.0% per year) reflecting the importance of the high-tech industries in the county. Forest products only accounted for 1% of earned income manufacturing in 2000, down from 5% in 1970.
- Construction earnings grew at 6.6% per year, and accounted for 11% of income from earnings in 2000.
- Earnings from services also grew at 6.6% per year during the period and represented 27% of earnings in 2000, up from 18% in 1970,
- Earnings from agricultural services (including income from forestry and fishing) increased at 6.5% per year and accounted for 1% of earnings in 2000,
- Earnings from finance, insurance and real estate grew at 5.2% per year and accounted for 7% of earned income in 2000.
- Earnings from wholesale trade grew at 5.1% per year and accounted for 4% of earned income in 2000.
- Earnings from transportation and public utilities grew at 3.6% per year and accounted for 4% of earned income in 2000.
- Earnings from retail trade grew at 3.5% per year and accounted for 10% of earned income in 2000.
- Earnings from government grew at 2.6% per year and accounted for 13% of earned income in 2000.

Table 5-8 – Distribution of Income from Earnings by Sector in Sonoma County ($1,000 current dollars)

Year	Ag. Services etc	Construction	Manufacturing	Transp & public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government
1970	4,265	37,887	61,524	30,168	18,817	80,074	35,447	92,498	125,307
1975	8,591	76,216	113,826	59,844	37,109	124,294	51,540	169,997	215,891
1980	12,398	181,181	276,599	114,727	68,809	244,365	104,371	369,492	353,853
1985	26,448	322,080	464,825	193,763	140,168	417,181	172,857	641,371	526,208
1990	57,260	557,005	705,993	252,547	237,794	591,723	327,290	1,169,144	788,813
1995	77,604	454,665	970,234	262,407	278,925	716,379	472,316	1,633,557	954,384
2000	120,951	1,112,460	1,969,874	389,684	365,396	1,006,663	710,265	2,670,638	1,234,488
Compound Annual Growth Rates									
70-00	11.8%	11.9%	12.2%	8.9%	10.4%	8.8%	10.5%	11.9%	7.9%
Inflation	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%	5.3%
Change	6.5%	6.6%	7.0%	3.6%	5.1%	3.5%	5.2%	6.6%	2.6%
Share of Earned Income									
1970	1%	7%	12%	6%	4%	16%	7%	18%	24%
1975	1%	8%	13%	7%	4%	14%	6%	19%	24%
1980	1%	10%	15%	6%	4%	14%	6%	21%	20%
1985	1%	11%	15%	6%	5%	14%	6%	21%	18%
1990	1%	12%	15%	5%	5%	12%	7%	24%	16%
1995	1%	8%	16%	4%	5%	12%	8%	28%	16%
2000	1%	11%	20%	4%	4%	10%	7%	27%	13%
Change	0%	4%	8%	-2%	0%	-5%	0%	9%	-12%

Source: US Bureau of Economic Analysis, BST Associates

5.2.4 Per Capita Income Trends and Forecasts

The per capita income in Humboldt and Mendocino counties has lagged behind that of the rest of California and Sonoma County since 1970 but the gap is becoming wider.

In Humboldt County, per capita income increased from $10,412 in 1970 to $13,494 in 2000 or at 0.9% per year (after adjusting for inflation). County residents experienced a decline from 84% of the average California income in 1970 to 72% in 2000.

In Mendocino County, per capita income increased from $9,972 in 1970 to $14,432 in 2000 or at 1.2% per year (after adjusting for inflation). County residents experienced a moderate decline from 80% of the average California income in 1970 to 77% in 2000.

In Sonoma County, per capita income increased from $11,611 in 1970 to $20,246 in 2000 or at 1.9% per year (after adjusting for inflation). County residents experienced an increase from 94% of the average California income in 1970 to 108% in 2000.

Table 5-9 – Per Capita Income Trends in Humboldt, Mendocino and Sonoma Counties (in real dollars)

	Per Capita Income (Real)			% of California		
Year	**Humboldt**	**Mendocino**	**Sonoma**	**Humboldt**	**Mendocino**	**Sonoma**
1970	10,412	9,972	11,611	84%	80%	94%
1975	11,296	10,857	12,572	86%	82%	95%
1980	12,033	11,996	14,133	82%	82%	97%
1985	11,940	11,928	15,895	76%	76%	101%
1990	12,562	12,849	17,390	75%	77%	104%
1995	12,136	12,713	16,778	76%	80%	105%
2000	13,494	14,432	20,246	72%	77%	108%
Compound Real Annual Growth Rates (adjusted for inflation)						
70-00	0.9%	1.2%	1.9%	-0.5%	-0.1%	0.5%

Source: US Bureau of Economic Analysis, BST Associates

The Center for Continuing Study of the California Economy[6] projected that the per capita income in the three counties would each increase at annual rates of between 1.4% and 2.7% per year, with a most likely increase of 2.0% per year between 2000 and 2010. This level of increase would maintain the current relationship between counties and with the California average per capita income. Hence, there are no major changes expected in industrial employment. The State of California projects that:

- Non-farm employment in these sectors will continue to decline in Humboldt County, with a loss of 120 jobs between 1997 and 2004 (the most recent data available). With the recent closures in lumber mills, this estimate is considered conservative.
- Non-farm employment in Mendocino County's resource and industrial sectors are projected to increase marginally (by 240 jobs) between 1999 and 2006. Total employment is expected to increase 1.4% annually during this time period (from 29,640 non farm jobs in 1999 to 32,720 non farm jobs in 2006).
- Non-farm employment in the resource and industrial sectors in Sonoma County are projected to increase by 6,700 jobs between 1999 and 2006, or at 2.1% per year, which is in line with the expected growth in total employment.

5.3 Employment

The following section reviews employment trends and forecasts with a focus on resource and industrial sectors (i.e., agriculture, manufacturing, transportation and utilities, wholesale trade) since they generally represent the largest generators of rail freight.

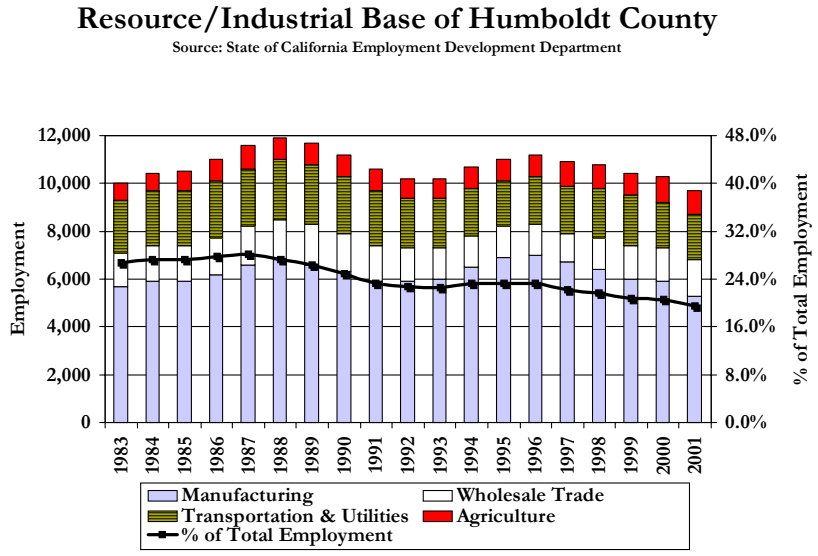
5.3.1 Humboldt County

In Humboldt County, employment in the manufacturing sector increased from 5,700 jobs in 1983 to a peak of 7,000 in 1996 before falling significantly to 5,300 in 2001. Most

[6] Source: California County Projections, year 2001, latest edition available, Table 2, page 4-14.

(64%) of the manufacturing base is composed of forest products manufacturing. However, the manufacturing sector is diversifying into other miscellaneous durable (9% of manufacturing employment) and non-durable (26% of manufacturing employment) goods production.

Figure 5-1



Wholesale trade has grown modestly, from 1,400 jobs in 1983 to 1,500 jobs in 2001 (0.4% per year). Most of the wholesale trade activity is oriented toward outbound construction materials and to a lesser extent inbound retail products.

Transportation and utilities employment declined from 2,200 jobs in 1983 to 1,900 jobs in 2001.

Employment in agriculture increased at an annual rate of 2.0% between 1983 and 2001, from 700 jobs to 1,100 jobs.

In total, the resource and industrial sectors declined slightly from 10,000 jobs in 1983 to 9,700 in 2001, or at –0.2% per year. More importantly, these sectors are continuing to lose share to non-resource/industrial jobs. Between 1983 and 2001, the share of resource/industrial jobs to total employment declined from 27% in the early 1980s to less than 20% in 2001. In particular, the growth in retail trade and services has been relatively rapid.

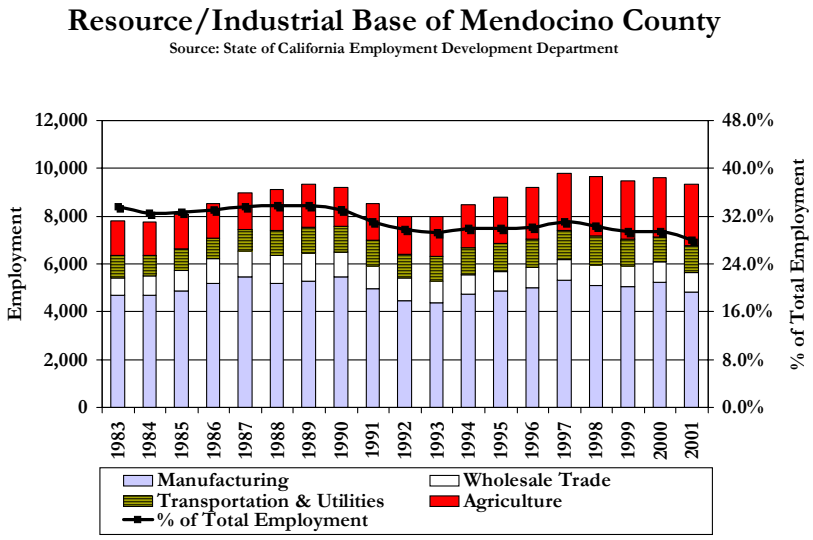
The State of California projects that non-farm employment in the resource sectors will continue to decline, with a loss of 120 jobs between 1997 and 2004 (the most recent data

available). With the recent closures in lumber mills, this estimate is considered conservative.

5.3.2 Mendocino County

In Mendocino County, employment in the manufacturing sector increased slightly from 4,700 jobs in 1983 to 4,820 in 2001. A substantial portion (42%) of the manufacturing base is also composed of the forest products industry. However, the manufacturing sector is more diversified in Mendocino County than in Humboldt County. Approximately 22% of manufacturing employment is in other durable manufacturing and 36% in non-durable (including 1,700 jobs in food processing).

Figure 5-2



Employment in wholesale trade grew rapidly from 1983 (720 jobs) through the late 1980s (reaching nearly 1,200 jobs in 1989) and then fell steadily to 820 jobs in 2001.

Transportation and utilities employment increased from 920 jobs in 1983 to 1,130 jobs in 2001, or at 1.1% per year.

Employment in agriculture increased substantially from 1,460 jobs in 1983 to 2,570 jobs in 2001, or at 3.2% per year. Most of this increase occurred in the 1990s.

In total, the resource and industrial sectors increased employment at 1% per year, from 7,800 jobs in 1983 to 9,340 jobs in 2001. However, other sectors (notably retail trade and services) grew more rapidly (at 2.5% per year). As a result, resource/industrial jobs declined from 33% of total employment in the early 1980s to 28% in 2001.

The State of California projects that non-farm employment in the resource and industrial sectors will increase marginally (by 240 jobs) between 1999 and 2006. Total employment is expected to increase 1.4% annually during this time period (from 29,640 non farm jobs in 1999 to 32,720 non farm jobs in 2006).

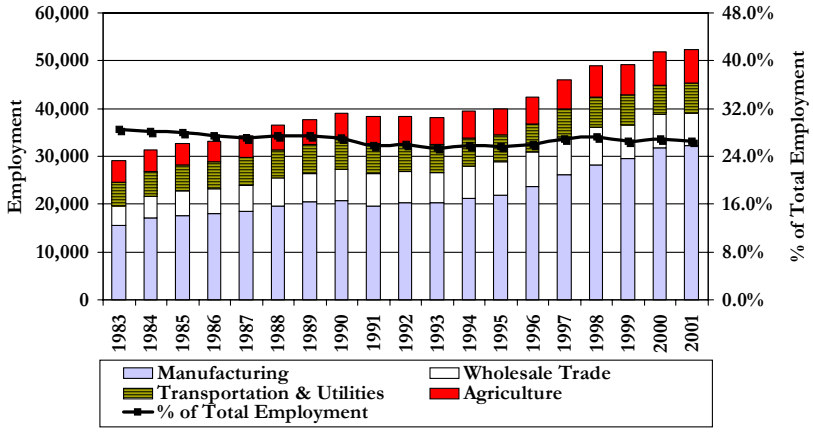
5.3.3 Sonoma County

Sonoma County's proximity to San Francisco Bay has resulted in a different, more diverse employment base. Employment in the manufacturing sector increased substantially from 15,600 jobs in 1983 to 32,300 in 2001 or at a rate of 4.1% per year. Lumber and wood products only represented 1,000 jobs in 2001, down from a peak of 2,200 in the late 1980s/early 1990s. Most of the manufacturing base is in high-tech (10,600 jobs in scientific instruments and 2,900 in electronics) and food processing (8,700).

Figure 5-3

Resource/Industrial Base of Sonoma County

Source: State of California Employment Development Department



Employment in wholesale trade grew rapidly from 4,100 jobs in 1983 to 6,700 in 2001, or at 2.8% per year.

Transportation and utilities employment increased from 4,900 jobs in 1983 to 6,400 jobs in 2001, or at 1.5% per year.

Employment in agriculture increased substantially from 4,500 jobs in 1983 to 7,000 jobs in 2001, or at 2.5% per year.
In total, the resource and industrial sectors increased at 3.3% per year, from 29,100 jobs in 1983 to 52,400 jobs in 2001. Other sectors (notably retail trade and services grew

slightly more rapidly (at 3.9% per year). As a result, resource/industrial jobs declined from 29% of total employment in the early 1980s to 27% in 2001.

The State of California projects that non-farm employment in the resource and industrial sectors will increase by 6,700 jobs between 1999 and 2006, or at 2.1% per year, which is in line with the expected growth in total employment.

5.4 Resource Product Trends

In the past, most of the freight rail carried on the system has consisted of forest products, with much lesser volumes in aggregates, agricultural products and fabricated metal products. These commodities are likely to continue to represent the majority of rail freight on the corridor, given that their potential volumes and physical characteristics lend themselves best to rail freight. The financial feasibility of the railroad continues to depend heavily on these commodities.

5.4.1 Agricultural Commodities

The number of farms and land in farms is declining slightly throughout the corridor. As shown in Table 5-10, the number of farms has declined from 4,996 in 1987 to 4,629 in 1997 (the last year of the 5 year census of agriculture). The average farm size has remained at between 1,500 and 1,600 acres.

Table 5-10 – Agricultural Trends in Humboldt, Mendocino and Sonoma Counties

Item	1997	1992	1987
Farms (number)	4,629	4,699	4,996
Land in farms (acres)	1,793,908	1,839,998	1,943,070
Land in farms - average size of farm (acres)	1,531	1,539	1,601
Total cropland (acres)	262,088	267,275	281,074
Total cropland, harvested cropland (farms)	3,084	2,817	2,791
Total cropland, harvested cropland (acres)	126,429	123,567	126,506

Source: US Census of Agriculture

Much of the agricultural activity in counties bordering the NWP corridor is in fruit and livestock production. Sonoma County produced $585 million of agricultural products, including wine grapes, milk, livestock and poultry, cattle and calves, and grapevines. Mendocino County produced $129 million of agricultural products, including wine grapes, Bartlett pears, cattle and calves, and milk. Humboldt County produced $97 million of agricultural products, including nursery products, milk, cattle and calves and vegetable crops.

In 2000, the tri-county area produced nearly $500 million of fruits and nuts. Most of this activity focused on grape and pear production and was centered in Sonoma County and to a lesser extent in Mendocino County.

This area also produced $211 million of livestock and related products. Again, most of this activity was centered in Sonoma County as well as Humboldt County.

Table 5-11 – Value of Agricultural Production ($millions in 2000)

Category (in 2000)	Humboldt	Mendocino	Sonoma	Summary
Value of production, 2000 ($ mill.)	96.7	128.6	585.0	810.3
Percent of California	*0.3*	*0.4*	*2.0*	*2.7*
County Rank	36	33	16	N/A
Field crops	8.0	10.8	7.2	26.0
Seed crops	0.0	0.0	0.0	0.0
Vegetables	0.8	1.0	6.6	8.4
Fruits and nuts	0.4	102.5	392.8	495.7
Nursery, flowers, and foliage	32.9	2.6	33.3	68.7
Apiary products	0.0	0.0	0.1	0.1
Livestock and livestock products	54.7	11.8	145.0	211.5
Poultry and poultry products	0.0	0.0	0.0	0.0

Source: California Department of Agriculture

5.4.2 Forest Products

According to the California State Board of Equalization, the timber harvest in Humboldt, Mendocino and Del Norte Counties has declined from over 800,000 million board feet (mbf) in the period of the early to mid 1990s to less than 500,000 mbf in 2001. As shown in Figure 5-4, harvests in all three counties dropped by more than 100,000 mbf during this period. However, harvest levels also dropped in other counties of California, and as a result, this area maintained a market share of approximately 30% of the state's timber harvest in 2000/2001.

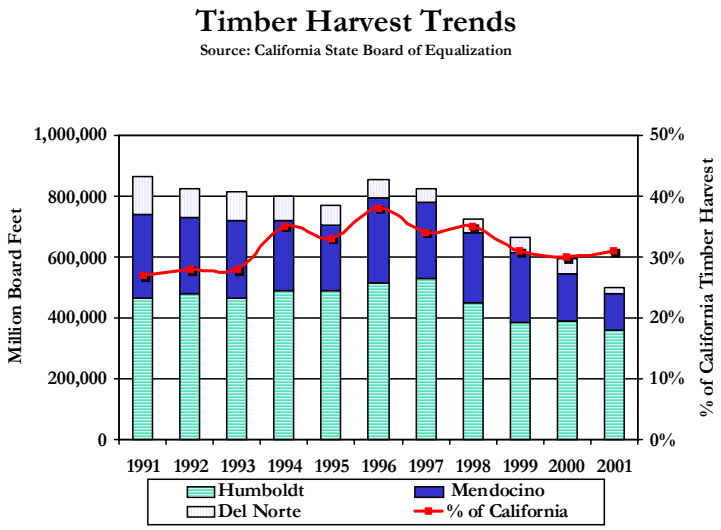
At the present time, nearly all timber harvests come from private lands. Smaller mills that do not have their own timberlands are at a significant disadvantage to the private owners. According to the North Coast Journal:

> "Approximately fifty-one percent of Forest Service timber was set aside for small mills to protect them from competition from timber giants like Louisiana Pacific or Simpson Timber. The volume was huge -- around 150 million board feet were sold out of Six Rivers every year into the 1980s. No cash was required up front, meaning that the small mills without capital reserves didn't have to incur large debt to secure a log supply.[7]"

As land was set aside for spotted owl protection, the timber available from the US Forests dwindled. This forced mills without timberlands to acquire logs from nearby private landowners as well as from sources in the Pacific Northwest (Washington and Oregon), Canada and as far away as New Zealand.

[7] Eel River Sawmills, Going, Going, Gone dated October 18, 2001.

Figure 5-4



Humboldt and Mendocino counties account for approximately 80% to 90% of the California Redwood Area[8] timber harvest and lumber production. As shown in Figure 5-5, lumber production in this region peaked in the late 1980s at 2,214 mbf, and then fell to 1,300 mbf during most of the 1990s. Douglas Fir now accounts for 51% of production, which is the first time that it has surpassed Redwood. There is more competition for Douglas Fir lumber than for Redwood lumber, because Douglas Fir lumber is also produced in other areas of California and in Oregon and Washington.

Most of the lumber sold in the NCRA corridor is sold FOB mill, which means that the transportation costs are the responsibility of the buyer. However, if transportation costs increase, it can put the area at a disadvantage with respect to other producing areas. This problem is exacerbated by the shift to Douglas Fir lumber production. Even in the face of the economic boom of the past ten years in California and the Southwest, lumber prices remained flat and/or declined.

As shown in Figure 5-6, the Eureka price for Douglas Fir two by fours peaked at around $400 in 1999 and then declined to $312 in 2001. Similar drops in price were recorded for other forest products. Lumber producers have experienced increased costs, lack of timber availability and declining prices and this has caused some firms to curtail production or cease operations. Some of the curtailments/ closures have included the PALCO Scotia

[8] California Redwood Area is defined as: Alameda, Contra Costa, Del Norte, Humboldt, Marin, Mendocino, Monterey, Napa, San Benito, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma counties.

mill, Eel River Sawmill, Blue Lake Forest Products, and Georgia-Pacific's Fort Bragg sawmill, among others.

Figure 5-5

California Redwood Area Lumber Production Trends

Source: Western Wood Products Association

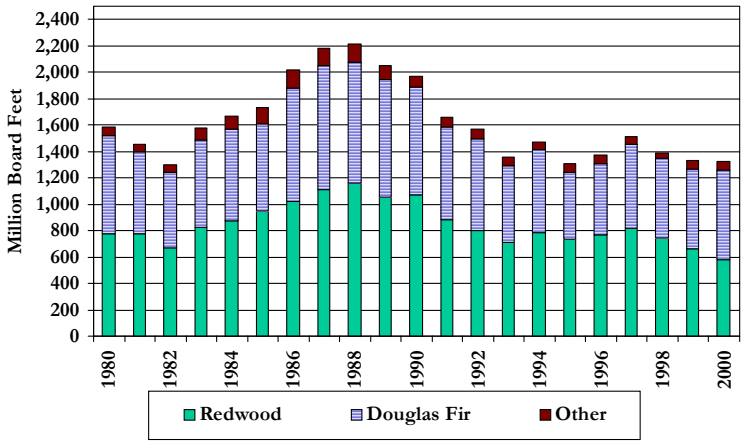
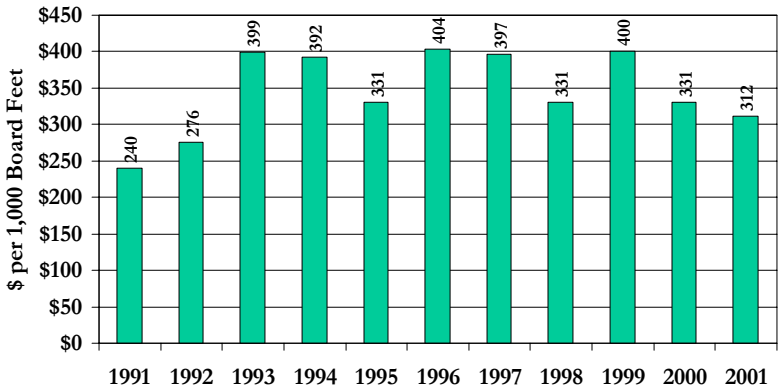


Figure 5-6

Lumber Price Trends (Doug Fir 2x4)

Source: Random Lengths



Prices Net FOB Mill, Eureka Rate

Table 5-12 summarizes some of the key changes in production and distribution of lumber produced in California, based upon surveys by the Western Wood Products Association. Data is not available at the County level in order to protect the anonymity of individual mills. The key trends are:

- Lumber production declined from nearly 5,000,000 mmbf in 1990 to 3,100,000 mmbf in 1995 and then remained at this level through 2000;
- There has been a change in mode of transportation of lumber. Rail shipments from all California producers have declined from 19% to 10%, while truck shipments increased from 80% to 90%. There has also been a decline in the volume moved by water (barge and vessel). While the declining share of lumber shipments by rail applies to the entire state, some of the decline likely reflects the loss of rail service to Humboldt, Mendocino and Sonoma Counties;
- Two-thirds of the product stays in the California Market (primarily the San Francisco, Sacramento and Los Angeles area markets); and,
- Most of the production is shipped to wholesalers but an increasing share goes directly to retailers and company owned distribution yards.

These trends are similar for mills located in the NWP corridor. The forest product industry in the study area has declined as a result of market forces (low prices and competition) and increased costs (due to environmental and other requirements), which has in turn reduced shipments from the area. The local survivors of the industry have taken steps to secure a supply of raw materials either by entering into forest management plans or accessing logs from other areas (Washington, Oregon, Canada and elsewhere). The supply of logs could increase in the future as "land that was logged 30 – 50 years ago and replanted will be ready to harvest in the next 15 years increasing standing timber available for harvest[9]".

The demand for forest products in the housing sector in the primary markets is expected to continue to be strong. According to the Center for Continuing Study of the California Economy[10], household formation in markets served by the North Coast:

- San Francisco Bay area household formation is projected to increase at 1.4% per year between 2000 and 2010 as opposed to actual growth of 1.0% between 1990 and 2000.
- Sacramento region household formation is projected to increase at 1.9% per year between 2000 and 2010 as opposed to actual growth of 1.8% between 1990 and 2000.
- Los Angeles Basin household formation is projected to increase at 1.6% per year between 2000 and 2010 as opposed to actual growth of 0.9% between 1990 and 2000.

Due to these considerations, the report assumes that the existing levels of forest product production will be stable in the future.

[9] Source: Prosperity: The North Coast Strategy, Volume I, page 16.

[10] Source: California County Projections, year 2001, latest edition available, Table 2, page 4-14.

Table 5-12 – California State Lumber Production Trends

Item	1990	1995	2000	Change 2000-1990
Lumber Production (mmbf)	4,981,000	3,169,000	3,173,000	-1,808,000
Est Wholesale Value	$1,564,000,000	$1,415,300,000	$1,362,000,000	-$202,000,000
Mode of Transportation				
Rail	18.5%	16.5%	9.8%	-8.7%
Truck	79.7%	81.8%	90.0%	10.3%
Water	1.8%	1.7%	0.2%	-1.6%
Principal Markets				
California	67.7%	67.1%	66.2%	-1.5%
Other West	11.3%	17.4%	20.3%	9.0%
Midwest	8.8%	6.7%	7.2%	-1.6%
Northeast	3.5%	2.0%	1.3%	-2.2%
South Central	3.0%	3.0%	2.9%	-0.1%
Southeast	2.8%	2.5%	1.1%	-1.7%
Export	2.9%	1.3%	1.0%	-1.9%
Distribution Channels				
Direct to user	7.2%	8.8%	1.3%	-5.9%
Direct to retailer	7.1%	6.1%	10.4%	3.3%
Wholesaler	64.1%	58.5%	59.7%	-4.4%
Company owned distribution yards	5.0%	5.4%	9.1%	4.1%
To factory for further manufacturing	16.6%	17.1%	13.5%	-3.1%
To other companies	0.0%	4.1%	6.0%	6.0%

Source: Western Wood Products Association

5.5 Traffic Trends

The following section discusses recent trends in truck and rail traffic. Heavy trucks represent a very large portion of the truck traffic on state highways within the study area. Table 5-13 presents an estimate of the number of trucks and railcars generated by producers in the area. Truck traffic associated with lumber production in the region has declined at approximately 3.2% per year between 1990 and 2000 (from 559 trucks to 402 trucks per day). Table 5-13 also shows rail traffic, which includes rail traffic generated at transload facilities in the Redding and Woodland areas[11], which has declined even more rapidly at 10.3% per year, from 13,500 cars to approximately 4,600.

[11] Rail traffic estimates are based on interviews and evaluation of the Public Waybill data prepared for the Surface Transportation Board for the years included in the table.

Table 5-13 – Estimated One-way Truck and Rail Traffic Trips from Forest Products Mills in Humboldt, Mendocino and Sonoma Counties

	Units (Full/year)		Units (Full/day)	
Year	**Rail**	**Truck**	**Rail**	**Truck**
1990	13,543	204,205	37	559
1991	11,468	172,924	31	474
1992	10,574	163,658	29	448
1993	9,362	144,905	26	397
1994	8,538	148,153	23	406
1995	7,685	133,342	21	365
1996	10,244	131,516	28	360
1997	10,794	138,582	30	380
1998	5,013	146,440	14	401
1999	4,916	147,892	13	405
2000	4,570	146,894	13	402
Compound Annual Growth Rate				
1990-2000	-10.3%	-3.2%	-10.3%	-3.2%

Source: Surface Transportation Board, Caltrans, BST Associates

5.5.1 Truck Traffic Trends

Truck traffic trends on major highways within the corridor is presented in the following section.

5.5.1.1 *Highway 299*

As shown in Table 5-14, heavy truck traffic on Highway 299, which connects Eureka/Arcata to Redding and Trinity County, increased at 2.7% per year between 1992 and 2000 at the junction with Route 200.

Table 5-14 – Average Daily 5+ Axle Truck Traffic on Highway 299

Route	County		Description	2000	1998	1997	1996	1995	1994	1993	1992	92-00*
299	HUM	1.802	JCT. RTE. 200 WEST	508	483	754	740	740	740	718	718	-4.2%
299	HUM	1.802	JCT. RTE. 200 WEST	761	754	483	512	512	512	613	613	2.7%
299	HUM	5.451	BLUE LAKE ROAD	362	393	393	393	393	393	377	372	-0.3%
299	HUM	38.833	WILLOW CREEK, JCT. RTE. 96 NORTH	170	207	174	128	128	133	348	353	-8.7%
299	HUM	38.833	WILLOW CREEK, JCT. RTE. 96 NORTH	223	174	207	232	232	238	241	243	-1.1%
299	HUM	43.035	HUMBOLT/TRINITY COUNTY LINE	364	280	280	276	280	204	204	206	7.4%
299	TRI	25.772	PRAIRIE CREEK ROAD	239	222	223	205	205	205	257	252	-0.7%

*Average yearly change in traffic volume

Source: Caltrans Traffic Reports, BST Associates

Average truck volumes at this location decreased from 613 trips per day in 1992 to 483 trips per day in 1997 and then increased to 761 trips per day in 2000. Likewise, the truck

trips at the Humboldt/Trinity County border to the east increased from 206 trucks per day in the early 1990s to 364 trips per day in 2000, or at 7.4% annually during this time period. These increases in truck traffic correspond with the closure of the railroad in Humboldt County. According to interviews conducted for this study, mills began to truck lumber and other forest products to the Redding area reload facilities to gain access to the UP Railroad for those products that needed to be moved by rail.

5.5.1.2 *Highway 101*

As shown in Table 5-15, heavy truck traffic on Highway 101 changed in a variety of places. The following trends are evident, starting from the north and traveling south:

Humboldt County

- In the Arcata area, truck traffic increased marginally (at 0.2% to 0.3% per year);
- From Eureka south to Scotia Road, truck traffic decreased in all locations; and
- At Scotia Road south to Route 254, truck traffic generally increased between 1% and 2.4% per year between 1992 and 2000.

Mendocino County

- From Garberville to Route 162 (Laytonville), truck traffic decreased;
- Truck traffic eastbound on Route 20 near Willits increased at 3.5%. This route connects mills in this area to reload facilities to the east in Woodland; and
- At Route 253 (Ukiah), truck traffic increased 2.7% from the west and 0.8% from the east.

Sonoma County

- Truck traffic increased steadily in the northern portion of the County, particularly at the junction with Route 128 (around Geyserville) but traffic fell in South Geyserville;
- Near Healdsburg, truck traffic increased at 2.5% per year;
- In Santa Rosa, truck traffic increased at 7.3% at College Avenue;
- Truck traffic declined near Cotati at Route 116;
- In Petaluma, on the Old Redwood Highway, truck traffic increased 4.1% per year; and
- At South Petaluma, heavy truck traffic increased at 3.5% to 8.8% per year.

Table 5-15 – Average Daily Truck Traffic on Highway 101

Route	County		Description	2000	1998	1997	1996	1995	1994	1993	1992	92-00
101	SON	2.925	SOUTH PETALUMA	1919	1919	2007	1857	1857	1455	1455	1455	3.5%
101	SON	2.925	SOUTH PETALUMA	4427	4426	3516	2007	2007	2248	2248	2248	8.8%
101	SON	3.664	PETALUMA, SOUTH JCT. RTE. 116 EAST	3643	3645	3144	3516	3516	3101	3101	3101	2.0%
101	SON	7.651	PETALUMA, OLD REDWOOD HIGHWAY	4215	4215	2984	3144	3144	3059	3059	3059	4.1%
101	SON	7.651	PETALUMA, OLD REDWOOD HIGHWAY	3546	3545	2705	2984	2984	3661	3661	3661	-0.4%
101	SON	12.682	COTATI, NORTH JCT. RTE. 116	2967	2965	2374	2705	2705	3359	3359	3359	-1.5%
101	SON	12.682	COTATI, NORTH JCT. RTE. 116	2820	2820	1772	2374	2374	3677	3677	3677	-3.3%
101	SON	19.646	SANTA ROSA, JCT. RTE. 12	2243	2242	1633	1772	1772	3378	3378	3312	-4.8%
101	SON	19.646	SANTA ROSA, JCT. RTE. 12	2044	2044	1591	1633	1633	2258	2214	2139	-0.6%
101	SON	20.74	SANTA ROSA, COLLEGE AVENUE	2117	2117	2069	1591	1591	2368	2328	2261	-0.8%
101	SON	20.74	SANTA ROSA, COLLEGE AVENUE	3280	3279	1364	2069	2069	1972	1935	1871	7.3%
101	SON	27.618	SHILOH ROAD	1520	1520	1276	1364	1364	2651	2597	2553	-6.3%
101	SON	34.551	SOUTH HEALDSBURG	2924	2924	1210	1276	1276	2459	2423	2395	2.5%
101	SON	38.558	LYTTON SPRINGS ROAD	1548	1445	1122	1210	1160	2079	2031	2010	-3.2%
101	SON	41.43	SOUTH GEYSERVILLE	1239	1239	1377	1122	1125	1647	1613	1599	-3.1%
101	SON	43.373	JCT. RTE. 128 EAST	1527	1527	1010	1377	1377	1118	10925	1077	4.5%
101	SON	52.061	CLOVERDALE, FIRST STREET	1112	1577	920	1010	1010	995	995	984	1.5%
101	SON	53.545	JCT. RTE. 128 WEST	1011	1011	728	920	920	870	870	862	2.0%
101	SON	54.201	JCT. RTE. 128 WEST	570	854	0	728	728	835	835	823	-4.5%
101	MEN	10.89	HOPLAND, JCT. RTE. 175 EAST	605	579	580	314	314	314	757	751	-2.7%
101	MEN	21.59	JCT. RTE. 253 WEST	933	869	898	869	811	811	759	753	2.7%
101	MEN	23.45	UKIAH JCT 222 EAST	770	162	162	190	190	190	726	722	0.8%
101	MEN	30.833	JCT. RTE. 20 EAST	832	628	628	729	729	729	634	631	3.5%
101	MEN	30.833	JCT. RTE. 20 EAST	380	493	525	304	287	287	836	825	-9.2%
101	MEN	46.363	WILLITS, JCT. RTE. 20 WEST	941	941	1113	1051	1051	1051	836	860	1.1%
101	MEN	46.363	WILLITS, JCT. RTE. 20 WEST	505	505	452	934	934	934	1008	1008	-8.3%
101	MEN	59.31	JCT. RTE. 162 EAST	588	597	600	600	600	600	591	582	0.1%
101	MEN	59.31	JCT. RTE. 162 EAST	538	594	597	597	597	597	569	550	-0.3%
101	MEN	69.49	LAYTONVILLE, BRANSCOMB ROAD	485	460	463	506	506	506	567	560	-1.8%
101	MEN	69.49	LAYTONVILLE, BRANSCOMB ROAD	440	417	417	269	269	269	463	452	-0.3%
101	MEN	91.245	LEGGETT, JCT. RTE. 1	474	458	504	450	450	450	459	453	0.6%
101	MEN	101.16	JCT. RTE. 271	455	439	442	420	459	459	459	616	-3.7%
101	HUM	11.125	GARBERVILLE, SPROWEL CREEK ROAD	475	550	550	550	562	659	783	659	-4.0%
101	HUM	11.125	GARBERVILLE, SPROWEL CREEK ROAD	461	437	437	437	536	601	533	615	-3.5%
101	HUM	17.907	JCT. RTE. 254 NORTHEAST	638	621	620	620	595	595	612	578	1.2%
101	HUM	17.907	JCT. RTE. 254 NORTHEAST	689	636	636	636	583	583	625	572	2.4%
101	HUM	27.936	JCT. RTE. 254	667	591	591	591	582	582	625	559	2.2%
101	HUM	27.936	JCT. RTE. 254	674	610	610	610	599	599	599	567	2.2%
101	HUM	35.108	JCT. RTE. 254 SOUTH	601	622	622	622	633	633	611	580	0.4%
101	HUM	35.698	SOUTH FORK ROAD	634	613	613	613	624	624	603	583	1.1%
101	HUM	50.585	SOUTH SCOTIA ROAD	689	689	689	689	630	630	656	621	1.3%
101	HUM	57.69	JCT. RTE. 36 EAST	657	719	720	720	644	644	644	943	-4.4%

Table 5-7 (Continued) – Average Daily Truck Traffic on Highways 101

Route	County		Description	2000	1998	1997	1996	1995	1994	1993	1992	92-00
101	HUM	57.69	JCT. RTE. 36 EAST	790	790	796	796	705	705	705	826	-0.6%
101	HUM	64.29	JCT. RTE. 211, SINGELY ROAD	726	704	698	698	676	676	657	778	-0.9%
101	HUM	64.29	JCT. RTE. 211, SINGELY ROAD	720	835	818	766	773	766	646	803	-1.4%
101	HUM	65.947	LOLETA DRIVE	693	664	660	660	657	657	635	761	-1.2%
101	HUM	81.14	EUREKA N CTY LIM	613	613	613	613	622	622	622	1006	-6.0%
101	HUM	85.83	ARCATA, JCT. RTE. 255 SOUTH	521	521	521	521	521	521	521	514	0.2%
101	HUM	85.83	ARCATA, JCT. RTE. 255 SOUTH	965	965	965	965	965	965	965	950	0.2%
101	HUM	88.272	ARCATA, JCT. RTE. 299 EAST	1035	1035	1035	1035	1035	1021	1021	1007	0.3%
101	HUM	88.272	ARCATA, JCT. RTE. 299 EAST	1112	1112	1122	1122	1122	1083	1083	1083	0.3%
101	HUM	90.134	JCT. RTE. 200 EAST	1113	1113	1113	1113	1113	1057	1057	1057	0.6%
101	HUM	90.134	JCT. RTE. 200 EAST	253	253	257	455	455	415	415	412	-5.9%
101	HUM	97.5	CRANNELL ROAD	200	392	392	392	392	377	377	377	-7.6%
101	HUM	97.5	CRANNELL ROAD	200	371	371	371	371	346	346	349	-6.7%
101	HUM	122.25	BALD HILLS ROAD	239	239	168	168	168	204	204	240	-0.1%
101	HUM	122.25	BALD HILLS ROAD	200	215	239	239	203	203	203	292	-4.6%

Source: Caltrans Website: http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/, BST Associates

6.0 SUMMARY OF FREIGHT SURVEY RESULTS

The following section presents a summary of the freight shipper interviews that are described in Section 4.0, "Freight Rail Market" Methodology of this report and an estimate of the expected range of rail freight market potential by commodity type. The potential freight volumes are also broken down by location, using the seven zones along the rail line as defined in the Northwestern Pacific Railways Tariff (NWPY) from January 2000.

6.1 Forest Products Mills

Forest products mills are expected to continue to be the mainstay of the railroad for the foreseeable future because of the volumes, commodity characteristics and distances involved. As shown in Table 6-1, forest products generated 4,482 outbound and 756 inbound rail cars in 1996/97 or more than 75% of all traffic.

These firms are expected to generate the following freight rail demand by scenario:

- Low scenario: 4,749 outbound and 2,184 inbound rail cars;
- Medium scenario: 6,962 outbound and 3,017 inbound rail cars; and
- High scenario[12]: 9,599 outbound and 3,450 inbound rail cars.

By zone, nearly two-thirds of the products are generated at the north-end of the corridor in Zone 7 (Eureka, Arcata, Fortuna etc.). Other centers are located in the Ukiah, Willits and Windsor areas.

[12] The reactivation of the Eel River and Blue Lake sawmills is included only in the high growth forecast.

Table 6-1 – Estimated Rail Traffic from Forest Products Mills by Zone (Full rail cars)

		Outbound				Inbound			
Zone	Area	Actual 96/97	Low	Medium	High	Actual 96/97	Low	Medium	High
1	Petaluma/Novato etc	54	112	163	214	-	-	-	-
2	Santa Rosa/Windsor etc	793	615	770	925	273	890	1,050	1,210
3	Healdsburg etc	65	100	146	191	-	-	-	-
4	Ukiah, Redwood Valley etc	253	472	735	992	483	794	1,017	1,240
5	Willits etc	70	180	282	383	-	-	-	-
6	Dos Rios etc	-	24	30	36	-	-	-	-
7	Arcata, Eureka etc	3,333	3,246	4,837	6,858	-	500	950	1,000
	Subtotal	4,568	4,749	6,962	9,599	756	2,184	3,017	3,450

Source: Interviews, BST Associates

Additional traffic is projected under all forecast scenarios for two primary reasons. First, service was poor in 1996/7 and the expected level of service upon reopening of the railroad is assumed to be of much higher quality, thus attracting additional service. Second, the logistics patterns under existing (and future) conditions are different than under prior conditions. More traffic is destined for more distant places. In addition, firms are looking for more economical ways to receive inbound materials (especially logs and lumber for mills and remanufacturers).

Most of these firms require service 2, 3, or 5 times per week, depending on their volumes and the size of their rail spurs. However, the key factors they cited for choosing rail were price and reliability of service.

Direct rail access could provide a significant cost savings for these producers. It takes approximately 3.5 trucks to load a railcar. The cost to dray from Eureka/Arcata to Redding is approximately $300 per truck (or $1,050 per railcar) plus a $400 reload charge per railcar, which equals $1,450 per rail car. The UP provides rebates or rate adjustments of approximately $600 per rail car so the net cost differential is $850 per rail car. The savings by direct service depend upon the negotiated rates between the NWP and the UP but could be as much as $850 per rail car based on previous tariff rates. In addition, mills can use their own personnel to load cars when the timing is optimal. This increased flexibility was mentioned as an additional benefit by several interviewees.

6.2 Feed Mills

The feed mills are located in Zone 1 of the NWPY tariff in the south end of the corridor at Petaluma and Novato. These mills obtain grain from the Midwest (mostly corn, but also soy, barley, etc.) and Canada (canola) in bulk hopper cars. Most of the product comes via the UP Railroad to Napa Junction with transit to Petaluma by Cal Northern and the NWP. One mill (Bar Ale Feed) ceased mill operations in Petaluma (although the

Petaluma facility still functions as a retail outlet) and developed a new state-of-the-art facility in Williams (Colusa County).

The operators suggested that the size of the rail market could be approximately 1,300 to 1,400 cars per year. However, these operators only used rail for 435 cars in 1996/1997 (359 without Bar Ale). The market was estimated at between 724 cars (low) to 1,060 cars (high).

Service needs were expressed as 5 times per week (Monday through Friday) by large firms and 2-3 times per week by a smaller firm. One large firm wanted 1 time (evening switches), and another wanted 2 times per day (with switches in the evening or early morning at 5am, and at 2pm).

The mills expressed no interest in directly serving Humboldt County dairies with rail since it only represents around 20% of the feed grain market and dairies are not directly served by rail. They feel that truck service to Humboldt County adequately meets their needs. In addition, there are industry concerns about the increasing costs of staying in business for the dairy industry and the changes from small to large producers.

Table 6-2 – Estimated Rail Traffic from Feed Mills by Zone (full rail cars)

		Outbound				Inbound			
Zone	Area	Actual 96/97	Low	Medium	High	Actual 96/97	Low	Medium	High
1	Petaluma/Novato etc	-	-	-	-	435	724	892	1,060
2	Santa Rosa/Windsor etc	-	-	-	-	-	-	-	-
3	Healdsburg etc	-	-	-	-	-	-	-	-
4	Ukiah, Redwood Valley etc	-	-	-	-	-	-	-	-
5	Willits etc	-	-	-	-	-	-	-	-
6	Dos Rios etc	-	-	-	-	-	-	-	-
7	Arcata, Eureka etc	-	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	435	724	892	1,060

Source: Interviews, BST Associates

Concern was also expressed about previous rail service, particularly:

- Lack of coordination between the NWPY and Cal Northern in providing switching;
- Disputes over rates; and
- Issues with the proper spotting of railcars.

The original surcharge by the NWPY was around $215 to $225 per car ($2.15 to $2.25 per ton) to serve Petaluma. Without rail, the product must be transported to mills from Napa Junction at a freight charge of $9 to $10 per ton, which puts mills at a competitive disadvantage with other mills that have direct rail access. Rail offers substantial savings ($6+ to $7+ per ton) over truck from Napa Junction. However, mills have entered into other contracts to cut down on costs such as buying corn and barley from California

producers, which require long-term contract alliances. This could reduce the amount of grain required from locations served by rail. Approximately 60% of corn at one mill is now obtained from local sources. This reduces the cost differential to approximately $5 to $6 per ton.

6.3 Aggregates

Aggregate production along the NWP corridor in Humboldt and Mendocino Counties has typically been used to serve local community demand in the past. Small volumes of aggregate moved on the railroad in 1996/97, mainly serving these local communities and industries.

In Sonoma County, aggregates are trucked from the Russian River and quarries to job sites and ready mix producers in the North Bay area. According to one major producer, trucks provide easy access from the quarry to the job site and ready mix plants have limited storage capacity or are not located on rail. However, other producers/users at the south end of the line are seeking rail service.

There is a growing shortage of materials in the San Francisco Bay area, which is initiating a wider search for aggregates. The North Bay area is not currently experiencing a shortage but likely will within a few years as permits expire in the Russian River. The California Department of Conservation estimates that there is a historical demand of 9 tons of aggregates per person per year in the North Bay as compared with 7.5 tons per person in the rest of the Bay Area (based upon the average use between 1960 to 2000). Approximately 95% of these products are currently trucked in to the San Francisco Bay area.

Interest has been expressed in moving aggregate from Humboldt County to the San Francisco Bay Area (probably North Bay). There remain questions about the ability to expand production beyond existing extraction rates and about whether the delivered product price (with transportation cost) would be competitive to the North Bay and beyond.

There are several issues related to expansion of the resource base in Humboldt County. The product comes largely from three rivers or from upland quarries:

- Mad River has been studied extensively and is at sustained yield;
- Van Dusen River has also been studied rather extensively and is at sustained yield; and
- Eel River has not been studied to the level of detail required to fully understand sustained yield (i.e., a yield that can be maintained over a long period of time) and biological implications. Humboldt County tried to secure a grant to study the resource base but was not successful. There is currently not enough information to know if the resource can be expanded, especially with ESA regulations. The preliminary estimate of sustained yield may be 1.2 million cubic yards per year (or maybe more) of product based on discussions with

Humboldt County. This is about 400,000 cubic yards (or 600,000 tons) above current harvest levels.

The transportation costs to deliver the product are unknown. There is a combination of truck and rail costs that would be required to move the product from the mine site to the final customer. This is a critical factor in determining the feasibility of these movements. Substantial quantities of aggregates are also located at Marysville (i.e., approximately 2 billion tons north of Sacramento at Yuba River) but shippers have not been able to deliver product at market rates to the North Bay. This area is located at approximately the same distance from Petaluma as the product generated in Humboldt County.

In summary, there is uncertainty regarding the potential shipments of aggregates for the following reasons:

- The resource base is not known with certainty at the present time;
- There is concern about being able to deliver the product at market prices; and
- Prices and service needs are unknown at this time.

For these reasons, the Bay Area market is only considered under the high growth scenario forecast. As shown in Table 6-3, aggregates serving the San Francisco Bay market could reach 6,000 carloads per year. These loads have been placed in the Willits area, which assumes a centralized site for processing located south of the Eel River Canyon. Alternatively, this product could be dispersed from Willits north past Arcata.

In addition, there are aggregates bound for local markets, which are expected to range from 500 (low) to 1,270 (high) railcars.

Table 6-3 – Estimated Rail Traffic from Aggregates by Zone (full rail cars)

		Outbound				Inbound			
Zone	Area	Actual 96/97	Low	Medium	High	Actual 96/97	Low	Medium	High
1	Petaluma/Novato etc	-	-	-	-	-	-	-	-
2	Santa Rosa/Windsor etc	-	-	-	-	-	-	-	-
3	Healdsburg etc	-	-	-	-	-	-	-	-
4	Ukiah, Redwood Valley etc	270	-	135	270	-	-	-	-
5	Willits etc	-	-	-	-	-	-	-	-
6	Dos Rios etc	-	-	-	-	-	-	-	-
7	Arcata, Eureka etc	564	500	1,018	7,000	-	-	-	-
	Subtotal	834	500	1,153	7,270	-	-	-	-

Source: Interviews, BST Associates

6.4 Solid Waste

6.4.1 Humboldt County

Humboldt County generates 80,000 tons per year (approximately 200 tons per day Monday through Friday), which is growing at the same rate as population growth. The County was interested in having this product move by rail. However, the existing facility

is not served by rail and there is no way to bring rail to the existing facility without relocating other businesses or crossing a wetland. There was a study of 5 to 6 potential rail-served sites but the community preferred the current site, which lacks rail access. To use rail would require shuttling waste from the existing transfer facility to a reload facility. This could require additional costs for trucking and potentially additional storage. Neither of these expenses is in the current budget/rate and would require a rate adjustment.

Humboldt County's operator, Waste Solutions Group, is also interested in rail but this depends upon cost and reliability of service. The operator still has 14 years left on a 15-year contract with Potrero Hills and was only considering this location for Humboldt County. Previously negotiated rail rates to Potrero Hills are confidential but any new rates offered would presumably need to meet or beat the rates contracted for with the previous rail operator. Waste Solutions is currently trucking the waste to a site in Medford and is able to defray costs to some extent by backhauling wood chips for export at Humboldt Bay.

The solid waste authority and its vendor indicate that they could use rail if it were available and cost effective (including all costs such as drayage to rail served locations). Due to these uncertainties, the potential for solid waste was only placed in the high scenario. However, the shift to rail would be expensive and would require a long-term commitment (approximately $6 million capital outlay). The County would put waste in 12-foot high containers (64 cubic yards per container) and could get 4 containers per flatcar. They would need service 5 or 7 days per week. It is uncertain whether rail is still viable but, if it were, it would require direct access to Eureka, not a reload facility at Willits. Due to the high capital and operations costs associated with providing service, solid waste was not carried forward in the financial and economic analysis.

6.4.2 Mendocino County

Mendocino County has two vendors:

- Solid Waste of Willits – located in close proximity to rail, but is presently not utilizing rail; and
- Solid Waste Systems (Ukiah) – A rail spur could be built.

Both vendors take waste to Potrero Hills, located 119 miles from Ukiah and 141 miles from Willits. It costs approximately $400 per truckload ($20 per ton) to take the waste from Willits to Potrero Hills.

Rail service was considered by Mendocino County Solid Waste, but was found not to be economically viable. Rail service could only take the waste to Suisun City or Fairfield; from there it would need to be trucked to the landfill. If rail were to be used in Mendocino County, it would need to be serviced 6 days per week.

6.4.3 Summary

Table 6-4 summarizes the solid waste freight rail demand estimates. Due to the uncertainties indicated above and the requirement of six day a week service, the Mendocino County volumes were not included in the analysis.

Table 6-4 – Estimated Rail Traffic from Solid Waste by Zone (full rail cars) But Not Included In Financial Analysis

		Outbound				Inbound			
Zone	Area	Actual 96/97	Low	Medium	High	Actual 96/97	Low	Medium	High
1	Petaluma/Novato, etc.	-	-	-	8	-	-	-	-
2	Santa Rosa/Windsor, etc.	-	-	-	-	-	-	-	-
3	Healdsburg, etc.	-	-	-	-	-	-	-	-
4	Ukiah, Redwood Valley, etc.	-	-	-	-	-	-	-	-
5	Willits, etc.	-	-	-	-	-	-	-	-
6	Dos Rios, etc.	-	-	-	-	-	-	-	-
7	Arcata, Eureka, etc.	3	-	-	1,000	-	-	-	-
	Subtotal	3	-	-	1,008	-	-	-	-

Source: Interviews, BST Associates

6.5 Miscellaneous Products

There are also a few shippers located along the corridor moving products not included in the previous categories. These include fabricated pear and fish producers, wine, beer and beverage distributors, metals producers and other firms. They are primarily located in Zone 1 (primarily wine distributors), Zone 4 (primarily structural fabricators) and Zone 7 (fish products, inbound lime for the pulp mill, and the port related traffic).

Demand from these users is presented in Table 6-5. As shown, these shippers generated 104 outbound and 4 inbound railcar moves in 1996/1997. They are expected to generate the following levels of traffic in the future:

- Low scenario: 104 outbound and 140 inbound rail cars/per year;
- Medium scenario: 166 outbound and 201 inbound rail cars/per year; and
- High scenario: 3,230 outbound and 251 inbound rail cars/per year. The high case scenario includes 3,000 cars generated by port-related industry.

Table 6-5 – Estimated Rail Traffic from Miscellaneous Shippers by Zone (full rail cars)

		Outbound				Inbound			
Zone	Area	Actual 96/97	Low	Medium	High	Actual 96/97	Low	Medium	High
1	Petaluma/Novato, etc.	52	-	26	52	-	-	-	-
2	Santa Rosa/Windsor, etc.	-	-	-	-	4	-	2	4
3	Healdsburg, etc.	3	-	2	3	-	15	22	27
4	Ukiah, Redwood Valley, etc.	46	94	125	155	-	55	89	120
5	Willits, etc.	-	-	-	-	-	-	-	-
6	Dos Rios, etc.	-	-	-	-	-	-	-	-
7	Arcata, Eureka, etc.	152	10	14	3,020	-	70	88	100
	Subtotal	253	104	166	3,230	4	140	201	251

Source: Interviews, BST Associates

6.6 Summary Rail Traffic

Table 6-6 presents a summary of the low, medium, high and most likely forecasts by commodity.

Table 6-6 – Estimated Rail Traffic from Rail Shippers by Commodity (full rail cars)

Category	Actual 96/97	Low	Medium	High	Most Likely
Feed Mills	435	724	892	1,060	875
Forest Products Mills	5,324	6,933	9,979	13,049	9,676
Aggregates	834	500	1,153	7,270	1,634
Solid Waste[1]	3	-	-	1,008	101
Miscellaneous	257	244	367	3,481	654
Total	6,853	8,401	12,391	25,868	12,940

Source: Interviews, BST Associates

[1] The solid waste carloads were not included in the financial analysis due to the expense related to the capital and operating expenses.

6.7 Rail Competition Issues

6.7.1 Truck Competition

Since the NWP stopped operation to the north end of the railroad in Eureka in 1997, the trucking companies of the region have taken up the business that exists along the corridor. Truck competition can be characterized in two ways:

- Direct Service: former NWP customers are currently using trucking services to import and export raw and finished goods to the region. These customers include feed mills, forest products and aggregates producers.

- Dray Service (trucking to the UP or Port): both on the north and south ends, customers are using trucks to dray both their inputs and outputs to railroads. On the north end the Union Pacific is currently subsidizing the dray from Eureka to Redding along state route 299 and there are also drays between the California Northern and several feed mills on the south end.

Overall given the inactivity of the NWP over the last few years, many of the current shippers have come to rely on trucking as their primary mode of transportation. This has been accounted for in the revenue estimates for the NWP in that there is a "ramp-up" period for the transfer of shipments from truck to rail. The overriding assumption for this financial analysis is that the tariff is competitive with the trucking industry.

Regional trucking companies do not see the overall transportation market growing and would see the reintroduction of the NWP as direct competition. Details of interviews with regional trucking companies are included in Appendix A.

6.7.2 Relationship with UP Railroad

The success of the NWP depends significantly upon its relationship with the UP Railroad. In discussions with the UP Shortline coordinator, it was indicated that the UP supports re-establishing rail on NWP. UP is, however, concerned about outstanding expenses on the railcars that have been trapped on the north end of the rail line since the Eel River Canyon section was washed out. UP wants to negotiate a solution for this problem in the near-term future.

In the long run, the UP will support the NWP to the degree that it effectively uses railcars. Frequently, rail cars are lost or delayed on shortline operations. The UP can react to poor railcar turnover performance by increasing demurrage rates and/or not providing cars. The performance of the NWP and its shippers will be critical in re-establishing a good working relationship with UP.

6.7.3 Willits Reload Facility

According to shippers in Zone 1 (Eureka/Arcata area), there is little value of a truck-to-rail reload facility in Willits or Redwood Valley. The distance from Eureka to Willits is about the same as the distance to Redding, which allows one truck turn per day. However, at Redding, shippers can directly access the UP system, while at Willits/Redwood Valley, shippers would still be 150 miles from the UP mainline, operating over two shortline railroads.

UP's Redding reload facility serves much of Northern California in addition to the Humboldt area, including lumber shippers north and east of Redding. Consequently, the operation likely enjoys substantial economies of scale, both in the reload operation itself and in terms of UP's train operations. A Willits reload operation could likely expect significant competition from Redding, based on that operation exercising and protecting its economies of scale. The only way to attract shippers from Zone 1 to a reload facility at Willits/Redwood Valley would likely be with major price incentives.

A reload facility located in Willits/Redwood Valley would, however, be useful for shippers in Zones 4 through 6. There are existing reload operators that are providing this service, including Diablo Timber in Windsor, Capital Lumber in Healdsburg and Piedmont Lumber in Calpella, among others. Enhancing these existing facilities and, perhaps, developing new ones could improve the efficiency of the railroad by limiting the number of pickup spots. For the purposes of this study a reload facility and its associated costs are included in the analysis for operating scenario I.

6.7.4 STAA Truck Access

Truck traffic in Humboldt County is restricted to California legal (or lower) standards, which means the maximum truck has a distance of 40 feet from the end of the trailer to the kingpin and 65 feet in overall length. The restriction is due to steep grades, turning radii and other factors that would cause unsafe conditions for transit by longer trucks.

Other counties (including most of Mendocino and Sonoma Counties) are able to use longer trucks such as trailers that are 48 to 53 feet long (so-called STAA[13] trucks). The inability to access longer trucks presents a competitive disadvantage to shippers for two reasons. First, some shippers cube out[14] in the smaller California legal trucks. These shippers could achieve higher freight volumes with larger trucks and thus lower their transportation costs. Second, shippers that weight out in the California legal trucks must transport their products to the ultimate destination in the smaller trucks or transload from a smaller to a larger truck at a point that STAA trucks are allowed. Many of the major national trucking firms have shifted their entire fleet to the STAA trucks, since they operate mainly along the Interstate system. The inability to access these truckers can also lead to higher transportation costs.

Improvements are currently being considered which (when enacted) would allow access by STAA trucks into Humboldt County via SR299. The Buckhorn Grade Improvement project, which would straighten out curves and improve grades along SR299[15], would allow access to Humboldt County by STAA trucks. This project, which is in the early stages of analysis, could cost approximately $120 million to complete. Because of its impact on trucking and other benefits (improved speed and safety between Eureka and Redding), it is a high priority for local communities. If it were constructed, it could decrease the cost of truck transport between northern Humboldt County and Redding.

7.0 POTENTIAL PORT-RELATED RAIL TRAFFIC

This section addresses the potential for port-related rail traffic on the NWP. A detailed analysis of the market for port-related rail traffic will be addressed as a part of the Port of

[13] STAA refers to the Surface Transportation Acceptance Act, which requires states to allow larger trucks on the "National System" defined as the Interstate System and non-Interstate Federal-aid Primary System.

[14] For high-density (weigh-out) freight such as farm products and natural resources, a vehicle's maximum payload is controlled by truck weight limits. For low density (cube-out) freight, such as computer equipment and snack foods, vehicle size limits constrain payload.

[15] There are a few additional projects that would also be needed to allow access by STAA trucks.

Humboldt Bay Harbor Revitalization Plan, which will be prepared following this study effort. The Harbor Revitalization Plan will include a complete evaluation of port market opportunities, addressing both the "with rail" and "without rail" conditions.

Based on the known dynamics in the West Coast port and rail markets, this section addresses:

- The relationship of rail systems to ports in general, and to the Port of Humboldt Bay specifically;
- The trade and logistical dynamics driving the movement of containers, breakbulk cargo, automobiles, bulk cargo and marine industrial cargoes at West Coast ports;
- Shipper and carrier requirements for rail-related port traffic in these categories; and
- A discussion of the likely opportunity areas and potential volumes of port-related rail traffic at Humboldt Bay.

7.1 The Role of Rail Service at Ports

The movement of freight in waterborne trade requires that the landside rail and/or roadway transportation systems connect with navigable deep water at a location that minimizes total transportation cost. In this sense, a port is simply a location where deep water efficiently meets the railways and/or roadways. Without this efficient inland connection, a harbor may have excellent navigation access but limited functionality as a port.

7.1.1 Rail Market Share at West Coast Ports

Table 7-1 illustrates the approximate percentage of port traffic moving by rail, depending on the commodity and the port area. The statistics indicate that rail service is highly important at West Coast ports, accounting for up to 90% of port related traffic in some sectors.

Table 7-1 - Approximate Percentage of West Coast Public Port Traffic by Rail

	Pacific Northwest Ports	Bay Area Ports	Southern California Ports
Containers	65%	10%	50%
Breakbulk	10%	10%	10%
Bulk grain	65%	Nil	Nil
Bulk minerals	90%	Nil	90%
Automobiles	85%	25%	50%
Marine industrial	Varies up to 100%	Varies up to 100%	Varies up to 100%

Source: PB Ports & Marine and BST Associates, 2002

Rail service is also important to ports in another respect that is not reflected in the statistics. While all shippers and carriers using a port will not necessarily use rail service, most want the *flexibility to use rail.* Having the rail option available ensures shippers

they can reach additional markets or supply sources in the future, if needed, or negotiate inland transportation arrangements from a position of strength, leveraging truck against rail.

7.1.2 Rail Service Types

Rail access is particularly important because of its ability to haul large volumes of heavy freight more efficiently than truck, and its ability to haul large volumes of freight over longer distances more efficiently than truck. Two types of rail service occur at ports:

- Unit train service – Involves trainload volumes of a single commodity between the port and a single location, with no intermediate switching or classification of the railcars; and
- General manifest service – Involves smaller volumes of mixed commodities to make up a trainload between the port and multiple locations, with intermediate switching or classification of the railcars.

The efficiencies of rail relative to ports are dependent on large volumes moving on a regular basis between the port and a single inland location (or cluster of locations) such as a mill, mine, manufacturing plant or major distribution center. The greatest efficiencies occur when unit train volumes are achievable over long distances. In most instances, in the case of containers, this involves 15-30 double stack railcars at a time (300-600 TEUs) over at least 150 miles in the case of shuttle services or 1,000-2,000 miles in the case of land bridge services. For bulk products, this involves 50-110 hopper cars at a time over distances of 500-1,500 miles. Maintaining unit train service at ports is solely dependent on sufficient volumes of the import or export traffic involved.

Breakbulk products such as lumber or steel usually operate in general manifest service due to the smaller railcar volumes and the mix of origins/destinations involved. Depending on the circumstances, this could range from a single railcar moving 1,000-2,000 miles or 30 railcars moving 30 miles between mills and plants in a key-supplier relationship. Maintaining general manifest service at ports requires a sufficient volume and mix of the port-related import/export traffic and domestic traffic to warrant service several days per week.

7.1.3 Rail at Resource-Based Ports

The role of rail service varies depending on the nature of the port. Some ports are mainly resource based; that is, the port's traffic base is tied to extractive or resource-based industries located close to the harbor. In this case, sufficient serviceability of the rail system is needed to move traffic between local industries and the harbor, and to enable local shippers to reach more distant domestic markets. This has historically been the case at the Port of Humboldt Bay and other coastal ports in the North Pacific range, such as Coos Bay, OR and Grays Harbor, WA. While relatively isolated from domestic markets, these port cities grew up relying on local industries, moving their products into waterborne trade and domestic markets over local rail and highway connections. Continued serviceability in the rail and highway systems is critical to maintaining opportunities for these ports.

7.1.4 Rail at Logistics-Based Ports

At the other extreme, some ports are mainly logistics based. In this case the port's traffic base comes from well beyond the local area and the port's main reason for existence is based purely on superior rail-water logistics and the lowest cost transportation economics relative to alternative locations. With logistical superiority, the rail and navigation systems taken together can act as a magnet for certain types of port traffic.

Prince Rupert, situated in a relatively isolated location in northern British Columbia, is a port built purely on the basis of its rail-water logistics for bulk grain and coal. Served by Canadian National Railway and located a day closer to Asia by water than Vancouver, BC, the grain elevator and coal terminal at Prince Rupert handle unit trainloads of freight from the Canadian prairie provinces in a highly efficient rail-water operation.

Likewise, the Columbia River ports are largely logistics based, due to the efficiency of the direct, water-grade east-west rail (and barge) routes through the Cascade Mountains of BNSF and Union Pacific. As a result of these efficient logistics, the ports of Portland, OR and Vancouver and Kalama, WA have attracted large quantities of bulk grains and minerals by rail from the mountain and plains states for vessel loading to Asia.

7.1.5 Rail at Population-Based Ports

The largest ports are population based. Ports like Los Angeles, Long Beach and New York serve high population regions whose consumption of imports and production of exports attracts a high level of port traffic served by truck. It is no coincidence that these ports have excellent rail connections as well, originally built to support the movement of domestic goods to the population or domestic production to other regions. Consequently, the population-based ports also tend to have excellent rail logistics for handling import and export waterborne trade to/from points well beyond their immediate regions, benefiting from enormous rail economies of scale.

Los Angeles and Long Beach actually have the shortest and most-efficient rail connections to Chicago and the Sunbelt via BNSF and Union Pacific for import/export trade. In addition, the economies of scale resulting from the high-volume mix of domestic and import/export intermodal traffic results in round trip rail costs for containers that are several hundred dollars per box lower than at other West Coast ports.

7.2 Container and Intermodal Traffic

7.2.1 Direct container steamship service

Since the introduction of double stack trains and the rise of intermodalism in the late 1980s, the transpacific container trade has been controlled by the steamship carriers. Decisions on port calls, intermodal traffic routing, rail carrier selection and other logistical details are virtually all made by the steamship lines. In making these decisions, the steamship carriers seek to balance vessel operating efficiency, service to local cargo markets and intermodal connections to inland markets.

The container steamship industry continues to go through a period of extensive consolidation, including acquisitions, mergers and the formation of operating alliances in which carrier groups share slots on each other's vessels. The selection of vessel itineraries, port calls and intermodal gateways is complicated by the alliances because several steamship lines must now agree on all decisions.

Vessel sizes continue to increase with the introduction of the large and wider post-Panamax container ships—those too wide to transit the Panama Canal. Ships in the transpacific trade range in size from 3,000 to 6,000 TEU, the most typical being about 4,000 TEU with maximum sailing drafts of over 45 feet. While much is written about the increasing ship sizes and the likelihood of 8,000 to 10,000 TEU ships, carriers will most likely operate a variety of ship sizes to serve various markets.

Container service has concentrated at five West Coast port areas, where population centers, railroad mainlines and the interstate highways converge. These include: Los Angeles/Long Beach, Oakland, Seattle/Tacoma, Vancouver, BC, and Portland. Southern California has emerged as the dominant load center (see discussion of population based ports above), with Oakland and Seattle/Tacoma also serving as container load centers. Each carrier group now operates multiple weekly services, generally calling two to four ports and absorbing the cost of trucking cargo from other port areas.

Vancouver, British Columbia has emerged as a significant West Coast competitor for intermodal traffic for two reasons: rail mergers have given Canadian Pacific and Canadian National direct access into Chicago and the U.S. northeast market; and the low value of the Canadian dollar has made Canadian marine terminal and rail services very cost competitive. In addition, Vancouver has experienced a significant shift of breakbulk products to containerization in the past several years. Service at San Francisco has been virtually eliminated, in favor of Oakland, due to poor east-west main line rail service and interstate highway access. Portland—with 290,000 TEUs per year, a 2-3 percent share of West Coast container volume—struggles to maintain its niche role in the trade due to its relatively small market size, 40-foot channel depth, and close proximity to load centers in Tacoma and Seattle.

In addition to adequate marine terminal facilities and terminal operators, the typical requirements a container carrier will have in considering a port call are the following:

- Channel/harbor depth of 50 feet at load centers and 40-45 feet at middle port calls;
- Local market volumes providing at least 1,000 TEUs per weekly vessel call;
- Mainline rail access by both Class 1 rail carriers (BNSF and UP), or at least the steamship line's favored rail carrier, with up to 65-hour rail service to Chicago for:

  -Handling eastbound and/or westbound intermodal cargo; and
  -Repositioning empty containers from east to west to serve the local market;
- Interstate highway access to regional hinterland markets; and
- Support services such as container and chassis repair, drayage companies, etc.

Ironically, a container carrier group will not likely consider a port call unless other competing carriers are also active in the market on a direct calling basis. Lacking competition by other direct calling carriers, a steamship line has no incentive to make direct ship calls itself; rather it can opt to call at the nearest load center port, requiring shippers to truck their cargo to the ship. Container carriers notoriously "follow the leader" in port selection, rather than seek out niche markets.

In addition to the transpacific container trade, container services to Australia, South America, North Europe and the Mediterranean operate on the West Coast. While carriers in these trades tend to be somewhat more opportunistic relative to smaller port markets, many of the dynamics described above apply, although to a lesser degree than in the transpacific.

7.2.2 Inland Intermodal Shuttle Service

A new phenomenon in the container trade is the emergence of inland container depots—or "ports"—served by intermodal rail shuttle or barge feeder. These services create the opportunity for ports and inland cities to generate economic activity in the container trade without direct container vessel calls. Table 7-2 identifies many of the rail shuttles and barge feeders currently in operation or under study in the U.S.

Table 7-2 - Container Rail Shuttles and Barge Feeders in Service or Under Study

Rail Shuttles In Operation	Rail Shuttles Under Study	Barge Feeders In Operation	Barge Feeders Under Study
Portland/Seattle	Oakland/Stockton	Portland/Pasco, WA	New York/Bridgeport, CT
Pasco, WA/Seattle	Oakland/Sacramento	Portland/Lewiston, ID	New York/Quonset Pt., RI
Portland/Oakland	New York/various points		
Norfolk/northern VA			
Atlanta/Savannah			
Atlanta/Jacksonville			
Atlanta/Charleston			

The feasibility of these services in competition with trucks depends on volume, distance, transit time and logistical fit with the container carriers' operations. Based on the rail shuttles currently in service, the conditions for feasible operations appear to include:

- Distance of 180 miles or more between the hub and feeder locations;
- Transit time of 24 hours or less; and
- Volume of at least 100 TEUs several days per week (round trip), or about 15,000 TEUs per year in order to achieve shuttle train transit time and switching efficiencies.

The Oakland/Stockton and Oakland/Sacramento shuttles under study involve a market of about 150,000 TEUs per year of agricultural exports in the Fresno-to-Sacramento area and 24-hour rail service over the BNSF or UP. The key question is whether rail operations over a distance of only about 60 miles can compete with truck where drayage rates are $250-$275 per container (round trip). Based on the potential to take trucks off of I-80 and I-580—and the resulting air quality and congestion mitigation benefits—

Caltrans, the ports and the air quality authorities will likely consider the potential to subsidize the operation.

According to container statistics provided by the Port of Oakland, just over 21,000 TEUs of container traffic were identified along the NCRA corridor (Humboldt, Mendocino and Sonoma counties) in 1999. Of the total, 20,900 TEUs were identified in Sonoma County where competition with truck service would not be feasible, 71 TEUs were identified in Mendocino County and 285 TEUs were identified in Humboldt County. These data (from the Journal of Commerce PIERS service) probably understate the true volume due anomalies in reporting the place of business of the shippers, but even if Humboldt and Mendocino County volumes were several times larger, it appears the market size (two railcars per week in Humboldt and Mendocino counties) is insufficient to support rail shuttle service.

7.3 Breakbulk and forest products

Control over port decisions and logistics in the breakbulk trade involves a complex relationship between the import/export shippers and the ocean carriers, with the ocean carriers exercising increasing control.

Traditionally, breakbulk carriers made multiple port calls on the West Coast at coastal ports, mill docks and major population centers. Shippers could dictate to the ocean carrier which port or dock they should call if they expected to handle their cargo. Today, with the introduction of larger, more expensive and more sophisticated box-hold vessels, the ocean carriers are calling fewer ports, seeking to draw the cargo to the ship. Like the container lines, breakbulk carriers are using key ports as load centers, absorbing the inland truck or rail costs needed to draw cargo from other port areas to the ship.

Despite load centering, ocean carriers will call additional ports or mill docks under the right circumstances. Local cargoes that are available in sufficient quantity on a somewhat regular (e.g., monthly) basis and that would otherwise involve extraordinary inland transportation costs to a load center may be able to induce direct calls by the carrier. Under these circumstances, the cargo involved is typically local to the port, most likely using truck transportation.

The typical port and logistical requirements for a breakbulk ocean carrier include:

Load Center Ship Calls

- Channel/harbor depth of 35-40 feet;
- Close proximity to a local metropolitan market with regional cargo volumes of at least 10-20,000 tons per month;
- Interstate highway access to regional markets; and
- Mainline rail access by both Class 1 rail carriers (BNSF and UP), or at least the key shippers' favored rail carrier, for handling of cargoes such as:

  -Import steel and rail products;

-Export forest products and metals from more distant mills; and
-Export Midwest machinery and rolling stock.

Local Ship Calls

- Channel/harbor depth of 35-40 feet;
- Local volumes of providing at least 500 to 2,000 tons per month;
- Direct highway access, not necessarily by interstate highway; and
- Direct rail access, not necessarily by the Class 1 carriers.

7.4 Automobiles

Logistical decisions and port selection in the automobile import/export trade are controlled by automobile import companies with some input from the ocean carriers (particularly in those cases where the auto company has a sister steamship company). Key auto ports on the West Coast include Portland, Tacoma, San Diego, Los Angeles, Long Beach and Port Hueneme. Vancouver, Washington handles Subaru imports and Benicia handles automobiles mainly for the Northern California market. Richmond previously handled Honda, but is no longer in the business and Seattle no longer handles automobiles since Nissan consolidated its West Coast operations at Los Angeles earlier this year.

The Northwest ports are mainly intermodal automobile gateways, handling 85 percent of their vehicles by rail to states as far east as New York and as far south as Texas. San Diego, LA, Long Beach and Port Hueneme handle vehicles for the large Southern California market by truck and the Sunbelt states by rail. Most of the Asian automakers use two West Coast ports—one in Southern California and one in the Northwest while most European automakers focus their entire West Coast distribution out of Southern California.

A key issue for the automakers is the management and coordination of retail market demand, Asian production, and inventories. The more sophisticated auto companies have developed tightly coordinated systems to scale production to demand resulting in minimal inventories and fast throughput at their West Coast ports. Toyota and Honda have even developed liner-type weekly ship deliveries tied to a weekly processing and delivery cycle at the port. Throughout the strong auto market from the 1990s to date, many cars are actually sold to dealers while they are still on the water en route to port. Consequently fast throughput and quick dispatch by rail is critical to achieving their logistical goals.

Less sophisticated automakers have poor coordination of production with demand (and some poor selling car models), resulting in high inventories and long storage times at their ports. To address these inventory requirements, some car companies and the railroads are developing inland storage and processing depots to position their inventories closer to the ultimate market and utilize less expensive non-waterfront property.

Hyundai, for instance, has opened a Dallas/Fort Worth depot and is considering a Chicago depot.

In addition to adequate marine terminal facilities and terminal operators, the typical requirements an auto importer will have in considering a port call are:

- Channel/harbor depth of 35 feet;
- Close proximity to a local metropolitan market;
- Interstate highway access to local and regional markets;
- Mainline rail access by both Class 1 rail carriers (BNSF and UP), or at least the auto maker's favored rail carrier, with 85-hour service to Chicago; and
- Automobile processor services and support services such as specialized truck carriers.

7.5 Bulk Cargoes

Logistics and port decisions in the bulk cargo trades are controlled entirely by the import and export shippers on a charter ship basis. The shippers, who are often producers of the bulk materials, contract for rail or truck service, contract for marine terminal services and charter the vessels involved in the cargo movement.

Most bulk shipments are agricultural or mining outputs or raw material inputs for manufacturing, which are less time sensitive than other cargoes, but highly cost sensitive. Inland and ocean transportation costs for bulk products can account for as much as half of the delivered cost of the product. Consequently, logistical decisions for bulk shipments are made purely in the basis of the point-to-point transportation economics of one routing and port alternative versus others.

Bulk cargo movements tend to fall into two different categories based on volume: small lot shipments (e.g., 5,000 tons) that may utilize only a single hold in a vessel; and large lot shipments (20-60,000 tons) that move by the shipload. Large lot bulk cargoes include grain and minerals ores produced in locations beyond the North Coast area and shipped in volumes of 500,000 tons per year or more. In either case, the key variables that drive the logistics decisions are volume, distance to/from the port, and the storage, loading and unloading capabilities at the inland location.

Assuming adequate marine terminal facilities are provided at the port, the key requirements of bulk cargo shippers in selecting ports and logistical options are:

Large Lot Cargoes

- Channel/harbor depth of up to 45 feet for minerals and grain in Panamax vessels (up to 70,000 dwt) or up to 65 feet for coal and crude petroleum in Cape-size vessels (over 80,000 dwt);
- Mainline rail access by both Class 1 rail carriers (BNSF and UP), or at least the shipper's favored rail carrier;

- Lowest cost rail routing (e.g., non-circuitous and non-mountainous); and
- Direct highway access, not necessarily by interstate highway.

Small Lot Cargoes

- Channel/harbor depth of up to 38 feet for smaller lot bulk products in Handy-size vessels (35,000 dwt);
- Direct rail access, not necessarily by the Class 1 carriers;
- Lowest cost rail routing, avoiding more costly circuitous or mountainous routes; and
- Direct highway access, not necessarily by interstate highway.

7.6 Marine Industrial Cargoes

Port and logistical decisions regarding marine industrial cargoes are typically made entirely by the shipper. The shipper, in this case, is a manufacturer with production facilities located on waterfront property and a dock for handling raw material imports or finished export shipments.

Recent examples of this type of marine industrial facility include the Steelscape (formerly BHP) steel mill in Kalama, Washington, the United States Gypsum plant in Rainier, Oregon and the American Bridge Company fabrication plant planned for Reedsport, Oregon. Nucor Steel conducted an extensive site search on the Pacific Coast for a new mini-mill in the 1990's, ultimately opting to purchase Birmingham Steel Corporation and their Seattle mini-mill. Other site searches in the last several years have included fiber optic manufacturers, energy companies, and pipeline manufacturers. Volume at these plants varies; the Steelscape mini-mill produces about 350,000 tons per year of steel coil products with railcar volumes of between 1,400 and 3,100 between 1998 and 2000.

Many of the basic decisions about logistics are made as a part of the company's site selection process. Due to the manufacturing considerations in siting these projects, factors such as site attributes, utilities, labor, and taxes often outweigh port and logistical requirements in the ultimate decision process. Close proximity to key markets and suppliers can also be an important siting factor, so as to minimize transportation costs, but this can create a trade-off with site availability and labor issues in urban markets.

The port and logistical requirements for marine industrial cargo will vary from project to project. These operations generally handle bulk inputs or breakbulk outputs, so their requirements are very similar to those described for those categories above. Typical requirements for marine industrial plants include:

- Channel/harbor depth of up to 40 feet;
- Waterfront site size of up to 200 acres;
- Mainline rail access by both Class 1 rail carriers (BNSF and UP), the company's favored Class 1 carrier or short line, depending on the circumstances;

- Daily rail service; and
- Highway access by interstate or US/state highway, depending on the circumstances.

7.7 Opportunities for Humboldt Bay and the NWP

As indicated earlier, a detailed analysis of the market for port-related rail traffic will be performed as a part of the Port of Humboldt Bay Harbor Revitalization Plan, which will be prepared following this study effort. The Harbor Revitalization Plan will include a complete evaluation of port market opportunities, addressing both the "with rail" and "without rail" conditions.

Based on the trade and competitive conditions in West Coast marine cargo markets and the rail shipper surveys, the most likely areas of opportunity for rail-related port traffic are marine industrial cargoes, inbound forest products, and outbound aggregates.

7.7.1 Marine Industrial Cargo

Given the availability of the 38-foot channel access, waterfront sites, relatively low-cost land, utilities, labor, a highly livable environment, and serviceable highway and rail access, the Port of Humboldt Bay should be competitive for certain marine industrial project opportunities. While rail and highway access may be more limited than at some other locations, it should be sufficiently serviceable for industries attracted to Humboldt Bay's other positive attributes for manufacturing. Success in attracting a new marine industrial tenant will not necessarily come quickly, requiring three to five years or more for site preparation, marketing and the right opportunity to materialize. Rail volumes from a marine industrial plant could range up to about 400,000 tons, or 3,000 to 4,000 railcars per year.

7.7.2 Inbound Forest Products

A few forest product companies in the NWP corridor expressed interest in rail shipment of inbound forest products from the Port of Humboldt Bay, which could result in freight opportunities for the NWP.

Humboldt Bay Forest Products receives approximately 60,000 mbf (thousand board feet) of inbound logs by water from Canada and the Pacific Northwest for delivery to local mills in the Ukiah/Ft. Bragg area. This cargo is currently handled over their dock at Fields Landing and moves by truck to its final destination. Humboldt Bay Forest Products has expressed interest in delivery by rail to reduce their costs. Current volumes equate to about 1,200 railcars per year.

Several mills in Aberdeen and Longview, Washington and elsewhere are delivering lumber to Humboldt/Mendocino mills for wood treatment, use in remanufacturing or wholesale distribution. Currently, this freight moves by a rail-truck combination. It may be possible to receive these products by water at the Port of Humboldt Bay with final delivery by rail. In 1996/1997, two mills in the Ukiah/Ft. Bragg area (LP Treating and Georgia Pacific Tanks) received a total of about 400 railcars.

7.7.3 Outbound Aggregates

As aggregate supplies in San Francisco Bay become scarcer, it may be possible to ship gravel from riverbeds in the Eel River, the Mad River and other locations around Humboldt Bay via barge. Rail shipment, or possibly truck-rail shipment, to the Port would be needed to facilitate this movement. This potential should be evaluated in conjunction with local operators.

7.7.4 Other Commodities

Conditions are not favorable at Humboldt Bay for container/intermodal traffic or automobiles, because the Port is at a slight competitive disadvantage because of the access time to the Union Pacific railroads and interstate highways and is not in a major population center. Some opportunities may exist for breakbulk cargo, although they would likely be local truck-oriented freight. Rail-oriented breakbulk cargo will likely be handled at load center ports with more direct Class 1 mainline rail access. Rail-oriented bulk cargo opportunities will be confined to North Coast origin/destination cargoes such as the woodchips, with bulk cargoes to and from more distant locations moving through ports with more direct rail connections. However, if the NWP and the Union Pacific can negotiate a competitive price for shippers to use the Port of Humboldt Bay and the NWP, then they might be able to capture more breakbulk and intermodal traffic.

8.0 PASSENGER/EXCURSION RAIL ANALYSIS

The purpose of this section is to assess the feasibility for passenger rail service is feasible in the Northwestern Pacific corridor. For this study, passenger rail includes intercity and commuter service as well as excursion (i.e. tourist-oriented) service.

8.1 Passenger/Excursion Market Methodology

In general, the process for evaluating the feasibility of each type of service was based upon characteristics of the NWP corridor and the comparison of these characteristics to similar service that operates elsewhere in California or previously within the NWP corridor.

For intercity rail, this report examines three Amtrak routes: the Pacific Surfliner, the San Joaquins and the Capitol Corridor. Each of these routes operates exclusively in California. As a benchmark, they were evaluated based on population served, frequency, travel time and length of corridor. This discussion also addresses other modes that currently offer intercity service in the corridor.

The discussion on commuter rail addresses the Sonoma-Marin Area Rail Transit (SMART) proposed service as well as the potential for commuter service in the remainder of the corridor. Like intercity rail, travel patterns, population and travel times

influence the market for commuter rail. This evaluation utilizes the work previously completed for the SMART Commission in March 2002.[16]

The viability of excursion rail was also considered. The market for excursion rail is different than the market for intercity and commuter. Excursion rail focuses on trips that are made for the experience itself, not for travel between one point and another. An excursion trip should be considered an "entertainment" trip versus a work or other trip that is dependent on public transportation. Due to the unique nature of entertainment based trips these trips are less time and cost-sensitive. Also, the equipment used as well as entertainment/attractions on-board and off-train are important.

The scope and timeframe for this study did not permit the collection of extensive market research, such as stated preference surveys. Instead, this evaluation relies on the assessment of service previously operated in the corridor as well as characteristics of other, successful excursion rail operations in other parts of Northern California. To this end, operators of these services were interviewed and asked to describe factors for successful excursion rail in general and the NWP corridor in particular. They were also asked to describe characteristics of their operations. The list of interview questions is included in Appendix B. Tourism professionals, such as staff from convention and visitor bureaus, were also interviewed to characterize visitor travel in the corridor as well as their opinion of interest/viability for excursion rail.

8.2 Findings

8.2.1 Previous Passenger Service

Intercity passenger service has operated in this corridor since the early 1900's. However, the service began to decline in the 1920's as the roadway system expanded and automobile usage increased. In 1941, most of the train service was replaced by buses that could cross the Golden Gate Bridge into San Francisco. Any remaining intercity passenger train service was eliminated in 1971. Since then, the only passenger service in the corridor has been the operation of excursion trains.

In 1984, the north end of the railroad between Eureka and Willits was sold and became the Eureka Southern railroad. Under the Eureka Southern Railroad, excursion service was operated between Willits and Eureka (northbound on Saturday and southbound on Sunday). Almost 3,600 passengers were carried on 15 round trips. In 1990, service was discontinued by the Federal Railroad Administration (FRA) due to deteriorated track conditions in the Eel River Canyon.[17]

Between 1992 and 1997, Up to two excursion trains a year operated out of Eureka (both northbound and southbound). These were special event trains for holidays (Christmas

[16] Sonoma Marin Area Rail Transit Commission (SMART), *Cloverdale to San Rafael Commuter Rail Ridership and Revenue Forecasting*, March 29, 2002.

[17] California Department of Transportation, District 1, *Feasibility of Intercity Rail Passenger Service on San Francisco Bay Area – Eureka Corridor, No. 01D290, Phase I Final Report,* August 3, 1992.

and Fourth of July) and local events (such as the Shively Harvest Festival). Based on anecdotal evidence these trains were popular and attracted significant ridership.

In 1996, interest was renewed in operating trains south of Willits. In October and November 1996, six pilot excursion trains were operated between Healdsburg and Willits. These trips were operated by the California Redwood Coast Company (CRCC) and were well publicized. Anecdotal evidence suggests that passenger loads per train were as high as 500 people per train.

In early 1997, the CRCC signed an exclusive agreement to operate excursion trains in the NWP corridor south of Willits. As a result, the CRCC began operating service between Healdsburg and Willits every weekend, starting in March 1997. They operated about 20 trains until June 1997 when the NCRA curtailed operation due to track conditions. On average passenger loads per train were about 200.

The regular weekend service was also highly publicized. It utilized Vista Dome cars as well as coach cars. The Vista Dome passengers were considered "first class" and had access to meals in a sit-down dining car. The coach passengers had access to snack service. In addition, this service was coordinated with the Skunk Train in Willits. Passengers could ride one leg of the CRCC train to Willits, transfer to the Skunk Train and arrive in Fort Bragg for an overnight stay. The return trip back to Willits and Healdsburg would be made the next day.

Since then, excursion train activity has been limited. A few years ago, a train was used to transport passengers from a cruise ship docking in the Port of Humboldt to Old Town Eureka. However, since there are operational and market limitations at Humboldt, demand for this type of service is limited.[18]

8.2.2 Intercity

Intercity rail and bus service connects different geographic regions and typically uses tracks that are owned by a freight railroad. "Intercity rail" is formally and broadly defined at the federal level as all other passenger rail service that is not defined as commuter rail.[19]

Intercity trips are moderately time dependent but are flexible in terms of scheduling. Intercity trips are typically not commute related trips but may be used by persons dependent on public transit for a variety of personal or professional reasons. Business travel that is not daily or typically greater than 150 miles in length would also be included in this category. Intercity trips differ from commuter trips in that they are made throughout the day instead of just during commute hours.[20]

[18] Phone conversation with Angelo Figone, California Redwood Coast Co., June 25, 2002.

[19] California Department of Transportation, *California State Rail Plan 2001-02-2010-11*, October, 2001

[20] California Department of Transportation, District 1, *Feasibility of Intercity Rail Passenger Service on San Francisco Bay Area – Eureka Corridor, No. 01D290, Phase I Final Report,* August 3, 1992.

In California, Amtrak operates three routes that are funded in part by the State of California. These routes are the Pacific Surfliner (San Luis Obispo-Santa Barbara-Los Angeles-San Diego); the San Joaquins (Bay Area/Sacramento-Fresno-Bakersfield); and the Capitol Corridor (Auburn-Sacramento-Oakland-San Jose). Each of these routes operates exclusively in California.

The following information describes attributes of each service:[21]

Pacific Surfliner Route

- Major stations: San Luis Obispo, Santa Barbara, Los Angeles, Orange County, San Diego;
- 351 route miles;
- Overall average speed is 38 to 46 mph;
- Running time for the entire corridor ranges from 7 hours 41 minutes to 9 hours 17 minutes;
- This route is served by four Amtrak feeder bus routes;
- 2000-2001 ridership: 1.66 million riders;
- There are plans to increase service to 16 round trips by 2009; and
- The farebox ratio (percentage of operating costs covered by operating revenue) is currently 53.5 percent.

San Joaquins Route

- Major stations: Oakland, Sacramento, Stockton, Fresno, Bakersfield;
- 314 route miles;
- Running time Bakersfield to Oakland is 5 hours 33 minutes to 5 hours 35 minutes; running time Bakersfield to Sacramento is 6 hours 10 minutes to 6 hours 25 minutes;
- Average speed 49 to 51 mph (Bakersfield to Oakland) and 51 mph (Bakersfield to Sacramento);
- This route is served by 19 Amtrak feeder bus routes;
- 2000-2001 ridership: 711,000 riders;
- There are plans to increase service to 8 round trips by 2007; and
- The farebox ratio is currently 45.3 percent.

Capitol Corridor

- Major stations: Auburn, Sacramento, Oakland, San Jose;
- 169 route miles;
- Running time for the entire corridor ranges from 4 hours 5 minutes to 4 hours 47 minutes;

[21] California Department of Transportation, *California State Rail Plan (2001-02 to 2010-11)*, October 2001.

- Average speed 35 mph to 41 mph;
- This route is served by 8 Amtrak feeder bus routes;
- 2000-2001 ridership: 1.03 million riders;
- There are plans to increase service to 16 round trips by 2011; and
- The farebox ratio is currently 40.1 percent.

The fare for full corridor travel between Sacramento and San Jose is about $34; between San Luis Obispo and San Diego is about $107; between Oakland and Bakersfield is about $90.

From this study, intercity rail can be characterized as serving significant population and employment centers, averaging 60 to 70 mph, and total corridor travel times of no more than about nine hours. It has been found that extensive network of feeder bus service is also important component of California's intercity rail program.

Communities in the NWP corridor are connected to these trains by Amtrak's feeder bus service. Table 8-1 shows ridership for each bus serving these communities. These buses take passengers to stations on the Capitol Corridor and San Joaquins routes at Martinez. It is clear from the data that intercity passenger demand in the NWP corridor is low, as demonstrated by each station's rank compared to all of Amtrak's 110 feeder bus stations. Whereas the top ten stations serve between 260,000 and 1.1 million passengers, Arcata and Eureka rank 81st and 86th, respectively, and provide only about 6,000 passengers per year (20 per day) via the current Amtrak bus shuttle.

Table 8-1 – Amtrak Train and Bus Ridership by Station – NWP Corridor Stations

Station	County	1999-00 Ridership	1998-99 Ridership	State of California Rank
Santa Rosa	Sonoma	12,272	11,917	53
Arcata	Humboldt	3,059	3,152	81
Eureka	Humboldt	2,615	2,795	86
Petaluma	Sonoma	2,138	1,850	90
Rohnert Park	Sonoma	1,970	1,818	91
McKinleyville	Humboldt	1,948	2,039	92
Ukiah	Mendocino	1,455	1,355	93
Willits	Mendocino	777	770	105
Garberville	Humboldt	653	525	110

Source: *California State Rail Plan, 2001-02 to 2010-11*, October 2001.

The State Rail Plan identifies five new routes that are included in their 10-year plan, as well as two other routes that Amtrak is evaluating for inclusion in a later plan. The Schellville to Eureka corridor was not included as one of these corridors, and Caltrans is not currently considering if it should be included in its plan.

The NWP corridor is also served by Greyhound intercity bus service. Greyhound operates two to three trips daily in each direction between Eureka and San Rafael. Ridership volumes could not be obtained from Greyhound. The total one-way travel time

between Eureka and San Rafael is between 5 hours, 50 minutes and 6 hours, 45 minutes. The round trip fare is about $60.

If intercity rail service were operated in the NWP corridor, the entire corridor trip would take about 12 hours under the current operating speeds. Removal of these restrictions and upgrading the maximum speed to 40 mph would result in a travel time of about nine hours. If costs were comparable to Amtrak intercity service, the fare would be about $100. However, because the population density is much lower in this corridor than the Amtrak corridor, it is unlikely that the farebox return would be similar, thus making the fares higher. For comparison, the trip between San Rafael and Eureka takes about 5½ hours by private automobile (without stops). The distance is about 240 miles by traveling on Highway 101.

The traveltime between Eureka and San Rafael would take almost 65 percent longer (3½ hours more) by train than by car, even with upgraded speeds. The train would take at least one-third longer than the Greyhound bus (2¼ hours more). Given the significant differences in travel time, the potential out-of-pocket costs to travelers and the low population density of much of the corridor, it is unlikely that rail could be a viable option for intercity travel in the NWP corridor. Therefore, it is not analyzed further in this study.

8.2.3 Commuter Rail

Commuter rail primarily serves local and regional areas. The Interstate Commerce Commission (ICC) states that commuter rail includes some or all of the following features:[22]

- The passenger service is primarily being used by patrons traveling on a regular basis either within a metropolitan area or between a metropolitan area and its suburbs;
- The service is usually characterized by operations performed at morning and evening peak periods of travel;
- The service usually honors commutation or multiple-ride tickets at a fare reduced below the ordinary coach fare and carries the majority of its patrons on such a reduced fare basis;
- The service makes several stops at short intervals either within a zone or along the entire route;
- The equipment used may consist of little more than ordinary coaches; and
- The service should not extend more than 100 miles at the most, except in rare instances; although service over shorter distances may not be commuter or short haul within the meaning of the exclusion.

A segment of the NWP corridor has been identified for commuter rail in previous planning efforts. The Sonoma-Marin Area Rail Transit (SMART) corridor is located in the Northwestern Pacific right-of-way and extends from downtown San Rafael to

[22] ibid.

Cloverdale. It is 68 miles long. Commuter rail service has been proposed in this corridor to alleviate congestion in the US 101 corridor and to accommodate future travel demand. In 20 years, the population of Marin and Sonoma Counties is expected to increase 26 percent, from 714,900 people to 902,200 people.[23]

Twelve stations have been assumed for this corridor in recent planning efforts. They would be located at San Rafael, San Rafael Civic Center, South Novato, North Novato, Petaluma, Cotati, Rohnert Park, Santa Rosa, Windsor, Healdsburg, Geyserville, and Cloverdale. There would be a minimum of three trains during each peak period at each station, as well as limited midday service. It was estimated that there would be about 5,100 daily boardings in 2007, and about 6,000 daily boardings in 2020.[24] Outside of the San Rafael and Cloverdale corridor, there is not sufficient density to support regular commuter operations.

8.2.4 Excursion Rail

The purpose of a trip made on excursion rail is to enjoy the trip itself. It is generally not thought of as 'public transportation' but as 'entertainment'. Attractions on-board as well as off-train may be big draws for passenger and may appeal to both tourists and local residents. Because tourism is a primary industry of the four counties in the NWP corridor and could provide a base of ridership, the feasibility of excursion rail was considered. The corridor also lends itself well to excursion rail because of the following features:

- Dramatic and unique scenery, particularly in the Eel River Canyon, much of which is not accessible by car;
- Places of historical significance within the corridor;
- Parks and forests that feature redwood trees; and
- Permanent attractions that could be linked with the train service, such as wineries, restaurants and sites of historical significance.

Table 8-2 shows the number of leisure visitors to the four counties in the NWP for a seven-year period. This information comes from extensive surveys that are completed for California Tourism, the state agency for tourism. Staff at California Tourism indicated the data is not reliable enough to get year-by-year growth rates; however, it is sufficient to understand overall trends. Tourism in these counties is expected to grow, particularly after the events of September 11, 2001 because people are expected to take trips close to home.[25]

[23] California Department of Finance, *Interim County Population Projections*, June 2001.

[24] Sonoma Marin Area Rail Transit Commission (SMART), *Cloverdale to San Rafael Commuter Rail Ridership and Revenue Forecasting*, March 29, 2002.

[25] Phone conversation with Eileen Hook, California Tourism, June 20, 2002.

Table 8-2 - Total Leisure Visitor Volumes by County

	Millions of Person Trips			
Year	Marin	Sonoma	Mendocino	Humboldt
1994	0.9	3.3	1.6	1.1
1995	1.6	3.1	1.5	1.2
1996	1.3	2.2	1.3	1.3
1997	1.0	3.7	1.0	1.5
1998	1.1	3.0	1.5	1.0
1999	1.6	3.1	0.8	1.1
2000	1.4	4.4	2.2	1.6
6-year change	56%	33%	38%	45%

Source: *County Visitor Volumes*, California Tourism

It is difficult to ascertain exactly how many of these people would be interested in excursion railroad rides. This is because this service does not currently exist in the NWP corridor and excursion rail has many variables that influence ridership and differentiate it from other attractions (rail and otherwise), such as the scenery and natural features, equipment used, and attractions on-board and off-train, Therefore, data was collected on other excursion rail operations to get an idea of the factors that make an excursion rail operation successful as well as actual statistics on operations (such as number of riders and total visitors to the area).

Staff at the following railroads were interviewed:

- California Western/"The Skunk Train," Fort Bragg & Willits (Mendocino County), California;
- Roaring Camp Railroads, Felton (Santa Cruz County), California;
- The Napa Valley Wine Train, Napa (Napa County), California;
- The Shasta Sunset Dinner Train, McCloud (Siskiyou County), California; and
- Yreka Western, Yreka (Siskiyou County), California.

These rides were selected for investigation because they are located in Northern California and have developed an established place in the marketplace. Characteristics of each of these railroads are summarized in the following sections.

8.2.4.1 *California Western*

The California Western, or "Skunk Train," operates between Fort Bragg and Willits in Mendocino County. The Skunk Train operates throughout the year and offers full-day, half-day and one-way trips. The trips offered vary by the time of year. All of the trips have a layover at Northspur where passengers can purchase food and beverages. The trip features a scenic ride through redwood groves, coastal mountains, and along the Noyo River. Most of the ride is not accessible by car.

Power is provided by steam locomotive, diesel-electric locomotive or gasoline-powered motorcars. The steam locomotive operates on a limited schedule between April and

October for the Half-Day trips; the diesel locomotive operates only on certain days. The motorcars are used most of the time.

The full-day trip lasts 8½ hours, connects Fort Bragg and Willits and makes two stops at Northspur. The adult fare is $45. The Half-Day and One-Way trips take 3½ hours. It costs $29-$39 depending on the type of equipment used.

The level of service by time of year is described below:

- Winter and Spring: The Half-Day trip operates daily and departs from Fort Bragg only;
- Spring Break: The Half-Day and One-Way trips operate daily from Fort Bragg only;
- Summer and Late Summer: All trips operate daily;
- Fall: Half-Day and One-Way trips are offered daily and depart from Fort Bragg and Willits; and
- Winter: Half-Day trips depart from Fort Bragg daily.

The railroad also offers Special Events on the train throughout the year and a Sunset Dinner BBQ once a week in the summer.

The Skunk Train serves about 65,000 visitors a year. The railroad has reached its current capacity and is considering adding additional cars to its trains to increase capacity. Their motorcars accommodate 40 people per car; their other cars accommodate 80 people per car. Typically, the largest train they operate is ten cars.[26]

The California Western would like to add a trip between Willits and Longvale in the Northwestern Pacific corridor. This trip would use a steam engine and would take about two hours, round-trip. The attraction of this trip would be the scenery. This service could be coordinated with current Skunk Train service, possibly one morning and one afternoon train. Three to four cars would be needed to initiate this service.

The California Western also operates freight service at nighttime. The NWP closure has affected the amount of revenue they have been earning. According to the California Western is losing about $300,000 per year due to the closure.[27]

8.2.4.2 *Roaring Camp & Big Trees Narrow Gauge Railroad and Santa Cruz, Big Trees and Pacific Railway Company*

The Roaring Camp Railroad operates two trains in Roaring Camp, near Santa Cruz--the Roaring Camp & Big Trees Narrow Gauge Railroad (RC&BTNGRR) and the Santa Cruz, Big Trees and Pacific Railway (SCBT&PRY), a standard gauge operation. The RC&BTNGRR and SCBT&P RY are separate corporations owned by the same, publicly held corporation. The SCBT&P RY owns all track and supply crews and power.

[26] Phone conversation with John Mayfield, Owner, California Western, June 5, 2002.

[27] Phone conversation with John Mayfield, Owner, California Western, May 24, 2002.

RC&BTNGRR leases track on a long-term lease. Its pays a set fee to the owners instead of a percentage of profit.[28] The service can be summarized by the following:

- The Narrow Gauge trip is a 1¼-hour trip, traveling at 3 mph and includes a 15-minute layover at Bear Mountain.
- The train is a steam powered locomotive.
- The adult fare is $15.50.
- The train operates daily year-round, however in December, it operates on weekends and holidays only.
- At peak times, there are 100 people per train and annually, there are 200,000 riders.

Roaring Camp Railroad's government relations manager described this trip as "very profitable". The factors contributing to its success include its short travel time, the scenery and proximity of the trees, the docent presentations and its large parking lot and its proximity to the Bay Area. However, the trip may have reached capacity, as there is track congestion. They currently operate two train sets and the trains cannot be made longer because of the switchbacks. A passing track would have to be added if they want to add a third set.

The Santa Cruz, Big Trees and Pacific Railway Company (SCBT&P RY) operates a standard gauge railroad. It operates between Roaring Camp and the Santa Cruz Beach and Boardwalk. En-route attractions include Henry Cowell Redwoods State Park, the San Lorenzo Scenic Gorge, a steel truss bridge and a tunnel. The Santa Cruz Beach and Boardwalk is a destination itself, separate from the train ride. Total round trip travel time is three hours.

The passenger coaches and open-air cars are pulled by a diesel locomotive. The railroad has plans to eventually operate a steam locomotive.

This service has been described as "marginally profitable." The length of the trip (three hours round trip) is felt to detract from its appeal, and the railroad is evaluating ways to shorten it. Holiday Christmas trains are operated on this route in December weekends. The service was started two years ago operating four trains per evening with about 350 people per train. The ride costs $10. The goal of the service is to increase ridership to 500 people per train. An agreement was recently signed to have the SCBT&P RY haul sand for silicon wafers to Santa Cruz.

8.2.4.3 *Napa Valley Wine Train*

The Napa Valley Wine Train (NVWT) operates between Napa and St. Helena. It is a three hour trip and travels at an average speed of 36 mph. It offers a variety of regular and special packages that feature a fine, gourmet dining experience and wine tasting. The regular packages range from $59.50 to $110 per person. The service operates year-round,

[28] Phone conversation with Cliff Waters, Government Relations Manager, Roaring Camp Railroads, May 22, 2002.

usually four to six days per week. There are up to two trains per day. The NVWT owns, operates and maintains its entire track and restores its equipment.

Unlike the other railroads profiled here, the NVWT does not target families. Instead, their target customers are 55 or older, semi-retired, affluent and Monday through Friday travelers.

Their visitor profile:

- Median age is 51;
- 67 percent of riders come from within a 200 mile radius; 23 percent come from within a 30 mile radius; 11 percent come from within a 500 mile radius or more; and
- 20 percent of the riders come as part of a group.

The NVWT offers 180 special events each year and 15 different programs. Their annual ridership is about 120,000 passengers. In 2001, they operated a total of 627 trains with, on average, almost 200 people per train.

According to the NVWT the success of the service is due to:[29]

- Consistency of service;
- Quality of dining experience and food;
- Proximity to population centers (the Bay Area and Sacramento);
- Historical features (railroad operations on this line predates the transcontinental railroad);
- Scenery; and
- Accessibility to San Francisco.

The challenges of the NVWT are:

- Maintaining level of frequency of service;
- Dealing with 15 different government agencies;
- Equipment maintenance; and
- Maintaining stable labor force.

Some moderate level of freight service is operated on this line.

In June 2002, the Napa Valley Wine Train inaugurated new "shuttle" service between Napa and Yountville, an eight-mile trip. This service is considered basic transportation to help visitors avoid the congestion on Highway 29. Five round trips are operated daily using former Rio Grande cars and former VIA cars. The fare is $12. The trains have a capacity of 250 passengers.[30]

[29] Phone conversation with Erica Ercolano, Marketing Director, Napa Valley Wine Train, June 4, 2002.

[30] Phone conversation with Erica Ercolano, Marketing Director, Napa Valley Wine Train, June 4, 2002.

8.2.4.4 *Yreka Western Railroad*

The Yreka Western (YWRR) operates steam excursions in Yreka, featuring a 1915 steam locomotive and dramatic views of Mount Shasta. The total trip time for the excursion is one hour that includes a layover in the historical town of Montague. The route cannot be driven by car. The train usually travels at about 5mph although the limit is 10mph.

The train operates regularly between Memorial Day and the end of October. Between mime-June and Labor Day, it operates one trip Wednesdays through Sundays. In the shoulder season, it operates only on weekends. The adult fare is $12.50. A limited number of special events are added during the season.

Factors for success for this service have been cited as use of the steam engine, educational features, provides family entertainment and provides a sense of history.

The steam engine was non-operative last year, which decreased ridership. When the steam engine is in service, there are about 60 passengers on Wednesdays and Thursdays, 80 passengers on Fridays and 100 passengers on weekends. The capacity of the train is 300 passengers. Its current owners bought the railroad in 2000. Under the previous owners, the excursion service regularly hauled 300 people per train.

The YWRR is considering improving the tracks parallel to Interstate 5 for narrow gauge steam engines. These trains would run every hour to the county fairgrounds when there were events there.

The Yreka Western owns the track as well as the freight and passenger operations. There is one freight customer, a mill, which operates freight traffic six days per week, year-round. This operation "pays the bills" for the railroad.[31]

8.2.4.5 *Leisure Visitor Volumes*

Table 8-3 summarizes total leisure visitor volumes for the counties in which these rides are located.

Table 8-3 - Total Leisure Visitor Volumes by County for Established Excursion Rail

	Millions of Person Trips		
Year	Napa	Santa Cruz	Siskiyou
1994	2.1	2.5	1.1
1995	1.6	3.0	0.6
1996	1.4	3.0	0.6
1997	1.5	2.5	0.7
1998	1.2	1.9	0.8
1999	1.8	0.4	0.7
2000	2.5	3.8	0.7

Source: *County Visitor Volumes,* California Tourism.

[31] Phone conversation, Karla Bennett, Office Manager/Hostess, Yreka Western RR, May 20, 2002.

8.2.4.6 *Excursion Rail Themes*

In addition to staff at existing excursion railroad operations, tourism professionals were also interviewed (a complete list of persons interviewed is contained in Appendix B). The following 'themes' for operating the excursion service and making it profitable emerged from these interviews, regarding excursion rail in general and the NWP corridor specifically:

- The operation should be marketed to families and the general public, not just rail fans;
- There must a significant population and/or tourist base to draw from;
- Keep it short. About an hour in length, round trip (including layovers), was recommended. This relates to the attention span of children. A half-day train ride is a huge investment for a potential passenger;
- Keep it cheap. Around $10 for adults was identified as an attractive price;
- If you can see the route from the roadway (from the car), it probably won't be successful because there is no "mystery";
- Historical features and attractiveness of the equipment and scenery should be significant;
- Train operations must stick to a schedule. Occasional "special event" trains are a different type of service;
- Equipment can be important: steam engines can be a big draw but are expensive to operate and maintain;
- Old-fashioned atmosphere on-board is OK as long as the equipment works and is comfortable;
- The ride must be "rock solid" and smooth;
- The most successful excursion railroads are six miles in length; if longer than that, track maintenance results in declining revenues;
- If the ride is marketed to upscale visitors, there must be a reason to be on the train other than looking at the scenery, such as a European-style dining experience;
- Plan for two years and farther beyond start up. Rail fans will make the train successful the first year but need to attract the general public through extensive advertising for subsequent years;
- To maintain market share beyond the initial years, the ride will have to include more extensive and varied entertainment, like "Mystery Trains" and "shootouts"; and
- A stable work force is important. Volunteers can help the operation save money but typically they are not interested in operating the ride as a "business" or "entertainment." They are more interested in the ride as a "railroad."

Advice for Excursion Rail in the Northwestern Pacific Corridor:

- Easy access from the Bay Area is key, perhaps provided by a bus connection linked directly to the train ride;
- Start small and slow. Operate on a limited but regular schedule in the beginning;
- Have to have track up to at least Class II speeds;
- Steam engines would be too expensive to operate for initial service. Also, they are very polluting, and local residents are sensitive to adverse environmental effects;
- Amtrak compatible equipment is not necessary;
- If a locomotive is used, it should be diesel; otherwise, motorcars or self-propelled units are a good choice in terms of vehicle and operating costs;
- If an overnight stay is required (for example, if there was service between Eureka and Willits), then the provision of transportation between the train station and hotels would be very important;
- Tie-ins with wineries, restaurants, historical tours, museums, etc. will be very important to make the ride unique and special and thus a better draw; and
- If half-day trips or longer are operated (e.g. into the Eel River Canyon), it should be noted that passengers would not be in town spending money during that time.

8.3 Excursion Market Potential

8.3.1 Ridership

The estimation of ridership levels for each operating scenarios was based on the ridership levels experienced by the other excursion railroads profiled in this report. An average volume of passengers per train was calculated for each railroad. See Table 8-4.

Table 8-4 – Average Number of Passengers Per Train for Established Excursion Rail

Railroad	Approx. Number of Trains Annually	Number of Passengers Annually	Average Number of Passengers Per Train
California Western	700*	65,000	93
Roaring Camp Narrow Gauge	630	200,000	317
Napa Valley Wine Train	625	120,000	192
Shasta Sunset Dinner Train	200*	20,000	100
Shasta Sunset Excursion Train	60*	7,000	117
Yreka Western	80*	7,000	88

* Does not include "special event" trains.
Source: Parsons Brinckerhoff, June 2002.

These volumes were used to define a low, medium and high level of demand for each operating scenario:

Low: 90 passengers per train
Medium: 195 passengers per train
High: 300 passengers per train

Table 8-5 shows the levels of demand for each operating scenario.

Table 8-5 – Number of Annual Passengers by Operating Scenario

	Operating Scenarios	
Level of Demand	I	II
Low	5,760	25,200
Medium	12,480	54,600
High	19,200	84,000

Source: Parsons Brinckerhoff, June 2002.

Upon being input into the financial model, these volumes were adjusted for annual population and tourist growth (1 percent per year) and inflation (2.85 percent per year). The rates were also prorated depending on the level of service assumed for each year between 2003 and 2028.

8.3.2 Fares

To determine potential revenue for each of these scenarios, it was assumed that the Eureka to Samoa fare would be $15 for adults and $10 for children. The Eureka to South Fork fare was assumed to be $30 for adults and $16 for children. A 50/50 split in adult versus children fares was assumed.

9.0 OPERATING SCENARIOS TO SERVE FREIGHT AND PASSENGER MARKETS

Based the on demand analysis summarized above, PB in consultation with the NCRA, created operating scenarios that would not only meet the needs of the majority of freight shippers and excursion operations, but also minimize operating costs for the service provided. Another key consideration was the process and prioritization of the capital improvements to meet the market demand. The three operating scenarios, described below, would be phased into service between 2003 and 2013.

9.1 Rail Operations Analysis Methodology

Using track charts provided by the NCRA and train movements assumptions derived from the operating scenarios above, PB built a dynamic rail simulation model using the Berkeley Simulation Software Rail Traffic Controller (RTC). This model accurately replicates the physical characteristics of the rail infrastructure (track lengths, grade, curvature, and switch geometry), replicates the track-train dynamics over the

infrastructure, and simulates train operations based on actual meet, pass and overtake logic used by railroad dispatchers. The simulation was used to model train operations, train miles, train speeds, fuel consumption and other factors used in the analysis. For a full description of the rail operations analysis methodology see appendix G.

9.2 Freight Operating Scenarios

In conjunction with the NCRA, two operating scenarios were developed and applied to the market forecasts. Throughout the document there are references to "FRA Class 1, 2 and 3" conditions, these classes are dictated by the federal law CFR 213.9. These classes are a reference to the condition of the track, its geometry and its associated maximum allowable speed. The following table summarizes the FRA classes and their associated speeds.

FRA (CFR 213.9) Class's of Track and Associated Maximum Speeds

FRA Class of Track	Max. Freight Train Speed	Max. Passenger Train Speed
Class 1	10 mph	15 mph
Class 2	25 mph	30 mph
Class 3	40 mph	60 mph
Class 4*	60 mph	80 mph
Class 5	80 mph	90 mph

*Under federal regulation signalization is required if freight trains operating at speeds greater than fifty miles per hour and passenger trains greater than 60 miles per hour. Since the NWP currently does not have signalization, it would have to comply with these speed restrictions, regardless of the class of track.

The three proposed operating scenarios are described in detail below. Figures 9-1 to 9-3 graphically represent the scenarios. The specific operating requirements of each of the freight and passenger scenarios are outlined in Table 9-1.

9.2.1 Operating Scenario I: Willits Area South to Schellville, South Fork North to Samoa

Scenario I involves a split operation, with rail service from Willits south and South Fork north, leaving the Eel River canyon out of service. Under this operating scenario, there would be direct train service to all shippers between Willits and Schellville. Customers north of Willits would be served by a transload facility in the Redwood Valley area. This service would run three times a week in each direction at speeds of 10-25 miles per hour (Class 1 and 2 operation). According to the capital plan outlined by the NCRA, the southern service would begin operating in the second quarter of 2003. (See map 1.2.1)

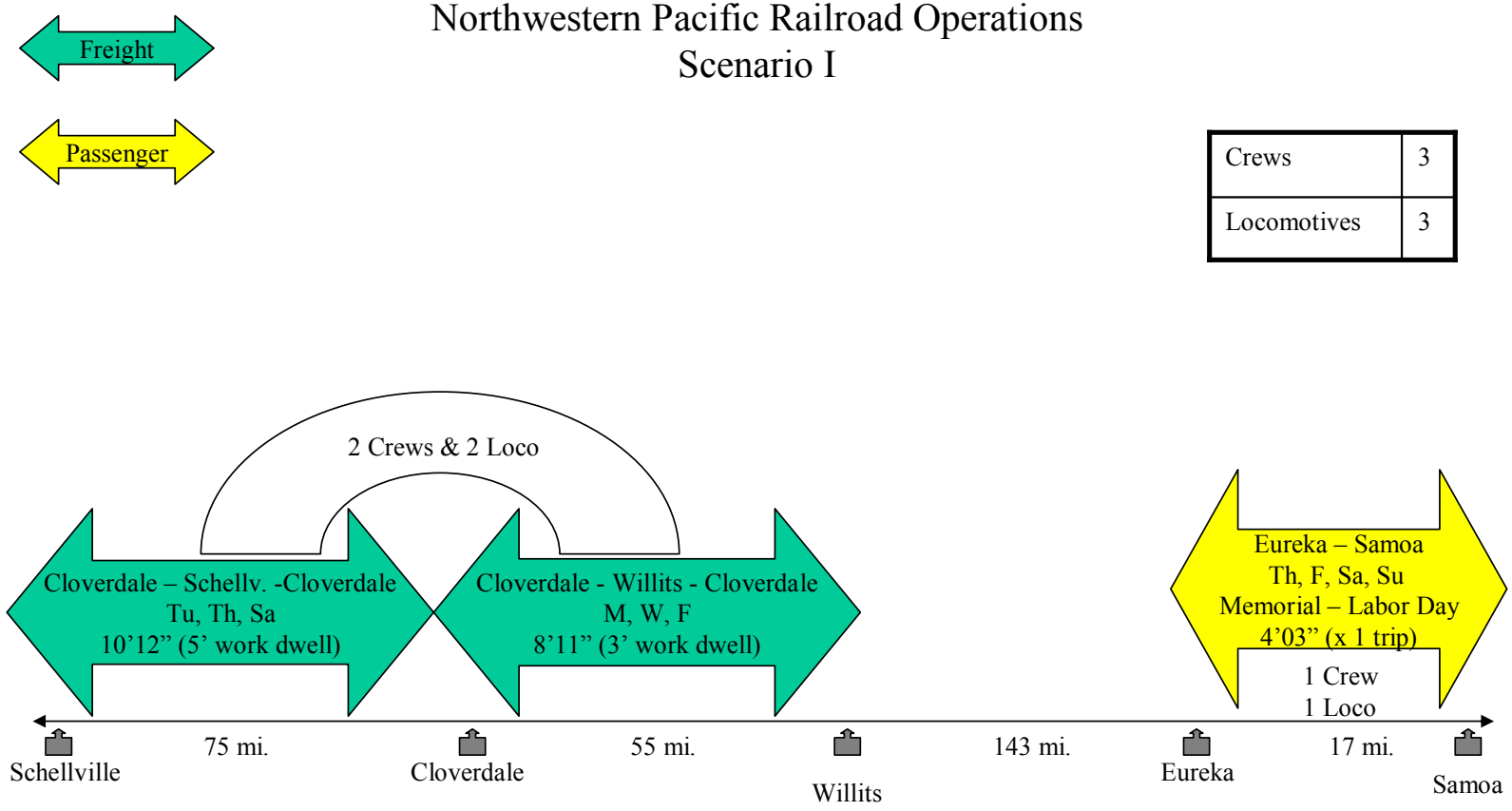
On the north end of the railroad there would be service provided between South Fork and Samoa. This would allow for excursion operations and enable any shipper along the corridor to connect with the Port of Humboldt Bay to ship to other destinations by water. Service on this section of the railroad would begin operating in the fourth quarter of

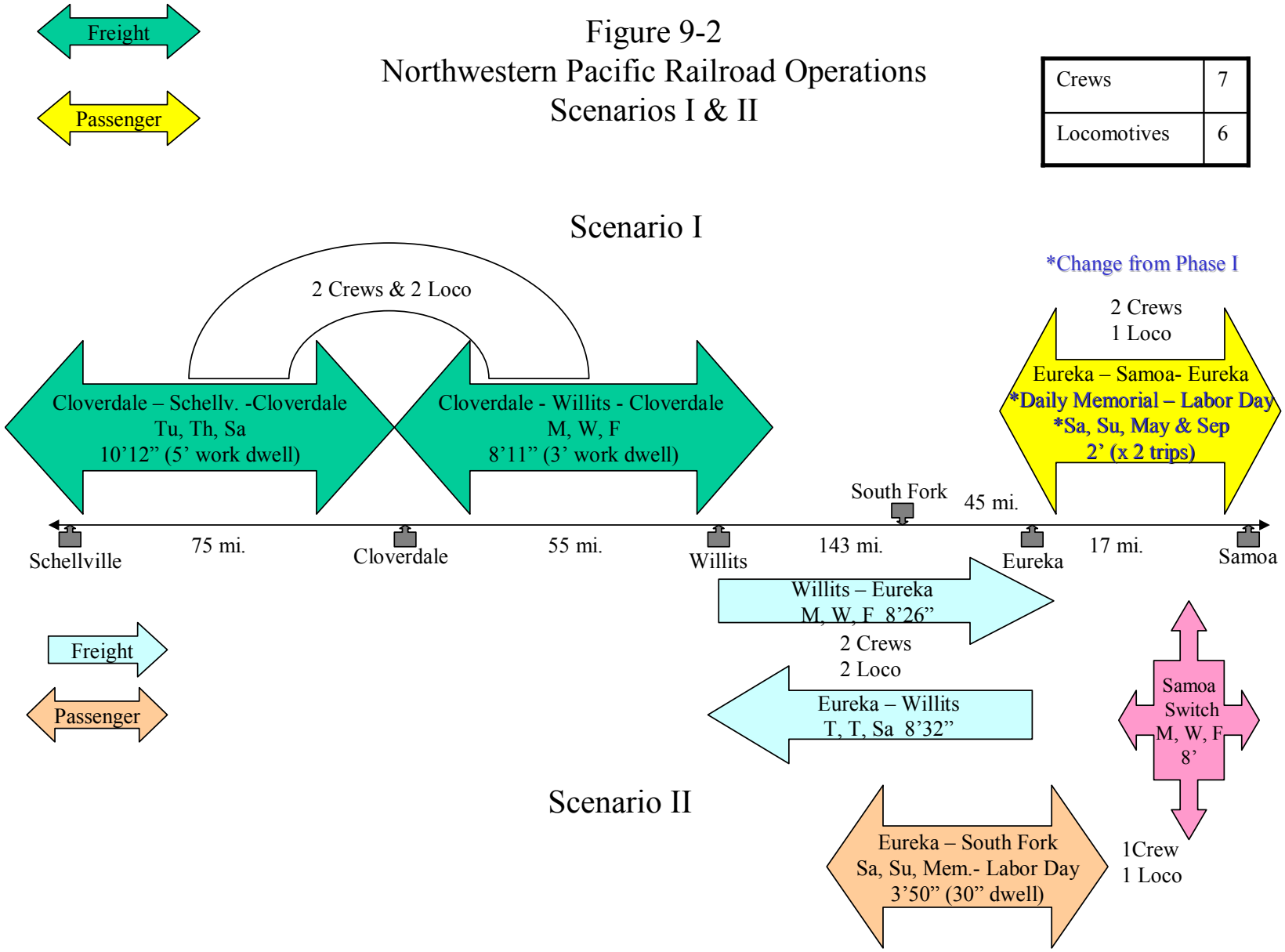
2003. Travel time between Willits and points south and the Union Pacific in Suisun City would range from 3 to 4 days (See Figure 9-1 and Table 9-1).

9.2.2 Operating Scenario II: Eel River Connection

Under Operating Scenario II, the entire route from Schellville to Samoa would be restored. This would allow basic operations through the Eel River Canyon connecting both outbound and inbound freight to the region. It would continue to operate 3 days a week in each direction at speeds of 10-25 miles per hour (Class 1 and 2 operation). It is anticipated that this section would be operational in the third quarter of 2006. Travel time between Eureka and the Union Pacific at Suisun City would range from 4 to 5 days (See map 1.2.1, Figure 9-2 and Table 9-1)

Figure 9-1
Northwestern Pacific Railroad Operations
Scenario I




Freight
Passenger
Figure 9-2
Northwestern Pacific Railroad Operations
Scenarios I & II
Crews 7
Locomotives 6
Scenario I
*Change from Phase I
2 Crews & 2 Loco
Cloverdale – Schellv. -Cloverdale
Tu, Th, Sa
10'12" (5' work dwell)
Cloverdale - Willits - Cloverdale
M, W, F
8'11" (3' work dwell)
2 Crews
1 Loco
Eureka – Samoa- Eureka
*Daily Memorial – Labor Day
*Sa, Su, May & Sep
2' (x 2 trips)
South Fork
45 mi.
Schellville
75 mi.
Cloverdale
55 mi.
Willits
143 mi.
Eureka
17 mi.
Samoa
Willits – Eureka
M, W, F 8'26"
2 Crews
2 Loco
Eureka – Willits
T, T, Sa 8'32"
Freight
Passenger
Samoa
Switch
M, W, F
8'
Scenario II
Eureka – South Fork
Sa, Su, Mem.- Labor Day
3'50" (30" dwell)
1Crew
1 Loco

9.3 Passenger Operating Scenarios

Based on the information obtained in the interviews as well as data collected from previously completed studies, a set of three operating scenarios were defined for passenger rail service in the NWP corridor. The three scenarios incorporate many of themes stated above. They are differentiated by the level of service they offer (in terms of frequency and route) and potential demand (both expressed as high, medium and low levels).

The operating plans for the other railroads examined in this report were the starting point for developing the plans for the NWP corridor. The factors that were considered included annual visitor levels, local and regional population, visitor growth potential, the special attributes of each route, and the seasonality and frequency of trains of the other railroads.

9.3.1 Operating Scenario I

This trip would travel around Humboldt Bay connecting Eureka and Samoa. This service was assumed to occur between 2003 and 2005 and would be considered a "ramp up" period with a modest amount of service. Trains would operate at a maximum speed of 10 mph. The round trip would take about four hours (includes a 30 minute layover). Trains would be operated between Memorial Day and Labor Day on Thursday, Friday, Saturday and Sunday. A total of 64 trains would operate per year.

Because Samoa is also easily accessible by car, it would be important to have tie-ins with the ride that would make it unique and special, for example, a meal with entertainment at the Samoa Cookhouse or with the proposed Logging Museum.

Advantages of the Eureka to Samoa Trip:

- Uses Eureka as its base – established visitor and population base;
- Appealing scenery;
- Within the budget constraints of most tourists; and
- Opportunities for tie-ins in Samoa.

Disadvantages of the Eureka to Samoa Trip:

- Can make about the trip to Samoa in significantly less time by car;
- Tie-ins must be unique and substantial;
- Scenery is not dramatic and can also be viewed by car; and
- Trip length would take a half-day.

9.3.2 Operating Scenario II

This scenario would be implemented at the beginning of 2006. This scenario expands the twice a day Eureka to Samoa trip to daily service between Memorial Day and Labor Day and weekends the remainder of May and September. Due to track upgrades, it was

assumed that this trip could be completed in two hours (includes a 30 minute layover). Because the trip could be made in less time, the number of trips per day was increased to two, instead of one. The shorter trip time would make it more appealing to a broader market. With this schedule, 248 trains would operate annually.

Starting in 2008, this scenario assumes that a new trip would be added between Eureka and South Fork. The trip would operate between Memorial Day and Labor Day once a day on Saturday and Sunday. A round trip would take almost four hours (includes a 30 minute layover). This trip would take advantage of the dramatic scenery of the Eel River Canyon as well as access to Rockefeller Forest and Founders Grove, popular destinations in Humboldt Redwoods State Park. Thirty-two trains would operate annually.

Advantages of the Eureka to South Fork Trip:

- Same trip cannot be made by car;
- Dramatic and unique scenery;
- Tie-in with established tourist destination (Humboldt Redwoods State Park);
- Uses Eureka visitor and population base; and
- Segmentation of the route may possible, for example from Eureka to Scotia or Loleta.

Disadvantages of the Eureka to South Fork Trip:

- Trip takes about a half-day; and
- May compete with the Eureka to Samoa trip.

Table 9-1

		Northwestern Pacific Railroad Operations Summary										10-Jan-03
		Loco.	**Each trip**				**Weekly Total**			**Annual Total**		
Operating Scenario I			**Time**		**Fuel**	**Time**		**Fuel**				
Freight	**3 Day Service**		**hrs/min**	**Miles**	**Gallons**	**hrs/min**	**Miles**	**Gallons**	**# weeks**	**Time/hrs**	**Miles**	**Gals**
Cloverdale - Schellville - Cloverdale	TU,TH, SA	2	10'12"	150	333	30.5	450	999	52	1,586	23,400	51,948
Cloverdale - Willits - Cloverdale	M,W, F	-	8'11"	110	393	24.5	330	1,179		1,274	17,160	61,308
	Subtotal	2				55	780	2,178		2,860	40,560	113,256
			Time		**Fuel**	**Time**		**Fuel**				
Passenger	**Days**		**hrs/min**	**Miles**	**Gallons**	**hrs/min**	**Miles**	**Gallons**				
Eureka - Samoa, Memorial - Labor	TH,F,SA, SU	1	4	35	20	16	140	80	12 weeks	192	1,680	960
	1 Trip/day											
		3							Total for OS I	3,052	42,240	114,216
Operating Scenario II			**Time**		**Fuel**	**Time**		**Fuel**				
Freight	**3 Day Service**		**hrs/min**	**Miles**	**Gallons**	**hrs/min**	**Miles**	**Gallons**	**# weeks**	**Time/hrs**	**Miles**	**Gals**
Cloverdale - Schellville - Cloverdale	TU,TH, SA	2	10'12"	150	333	30.5	450	999	52	1,586	23,400	51,948
Cloverdale - Willits - Cloverdale	M,W, F	-	8'11"	110	393	24.5	330	1179		1,274	17,160	61,308
Willits - Eureka	M,W, F	2	8'26"	143	215	25.33	429	645		1,317	22,308	33,540
Eureka - Willits	TU,TH, SA	-	8'32'	143	381	25.5	429	1143		1,326	22,308	59,436
Samoa Switch	M,W, F	1	8'	50	100	24	150	300		1,248	7,800	15,600
	Subtotal	5				129.83	1,788	4,266		6,751	92,976	221,832
			Time		**Fuel**	**Time**		**Fuel**				
Passenger	**Days**		**hrs/min**	**Miles**	**Gallons**	**hrs/min**	**Miles**	**Gallons**				
Eureka - Samoa, Memorial - Labor	2 Trips Daily	1	2	35	20	28	490	560	12 weeks	336	5,880	6,720
May & Sep	Sa, Su Only	(Use Somoa Switch Loco.)				8	140	80	8 weeks	64	1,120	640
Eureka - S. Fork, Memorial - Labor	SA, SU		3'50"	90	94	7.66	180	188	12 weeks	92	2,160	2,256
	Subtotal	(Use Somoa Switch Loco.)								492	9,160	9,616
	Locomotives	6							Total for OS II	7,243	102,136	231,448

10.0 FINANCIAL ANALYSIS OF THE PROPOSED OPERATING SCENARIOS AND MARKET DEMAND

The overall goal of this study is to determine the financial feasibility of operating the Northwestern Pacific Railroad. The following is an explanation of the inputs that went into the revenue and expense components of the financial model.

10.1 Explanation of Model Inputs and Assumptions

10.1.1 Freight Revenue Inputs

Section 6.0 describes in detail how the volume of freight carloads was determined for the first operating years of the service. This section translates this volume forecast into low, medium and high revenue estimates.

Given that there has not been freight service on the railroad for several years, it is assumed that it will take time to regain volumes from the shippers based on proven, consistent service. To this end, this study has discounted the forecasted revenue rates in the first five years under operating scenario I and II to reflect this period of market penetration.

Operating Scenario I (Willits South to Schellville):
Since the railroad has been out of service for several years, yearly freight volumes were discounted to represent the time that it would take to win the shipping business back from trucking industry and to gain the confidence of the shippers. Given this assumption, year one (2003), which would begin in the fourth quarter of 2003, carloads are 40% of the forecasted volumes. By 2005 this is increased to 75% of the anticipated carloads and by 2007, the service should have the full amount of the anticipated carloads and revenue. For the years beyond 2008, 0% annual growth in carload volumes was assumed for the next 20 years. (See Table 10-1)

Operating Scenario II (Shellville to Eureka/Samoa):
With the connection of the Eel River Canyon in the fall of 2006, the shippers from Willits to Samoa (north end) are included in the customer base of the NWP. Under OS II, the additional north end shippers are also discounted to reflect an appropriate "ramp-up" period for service. 2006 is 40% of total forecasted volume, 2007 to 50%, 2008 to 75%, 2009 to 75% and finally in 2010 to 100% of the forecasted volume. After 2010 there is no net increase in the volumes shipped. (See Table 10-1)

Table 10.1
Carload Increase Schedule for Freight Service

Year	'03	'04	'05	'06	'07	'08	'09	'10	'11	'28
OS I	40%	50%	75%	75%	100%	100%	100%	100%	100%	100%
OS II				40%	50%	75%	75%	100%	100%	100%

For the years beyond 2010, 0% annual growth in carload volumes was assumed for the next 20 years. This 0% growth rate is based on the economic analysis that shows a stagnant or diminishing amount of freight being produced by the three county region. The revenue forecast is based on the January 2000 Freight Tariff NWPY 8000, the January 2001 Freight Tariff NWPY 1000, and interviews with NWPY marketing staff[32]. Consistent with the zonal system used in the above freight analysis, the revenue rates for each of the cars by type and destination were calculated. For years 2010 and on, based on a FRA study of Class 1 railroad tariff growth, a 2.85% per year increase in tariff rates was applied to be consistent with the Revenue Cost Adjustment Factor of the Surface Transportation Board.

10.1.2 Passenger Revenue Inputs

The passenger revenue inputs are based on the interviews that were described in Section 8.0 and research of other excursion railroad properties. For all trips between Eureka and Samoa, the fare would be $15 for adults and $10 for children. From Eureka to South Fork, the fare was assumed to be $30 for adults and $16 for children. . This fare structure was based on interviews and analysis of other excursion railroads throughout Northern California.

It was assumed that there would be 1% growth in ridership per year. Additionally, it was assumed that inflation would be 2.85% and fares would track with inflation.

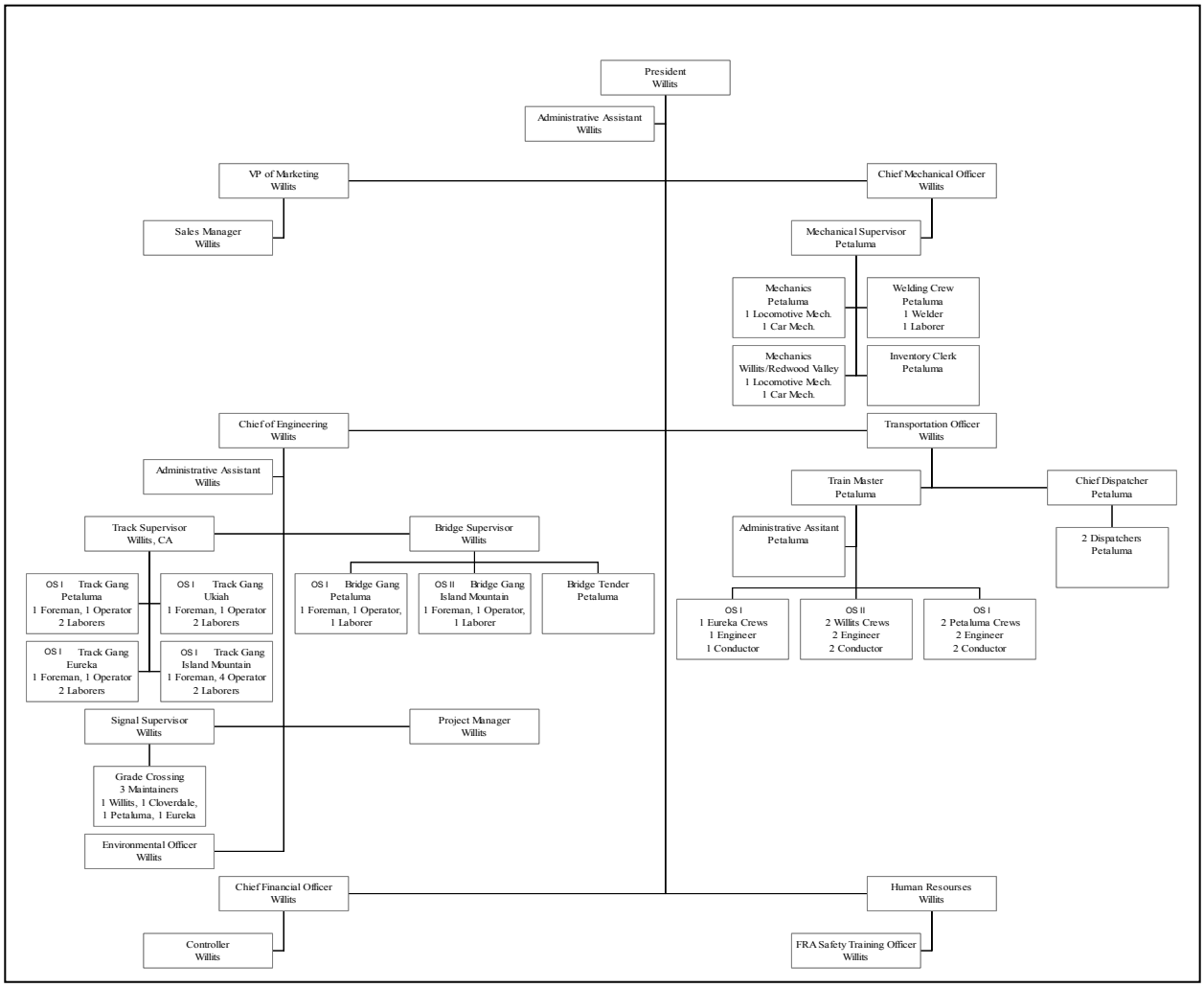
10.1.3 Freight Cost Inputs

In order to create a representative cost model for the Northwestern Pacific Railroad, PB with the NCRA, created a railroad organization that would represent the necessary positions to operate the railroad (see Figure 10-1).

[32] Interview with Bill Bremer, NWPY, 11/26/02

[34] The most likely case is calculated based upon the following assignments of probability – low scenario (20%), Medium scenario (70%) and high scenario (10%). See chapter 6 for additional details.

Figure 10-1 - NWP Corporate Structure



Appropriate salaries and hourly rates were applied to all of the staff involved with operating and maintaining the railroad (See Appendix C). For this exercise, following the two-phased approach to reopening the railroad, crew bases were developed at the following locations:

- Petaluma/Cloverdale - Serving the Schellville to Willits portion of the route (Scenario I);
- Willits - Serving the north end of the southern end of the route and as administrative headquarters (Scenarios I and II);
- Eureka - To act as a crew base for the Eureka based services (Scenario I); and
- Island Mountain - A maintenance center that would concentrate on servicing the Eel River Canyon (Scenario II).

In addition to organizing the railroad geographically, the railroad was organized into the following 'cost centers': transportation, mechanical, equipment/automotive, maintenance of way, insurance, general and administrative, fuel, locomotive leases and car hire/demurrage.

The following elements were not included in the cost model:

- Current or past financial obligations of the NCRA, such as interest;
- Ownership of any equipment;
- Depreciation; and
- Any revenues from miscellaneous sources such as easement leases.

In order to make the cost model represent the most current wage and per unit costs, the study drew upon the following sources:

- The Sonoma Marin Rail Plan, 1999;
- The Northwestern Pacific Railroad Year 2000 Budget;
- 1998 Metro North Budget;
- Personal interviews with industry Experts;
- Parsons Brinckerhoff;
- NCRA;
- Amtrak; and
- Willdan/HNTB, Capital Assessment.

All of the inputs for the cost model were reviewed by railroad professionals and represent the most current wage, equipment and material rates for the railroad industry and the region (See Appendix C and Appendix H)

Transportation - is primarily the operating crews and dispatch functions for the railroad. It was assumed that two person crews would be required to run the trains along the NWP.

Mechanical – this is the cost associated with maintaining locomotives and cars associated with the service. It was assumed that the locomotives would be leased and that cars would be used on a 'car hire' basis for the customers along the NWP.

Insurance – Insurance is primarily liability insurance for the Railroad.

Maintenance of Way – for the purpose of this study it has been assumed throughout that when an operator began operating along the railroad that it would be in a "good state of repair." The implications of this are that in most sections of the railroad, standard per-mile costs can be used for the calculation of the expenses related to the track, bridges and tunnels of the railroad. The one place where there is an exception to this rule is through the Eel River Canyon. This section of the railroad has historically had severe problems and will require a sizable amount of preventative maintenance to keep the drainage in working order. For this reason, an additional track gang was placed at Island Mountain

to service the 80 miles of the Eel River Canyon. This category also includes the vehicles and equipment that would be required to maintain the railroad.

General and Administrative – This section represents most of the office and management functions that would be required to operate a railroad. These functions include all positions from a President and CFO to Administrative Assistants. It also provides the training and environmental functions that would be critical to the NWP opening again.

Equipment/Vehicles – This category has the vehicle expenses related to all functions except for maintenance of way. These vehicles are primarily used by the executive staff and sales force. It is assumed that all of the vehicles are leased and that the operating costs are consistent with the federal standard 36.1¢ per mile.

Fuel – Fuel in a railroad operation is a major cost factor. It varies significantly by locomotive type and load.

Locomotive Leases – Since the NWP would be reopening with virtually none of its own equipment; the railroad will have to lease locomotives.

Car Hire/Demurrage - Car hire and demurrage are both significant cost components for the NWP. Conservative estimates are used for this railroad as it is assumed that only through consistent service and reliable turn-around of car hire equipment, will railroads, such as the Union Pacific, enter into 'free-time' agreements with the NWP. Such an agreement would allow the NWP an allowance to move cars over its railroad without having to pay a car hire fee.

10.1.4 Passenger Cost Inputs

Since the excursion rail service is based on the use of NWP crews, dispatching, and locomotive rental, the costs associated with operating the passenger trains would be charged to the passenger franchisee as an overhead rate built into fee for service.

10.2 Financial Model (Spreadsheet)

Table 10-2 is the 25-year forecast for costs and revenues for the proposed operating scenarios for the NWP. The Table has three major sections: low, medium and high demand forecasts. Each of these demand sections are broken out for the three operating scenarios: I and II. These eight different scenarios are summarized in Table 10-2.

Table 10-2 Financial Summary Sheet

NWP Financial Model: Low Demand Forecast

	Operating Scenario I				Operating Scenario II																								
Year	2003	2004	2005	Scenario I Summary	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Scenario II Summary	Grand Total
Revenue																													
Number of Freight Cars	1,536	1,921	2,881	6,338	4,705	6,121	7,261	7,261	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	134,416	140,754
Freight Revenue	$ 734,862	$ 918,578	$ 1,377,867	$ 3,031,308	$ 2,854,987	$ 3,634,470	$ 4,585,486	$ 4,716,172	$ 5,593,380	$ 5,752,792	$ 5,916,746	$ 6,085,373	$ 6,258,806	$ 6,437,182	$ 6,620,642	$ 6,809,330	$ 7,003,396	$ 7,202,993	$ 7,408,279	$ 7,619,414	$ 7,836,568	$ 8,059,910	$ 8,289,617	$ 8,525,871	$ 8,768,859	$ 9,018,771	$ 9,275,806	$ 121,220,820	$ 124,252,128
Number of Passengers	-	4,608	5,760	10,368	22,320	22,543	25,200	25,452	25,707	25,964	26,223	26,485	26,750	27,018	27,288	27,561	27,836	28,115	28,396	28,680	28,967	29,256	29,549	29,844	30,143	30,444	30,749	457,082	467,450
Passenger Revenue	$ -	$ 58,291	$ 72,864	$ 131,155	$ 282,348	$ 285,171	$ 352,517	$ 356,042	$ 359,602	$ 363,198	$ 366,830	$ 370,498	$ 374,203	$ 377,945	$ 381,725	$ 385,542	$ 389,398	$ 393,292	$ 397,224	$ 401,197	$ 405,209	$ 409,261	$ 413,353	$ 417,487	$ 421,662	$ 425,878	$ 430,137	$ 6,394,011	$ 6,525,166
Miscellaneous																													
Total Revenue	$ 734,862	$ 976,869	$ 1,450,731	$ 3,162,463	$ 3,137,335	$ 3,919,642	$ 4,938,003	$ 5,072,214	$ 5,952,982	$ 6,115,990	$ 6,283,576	$ 6,455,872	$ 6,633,010	$ 6,815,128	$ 7,002,367	$ 7,194,873	$ 7,392,794	$ 7,596,285	$ 7,805,503	$ 8,020,611	$ 8,241,776	$ 8,469,171	$ 8,702,971	$ 8,943,358	$ 9,190,521	$ 9,444,650	$ 9,705,943	$ 127,614,831	$ 130,777,294
Summary Expenses																													
Transportation	$ 707,600	$ 727,767	$ 748,508	$ 2,183,875	$ 1,321,730	$ 1,359,399	$ 1,398,142	$ 1,437,989	$ 1,478,972	$ 1,521,122	$ 1,564,474	$ 1,609,062	$ 1,654,920	$ 1,702,085	$ 1,750,595	$ 1,800,487	$ 1,851,801	$ 1,904,577	$ 1,958,857	$ 2,014,685	$ 2,072,103	$ 2,131,158	$ 2,191,896	$ 2,254,365	$ 2,318,615	$ 2,384,695	$ 2,452,659	$ 32,052,563	$ 34,236,437
Mechanical	$ 451,571	$ 455,264	$ 484,496	$ 1,391,331	$ 790,235	$ 812,757	$ 835,921	$ 859,744	$ 884,247	$ 909,448	$ 935,367	$ 962,025	$ 989,443	$ 1,017,642	$ 1,046,645	$ 1,076,474	$ 1,107,154	$ 1,138,708	$ 1,171,161	$ 1,204,539	$ 1,238,868	$ 1,274,176	$ 1,310,490	$ 1,347,839	$ 1,386,253	$ 1,425,761	$ 1,466,395	$ 19,163,574	$ 20,554,905
Equipment/Vehicles	$ 45,045	$ 46,329	$ 47,649	$ 139,023	$ 49,007	$ 50,404	$ 51,840	$ 53,318	$ 54,837	$ 56,400	$ 58,008	$ 59,661	$ 61,361	$ 63,110	$ 64,909	$ 66,759	$ 68,661	$ 70,618	$ 72,631	$ 74,701	$ 76,830	$ 79,019	$ 81,271	$ 83,587	$ 85,970	$ 88,420	$ 90,940	$ 1,188,446	$ 1,327,469
Maintenance of Way*	$ 3,107,791	$ 3,196,363	$ 3,287,459	$ 9,591,613	$ 4,270,091	$ 4,391,789	$ 4,516,955	$ 4,645,688	$ 4,778,090	$ 4,914,266	$ 5,054,322	$ 5,198,371	$ 5,346,524	$ 5,498,900	$ 5,655,619	$ 5,816,804	$ 5,982,583	$ 6,153,086	$ 6,328,449	$ 6,508,810	$ 6,694,311	$ 6,885,099	$ 7,081,325	$ 7,283,142	$ 7,490,712	$ 7,704,197	$ 7,923,767	$ 103,551,700	$ 113,143,313
Insurance	$ 200,000	$ 205,700	$ 211,562	$ 617,262	$ 217,592	$ 223,793	$ 230,171	$ 236,731	$ 243,478	$ 250,417	$ 257,554	$ 264,895	$ 272,444	$ 280,209	$ 288,195	$ 296,408	$ 304,856	$ 313,544	$ 322,480	$ 331,671	$ 341,123	$ 350,846	$ 360,845	$ 371,129	$ 381,706	$ 392,584	$ 403,773	$ 5,276,707	$ 5,893,969
General and Administrative	$ 1,479,370	$ 1,521,532	$ 1,564,896	$ 4,565,798	$ 1,609,495	$ 1,655,366	$ 1,702,544	$ 1,751,066	$ 1,800,972	$ 1,852,299	$ 1,905,090	$ 1,959,385	$ 2,015,227	$ 2,072,661	$ 2,131,732	$ 2,192,487	$ 2,254,972	$ 2,319,239	$ 2,385,338	$ 2,453,320	$ 2,523,239	$ 2,595,152	$ 2,669,113	$ 2,745,183	$ 2,823,421	$ 2,903,888	$ 2,986,649	$ 39,031,007	$ 43,596,805
Fuel	$ 125,638	$ 129,218	$ 132,901	$ 387,757	$ 266,628	$ 274,227	$ 282,042	$ 290,080	$ 298,347	$ 306,850	$ 315,596	$ 324,590	$ 333,841	$ 343,355	$ 353,141	$ 363,206	$ 373,557	$ 384,203	$ 395,153	$ 406,415	$ 417,998	$ 429,911	$ 442,163	$ 454,765	$ 467,726	$ 481,056	$ 494,766	$ 6,465,844	$ 6,853,601
Locomotive Lease	$ 122,000	$ 125,477	$ 129,053	$ 376,530	$ 261,110	$ 268,552	$ 276,206	$ 284,078	$ 292,174	$ 300,501	$ 309,065	$ 317,873	$ 326,933	$ 336,250	$ 345,834	$ 355,690	$ 365,827	$ 376,253	$ 386,976	$ 398,005	$ 409,348	$ 421,015	$ 433,014	$ 445,354	$ 458,047	$ 471,101	$ 484,528	$ 6,332,048	$ 6,708,578
Car Hire/(Demurrage)	$ 69,640	$ 190,139	$ 207,429	$ 467,208	$ 392,495	$ 518,107	$ 650,122	$ 668,650	$ 811,734	$ 834,869	$ 858,662	$ 883,134	$ 908,304	$ 934,190	$ 960,815	$ 988,198	$ 1,016,362	$ 1,045,328	$ 1,075,120	$ 1,105,761	$ 1,137,275	$ 1,169,687	$ 1,203,023	$ 1,237,309	$ 1,272,573	$ 1,308,841	$ 1,346,143	$ 17,592,063	$ 18,059,270
Total Expenses	$ 6,308,655	$ 6,407,650	$ 6,606,525	$ 19,322,829	$ 9,178,384	$ 9,554,394	$ 9,943,943	$ 10,227,345	$ 10,642,852	$ 10,946,173	$ 11,258,139	$ 11,578,996	$ 11,908,997	$ 12,248,404	$ 12,597,483	$ 12,956,512	$ 13,325,772	$ 13,705,557	$ 14,096,165	$ 14,497,906	$ 14,911,096	$ 15,336,062	$ 15,773,140	$ 16,222,675	$ 16,685,021	$ 17,160,544	$ 17,649,620	$ 230,653,950	$ 249,976,780
Difference	$ (5,573,792)	$ (5,430,781)	$ (5,155,794)	$ (16,160,367)	$ (6,041,048)	$ (5,634,752)	$ (5,005,940)	$ (5,155,131)	$ (4,689,870)	$ (4,830,184)	$ (4,974,563)	$ (5,123,124)	$ (5,275,988)	$ (5,433,276)	$ (5,595,116)	$ (5,761,639)	$ (5,932,978)	$ (6,109,272)	$ (6,290,662)	$ (6,477,295)	$ (6,669,320)	$ (6,866,892)	$ (7,070,169)	$ (7,279,316)	$ (7,494,500)	$ (7,715,894)	$ (7,943,676)	$ (103,039,119)	$ (119,199,486)
Cost Inflation Assumed:	103%																												

* Includes MOW vehicles, equipment and environmental manager

NWP Financial Model: Medium Demand Forecast

	Operating Scenario I				Operating Scenario II																								
Year	2003	2004	2005	Scenario I Summary	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Scenario II Summary	Grand Total
Revenue																													
Number of Freight Cars	2,047	2,559	3,839	8,446	6,748	8,755	10,573	10,573	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	198,248	206,694
Freight Revenue	$ 987,859	$ 1,234,824	$ 1,852,235	$ 4,074,918	$ 4,017,244	$ 5,109,922	$ 6,500,444	$ 6,685,707	$ 7,967,426	$ 8,194,498	$ 8,428,041	$ 8,668,240	$ 8,915,285	$ 9,169,371	$ 9,430,698	$ 9,699,473	$ 9,975,908	$ 10,260,221	$ 10,552,637	$ 10,853,388	$ 11,162,709	$ 11,480,846	$ 11,808,050	$ 12,144,580	$ 12,490,700	$ 12,846,685	$ 13,212,816	$ 172,671,609	$ 176,746,527
Number of Passengers	-	9,984	12,480	22,464	48,360	48,844	54,600	55,146	55,697	56,254	56,817	57,385	57,959	58,539	59,124	59,715	60,312	60,915	61,525	62,140	62,761	63,389	64,023	64,663	65,310	65,963	66,622	990,345	1,012,809
Passenger Revenue	$ -	$ 126,298	$ 157,872	$ 284,170	$ 611,754	$ 617,872	$ 745,563	$ 771,424	$ 779,138	$ 786,929	$ 794,799	$ 783,594	$ 810,774	$ 818,882	$ 827,071	$ 835,341	$ 843,695	$ 852,132	$ 860,653	$ 869,259	$ 877,952	$ 886,732	$ 895,599	$ 904,555	$ 913,600	$ 922,736	$ 931,964	$ 13,834,538	$ 14,118,708
Miscellaneous																													
Total Revenue	$ 987,859	$ 1,361,121	$ 2,010,107	$ 4,359,087	$ 4,628,998	$ 5,727,793	$ 7,246,007	$ 7,457,130	$ 8,746,564	$ 8,981,427	$ 9,222,840	$ 9,451,835	$ 9,726,059	$ 9,988,253	$ 10,257,768	$ 10,534,814	$ 10,819,602	$ 11,112,353	$ 11,413,290	$ 11,722,647	$ 12,040,661	$ 12,367,578	$ 12,703,649	$ 13,049,135	$ 13,404,301	$ 13,769,422	$ 14,144,780	$ 186,506,147	$ 190,865,234
Summary Expenses																													
Transportation	$ 707,600	$ 727,767	$ 748,508	$ 2,183,875	$ 1,321,730	$ 1,359,399	$ 1,398,142	$ 1,437,989	$ 1,478,972	$ 1,521,122	$ 1,564,474	$ 1,609,062	$ 1,654,920	$ 1,702,085	$ 1,750,595	$ 1,800,487	$ 1,851,801	$ 1,904,577	$ 1,958,857	$ 2,014,685	$ 2,072,103	$ 2,131,158	$ 2,191,896	$ 2,254,365	$ 2,318,615	$ 2,384,695	$ 2,452,659	$ 32,052,563	$ 34,236,437
Mechanical	$ 451,571	$ 455,264	$ 484,496	$ 1,391,331	$ 790,235	$ 812,757	$ 835,921	$ 859,744	$ 884,247	$ 909,448	$ 935,367	$ 962,025	$ 989,443	$ 1,017,642	$ 1,046,645	$ 1,076,474	$ 1,107,154	$ 1,138,708	$ 1,171,161	$ 1,204,539	$ 1,238,868	$ 1,274,176	$ 1,310,490	$ 1,347,839	$ 1,386,253	$ 1,425,761	$ 1,466,395	$ 19,163,574	$ 20,554,905
Equipment/Vehicles	$ 45,045	$ 46,329	$ 47,649	$ 139,023	$ 49,007	$ 50,404	$ 51,840	$ 53,318	$ 54,837	$ 56,400	$ 58,008	$ 59,661	$ 61,361	$ 63,110	$ 64,909	$ 66,759	$ 68,661	$ 70,618	$ 72,631	$ 74,701	$ 76,830	$ 79,019	$ 81,271	$ 83,587	$ 85,970	$ 88,420	$ 90,940	$ 1,188,446	$ 1,327,469
Maintenance of Way*	$ 3,107,791	$ 3,196,363	$ 3,287,459	$ 9,591,613	$ 4,270,091	$ 4,391,789	$ 4,516,955	$ 4,645,688	$ 4,778,090	$ 4,914,266	$ 5,054,322	$ 5,198,371	$ 5,346,524	$ 5,498,900	$ 5,655,619	$ 5,816,804	$ 5,982,583	$ 6,153,086	$ 6,328,449	$ 6,508,810	$ 6,694,311	$ 6,885,099	$ 7,081,325	$ 7,283,142	$ 7,490,712	$ 7,704,197	$ 7,923,767	$ 103,551,700	$ 113,143,313
Insurance	$ 200,000	$ 205,700	$ 211,562	$ 617,262	$ 217,592	$ 223,793	$ 230,171	$ 236,731	$ 243,478	$ 250,417	$ 257,554	$ 264,895	$ 272,444	$ 280,209	$ 288,195	$ 296,408	$ 304,856	$ 313,544	$ 322,480	$ 331,671	$ 341,123	$ 350,846	$ 360,845	$ 371,129	$ 381,706	$ 392,584	$ 403,773	$ 5,276,707	$ 5,893,969
General and Administrative	$ 1,479,370	$ 1,521,532	$ 1,564,896	$ 4,565,798	$ 1,609,495	$ 1,655,366	$ 1,702,544	$ 1,751,066	$ 1,800,972	$ 1,852,299	$ 1,905,090	$ 1,959,385	$ 2,015,227	$ 2,072,661	$ 2,131,732	$ 2,192,487	$ 2,254,972	$ 2,319,239	$ 2,385,338	$ 2,453,320	$ 2,523,239	$ 2,595,152	$ 2,669,113	$ 2,745,183	$ 2,823,421	$ 2,903,888	$ 2,986,649	$ 39,031,007	$ 43,596,805
Fuel	$ 125,638	$ 129,218	$ 132,901	$ 387,757	$ 266,628	$ 274,227	$ 282,042	$ 290,080	$ 298,347	$ 306,850	$ 315,596	$ 324,590	$ 333,841	$ 343,355	$ 353,141	$ 363,206	$ 373,557	$ 384,203	$ 395,153	$ 406,415	$ 417,998	$ 429,911	$ 442,163	$ 454,765	$ 467,726	$ 481,056	$ 494,766	$ 6,465,844	$ 6,853,601
Locomotive Lease	$ 122,000	$ 125,477	$ 129,053	$ 376,530	$ 261,110	$ 268,552	$ 276,206	$ 284,078	$ 292,174	$ 300,501	$ 309,065	$ 317,873	$ 326,933	$ 336,250	$ 345,834	$ 355,690	$ 365,827	$ 376,253	$ 386,976	$ 398,005	$ 409,348	$ 421,015	$ 433,014	$ 445,354	$ 458,047	$ 471,101	$ 484,528	$ 6,332,048	$ 6,708,578
Car Hire/(Demurrage)	$ 190,636	$ 269,770	$ 451,210	$ 911,616	$ 867,154	$ 1,153,140	$ 1,455,239	$ 1,496,713	$ 1,824,169	$ 1,876,157	$ 1,929,628	$ 1,984,622	$ 2,041,184	$ 2,099,358	$ 2,159,189	$ 2,220,726	$ 2,284,017	$ 2,349,111	$ 2,416,061	$ 2,484,919	$ 2,555,739	$ 2,628,578	$ 2,703,492	$ 2,780,542	$ 2,859,787	$ 2,941,291	$ 3,025,118	$ 39,533,734	$ 40,445,350
Total Expenses	$ 6,429,651	$ 6,677,420	$ 7,057,734	$ 20,164,805	$ 9,653,042	$ 10,189,426	$ 10,749,059	$ 11,055,408	$ 11,655,286	$ 11,987,462	$ 12,329,104	$ 12,680,484	$ 13,041,878	$ 13,413,571	$ 13,795,858	$ 14,189,040	$ 14,593,428	$ 15,009,340	$ 15,437,107	$ 15,877,064	$ 16,329,560	$ 16,794,953	$ 17,273,609	$ 17,765,907	$ 18,272,235	$ 18,792,994	$ 19,328,594	$ 252,595,622	$ 272,760,427
Difference	$ (5,441,792)	$ (5,316,299)	$ (5,047,627)	$ (15,805,718)	$ (5,024,045)	$ (4,461,633)	$ (3,503,052)	$ (3,598,277)	$ (2,908,722)	$ (3,006,035)	$ (3,106,265)	$ (3,228,649)	$ (3,315,819)	$ (3,425,319)	$ (3,538,090)	$ (3,654,226)	$ (3,773,825)	$ (3,896,988)	$ (4,023,816)	$ (4,154,417)	$ (4,288,899)	$ (4,427,375)	$ (4,569,960)	$ (4,716,772)	$ (4,867,934)	$ (5,023,572)	$ (5,183,815)	$ (66,089,475)	$ (81,895,193)
Cost Inflation Assumed:	103%																												

* Includes MOW vehicles, equipment and environmental manager

NWP Financial Model: High Demand Forecast

	Operating Scenario I				Operating Scenario II																								
Year	2003	2004	2005	Scenario I Summary	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Scenario II Summary	Grand Total
Revenue																													
Number of Freight Cars	2,558	3,198	4,797	10,553	8,491	15,632	20,250	20,250	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	397,888	408,441
Freight Revenue	$ 1,240,473	$ 1,550,591	$ 2,325,886	$ 5,116,950	$ 4,987,081	$ 9,588,449	$ 12,920,467	$ 13,288,700	$ 16,348,497	$ 16,814,429	$ 17,293,640	$ 17,786,509	$ 18,293,425	$ 18,814,787	$ 19,351,009	$ 19,902,512	$ 20,469,734	$ 21,053,121	$ 21,653,135	$ 22,270,250	$ 22,904,952	$ 23,557,743	$ 24,229,139	$ 24,919,669	$ 25,629,880	$ 26,360,331	$ 27,111,601	$ 354,307,795	$ 359,424,745
Number of Passengers	-	15,439	19,299	34,738	74,400	75,144	84,000	84,840	85,688	86,545	87,411	88,285	89,168	90,059	90,960	91,870	92,788	93,716	94,653	95,600	96,556	97,521	98,497	99,482	100,476	101,481	102,496	1,523,608	1,558,346
Passenger Revenue	$ -	$ 195,306	$ 244,132	$ 439,438	$ 941,160	$ 950,572	$ 1,147,020	$ 1,186,806	$ 1,198,674	$ 1,210,660	$ 1,222,767	$ 1,205,530	$ 1,247,345	$ 1,259,818	$ 1,272,416	$ 1,285,140	$ 1,297,992	$ 1,310,972	$ 1,324,081	$ 1,337,322	$ 1,350,695	$ 1,364,202	$ 1,377,844	$ 1,391,623	$ 1,405,539	$ 1,419,594	$ 1,433,790	$ 21,283,905	$ 21,723,343
Miscellaneous																													
Total Revenue	$ 1,240,473	$ 1,745,897	$ 2,570,019	$ 5,556,388	$ 5,928,241	$ 10,539,021	$ 14,067,487	$ 14,475,506	$ 17,547,170	$ 18,025,089	$ 18,516,407	$ 18,992,039	$ 19,540,769	$ 20,074,605	$ 20,623,425	$ 21,187,653	$ 21,767,726	$ 22,364,093	$ 22,977,217	$ 23,607,572	$ 24,255,647	$ 24,921,945	$ 25,606,983	$ 26,311,292	$ 27,035,419	$ 27,779,926	$ 28,545,391	$ 375,591,700	$ 381,148,087
Summary Expenses																													
Transportation	$ 707,600	$ 727,767	$ 748,508	$ 2,183,875	$ 1,321,730	$ 1,359,399	$ 1,398,142	$ 1,437,989	$ 1,478,972	$ 1,521,122	$ 1,564,474	$ 1,609,062	$ 1,654,920	$ 1,702,085	$ 1,750,595	$ 1,800,487	$ 1,851,801	$ 1,904,577	$ 1,958,857	$ 2,014,685	$ 2,072,103	$ 2,131,158	$ 2,191,896	$ 2,254,365	$ 2,318,615	$ 2,384,695	$ 2,452,659	$ 32,052,563	$ 34,236,437
Mechanical	$ 451,571	$ 455,264	$ 484,496	$ 1,391,331	$ 790,235	$ 812,757	$ 835,921	$ 859,744	$ 884,247	$ 909,448	$ 935,367	$ 962,025	$ 989,443	$ 1,017,642	$ 1,046,645	$ 1,076,474	$ 1,107,154	$ 1,138,708	$ 1,171,161	$ 1,204,539	$ 1,238,868	$ 1,274,176	$ 1,310,490	$ 1,347,839	$ 1,386,253	$ 1,425,761	$ 1,466,395	$ 19,163,574	$ 20,554,905
Equipment/Vehicles	$ 45,045	$ 46,329	$ 47,649	$ 139,023	$ 49,007	$ 50,404	$ 51,840	$ 53,318	$ 54,837	$ 56,400	$ 58,008	$ 59,661	$ 61,361	$ 63,110	$ 64,909	$ 66,759	$ 68,661	$ 70,618	$ 72,631	$ 74,701	$ 76,830	$ 79,019	$ 81,271	$ 83,587	$ 85,970	$ 88,420	$ 90,940	$ 1,188,446	$ 1,327,469
Maintenance of Way*	$ 3,107,791	$ 3,196,363	$ 3,287,459	$ 9,591,613	$ 4,270,091	$ 4,391,789	$ 4,516,955	$ 4,645,688	$ 4,778,090	$ 4,914,266	$ 5,054,322	$ 5,198,371	$ 5,346,524	$ 5,498,900	$ 5,655,619	$ 5,816,804	$ 5,982,583	$ 6,153,086	$ 6,328,449	$ 6,508,810	$ 6,694,311	$ 6,885,099	$ 7,081,325	$ 7,283,142	$ 7,490,712	$ 7,704,197	$ 7,923,767	$ 103,551,700	$ 113,143,313
Facility Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Station Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	-
Insurance	$ 200,000	$ 205,700	$ 211,562	$ 617,262	$ 217,592	$ 223,793	$ 230,171	$ 236,731	$ 243,478	$ 250,417	$ 257,554	$ 264,895	$ 272,444	$ 280,209	$ 288,195	$ 296,408	$ 304,856	$ 313,544	$ 322,480	$ 331,671	$ 341,123	$ 350,846	$ 360,845	$ 371,129	$ 381,706	$ 392,584	$ 403,773	$ 5,276,707	$ 5,893,969
General and Administrative	$ 1,479,370	$ 1,521,532	$ 1,564,896	$ 4,565,798	$ 1,609,495	$ 1,655,366	$ 1,702,544	$ 1,751,066	$ 1,800,972	$ 1,852,299	$ 1,905,090	$ 1,959,385	$ 2,015,227	$ 2,072,661	$ 2,131,732	$ 2,192,487	$ 2,254,972	$ 2,319,239	$ 2,385,338	$ 2,453,320	$ 2,523,239	$ 2,595,152	$ 2,669,113	$ 2,745,183	$ 2,823,421	$ 2,903,888	$ 2,986,649	$ 39,031,007	$ 43,596,805
Fuel	$ 125,638	$ 129,218	$ 132,901	$ 387,757	$ 266,628	$ 274,227	$ 282,042	$ 290,080	$ 298,347	$ 306,850	$ 315,596	$ 324,590	$ 333,841	$ 343,355	$ 353,141	$ 363,206	$ 373,557	$ 384,203	$ 395,153	$ 406,415	$ 417,998	$ 429,911	$ 442,163	$ 454,765	$ 467,726	$ 481,056	$ 494,766	$ 6,465,844	$ 6,853,601
Locomotive Lease	$ 122,000	$ 125,477	$ 129,053	$ 376,530	$ 261,110	$ 268,552	$ 276,206	$ 284,078	$ 292,174	$ 300,501	$ 309,065	$ 317,873	$ 326,933	$ 336,250	$ 345,834	$ 355,690	$ 365,827	$ 376,253	$ 386,976	$ 398,005	$ 409,348	$ 421,015	$ 433,014	$ 445,354	$ 458,047	$ 471,101	$ 484,528	$ 6,332,048	$ 6,708,578
Car Hire/(Demurrage)	$ 238,176	$ 324,300	$ 544,643	$ 1,107,119	$ 1,058,241	$ 2,054,204	$ 2,777,695	$ 2,773,759	$ 3,641,667	$ 3,745,455	$ 3,852,200	$ 3,961,988	$ 4,074,905	$ 4,191,039	$ 4,310,484	$ 4,433,333	$ 4,559,683	$ 4,689,634	$ 4,823,288	$ 4,960,752	$ 5,102,133	$ 5,247,544	$ 5,397,099	$ 5,550,917	$ 5,709,118	$ 5,871,828	$ 6,039,175	$ 78,922,919	$ 80,030,037
Total Expenses	$ 6,477,191	$ 6,731,950	$ 7,151,167	$ 20,360,308	$ 9,844,130	$ 11,090,491	$ 12,071,516	$ 12,332,454	$ 13,472,785	$ 13,856,759	$ 14,251,677	$ 14,657,850	$ 15,075,598	$ 15,505,253	$ 15,947,153	$ 16,401,646	$ 16,869,093	$ 17,349,863	$ 17,844,334	$ 18,352,897	$ 18,875,955	$ 19,413,919	$ 19,967,216	$ 20,536,282	$ 21,121,566	$ 21,723,530	$ 22,342,651	$ 291,984,806	$ 312,345,114
Difference	$ (5,236,718)	$ (4,986,053)	$ (4,581,149)	$ (14,803,920)	$ (3,915,889)	$ (551,470)	$ 1,995,971	$ 2,143,052	$ 4,074,386	$ 4,168,330	$ 4,264,730	$ 4,334,189	$ 4,465,171	$ 4,569,352	$ 4,676,272	$ 4,786,006	$ 4,898,632	$ 5,014,230	$ 5,132,883	$ 5,254,675	$ 5,379,692	$ 5,508,026	$ 5,639,767	$ 5,775,010	$ 5,913,853	$ 6,056,395	$ 6,202,740	$ 83,606,893	$ 68,802,973
Cost Inflation Assumed:	103%																												

* Includes MOW vehicles, equipment and environmental manager

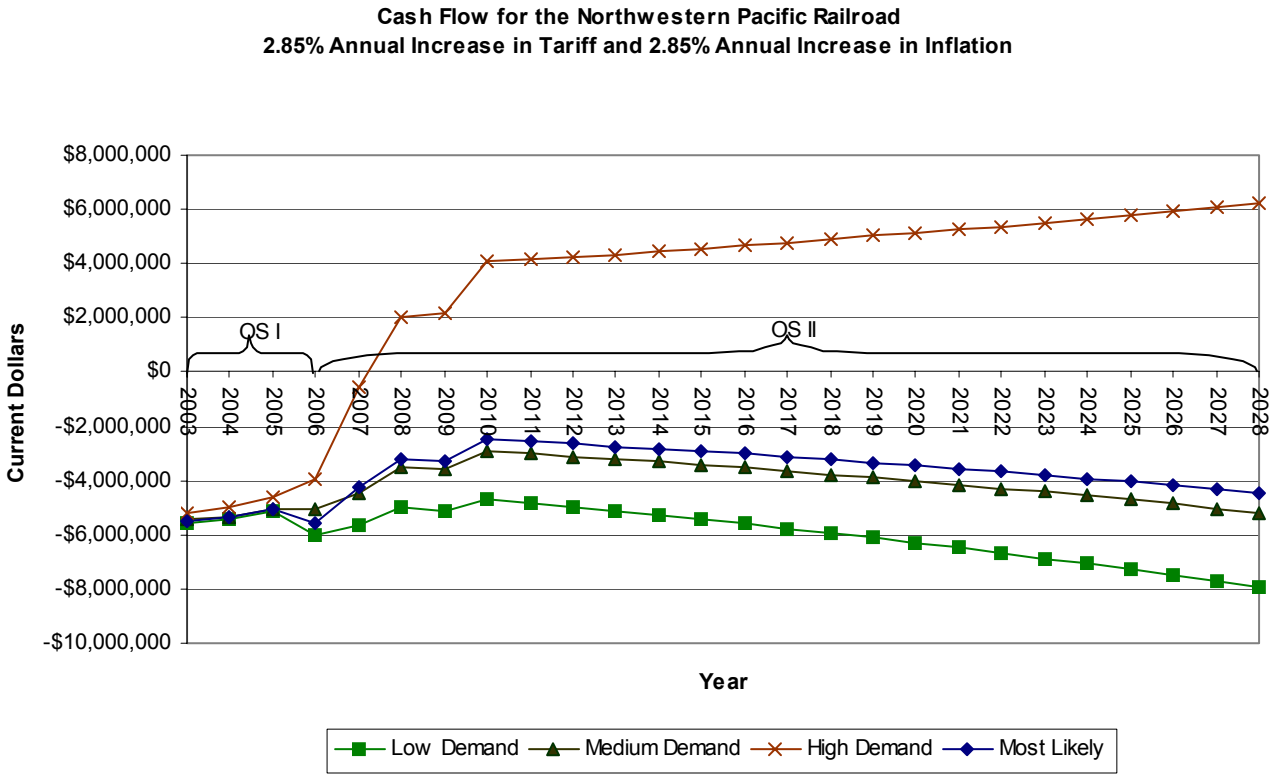
NWP Financial Model: Most Likely Demand Forecast

	Operating Scenario I				Operating Scenario II																								
Year	2003	2004	2005	Scenario I Summary	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Scenario II Summary	Grand Total
Revenue																													
Number of Freight Cars	1,997	2,497	3,745	8,238	5,335	8,968	10,956	10,956	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	207,088	215,326
Freight Revenue	$ 963,018	$ 1,203,772	$ 1,805,659	$ 3,972,449	$ 3,014,173	$ 5,300,179	$ 6,815,111	$ 7,009,342	$ 8,404,580	$ 8,644,111	$ 8,890,468	$ 9,143,846	$ 9,404,446	$ 9,672,473	$ 9,948,138	$ 10,231,660	$ 10,523,262	$ 10,823,175	$ 11,131,636	$ 11,448,888	$ 11,775,181	$ 12,110,773	$ 12,455,931	$ 12,810,925	$ 13,176,036	$ 13,551,553	$ 13,937,772	$ 182,145,695	$ 186,118,144
Number of Passengers	-	9,984	12,480	22,464	48,360	48,844	54,600	55,146	55,697	56,254	56,817	57,385	57,959	58,539	59,124	59,715	60,312	60,915	61,525	62,140	62,761	63,389	64,023	64,663	65,310	65,963	66,622	990,345	1,012,809
Passenger Revenue	$ -	$ 126,298	$ 157,872	$ 284,170	$ 611,754	$ 617,872	$ 745,563	$ 771,424	$ 779,138	$ 786,929	$ 794,799	$ 783,594	$ 810,774	$ 818,882	$ 827,071	$ 835,341	$ 843,695	$ 852,132	$ 860,653	$ 869,259	$ 877,952	$ 886,732	$ 895,599	$ 904,555	$ 913,600	$ 922,736	$ 931,964	$ 13,834,538	$ 14,118,708
Miscellaneous																													
Total Revenue	$ 963,018	$ 1,330,070	$ 1,963,531	$ 4,256,618	$ 3,625,927	$ 5,918,050	$ 7,560,674	$ 7,780,765	$ 9,183,718	$ 9,431,040	$ 9,685,267	$ 9,927,441	$ 10,215,220	$ 10,491,354	$ 10,775,209	$ 11,067,001	$ 11,366,957	$ 11,675,307	$ 11,992,289	$ 12,318,147	$ 12,653,133	$ 12,997,505	$ 13,351,529	$ 13,715,479	$ 14,089,636	$ 14,474,289	$ 14,869,736	$ 195,980,233	$ 200,236,852
Summary Expenses																													
Transportation	$ 707,600	$ 727,767	$ 748,508	$ 2,183,875	$ 1,321,730	$ 1,359,399	$ 1,398,142	$ 1,437,989	$ 1,478,972	$ 1,521,122	$ 1,564,474	$ 1,609,062	$ 1,654,920	$ 1,702,085	$ 1,750,595	$ 1,800,487	$ 1,851,801	$ 1,904,577	$ 1,958,857	$ 2,014,685	$ 2,072,103	$ 2,131,158	$ 2,191,896	$ 2,254,365	$ 2,318,615	$ 2,384,695	$ 2,452,659	$ 32,052,563	$ 34,236,437
Mechanical	$ 451,571	$ 455,264	$ 484,496	$ 1,391,331	$ 790,235	$ 812,757	$ 835,921	$ 859,744	$ 884,247	$ 909,448	$ 935,367	$ 962,025	$ 989,443	$ 1,017,642	$ 1,046,645	$ 1,076,474	$ 1,107,154	$ 1,138,708	$ 1,171,161	$ 1,204,539	$ 1,238,868	$ 1,274,176	$ 1,310,490	$ 1,347,839	$ 1,386,253	$ 1,425,761	$ 1,466,395	$ 19,163,574	$ 20,554,905
Equipment/Vehicles	$ 45,045	$ 46,329	$ 47,649	$ 139,023	$ 49,007	$ 50,404	$ 51,840	$ 53,318	$ 54,837	$ 56,400	$ 58,008	$ 59,661	$ 61,361	$ 63,110	$ 64,909	$ 66,759	$ 68,661	$ 70,618	$ 72,631	$ 74,701	$ 76,830	$ 79,019	$ 81,271	$ 83,587	$ 85,970	$ 88,420	$ 90,940	$ 1,188,446	$ 1,327,469
Maintenance of Way*	$ 3,107,791	$ 3,196,363	$ 3,287,459	$ 9,591,613	$ 4,270,091	$ 4,391,789	$ 4,516,955	$ 4,645,688	$ 4,778,090	$ 4,914,266	$ 5,054,322	$ 5,198,371	$ 5,346,524	$ 5,498,900	$ 5,655,619	$ 5,816,804	$ 5,982,583	$ 6,153,086	$ 6,328,449	$ 6,508,810	$ 6,694,311	$ 6,885,099	$ 7,081,325	$ 7,283,142	$ 7,490,712	$ 7,704,197	$ 7,923,767	$ 103,551,700	$ 113,143,313
Insurance	$ 200,000	$ 205,700	$ 211,562	$ 617,262	$ 217,592	$ 223,793	$ 230,171	$ 236,731	$ 243,478	$ 250,417	$ 257,554	$ 264,895	$ 272,444	$ 280,209	$ 288,195	$ 296,408	$ 304,856	$ 313,544	$ 322,480	$ 331,671	$ 341,123	$ 350,846	$ 360,845	$ 371,129	$ 381,706	$ 392,584	$ 403,773	$ 5,276,707	$ 5,893,969
General and Administrative	$ 1,479,370	$ 1,521,532	$ 1,564,896	$ 4,565,798	$ 1,609,495	$ 1,655,366	$ 1,702,544	$ 1,751,066	$ 1,800,972	$ 1,852,299	$ 1,905,090	$ 1,959,385	$ 2,015,227	$ 2,072,661	$ 2,131,732	$ 2,192,487	$ 2,254,972	$ 2,319,239	$ 2,385,338	$ 2,453,320	$ 2,523,239	$ 2,595,152	$ 2,669,113	$ 2,745,183	$ 2,823,421	$ 2,903,888	$ 2,986,649	$ 39,031,007	$ 43,596,805
Fuel	$ 125,638	$ 129,218	$ 132,901	$ 387,757	$ 266,628	$ 274,227	$ 282,042	$ 290,080	$ 298,347	$ 306,850	$ 315,596	$ 324,590	$ 333,841	$ 343,355	$ 353,141	$ 363,206	$ 373,557	$ 384,203	$ 395,153	$ 406,415	$ 417,998	$ 429,911	$ 442,163	$ 454,765	$ 467,726	$ 481,056	$ 494,766	$ 6,465,844	$ 6,853,601
Locomotive Lease	$ 122,000	$ 125,477	$ 129,053	$ 376,530	$ 261,110	$ 268,552	$ 276,206	$ 284,078	$ 292,174	$ 300,501	$ 309,065	$ 317,873	$ 326,933	$ 336,250	$ 345,834	$ 355,690	$ 365,827	$ 376,253	$ 386,976	$ 398,005	$ 409,348	$ 421,015	$ 433,014	$ 445,354	$ 458,047	$ 471,101	$ 484,528	$ 6,332,048	$ 6,708,578
Car Hire/(Demurrage)	$ 190,636	$ 269,770	$ 451,210	$ 911,616	$ 392,495	$ 1,153,140	$ 1,455,239	$ 1,496,713	$ 1,824,169	$ 1,876,157	$ 1,929,628	$ 1,984,622	$ 2,041,184	$ 2,099,358	$ 2,159,189	$ 2,220,726	$ 2,284,017	$ 2,349,111	$ 2,416,061	$ 2,484,919	$ 2,555,739	$ 2,628,578	$ 2,703,492	$ 2,780,542	$ 2,859,787	$ 2,941,291	$ 3,025,118	$ 213,061,888	$ 213,973,504
Total Expenses	$ 6,429,651	$ 6,677,420	$ 7,057,734	$ 20,164,805	$ 9,178,384	$ 10,189,426	$ 10,749,059	$ 11,055,408	$ 11,655,286	$ 11,987,462	$ 12,329,104	$ 12,680,484	$ 13,041,878	$ 13,413,571	$ 13,795,858	$ 14,189,040	$ 14,593,428	$ 15,009,340	$ 15,437,107	$ 15,877,064	$ 16,329,560	$ 16,794,953	$ 17,273,609	$ 17,765,907	$ 18,272,235	$ 18,792,994	19,328,594		
Difference	$ (5,466,633)	$ (5,347,350)	$ (5,094,204)	$ (15,908,187)	$ (5,552,456)	$ (4,271,376)	$ (3,188,386)	$ (3,274,642)	$ (2,471,568)	$ (2,556,422)	$ (2,643,838)	$ (2,753,043)	$ (2,826,658)	$ (2,922,217)	$ (3,020,649)	$ (3,122,039)	$ (3,226,471)	$ (3,334,033)	$ (3,444,818)	$ (3,558,917)	$ (3,676,428)	$ (3,797,448)	$ (3,922,080)	$ (4,050,427)	$ (4,182,599)	$ (4,318,705)	$ (4,458,858)	$ (17,081,655)	$ (13,736,652)

* Includes MOW vehicles, equipment and environmental manager

The forecast of cash flow for the railroad over time are summarized in graphical form in Figure 10-2:

Figure 10-2



As can been seen in the above graph, only the high demand scenario is able to create a positive cash flow. Both the medium and low and most likely scenarios are not able to "break even" on a cash flow basis and in fact widen the operating gap due to the overwhelming costs of operating the railroad in a 0% growth environment.

11.0 CONCLUSIONS REGARDING 25 YEAR OPERATING FEASIBILITY

11.1 Summary of Financial Results

11.1.1 Low demand

Under the low demand scenario, the railroad will not breakeven for the life of this analysis. If the low demand stays at the same level for the next 25 years, it will not be able to overcome the fixed or variable costs of operating the railroad.

11.1.2 Medium demand

Under all three operating scenarios there will be a net negative cash flow. If the medium demand stays at the same level for the next 25 years, it will not be able to overcome the fixed or variable costs of operating the railroad.

11.1.3 High demand

Under the high demand scenario once the north end of the railroad is connect to the south, the railroad is net cash flow positive, averaging approximately six million dollars a year in net positive cash flow.

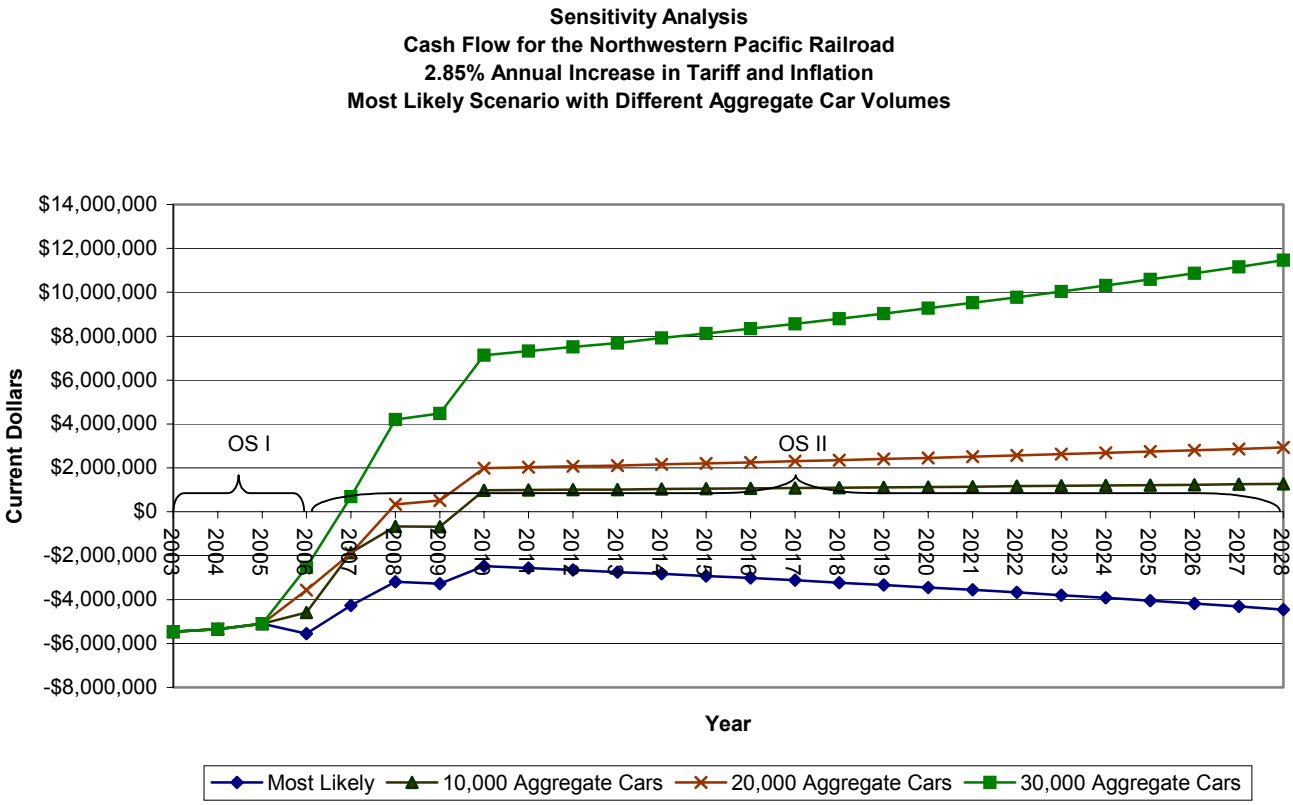
11.1.4 "Most Likely" demand

Since the "Most Likely" demand tracks closely with the Medium demand, it does not cross the break-even mark with its forecasted volumes.

11.2 Sensitivity Analysis

The above financial analysis is based on a model that allows for playing out "what-if" scenarios. Given that this analysis was asked to forecast out over a 25 year period, several assumptions could and will change over that time. Some of the factors that could change have been outlined earlier such as, inflation rates, tariff rates, prevailing wages and market conditions. Each one of these factors could have a significant impact on the financial viability of the railroad. One such analysis that is of particular interest to the NCRA and various public and private entities is what would happen if the number of cars carrying aggregate were increased by an order of magnitude. Below Figure 11-1 shows the impact that 10, 20 or 30 thousand aggregate cars would have on the financial performance of the railroad under the most likely scenario.

Figure 11-1



While this analysis is a gross simplification of the impacts of adding a significant number of aggregate cars to the system, because it does not account for:, additional locomotives, crew costs, higher maintenance costs, possible higher or lower demurrage/car hire costs, it does illustrate the overwhelming role that a large number of aggregate cars would play with the financial feasibility of the railroad.

11.3 Conclusions

Given the results outlined in Table 10-2, the financial model demonstrates that without both the market numbers and a reasonable increase in tariff that is on pace with inflation, it is very difficult to make it to a breakeven point. It is also critical to understand that the railroad is net cash flow positive only in the most optimistic projections. Given this analysis the following conclusions can be drawn:

6. **300 Miles of operating railroad:** The railroad has to operate the entire 300 miles in order to have a positive cash flow. Under scenario I for all three demand categories, the railroad operated at a loss. The fixed costs of operating a railroad are too high to support the proposed 141-mile route between Willits and Schellville.

7. **Credibility:** It will be critical for the railroad to operate consistently for several years to prove that it is a viable operation. We heard this from the NCRA and from the shippers that were interviewed. The railroad does not have to be fast and it does not have to be daily, but it does have to be reliable. As was demonstrated in the revenue model, there is skepticism as to if the railroad will function and for how long. It will be critical that the NCRA choose a highly credible operator to operate the Northwestern Pacific. All indications are that without a credible operator, the shippers will not trust their freight to the railroad.

8. **Price:** The NWP is wholly dependent on the cooperation of the California Northern Railroad and the Union Pacific Railroad. The rates that the NWP will be able to charge are interdependent on what rates the UPRR and the CNRR will want to negotiate. Again, the issue of credibility will play an important role as car hire rates and "free time" allowances will be dependent on the reliability of the NWP. All of these items will have profound impacts on the operation of the railroad and its revenue. Additionally it will be critical for the railroad to be price competitive with the trucking industry.

9. **New Markets:** As was underscored in the freight feasibility chapter, it is clear that the addition of new commodities such as aggregates or new activity from the Port of Humboldt Bay could have a profound impact on the feasibility of the railroad. However, these commodities would require substantial investment in environmental review, facilities and equipment. This type of investment of time and resources would only be put forward if the interested parties were assured of the long-term commitment of the railroad.

10. **Political Capital of Excursion Rail:** While excursion rail service contributes a relatively small amount financially to the bottom line (approximately seven percent), it can provide a positive image of the railroad to the community, possible shippers and government. It could also have a positive multiplier effect on regional tourism revenues.

This financial analysis demonstrates that, depending on the participation of the shippers of Humboldt and Mendocino Counties, the railroad could operate with a net positive cash flow under the high demand scenario. It is important to note that this study in no way reflects the current outstanding financial commitments of the NCRA, or previous operators. Additionally it does not address the capital costs of bringing the railroad up to a state of good repair that would allow the operations to begin. So there are two major cost issues that would have to be considered in the final evaluation of the financial feasibility of this railroad. These two issues were not part of the original scope of this project.

However it is important to look at the railroad in other terms besides the financial. The railroad also plays an economic role in the region and the state. As a second part of this analysis, this report examines the benefits that the railroad brings to the shippers and the reduced wear and tear on the highway system.

12.0 ECONOMIC IMPACT ASSESSMENT

This section presents an estimate of the economic impacts on local communities from re-establishing rail service along the corridor.

There are two types of impacts that may accrue from diverting freight traffic from trucks to the NWP railroad:

- Highway Use Impacts - Reduction of truck trips may represent a decrease in associated highway costs, including pavement rehabilitation, pavement maintenance and accident reduction, among other benefits. However, these benefits are partially offset by the taxes and fees generated by truckers on the system.
- Shipper Impacts - Decreased transportation costs may improve the viability of local producers by improving profit margins and local income levels. In addition, rail service may enable new economic opportunities to occur (i.e., non-local aggregate shipments and port-related industrial development).

12.1 Highway Use Impacts

The following section provides an estimate of the highway use impacts associated with diverting trucks from the highway system to rail service.

12.1.1 Methodology

The methodology for determining highway use impacts consists of estimating the number of miles that the trucks would travel under different scenarios of use and then applying factors associated with truck use, including pavement rehabilitation and maintenance costs, decreased accidents and noise. These factors are further described below.

12.1.1.1 *Truck Miles*

Truck miles were estimated by multiplying the number of trucks by the average number of miles per trip within California. The average number of miles, which were determined by interviews with shippers, is as follows:

- Feed Grain – 29 miles,
- Lumber – 150 miles,
- Pulp – 267 miles, and,

Table 12-1 summarizes the number of miles of truck traffic by type of product, which is expected to range between 10.3 million miles (low estimate) and 17.4 million miles (high estimate) per year after NWP rail service is re-established. The calculation is prepared by multiplying the number of trucks times the average miles times 2 to reflect a round trip. For example, under the high scenario, there are 4,971 trucks carrying feed grain with each one-way trip of 29 miles. The resulting truck miles are 4,971 feed grain trucks * 29 miles per one-way trip * 2 = 288,289 truck miles.

As noted above, aggregates (non-local) and port industry traffic are not included in the estimates of highway use impacts because these products do not currently move by truck and would require rail service to become viable.

Table 12-1 – Estimated Decrease in Truck Miles

Truck miles RT	Low	Medium	High	Most Likely[34]
Feed Grain	196,907	242,598	288,289	238,029
Lumber	7,663,636	11,018,182	14,400,000	10,685,455
Pulp	2,438,212	2,579,497	2,720,782	2,565,368
Aggregates	Not included	Not included	Not included	Not included
Port industry	Not included	Not included	Not included	Not included
subtotal	10,298,755	13,840,276	17,409,071	13,488,852

Source: BST Associates

12.1.1.2 *Truck Cost Factors*

12.1.1.2.1 Federal Highway Administration

In 1997, the Federal Highway Administration prepared a Federal Highway Cost Allocation Report.[35] This report was designed to provide an estimate of the maintenance, congestion and other costs of using the highway system by class of vehicle. As the report states:

> "In addition to developing improved methods to equitably allocate highway agency costs among different vehicle classes, the 1982 Federal HCAS also estimated how highway costs would be allocated among vehicles to promote economic efficiency. In general, the closer the price highway users must pay for each trip is to the total cost of that trip, the more efficient the utilization of resources.
>
> Marginal costs reflect the change in total costs associated with an additional mile of travel by different vehicle classes. Marginal costs include costs of the additional trip to the highway user (e.g., added vehicle operating cost and travel time), costs to public agencies (added use-related 3R [resurfacing, restoration and rehabilitation] and maintenance costs) and external costs such as air pollution and congestion costs imposed on other motorists. Many marginal costs vary by either location or time-of-day. For instance, the incremental pavement deterioration associated with an extra mile of travel by particular vehicle classes depends on the region of the country and the highway system upon which that travel occurs. Costs associated with an additional mile of travel on rural Interstate highways are negligible, but costs on urban Interstate highways may be high, particularly if that travel is during peak periods when traffic volumes are at their highest.
>
> With the exception of their own travel time, vehicle operating costs, and perhaps risks of having a crash, highway users normally do not consider many of these marginal costs when deciding whether to make a trip. In general, economic efficiency would be enhanced if users paid those costs they do not otherwise consider when deciding to make a trip.

[35] Source: http://www.fhwa.dot.gov/policy/hcas/summary/sum5.html#marginal

> Since many marginal costs vary according to when or where a trip is made, charges based on average costs will not necessarily promote improved economic efficiency. To achieve the greatest degree of efficiency, fees reflecting the marginal costs of trips made in various locations at various times of the day should be charged. Then, only trips whose benefits equal or exceed the full cost of the trip will be made. Implementing a Federal user charge system that could reflect locationally and temporally unique costs would be difficult, but it nevertheless is important to understand how current user fees compare to economically efficient ones."

According to the Federal Highway Administration's Cost Allocation Report, the marginal cost of additional truck traffic by 5+ axle trucks with a load of 60 kips (60,000 pounds) on rural interstate highways is estimated as follows:

- Pavement - $0.034 per truck mile[36]
- Congestion - $0.020
- Accidents - $0.009
- Noise - $0.002
- Subtotal - $0.065 per truck mile.

12.1.1.2.2 Caltrans

An earlier estimate by Caltrans of the impact of truck diversion due to resumption of NWP rail service was prepared in 1995 in a report entitled Evaluation of the North Coast Railroad, Contributions to the Regional Economy and to the Transportation Network[37]. This report estimated the cost of heavy trucks on the region's highway system by estimating the existing costs for maintenance and rehabilitation, apportioning the costs for truck usage and then estimating an average cost per truck(s). The estimated cost per mile in 2002 dollars[38] was as follows:

- Pavement Maintenance - $0.044 per truck mile,
- Pavement Rehabilitation - $0.042,
- Accidents - $0.086,
- Subtotal - $0.1730 per truck mile.

BST Associates discussed updating this information with Caltrans staff[39] but was unable to acquire the information for two primary reasons:

- Maintenance data is not available in summary form by type of expenditure and by specific location,

[36] The Cost Allocation Report estimated costs in 2000 dollars. These were adjusted at 2% per year to estimate costs in 2002.

[37] Source: Caltrans Transportation Economics, Transportation Planning Program, August 1, 1995.

[38] These cost estimates were adjusted at 2% per year to estimate costs in 2002.

[39] Personal communication with Theda Hawkinson, District 1 and Chris Cummings, District 2.

- The impact of trucks on highway infrastructure would require significant accounting, design and planning resources, which were not available at the time of this report.

12.1.1.2.3 Factors Used

Caltrans cost estimates are substantially higher than those provided in the FHWA cost allocation study for two reasons:

- FHWA prepared marginal factors as compared with Caltrans average estimates. Average estimates are typically higher than marginal estimates but marginal cost estimates are considered to more accurately reflect additional costs of traffic. However, updating the average costs previously estimated by Caltrans may over-report the impact of removing truck traffic, since the maintenance costs have likely increased while the number of trucks has decreased.
- Caltrans' estimates are area specific while FHWA's estimates are national averages. In addition, the locations used by FHWA to determine national averages are unknown and may under-report the conditions found in the study region.

The cost estimates presented below use both factors to generate a range of highway impact costs, with selection of a mid-point estimate for comparative purposes in this report. The midpoint increases the marginal costs to reflect the higher infrastructure costs in the study area than in a national average.

12.1.2 Results

12.1.2.1 *Costs*

The estimated annual reduction in highway costs associated with rail service is:

- Using FHWA factors, the highway cost impact ranges from $668,000 (under the low estimate) to $1.1 million (under the high estimate) as shown in table 12-2.
- Using Caltrans factors, the highway cost impact ranges from $1.8 million (under the low estimate) to $3.0 million (under the high estimate).
- The midpoint of these estimates ranges from $1.2 million (under the low estimate) to $2.1 million (under the high estimate) with a most likely estimate of $1.6 million.

Table 12-2 – Estimated Annual Highway Cost Reduction per Year (2002 dollars)

Cost Summary	Low	Medium	High	Most Likely
FHWA Factors	$668,000	$897,000	$1,128,000	$874,300
Midpoint	$1,225,000	$1,646,000	$2,070,000	$1,604,200
Caltrans Factors	$1,782,000	$2,394,000	$3,012,000	$2,333,400

Note: FHWA factors assume 60 kip 5-axle Comb/Rural Interstate highway based on 1997 Federal Highway Cost Allocation Study, updated to 2002 dollars
Source: BST Associates using data from FHWA, Caltrans.

12.1.2.2 *Tax Revenues*

Trucks also generate revenues for the federal and state government from taxes and fees, which partially offset the additional costs imposed on the highway system. Table 12-3 presents an estimate of the fees and taxes generated by trucks, which is expected to range from $725,000 (under the low estimate), to $1.2 million (under the high estimate). This estimate equals $0.07 per mile, which matches an estimate of the taxes paid by heavy trucks prepared by the California Trucking Association. The California Trucking Association estimated that annual state registration and fuel taxes on a typical 80,000 pound truck-tractor, traveling 80,000 jurisdictional miles, in California as of 3/1/02 would generate $5,576 per year or $0.07 per mile ($5,576/80,000 miles).

Table 12-3 – Estimated Annual Taxes from Trucks Diverted from Study Area ($2002 dollars)

Factor	Low	Medium	High	Most Likely
Miles	10,298,755	13,840,276	17,409,071	13,488,852
Miles per gallon	5.4	5.4	5.4	5.4
Gallons	1,907,177	2,563,014	3,223,902	2,497,935
Taxes per gallon				
Federal	$0.20	$0.20	$0.20	$0.20
State	$0.18	$0.18	$0.18	$0.18
Subtotal	$0.38	$0.38	$0.38	$0.38
Taxes generated	$724,727	$973,945	$1,225,083	$949,215

Source: BST Associates using data from FHWA and Caltrans.

12.1.2.3 *Net Highway Impact Cost*

The tax revenues generated by trucks are insufficient to cover highway impact costs. The net savings (cost reductions) from diverting trucks from the highway system range from $500,000 per year (under the low estimate) to $845,000 per year (under the high estimate), with a most likely estimate of $654,900 per year.

Table 12-4 – Net Highway Impact Costs

Category	Low	Medium	High	Most Likely
Costs - Midpoint	$1,225,000	$1,646,000	$2,070,000	$1,604,200
Revenues	$725,000	$974,000	$1,225,000	$949,300
Net Impacts	($500,000)	($672,000)	($845,000)	($654,900)

Source: BST Associates using data from FHWA.

12.2 Shipper Impacts

The following section provides an estimate of the savings to shippers and the additional income generated in the region associated with new users of rail service.

12.2.1 Methodology

Some key concepts used in the input/output analysis are defined below:

- Output refers to the value of production (or sales) that is created within the economy.
- Income includes wages, salaries, and proprietors' income, but does not include non-wage compensation (such as pensions, insurance, and health benefits).
- Employment is measured in year-round full-time equivalent jobs (FTEs).

Impacts, which can be categorized as direct, indirect and induced are described below.

12.2.1.1 *Direct Impacts*

Direct impacts are the economic activities directly caused by the movement of cargo flows on the railroad and represent the "first round" of spending, employment, wages, and output. Direct impacts accrue from two possibilities:

- First, shippers are expected to receive lower transportation costs from rail service as compared with truck service for those products that are currently moved by truck. The reduction in transportation costs from rail service allows operators to improve their financial performance. This improved financial performance equates to new output in the community.
- Second, some cargoes may only occur with rail service (i.e., non-local aggregates and port industrial users). These new users also act to increase economic output in the study area.

Direct impacts were developed on the basis of surveys and secondary data sources. As a part of the Long Term Financial Feasibility of the NWP, surveys were conducted with selected major shippers. This survey information served as the primary source for employment and revenue data. Surveys were also supplemented by other data-sources, including:

- The Covered Employment and Wages Program, commonly referred to as the ES-202 program data, which summarizes the employment and average annual wages per job in the impacted counties and the state of California by standard industrial classification (SIC), and,

- 1997 Censuses of Manufacturing and Transportation for California provided an estimate of revenue per employee and the ratio of payroll to output.

12.2.1.2 *Total Impacts*

Rounds of inter-industry purchases generate indirect and induced impacts. Indirect impacts include outside services and supplies used by the firm. Induced impacts refer to the household purchases by firm employees. As wages are paid out, workers' families spend their income on a wide array of goods and services, many of which are supplied by the local economy. Total impacts incorporate the sum of direct, indirect, and induced impacts. These impacts are limited for any region because of spending "leakages" at each round of inter-industry and household purchases. That is, some of the goods and services are purchased from outside the study area, thus reducing the total impact occurring locally.

Impacts were estimated using the IMPLAN model, which was developed by the Minnesota IMPLAN Group, Inc. Implan is an economic impact assessment modeling system that allows the user to build economic models to estimate the impacts of economic changes in states, counties, or communities. BST Associates developed type II multipliers (i.e., direct, indirect and induced effects) based upon the IMPLAN model results for the state of California, the three county area consisting of Humboldt, Mendocino and Sonoma counties and each county separately.

12.2.2 Results – Direct Impacts

12.2.2.1 *Direct Impacts - Output*

Based upon the estimated savings and new market potential, the region could expect additional output ranging from $7.6 million (under the low scenario) to $111.9 million (under the high scenario) with a most likely estimate of $20.1 million. As mentioned above, the additional output results from:

- Decreased transportation costs for feed grain, lumber and pulp producers, and,
- New business opportunities for aggregates and port industry under the high growth scenario.

Table 12-5 – Estimate of Additional Direct Output in Region from Rail Service

Revenues	Low	Medium	High	Most Likely
Feed Grain	$208,000	$256,000	$305,000	$251,300
Lumber	$5,900,000	$8,482,000	$11,086,000	$8,226,000
Pulp	$1,257,000	$1,340,000	$1,422,000	$1,331,600
Aggregates	$231,000	$532,000	$3,351,000	$753,700
Port industry	$0	$0	$95,727,000	$9,572,700
Subtotal	$7,596,000	$10,610,000	$111,891,000	$20,135,300

Source: BST Associates

12.2.2.2 *Direct Impacts - Income*

Payroll to output (or value of shipment) factors from the 1997 Census for California are presented in Table 12-6. These factors were used to estimate payroll from output. For example, the transportation cost savings for lumber producers under the high scenario is $11.1 million as reflected in the previous table. The payroll associated with these cost savings is $11.1 million times 16.3% or $1.78 million.

Table 12-6 – Payroll as a Percent of Output in California

Industry	Payroll as a % of Output
Animal food mfg	5.5%
Wood product mfg	16.3%
Pulp, paper, & paperboard mills	13.5%
Stone mining & quarrying	22.1%
Truck transportation	26.9%
Primary metal mfg	13.7%

Source: BST Associates, 1997 Census of Manufacturing for California

The additional direct income to the region, which is presented in Table 12-7, is expected to range from $1.2 million (under the low scenario), to $15.8 million (under the high scenario) with a most likely estimate of $3.0 million per year.

Table 12-7 – Estimate of Additional Direct Income in Region from Rail Service

Revenues	Low	Medium	High	Most Likely
Feed Grain	$12,000	$14,000	$17,000	$13,900
Lumber	$950,000	$1,365,000	$1,784,000	$1,323,900
Pulp	$169,000	$180,000	$191,000	$178,900
Aggregates	$51,000	$117,000	$740,000	$166,100
Port industry	$0	$0	$13,110,000	$1,311,000
Direct Income	$1,182,000	$1,676,000	$15,842,000	$2,993,800

Source: BST Associates

In addition to shipper's impacts, rail service would generate additional income for railroad employees and a loss of income for truckers. Additional railroad payroll of $3.3 million would be required to provide service three days per week (under all scenarios).

Lost truckers income is estimated by multiplying the number of trucks by the time to complete a full round trip and then dividing by a standard work year to estimate the number of full time jobs (FTEs). Lost income for truckers is projected to range from $2.9 million (under the low scenario) to $4.5 million (under the high scenario), with a most likely estimate of $3.6 million.

12.2.2.3 *Direct Impacts - Jobs*

Using typical payroll to job factors for the study area, the additional direct full time equivalent jobs is presented in Table 12-8. For example, the equivalent number of jobs created in the lumber industry is determined by dividing the payroll ($1,784,000 under the high scenario) by the average wage $36,903 to calculate the number of direct jobs (48.3).

Shippers will experience a gain of employment ranging from a low of 30 direct jobs (under the low scenario) to 368 direct jobs under the high scenario, with a most likely estimate of 73 FTEs.

Table 12-8 – Estimate of Additional Direct Employment in Region from Rail Service (FTEs)

Category	Low	Medium	High	Most Likely
Feed Grain	0.3	0.3	0.4	0.3
Lumber	25.7	37.0	48.3	35.9
Pulp	3.3	3.5	3.7	3.5
Aggregates	1.1	2.4	15.4	3.5
Port industry	-	-	300.0	30.0
Direct Jobs	30.3	43.2	367.8	73.1

Source: BST Associates

There would be 81 employees of the railroad in order to provide service 3 days per week.

The following numbers of trucking jobs would be lost:

- 89 FTEs under the low scenario,
- 140 FTEs under the high scenario, and
- 112 FTEs under the most likely scenario.

12.2.3 Results – Total Impacts

12.2.3.1 *Total Impacts - Income*

Total income was determined by multiplying the appropriate impact multiplier times the direct income. For example, the direct impact to the state of California from resuming NWP Rail service is $3.3 million in payroll for railroad workers. The total impact is the direct impact times the multiplier (1.87) to calculate the total impact of the railroad's payroll ($6.3 million). That is, for every dollar spent on payroll for NWP railroad employees, there are indirect and induced income impacts in the state of California of $0.87.

A similar process was undertaken for each industrial sector. The resulting income effects by major category and area for California are presented in table 12-9.

Table 12-9 – Summary of Total Income Effects in California

Direct	**Low**	**Medium**	**High**	**Most Likely**
Shippers	$1,182,000	$1,676,000	$15,842,000	$2,993,800
Railroad	$3,346,376	$3,346,376	$3,346,376	$3,346,376
Trucking	-$1,334,971	-$2,908,572	-$3,723,055	-$2,675,300
Net	$3,193,405	$2,113,804	$15,465,321	$3,664,876
Total	**Low**	**Medium**	**High**	**Most Likely**
Shippers	$2,838,075	$3,994,454	$41,197,834	$7,483,516
Railroad	$6,249,280	$6,249,280	$6,249,280	$6,249,280
Trucking	-$6,500,754	-$8,321,151	-$10,154,246	-$8,140,381
Net	$2,586,601	$1,922,584	$37,292,868	$5,592,416
Multipliers	**Low**	**Medium**	**High**	**Most Likely**
Shippers	2.40	2.38	2.60	2.50
Railroad	1.87	1.87	1.87	1.87
Trucking	4.87	2.86	2.73	3.04
Net	0.81	0.91	2.41	1.53

Source: BST Associates

As can be seen, there is an unlikely result that the impacts from the medium scenario are less than those for the low scenario, even though there is more traffic with the medium scenario. This result occurs because the railroad employment remains constant across all three scenarios, since it represents the number of employees required to provide three day per week service irrespective of utilization rates. However, the number of trucker's jobs that are lost in switching from the low scenario to the medium scenario is increasing at a faster rate than the increase in shipper's jobs. This conundrum occurs for both income and employment impacts. The resulting income effects by major category and area for the three county region are presented in table 12-10.

Table 12-10 – Summary of Total Income Effects in Three County Region

Direct	**Low**	**Medium**	**High**	**Most Likely**
Shippers	$1,182,000	$1,676,000	$15,842,000	$2,993,800
Railroad	$3,346,376	$3,346,376	$3,346,376	$3,346,376
Trucking	-$2,908,572	-$3,723,055	-$4,543,220	-$3,642,175
Net	$1,619,804	$1,299,321	$14,645,156	$2,698,001
Total	**Low**	**Medium**	**High**	**Most Likely**
Shippers	$2,656,338	$3,746,159	$33,488,287	$6,502,407
Railroad	$5,782,206	$5,782,206	$5,782,206	$5,782,206
Trucking	-$6,095,541	-$7,802,466	-$9,521,299	-$7,632,964
Net	$2,343,004	$1,725,900	$29,749,195	$4,651,650
Multipliers	**Low**	**Medium**	**High**	**Most Likely**
Shippers	2.25	2.24	2.11	2.17
Railroad	1.73	1.73	1.73	1.73
Trucking	2.10	2.10	2.10	2.10
Net	1.45	1.33	2.03	1.72

Source: BST Associates

12.2.3.2 *Total Impacts - Jobs*

Total employment was also determined by multiplying the appropriate impact multiplier times the direct jobs. For example, the direct impact to the state of California from resuming NWP Rail service is 81 railroad workers. The total impact is the direct impact times the multiplier (2.60) to calculate the total impact of the railroad's jobs (210). That is, for every job created in the NWP railroad, there are indirect and induced employment impacts in the state of California of 1.6 additional jobs.

A similar process was undertaken for each industrial sector. The resulting employment effects by major category and area for California are presented in table 12-11.

Table 12-11 – Summary of Total Employment Effects in California

Direct	**Low**	**Medium**	**High**	**Most Likely**
Shippers	30	43	368	73
Railroad	81	81	81	81
Trucking	(89)	(115)	(140)	(112)
Net	22	10	309	42
Total	**Low**	**Medium**	**High**	**Most Likely**
Shippers	85	120	1,180	219
Railroad	210	210	210	210
Trucking	(232)	(297)	(363)	(291)
Net	63	33	1,027	138
Multipliers	**Low**	**Medium**	**High**	**Most Likely**
Shippers	2.79	2.78	3.21	2.99
Railroad	2.60	2.60	2.60	2.60
Trucking	2.60	2.60	2.60	2.60

Source: BST Associates

The resulting income effects by major category and area for the three county region are presented in table 12-12.

Table 12-12 – Summary of Total Employment Effects in Three County Region

Direct	**Low**	**Medium**	**High**	**Most Likely**
Shippers	30	43	368	73
Railroad	81	81	81	81
Trucking	(89)	(115)	(140)	(112)
Net	22	10	309	42
Total	**Low**	**Medium**	**High**	**Most Likely**
Shippers	80	114	960	192
Railroad	202	202	202	202
Trucking	(186)	(238)	(290)	(232)
Net	97	78	873	162
Multipliers	**Low**	**Medium**	**High**	**Most Likely**
Shippers	2.65	2.63	2.61	2.62
Railroad	2.50	2.50	2.50	2.50
Trucking	2.07	2.07	2.07	2.07

Source: BST Associates

12.3 Regional Impacts on Income and Employment from NWP Rail Service

The following section provides a comparison of the total income and employment effects (i.e., direct, indirect and induced effects) of resuming rail service on the NWP Railroad as a percent of income and employment in the state and the three county region.

12.3.1.1 *Income*

The state would experience a net increase of an income of:

- $2.6 million under the low scenario (representing an increase of 0.0003% of state income),
- $37.3 million under the high scenario (representing an increase of 0.0032% of state income),
- $5.6 million under the most likely scenario (representing an increase of 0.0005% of state income).

The region would experience a net increase:

- $2.3 million under the low scenario (representing an increase of 0.011% of regional income),
- $29.7 million under the high scenario (representing an increase of 0.134% of regional income).
- $4.7 million under the medium scenario (representing an increase of 0.021% of regional income).

Under the low and medium scenarios, the income impacts in Humboldt Bay are slightly higher than in the other two counties. However, under the high scenario, most of the local impacts would be experienced in Humboldt County because of the development of port-related industry.

Table 12-13 – Total Income Generated by NWP Railroad Resumption as a Percent of Total Area Personal Income

Impacts	State	Region	Humboldt	Mendocino	Sonoma
Total Income generated by Resumption of NWP Railroad					
Low	$2,587,000	$2,343,000	$851,000	$210,000	$793,000
Medium	$1,923,000	$1,726,000	$440,000	$102,000	$513,000
High	$37,293,000	$29,749,000	$20,256,000	$634,000	$745,000
Most Likely	$5,592,800	$4,651,700	$2,503,800	$176,800	$592,200
Percent of NWP-related Income of Total Personal Income by area					
Low	0.0002%	0.0106%	0.0264%	0.0091%	0.0048%
Medium	0.0002%	0.0078%	0.0137%	0.0044%	0.0031%
High	0.0032%	0.1343%	0.6295%	0.0274%	0.0045%
Most Likely	0.0005%	0.0210%	0.0778%	0.0076%	0.0036%

Source: BST Associates

12.3.1.2 *Employment*

The state would experience a net increase of:

- 63 jobs[40] under the low scenario (representing an increase of 0.0004% of state employment),
- 1,027 jobs under the high scenario (representing an increase of 0.006% of state employment),
- 138 jobs under the most likely scenario (representing an increase of 0.0008% of state employment).

The region would experience a net increase:

- 97 jobs under the low scenario (representing an increase of 0.028% of regional employment),
- 873 jobs under the high scenario (representing an increase of 0.249% of regional employment),
- 161 jobs under the most likely scenario (representing an increase of 0.0046% of regional employment).

Under the low and medium scenarios, the employment impacts in Humboldt Bay are 10 to 15 more jobs than in the other two counties. However, under the high scenario, most of the local impacts would be experienced in Humboldt County because of the development of port-related industry.

Table 12-14 – Total Employment Generated by NWP Railroad Resumption as a Percent of Total Area Personal Employment

Impacts	State	Region	Humboldt	Mendocino	Sonoma
Total Employment generated by Resumption of NWP Railroad					
Low	63	97	43	17	31
Medium	33	78	31	19	22
High	1,027	873	826	30	23
Most Likely	138	161	113	20	24
Percent of NWP-related Employment of Total Employment by area					
Low	0.000%	0.028%	0.077%	0.042%	0.012%
Medium	0.000%	0.022%	0.056%	0.047%	0.009%
High	0.006%	0.249%	1.488%	0.075%	0.009%
Most Likely	0.001%	0.046%	0.203%	0.049%	0.009%

Source: BST Associates

[40] All jobs are reported as full time equivalent jobs or FTEs.

12.4 Relative Impacts from Expenditures in Rail and Trucking in California

The following section compares the impact in California of a dollar expended in the rail and trucking industries.

12.4.1 Rail

For every dollar put into the NWP rail, approximately 1/3rd is for compensation to employees and two-thirds for maintenance and acquisition of goods/services, taxes etc. These direct impacts then stimulate $0.40 in indirect expenditures and $0.47 in induced expenditures. For every dollar put into rail approximately $0.87 multiplies through the California economy.

12.4.2 Truck

For every dollar put into trucking in California, approximately $0.27 is for compensation to employees and $0.73 for maintenance and acquisition of goods/services, taxes etc. These direct impacts then stimulate $0.60 in indirect expenditures and $0.46 in induced expenditures. For every dollar put into trucking approximately $1.06 multiplies through the California economy.

Table 12-15 – Relative Impacts from Expenditures on Rail and Trucking in California

Impact	Railroad	Trucking
Direct	1.00	1.00
Employment	0.33	0.27
Other (Goods, services, taxes etc.)	0.67	0.73
Indirect	0.40	0.60
Induced	0.47	0.46
Total	1.87	2.06

Source: BST Associates using data from PBQD, US Census and Implan Model

Appendix A
Freight Survey Information

The detailed survey results are presented in this section in the following order:

- Feed mills;
- Forest products mills/wholesalers/distributors;
- Aggregates;
- Solid waste; and
- Miscellaneous producers.

Within each group, the interviews are organized by zone within the NCRA system starting from the south and going north.

The questionnaire used for the interviews follows the survey results at the end of this appendix.

FEED MILL INTERVIEWS

Dairyman's Milling Company

7546 Redwood Blvd, Novato, 94945
(415) 892-4748
George Grossi, Manager
Date of interview: May 23, 2002
Dairymen's receives canola meal, barley, corn and a variety of other products by rail. These products come from the US Midwest and Canada to Napa Junction. At the present time, these products are trucked to the mill in Novato. They have reduced their dependence on outside grains by forging alliances with California producers. This has allowed them to reduce their costs to $5 to $6 per ton to the mill.
They expect a demand for 2 to 5 hopper cars per month (24 to 60 cars per year). Rail provides lower transportation costs. Truck costs approximately $9 to $10 per ton from Napa Junction while rail service was provided at $225 per car or approximately $2 to $2.50 per ton (i.e., 100 ton and 90 ton car respectively). Price and reliable service are the two biggest needs from NCRA. They could use service 2 or 3 days per week.

Dairyman's Co-op Feed & Supply

323 East Washington Street, Petaluma, 94952
(707) 763-1585
Frederick Frost, Manager
Date of interview: May 23, 2002
Receive barley, corn, soybean meal, canola pellets, hominy, soy waste and like products from the US Midwest and Canada by rail to Napa Junction. They have also forged alliances with local producers and now estimate that as much as 60% of corn comes from local producers by rail. However, they have limited storage capability, which limits their ability to get large number of cars at a time. This also places them in single car rates, which are higher than multiple car rates.
Rail is still critical and provides lower transportation costs. The car rate from Napa Junction to Petaluma was identified at $211 per railcar or about $2.11 per ton (100-ton cars). Price and reliability of service are the most important components. In the past they

had difficulties with provision of shuttles from California Northern to NWP and problems getting cars spotted. They indicated a need for a maximum of 300 cars per year with service 2 times a day, 5 days per week (Monday through Friday).
He mentioned that Humboldt County only represents about 20% of the firm's business and would not be interested in rail service from the mill to Petaluma. Most farmers are not on rail and only have limited storage facilities.

Hunt & Behrens

PO Box 2040, Petaluma, 94953
(707) 762-4594
Bob Falco, Manager
Date of interview: May 23, 2002
The mill receives oats, barley, soy, wheat, corn, alfalfa, canola pellets and soybean pellets by rail (hopper cars). The cost to truck from Napa Junction to the mill is approximately $9 per ton. Cost to rail was approximately $225 per rail car ($2.25 per ton). By working with California producers they can get some of these products (corn, barley) at lower transportation cost. These deals are multi-year and could not be disengaged quickly. It would take time. He feels that mills located in Petaluma/Novato are at a disadvantage relative to other mills (in Modesto, Tulare etc.) that have direct rail access and thus lower transportation costs.
Past use was actually 148 cars in 1996/7. He suggested 50 cars per month, but this was perceived as a high estimate.

Willow Brook Feeds

PO Box 750818, Petaluma, 94975
(707) 795-7190
No info, called but no call back.

Bar Ale Feeds

201 1st Street, Petaluma, 94975
(707) 762-4505
Bar Ale Feed was located in Petaluma as a feed mill and had 75 cars on the rail line in 1996/7. They have since developed a new mill at Williams (Colusa County) on I-5 and the UP mainline. Petaluma is still operated as a retail outlet but not as a mill.
I placed a call but was not able to talk with a manager. Their website explains why they moved:

> Originating in Petaluma, Bar Ale, Inc. has built a new state of the art mill in Williams. **Recognizing the trends in the industry we decided to move to Williams because of its strategic location: crops grown locally, easy freeway access to entire state, and the lifestyle of the smaller community.** Bar Ale manufactures livestock feeds for cows, horses, pigs, sheep, goats, chickens, llamas, emu, ostrich, rabbit, pigeon, parrot, guinea pig and many more. We offer these feeds in sacks or bulk with capabilities of being able to customize feeds to the customer's specific needs. Our production is geared to produce 50 to 100 tons

of feed an hour. Steam flaked corn and barley; roll out of our plant daily in truck and trailer loads direct to the customer. Our commodity division handles thousands of tons alfalfa, oat, grain and grass hay from Oregon to the San Joaquin valley. We also sell almond hulls, whole cottonseed, wheat and rice bran along with other commodities directly to the end users. (Emphasis added by BST Associates).

FOREST PRODUCTS FIRM INTERVIEWS

Mead Clark Lumber

Headquarters: P O Box 529, Santa Rosa, 95402
Windsor branch: 340 Standard Ave, Windsor, 95492 (on Standard Structures property)
(707) 576-3333
Kevin Destruel, Manager
Date of interview: June 13, 2002
Mead Clark services the construction industry. As their website indicates:

> Mead Clark Lumber customers are primarily builders in Sonoma, Marin, Napa, Solano, and surrounding counties. About 35 percent are large contractors who build 50 or more homes or commercial projects a year; 60 percent are small contractors and remodelers; and about 5 percent are do-it-yourself homeowners.

Kevin stated that the Windsor facility packages lumber and other products for contractors in the North Bay area. He estimated that they receive approximately 700 to 900 railcars of lumber, OSB, plywood, etc. from the Pacific Northwest and elsewhere. [The company newsletter indicated that Mead Clark receives approximately 2,400 truck and trailer loads per year (or about 800 railcars per year at 3 trucks per rail) in the NWP corridor. However, they only used the NWP for 273 rail cars in 1996/7. See next interview]. Without direct rail service, they must use a reload facility in Woodland, about 1 hour away. They use their own trucks for this move but it further constrains delivery options for transporting products to contractor's job sites. Having direct access to the railroad would lower costs and free up their fleet. He would like to have service 5 times per week with up to 3 to 5 cars per day.

Georgia Pacific (Windsor)

Windsor
Mike Brown, GP sales 303-706-8143
Date of interview: June 13, 2002
I called Mike Brown to try and understand the 477 rail cars that were apparently shipped by GP via a Windsor facility (as indicated in NWP reports for 1996/7). Mike said that this must have been through the facility on Standard Structures property. GP trucks product from the Fort Bragg mill. [When added to Mead Lumber, this is approximately 750 rail cars, which confirms Mead Clark market estimates].

Diablo Timber

5747 Highway 29, Windsor, 94558
(707) 252-6142

Danny Jenkins, Traffic Manager
Date of interview: June 12, 2002
Diablo operates a remanufacturing facility and distribution yard at Windsor. They would receive approximately 40 to 60 cars per year inbound, which is slightly down from the 75 cars they received in 1996/7 because volumes are down. The inbound comes in spurts from PNW mills.
However, they also service outbound needs by 101 Redwood, Chinook and other mills at their facility. He estimated approximately 200 to 300 cars per year outbound in addition to the inbound for reman. This estimate did not include Standard Structures, which is reported on in the following interview. [101 Redwood showed as 20 cars in 1996/7 on the railroad.]
Previous rail service was not good and could not be counted on. Rail service 2 or 3 times a week would be sufficient.

Standard Structures

340 Standard Avenue, Windsor, 95492
(707) 544-2982
Dick Caletti (extension 216), President/CEO
Date of interview: June 13, 2002
Standard Structures manufactures and sells engineered products for commercial and residential (multi-family) construction. As their website indicates:

> SSI designs, sells and manufactures engineered wood products for roofs and floors for commercial buildings in the Western United States. Further, the Company designs and sells steel truss members and steel/wood composite members to be outsourced for the same segment of the construction industry. SSI is a mature 50-year-old company that has developed many proprietary products and utilizes automated methods of manufacturing. The Company maintains a skilled staff of 28 Engineers and Technicians in its Product Application Department. The Company's Sales staff consists of 15 Technical Sales Representatives who operate out of their home offices located throughout California, Nevada, Arizona and Oregon. There are Sales Support Technicians at the Windsor office that provide the pricing, product application and coordinating support for their assigned sales representatives. The Design Assistance Team provides pre-sale design and specification support for the Sales Team.
>
> The manufacturing plant and headquarters office is in Windsor, California, 60 miles north of San Francisco. The manufacturing facility consists of approximately 300 MSF of manufacturing space on 30 acres. The property is leased by SSI, as part of the 100 acres owned by the Caletti family.

Standard Structures receives approximately 10 cars per week (400 to 600 per year) of raw lumber and panels for their manufacturing process. These arrive in boxcars (20%) and flatcars (80%) and are handled at Diablo Timber. It is located on the Caletti family property.
On the outbound side, they have just signed an agreement with Boise (formerly Boise Cascade) for nationwide distribution. This would require 3 to 5 cars per week outbound (150 to 250 cars per year). These products require center beam railcars and can be 80 feet long. They are currently sending 10 railcars to Florida and according to truckers the

worst part of the trip is through the Highway 101 area. Service of 3 times per week would meet company needs.

Capital Lumber

13480 Old Redwood Hwy, Healdsburg, 95448
(707) 433-7070
Sam Sanregret, Regional Manager
Date of interview: June 13, 2002
As website indicates:

> Capital Lumber Company, manufacturer and distributor of specialty building materials since 1948, is an independently owned corporation with operations throughout the Western United States. Facilities include 10 regional distribution centers and 2 reload locations with inventories consisting primarily of redwood, cedar, fir, engineered wood products and composite lumber. Manufacturing is centered in Northern California at the Sonoma Milling Services division that provides kiln drying, planing and moulding services. Support services are provided by the National Accounts division in Southern California and by the company's Corporate offices in Phoenix. Capital's 300 plus employees include 50 experienced, knowledgeable sales professionals calling on over 1,500 accounts comprised of retail and pro-sales lumber dealers, home centers and the outdoor living industry. In 1986, the new planing mill and distribution plant was built in Healdsburg, Northern California.

Capital has two needs for rail. First, they bring in lumber from the East Coast for a manufacturer. Second, they buy forest products from Simpson, PALCO, and Sierra Pacific. If rail service were reliable, they would use it to serve Texas, Phoenix and other markets. It takes 3.5 to 4 trucks per railcar and there could be cost savings. He estimated 50 to 100 cars outbound per year.
Capital had significant problems with rail service in the past; poor reliability and stranded cars after the railroad went out of service. They had to pay to settle some of the claims.

Piedmont Lumber

6301 N. State Street, Calpella, 95418
(707) 485-8781
Larry James, Wholesale Lumber Sales
Date of interview: June 13, 2002
As indicated in their website, Piedmont's Calpella facility is both a manufacturing plant (for trusses) and a wholesale distribution yard:

> Five miles north of Ukiah at the junction of Highways 101 & 20, this small town is the site of Piedmont's first Truss yard. Opened in 1988, it is the Redwood Empire's premiere truss supplier. The same Calpella site is home to Piedmont's Wholesale Lumber division. From here we ship framing lumber to residential and commercial projects -- from Salinas to Redding.

Piedmont has operation retail locations in Lakeport, Oakland, Pittsburg and Walnut Creek and truss manufacturing locations in Calpella, Santa Rosa and Tracy. They supply large framing contractors in Northern California.
They are interested in rail service and could use:

- 400 to 500 cars outbound on rail (center beam); and
- 150 to 250 inbound cars of lumber (50% of total in A-frames) and unitized sheet (50% of total in boxcars).

They currently bring cars into a reload in Woodland (Hydra and/or Mellow) and truck to Calpella. However, these reload facilities are getting crowded and have limited storage capabilities. Piedmont has approximately 10 acres of storage area in Calpella. They are located on a rail spur, with approximately 9 car spots. They would need service 5 times a week.
They are considering building a reload facility for themselves. Approximately 1/3 of goods go to Calpella and 2/3 go to job sites. They have to pay $300 per truck plus $400 per railcar reload and storage costs (estimated at around $100,000 per year), which could be partially saved with their own facility.

Mendocino Forest Products

L-P Treating Plant,
5375 N State Street, Ukiah, 95418
Rick Wilson, Sales
(707) 468-1431
Date of interview: May 25, 2002
Mendocino Forest Products purchased the Louisiana Pacific Lumber mills and treatment plant in Mendocino County. They have two lumber mills:

- 40 mbf bf at Fort Bragg; and
- 60 mbf at Ukiah.

Most of their product goes to Southern California and Arizona. They are interested in rail and would like service 3 days per week. The outbound product goes to Calpella or directly to Home Depot (Riverside).
There is also inbound product coming to use treatment plant (sourced at Weyerhaeuser Aberdeen, Raymond Mills, etc.). This product currently comes by rail/truck, and alternatively could use barge. There are approximately 3 trucks to a railcar.
Potential rail car volumes:

- Inbound product coming to use treatment plant is sourced at Weyerhaeuser Aberdeen, Raymond Mills, etc. This product currently comes by rail/truck, and alternatively could use barge. Estimated market of 250 to 500 cars per year;
- Fort Bragg – around 4 boxcars per week (maybe up to 16/20 depending on potential business opportunity). They have an arrangement with GP to use their rail facility – don't have direct rail to the mill. It is unclear whether they could use the GP rail facility after GP closes the mill at the end of the year. Total outbound is estimated to be 150 to 250 cars per year; and
- Ukiah – 5-10 boxcars per week. Total outbound is 250 to 500 cars per year.

There are approximately 3 trucks to a railcar. They can get 19,000 board feet of green product on a truck and between 32,000 and 33,000 board feet of dried product on a truck.

Agwood Mill & Lumber, Inc.

650 Hollow Tree Road, Ukiah, 95418
(707) 468-5486
Mark Sparso, Vice President, Sales Manager
Date of interview: June 13, 2002
Agwood produces 3-inch and 4-inch structural, cut stock and industrial clears. They use approximately 50% Douglas Fir and 50% Redwood. Mark is interested in rail. They considered putting in a spur but have not done this yet. They are currently using a reload facility in Woodland (Mellow).
They bring in lumber for remanufacture from Washington and Oregon (Portland, Eugene, Cottage Grove, Aberdeen, Longview). He estimates approximately 100 truckloads per month of which about 25% could come by rail. He estimated 12 to 20 cars per month (flatcars) inbound (144 to 240 cars per year). He also estimated 6 to 12 cars outbound (72 to 144 cars per year), primarily to Los Angeles and Midwest. Service of 2 times per week would be sufficient.

Masonite Corp.

300 Ford Road, Ukiah, 95482
(707) 462-2961
Out of business. Company statement:

> NEWS RELEASE Editorial Contact: Hillary Hufford, Communications Manager Masonite Corporation Phone: 312/634-2860 Fax: 312/634-2785 E-mail: hillary.hufford@ipaper.com MASONITE ANNOUNCES INTENTION TO PHASE OUT HARDBOARD SIDING CHICAGO, ILLINOIS -- MARCH 6, 2001 -- Masonite Corporation announced today its decision to phase out production of all hardboard siding products. This will result in the closure of the Ukiah, Calif. mill, and the shutdown of two siding production lines at the Laurel, Miss. mill. The other products manufactured at the Laurel mill will not be impacted. The company will phase out production of all siding products including Colorlok®, Woodsman® Lap & Panel, SuperSide®, and HiddenRidge® siding, and Modulux® industrial board. Other Masonite industrial fiberboard products will continue to be available from the company's Lisbon Falls, Maine, mill. Both manufacturing locations expect to operate the affected production lines for the next 60 to 90 days to fulfill outstanding orders and facilitate a smooth market transition for customers. Although Masonite is phasing out production of hardboard siding products, International Paper will continue to make these products available to qualified claimants for repair and replacement purposes under the terms of a 1998 legal settlement. "This was a very difficult decision to make," said Jim Morrison, General Manager, Masonite Building and Industrial Products. "We will be working very closely with employees and their families during the transition to assist them in pursuing other employment opportunities. "Masonite will be providing severance, job placement and counseling assistance to a total of 620 affected employees throughout the Masonite organization. Masonite has manufactured hardboard siding since the mid-1950s. **Over the past five years, the hardboard siding market has declined significantly. "The continued decline of this market segment will not**

support continued production of this product," said Morrison. Masonite Corporation, headquartered in Chicago, Ill., designs and manufactures wood composite materials for residential and commercial construction and industrial applications. (Emphasis added by BST Associates)

G-P Fort Bragg (CWR)

90 W Redwood Ave, Fort Bragg, 95437
(707) 964-5651
William Sandahl, Plant controller
Date of interview: June 13, 2002
The plant is due to close in Q4, 2002 due to timber availability and market conditions. Plant had declining production, down to 55,000 mbf in 2001 from 93,000 mbf in 2000. Plant had a capacity of 650 mbf on an 8-hour shift. All decisions were made in headquarters.

Harwood Products

#1 Main Street, Branscomb, 95417
(707) 984-6181
Denny McIntyre, Sales/Purchasing Department
Date of interview: June 12, 2002
He indicated that Harwood would likely use the railroad but it has been shut down so long that they let the business get away from them. Harwood has an 11-car spur in Willits but that has been let go. They do not have rail service to the mill.
They truck to reload centers in Redding (UP), Antioch (BNSF) and Stockton (UP). It costs approximately $30 per 1,000 board feet to send to these outside reloads. If there were a reload facility in Willits, it would cost them approximately $8 or $9 per 1,000 board feet. In addition, it costs approximately $400 per railcar to use the reload for a 73-foot center beam railcar. They have the potential to ship 2 to 3 cars per month outbound (24 to 36 per year).
They also receive logs from Canada and Washington State by barge/truck. It costs approximately $240 per truckload from Eureka to Branscomb (125 to 130 miles). He would be interested in receiving logs by rail from Eureka or from Sierra foothills, if it were cheaper than truck.

Arcata/Simpson Redwood

5151 N US Highway 101, Arcata, 95521
(707) 268-3000
Bill Scott, Sales Manager
Date of interview: June 12, 2002
Simpson has an annual production is 240 mbf at Korbell and 40 mbf at Orrick (but Orrick production goes to Brainerd reman facility). Simpson's markets are in Colorado, South Dakota, and Texas.
Their actual volumes for recent past:

- Rail via Redding reload – 228 cars in 2000, 99 in 2001 and 107 so far in 2002; and
- Trucks – 9,074 in 2000, 8,503 in 2001 and 3,346 so far in 2002.

They are interested in rail. It could provide cost savings to the firm in terms of reduced truck and reload costs (depending on rate charged). In addition, there is a benefit for green Douglas Fir due to weight. They get a $600 per car rebate from UP but this does not cover all of the costs.
The previous rate was competitive (but not under last operator). Previous rail service was also poor and the Cal Northern and NWP were fighting. UP was also reluctant to give them cars because they got lost for 6 days on the system. If rail were price competitive, they would need service 5 times per week, with cars spotted in evening. They would need 73-foot A-frames and 57-foot flatcars. They still own rail at Samoa Peninsula and would use that area as the reload center for their products.

Blue Lake Forest Products

P O Box 1176, Arcata, 95521
(707) 822-2968
Bruce Taylor, President
Date of interview: May 22, 2002
Blue Lake Forest Products produced 55 to 60 mbf on single shift, capable of 120 mbf with two shifts. Blue Lake closed its doors on April 23, 2002 but are looking to sell or refinance.
They averaged 3 to 5 cars per week at the Redding reload facility (approx 150 to 250 flatcars per year). If they had the fiber and access at plant (or Costa Trucking reload), it could reach 2-3 cars per day. It cost approximately $350 per truck to Redding. There is an advantage in loading at the mill in terms of labor scheduling and use of mill personnel but it would still have to compete with the Redding reload.
Problems in the lumber industry are:

- Availability of wood fiber (especially in federal lands); and
- Depressed lumber and residual chip markets.

Britt Lumber

PO Box 248, Arcata, 95516
(707) 822-1779
Ross Muxworthy, Sales Manager
Date of interview: May 22, 2002
Britt Lumber is owned by MAXXAM, who also owns Pacific Lumber. Britt specializes in redwood fencing and other materials. They have a capacity to produce 200 mbf with one shift. Britt has a 46,000 square foot mill and a 25,000 square foot remanufacturing facility in Arcata.
Approximately 99% of the product is shipped by truck right now. They are using the Redding reload, averaging 3 to 5 cars per month for the rail oriented cargo. This could reach 15 per month if a project comes through with Mendocino Forest Products. UP discounts rail rate by $600 per railcar. Britt sells FOB the mill but reduced transportation costs would help the customer.
They are interested in rail, would work with the Costa Trucking reload if service were re-established in Eureka. They are not interested in a reload at Willits (no advantage).

LP Arcata Particleboard Plant

4700 West End Road, Arcata, 95521
(707) 825-1800
Kenneth Cole, Plant Manager
Date of interview: June 13, 2002

LP has three particleboard plants. The Arcata, CA has a capacity to produce 125 million square feet on a 3⁄4-inch basis (3 shifts per day; 7 days per week). The other facilities are located in Missoula, MT (155 msf) and Silsbee, TX (80 msf).

They are interested in direct rail service. They currently use the Redding reload facility but not as much as they used to. They use 25 to 30 cars per month, but Mr. Cole indicated with reliable cost-effective service, they could use 80 to 100 cars per month (960 to 1,200 per year). They would need service 5 times per week with spotting in the late evening or early morning hours. They need boxcars and bulkhead flatcars.

Sierra Pacific Industries

2293 Samoa Road, Arcata, 95521
Gordie Amos, Division Manager (707 443-3111)
Eric Shelby, Traffic Department Manager (530 378-8252)
Date of interview: June 13, 2002

Sierra Pacific owns a lumber mill in Arcata with a capacity of 200 mbf per 8-hour shift. They produced 74 mmbf in 2000 and 85 mmbf in 2001.

They use a reload facilities at Anderson (they own this one) and Shasta Lake, which are both on the UP. They average 2 to 3 cars per day (400 to 600 cars per year). UP picks up $600 on rail costs (with rebate reduced rate). However, it takes 3.5 trucks to make up railcar and $400 to load the car. The total cost to the shipper is more like $1,450 or $850 after the $600 UP credit.

They would need a frame cars and service of 5 to 6 cars every other day (3 times per week). Their spur holds 4 to 5 cars.

Humboldt Bay Forest Products

P 0 Box 266, Eureka, 95537
(707) 443-5631
Woody Murphy, President
Date of interview: May 23, 2002

Humboldt Bay Forest Products is located in Fields Landing in the south portion of Humboldt Bay. They have never used rail but has had some potential opportunities that could potentially use rail:

- Diatomaceous earth from Reno – export;
- Steel to Geneva Oregon; and
- Logs inbound to Willits, area – 60 mbf were handled last year.

In the past, they have primarily been an outbound shipper of locally produced forest products. However, they have had to change with the economy and are more interested in imports. Woody indicated that people do not even consider them if they do not have rail. He thinks it is critical to have rail now.

Samoa Pacific

L-P Somoa (Pulp)
PO Box 218, Eureka, 95564
(707) 443-7511
Brent Hawkins, Executive Resident Manager
Date of interview: May 23, 2002
Samoa Pacific (formerly Louisiana Pacific Corp mill) produces about 225,000 metric tons of pulp per year. Approximately 15% (33,750 tons per year) is shipped to domestic customers. There are around 90 tons per boxcar, so this equals approximately 375 cars per year. Domestic accounts are located in Los Angeles and Texas and are accessed by truck at the present time. Samoa Pacific is interested in rail service. They could potentially access other domestic accounts if rail service were provided
Potential Inputs by rail:

- Receive 5,500 tons per year of quick lime or 10,000 tons per year of pebble lime by truck (90 tons per car?); and
- Also receive 95,000 tons of wood chips from Fort Bragg/Mendocino area. Rail cars hold about 80-100 tons of product versus 20 tons for truck. 4 to 5 trucks for each rail car.

Samoa Pacific is interested in rail service but is flexible about service. They could use a shipment every two weeks. Rail acts as rolling warehouse for them.
Truck rates average $1,000 per truck to LA with product ($50 per ton). Inbound lime is about $1,200 per truck ($60 per ton).
They receive approximately 150 truckloads of wood chips per day (2,500 trucks from Mendocino, 1,500 trucks from Fort Bragg). They do not currently have a rail unload facility but could probably buy one used for a reasonable price. Rail service could also make chips farther south economical to access. Rates would need to be at least 10% less than trucking rates to be competitive.

Schmidbauer Lumber Corp.

P 0 Box 152, Eureka, 95502
(707) 443-7089
George Schmidbauer, President
Schmidbauer Lumber has an annual production of 90,000 mbf from its facility in Eureka. Their markets are primarily located in Southern California and Arizona. They use 95% direct truck and 5% truck to Redding reload facilities at present time.
They are interested in direct rail to Eureka and would use approximately 10 cars per month. They would need service 5 times per week, with cars spotted in evening. The rates would need to be competitive. UP rail rate from Redding to LA is $3,000 per car right now.

Eel River Saw Mills

1053 Northwestern Avenue, Fortuna, 95540
(707) 725-6911
This mill, which previously used the NCRA (180 rail cars in 1996/7), closed in 2001. It is for sale.

Palco Lumber Mills

PO Box 37, Scotia/Carlotta, 95565
Kevin Paldino, sales
(707) 764-2222
Pacific Lumber Company's annual production is 400,000 mbf from its mills in the Humboldt County area. Their markets are Southern California, Arizona, Texas, and the Midwest.
They are interested in rail. Scotia wouldn't use the service but the Carlotta mill would. They use the Redding reload with about 140 cars per year at the present time. According to Kevin, this could go to about 300 to 350 cars per year if there were service to Humboldt County. They would need A-frame railcars, can get 60,000 to 80,000 bdft on railcar. Get 16,000 bdft of green lumber per truck. They would need service approximately 2 times per week.

SOLID WASTE

Humboldt Waste Management Authority

Gerald Kindsfather, General Manager
1059 West Hawthorne Street, Eureka CA 95501
(707) 268-8690
Humboldt County generates approximately 80,000 tons per year (approximately 200 tons per day Monday through Friday), growing at rate of population growth.
County was interested in having all of this product move by rail. However, the existing facility is not served by rail and there is no way to bring rail to the existing facility. There was a study of 5 to 6 potential rail-served sites but community did not accept any of them.
To use rail would require shuttling waste from the existing transfer facility to a reload facility. This would require buying and operating a packer and probably also additional storage. Neither of these expenses is in the current budget/rate. Would require rate adjustment. Also rail delivery site may be re-developed with non-industrial uses.

Waste Solutions Group

David Gavrich
415-642-7170
The operator for Humboldt County (Waste Solutions Group) is interested in rail but this depends upon cost and reliability of service. Rates are confidential but would need to meet or exceed the rate contracted for with previous rail operator. Operator still has 14 years left on a 15-year contract with Potrero Hills. Waste Solutions was only considering this location for Humboldt County.
The use of rail would be expensive for Waste Solutions and would require a long-term commitment (approximately $6 million capital outlay). They would put waste in 12-foot high containers (64 cubic yards per container) and could get 4 containers on flatcars. They were planning on a 7-day turn with approximately 12 to 14 containers per day or 3 to 4 flatcars.

Currently, they are trucking the waste to a site in Medford and are able to defray costs to some extent by bringing back wood chips for export at Humboldt Bay. They would need service 5 or 7 days per week. Rate is confidential.
It is uncertain whether rail is still viable for Humboldt County.

Mendocino County Solid Waste

Paul Cayler, Deputy Director
707-463-4078
Mendocino County has two vendors:

- Solid Waste of Willits – near rail and could potentially be served by rail but not on rail at present; and
- Solid Waste Systems (Ukiah) – could build a rail spur.

Both vendors take waste to Potrero Hills, which is located 119 miles from Ukiah and 141 miles from Willits. It costs approximately $400 per truckload ($20 per ton) to take the waste from Willits to Potrero Hills.
Rail service was considered but was not found to economically viable. Rail service would only take the waste to Suisun City or Fairfield, from whence it would need to be trucked to the landfill. There was also discussion of road-railer technology.
If rail were to be used in Mendocino County, it would need to be 6 days per week

AGGREGATES

California Department of Conservation

Don Dupras
916-323-0111
Interest has been expressed in moving aggregate from Humboldt County to San Francisco Bay Area (North Bay). However, there is a lingering question expressed about the delivered product price (with transportation cost).
Don estimates 9 tons of aggregates per person per year in North Bay as opposed to 7.5 in rest of the Bay area (average from 1960 to 2000 stats). He also estimate that the price for base material is $12 to $13 per ton and that trucking it 25 to 30 miles may cost as much in freight as the value of the product. Approximately 95% of these products are currently trucked in SF Bay area.
Substantial quantities located at Marysville (2 billion tons north of Sacramento at Yuba River) but they have never been able to deliver it at market rates to North Bay. Goes by truck to Roseville (Placer County) and Rio Linda (Sacramento County).
These products are also being delivered from BC to SF Bay by self-unloading Panamax vessels (50,000 to 70,000 tons of product per vessel call). [Government statistics show 100,000 tons in 2001 at a delivered price of $17 ($7 of which is freight and $10 price of product). Port contracts in SF call for 400,000 tons and in Richmond 300,000 to as much as 1,000,000 tons. Source: US Maritime Administration data prepared by BST Associates from 2001 all-modes database]

Humboldt County

Kirk Girard, Community Development Services
707 445-7541
Kirk explained the issues related to expansion of resource base in Humboldt County. Product comes from three rivers:

- Mad River has been studied extensively and is at sustained yield.
- Van Dusen River has also been studied rather extensively and is at sustained yield.
- Eel River has not been studied. County tried to get grant to study resource base but was not successful. Do not have enough information to know if the resource can be expanded, especially with overlay of ESA regulations.

The preliminary estimate of sustained yield may be 1.2 million cubic yards per year (or maybe more) but additional study is required to document the volumes. Could be done by current operator, public agency, or new applicant. There are also questions about the ability to deliver the product at a price that the buyer can afford.

Syar Industries

Don McCall, Sales
707-252-8711
According to their website:

> Syar Industries, Inc. has been active in the rock products and construction industry for over 60 years. Syar is now the largest producer and supplier of high quality aggregate rock products and asphaltic paving materials in the North Bay region. Concrete and building materials are supplied from facilities in the Vallejo region. The Corporate office as well as the Napa quarry is located in Napa with other rock quarries at Vallejo in Solano County and at Soledad in Monterey County. Sand and gravel processing plants and mining operations are in Sonoma County along the Russian River at Healdsburg and along Cache Creek at Madison in Yolo County. Nine asphalt production plants are located in a network in Solano, Napa, Sonoma, Yolo and Contra Costa counties. All of these plants are among the most technologically advanced and efficient in the industry and can ship large volumes of aggregate and asphalt each day to customers throughout Northern California. In addition to quarry operations as a source of raw materials, Syar is advancing the recycling of concrete and asphalt to conserve resources and to provide for their long-term uses. Syar facilities provide 300 to 400 jobs during the year.

Syar Industries is one of the largest providers in the North Bay area. They have a quarry at Healdsburg, which is on NCRA's line, and used rail many, many years ago but not interested at the present time. Trucks provide easier access from the quarry to the job site (27 to 28 ton payload per truck). Also, a lot of the ready mix plants have limited storage capacity or aren't located on rail.
Syar says there is not a shortage now in the North Bay but could be in 2 to 3 years. Hansen is coming to the end of its permits in the Russian River and this will cause a pinch. The rest of San Francisco Bay is currently experiencing a shortage due to commercial building growth and public infrastructure projects (especially highways, bridges).

Eureka Sand and Gravel

Rob McGloughlin
707-443-2791
Eureka Sand and Gravel said existing resource base only serves the local market and there is a question about being able to deliver the product to SF Bay. Earlier attempt to barge product to SF Bay did not work. Recalls $17/18 per ton cost to rail in past. Wonders whether product would be marketable for $10 per ton for freight.

MISCELLANEOUS FIRMS

Skip Gibbs Company

949 School Way, Redwood Valley, 95470
(707) 485-5828
Katie Gibbs, Owner
Skip Gibbs Company acquires flat cars from the railroads, which are used to construct structural spans. They probably receive 70 cars per year but this depends on the availability of cars. These may all come on one day. They also receive steel from Arkansas, approximately 4 to 5 cars per year. They typically strip out parts and send them back to railroads in trucks. They are interested in direct rail service.

TRUCKING COMPANIES

Goselin Transportation
Louis Goselin, Owner
4050 Broadway Street
707-442-4566
Interview July 23, 2002

Goselin Transportation provides trucking services for forest products mills as well as other general commodities. Goselin has a relatively good balance of traffic with 60% out and 40% in. Occasionally some of the owner/operators serving the area will have deadheads back to the area with an empty truck.
The forest products industry has shrunk down to the larger operators and some smaller operators that have their own sources of timber supply or can access from other areas cost effectively. The existing operators are expected to be stable but he does not anticipate any growth.
The limits on truck size (65 feet) are not really a problem for the forest product mills. Truckers can run 48-foot trailers and this satisfies most of the demand.
In his opinion railroad development will be costly and can only be profitable (or cover O&M) if an additional base of cargo were developed (port or other traffic).

Bettendorf Trucking
Ron Burgess, Owner
4545 West End Road
707-822-8271
Interview July 23, 2002

Bettendorf Trucking provides trucking services for forest products mills and general commodities. It is also associated with Joe Costa Trucking and handles the garbage haul from Humboldt Bay to Medford.

He believes that forest products firms may be benefited by rail service but that it would cause a decline in the trucking industry. It could also require a larger critical mass than currently exists.
Current truck rate from Arcata/Eureka to the Redding area is $360 per truckload.
He estimates that the forest products industry is currently stable but has little growth potential. The limits on truck size (65 feet) are not really a problem for the forest product mills. However, truckers from outside the area may not know about the limits and can experience problems.

INTERVIEWS DURING FINAL REVISIONS - RAIL

James Sobbizadeh, 1/6/03 Fetzer
Don Baker, 12/20/02 Korbel
Marian Borg 12/20/02 Korbel
Brent Hawkins, 12/23/02 Samoa Pacific
John Brooks, 12/23/02 Brown Forman
Tony Becerra, 12/20/02 Groskopf Warehouse
Hal Burris, 12/23 LP Particleboard
Bill Scott, 12/23 Simpson
Bob Gill, 12/20 California Northern
Glen Back, 12/20 Willowbrook Feeds
Bob Falco, 12/20 Hunt & Behrens

DRAFT: Questions for potential Northwestern Pacific Railroad shippers
North Coast Rail Feasibility Study

1. Name of Business: _____
2. Location (one interview per location): _____
3. Name of Contact (Position): _____
4. Phone Number: _____
5. Nature of Business: (e.g., sawmill etc.)_____
   _____
   _____
   _____

6. Please describe current production capacity and production level: _____
   _____
   _____
   Do have plans to expand or contract your production level or capacity?: _____
   _____
   _____

7. What are the primary inputs to your business (what are the typical origins of key inputs): _____
   _____
   _____,
   how many tons move by mode and what is the typical number of tons, board feet, BDU etc that move per loaded truck, railcar, barge or other mode: _____
   _____
   _____

8. What are the primary outputs of your business (what are the typical destinations of key outputs): _____
   _____
   _____
   and how many tons move by mode and what is the typical number of tons/board feet etc that move per truck, railcar, barge or other mode): _____
   _____
   _____

9. Which carriers do you use (truck, barge, etc.)? What other key carriers serve Humboldt
   _____
   _____
   _____

10. What factors do you consider in sending inputs/outputs by mode (price, reliability, frequency of service, speed, distance, other): _____
    _____

_____

_____

11. Have you used rail in the past? Yes/no. When was the last time you used rail? Please describe your satisfaction with or concerns about rail service:_____

_____

_____

12. Would you consider using rail in the future? Yes/no
    Would you require direct service to your plant? Yes/no
    Would you require service to Eureka? Yes/no
    Would you consider using a truck/rail trans-loading facility located near Willits (Redwood Valley)? Yes/no.

13. Please describe what you would require to consider rail service:
    a. Frequency of service_____
    b. Speed of service_____
    c. Price_____
    d. Other key factors: _____

    _____

    _____

14. How many units of which products (tons/carloads, other) would you consider moving by rail? : _____

    _____

    _____

15. Do they anticipate volume growth in their freight shipments or receipts in the next 5 years? What rate of growth (percentage)? With rail service? Without rail service?

    _____

    _____

    _____

    _____

16. If rail service were not available, would there be an impact to your business? Yes/no please describe how business would be impacted: _____

    _____

    _____

Appendix B
Passenger Survey Information

CONTRIBUTORS:

Karla Bennett
Office Manager/Hostess, Yreka Western Railroad

Marcus Brown
North Coast Logging Interpretive Association

Susanne Dierkhising
Marketing Manager, Sonoma County Tourism Program

John Dickerson
Executive Director, Mendocino County Alliance

Erica Ercolano
Marketing Director, Napa Valley Wine Train

Angelo Figone
California Redwood Coast Company

Jeff Forbis
President, Shasta Sunset Dinner Train

Randy Gustaffsson
Stone Consulting

Arnold Herskovic
Director of Economic Planning and Project Development, SHN Consulting Engineers and Geologists Inc.

J Warren Hockaday
Executive Director, Eureka Chamber of Commerce

Eileen Hook
California Tourism

Don Leonard
Executive Director, Humboldt County Convention and Visitors Bureau

Art Lloyd
Northwestern Pacific Railroad consultant; tourist/excursion rail expert

Marty Markin, President
McCloud Chamber of Commerce

John Mayfield
Owner, California Western Railroad

John Poimiroo, Poimiroo and Partners

Richard Silver
Executive Director, Train Riders Association of California

Cliff Waters
Government Relations Manager, Roaring Camp Railroads

QUESTIONS FOR PASSENGER/EXCURSION RAIL ANALYSIS

Questions for Operators of Past or Proposed Service – North Coast/Northwestern Pacific corridor

These questions are applicable to both past and proposed service for the North Coast/Northwestern Pacific corridor.

What are the characteristics of the rail corridor that are particularly conducive to passenger or excursion rail service?

What operating scenarios make the most sense for this corridor? (in terms of frequency, seasonality, stops)? Should special event service (e.g. Christmas, themes) be considered?

What type of amenities should be considered on or off-board?

What characteristics of the rail corridor would be unfavorable for operating passenger or excursion service?

What types of opportunities exist for tie-ins with other rail service (e.g. Skunk Train)?

What types of opportunities existing for tie-ins with other tourist attractions (e.g. mills, Royal Caribbean boat, boat tours, Samoa cookhouse, Ft. Seward, Eel Canyon, etc.)?

What markets would be served by passenger or excursion service? Is there an intercity rail market?

Describe the contract you had with the host railroad.*

Did you pay a percentage of your profit to the host railroad?*

Who provided your equipment? Who operated it? How much did you pay them?*

What did you pay the host railroad in trackage fees?*

What was your breakeven point in terms of passengers?*

What was your fare structure?*

What was your ridership? How did it vary by season, day of week?*

*These questions will also be asked of the operators of other railroads. In addition, they will be asked to characterize their service, describe its attractions and identify success factors.

Questions for Tourism Professionals

Describe the visitor market in your region in terms of point of origin, trip purpose, length of stay, mode of arrival, popular activities/attractions, volume of visitors.

What is your opinion of the attractiveness of excursion rail as a tourist activity?

What opportunities exist for tie-ins with other tourist activities?

Appendix C
Financial Cost Input Sheets

Market Inputs Low

Shipper Information, Rates and Forecasts						Low Forecast	Operating Scenario I															
						Yearly Total					40% of total					50% of total					75% of total				
Shipper	**Location**	**Milepost**	**Zone**	**Rate per car**	**1996/97Actual**	**Number of Cars**	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2003	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2004	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2005
Kelleher Lumber	Blackpoint			$400		100			20	20	40	13	13	13	13	50	19	19	19	19	75
Dairyman's Milling Co	Novato	28.2	1	$400	16	24			5	5	10	3	3	3	3	12	5	5	5	5	18
House of Daniels	Novato	22.7	1	$405	29	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Adobe Lumber	Petaluma	41.8	1	$384	15	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Dairyman's Co-op Feed & Supply	Petaluma	39	1	$400	185	150			30	30	60	19	19	19	19	75	28	28	28	28	113
Hunt & Behrens	Petaluma	39	1	$400	148	300			60	60	120	38	38	38	38	150	56	56	56	56	225
Willow Brook Feeds	Petaluma	42.2	1	$400	10	250			50	50	100	31	31	31	31	125	47	47	47	47	188
Bar Ale Feeds	Petaluma	42	1	$324	76	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	Petaluma	42	1	$384	23	0			-	-	-	-	-	-	-	-	-	-	-	-	-
J H Pomeroy Co.	Petaluma	42	1	$405	23	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Cal Shake & Shingle	Roanoke Park			$408		12			2	2	5	2	2	2	2	6	2	2	2	2	9
West Sonoma Disposal				$400		0			-	-	-	-	-	-	-	-	-	-	-	-	-
Mead Clark Lumber	Santa Rosa	60	2	$400	273	700			140	140	280	88	88	88	88	350	131	131	131	131	525
Paterson Tractor	Santa Rosa	61	2	$412	4	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia Pacific (Windsor)	Windsor	51	2	$451	477	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	Windsor	52	2	$475	75	240			48	48	96	30	30	30	30	120	45	45	45	45	180
Standard Structures	Windsor	53	2	$475	238	550			110	110	220	69	69	69	69	275	103	103	103	103	413
Windsor Mill	Windsor	54	2	$475	3	15			3	3	6	2	2	2	2	8	3	3	3	3	11
Vinwood Mgt	Geyserville	59	3	$483	3	0			-	-	-	-	-	-	-	-	-	-	-	-	-
GB Mobile	Healdsburg			$475		15			3	3	6	2	2	2	2	8	3	3	3	3	11
Capital Lumber	Healdsburg	57	3	$475	38	50			10	10	20	6	6	6	6	25	9	9	9	9	38
Nu-Forest Lumber	Healdsburg	57.5	3	$475	26	50			10	10	20	6	6	6	6	25	9	9	9	9	38
RJW Lumber	Healdsburg	58	3	$475	1	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Piedmont Lumber	Calpella	111	4	$530	84	550			110	110	220	69	69	69	69	275	103	103	103	103	413
All-Coast Lumber	Cloverdale	74.2	4	$530	17	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Skip Gibbs Rail Bridge	Redwood Valley	111.1	4	$473	46	64			13	13	26	8	8	8	8	32	12	12	12	12	48
L-P Treating	Ukiah	103	4	$527	280	250			50	50	100	31	31	31	31	125	47	47	47	47	188
Alex Thomas (pears)	Ukiah			$700		30			6	6	12	4	4	4	4	15	6	6	6	6	23
Agwood Lumber	Ukiah	103.1	4	$530	28	216			43	43	86	27	27	27	27	108	41	41	41	41	162
California Shake & Shingle	Ukiah	104	4	$530	5	0			-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Ukiah Mill	Ukiah	105	4	$530	92	250			50	50	100	31	31	31	31	125	47	47	47	47	188
Georgia Pacific (Tanks)	Ukiah	106	4	$530	119	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	Ukiah	107	4	$530	46	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Parnum Paving	Ukiah	108	4	$496	270	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Cargill (salt)				$530		25			5	5	10	3	3	3	3	13	5	5	5	5	19
Cal Coast Lumber Treaters	Ukiah	109	4	$530	16	0			-	-	-	-	-	-	-	-	-	-	-	-	-
Masonite Corp	Ukiak	110	4	$530	49	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clark Miller Distributing	Ukiah			$640		30					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
G-P Fort Bragg (CWR)	Fort Bragg	128.5	5	$640	7	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mendocino Forest Products	Fort Bragg	128.5	5	$640		150					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
101 Redwood	Willits	130	5	$640	20	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Windsor Mill	Willits			$770		30					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
G&S Milling	Willits	129	5	$735	43	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Harwood Products	Branscomb	155	6	$770		24					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arcata/Simpson Redwood	Arcata	292	7	$1,000	358	100					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Britt Lumber	Arcata	295	7	$1,000	59	36					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L-P Flake Board	Arcata	298	7	$949	639	960					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L-P Logs	Arcata	298	7	$949	347	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sierra Pacific Industries	Arcata	300	7	$1,000	469	400					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LP Carlotta	Carlotta			$1,000							N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aggregates (name of shipper?)	Carlotta			$500		0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eureka Fish	Eureka	278	7	$1,000	3	10					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Humboldt Bay Forest Products	Eureka	273	7	$300	9	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L-P Samoa (Lumber)	Eureka	300	7	$1,000	10	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
L-P Samoa (Pulp)	Eureka	300	7	$928	-	900					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Schmidbauer Lumber Corp.	Eureka	274	7	$1,000	229	400					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Del Rico (beer)	Eureka			$1,050		20					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Palco Lumber Mills	Scotia	244.6	7	$1,000	712	300					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Palco Gravel	?		?	$300	564	500					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Palco logs				$250		700					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aggregates	Island Mountail	128	6	$500		0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eel River Saw Mills	Fortuna	266.1	7	$1,000	180	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blue Lake Forest Products	Arcata	300.8	7	$1,000	251	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Humboldt Waste Management	Eureka	275	7	$700		0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Port Related			?	$1,000	-	0					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Denotes demand only under "high"scenario						8401			768	768	1536.4		512	512	512	1920.5		512	512	512	2880.75
											75%					80%					90%
Passenger Forecast Information						**Number of Passengers**															
All Excursion routes are between S. Fork and Samoa						5,760					-		1,536	1,536	1,536	4,608		1,920	1,920	1,920	5,760

Market Inputs Low (cont.)

Shipper Information, Rates and Forecasts	Operating Scenario II																						
	Northend (S Fork to Willits) Ramp-up rate				40%	50%	75%	75%	100%														
					75% of total	100% of total	Market Inc.:	0.00%					Market Inc.:	0.00%					Market Inc.:	0.00%			
Shipper	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2006	2007	2008	2009	2010	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	19	19	19	19	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Dairyman's Milling Co	5	5	5	5	18	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
House of Daniels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Adobe Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dairyman's Co-op Feed & Supply	28	28	28	28	113	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Hunt & Behrens	56	56	56	56	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Willow Brook Feeds	47	47	47	47	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Bar Ale Feeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J H Pomeroy Co.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cal Shake & Shingle	2	2	2	2	9	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
West Sonoma Disposal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mead Clark Lumber	131	131	131	131	525	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Paterson Tractor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia Pacific (Windsor)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	45	45	45	45	180	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240	240
Standard Structures	103	103	103	103	413	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550
Windsor Mill	3	3	3	3	11	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Vinwood Mgt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GB Mobile	3	3	3	3	11	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Capital Lumber	9	9	9	9	38	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Nu-Forest Lumber	9	9	9	9	38	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
RJW Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piedmont Lumber	103	103	103	103	413	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550
All-Coast Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Skip Gibbs Rail Bridge	12	12	12	12	48	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
L-P Treating	47	47	47	47	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Alex Thomas (pears)	6	6	6	6	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Agwood Lumber	41	41	41	41	162	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216
California Shake & Shingle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Ukiah Mill	47	47	47	47	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Georgia Pacific (Tanks)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parnum Paving	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cargill (salt)	5	5	5	5	19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Cal Coast Lumber Treaters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Masonite Corp	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clark Miller Distributing	N/A	N/A	3	3	12	15	23	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
G-P Fort Bragg (CWR)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mendocino Forest Products	N/A	N/A	15	15	60	75	113	113	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
101 Redwood	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Windsor Mill	N/A	N/A	3	3	12	15	23	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
G&S Milling	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Harwood Products	N/A	N/A	2	2	10	12	18	18	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Arcata/Simpson Redwood	N/A	N/A	10	10	40	50	75	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Britt Lumber	N/A	N/A	4	4	14	18	27	27	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
L-P Flake Board	N/A	N/A	96	96	384	480	720	720	960	960	960	960	960	960	960	960	960	960	960	960	960	960	960
L-P Logs	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sierra Pacific Industries	N/A	N/A	40	40	160	200	300	300	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
LP Carlotta	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aggregates (name of shipper?)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eureka Fish	N/A	N/A	1	1	4	5	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Humboldt Bay Forest Products	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Samoa (Lumber)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Samoa (Pulp)	N/A	N/A	90	90	360	450	675	675	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
Schmidbauer Lumber Corp.	N/A	N/A	40	40	160	200	300	300	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Del Rico (beer)	N/A	N/A	2	2	8	10	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Palco Lumber Mills	N/A	N/A	30	30	120	150	225	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Palco Gravel	N/A	N/A	50	50	200	250	375	375	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Palco logs	N/A	N/A	70	70	280	350	525	525	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Aggregates	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Denotes demand only under "high"scenario	720	720	853	853	4704.75	6121	7261	7261	8401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401	8,401
						100%	Market Inc.:	1%															
Passenger Forecast Information																							
All Excursion routes are between S. Fork and Samoa		7,440	7,440	7,440	22,320	22,543	25,200	25,452	25,707	27,018	27,288	27,561	27,836	28,115	28,396	28,680	28,967	29,256	29,549	29,844	30,143	30,444	30,749

Market Inputs Low (cont.)

Out Year Revenue Forecasts

Shipper Information, Rates and Forecasts	Operating Scenario I											Operating Scenario II				
	Inflation:	0.00%		Rate Increase:	3%	Inflation:	0.00%	Rate Increase:	3%			Inflation:	0.00%	Rate Increase:	3%	
Shipper	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		2013	2014	2015	2016	2017
Kelleher Lumber	$ 16,456	$ 20,570	$ 30,855	$ 31,734	$ 41,140	$ 42,312	$ 43,518	$ 44,759	$ 46,034	$ 47,346		$ 48,696	$ 50,083	$ 51,511	$ 52,979	$ 54,489
Dairyman's Milling Co	$ 3,949	$ 4,937	$ 7,405	$ 7,616	$ 9,874	$ 10,155	$ 10,444	$ 10,742	$ 11,048	$ 11,363		$ 11,687	$ 12,020	$ 12,363	$ 12,715	$ 13,077
House of Daniels	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Adobe Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Dairyman's Co-op Feed & Supply	$ 24,684	$ 30,855	$ 46,283	$ 47,602	$ 61,710	$ 63,469	$ 65,278	$ 67,138	$ 69,051	$ 71,019		$ 73,043	$ 75,125	$ 77,266	$ 79,468	$ 81,733
Hunt & Behrens	$ 49,368	$ 61,710	$ 92,565	$ 95,203	$ 123,420	$ 126,937	$ 130,555	$ 134,276	$ 138,103	$ 142,039		$ 146,087	$ 150,250	$ 154,533	$ 158,937	$ 163,466
Willow Brook Feeds	$ 41,140	$ 51,425	$ 77,138	$ 79,336	$ 102,850	$ 105,781	$ 108,796	$ 111,897	$ 115,086	$ 118,366		$ 121,739	$ 125,209	$ 128,777	$ 132,447	$ 136,222
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
J H Pomeroy Co.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Cal Shake & Shingle	$ 2,014	$ 2,518	$ 3,777	$ 3,884	$ 5,036	$ 5,179	$ 5,327	$ 5,478	$ 5,635	$ 5,795		$ 5,960	$ 6,130	$ 6,305	$ 6,485	$ 6,669
West Sonoma Disposal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Mead Clark Lumber	$ 115,192	$ 143,990	$ 215,985	$ 222,141	$ 287,980	$ 296,187	$ 304,629	$ 313,311	$ 322,240	$ 331,424		$ 340,869	$ 350,584	$ 360,576	$ 370,852	$ 381,422
Paterson Tractor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 46,900	$ 58,625	$ 87,937	$ 90,443	$ 117,249	$ 120,591	$ 124,027	$ 127,562	$ 131,198	$ 134,937		$ 138,783	$ 142,738	$ 146,806	$ 150,990	$ 155,293
Standard Structures	$ 107,478	$ 134,348	$ 201,522	$ 207,265	$ 268,696	$ 276,353	$ 284,230	$ 292,330	$ 300,661	$ 309,230		$ 318,043	$ 327,108	$ 336,430	$ 346,018	$ 355,880
Windsor Mill	$ 2,931	$ 3,664	$ 5,496	$ 5,653	$ 7,328	$ 7,537	$ 7,752	$ 7,973	$ 8,200	$ 8,434		$ 8,674	$ 8,921	$ 9,175	$ 9,437	$ 9,706
Vinwood Mgt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
GB Mobile	$ 2,931	$ 3,664	$ 5,496	$ 5,653	$ 7,328	$ 7,537	$ 7,752	$ 7,973	$ 8,200	$ 8,434		$ 8,674	$ 8,921	$ 9,175	$ 9,437	$ 9,706
Capital Lumber	$ 9,771	$ 12,213	$ 18,320	$ 18,842	$ 24,427	$ 25,123	$ 25,839	$ 26,575	$ 27,333	$ 28,112		$ 28,913	$ 29,737	$ 30,585	$ 31,456	$ 32,353
Nu-Forest Lumber	$ 9,771	$ 12,213	$ 18,320	$ 18,842	$ 24,427	$ 25,123	$ 25,839	$ 26,575	$ 27,333	$ 28,112		$ 28,913	$ 29,737	$ 30,585	$ 31,456	$ 32,353
RJW Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Piedmont Lumber	$ 119,923	$ 149,904	$ 224,856	$ 231,264	$ 299,808	$ 308,352	$ 317,140	$ 326,179	$ 335,475	$ 345,036		$ 354,869	$ 364,983	$ 375,385	$ 386,084	$ 397,087
All-Coast Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Skip Gibbs Rail Bridge	$ 12,454	$ 15,567	$ 23,351	$ 24,017	$ 31,135	$ 32,022	$ 32,935	$ 33,873	$ 34,839	$ 35,832		$ 36,853	$ 37,903	$ 38,983	$ 40,094	$ 41,237
L-P Treating	$ 54,202	$ 67,752	$ 101,629	$ 104,525	$ 135,505	$ 139,367	$ 143,339	$ 147,424	$ 151,625	$ 155,947		$ 160,391	$ 164,962	$ 169,664	$ 174,499	$ 179,472
Alex Thomas (pears)	$ 8,639	$ 10,799	$ 16,199	$ 16,661	$ 21,599	$ 22,214	$ 22,847	$ 23,498	$ 24,168	$ 24,857		$ 25,565	$ 26,294	$ 27,043	$ 27,814	$ 28,607
Agwood Lumber	$ 47,097	$ 58,871	$ 88,307	$ 90,824	$ 117,743	$ 121,098	$ 124,550	$ 128,099	$ 131,750	$ 135,505		$ 139,367	$ 143,339	$ 147,424	$ 151,626	$ 155,947
California Shake & Shingle	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
L-P Ukiah Mill	$ 54,511	$ 68,138	$ 102,207	$ 105,120	$ 136,276	$ 140,160	$ 144,155	$ 148,263	$ 152,489	$ 156,835		$ 161,304	$ 165,901	$ 170,630	$ 175,493	$ 180,494
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Parnum Paving	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Cargill (salt)	$ 5,451	$ 6,814	$ 10,221	$ 10,512	$ 13,628	$ 14,016	$ 14,415	$ 14,826	$ 15,249	$ 15,683		$ 16,130	$ 16,590	$ 17,063	$ 17,549	$ 18,049
Cal Coast Lumber Treaters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Masonite Corp	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	N/A	N/A	N/A	$ 7,899	$ 9,874	$ 14,810	$ 15,232	$ 19,747	$ 20,310	$ 20,889		$ 21,484	$ 22,096	$ 22,726	$ 23,374	$ 24,040
G-P Fort Bragg (CWR)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	N/A	N/A	N/A	$ 39,494	$ 49,368	$ 74,052	$ 76,162	$ 98,736	$ 101,550	$ 104,444		$ 107,421	$ 110,482	$ 113,631	$ 116,870	$ 120,200
101 Redwood	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Windsor Mill	N/A	N/A	N/A	$ 9,503	$ 11,879	$ 17,819	$ 18,327	$ 23,758	$ 24,435	$ 25,132		$ 25,848	$ 26,585	$ 27,342	$ 28,122	$ 28,923
G&S Milling	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Harwood Products	N/A	N/A	N/A	$ 7,603	$ 9,503	$ 14,255	$ 14,661	$ 19,007	$ 19,548	$ 20,105		$ 20,679	$ 21,268	$ 21,874	$ 22,497	$ 23,139
Arcata/Simpson Redwood	N/A	N/A	N/A	$ 41,140	$ 51,425	$ 77,138	$ 79,336	$ 102,850	$ 105,781	$ 108,796		$ 111,897	$ 115,086	$ 118,366	$ 121,739	$ 125,209
Britt Lumber	N/A	N/A	N/A	$ 14,810	$ 18,513	$ 27,770	$ 28,561	$ 37,026	$ 38,081	$ 39,167		$ 40,283	$ 41,431	$ 42,612	$ 43,826	$ 45,075
L-P Flake Board	N/A	N/A	N/A	$ 374,802	$ 468,502	$ 702,753	$ 722,782	$ 937,005	$ 963,709	$ 991,175		$ 1,019,423	$ 1,048,477	$ 1,078,359	$ 1,109,092	$ 1,140,701
L-P Logs	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Sierra Pacific Industries	N/A	N/A	N/A	$ 164,560	$ 205,700	$ 308,550	$ 317,344	$ 411,400	$ 423,125	$ 435,184		$ 447,587	$ 460,343	$ 473,463	$ 486,956	$ 500,835
LP Carlotta	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Eureka Fish	N/A	N/A	N/A	$ 4,114	$ 5,143	$ 7,714	$ 7,934	$ 10,285	$ 10,578	$ 10,880		$ 11,190	$ 11,509	$ 11,837	$ 12,174	$ 12,521
Humboldt Bay Forest Products	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
L-P Samoa (Lumber)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	N/A	N/A	N/A	$ 343,601	$ 429,502	$ 644,252	$ 662,614	$ 859,003	$ 883,485	$ 908,664		$ 934,561	$ 961,196	$ 988,590	$ 1,016,765	$ 1,045,743
Schmidbauer Lumber Corp.	N/A	N/A	N/A	$ 164,560	$ 205,700	$ 308,550	$ 317,344	$ 411,400	$ 423,125	$ 435,184		$ 447,587	$ 460,343	$ 473,463	$ 486,956	$ 500,835
Del Rico (beer)	N/A	N/A	N/A	$ 8,639	$ 10,799	$ 16,199	$ 16,661	$ 21,599	$ 22,214	$ 22,847		$ 23,498	$ 24,168	$ 24,857	$ 25,565	$ 26,294
Palco Lumber Mills	N/A	N/A	N/A	$ 123,420	$ 154,275	$ 231,413	$ 238,008	$ 308,550	$ 317,344	$ 326,388		$ 335,690	$ 345,257	$ 355,097	$ 365,217	$ 375,626
Palco Gravel	N/A	N/A	N/A	$ 61,710	$ 77,138	$ 115,706	$ 119,004	$ 154,275	$ 158,672	$ 163,194		$ 167,845	$ 172,629	$ 177,549	$ 182,609	$ 187,813
Palco logs	N/A	N/A	N/A	$ 71,995	$ 89,994	$ 134,991	$ 138,838	$ 179,988	$ 185,117	$ 190,393		$ 195,819	$ 201,400	$ 207,140	$ 213,043	$ 219,115
Aggregates	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A
Denotes demand only under "high"scenario	$ 734,862	$ 918,578	$ 1,377,867	$ 2,854,987	$ 3,634,470	$ 4,585,486	$ 4,716,172	$ 5,593,380	$ 5,752,792	$ 5,916,746		$ 6,085,373	$ 6,258,806	$ 6,437,182	$ 6,620,642	$ 6,809,330
	Inflation:		Rate Increase:	3%												
Passenger Forecast Information																
All Excursion routes are between S. Fork and Samoa	$ -	$ 58,291	$ 72,864	$ 282,348	$ 285,171	352,517	356,042	359,602	363,198	366,830		370,498	374,203	377,945	381,725	385,542

Market Inputs Low (cont.)

Shipper Information, Rates and Forecasts												
	Inflation:	0.00%	Rate Increase:	3%		Inflation:	0.00%	Rate Increase:	3%			
Shipper	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	$ 56,042	$ 57,639	$ 59,282	$ 60,971	$ 62,709	$ 64,496	$ 66,334	$ 68,225	$ 70,169	$ 72,169	$ 74,226
Dairyman's Milling Co	$ 13,450	$ 13,833	$ 14,228	$ 14,633	$ 15,050	$ 15,479	$ 15,920	$ 16,374	$ 16,841	$ 17,321	$ 17,814
House of Daniels	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Adobe Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Dairyman's Co-op Feed & Supply	$ 84,063	$ 86,458	$ 88,922	$ 91,457	$ 94,063	$ 96,744	$ 99,501	$ 102,337	$ 105,254	$ 108,253	$ 111,339
Hunt & Behrens	$ 168,125	$ 172,917	$ 177,845	$ 182,913	$ 188,127	$ 193,488	$ 199,003	$ 204,674	$ 210,507	$ 216,507	$ 222,677
Willow Brook Feeds	$ 140,104	$ 144,097	$ 148,204	$ 152,428	$ 156,772	$ 161,240	$ 165,835	$ 170,562	$ 175,423	$ 180,422	$ 185,564
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
J H Pomeroy Co.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cal Shake & Shingle	$ 6,860	$ 7,055	$ 7,256	$ 7,463	$ 7,676	$ 7,894	$ 8,119	$ 8,351	$ 8,589	$ 8,833	$ 9,085
West Sonoma Disposal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mead Clark Lumber	$ 392,292	$ 403,472	$ 414,971	$ 426,798	$ 438,962	$ 451,472	$ 464,339	$ 477,573	$ 491,184	$ 505,182	$ 519,580
Paterson Tractor	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 159,719	$ 164,271	$ 168,953	$ 173,768	$ 178,720	$ 183,814	$ 189,052	$ 194,440	$ 199,982	$ 205,681	$ 211,543
Standard Structures	$ 366,023	$ 376,454	$ 387,183	$ 398,218	$ 409,567	$ 421,240	$ 433,245	$ 445,593	$ 458,292	$ 471,353	$ 484,787
Windsor Mill	$ 9,982	$ 10,267	$ 10,560	$ 10,860	$ 11,170	$ 11,488	$ 11,816	$ 12,153	$ 12,499	$ 12,855	$ 13,221
Vinwood Mgt	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
GB Mobile	$ 9,982	$ 10,267	$ 10,560	$ 10,860	$ 11,170	$ 11,488	$ 11,816	$ 12,153	$ 12,499	$ 12,855	$ 13,221
Capital Lumber	$ 33,275	$ 34,223	$ 35,198	$ 36,202	$ 37,233	$ 38,295	$ 39,386	$ 40,508	$ 41,663	$ 42,850	$ 44,072
Nu-Forest Lumber	$ 33,275	$ 34,223	$ 35,198	$ 36,202	$ 37,233	$ 38,295	$ 39,386	$ 40,508	$ 41,663	$ 42,850	$ 44,072
RJW Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Piedmont Lumber	$ 408,404	$ 420,044	$ 432,015	$ 444,327	$ 456,991	$ 470,015	$ 483,410	$ 497,187	$ 511,357	$ 525,931	$ 540,920
All-Coast Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Skip Gibbs Rail Bridge	$ 42,412	$ 43,621	$ 44,864	$ 46,143	$ 47,458	$ 48,811	$ 50,202	$ 51,632	$ 53,104	$ 54,617	$ 56,174
L-P Treating	$ 184,587	$ 189,848	$ 195,259	$ 200,824	$ 206,547	$ 212,434	$ 218,488	$ 224,715	$ 231,119	$ 237,706	$ 244,481
Alex Thomas (pears)	$ 29,422	$ 30,260	$ 31,123	$ 32,010	$ 32,922	$ 33,860	$ 34,825	$ 35,818	$ 36,839	$ 37,889	$ 38,969
Agwood Lumber	$ 160,391	$ 164,963	$ 169,664	$ 174,499	$ 179,473	$ 184,588	$ 189,848	$ 195,259	$ 200,824	$ 206,547	$ 212,434
California Shake & Shingle	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Ukiah Mill	$ 185,638	$ 190,929	$ 196,370	$ 201,967	$ 207,723	$ 213,643	$ 219,732	$ 225,994	$ 232,435	$ 239,060	$ 245,873
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Parnum Paving	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cargill (salt)	$ 18,564	$ 19,093	$ 19,637	$ 20,197	$ 20,772	$ 21,364	$ 21,973	$ 22,599	$ 23,244	$ 23,906	$ 24,587
Cal Coast Lumber Treaters	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Masonite Corp	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	$ 24,725	$ 25,430	$ 26,155	$ 26,900	$ 27,667	$ 28,455	$ 29,266	$ 30,100	$ 30,958	$ 31,840	$ 32,748
G-P Fort Bragg (CWR)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	$ 123,626	$ 127,149	$ 130,773	$ 134,500	$ 138,333	$ 142,276	$ 146,331	$ 150,501	$ 154,790	$ 159,202	$ 163,739
101 Redwood	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Windsor Mill	$ 29,748	$ 30,595	$ 31,467	$ 32,364	$ 33,286	$ 34,235	$ 35,211	$ 36,214	$ 37,246	$ 38,308	$ 39,400
G&S Milling	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Harwood Products	$ 23,798	$ 24,476	$ 25,174	$ 25,891	$ 26,629	$ 27,388	$ 28,169	$ 28,971	$ 29,797	$ 30,646	$ 31,520
Arcata/Simpson Redwood	$ 128,777	$ 132,447	$ 136,222	$ 140,104	$ 144,097	$ 148,204	$ 152,428	$ 156,772	$ 161,240	$ 165,835	$ 170,562
Britt Lumber	$ 46,360	$ 47,681	$ 49,040	$ 50,438	$ 51,875	$ 53,353	$ 54,874	$ 56,438	$ 58,046	$ 59,701	$ 61,402
L-P Flake Board	$ 1,173,211	$ 1,206,647	$ 1,241,037	$ 1,276,406	$ 1,312,784	$ 1,350,198	$ 1,388,679	$ 1,428,256	$ 1,468,962	$ 1,510,827	$ 1,553,886
L-P Logs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$
Sierra Pacific Industries	$ 515,108	$ 529,789	$ 544,888	$ 560,417	$ 576,389	$ 592,816	$ 609,712	$ 627,088	$ 644,960	$ 663,342	$ 682,247
LP Carlotta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Eureka Fish	$ 12,878	$ 13,245	$ 13,622	$ 14,010	$ 14,410	$ 14,820	$ 15,243	$ 15,677	$ 16,124	$ 16,584	$ 17,056
Humboldt Bay Forest Products	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Samoa (Lumber)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	$ 1,075,546	$ 1,106,199	$ 1,137,726	$ 1,170,151	$ 1,203,501	$ 1,237,800	$ 1,273,078	$ 1,309,360	$ 1,346,677	$ 1,385,058	$ 1,424,532
Schmidbauer Lumber Corp.	$ 515,108	$ 529,789	$ 544,888	$ 560,417	$ 576,389	$ 592,816	$ 609,712	$ 627,088	$ 644,960	$ 663,342	$ 682,247
Del Rico (beer)	$ 27,043	$ 27,814	$ 28,607	$ 29,422	$ 30,260	$ 31,123	$ 32,010	$ 32,922	$ 33,860	$ 34,825	$ 35,818
Palco Lumber Mills	$ 386,331	$ 397,342	$ 408,666	$ 420,313	$ 432,292	$ 444,612	$ 457,284	$ 470,316	$ 483,720	$ 497,506	$ 511,685
Palco Gravel	$ 193,166	$ 198,671	$ 204,333	$ 210,156	$ 216,146	$ 222,306	$ 228,642	$ 235,158	$ 241,860	$ 248,753	$ 255,843
Palco logs	$ 225,360	$ 231,783	$ 238,389	$ 245,183	$ 252,170	$ 259,357	$ 266,749	$ 274,351	$ 282,170	$ 290,212	$ 298,483
Aggregates	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Denotes demand only under "high"scenario	$ 7,003,396	$ 7,202,993	$ 7,408,279	$ 7,619,414	$ 7,836,568	$ 8,059,910	$ 8,289,617	$ 8,525,871	$ 8,768,859	$ 9,018,771	$ 9,275,806
Passenger Forecast Information											
All Excursion routes are between S. Fork and Samoa	389,398	393,292	397,224	401,197	405,209	409,261	413,353	417,487	421,662	425,878	430,137

Market Inputs Medium

Out Year Car Load Forecasts Operating Scenario I

Shipper Information, Rates and Forecasts						**Medium Forecast**	**Operating Scenario I**													
						Yearly Total					40% of total				50% of total					75% of total
Shipper	**Location**	**Milepost**	**Zone**	**Rate per car**	**1996/97Actual**	**Number of Cars**	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2003	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2004	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2005
Kelleher Lumber	Blackpoint			$400		120			24	24	48	15	15	15	15	60	23	23	23	23	90
Dairyman's Milling Co	Novato	28.2	1	$400	16	42			8	8	17	5	5	5	5	21	8	8	8	8	32
House of Daniels	Novato	22.7	1	$405	29	15			3	3	6	2	2	2	2	7	3	3	3	3	11
Adobe Lumber	Petaluma	41.8	1	$384	15	8			2	2	3	1	1	1	1	4	1	1	1	1	6
Dairyman's Co-op Feed & Supply	Petaluma	39	1	$400	185	200			40	40	80	25	25	25	25	100	38	38	38	38	150
Hunt & Behrens	Petaluma	39	1	$400	148	350			70	70	140	44	44	44	44	175	66	66	66	66	263
Willow Brook Feeds	Petaluma	42.2	1	$400	10	300			60	60	120	38	38	38	38	150	56	56	56	56	225
Bar Ale Feeds	Petaluma	42	1	$324	76	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	Petaluma	42	1	$384	23	12			2	2	5	1	1	1	1	6	2	2	2	2	9
J H Pomeroy Co.	Petaluma	42	1	$405	23	12			2	2	5	1	1	1	1	6	2	2	2	2	9
Cal Shake & Shingle	Roanoke Park			$408		24			5	5	10	3	3	3	3	12	5	5	5	5	18
West Sonoma Disposal				$400		-			-	-	-	-	-	-	-	-	-	-	-	-	-
Mead Clark Lumber	Santa Rosa	60	2	$400	273	800			160	160	320	100	100	100	100	400	150	150	150	150	600
Paterson Tractor	Santa Rosa	61	2	$412	4	2			0	0	1	0	0	0	0	1	0	0	0	0	2
Georgia Pacific (Windsor)	Windsor	51	2	$451	477	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	Windsor	52	2	$475	75	300			60	60	120	38	38	38	38	150	56	56	56	56	225
Standard Structures	Windsor	53	2	$475	238	700			140	140	280	88	88	88	88	350	131	131	131	131	525
Windsor Mill	Windsor	54	2	$475	3	20			4	4	8	3	3	3	3	10	4	4	4	4	15
Vinwood Mgt	Geyserville	59	3	$483	3	2			0	0	1	0	0	0	0	1	0	0	0	0	1
GB Mobile	Healdsburg			$475		22			4	4	9	3	3	3	3	11	4	4	4	4	17
Capital Lumber	Healdsburg	57	3	$475	38	75			15	15	30	9	9	9	9	38	14	14	14	14	56
Nu-Forest Lumber	Healdsburg	57.5	3	$475	26	70			14	14	28	9	9	9	9	35	13	13	13	13	53
RJW Lumber	Healdsburg	58	3	$475	1	1			0	0	0	0	0	0	0	0	0	0	0	0	0
Piedmont Lumber	Calpella	111	4	$530	84	650			130	130	260	81	81	81	81	325	122	122	122	122	488
All-Coast Lumber	Cloverdale	74.2	4	$530	17	9			2	2	3	1	1	1	1	4	2	2	2	2	6
Skip Gibbs Rail Bridge	Redwood Valley	111.1	4	$473	46	75			15	15	30	9	9	9	9	37	14	14	14	14	56
L-P Treating	Ukiah	103	4	$527	280	375			75	75	150	47	47	47	47	188	70	70	70	70	281
Alex Thomas (pears)	Ukiah			$700		50			10	10	20	6	6	6	6	25	9	9	9	9	38
Agwood Lumber	Ukiah	103.1	4	$530	28	300			60	60	120	38	38	38	38	150	56	56	56	56	225
California Shake & Shingle	Ukiah	104	4	$530	5	3			1	1	1	0	0	0	0	1	0	0	0	0	2
L-P Ukiah Mill	Ukiah	105	4	$530	92	375			75	75	150	47	47	47	47	188	70	70	70	70	281
Georgia Pacific (Tanks)	Ukiah	106	4	$530	119	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	Ukiah	107	4	$530	46	23			5	5	9	3	3	3	3	12	4	4	4	4	17
Parnum Paving	Ukiah	108	4	$496	270	135			27	27	54	17	17	17	17	68	25	25	25	25	101
Cargill (salt)				$530		35			7	7	14	4	4	4	4	18	7	7	7	7	26
Cal Coast Lumber Treaters	Ukiah	109	4	$530	16	18			4	4	7	2	2	2	2	9	3	3	3	3	14
Masonite Corp	Ukiak	110	4	$530	49	-					N/A					N/A					N/A
Clark Miller Distributing	Ukiah			$640		54					N/A					N/A					N/A
G-P Fort Bragg (CWR)	Fort Bragg	128.5	5	$640	7	-					N/A					N/A					N/A
Mendocino Forest Products	Fort Bragg	128.5	5	$640		200					N/A					N/A					N/A
101 Redwood	Willits	130	5	$640	20	10					N/A					N/A					N/A
Windsor Mill	Willits			$770		50					N/A					N/A					N/A
G&S Milling	Willits	129	5	$735	43	22					N/A					N/A					N/A
Harwood Products	Branscomb	155	6	$770		30					N/A					N/A					N/A
Arcata/Simpson Redwood	Arcata	292	7	$1,000	358	175					N/A					N/A					N/A
Britt Lumber	Arcata	295	7	$1,000	59	108					N/A					N/A					N/A
L-P Flake Board	Arcata	298	7	$949	639	1,080					N/A					N/A					N/A
L-P Logs	Arcata	298	7	$949	347	174					N/A					N/A					N/A
Sierra Pacific Industries	Arcata	300	7	$1,000	469	500					N/A					N/A					N/A
LP Carlotta	Carlotta			$1,000							N/A					N/A					N/A
Aggregates (name of shipper?)	Carlotta			$500		-					N/A					N/A					N/A
Eureka Fish	Eureka	278	7	$1,000	3	14					N/A					N/A					N/A
Humboldt Bay Forest Products	Eureka	273	7	$300	9	600					N/A					N/A					N/A
L-P Samoa (Lumber)	Eureka	300	7	$1,000	10	-					N/A					N/A					N/A
L-P Samoa (Pulp)	Eureka	300	7	$928	-	1,380					N/A					N/A					N/A
Schmidbauer Lumber Corp.	Eureka	274	7	$1,000	229	500					N/A					N/A					N/A
Del Rico (beer)	Eureka			$1,050		33					N/A					N/A					N/A
Palco Lumber Mills	Scotia	244.6	7	$1,000	712	325					N/A					N/A					N/A
Palco Gravel	?		?	$300	564	890					N/A					N/A					N/A
Palco logs				$250		1,000					N/A					N/A					N/A
Aggregates	Island Mountail	128	6	$500		128					N/A					N/A					N/A
Eel River Saw Mills	Fortuna	266.1	7	$1,000	180	-					N/A					N/A					N/A
Blue Lake Forest Products	Arcata	300.8	7	$1,000	251	-					N/A					N/A					N/A
Humboldt Waste Management	Eureka	275	7	$700		-					N/A					N/A					N/A
Port Related			?	$1,000	-	-					N/A					N/A					N/A
Denotes demand only under "high"scenario						12,391			1,024	1,024	2,047		682	682	682	2,559		682	682	682	3,839
Passenger Forecast Information						**Number of Passengers**					75%					80%					90%
All Excursion routes are between S. Fork and Samoa						12,480					-		3,328	3,328	3,328	9,984		4,160	4,160	4,160	12,480

Market Inputs Medium (cont.)

Shipper Information, Rates and Forecasts	Operating Scenario II																						
	Northend (S Fork to Willits) Ramp-up rate				40%	50%	75%	75%	100%														
					75% of total	100% of total	Market Inc.:	0.00%					Market Inc.:	0.00%				Market Inc.:	0.00%				
Shipper	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2006	2007	2008	2009	2010	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	23	23	23	23	90	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Dairyman's Milling Co	8	8	8	8	32	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
House of Daniels	3	3	3	3	11	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Adobe Lumber	1	1	1	1	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Dairyman's Co-op Feed & Supply	38	38	38	38	150	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Hunt & Behrens	66	66	66	66	263	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Willow Brook Feeds	56	56	56	56	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Bar Ale Feeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	2	2	2	2	9	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
J H Pomeroy Co.	2	2	2	2	9	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Cal Shake & Shingle	5	5	5	5	18	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
West Sonoma Disposal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mead Clark Lumber	150	150	150	150	600	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800	800
Paterson Tractor	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Georgia Pacific (Windsor)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	56	56	56	56	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Standard Structures	131	131	131	131	525	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700	700
Windsor Mill	4	4	4	4	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Vinwood Mgt	0	0	0	0	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
GB Mobile	4	4	4	4	17	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Capital Lumber	14	14	14	14	56	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Nu-Forest Lumber	13	13	13	13	53	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
RJW Lumber	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Piedmont Lumber	122	122	122	122	488	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650
All-Coast Lumber	2	2	2	2	6	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Skip Gibbs Rail Bridge	14	14	14	14	56	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
L-P Treating	70	70	70	70	281	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375
Alex Thomas (pears)	9	9	9	9	38	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Agwood Lumber	56	56	56	56	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
California Shake & Shingle	0	0	0	0	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
L-P Ukiah Mill	70	70	70	70	281	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375	375
Georgia Pacific (Tanks)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	4	4	4	4	17	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Parnum Paving	25	25	25	25	101	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
Cargill (salt)	7	7	7	7	26	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Cal Coast Lumber Treaters	3	3	3	3	14	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Masonite Corp	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clark Miller Distributing	N/A	N/A	5	5	22	27	41	41	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
G-P Fort Bragg (CWR)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mendocino Forest Products	N/A	N/A	20	20	80	100	150	150	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
101 Redwood	N/A	N/A	1	1	4	5	8	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Windsor Mill	N/A	N/A	5	5	20	25	38	38	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
G&S Milling	N/A	N/A	2	2	9	11	16	16	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Harwood Products	N/A	N/A	3	3	12	15	23	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Arcata/Simpson Redwood	N/A	N/A	18	18	70	88	131	131	175	175	175	175	175	175	175	175	175	175	175	175	175	175	175
Britt Lumber	N/A	N/A	11	11	43	54	81	81	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
L-P Flake Board	N/A	N/A	108	108	432	540	810	810	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080
L-P Logs	N/A	N/A	17	17	69	87	130	130	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174
Sierra Pacific Industries	N/A	N/A	50	50	200	250	375	375	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
LP Carlotta	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aggregates (name of shipper?)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eureka Fish	N/A	N/A	1	1	6	7	11	11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Humboldt Bay Forest Products	N/A	N/A	60	60	240	300	450	450	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
L-P Samoa (Lumber)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Samoa (Pulp)	N/A	N/A	138	138	552	690	1,035	1,035	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380	1,380
Schmidbauer Lumber Corp.	N/A	N/A	50	50	200	250	375	375	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Del Rico (beer)	N/A	N/A	3	3	13	17	25	25	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Palco Lumber Mills	N/A	N/A	33	33	130	163	244	244	325	325	325	325	325	325	325	325	325	325	325	325	325	325	325
Palco Gravel	N/A	N/A	89	89	356	445	668	668	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890
Palco logs	N/A	N/A	100	100	400	500	750	750	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Aggregates	N/A	N/A	13	13	51	64	96	96	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Denotes demand only under "high"scenario	960	960	1,687	1,687	6,748	8,755	10,573	10,573	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391	12,391
Passenger Forecast Information						100%	Market Inc.:	1%															
All Excursion routes are between S. Fork and Samoa		16,120	16,120	16,120	48,360	48,844	54,600	55,146	55,697	58,539	59,124	59,715	60,312	60,915	61,525	62,140	62,761	63,389	64,023	64,663	65,310	65,963	66,622

Market Inputs Medium (cont.)

Out Year Revenue Forecasts

Shipper Information, Rates and Forecasts	Operating Scenario I												Operating Scenario II									
	Inflation:	0.00%		Rate Increase:	3%		Inflation:	0.00%		Rate Increase:	3%		Inflation:	0.00%		Rate Increase:	3%			Inflation:	0.00%	
Shipper	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019					
Kelleher Lumber	$ 19,747	$ 24,684	$ 37,026	$ 38,081	$ 49,368	$ 50,775	$ 52,222	$ 53,710	$ 55,241	$ 56,816	$ 58,435	$ 60,100	$ 61,813	$ 63,575	$ 65,387	$ 67,250	$ 69,167					
Dairyman's Milling Co	$ 6,912	$ 8,639	$ 12,959	$ 13,328	$ 17,279	$ 17,771	$ 18,278	$ 18,799	$ 19,334	$ 19,885	$ 20,452	$ 21,035	$ 21,635	$ 22,251	$ 22,885	$ 23,538	$ 24,208					
House of Daniels	$ 2,416	$ 3,020	$ 4,530	$ 4,659	$ 6,040	$ 6,212	$ 6,389	$ 6,571	$ 6,758	$ 6,951	$ 7,149	$ 7,353	$ 7,562	$ 7,778	$ 8,000	$ 8,228	$ 8,462					
Adobe Lumber	$ 1,185	$ 1,481	$ 2,222	$ 2,285	$ 2,962	$ 3,046	$ 3,133	$ 3,223	$ 3,314	$ 3,409	$ 3,506	$ 3,606	$ 3,709	$ 3,814	$ 3,923	$ 4,035	$ 4,150					
Dairyman's Co-op Feed & Supply	$ 32,912	$ 41,140	$ 61,710	$ 63,469	$ 82,280	$ 84,625	$ 87,037	$ 89,517	$ 92,069	$ 94,693	$ 97,391	$ 100,167	$ 103,022	$ 105,958	$ 108,978	$ 112,083	$ 115,278					
Hunt & Behrens	$ 57,596	$ 71,995	$ 107,993	$ 111,070	$ 143,990	$ 148,094	$ 152,314	$ 156,655	$ 161,120	$ 165,712	$ 170,435	$ 175,292	$ 180,288	$ 185,426	$ 190,711	$ 196,146	$ 201,736					
Willow Brook Feeds	$ 49,368	$ 61,710	$ 92,565	$ 95,203	$ 123,420	$ 126,937	$ 130,555	$ 134,276	$ 138,103	$ 142,039	$ 146,087	$ 150,250	$ 154,533	$ 158,937	$ 163,466	$ 168,125	$ 172,917					
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Compass Lumber	$ 1,817	$ 2,271	$ 3,406	$ 3,503	$ 4,542	$ 4,671	$ 4,804	$ 4,941	$ 5,082	$ 5,227	$ 5,376	$ 5,529	$ 5,687	$ 5,849	$ 6,016	$ 6,187	$ 6,363					
J H Pomeroy Co.	$ 1,916	$ 2,395	$ 3,593	$ 3,695	$ 4,790	$ 4,927	$ 5,067	$ 5,212	$ 5,360	$ 5,513	$ 5,670	$ 5,832	$ 5,998	$ 6,169	$ 6,345	$ 6,525	$ 6,711					
Cal Shake & Shingle	$ 4,028	$ 5,036	$ 7,553	$ 7,769	$ 10,071	$ 10,358	$ 10,653	$ 10,957	$ 11,269	$ 11,590	$ 11,921	$ 12,260	$ 12,610	$ 12,969	$ 13,339	$ 13,719	$ 14,110					
West Sonoma Disposal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Mead Clark Lumber	$ 131,648	$ 164,560	$ 246,840	$ 253,875	$ 329,120	$ 338,500	$ 348,147	$ 358,069	$ 368,274	$ 378,770	$ 389,565	$ 400,668	$ 412,087	$ 423,831	$ 435,910	$ 448,334	$ 461,111					
Paterson Tractor	$ 339	$ 424	$ 636	$ 654	$ 847	$ 872	$ 896	$ 922	$ 948	$ 975	$ 1,003	$ 1,032	$ 1,061	$ 1,091	$ 1,122	$ 1,154	$ 1,187					
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Diablo Timber	$ 58,625	$ 73,281	$ 109,921	$ 113,054	$ 146,561	$ 150,738	$ 155,034	$ 159,453	$ 163,997	$ 168,671	$ 173,478	$ 178,422	$ 183,507	$ 188,737	$ 194,116	$ 199,649	$ 205,339					
Standard Structures	$ 136,791	$ 170,988	$ 256,482	$ 263,792	$ 341,976	$ 351,723	$ 361,747	$ 372,056	$ 382,660	$ 393,566	$ 404,782	$ 416,319	$ 428,184	$ 440,387	$ 452,938	$ 465,847	$ 479,124					
Windsor Mill	$ 3,908	$ 4,885	$ 7,328	$ 7,537	$ 9,771	$ 10,049	$ 10,336	$ 10,630	$ 10,933	$ 11,245	$ 11,565	$ 11,895	$ 12,234	$ 12,582	$ 12,941	$ 13,310	$ 13,689					
Vinwood Mgt	$ 298	$ 373	$ 559	$ 575	$ 745	$ 766	$ 788	$ 811	$ 834	$ 858	$ 882	$ 907	$ 933	$ 960	$ 987	$ 1,015	$ 1,044					
GB Mobile	$ 4,299	$ 5,374	$ 8,061	$ 8,291	$ 10,748	$ 11,054	$ 11,369	$ 11,693	$ 12,026	$ 12,369	$ 12,722	$ 13,084	$ 13,457	$ 13,841	$ 14,235	$ 14,641	$ 15,058					
Capital Lumber	$ 14,656	$ 18,320	$ 27,480	$ 28,263	$ 36,640	$ 37,685	$ 38,759	$ 39,863	$ 40,999	$ 42,168	$ 43,370	$ 44,606	$ 45,877	$ 47,184	$ 48,529	$ 49,912	$ 51,335					
Nu-Forest Lumber	$ 13,679	$ 17,099	$ 25,648	$ 26,379	$ 34,198	$ 35,172	$ 36,175	$ 37,206	$ 38,266	$ 39,357	$ 40,478	$ 41,632	$ 42,818	$ 44,039	$ 45,294	$ 46,585	$ 47,912					
RJW Lumber	$ 98	$ 122	$ 183	$ 188	$ 244	$ 251	$ 258	$ 266	$ 273	$ 281	$ 289	$ 297	$ 306	$ 315	$ 324	$ 333	$ 342					
Piedmont Lumber	$ 141,727	$ 177,159	$ 265,739	$ 273,312	$ 354,318	$ 364,416	$ 374,802	$ 385,484	$ 396,470	$ 407,770	$ 419,391	$ 431,344	$ 443,637	$ 456,281	$ 469,285	$ 482,659	$ 496,415					
All-Coast Lumber	$ 1,853	$ 2,317	$ 3,475	$ 3,574	$ 4,633	$ 4,765	$ 4,901	$ 5,041	$ 5,185	$ 5,332	$ 5,484	$ 5,641	$ 5,801	$ 5,967	$ 6,137	$ 6,312	$ 6,492					
Skip Gibbs Rail Bridge	$ 14,497	$ 18,121	$ 27,182	$ 27,957	$ 36,243	$ 37,276	$ 38,338	$ 39,431	$ 40,554	$ 41,710	$ 42,899	$ 44,122	$ 45,379	$ 46,672	$ 48,003	$ 49,371	$ 50,778					
L-P Treating	$ 81,303	$ 101,629	$ 152,443	$ 156,788	$ 203,257	$ 209,050	$ 215,008	$ 221,136	$ 227,438	$ 233,920	$ 240,587	$ 247,444	$ 254,496	$ 261,749	$ 269,209	$ 276,881	$ 284,772					
Alex Thomas (pears)	$ 14,399	$ 17,999	$ 26,998	$ 27,768	$ 35,998	$ 37,023	$ 38,079	$ 39,164	$ 40,280	$ 41,428	$ 42,609	$ 43,823	$ 45,072	$ 46,357	$ 47,678	$ 49,037	$ 50,434					
Agwood Lumber	$ 65,413	$ 81,766	$ 122,649	$ 126,144	$ 163,532	$ 168,192	$ 172,986	$ 177,916	$ 182,986	$ 188,201	$ 193,565	$ 199,082	$ 204,756	$ 210,591	$ 216,593	$ 222,766	$ 229,115					
California Shake & Shingle	$ 545	$ 681	$ 1,022	$ 1,051	$ 1,363	$ 1,402	$ 1,442	$ 1,483	$ 1,525	$ 1,568	$ 1,613	$ 1,659	$ 1,706	$ 1,755	$ 1,805	$ 1,856	$ 1,909					
L-P Ukiah Mill	$ 81,766	$ 102,207	$ 153,311	$ 157,680	$ 204,414	$ 210,240	$ 216,232	$ 222,395	$ 228,733	$ 235,252	$ 241,956	$ 248,852	$ 255,945	$ 263,239	$ 270,741	$ 278,457	$ 286,393					
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Ward-Way Lumber	$ 5,015	$ 6,269	$ 9,403	$ 9,671	$ 12,537	$ 12,895	$ 13,262	$ 13,640	$ 14,029	$ 14,429	$ 14,840	$ 15,263	$ 15,698	$ 16,145	$ 16,605	$ 17,079	$ 17,565					
Parnum Paving	$ 27,547	$ 34,434	$ 51,651	$ 53,123	$ 68,868	$ 70,831	$ 72,850	$ 74,926	$ 77,061	$ 79,258	$ 81,516	$ 83,840	$ 86,229	$ 88,687	$ 91,214	$ 93,814	$ 96,488					
Cargill (salt)	$ 7,631	$ 9,539	$ 14,309	$ 14,717	$ 19,079	$ 19,622	$ 20,182	$ 20,757	$ 21,348	$ 21,957	$ 22,583	$ 23,226	$ 23,888	$ 24,569	$ 25,269	$ 25,989	$ 26,730					
Cal Coast Lumber Treaters	$ 3,925	$ 4,906	$ 7,359	$ 7,569	$ 9,812	$ 10,092	$ 10,379	$ 10,675	$ 10,979	$ 11,292	$ 11,614	$ 11,945	$ 12,285	$ 12,635	$ 12,996	$ 13,366	$ 13,747					
Masonite Corp	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Clark Miller Distributing	N/A	N/A	N/A	$ 14,218	$ 17,772	$ 26,659	$ 27,418	$ 35,545	$ 36,558	$ 37,600	$ 38,671	$ 39,774	$ 40,907	$ 42,073	$ 43,272	$ 44,505	$ 45,774					
G-P Fort Bragg (CWR)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Mendocino Forest Products	N/A	N/A	N/A	$ 52,659	$ 65,824	$ 98,736	$ 101,550	$ 131,648	$ 135,400	$ 139,259	$ 143,228	$ 147,310	$ 151,508	$ 155,826	$ 160,267	$ 164,835	$ 169,532					
101 Redwood	N/A	N/A	N/A	$ 2,633	$ 3,291	$ 4,937	$ 5,077	$ 6,582	$ 6,770	$ 6,963	$ 7,161	$ 7,365	$ 7,575	$ 7,791	$ 8,013	$ 8,242	$ 8,477					
Windsor Mill	N/A	N/A	N/A	$ 15,839	$ 19,799	$ 29,698	$ 30,544	$ 39,597	$ 40,726	$ 41,886	$ 43,080	$ 44,308	$ 45,571	$ 46,870	$ 48,205	$ 49,579	$ 50,992					
G&S Milling	N/A	N/A	N/A	$ 6,501	$ 8,126	$ 12,190	$ 12,537	$ 16,253	$ 16,716	$ 17,192	$ 17,682	$ 18,186	$ 18,705	$ 19,238	$ 19,786	$ 20,350	$ 20,930					
Harwood Products	N/A	N/A	N/A	$ 9,503	$ 11,879	$ 17,819	$ 18,327	$ 23,758	$ 24,435	$ 25,132	$ 25,848	$ 26,585	$ 27,342	$ 28,122	$ 28,923	$ 29,748	$ 30,595					
Arcata/Simpson Redwood	N/A	N/A	N/A	$ 71,995	$ 89,994	$ 134,991	$ 138,838	$ 179,988	$ 185,117	$ 190,393	$ 195,819	$ 201,400	$ 207,140	$ 213,043	$ 219,115	$ 225,360	$ 231,783					
Britt Lumber	N/A	N/A	N/A	$ 44,431	$ 55,539	$ 83,309	$ 85,683	$ 111,078	$ 114,244	$ 117,500	$ 120,848	$ 124,293	$ 127,835	$ 131,478	$ 135,225	$ 139,079	$ 143,043					
L-P Flake Board	N/A	N/A	N/A	$ 421,652	$ 527,065	$ 790,598	$ 813,130	$ 1,054,130	$ 1,084,173	$ 1,115,072	$ 1,146,851	$ 1,179,537	$ 1,213,153	$ 1,247,728	$ 1,283,289	$ 1,319,862	$ 1,357,478					
L-P Logs	N/A	N/A	N/A	$ 67,738	$ 84,672	$ 127,008	$ 130,628	$ 169,344	$ 174,170	$ 179,134	$ 184,240	$ 189,490	$ 194,891	$ 200,445	$ 206,158	$ 212,033	$ 218,076					
Sierra Pacific Industries	N/A	N/A	N/A	$ 205,700	$ 257,125	$ 385,688	$ 396,680	$ 514,250	$ 528,906	$ 543,980	$ 559,483	$ 575,429	$ 591,828	$ 608,695	$ 626,043	$ 643,886	$ 662,236					
LP Cariotta	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Aggregates (name of shipper?)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
Eureka Fish	N/A	N/A	N/A	$ 5,760	$ 7,200	$ 10,799	$ 11,107	$ 14,399	$ 14,809	$ 15,231	$ 15,666	$ 16,112	$ 16,571	$ 17,043	$ 17,529	$ 18,029	$ 18,543					
Humboldt Bay Forest Products	N/A	N/A	N/A	$ 74,052	$ 92,565	$ 138,848	$ 142,805	$ 185,130	$ 190,406	$ 195,833	$ 201,414	$ 207,154	$ 213,058	$ 219,130	$ 225,376	$ 231,799	$ 238,405					
L-P Samoa (Lumber)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
L-P Samoa (Pulp)	N/A	N/A	N/A	$ 526,855	$ 658,569	$ 987,854	$ 1,016,008	$ 1,317,138	$ 1,354,677	$ 1,393,285	$ 1,432,994	$ 1,473,834	$ 1,515,838	$ 1,559,040	$ 1,603,472	$ 1,649,171	$ 1,696,173					
Schmidbauer Lumber Corp.	N/A	N/A	N/A	$ 205,700	$ 257,125	$ 385,688	$ 396,680	$ 514,250	$ 528,906	$ 543,980	$ 559,483	$ 575,429	$ 591,828	$ 608,695	$ 626,043	$ 643,886	$ 662,236					
Del Rico (beer)	N/A	N/A	N/A	$ 14,255	$ 17,819	$ 26,728	$ 27,490	$ 35,638	$ 36,653	$ 37,698	$ 38,772	$ 39,877	$ 41,014	$ 42,183	$ 43,385	$ 44,621	$ 45,893					
Palco Lumber Mills	N/A	N/A	N/A	$ 133,705	$ 167,131	$ 250,697	$ 257,842	$ 334,263	$ 343,789	$ 353,587	$ 363,664	$ 374,029	$ 384,688	$ 395,652	$ 406,928	$ 418,526	$ 430,454					
Palco Gravel	N/A	N/A	N/A	$ 109,844	$ 137,305	$ 205,957	$ 211,827	$ 274,610	$ 282,436	$ 290,485	$ 298,764	$ 307,279	$ 316,036	$ 325,043	$ 334,307	$ 343,835	$ 353,634					
Palco logs	N/A	N/A	N/A	$ 102,850	$ 128,563	$ 192,844	$ 198,340	$ 257,125	$ 264,453	$ 271,990	$ 279,742	$ 287,714	$ 295,914	$ 304,348	$ 313,022	$ 321,943	$ 331,118					
Aggregates	N/A	N/A	N/A	$ 26,330	$ 32,912	$ 49,368	$ 50,775	$ 65,824	$ 67,700	$ 69,629	$ 71,614	$ 73,655	$ 75,754	$ 77,913	$ 80,134	$ 82,417	$ 84,766					
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Denotes demand only under "high"scenario	$ 987,859	$ 1,234,824	$ 1,852,235	$ 4,017,244	$ 5,109,922	$ 6,500,444	$ 6,685,707	$ 7,967,426	$ 8,194,498	$ 8,428,041	$ 8,668,240	$ 8,915,285	$ 9,169,371	$ 9,430,698	$ 9,699,473	$ 9,975,908	$ 10,260,221					
Passenger Forecast Information	Inflation:		Rate Increase:	3%																		
All Excursion routes are between S. Fork and Samoa	$ -	$ 126,298	$ 157,872	$ 611,754	$ 617,872	$ 745,563	$ 771,424	$ 779,138	$ 786,929	$ 794,799	$ 783,594	$ 810,774	$ 818,882	$ 827,071	$ 835,341	$ 843,695	$ 852,132					

Market Inputs Medium (cont.)

Shipper Information, Rates and Forecasts										
	Rate Increase:	3%		Inflation:	0.00%	Rate Increase:	3%			
Shipper	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Kelleher Lumber	$ 71,138	$ 73,165	$ 75,251	$ 77,395	$ 79,601	$ 81,870	$ 84,203	$ 86,603	$ 89,071	
Dairyman's Milling Co	$ 24,898	$ 25,608	$ 26,338	$ 27,088	$ 27,860	$ 28,654	$ 29,471	$ 30,311	$ 31,175	
House of Daniels	$ 8,703	$ 8,951	$ 9,206	$ 9,469	$ 9,739	$ 10,016	$ 10,302	$ 10,595	$ 10,897	
Adobe Lumber	$ 4,268	$ 4,390	$ 4,515	$ 4,644	$ 4,776	$ 4,912	$ 5,052	$ 5,196	$ 5,344	
Dairyman's Co-op Feed & Supply	$ 118,563	$ 121,942	$ 125,418	$ 128,992	$ 132,668	$ 136,449	$ 140,338	$ 144,338	$ 148,451	
Hunt & Behrens	$ 207,486	$ 213,399	$ 219,481	$ 225,736	$ 232,170	$ 238,786	$ 245,592	$ 252,591	$ 259,790	
Willow Brook Feeds	$ 177,845	$ 182,913	$ 188,127	$ 193,488	$ 199,003	$ 204,674	$ 210,507	$ 216,507	$ 222,677	
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Compass Lumber	$ 6,545	$ 6,731	$ 6,923	$ 7,120	$ 7,323	$ 7,532	$ 7,747	$ 7,967	$ 8,195	
J H Pomeroy Co.	$ 6,903	$ 7,099	$ 7,302	$ 7,510	$ 7,724	$ 7,944	$ 8,170	$ 8,403	$ 8,643	
Cal Shake & Shingle	$ 14,512	$ 14,926	$ 15,351	$ 15,789	$ 16,239	$ 16,701	$ 17,177	$ 17,667	$ 18,170	
West Sonoma Disposal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Mead Clark Lumber	$ 474,253	$ 487,769	$ 501,671	$ 515,968	$ 530,673	$ 545,798	$ 561,353	$ 577,351	$ 593,806	
Paterson Tractor	$ 1,221	$ 1,256	$ 1,292	$ 1,329	$ 1,366	$ 1,405	$ 1,445	$ 1,487	$ 1,529	
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Diablo Timber	$ 211,191	$ 217,210	$ 223,400	$ 229,767	$ 236,315	$ 243,050	$ 249,977	$ 257,102	$ 264,429	
Standard Structures	$ 492,779	$ 506,823	$ 521,267	$ 536,123	$ 551,403	$ 567,118	$ 583,281	$ 599,904	$ 617,001	
Windsor Mill	$ 14,079	$ 14,481	$ 14,893	$ 15,318	$ 15,754	$ 16,203	$ 16,665	$ 17,140	$ 17,629	
Vinwood Mgt	$ 1,074	$ 1,104	$ 1,136	$ 1,168	$ 1,201	$ 1,236	$ 1,271	$ 1,307	$ 1,344	
GB Mobile	$ 15,487	$ 15,929	$ 16,383	$ 16,850	$ 17,330	$ 17,824	$ 18,332	$ 18,854	$ 19,391	
Capital Lumber	$ 52,798	$ 54,302	$ 55,850	$ 57,442	$ 59,079	$ 60,763	$ 62,494	$ 64,275	$ 66,107	
Nu-Forest Lumber	$ 49,278	$ 50,682	$ 52,127	$ 53,612	$ 55,140	$ 56,712	$ 58,328	$ 59,990	$ 61,700	
RJW Lumber	$ 352	$ 362	$ 372	$ 383	$ 394	$ 405	$ 417	$ 429	$ 441	
Piedmont Lumber	$ 510,563	$ 525,114	$ 540,080	$ 555,472	$ 571,303	$ 587,585	$ 604,331	$ 621,555	$ 639,269	
All-Coast Lumber	$ 6,677	$ 6,867	$ 7,063	$ 7,264	$ 7,471	$ 7,684	$ 7,903	$ 8,128	$ 8,360	
Skip Gibbs Rail Bridge	$ 52,225	$ 53,713	$ 55,244	$ 56,819	$ 58,438	$ 60,103	$ 61,816	$ 63,578	$ 65,390	
L-P Treating	$ 292,888	$ 301,236	$ 309,821	$ 318,651	$ 327,732	$ 337,073	$ 346,679	$ 356,560	$ 366,722	
Alex Thomas (pears)	$ 51,871	$ 53,350	$ 54,870	$ 56,434	$ 58,042	$ 59,697	$ 61,398	$ 63,148	$ 64,948	
Agwood Lumber	$ 235,644	$ 242,360	$ 249,268	$ 256,372	$ 263,678	$ 271,193	$ 278,922	$ 286,871	$ 295,047	
California Shake & Shingle	$ 1,964	$ 2,020	$ 2,077	$ 2,136	$ 2,197	$ 2,260	$ 2,324	$ 2,391	$ 2,459	
L-P Ukiah Mill	$ 294,556	$ 302,950	$ 311,585	$ 320,465	$ 329,598	$ 338,991	$ 348,653	$ 358,589	$ 368,809	
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Ward-Way Lumber	$ 18,066	$ 18,581	$ 19,111	$ 19,655	$ 20,215	$ 20,791	$ 21,384	$ 21,993	$ 22,620	
Parnum Paving	$ 99,237	$ 102,066	$ 104,975	$ 107,966	$ 111,043	$ 114,208	$ 117,463	$ 120,811	$ 124,254	
Cargill (salt)	$ 27,492	$ 28,275	$ 29,081	$ 29,910	$ 30,762	$ 31,639	$ 32,541	$ 33,468	$ 34,422	
Cal Coast Lumber Treaters	$ 14,139	$ 14,542	$ 14,956	$ 15,382	$ 15,821	$ 16,272	$ 16,735	$ 17,212	$ 17,703	
Masonite Corp	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Clark Miller Distributing	$ 47,078	$ 48,420	$ 49,800	$ 51,219	$ 52,679	$ 54,180	$ 55,725	$ 57,313	$ 58,946	
G-P Fort Bragg (CWR)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Mendocino Forest Products	$ 174,364	$ 179,334	$ 184,445	$ 189,701	$ 195,108	$ 200,668	$ 206,387	$ 212,269	$ 218,319	
101 Redwood	$ 8,718	$ 8,967	$ 9,222	$ 9,485	$ 9,755	$ 10,033	$ 10,319	$ 10,613	$ 10,916	
Windsor Mill	$ 52,445	$ 53,940	$ 55,477	$ 57,059	$ 58,685	$ 60,357	$ 62,077	$ 63,847	$ 65,666	
G&S Milling	$ 21,526	$ 22,140	$ 22,771	$ 23,420	$ 24,087	$ 24,774	$ 25,480	$ 26,206	$ 26,953	
Harwood Products	$ 31,467	$ 32,364	$ 33,286	$ 34,235	$ 35,211	$ 36,214	$ 37,246	$ 38,308	$ 39,400	
Arcata/Simpson Redwood	$ 238,389	$ 245,183	$ 252,170	$ 259,357	$ 266,749	$ 274,351	$ 282,170	$ 290,212	$ 298,483	
Britt Lumber	$ 147,120	$ 151,313	$ 155,625	$ 160,060	$ 164,622	$ 169,314	$ 174,139	$ 179,102	$ 184,207	
L-P Flake Board	$ 1,396,167	$ 1,435,957	$ 1,476,882	$ 1,518,973	$ 1,562,264	$ 1,606,788	$ 1,652,582	$ 1,699,681	$ 1,748,121	
L-P Logs	$ 224,292	$ 230,684	$ 237,258	$ 244,020	$ 250,975	$ 258,128	$ 265,484	$ 273,051	$ 280,832	
Sierra Pacific Industries	$ 681,110	$ 700,522	$ 720,487	$ 741,020	$ 762,139	$ 783,860	$ 806,200	$ 829,177	$ 852,809	
LP Carlotta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Aggregates (name of shipper?)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Eureka Fish	$ 19,071	$ 19,615	$ 20,174	$ 20,749	$ 21,340	$ 21,948	$ 22,574	$ 23,217	$ 23,879	
Humboldt Bay Forest Products	$ 245,200	$ 252,188	$ 259,375	$ 266,767	$ 274,370	$ 282,190	$ 290,232	$ 298,504	$ 307,011	
L-P Samoa (Lumber)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
L-P Samoa (Pulp)	$ 1,744,513	$ 1,794,232	$ 1,845,368	$ 1,897,961	$ 1,952,053	$ 2,007,686	$ 2,064,905	$ 2,123,755	$ 2,184,282	
Schmidbauer Lumber Corp.	$ 681,110	$ 700,522	$ 720,487	$ 741,020	$ 762,139	$ 783,860	$ 806,200	$ 829,177	$ 852,809	
Del Rico (beer)	$ 47,201	$ 48,546	$ 49,930	$ 51,353	$ 52,816	$ 54,322	$ 55,870	$ 57,462	$ 59,100	
Palco Lumber Mills	$ 442,722	$ 455,339	$ 468,316	$ 481,663	$ 495,391	$ 509,509	$ 524,030	$ 538,965	$ 554,326	
Palco Gravel	$ 363,713	$ 374,079	$ 384,740	$ 395,705	$ 406,982	$ 418,581	$ 430,511	$ 442,781	$ 455,400	
Palco logs	$ 340,555	$ 350,261	$ 360,243	$ 370,510	$ 381,070	$ 391,930	$ 403,100	$ 414,589	$ 426,404	
Aggregates	$ 87,182	$ 89,667	$ 92,222	$ 94,851	$ 97,554	$ 100,334	$ 103,194	$ 106,135	$ 109,160	
Eel River Saw Mills	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Blue Lake Forest Products	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Humboldt Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Port Related	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Denotes demand only under "high"scenario	$ 10,552,637	$ 10,853,388	$ 11,162,709	$ 11,480,846	$ 11,808,050	$ 12,144,580	$ 12,490,700	$ 12,846,685	$ 13,212,816	
Passenger Forecast Information										
All Excursion routes are between S. Fork and Samoa	$ 860,653	$ 869,259	$ 877,952	$ 886,732	$ 895,599	$ 904,555	$ 913,600	$ 922,736	$ 931,964	

Market Inputs High

Out Year Car Load Forecasts Operating Scenario I

Shipper Information, Rates and Forecasts						**High Forecast**	Operating Scenario I													
						Yearly Total					40% of total				50% of total					75% of total
Shipper	**Location**	**Milepost**	**Zone**	**Rate per car**	**1996/97Actual**	**Number of Cars**	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2003	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2004	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2005
Kelleher Lumber	Blackpoint			$400		140			28	28	56	18	18	18	18	70	26	26	26	26	105
Dairyman's Milling Co	Novato	28.2	1	$400	16	60			12	12	24	8	8	8	8	30	11	11	11	11	45
House of Daniels	Novato	22.7	1	$405	29	29			6	6	12	4	4	4	4	15	5	5	5	5	22
Adobe Lumber	Petaluma	41.8	1	$384	15	15			3	3	6	2	2	2	2	8	3	3	3	3	11
Dairyman's Co-op Feed & Supply	Petaluma	39	1	$400	185	250			50	50	100	31	31	31	31	125	47	47	47	47	188
Hunt & Behrens	Petaluma	39	1	$400	148	400			80	80	160	50	50	50	50	200	75	75	75	75	300
Willow Brook Feeds	Petaluma	42.2	1	$400	10	350			70	70	140	44	44	44	44	175	66	66	66	66	263
Bar Ale Feeds	Petaluma	42	1	$324	76	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	Petaluma	42	1	$384	23	23			5	5	9	3	3	3	3	12	4	4	4	4	17
J H Pomeroy Co.	Petaluma	42	1	$405	23	23			5	5	9	3	3	3	3	12	4	4	4	4	17
Cal Shake & Shingle	Roanoke Park			$408		36			7	7	14	5	5	5	5	18	7	7	7	7	27
West Sonoma Disposal				$400		8			2	2	3	1	1	1	1	4	2	2	2	2	6
Mead Clark Lumber	Santa Rosa	60	2	$400	273	900			180	180	360	113	113	113	113	450	169	169	169	169	675
Paterson Tractor	Santa Rosa	61	2	$412	4	4			1	1	2	1	1	1	1	2	1	1	1	1	3
Georgia Pacific (Windsor)	Windsor	51	2	$451	477	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	Windsor	52	2	$475	75	360			72	72	144	45	45	45	45	180	68	68	68	68	270
Standard Structures	Windsor	53	2	$475	238	850			170	170	340	106	106	106	106	425	159	159	159	159	638
Windsor Mill	Windsor	54	2	$475	3	25			5	5	10	3	3	3	3	13	5	5	5	5	19
Vinwood Mgt	Geyserville	59	3	$483	3	3			1	1	1	0	0	0	0	2	1	1	1	1	2
GB Mobile	Healdsburg			$475		27			5	5	11	3	3	3	3	14	5	5	5	5	20
Capital Lumber	Healdsburg	57	3	$475	38	100			20	20	40	13	13	13	13	50	19	19	19	19	75
Nu-Forest Lumber	Healdsburg	57.5	3	$475	26	90			18	18	36	11	11	11	11	45	17	17	17	17	68
RJW Lumber	Healdsburg	58	3	$475	1	1			0	0	0	0	0	0	0	1	0	0	0	0	1
Piedmont Lumber	Calpella	111	4	$530	84	750			150	150	300	94	94	94	94	375	141	141	141	141	563
All-Coast Lumber	Cloverdale	74.2	4	$530	17	17			3	3	7	2	2	2	2	9	3	3	3	3	13
Skip Gibbs Rail Bridge	Redwood Valley	111.1	4	$473	46	85			17	17	34	11	11	11	11	43	16	16	16	16	64
L-P Treating	Ukiah	103	4	$527	280	500			100	100	200	63	63	63	63	250	94	94	94	94	375
Alex Thomas (pears)	Ukiah			$700		70			14	14	28	9	9	9	9	35	13	13	13	13	53
Agwood Lumber	Ukiah	103.1	4	$530	28	384			77	77	154	48	48	48	48	192	72	72	72	72	288
California Shake & Shingle	Ukiah	104	4	$530	5	5			1	1	2	1	1	1	1	3	1	1	1	1	4
L-P Ukiah Mill	Ukiah	105	4	$530	92	500			100	100	200	63	63	63	63	250	94	94	94	94	375
Georgia Pacific (Tanks)	Ukiah	106	4	$530	119	-			-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	Ukiah	107	4	$530	46	46			9	9	18	6	6	6	6	23	9	9	9	9	35
Parnum Paving	Ukiah	108	4	$496	270	270			54	54	108	34	34	34	34	135	51	51	51	51	203
Cargill (salt)				$530		45			9	9	18	6	6	6	6	23	8	8	8	8	34
Cal Coast Lumber Treaters	Ukiah	109	4	$530	16	30			6	6	12	4	4	4	4	15	6	6	6	6	23
Masonite Corp	Ukiak	110	4	$530	49	-					N/A										N/A
Clark Miller Distributing	Ukiah			$640		75					N/A										N/A
G-P Fort Bragg (CWR)	Fort Bragg	128.5	5	$640	7	-					N/A										N/A
Mendocino Forest Products	Fort Bragg	128.5	5	$640		250					N/A										N/A
101 Redwood	Willits	130	5	$640	20	20					N/A										N/A
Windsor Mill	Willits			$770		70					N/A										N/A
G&S Milling	Willits	129	5	$735	43	43					N/A										N/A
Harwood Products	Branscomb	155	6	$770		36					N/A										N/A
Arcata/Simpson Redwood	Arcata	292	7	$1,000	358	250					N/A										N/A
Britt Lumber	Arcata	295	7	$1,000	59	180					N/A										N/A
L-P Flake Board	Arcata	298	7	$949	639	1,200					N/A										N/A
L-P Logs	Arcata	298	7	$949	347	347					N/A										N/A
Sierra Pacific Industries	Arcata	300	7	$1,000	469	600					N/A										N/A
LP Carlotta	Carlotta			$1,000							N/A										N/A
Aggregates (name of shipper?)	Carlotta			$500		-					N/A										N/A
Eureka Fish	Eureka	278	7	$1,000	3	20					N/A										N/A
Humboldt Bay Forest Products	Eureka	273	7	$300	9	1,200					N/A										N/A
L-P Samoa (Lumber)	Eureka	300	7	$1,000	10	-					N/A										N/A
L-P Samoa (Pulp)	Eureka	300	7	$928	-	1,460					N/A										N/A
Schmidbauer Lumber Corp.	Eureka	274	7	$1,000	229	600					N/A										N/A
Del Rico (beer)	Eureka			$1,050		40					N/A										N/A
Palco Lumber Mills	Scotia	244.6	7	$1,000	712	350					N/A										N/A
Palco Gravel	?		?	$300	564	1,000					N/A										N/A
Palco logs				$250		1,300					N/A										N/A
Aggregates	Island Mountail	128	6	$500		6,000					N/A										N/A
Eel River Saw Mills	Fortuna	266.1	7	$1,000	180	180					N/A										N/A
Blue Lake Forest Products	Arcata	300.8	7	$1,000	251	251					N/A										N/A
Humboldt Waste Management	Eureka	275	7	$700							N/A										N/A
Port Related			?	$1,000	-	3,000					N/A										N/A
Denotes demand only under "high"scenario						24,868			1,279	1,279	2,558		853	853	853	3,198		853	853	853	4,797
Passenger Forecast Information						**Number of Passengers**					75%					80%					90%
All Excursion routes are between S. Fork and Samoa						19,299					-		5,146	5,146	5,146	15,439		6,433	6,433	6,433	19,299

Market Inputs High (cont.)

Shipper Information, Rates and Forecasts	Operating Scenario II																						
	Northend (S Fork to Willits) Ramp-up rate				40%	50%	75%	75%	100%														
					75% of total	100% of total	Market Inc.:	0.00%					Market Inc.:	0.00%					Market Inc.:	0.00%			
Shipper	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2006	2007	2008	2009	2010	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	26	26	26	26	105	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
Dairyman's Milling Co	11	11	11	11	45	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
House of Daniels	5	5	5	5	22	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Adobe Lumber	3	3	3	3	11	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Dairyman's Co-op Feed & Supply	47	47	47	47	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Hunt & Behrens	75	75	75	75	300	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Willow Brook Feeds	66	66	66	66	263	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Bar Ale Feeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	4	4	4	4	17	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
J H Pomeroy Co.	4	4	4	4	17	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Cal Shake & Shingle	7	7	7	7	27	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
West Sonoma Disposal	2	2	2	2	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Mead Clark Lumber	169	169	169	169	675	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
Paterson Tractor	1	1	1	1	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Georgia Pacific (Windsor)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	68	68	68	68	270	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
Standard Structures	159	159	159	159	638	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850
Windsor Mill	5	5	5	5	19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Vinwood Mgt	1	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
GB Mobile	5	5	5	5	20	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
Capital Lumber	19	19	19	19	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Nu-Forest Lumber	17	17	17	17	68	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
RJW Lumber	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Piedmont Lumber	141	141	141	141	563	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
All-Coast Lumber	3	3	3	3	13	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Skip Gibbs Rail Bridge	16	16	16	16	64	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
L-P Treating	94	94	94	94	375	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Alex Thomas (pears)	13	13	13	13	53	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Agwood Lumber	72	72	72	72	288	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384	384
California Shake & Shingle	1	1	1	1	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
L-P Ukiah Mill	94	94	94	94	375	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Georgia Pacific (Tanks)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	9	9	9	9	35	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
Parnum Paving	51	51	51	51	203	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
Cargill (salt)	8	8	8	8	34	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Cal Coast Lumber Treaters	6	6	6	6	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Masonite Corp	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clark Miller Distributing	N/A	N/A	4	4	15	38	56	56	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
G-P Fort Bragg (CWR)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mendocino Forest Products	N/A	N/A	13	13	50	125	188	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
101 Redwood	N/A	N/A	1	1	4	10	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Windsor Mill	N/A	N/A	4	4	14	35	53	53	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
G&S Milling	N/A	N/A	2	2	9	22	32	32	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Harwood Products	N/A	N/A	2	2	7	18	27	27	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Arcata/Simpson Redwood	N/A	N/A	13	13	50	125	188	188	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
Britt Lumber	N/A	N/A	9	9	36	90	135	135	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
L-P Flake Board	N/A	N/A	60	60	240	600	900	900	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
L-P Logs	N/A	N/A	17	17	69	174	260	260	347	347	347	347	347	347	347	347	347	347	347	347	347	347	347
Sierra Pacific Industries	N/A	N/A	30	30	120	300	450	450	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
LP Carlotta	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aggregates (name of shipper?)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eureka Fish	N/A	N/A	1	1	4	10	15	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Humboldt Bay Forest Products	N/A	N/A	60	60	240	600	900	900	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
L-P Samoa (Lumber)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Samoa (Pulp)	N/A	N/A	73	73	292	730	1,095	1,095	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460
Schmidbauer Lumber Corp.	N/A	N/A	30	30	120	300	450	450	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
Del Rico (beer)	N/A	N/A	2	2	8	20	30	30	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Palco Lumber Mills	N/A	N/A	18	18	70	175	263	263	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Palco Gravel	N/A	N/A	50	50	200	500	750	750	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Palco logs	N/A	N/A	65	65	260	650	975	975	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Aggregates	N/A	N/A	300	300	1,200	3,000	4,500	4,500	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Eel River Saw Mills	N/A	N/A	9	9	36	90	135	135	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
Blue Lake Forest Products	N/A	N/A	13	13	50	126	188	188	251	251	251	251	251	251	251	251	251	251	251	251	251	251	251
Humboldt Waste Management	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Port Related	N/A	N/A	150	150	600	1,500	2,250	2,250	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Denotes demand only under "high"scenario	1,199	1,199	2,123	2,123	8,491	15,632	20,250	20,250	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868	24,868
Passenger Forecast Information						100%	Market Inc.:	1%															
All Excursion routes are between S. Fork and Samoa		24,800	24,800	24,800	74,400	75,144	84,000	84,840	85,688	90,059	90,960	91,870	92,788	93,716	94,653	95,600	96,556	97,521	98,497	99,482	100,476	101,481	102,496

Market Inputs High (cont.)

Out Year Revenue Forecasts

Shipper Information, Rates and Forecasts	Operating Scenario I										Operating Scenario II				
	Inflation:	0.00%		Rate Increase:	3%	Inflation:	0.00%	Rate Increase:	3%		Inflation:	0.00%	Rate Increase:	3%	
Shipper	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Kelleher Lumber	$ 23,038	$ 28,798	$ 43,197	$ 44,428	$ 57,596	$ 59,237	$ 60,926	$ 62,662	$ 64,448	$ 66,285	$ 68,174	$ 70,117	$ 72,115	$ 74,170	$ 76,284
Dairyman's Milling Co	$ 9,874	$ 12,342	$ 18,513	$ 19,041	$ 24,684	$ 25,387	$ 26,111	$ 26,855	$ 27,621	$ 28,408	$ 29,217	$ 30,050	$ 30,907	$ 31,787	$ 32,693
House of Daniels	$ 4,832	$ 6,040	$ 9,060	$ 9,318	$ 12,080	$ 12,424	$ 12,778	$ 13,142	$ 13,517	$ 13,902	$ 14,298	$ 14,706	$ 15,125	$ 15,556	$ 15,999
Adobe Lumber	$ 2,370	$ 2,962	$ 4,443	$ 4,570	$ 5,924	$ 6,093	$ 6,267	$ 6,445	$ 6,629	$ 6,818	$ 7,012	$ 7,212	$ 7,418	$ 7,629	$ 7,846
Dairyman's Co-op Feed & Supply	$ 41,140	$ 51,425	$ 77,138	$ 79,336	$ 102,850	$ 105,781	$ 108,796	$ 111,897	$ 115,086	$ 118,366	$ 121,739	$ 125,209	$ 128,777	$ 132,447	$ 136,222
Hunt & Behrens	$ 65,824	$ 82,280	$ 123,420	$ 126,937	$ 164,560	$ 169,250	$ 174,074	$ 179,035	$ 184,137	$ 189,385	$ 194,783	$ 200,334	$ 206,043	$ 211,916	$ 217,955
Willow Brook Feeds	$ 57,596	$ 71,995	$ 107,993	$ 111,070	$ 143,990	$ 148,094	$ 152,314	$ 156,655	$ 161,120	$ 165,712	$ 170,435	$ 175,292	$ 180,288	$ 185,426	$ 190,711
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ 3,633	$ 4,542	$ 6,813	$ 7,007	$ 9,084	$ 9,343	$ 9,609	$ 9,883	$ 10,164	$ 10,454	$ 10,752	$ 11,058	$ 11,374	$ 11,698	$ 12,031
J H Pomeroy Co.	$ 3,832	$ 4,790	$ 7,185	$ 7,390	$ 9,580	$ 9,854	$ 10,134	$ 10,423	$ 10,720	$ 11,026	$ 11,340	$ 11,663	$ 11,996	$ 12,337	$ 12,689
Cal Shake & Shingle	$ 6,043	$ 7,553	$ 11,330	$ 11,653	$ 15,107	$ 15,537	$ 15,980	$ 16,435	$ 16,904	$ 17,386	$ 17,881	$ 18,391	$ 18,915	$ 19,454	$ 20,008
West Sonoma Disposal	$ 1,316	$ 1,646	$ 2,468	$ 2,539	$ 3,291	$ 3,385	$ 3,481	$ 3,581	$ 3,683	$ 3,788	$ 3,896	$ 4,007	$ 4,121	$ 4,238	$ 4,359
Mead Clark Lumber	$ 148,104	$ 185,130	$ 277,695	$ 285,609	$ 370,260	$ 380,812	$ 391,666	$ 402,828	$ 414,309	$ 426,116	$ 438,261	$ 450,751	$ 463,598	$ 476,810	$ 490,399
Paterson Tractor	$ 678	$ 847	$ 1,271	$ 1,307	$ 1,695	$ 1,743	$ 1,793	$ 1,844	$ 1,897	$ 1,951	$ 2,006	$ 2,063	$ 2,122	$ 2,183	$ 2,245
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 70,349	$ 87,937	$ 131,905	$ 135,664	$ 175,874	$ 180,886	$ 186,041	$ 191,343	$ 196,797	$ 202,405	$ 208,174	$ 214,107	$ 220,209	$ 226,485	$ 232,940
Standard Structures	$ 166,103	$ 207,628	$ 311,443	$ 320,319	$ 415,257	$ 427,092	$ 439,264	$ 451,783	$ 464,659	$ 477,901	$ 491,522	$ 505,530	$ 519,938	$ 534,756	$ 549,996
Windsor Mill	$ 4,885	$ 6,107	$ 9,160	$ 9,421	$ 12,213	$ 12,562	$ 12,920	$ 13,288	$ 13,666	$ 14,056	$ 14,457	$ 14,869	$ 15,292	$ 15,728	$ 16,176
Vinwood Mgt	$ 596	$ 745	$ 1,118	$ 1,150	$ 1,490	$ 1,533	$ 1,576	$ 1,621	$ 1,668	$ 1,715	$ 1,764	$ 1,814	$ 1,866	$ 1,919	$ 1,974
GB Mobile	$ 5,276	$ 6,595	$ 9,893	$ 10,175	$ 13,191	$ 13,566	$ 13,953	$ 14,351	$ 14,760	$ 15,180	$ 15,613	$ 16,058	$ 16,516	$ 16,986	$ 17,470
Capital Lumber	$ 19,542	$ 24,427	$ 36,640	$ 37,685	$ 48,854	$ 50,246	$ 51,678	$ 53,151	$ 54,666	$ 56,224	$ 57,826	$ 59,474	$ 61,169	$ 62,912	$ 64,705
Nu-Forest Lumber	$ 17,587	$ 21,984	$ 32,976	$ 33,916	$ 43,968	$ 45,221	$ 46,510	$ 47,836	$ 49,199	$ 50,601	$ 52,043	$ 53,527	$ 55,052	$ 56,621	$ 58,235
RJW Lumber	$ 195	$ 244	$ 366	$ 377	$ 489	$ 502	$ 517	$ 532	$ 547	$ 562	$ 578	$ 595	$ 612	$ 629	$ 647
Piedmont Lumber	$ 163,532	$ 204,414	$ 306,622	$ 315,360	$ 408,829	$ 420,480	$ 432,464	$ 444,789	$ 457,466	$ 470,504	$ 483,913	$ 497,704	$ 511,889	$ 526,478	$ 541,482
All-Coast Lumber	$ 3,707	$ 4,633	$ 6,950	$ 7,148	$ 9,267	$ 9,531	$ 9,803	$ 10,082	$ 10,369	$ 10,665	$ 10,969	$ 11,281	$ 11,603	$ 11,933	$ 12,274
Skip Gibbs Rail Bridge	$ 16,540	$ 20,675	$ 31,013	$ 31,897	$ 41,351	$ 42,529	$ 43,741	$ 44,988	$ 46,270	$ 47,589	$ 48,945	$ 50,340	$ 51,775	$ 53,250	$ 54,768
L-P Treating	$ 108,404	$ 135,505	$ 203,257	$ 209,050	$ 271,010	$ 278,734	$ 286,677	$ 294,848	$ 303,251	$ 311,894	$ 320,783	$ 329,925	$ 339,328	$ 348,999	$ 358,945
Alex Thomas (pears)	$ 20,159	$ 25,198	$ 37,797	$ 38,875	$ 50,397	$ 51,833	$ 53,310	$ 54,829	$ 56,392	$ 57,999	$ 59,652	$ 61,352	$ 63,101	$ 64,899	$ 66,749
Agwood Lumber	$ 83,728	$ 104,660	$ 156,990	$ 161,464	$ 209,320	$ 215,286	$ 221,422	$ 227,732	$ 234,222	$ 240,898	$ 247,763	$ 254,825	$ 262,087	$ 269,557	$ 277,239
California Shake & Shingle	$ 1,090	$ 1,363	$ 2,044	$ 2,102	$ 2,726	$ 2,803	$ 2,883	$ 2,965	$ 3,050	$ 3,137	$ 3,226	$ 3,318	$ 3,413	$ 3,510	$ 3,610
L-P Ukiah Mill	$ 109,021	$ 136,276	$ 204,414	$ 210,240	$ 272,553	$ 280,320	$ 288,309	$ 296,526	$ 304,977	$ 313,669	$ 322,609	$ 331,803	$ 341,259	$ 350,985	$ 360,988
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ 10,030	$ 12,537	$ 18,806	$ 19,342	$ 25,075	$ 25,789	$ 26,524	$ 27,280	$ 28,058	$ 28,858	$ 29,680	$ 30,526	$ 31,396	$ 32,291	$ 33,211
Parnum Paving	$ 55,095	$ 68,868	$ 103,303	$ 106,247	$ 137,737	$ 141,662	$ 145,700	$ 149,852	$ 154,123	$ 158,515	$ 163,033	$ 167,679	$ 172,458	$ 177,373	$ 182,429
Cargill (salt)	$ 9,812	$ 12,265	$ 18,397	$ 18,922	$ 24,530	$ 25,229	$ 25,948	$ 26,687	$ 27,448	$ 28,230	$ 29,035	$ 29,862	$ 30,713	$ 31,589	$ 32,489
Cal Coast Lumber Treaters	$ 6,541	$ 8,177	$ 12,265	$ 12,614	$ 16,353	$ 16,819	$ 17,299	$ 17,792	$ 18,299	$ 18,820	$ 19,357	$ 19,908	$ 20,476	$ 21,059	$ 21,659
Masonite Corp	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	N/A	N/A	N/A	$ 9,874	$ 24,684	$ 37,026	$ 38,081	$ 49,368	$ 50,775	$ 52,222	$ 53,710	$ 55,241	$ 56,816	$ 58,435	$ 60,100
G-P Fort Bragg (CWR)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	N/A	N/A	N/A	$ 32,912	$ 82,280	$ 123,420	$ 126,937	$ 164,560	$ 169,250	$ 174,074	$ 179,035	$ 184,137	$ 189,385	$ 194,783	$ 200,334
101 Redwood	N/A	N/A	N/A	$ 2,633	$ 6,582	$ 9,874	$ 10,155	$ 13,165	$ 13,540	$ 13,926	$ 14,323	$ 14,731	$ 15,151	$ 15,583	$ 16,027
Windsor Mill	N/A	N/A	N/A	$ 11,087	$ 27,718	$ 41,577	$ 42,762	$ 55,436	$ 57,016	$ 58,641	$ 60,312	$ 62,031	$ 63,799	$ 65,617	$ 67,487
G&S Milling	N/A	N/A	N/A	$ 6,501	$ 16,253	$ 24,379	$ 25,074	$ 32,506	$ 33,432	$ 34,385	$ 35,365	$ 36,373	$ 37,409	$ 38,476	$ 39,572
Harwood Products	N/A	N/A	N/A	$ 5,702	$ 14,255	$ 21,383	$ 21,992	$ 28,510	$ 29,323	$ 30,158	$ 31,018	$ 31,902	$ 32,811	$ 33,746	$ 34,708
Arcata/Simpson Redwood	N/A	N/A	N/A	$ 51,425	$ 128,563	$ 192,844	$ 198,340	$ 257,125	$ 264,453	$ 271,990	$ 279,742	$ 287,714	$ 295,914	$ 304,348	$ 313,022
Britt Lumber	N/A	N/A	N/A	$ 37,026	$ 92,565	$ 138,848	$ 142,805	$ 185,130	$ 190,406	$ 195,833	$ 201,414	$ 207,154	$ 213,058	$ 219,130	$ 225,376
L-P Flake Board	N/A	N/A	N/A	$ 234,251	$ 585,628	$ 878,442	$ 903,477	$ 1,171,256	$ 1,204,637	$ 1,238,969	$ 1,274,279	$ 1,310,596	$ 1,347,948	$ 1,386,365	$ 1,425,876
L-P Logs	N/A	N/A	N/A	$ 67,738	$ 169,344	$ 254,016	$ 261,256	$ 338,688	$ 348,341	$ 358,268	$ 368,479	$ 378,981	$ 389,782	$ 400,890	$ 412,316
Sierra Pacific Industries	N/A	N/A	N/A	$ 123,420	$ 308,550	$ 462,825	$ 476,016	$ 617,100	$ 634,687	$ 652,776	$ 671,380	$ 690,514	$ 710,194	$ 730,435	$ 751,252
LP Carlotta	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Eureka Fish	N/A	N/A	N/A	$ 4,114	$ 10,285	$ 15,428	$ 15,867	$ 20,570	$ 21,156	$ 21,759	$ 22,379	$ 23,017	$ 23,673	$ 24,348	$ 25,042
Humboldt Bay Forest Products	N/A	N/A	N/A	$ 74,052	$ 185,130	$ 277,695	$ 285,609	$ 370,260	$ 380,812	$ 391,666	$ 402,828	$ 414,309	$ 426,116	$ 438,261	$ 450,751
L-P Samoa (Lumber)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	N/A	N/A	N/A	$ 278,699	$ 696,747	$ 1,045,121	$ 1,074,906	$ 1,393,494	$ 1,433,209	$ 1,474,055	$ 1,516,066	$ 1,559,274	$ 1,603,713	$ 1,649,419	$ 1,696,427
Schmidbauer Lumber Corp.	N/A	N/A	N/A	$ 123,420	$ 308,550	$ 462,825	$ 476,016	$ 617,100	$ 634,687	$ 652,776	$ 671,380	$ 690,514	$ 710,194	$ 730,435	$ 751,252
Del Rico (beer)	N/A	N/A	N/A	$ 8,639	$ 21,599	$ 32,398	$ 33,321	$ 43,197	$ 44,428	$ 45,694	$ 46,997	$ 48,336	$ 49,714	$ 51,130	$ 52,588
Palco Lumber Mills	N/A	N/A	N/A	$ 71,995	$ 179,988	$ 269,981	$ 277,676	$ 359,975	$ 370,234	$ 380,786	$ 391,638	$ 402,800	$ 414,280	$ 426,087	$ 438,230
Palco Gravel	N/A	N/A	N/A	$ 61,710	$ 154,275	$ 231,413	$ 238,008	$ 308,550	$ 317,344	$ 326,388	$ 335,690	$ 345,257	$ 355,097	$ 365,217	$ 375,626
Palco logs	N/A	N/A	N/A	$ 66,853	$ 167,131	$ 250,697	$ 257,842	$ 334,263	$ 343,789	$ 353,587	$ 363,664	$ 374,029	$ 384,688	$ 395,652	$ 406,928
Aggregates	N/A	N/A	N/A	$ 617,100	$ 1,542,750	$ 2,314,125	$ 2,380,078	$ 3,085,500	$ 3,173,437	$ 3,263,880	$ 3,356,900	$ 3,452,572	$ 3,550,970	$ 3,652,173	$ 3,756,260
Eel River Saw Mills	N/A	N/A	N/A	$ 37,026	$ 92,565	$ 138,848	$ 142,805	$ 185,130	$ 190,406	$ 195,833	$ 201,414	$ 207,154	$ 213,058	$ 219,130	$ 225,376
Blue Lake Forest Products	N/A	N/A	N/A	$ 51,631	$ 129,077	$ 193,615	$ 199,133	$ 258,154	$ 265,511	$ 273,078	$ 280,861	$ 288,865	$ 297,098	$ 305,565	$ 314,274
Humboldt Waste Management	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Port Related	N/A	N/A	N/A	$ 617,100	$ 1,542,750	$ 2,314,125	$ 2,380,078	$ 3,085,500	$ 3,173,437	$ 3,263,880	$ 3,356,900	$ 3,452,572	$ 3,550,970	$ 3,652,173	$ 3,756,260
Denotes demand only under "high"scenario	$ 1,240,473	$ 1,550,591	$ 2,325,886	$ 4,987,081	$ 9,588,449	$ 12,920,467	$ 13,288,700	$ 16,348,497	$ 16,814,429	$ 17,293,640	$ 17,786,509	$ 18,293,425	$ 18,814,787	$ 19,351,009	$ 19,902,512
Passenger Forecast Information	Inflation:		Rate Increase:	3%											
All Excursion routes are between S. Fork and Samoa	$ -	$ 195,306	$ 244,132	$ 941,160	$ 950,572	$ 1,147,020	$ 1,186,806	$ 1,198,674	$ 1,210,660	$ 1,222,767	$ 1,205,530	$ 1,247,345	$ 1,259,818	$ 1,272,416	$ 1,285,140

Market Inputs High (cont.)

Shipper Information, Rates and Forecasts												
	Inflation:	0.00%	Rate Increase:	3%		Inflation:	0.00%	Rate Increase:	3%			
Shipper	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	$ 78,458	$ 80,694	$ 82,994	$ 85,360	$ 87,792	$ 90,294	$ 92,868	$ 95,515	$ 98,237	$ 101,036	$ 103,916
Dairyman's Milling Co	$ 33,625	$ 34,583	$ 35,569	$ 36,583	$ 37,625	$ 38,698	$ 39,801	$ 40,935	$ 42,101	$ 43,301	$ 44,535
House of Daniels	$ 16,455	$ 16,924	$ 17,407	$ 17,903	$ 18,413	$ 18,938	$ 19,477	$ 20,032	$ 20,603	$ 21,191	$ 21,795
Adobe Lumber	$ 8,070	$ 8,300	$ 8,537	$ 8,780	$ 9,030	$ 9,287	$ 9,552	$ 9,824	$ 10,104	$ 10,392	$ 10,689
Dairyman's Co-op Feed & Supply	$ 140,104	$ 144,097	$ 148,204	$ 152,428	$ 156,772	$ 161,240	$ 165,835	$ 170,562	$ 175,423	$ 180,422	$ 185,564
Hunt & Behrens	$ 224,167	$ 230,556	$ 237,127	$ 243,885	$ 250,835	$ 257,984	$ 265,337	$ 272,899	$ 280,676	$ 288,676	$ 296,903
Willow Brook Feeds	$ 196,146	$ 201,736	$ 207,486	$ 213,399	$ 219,481	$ 225,736	$ 232,170	$ 238,786	$ 245,592	$ 252,591	$ 259,790
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ 12,374	$ 12,727	$ 13,089	$ 13,462	$ 13,846	$ 14,241	$ 14,647	$ 15,064	$ 15,493	$ 15,935	$ 16,389
J H Pomeroy Co.	$ 13,051	$ 13,423	$ 13,805	$ 14,199	$ 14,603	$ 15,020	$ 15,448	$ 15,888	$ 16,341	$ 16,806	$ 17,285
Cal Shake & Shingle	$ 20,579	$ 21,165	$ 21,768	$ 22,389	$ 23,027	$ 23,683	$ 24,358	$ 25,052	$ 25,766	$ 26,500	$ 27,256
West Sonoma Disposal	$ 4,483	$ 4,611	$ 4,743	$ 4,878	$ 5,017	$ 5,160	$ 5,307	$ 5,458	$ 5,614	$ 5,774	$ 5,938
Mead Clark Lumber	$ 504,376	$ 518,750	$ 533,535	$ 548,740	$ 564,380	$ 580,464	$ 597,008	$ 614,022	$ 631,522	$ 649,520	$ 668,032
Paterson Tractor	$ 2,309	$ 2,375	$ 2,442	$ 2,512	$ 2,584	$ 2,657	$ 2,733	$ 2,811	$ 2,891	$ 2,973	$ 3,058
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 239,578	$ 246,406	$ 253,429	$ 260,652	$ 268,080	$ 275,721	$ 283,579	$ 291,661	$ 299,973	$ 308,522	$ 317,315
Standard Structures	$ 565,671	$ 581,793	$ 598,374	$ 615,428	$ 632,967	$ 651,007	$ 669,561	$ 688,643	$ 708,269	$ 728,455	$ 749,216
Windsor Mill	$ 16,637	$ 17,112	$ 17,599	$ 18,101	$ 18,617	$ 19,147	$ 19,693	$ 20,254	$ 20,831	$ 21,425	$ 22,036
Vinwood Mgt	$ 2,030	$ 2,088	$ 2,147	$ 2,209	$ 2,272	$ 2,336	$ 2,403	$ 2,471	$ 2,542	$ 2,614	$ 2,689
GB Mobile	$ 17,968	$ 18,480	$ 19,007	$ 19,549	$ 20,106	$ 20,679	$ 21,268	$ 21,875	$ 22,498	$ 23,139	$ 23,799
Capital Lumber	$ 66,550	$ 68,446	$ 70,397	$ 72,403	$ 74,467	$ 76,589	$ 78,772	$ 81,017	$ 83,326	$ 85,701	$ 88,143
Nu-Forest Lumber	$ 59,895	$ 61,602	$ 63,357	$ 65,163	$ 67,020	$ 68,930	$ 70,895	$ 72,915	$ 74,993	$ 77,131	$ 79,329
RJW Lumber	$ 665	$ 684	$ 704	$ 724	$ 745	$ 766	$ 788	$ 810	$ 833	$ 857	$ 881
Piedmont Lumber	$ 556,915	$ 572,787	$ 589,111	$ 605,901	$ 623,169	$ 640,929	$ 659,196	$ 677,983	$ 697,305	$ 717,179	$ 737,618
All-Coast Lumber	$ 12,623	$ 12,983	$ 13,353	$ 13,734	$ 14,125	$ 14,528	$ 14,942	$ 15,368	$ 15,806	$ 16,256	$ 16,719
Skip Gibbs Rail Bridge	$ 56,329	$ 57,934	$ 59,585	$ 61,284	$ 63,030	$ 64,827	$ 66,674	$ 68,574	$ 70,529	$ 72,539	$ 74,606
L-P Treating	$ 369,175	$ 379,696	$ 390,518	$ 401,647	$ 413,094	$ 424,868	$ 436,976	$ 449,430	$ 462,239	$ 475,413	$ 488,962
Alex Thomas (pears)	$ 68,651	$ 70,608	$ 72,620	$ 74,690	$ 76,818	$ 79,008	$ 81,259	$ 83,575	$ 85,957	$ 88,407	$ 90,927
Agwood Lumber	$ 285,140	$ 293,267	$ 301,625	$ 310,221	$ 319,063	$ 328,156	$ 337,508	$ 347,127	$ 357,020	$ 367,195	$ 377,661
California Shake & Shingle	$ 3,713	$ 3,819	$ 3,927	$ 4,039	$ 4,154	$ 4,273	$ 4,395	$ 4,520	$ 4,649	$ 4,781	$ 4,917
L-P Ukiah Mill	$ 371,276	$ 381,858	$ 392,741	$ 403,934	$ 415,446	$ 427,286	$ 439,464	$ 451,989	$ 464,870	$ 478,119	$ 491,745
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ 34,157	$ 35,131	$ 36,132	$ 37,162	$ 38,221	$ 39,310	$ 40,431	$ 41,583	$ 42,768	$ 43,987	$ 45,241
Parnum Paving	$ 187,628	$ 192,975	$ 198,475	$ 204,131	$ 209,949	$ 215,933	$ 222,087	$ 228,416	$ 234,926	$ 241,622	$ 248,508
Cargill (salt)	$ 33,415	$ 34,367	$ 35,347	$ 36,354	$ 37,390	$ 38,456	$ 39,552	$ 40,679	$ 41,838	$ 43,031	$ 44,257
Cal Coast Lumber Treaters	$ 22,277	$ 22,911	$ 23,564	$ 24,236	$ 24,927	$ 25,637	$ 26,368	$ 27,119	$ 27,892	$ 28,687	$ 29,505
Masonite Corp	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	$ 61,813	$ 63,575	$ 65,387	$ 67,250	$ 69,167	$ 71,138	$ 73,165	$ 75,251	$ 77,395	$ 79,601	$ 81,870
G-P Fort Bragg (CWR)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	$ 206,043	$ 211,916	$ 217,955	$ 224,167	$ 230,556	$ 237,127	$ 243,885	$ 250,835	$ 257,984	$ 265,337	$ 272,899
101 Redwood	$ 16,483	$ 16,953	$ 17,436	$ 17,933	$ 18,444	$ 18,970	$ 19,511	$ 20,067	$ 20,639	$ 21,227	$ 21,832
Windsor Mill	$ 69,411	$ 71,389	$ 73,424	$ 75,516	$ 77,668	$ 79,882	$ 82,159	$ 84,500	$ 86,908	$ 89,385	$ 91,933
G&S Milling	$ 40,700	$ 41,860	$ 43,053	$ 44,280	$ 45,542	$ 46,840	$ 48,175	$ 49,548	$ 50,960	$ 52,412	$ 53,906
Harwood Products	$ 35,697	$ 36,714	$ 37,761	$ 38,837	$ 39,944	$ 41,082	$ 42,253	$ 43,457	$ 44,696	$ 45,970	$ 47,280
Arcata/Simpson Redwood	$ 321,943	$ 331,118	$ 340,555	$ 350,261	$ 360,243	$ 370,510	$ 381,070	$ 391,930	$ 403,100	$ 414,589	$ 426,404
Britt Lumber	$ 231,799	$ 238,405	$ 245,200	$ 252,188	$ 259,375	$ 266,767	$ 274,370	$ 282,190	$ 290,232	$ 298,504	$ 307,011
L-P Flake Board	$ 1,466,514	$ 1,508,309	$ 1,551,296	$ 1,595,508	$ 1,640,980	$ 1,687,748	$ 1,735,849	$ 1,785,321	$ 1,836,202	$ 1,888,534	$ 1,942,357
L-P Logs	$ 424,067	$ 436,153	$ 448,583	$ 461,368	$ 474,517	$ 488,040	$ 501,950	$ 516,255	$ 530,968	$ 546,101	$ 561,665
Sierra Pacific Industries	$ 772,663	$ 794,684	$ 817,332	$ 840,626	$ 864,584	$ 889,224	$ 914,567	$ 940,633	$ 967,441	$ 995,013	$ 1,023,370
LP Carlotta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Eureka Fish	$ 25,755	$ 26,489	$ 27,244	$ 28,021	$ 28,819	$ 29,641	$ 30,486	$ 31,354	$ 32,248	$ 33,167	$ 34,112
Humboldt Bay Forest Products	$ 463,598	$ 476,810	$ 490,399	$ 504,376	$ 518,750	$ 533,535	$ 548,740	$ 564,380	$ 580,464	$ 597,008	$ 614,022
L-P Samoa (Lumber)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	$ 1,744,775	$ 1,794,501	$ 1,845,645	$ 1,898,246	$ 1,952,346	$ 2,007,987	$ 2,065,215	$ 2,124,074	$ 2,184,610	$ 2,246,871	$ 2,310,907
Schmidbauer Lumber Corp.	$ 772,663	$ 794,684	$ 817,332	$ 840,626	$ 864,584	$ 889,224	$ 914,567	$ 940,633	$ 967,441	$ 995,013	$ 1,023,370
Del Rico (beer)	$ 54,086	$ 55,628	$ 57,213	$ 58,844	$ 60,521	$ 62,246	$ 64,020	$ 65,844	$ 67,721	$ 69,651	$ 71,636
Palco Lumber Mills	$ 450,720	$ 463,565	$ 476,777	$ 490,365	$ 504,341	$ 518,714	$ 533,498	$ 548,702	$ 564,340	$ 580,424	$ 596,966
Palco Gravel	$ 386,331	$ 397,342	$ 408,666	$ 420,313	$ 432,292	$ 444,612	$ 457,284	$ 470,316	$ 483,720	$ 497,506	$ 511,685
Palco logs	$ 418,526	$ 430,454	$ 442,722	$ 455,339	$ 468,316	$ 481,663	$ 495,391	$ 509,509	$ 524,030	$ 538,965	$ 554,326
Aggregates	$ 3,863,313	$ 3,973,418	$ 4,086,660	$ 4,203,130	$ 4,322,919	$ 4,446,122	$ 4,572,837	$ 4,703,163	$ 4,837,203	$ 4,975,063	$ 5,116,852
Eel River Saw Mills	$ 231,799	$ 238,405	$ 245,200	$ 252,188	$ 259,375	$ 266,767	$ 274,370	$ 282,190	$ 290,232	$ 298,504	$ 307,011
Blue Lake Forest Products	$ 323,231	$ 332,443	$ 341,917	$ 351,662	$ 361,684	$ 371,992	$ 382,594	$ 393,498	$ 404,713	$ 416,247	$ 428,110
Humboldt Waste Management	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Port Related	$ 3,863,313	$ 3,973,418	$ 4,086,660	$ 4,203,130	$ 4,322,919	$ 4,446,122	$ 4,572,837	$ 4,703,163	$ 4,837,203	$ 4,975,063	$ 5,116,852
Denotes demand only under "high"scenario	$ 20,469,734	$ 21,053,121	$ 21,653,135	$ 22,270,250	$ 22,904,952	$ 23,557,743	$ 24,229,139	$ 24,919,669	$ 25,629,880	$ 26,360,331	$ 27,111,601
Passenger Forecast Information											
All Excursion routes are between S. Fork and Samoa	$ 1,297,992	$ 1,310,972	$ 1,324,081	$ 1,337,322	$ 1,350,695	$ 1,364,202	$ 1,377,844	$ 1,391,623	$ 1,405,539	$ 1,419,594	$ 1,433,790

Market Inputs Most Likely

Shipper Information, Rates and Forecasts — **Most Likely Forecast**

Shipper	**Location**	**Milepost**	**Zone**	**Rate per car**	**1996/97Actual**	**Yearly Total Number of Cars**
Kelleher Lumber	Blackpoint			$400		118
Dairyman's Milling Co	Novato	28.2	1	$400	16	40
House of Daniels	Novato	22.7	1	$405	29	13
Adobe Lumber	Petaluma	41.8	1	$384	15	7
Dairyman's Co-op Feed & Supply	Petaluma	39	1	$400	185	195
Hunt & Behrens	Petaluma	39	1	$400	148	345
Willow Brook Feeds	Petaluma	42.2	1	$400	10	295
Bar Ale Feeds	Petaluma	42	1	$324	76	-
Compass Lumber	Petaluma	42	1	$384	23	10
J H Pomeroy Co.	Petaluma	42	1	$405	23	10
Cal Shake & Shingle	Roanoke Park			$408		23
West Sonoma Disposal				$400		1
Mead Clark Lumber	Santa Rosa	60	2	$400	273	790
Paterson Tractor	Santa Rosa	61	2	$412	4	2
Georgia Pacific (Windsor)	Windsor	51	2	$451	477	-
Diablo Timber	Windsor	52	2	$475	75	294
Standard Structures	Windsor	53	2	$475	238	685
Windsor Mill	Windsor	54	2	$475	3	20
Vinwood Mgt	Geyserville	59	3	$483	3	1
GB Mobile	Healdsburg			$475		21
Capital Lumber	Healdsburg	57	3	$475	38	73
Nu-Forest Lumber	Healdsburg	57.5	3	$475	26	68
RJW Lumber	Healdsburg	58	3	$475	1	-
Piedmont Lumber	Calpella	111	4	$530	84	640
All-Coast Lumber	Cloverdale	74.2	4	$530	17	8
Skip Gibbs Rail Bridge	Redwood Valley	111.1	4	$473	46	73
L-P Treating	Ukiah	103	4	$527	280	363
Alex Thomas (pears)	Ukiah			$700		48
Agwood Lumber	Ukiah	103.1	4	$530	28	292
California Shake & Shingle	Ukiah	104	4	$530	5	2
L-P Ukiah Mill	Ukiah	105	4	$530	92	363
Georgia Pacific (Tanks)	Ukiah	106	4	$530	119	-
Ward-Way Lumber	Ukiah	107	4	$530	46	21
Parnum Paving	Ukiah	108	4	$496	270	122
Cargill (salt)				$530		34
Cal Coast Lumber Treaters	Ukiah	109	4	$530	16	16
Masonite Corp	Ukiak	110	4	$530	49	-
Clark Miller Distributing	Ukiah			$640		51
G-P Fort Bragg (CWR)	Fort Bragg	128.5	5	$640	7	-
Mendocino Forest Products	Fort Bragg	128.5	5	$640		195
101 Redwood	Willits	130	5	$640	20	9
Windsor Mill	Willits			$770		48
G&S Milling	Willits	129	5	$735	43	19
Harwood Products	Branscomb	155	6	$770		29
Arcata/Simpson Redwood	Arcata	292	7	$1,000	358	168
Britt Lumber	Arcata	295	7	$1,000	59	101
L-P Flake Board	Arcata	298	7	$949	639	1,068
L-P Logs	Arcata	298	7	$949	347	156
Sierra Pacific Industries	Arcata	300	7	$1,000	469	490
LP Carlotta	Carlotta			$1,000		-
Aggregates (name of shipper?)	Carlotta			$500		-
Eureka Fish	Eureka	278	7	$1,000	3	14
Humboldt Bay Forest Products	Eureka	273	7	$300	9	540
L-P Samoa (Lumber)	Eureka	300	7	$1,000	10	-
L-P Samoa (Pulp)	Eureka	300	7	$928	-	1,292
Schmidbauer Lumber Corp.	Eureka	274	7	$1,000	229	490
Del Rico (beer)	Eureka			$1,050		31
Palco Lumber Mills	Scotia	244.6	7	$1,000	712	323
Palco Gravel	?		?	$300	564	823
Palco logs				$250		970
Aggregates	Island Mountail	128	6	$500		690
Eel River Saw Mills	Fortuna	266.1	7	$1,000	180	18
Blue Lake Forest Products	Arcata	300.8	7	$1,000	251	25
Humboldt Waste Management	Eureka	275	7	$700		100
Port Related			?	$1,000	-	300
Denotes demand only under "high"scenario						12,943
Passenger Forecast Information						**Number of Passengers**
All Excursion routes are between S. Fork and Samoa						19,299

Out Year Car Load Forecasts — Operating Scenario I

Operating Scenario I															
					40% of total					50% of total					75% of total
Shipper	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2003	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2004	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2005
Kelleher Lumber			24	24	47	15	15	15	15	59	22	22	22	22	89
Dairyman's Milling Co			8	8	16	5	5	5	5	20	8	8	8	8	30
House of Daniels			3	3	5	2	2	2	2	7	2	2	2	2	10
Adobe Lumber			1	1	3	1	1	1	1	4	1	1	1	1	5
Dairyman's Co-op Feed & Supply			39	39	78	24	24	24	24	98	37	37	37	37	146
Hunt & Behrens			69	69	138	43	43	43	43	173	65	65	65	65	259
Willow Brook Feeds			59	59	118	37	37	37	37	148	55	55	55	55	221
Bar Ale Feeds			-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber			2	2	4	1	1	1	1	5	2	2	2	2	8
J H Pomeroy Co.			2	2	4	1	1	1	1	5	2	2	2	2	8
Cal Shake & Shingle			5	5	9	3	3	3	3	12	4	4	4	4	17
West Sonoma Disposal			0	0	0	0	0	0	0	1	0	0	0	0	1
Mead Clark Lumber			158	158	316	99	99	99	99	395	148	148	148	148	593
Paterson Tractor			0	0	1	0	0	0	0	1	0	0	0	0	2
Georgia Pacific (Windsor)			-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber			59	59	118	37	37	37	37	147	55	55	55	55	221
Standard Structures			137	137	274	86	86	86	86	343	128	128	128	128	514
Windsor Mill			4	4	8	3	3	3	3	10	4	4	4	4	15
Vinwood Mgt			0	0	0	0	0	0	0	1	0	0	0	0	1
GB Mobile			4	4	8	3	3	3	3	11	4	4	4	4	16
Capital Lumber			15	15	29	9	9	9	9	37	14	14	14	14	55
Nu-Forest Lumber			14	14	27	9	9	9	9	34	13	13	13	13	51
RJW Lumber			-	-	-	-	-	-	-	-	-	-	-	-	-
Piedmont Lumber			128	128	256	80	80	80	80	320	120	120	120	120	480
All-Coast Lumber			2	2	3	1	1	1	1	4	2	2	2	2	6
Skip Gibbs Rail Bridge			15	15	29	9	9	9	9	37	14	14	14	14	55
L-P Treating			73	73	145	45	45	45	45	182	68	68	68	68	272
Alex Thomas (pears)			10	10	19	6	6	6	6	24	9	9	9	9	36
Agwood Lumber			58	58	117	37	37	37	37	146	55	55	55	55	219
California Shake & Shingle			0	0	1	0	0	0	0	1	0	0	0	0	2
L-P Ukiah Mill			73	73	145	45	45	45	45	182	68	68	68	68	272
Georgia Pacific (Tanks)			-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber			4	4	8	3	3	3	3	11	4	4	4	4	16
Parnum Paving			24	24	49	15	15	15	15	61	23	23	23	23	92
Cargill (salt)			7	7	14	4	4	4	4	17	6	6	6	6	26
Cal Coast Lumber Treaters			3	3	6	2	2	2	2	8	3	3	3	3	12
Masonite Corp					N/A										N/A
Clark Miller Distributing					N/A										N/A
G-P Fort Bragg (CWR)					N/A										N/A
Mendocino Forest Products					N/A										N/A
101 Redwood					N/A										N/A
Windsor Mill					N/A										N/A
G&S Milling					N/A										N/A
Harwood Products					N/A										N/A
Arcata/Simpson Redwood					N/A										N/A
Britt Lumber					N/A										N/A
L-P Flake Board					N/A										N/A
L-P Logs					N/A										N/A
Sierra Pacific Industries					N/A										N/A
LP Carlotta					N/A										N/A
Aggregates (name of shipper?)					N/A										N/A
Eureka Fish					N/A										N/A
Humboldt Bay Forest Products					N/A										N/A
L-P Samoa (Lumber)					N/A										N/A
L-P Samoa (Pulp)					N/A										N/A
Schmidbauer Lumber Corp.					N/A										N/A
Del Rico (beer)					N/A										N/A
Palco Lumber Mills					N/A										N/A
Palco Gravel					N/A										N/A
Palco logs					N/A										N/A
Aggregates					N/A										N/A
Eel River Saw Mills					N/A										N/A
Blue Lake Forest Products					N/A										N/A
Humboldt Waste Management					N/A										N/A
Port Related					N/A										N/A
Denotes demand only under "high"scenario			999	999	1,997		666	666	666	2,497		666	666	666	3,745
Passenger Forecast Information					75%					80%					90%
All Excursion routes are between S. Fork and Samoa					-		5,146	5,146	5,146	15,439		6,433	6,433	6,433	19,299

Market Inputs Most Likely (cont.)

Shipper Information, Rates and Forecasts	Operating Scenario II																						
	Northend (S Fork to Willits) Ramp-up rate				40%	50%	75%	75%	100%														
					75% of total	100% of total	Market Inc.:	0.00%					Market Inc.:	0.00%				Market Inc.:	0.00%				
Shipper	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	2006	2007	2008	2009	2010	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	22	22	22	22	89	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
Dairyman's Milling Co	8	8	8	8	30	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
House of Daniels	2	2	2	2	10	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Adobe Lumber	1	1	1	1	5	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Dairyman's Co-op Feed & Supply	37	37	37	37	146	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195
Hunt & Behrens	65	65	65	65	259	345	345	345	345	345	345	345	345	345	345	345	345	345	345	345	345	345	345
Willow Brook Feeds	55	55	55	55	221	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295
Bar Ale Feeds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Compass Lumber	2	2	2	2	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
J H Pomeroy Co.	2	2	2	2	8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Cal Shake & Shingle	4	4	4	4	17	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
West Sonoma Disposal	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mead Clark Lumber	148	148	148	148	593	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790	790
Paterson Tractor	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Georgia Pacific (Windsor)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diablo Timber	55	55	55	55	221	294	294	294	294	294	294	294	294	294	294	294	294	294	294	294	294	294	294
Standard Structures	128	128	128	128	514	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685	685
Windsor Mill	4	4	4	4	15	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Vinwood Mgt	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GB Mobile	4	4	4	4	16	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Capital Lumber	14	14	14	14	55	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
Nu-Forest Lumber	13	13	13	13	51	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
RJW Lumber	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Piedmont Lumber	120	120	120	120	480	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640	640
All-Coast Lumber	2	2	2	2	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Skip Gibbs Rail Bridge	14	14	14	14	55	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
L-P Treating	68	68	68	68	272	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363
Alex Thomas (pears)	9	9	9	9	36	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Agwood Lumber	55	55	55	55	219	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
California Shake & Shingle	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
L-P Ukiah Mill	68	68	68	68	272	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363	363
Georgia Pacific (Tanks)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ward-Way Lumber	4	4	4	4	16	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Parnum Paving	23	23	23	23	92	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Cargill (salt)	6	6	6	6	26	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Cal Coast Lumber Treaters	3	3	3	3	12	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Masonite Corp	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clark Miller Distributing	N/A	N/A	3	3	10	26	38	38	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
G-P Fort Bragg (CWR)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mendocino Forest Products	N/A	N/A	10	10	39	98	146	146	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195
101 Redwood	N/A	N/A	0	0	2	5	7	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Windsor Mill	N/A	N/A	2	2	10	24	36	36	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
G&S Milling	N/A	N/A	1	1	4	10	14	14	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Harwood Products	N/A	N/A	1	1	6	15	22	22	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Arcata/Simpson Redwood	N/A	N/A	8	8	34	84	126	126	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
Britt Lumber	N/A	N/A	5	5	20	51	76	76	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
L-P Flake Board	N/A	N/A	53	53	214	534	801	801	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068	1,068
L-P Logs	N/A	N/A	8	8	31	78	117	117	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
Sierra Pacific Industries	N/A	N/A	25	25	98	245	368	368	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490
LP Carlotta	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aggregates (name of shipper?)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eureka Fish	N/A	N/A	1	1	3	7	11	11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Humboldt Bay Forest Products	N/A	N/A	27	27	108	270	405	405	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540
L-P Samoa (Lumber)	N/A	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L-P Samoa (Pulp)	N/A	N/A	65	65	258	646	969	969	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292	1,292
Schmidbauer Lumber Corp.	N/A	N/A	25	25	98	245	368	368	490	490	490	490	490	490	490	490	490	490	490	490	490	490	490
Del Rico (beer)	N/A	N/A	2	2	6	16	23	23	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Palco Lumber Mills	N/A	N/A	16	16	65	162	242	242	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323
Palco Gravel	N/A	N/A	41	41	165	412	617	617	823	823	823	823	823	823	823	823	823	823	823	823	823	823	823
Palco logs	N/A	N/A	49	49	194	485	728	728	970	970	970	970	970	970	970	970	970	970	970	970	970	970	970
Aggregates	N/A	N/A	35	35	138	345	518	518	690	690	690	690	690	690	690	690	690	690	690	690	690	690	690
Eel River Saw Mills	N/A	N/A	1	1	4	9	14	14	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Blue Lake Forest Products	N/A	N/A	1	1	5	13	19	19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Humboldt Waste Management	N/A	N/A	5	5	20	50	75	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Port Related	N/A	N/A	15	15	60	150	225	225	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Denotes demand only under "high"scenario	936	936	1,334	1,334	5,335	8,968	10,956	10,956	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943	12,943
Passenger Forecast Information						100%	Market Inc.:	1%															
All Excursion routes are between S. Fork and Samoa		24,800	24,800	24,800	74,400	75,144	84,000	84,840	85,688	90,059	90,960	91,870	92,788	93,716	94,653	95,600	96,556	97,521	98,497	99,482	100,476	101,481	102,496

Market Inputs Most Likely (cont.)

Out Year Revenue Forecasts

Shipper Information, Rates and Forecasts	Operating Scenario I											Operating Scenario II				
	Inflation:	0.00%		Rate Increase:	3%	Inflation:	0.00%	Rate Increase:	3%			Inflation:	0.00%	Rate Increase:	3%	
Shipper	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		2013	2014	2015	2016	2017
Kelleher Lumber	$ 19,418	$ 24,273	$ 36,409	$ 37,447	$ 48,545	$ 49,929	$ 51,352	$ 52,815	$ 54,320	$ 55,869		$ 57,461	$ 59,098	$ 60,783	$ 62,515	$ 64,297
Dairyman's Milling Co	$ 6,582	$ 8,228	$ 12,342	$ 12,694	$ 16,456	$ 16,925	$ 17,407	$ 17,903	$ 18,414	$ 18,939		$ 19,478	$ 20,033	$ 20,604	$ 21,192	$ 21,796
House of Daniels	$ 2,166	$ 2,708	$ 4,061	$ 4,177	$ 5,415	$ 5,569	$ 5,728	$ 5,891	$ 6,059	$ 6,232		$ 6,410	$ 6,592	$ 6,780	$ 6,973	$ 7,172
Adobe Lumber	$ 1,106	$ 1,382	$ 2,073	$ 2,133	$ 2,765	$ 2,843	$ 2,924	$ 3,008	$ 3,094	$ 3,182		$ 3,272	$ 3,366	$ 3,462	$ 3,560	$ 3,662
Dairyman's Co-op Feed & Supply	$ 32,089	$ 40,112	$ 60,167	$ 61,882	$ 80,223	$ 82,509	$ 84,861	$ 87,279	$ 89,767	$ 92,325		$ 94,956	$ 97,663	$ 100,446	$ 103,309	$ 106,253
Hunt & Behrens	$ 56,773	$ 70,967	$ 106,450	$ 109,484	$ 141,933	$ 145,978	$ 150,138	$ 154,417	$ 158,818	$ 163,345		$ 168,000	$ 172,788	$ 177,712	$ 182,777	$ 187,986
Willow Brook Feeds	$ 48,545	$ 60,682	$ 91,022	$ 93,616	$ 121,363	$ 124,822	$ 128,379	$ 132,038	$ 135,801	$ 139,671		$ 143,652	$ 147,746	$ 151,957	$ 156,288	$ 160,742
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ 1,580	$ 1,975	$ 2,962	$ 3,046	$ 3,949	$ 4,062	$ 4,178	$ 4,297	$ 4,419	$ 4,545		$ 4,675	$ 4,808	$ 4,945	$ 5,086	$ 5,231
J H Pomeroy Co.	$ 1,666	$ 2,083	$ 3,124	$ 3,213	$ 4,165	$ 4,284	$ 4,406	$ 4,532	$ 4,661	$ 4,794		$ 4,930	$ 5,071	$ 5,215	$ 5,364	$ 5,517
Cal Shake & Shingle	$ 3,861	$ 4,826	$ 7,239	$ 7,445	$ 9,651	$ 9,927	$ 10,209	$ 10,500	$ 10,800	$ 11,107		$ 11,424	$ 11,750	$ 12,084	$ 12,429	$ 12,783
West Sonoma Disposal	$ 165	$ 206	$ 309	$ 317	$ 411	$ 423	$ 435	$ 448	$ 460	$ 473		$ 487	$ 501	$ 515	$ 530	$ 545
Mead Clark Lumber	$ 130,002	$ 162,503	$ 243,755	$ 250,702	$ 325,006	$ 334,269	$ 343,795	$ 353,593	$ 363,671	$ 374,036		$ 384,696	$ 395,659	$ 406,936	$ 418,533	$ 430,462
Paterson Tractor	$ 339	$ 424	$ 636	$ 654	$ 847	$ 872	$ 896	$ 922	$ 948	$ 975		$ 1,003	$ 1,032	$ 1,061	$ 1,091	$ 1,122
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 57,452	$ 71,815	$ 107,723	$ 110,793	$ 143,630	$ 147,723	$ 151,934	$ 156,264	$ 160,717	$ 165,298		$ 170,009	$ 174,854	$ 179,837	$ 184,963	$ 190,234
Standard Structures	$ 133,859	$ 167,324	$ 250,986	$ 258,139	$ 334,648	$ 344,186	$ 353,995	$ 364,084	$ 374,460	$ 385,132		$ 396,109	$ 407,398	$ 419,009	$ 430,950	$ 443,232
Windsor Mill	$ 3,908	$ 4,885	$ 7,328	$ 7,537	$ 9,771	$ 10,049	$ 10,336	$ 10,630	$ 10,933	$ 11,245		$ 11,565	$ 11,895	$ 12,234	$ 12,582	$ 12,941
Vinwood Mgt	$ 199	$ 248	$ 373	$ 383	$ 497	$ 511	$ 525	$ 540	$ 556	$ 572		$ 588	$ 605	$ 622	$ 640	$ 658
GB Mobile	$ 4,104	$ 5,130	$ 7,694	$ 7,914	$ 10,259	$ 10,552	$ 10,852	$ 11,162	$ 11,480	$ 11,807		$ 12,143	$ 12,490	$ 12,846	$ 13,212	$ 13,588
Capital Lumber	$ 14,265	$ 17,832	$ 26,747	$ 27,510	$ 35,663	$ 36,680	$ 37,725	$ 38,800	$ 39,906	$ 41,043		$ 42,213	$ 43,416	$ 44,653	$ 45,926	$ 47,235
Nu-Forest Lumber	$ 13,288	$ 16,610	$ 24,915	$ 25,626	$ 33,221	$ 34,167	$ 35,141	$ 36,143	$ 37,173	$ 38,232		$ 39,322	$ 40,442	$ 41,595	$ 42,780	$ 44,000
RJW Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Piedmont Lumber	$ 139,547	$ 174,434	$ 261,650	$ 269,107	$ 348,867	$ 358,810	$ 369,036	$ 379,554	$ 390,371	$ 401,496		$ 412,939	$ 424,708	$ 436,812	$ 449,261	$ 462,065
All-Coast Lumber	$ 1,744	$ 2,180	$ 3,271	$ 3,364	$ 4,361	$ 4,485	$ 4,613	$ 4,744	$ 4,880	$ 5,019		$ 5,162	$ 5,309	$ 5,460	$ 5,616	$ 5,776
Skip Gibbs Rail Bridge	$ 14,205	$ 17,757	$ 26,635	$ 27,394	$ 35,513	$ 36,525	$ 37,566	$ 38,637	$ 39,738	$ 40,870		$ 42,035	$ 43,233	$ 44,465	$ 45,733	$ 47,036
L-P Treating	$ 78,701	$ 98,377	$ 147,565	$ 151,770	$ 196,753	$ 202,361	$ 208,128	$ 214,059	$ 220,160	$ 226,435		$ 232,888	$ 239,525	$ 246,352	$ 253,373	$ 260,594
Alex Thomas (pears)	$ 13,823	$ 17,279	$ 25,918	$ 26,657	$ 34,558	$ 35,542	$ 36,555	$ 37,597	$ 38,669	$ 39,771		$ 40,904	$ 42,070	$ 43,269	$ 44,502	$ 45,771
Agwood Lumber	$ 63,668	$ 79,585	$ 119,378	$ 122,780	$ 159,171	$ 163,707	$ 168,373	$ 173,171	$ 178,107	$ 183,183		$ 188,403	$ 193,773	$ 199,295	$ 204,975	$ 210,817
California Shake & Shingle	$ 436	$ 545	$ 818	$ 841	$ 1,090	$ 1,121	$ 1,153	$ 1,186	$ 1,220	$ 1,255		$ 1,290	$ 1,327	$ 1,365	$ 1,404	$ 1,444
L-P Ukiah Mill	$ 79,149	$ 98,937	$ 148,405	$ 152,634	$ 197,873	$ 203,512	$ 209,313	$ 215,278	$ 221,413	$ 227,724		$ 234,214	$ 240,889	$ 247,754	$ 254,815	$ 262,078
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ 4,579	$ 5,724	$ 8,585	$ 8,830	$ 11,447	$ 11,773	$ 12,109	$ 12,454	$ 12,809	$ 13,174		$ 13,550	$ 13,936	$ 14,333	$ 14,741	$ 15,162
Parnum Paving	$ 24,895	$ 31,118	$ 46,677	$ 48,008	$ 62,237	$ 64,010	$ 65,835	$ 67,711	$ 69,641	$ 71,625		$ 73,667	$ 75,766	$ 77,926	$ 80,146	$ 82,431
Cargill (salt)	$ 7,413	$ 9,267	$ 13,900	$ 14,296	$ 18,534	$ 19,062	$ 19,605	$ 20,164	$ 20,738	$ 21,329		$ 21,937	$ 22,563	$ 23,206	$ 23,867	$ 24,547
Cal Coast Lumber Treaters	$ 3,489	$ 4,361	$ 6,541	$ 6,728	$ 8,722	$ 8,970	$ 9,226	$ 9,489	$ 9,759	$ 10,037		$ 10,323	$ 10,618	$ 10,920	$ 11,232	$ 11,552
Masonite Corp	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	N/A	N/A	N/A	$ 6,714	$ 16,785	$ 25,178	$ 25,895	$ 33,570	$ 34,527	$ 35,511		$ 36,523	$ 37,564	$ 38,635	$ 39,736	$ 40,868
G-P Fort Bragg (CWR)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	N/A	N/A	N/A	$ 25,671	$ 64,178	$ 96,268	$ 99,011	$ 128,357	$ 132,015	$ 135,777		$ 139,647	$ 143,627	$ 147,720	$ 151,930	$ 156,260
101 Redwood	N/A	N/A	N/A	$ 1,185	$ 2,962	$ 4,443	$ 4,570	$ 5,924	$ 6,093	$ 6,267		$ 6,445	$ 6,629	$ 6,818	$ 7,012	$ 7,212
Windsor Mill	N/A	N/A	N/A	$ 7,603	$ 19,007	$ 28,510	$ 29,323	$ 38,013	$ 39,097	$ 40,211		$ 41,357	$ 42,536	$ 43,748	$ 44,995	$ 46,277
G&S Milling	N/A	N/A	N/A	$ 2,873	$ 7,182	$ 10,772	$ 11,079	$ 14,363	$ 14,772	$ 15,193		$ 15,626	$ 16,072	$ 16,530	$ 17,001	$ 17,485
Harwood Products	N/A	N/A	N/A	$ 4,593	$ 11,483	$ 17,225	$ 17,716	$ 22,966	$ 23,621	$ 24,294		$ 24,987	$ 25,699	$ 26,431	$ 27,184	$ 27,959
Arcata/Simpson Redwood	N/A	N/A	N/A	$ 34,558	$ 86,394	$ 129,591	$ 133,284	$ 172,788	$ 177,712	$ 182,777		$ 187,986	$ 193,344	$ 198,854	$ 204,522	$ 210,351
Britt Lumber	N/A	N/A	N/A	$ 20,776	$ 51,939	$ 77,909	$ 80,129	$ 103,879	$ 106,839	$ 109,884		$ 113,016	$ 116,237	$ 119,549	$ 122,956	$ 126,461
L-P Flake Board	N/A	N/A	N/A	$ 208,484	$ 521,209	$ 781,813	$ 804,095	$ 1,042,418	$ 1,072,127	$ 1,102,682		$ 1,134,109	$ 1,166,431	$ 1,199,674	$ 1,233,865	$ 1,269,030
L-P Logs	N/A	N/A	N/A	$ 30,453	$ 76,132	$ 114,197	$ 117,452	$ 152,263	$ 156,603	$ 161,066		$ 165,656	$ 170,378	$ 175,233	$ 180,227	$ 185,364
Sierra Pacific Industries	N/A	N/A	N/A	$ 100,793	$ 251,983	$ 377,974	$ 388,746	$ 503,965	$ 518,328	$ 533,100		$ 548,294	$ 563,920	$ 579,992	$ 596,522	$ 613,522
LP Carlotta	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
Eureka Fish	N/A	N/A	N/A	$ 2,880	$ 7,200	$ 10,799	$ 11,107	$ 14,399	$ 14,809	$ 15,231		$ 15,666	$ 16,112	$ 16,571	$ 17,043	$ 17,529
Humboldt Bay Forest Products	N/A	N/A	N/A	$ 33,323	$ 83,309	$ 124,963	$ 128,524	$ 166,617	$ 171,366	$ 176,250		$ 181,273	$ 186,439	$ 191,752	$ 197,217	$ 202,838
L-P Samoa (Lumber)	N/A	N/A	N/A	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	N/A	N/A	N/A	$ 246,629	$ 616,573	$ 924,860	$ 951,219	$ 1,233,147	$ 1,268,292	$ 1,304,438		$ 1,341,614	$ 1,379,850	$ 1,419,176	$ 1,459,623	$ 1,501,222
Schmidbauer Lumber Corp.	N/A	N/A	N/A	$ 100,793	$ 251,983	$ 377,974	$ 388,746	$ 503,965	$ 518,328	$ 533,100		$ 548,294	$ 563,920	$ 579,992	$ 596,522	$ 613,522
Del Rico (beer)	N/A	N/A	N/A	$ 6,696	$ 16,739	$ 25,108	$ 25,824	$ 33,478	$ 34,432	$ 35,413		$ 36,422	$ 37,460	$ 38,528	$ 39,626	$ 40,755
Palco Lumber Mills	N/A	N/A	N/A	$ 66,441	$ 166,103	$ 249,154	$ 256,255	$ 332,206	$ 341,673	$ 351,411		$ 361,426	$ 371,727	$ 382,321	$ 393,217	$ 404,424
Palco Gravel	N/A	N/A	N/A	$ 50,787	$ 126,968	$ 190,452	$ 195,880	$ 253,937	$ 261,174	$ 268,617		$ 276,273	$ 284,147	$ 292,245	$ 300,574	$ 309,140
Palco logs	N/A	N/A	N/A	$ 49,882	$ 124,706	$ 187,058	$ 192,390	$ 249,411	$ 256,519	$ 263,830		$ 271,349	$ 279,083	$ 287,037	$ 295,217	$ 303,631
Aggregates	N/A	N/A	N/A	$ 70,967	$ 177,416	$ 266,124	$ 273,709	$ 354,833	$ 364,945	$ 375,346		$ 386,044	$ 397,046	$ 408,362	$ 420,000	$ 431,970
Eel River Saw Mills	N/A	N/A	N/A	$ 3,703	$ 9,257	$ 13,885	$ 14,280	$ 18,513	$ 19,041	$ 19,583		$ 20,141	$ 20,715	$ 21,306	$ 21,913	$ 22,538
Blue Lake Forest Products	N/A	N/A	N/A	$ 5,143	$ 12,856	$ 19,284	$ 19,834	$ 25,713	$ 26,445	$ 27,199		$ 27,974	$ 28,771	$ 29,591	$ 30,435	$ 31,302
Humboldt Waste Management	N/A	N/A	N/A	$ 14,399	$ 35,998	$ 53,996	$ 55,535	$ 71,995	$ 74,047	$ 76,157		$ 78,328	$ 80,560	$ 82,856	$ 85,217	$ 87,646
Port Related	N/A	N/A	N/A	$ 61,710	$ 154,275	$ 231,413	$ 238,008	$ 308,550	$ 317,344	$ 326,388		$ 335,690	$ 345,257	$ 355,097	$ 365,217	$ 375,626
Denotes demand only under "high"scenario	$ 963,018	$ 1,203,772	$ 1,805,659	$ 3,014,173	$ 5,300,179	$ 6,815,111	$ 7,009,342	$ 8,404,580	$ 8,644,111	$ 8,890,468		$ 9,143,846	$ 9,404,446	$ 9,672,473	$ 9,948,138	$ 10,231,660
Passenger Forecast Information	Inflation:		Rate Increase:	3%												
All Excursion routes are between S. Fork and Samoa	$ -	$ 195,306	$ 244,132	$ 941,160	$ 950,572	$ 1,147,020	$ 1,186,806	$ 1,198,674	$ 1,210,660	$ 1,222,767		$ 1,205,530	$ 1,247,345	$ 1,259,818	$ 1,272,416	$ 1,285,140

Market Inputs Most Likely (cont.)

Shipper Information, Rates and Forecasts												
	Inflation:	0.00%	Rate Increase:	3%		Inflation:	0.00%	Rate Increase:	3%			
Shipper	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Kelleher Lumber	$ 66,129	$ 68,014	$ 69,952	$ 71,946	$ 73,996	$ 76,105	$ 78,274	$ 80,505	$ 82,800	$ 85,159	$ 87,586
Dairyman's Milling Co	$ 22,417	$ 23,056	$ 23,713	$ 24,388	$ 25,084	$ 25,798	$ 26,534	$ 27,290	$ 28,068	$ 28,868	$ 29,690
House of Daniels	$ 7,376	$ 7,587	$ 7,803	$ 8,025	$ 8,254	$ 8,489	$ 8,731	$ 8,980	$ 9,236	$ 9,499	$ 9,770
Adobe Lumber	$ 3,766	$ 3,873	$ 3,984	$ 4,097	$ 4,214	$ 4,334	$ 4,458	$ 4,585	$ 4,715	$ 4,850	$ 4,988
Dairyman's Co-op Feed & Supply	$ 109,281	$ 112,396	$ 115,599	$ 118,894	$ 122,282	$ 125,767	$ 129,352	$ 133,038	$ 136,830	$ 140,729	$ 144,740
Hunt & Behrens	$ 193,344	$ 198,854	$ 204,522	$ 210,350	$ 216,345	$ 222,511	$ 228,853	$ 235,375	$ 242,083	$ 248,983	$ 256,079
Willow Brook Feeds	$ 165,323	$ 170,035	$ 174,881	$ 179,865	$ 184,991	$ 190,263	$ 195,686	$ 201,263	$ 206,999	$ 212,898	$ 218,966
Bar Ale Feeds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Compass Lumber	$ 5,380	$ 5,533	$ 5,691	$ 5,853	$ 6,020	$ 6,192	$ 6,368	$ 6,550	$ 6,736	$ 6,928	$ 7,126
J H Pomeroy Co.	$ 5,674	$ 5,836	$ 6,002	$ 6,173	$ 6,349	$ 6,530	$ 6,716	$ 6,908	$ 7,105	$ 7,307	$ 7,515
Cal Shake & Shingle	$ 13,147	$ 13,522	$ 13,907	$ 14,304	$ 14,711	$ 15,131	$ 15,562	$ 16,006	$ 16,462	$ 16,931	$ 17,413
West Sonoma Disposal	$ 560	$ 576	$ 593	$ 610	$ 627	$ 645	$ 663	$ 682	$ 702	$ 722	$ 742
Mead Clark Lumber	$ 442,730	$ 455,347	$ 468,325	$ 481,672	$ 495,400	$ 509,519	$ 524,040	$ 538,975	$ 554,336	$ 570,134	$ 586,383
Paterson Tractor	$ 1,154	$ 1,187	$ 1,221	$ 1,256	$ 1,292	$ 1,329	$ 1,366	$ 1,405	$ 1,445	$ 1,487	$ 1,529
Georgia Pacific (Windsor)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Diablo Timber	$ 195,656	$ 201,232	$ 206,967	$ 212,866	$ 218,932	$ 225,172	$ 231,589	$ 238,189	$ 244,978	$ 251,960	$ 259,141
Standard Structures	$ 455,864	$ 468,857	$ 482,219	$ 495,962	$ 510,097	$ 524,635	$ 539,587	$ 554,965	$ 570,782	$ 587,049	$ 603,780
Windsor Mill	$ 13,310	$ 13,689	$ 14,079	$ 14,481	$ 14,893	$ 15,318	$ 15,754	$ 16,203	$ 16,665	$ 17,140	$ 17,629
Vinwood Mgt	$ 677	$ 696	$ 716	$ 736	$ 757	$ 779	$ 801	$ 824	$ 847	$ 871	$ 896
GB Mobile	$ 13,975	$ 14,374	$ 14,783	$ 15,205	$ 15,638	$ 16,084	$ 16,542	$ 17,014	$ 17,498	$ 17,997	$ 18,510
Capital Lumber	$ 48,581	$ 49,966	$ 51,390	$ 52,854	$ 54,361	$ 55,910	$ 57,503	$ 59,142	$ 60,828	$ 62,561	$ 64,344
Nu-Forest Lumber	$ 45,254	$ 46,543	$ 47,870	$ 49,234	$ 50,637	$ 52,081	$ 53,565	$ 55,091	$ 56,662	$ 58,276	$ 59,937
RJW Lumber	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Piedmont Lumber	$ 475,234	$ 488,778	$ 502,708	$ 517,035	$ 531,771	$ 546,926	$ 562,514	$ 578,545	$ 595,034	$ 611,992	$ 629,434
All-Coast Lumber	$ 5,940	$ 6,110	$ 6,284	$ 6,463	$ 6,647	$ 6,837	$ 7,031	$ 7,232	$ 7,438	$ 7,650	$ 7,868
Skip Gibbs Rail Bridge	$ 48,377	$ 49,755	$ 51,173	$ 52,632	$ 54,132	$ 55,675	$ 57,261	$ 58,893	$ 60,572	$ 62,298	$ 64,074
L-P Treating	$ 268,021	$ 275,660	$ 283,516	$ 291,596	$ 299,907	$ 308,454	$ 317,245	$ 326,286	$ 335,585	$ 345,150	$ 354,986
Alex Thomas (pears)	$ 47,075	$ 48,417	$ 49,797	$ 51,216	$ 52,675	$ 54,177	$ 55,721	$ 57,309	$ 58,942	$ 60,622	$ 62,350
Agwood Lumber	$ 216,825	$ 223,005	$ 229,361	$ 235,897	$ 242,620	$ 249,535	$ 256,647	$ 263,961	$ 271,484	$ 279,222	$ 287,179
California Shake & Shingle	$ 1,485	$ 1,527	$ 1,571	$ 1,616	$ 1,662	$ 1,709	$ 1,758	$ 1,808	$ 1,859	$ 1,912	$ 1,967
L-P Ukiah Mill	$ 269,547	$ 277,229	$ 285,130	$ 293,256	$ 301,614	$ 310,210	$ 319,051	$ 328,144	$ 337,496	$ 347,114	$ 357,007
Georgia Pacific (Tanks)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ward-Way Lumber	$ 15,594	$ 16,038	$ 16,495	$ 16,965	$ 17,449	$ 17,946	$ 18,457	$ 18,984	$ 19,525	$ 20,081	$ 20,653
Parnum Paving	$ 84,780	$ 87,196	$ 89,681	$ 92,237	$ 94,866	$ 97,570	$ 100,350	$ 103,210	$ 106,152	$ 109,177	$ 112,289
Cargill (salt)	$ 25,247	$ 25,966	$ 26,706	$ 27,468	$ 28,250	$ 29,055	$ 29,884	$ 30,735	$ 31,611	$ 32,512	$ 33,439
Cal Coast Lumber Treaters	$ 11,881	$ 12,219	$ 12,568	$ 12,926	$ 13,294	$ 13,673	$ 14,063	$ 14,464	$ 14,876	$ 15,300	$ 15,736
Masonite Corp	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Clark Miller Distributing	$ 42,033	$ 43,231	$ 44,463	$ 45,730	$ 47,033	$ 48,374	$ 49,752	$ 51,170	$ 52,629	$ 54,129	$ 55,671
G-P Fort Bragg (CWR)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Mendocino Forest Products	$ 160,714	$ 165,294	$ 170,005	$ 174,850	$ 179,833	$ 184,959	$ 190,230	$ 195,652	$ 201,228	$ 206,963	$ 212,861
101 Redwood	$ 7,418	$ 7,629	$ 7,846	$ 8,070	$ 8,300	$ 8,537	$ 8,780	$ 9,030	$ 9,287	$ 9,552	$ 9,824
Windsor Mill	$ 47,596	$ 48,953	$ 50,348	$ 51,783	$ 53,258	$ 54,776	$ 56,337	$ 57,943	$ 59,594	$ 61,293	$ 63,040
G&S Milling	$ 17,984	$ 18,496	$ 19,023	$ 19,566	$ 20,123	$ 20,697	$ 21,287	$ 21,893	$ 22,517	$ 23,159	$ 23,819
Harwood Products	$ 28,756	$ 29,575	$ 30,418	$ 31,285	$ 32,177	$ 33,094	$ 34,037	$ 35,007	$ 36,005	$ 37,031	$ 38,086
Arcata/Simpson Redwood	$ 216,346	$ 222,511	$ 228,853	$ 235,375	$ 242,083	$ 248,983	$ 256,079	$ 263,377	$ 270,883	$ 278,604	$ 286,544
Britt Lumber	$ 130,065	$ 133,772	$ 137,584	$ 141,505	$ 145,538	$ 149,686	$ 153,952	$ 158,340	$ 162,852	$ 167,494	$ 172,267
L-P Flake Board	$ 1,305,197	$ 1,342,395	$ 1,380,654	$ 1,420,002	$ 1,460,472	$ 1,502,096	$ 1,544,905	$ 1,588,935	$ 1,634,220	$ 1,680,795	$ 1,728,698
L-P Logs	$ 190,647	$ 196,080	$ 201,668	$ 207,416	$ 213,327	$ 219,407	$ 225,660	$ 232,092	$ 238,706	$ 245,509	$ 252,506
Sierra Pacific Industries	$ 631,008	$ 648,992	$ 667,488	$ 686,511	$ 706,077	$ 726,200	$ 746,897	$ 768,183	$ 790,076	$ 812,594	$ 835,753
LP Carlotta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Aggregates (name of shipper?)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Eureka Fish	$ 18,029	$ 18,543	$ 19,071	$ 19,615	$ 20,174	$ 20,749	$ 21,340	$ 21,948	$ 22,574	$ 23,217	$ 23,879
Humboldt Bay Forest Products	$ 208,619	$ 214,565	$ 220,680	$ 226,969	$ 233,438	$ 240,091	$ 246,933	$ 253,971	$ 261,209	$ 268,653	$ 276,310
L-P Samoa (Lumber)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
L-P Samoa (Pulp)	$ 1,544,007	$ 1,588,011	$ 1,633,269	$ 1,679,817	$ 1,727,692	$ 1,776,931	$ 1,827,574	$ 1,879,660	$ 1,933,230	$ 1,988,327	$ 2,044,994
Schmidbauer Lumber Corp.	$ 631,008	$ 648,992	$ 667,488	$ 686,511	$ 706,077	$ 726,200	$ 746,897	$ 768,183	$ 790,076	$ 812,594	$ 835,753
Del Rico (beer)	$ 41,917	$ 43,112	$ 44,340	$ 45,604	$ 46,904	$ 48,240	$ 49,615	$ 51,029	$ 52,484	$ 53,979	$ 55,518
Palco Lumber Mills	$ 415,950	$ 427,805	$ 439,997	$ 452,537	$ 465,434	$ 478,699	$ 492,342	$ 506,374	$ 520,805	$ 535,648	$ 550,914
Palco Gravel	$ 317,951	$ 327,012	$ 336,332	$ 345,918	$ 355,776	$ 365,916	$ 376,344	$ 387,070	$ 398,102	$ 409,448	$ 421,117
Palco logs	$ 312,284	$ 321,185	$ 330,338	$ 339,753	$ 349,436	$ 359,395	$ 369,638	$ 380,172	$ 391,007	$ 402,151	$ 413,612
Aggregates	$ 444,281	$ 456,943	$ 469,966	$ 483,360	$ 497,136	$ 511,304	$ 525,876	$ 540,864	$ 556,278	$ 572,132	$ 588,438
Eel River Saw Mills	$ 23,180	$ 23,841	$ 24,520	$ 25,219	$ 25,938	$ 26,677	$ 27,437	$ 28,219	$ 29,023	$ 29,850	$ 30,701
Blue Lake Forest Products	$ 32,194	$ 33,112	$ 34,056	$ 35,026	$ 36,024	$ 37,051	$ 38,107	$ 39,193	$ 40,310	$ 41,459	$ 42,640
Humboldt Waste Management	$ 90,144	$ 92,713	$ 95,355	$ 98,073	$ 100,868	$ 103,743	$ 106,700	$ 109,740	$ 112,868	$ 116,085	$ 119,393
Port Related	$ 386,331	$ 397,342	$ 408,666	$ 420,313	$ 432,292	$ 444,612	$ 457,284	$ 470,316	$ 483,720	$ 497,506	$ 511,685
Denotes demand only under "high"scenario	$ 10,523,262	$ 10,823,175	$ 11,131,636	$ 11,448,888	$ 11,775,181	$ 12,110,773	$ 12,455,931	$ 12,810,925	$ 13,176,036	$ 13,551,553	$ 13,937,772
Passenger Forecast Information											
All Excursion routes are between S. Fork and Samoa	$ 1,297,992	$ 1,310,972	$ 1,324,081	$ 1,337,322	$ 1,350,695	$ 1,364,202	$ 1,377,844	$ 1,391,623	$ 1,405,539	$ 1,419,594	$ 1,433,790

Cost Input Sheet I

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Transportation																					
Freight Labor																					
Engineer	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 108,500
Conductor	3	$ 31,200	$ 3,120	$ 14,040	$ 145,080			$ -	$ -	$ -	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 145,080
Supervisor (Train Master)	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 77,500
Chief Dispater	1	$ 45,000	$ 4,500	$ 20,250	$ 69,750																
Dispatcher	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 108,500
Freight Agent	1	$ 30,000	$ 3,000	$ 13,500	$ 46,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 46,500
Labor Sub-total	***10***	***$ 226,200***	***$ 22,620***	***$ 101,790***	***$ 555,830***	***0***	***$ -***	***$ -***	***$ -***	***$ -***		***$ -***	***$ -***	***$ -***	***$ -***		***$ -***	***$ -***	***$ -***	***$ -***	***$ 555,830***
Passenger Labor																					
Train Operator			$ -	$ -	$ -	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 54,250
Conductor			$ -	$ -	$ -	2	$ 31,200	$ 3,120	$ 14,040	$ 96,720	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 96,720
Supervisor (Train Master)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Chief Dispater			$ -	$ -	$ -																
Dispatcher			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Office Staff (Administrative Assistant)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Labor Sub-total	***0***	***$ -***	***$ -***	***$ -***	***$ -***	***3***	***$ 66,200***	***$ 6,620***	***$ 29,790***	***$ 150,970***		***$ -***	***$ -***	***$ -***	***$ -***		***$ -***	***$ -***	***$ -***	***$ -***	***$ 150,970***
Other																					
Low value tools and equipment		500			$ 500		300			$ 300	0				$ -	0				$ -	$ 800
Other outside service					$ -					$ -					$ -					$ -	$ -
Other Sub-total					***$ 500***					***$ 300***					***$ -***					***$ -***	$ 800
Total Transportation					***$ 556,330***					***$ 151,270***					***$ -***					***$ -***	***$ 707,600***
Transportation Assumptions																					
Number of Dispatchers	2																				
Train Crew Size	2																				
Overtime	10%																				
Fringes	45%																				
Tools per operator	$100																				
Mechanical																					
Labor					$ -																
Electrician			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Diesel Mechanic	1	$ 36,000	$ 3,600	$ 16,200	$ 55,800	1	$ 36,000	$ 3,600	$ 16,200	$ 55,800			$ -	$ -	$ -			$ -	$ -	$ -	$ 111,600
Car Mechanic	1	$ 34,000	$ 3,400	$ 15,300	$ 52,700	1	$ 34,000	$ 3,400	$ 15,300	$ 52,700			$ -	$ -	$ -			$ -	$ -	$ -	$ 105,400
Supervisor (Mechanical)	1	$ 55,000	$ 5,500	$ 24,750	$ 85,250			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 85,250
Inventory Clerk			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Transload Facility								$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Foreman	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 54,250
Laborer	1	$ 26,000	$ 2,600	$ 11,700	$ 40,300			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 40,300
Labor Sub-total	***5***	***$ 186,000***	***$ 18,600***	***$ 83,700***	***$ 288,300***	***2***	***$ 70,000***	***$ 7,000***	***$ 31,500***	***$ 108,500***	***-***	***$ -***	***$ -***	***$ -***	***$ -***	***-***	***$ -***	***$ -***	***$ -***	***$ -***	***$ 396,800***
Other																					
Locomotive Materials		$ 81,120			$ 81,120		$ 3,360			$ 3,360					$ -					$ -	$ 84,480
Car Materials		$ 32,448			$ 32,448		$ 168			$ -					$ -					$ -	$ 32,448
Low Value tools and Equipment per locomotive	3	$ 1,600			$ 4,800	2	$ 1,600			$ 3,200					$ -					$ -	$ 8,000
Cleaning supplies and other Materials					$ -					$ -					$ -					$ -	$ -
Other Sub-total		$ 34,048	$ -	$ -	$ 118,368	2	$ 1,768	$ -	$ -	$ 3,200		$ -	$ -	$ -	$ -			$ -	$ -	$ -	$ 121,568
Total Maintenance of Equipment					***$ 406,668***					***$ 111,700***					***$ -***					***$ -***	***$ 518,368***
MOE Assumptions																					
Overtime		10																			
Fringes		45																			
Car Miles (8 miles per train mile on OS I, 10 mi on OS II)		324480																			
Train Miles		40560				1680															
Car material cost per car mile	$	0.10																			
Locomotive material cost per train mile	$	2.00																			
Low Value tools and Equipment		100																			
Cleaning materials per train mile	N/A																				

Cost Input Sheet I (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Maintenance of Way																					
Labor																					
Project Manager			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Environmental Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 45,000	$ 4,500	$ 20,250	$ 69,750	$ 69,750
Track																					
Foreman	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250			$ -	$ -	$ -			$ -	$ -	$ -	$ 162,750
Operator	2	$ 31,200	$ 3,120	$ 14,040	$ 96,720	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360			$ -	$ -	$ -			$ -	$ -	$ -	$ 145,080
Laborer	4	$ 26,000	$ 2,600	$ 11,700	$ 161,200	2	$ 26,000	$ 2,600	$ 11,700	$ 80,600			$ -	$ -	$ -			$ -	$ -	$ -	$ 241,800
Supervisor (Track)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Welder	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 108,500
Welder Laborer	2	$ 26,000	$ 2,600	$ 11,700	$ 80,600			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 80,600
Signals																					
Signals/Grade Crossing Maintainer (Supervisor)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
Signals/Grade Crossing Maintainer	2	$ 37,440	$ 3,744	$ 16,848	$ 116,064	1	$ 37,440	$ 3,744	$ 16,848	$ 58,032			$ -	$ -	$ -			$ -	$ -	$ -	$ 174,096
Bridge																					
Foreman	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 54,250
Operator	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 48,360
Laborer	1	$ 26,000	$ 2,600	$ 11,700	$ 40,300			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 40,300
Supervisor			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 46,000	$ 4,600	$ 20,700	$ 71,300	$ 71,300
Bridge Tender	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 48,360
MOW Sub-total					***$ 862,854***					***$ 241,242***										***$ 412,300***	***$ 1,516,396***
Other																					
Track	141	$ 211,500			$ 211,500	74.2	$ 111,300			$ 111,300		$ -			$ -					$ -	$ 322,800
Signals	141	$ 169,200			$ 169,200	74.2	$ 89,040			$ 89,040		$ -			$ -					$ -	$ 258,240
Bridges and structures	141	$ 49,350			$ 49,350	74.2	$ 25,970			$ 25,970		$ -			$ -					$ -	$ 75,320
Tunnels	141	$ 49,350			$ 49,350	74.2	$ 25,970			$ 25,970		$ -			$ -					$ -	$ 75,320
Vehicles		$ 731,715			$ 731,715					$ -										$ -	$ 731,715
Ultrasonic Testing per year		$ 35,000			$ 35,000																$ 35,000
Low value tools per track maintainer	12	$ 60,000			$ 60,000	4	$ 20,000			$ 20,000	0	$ -				1	$ 5,000			$ 5,000	$ 85,000
Low value tools per signal maintainer	2	$ 2,000			$ 2,000	1	$ 1,000			$ 1,000	0	$ -				0	$ 5,000			$ 5,000	$ 8,000
Other Sub-total					$ 1,308,115					$ 273,280				$ -			$ 10,000			$ 10,000	$ 1,591,395
Total Maintenance of Way					***$ 2,170,969***					***$ 514,522***				***$ -***						***$ 422,300***	***$ 3,107,791***

Maintenance of Way Assumptions		
Overtime (%)	10	
Fringes (%)	45	
Lombard-Willits		
Track materials cost per mile	$ 1,500	
Crossing/Signal materials cost per mile	$ 1,200	
Bridge/structure cost per route mile	$ 350	
Tunnel cost per route mile	$ 350	
Willits-South Fork		
Track materials cost per mile (10% contingency)	$ 1,650	
Crossing/Signal materials cost per mile (10% contingency)	$ 1,320	
Bridge/structure cost per route mile (10% contingency)	$ 385	
Tunnel cost per route mile (10% contingency)	$ 385	
South Fork-Samoa		
Track materials cost per mile	$ 1,500	
Crossing/Signal materials cost per mile	$ 1,200	
Bridge/structure cost per route mile	$ 350	
Tunnel cost per route mile	$ 350	
Low value tools per track maintainer	$ 5,000	
Low value tools per signal maintainer	$ 1,000	
NCRA track miles		
Lombard-Willits	141	
Willits-South Fork	85.3	
South Fork-Samoa	74.2	
NCRA track miles: Tunnels		
Lombard-Willits	0.75	0.75
Willits-South Fork	2.95	2.95
South Fork-Samoa	0.82	0.82
NCRA track miles: Bridges		
Lombard-Willits	1.8	1.8
Willits-South Fork	0.85	0.85
South Fork-Samoa	1.19	1.19

Cost Input Sheet I (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Insurance and Claims																					
Total Insurance and Claims					$ -					$ -					$ -		200000			$ 200,000	***$ 200,000***
Assumptions																					
Liability Insurance	$ 200,000																				
Property and comphensive protection																					
Non-insured passengers/workers compensation																					
Self insurance retention																					
General and Administrative																					
Labor																					
President		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 120,000	$ 12,000	$ 54,000	$ 186,000	$ 186,000
Administrative assistant		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 30,000	$ 3,000	$ 13,500	$ 46,500	$ 46,500
VP of Marketing		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Sales Manager		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
Chief Mechanical Officer		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Chief Engineer		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Eng. Admin. Assistant		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 30,000	$ 3,000	$ 13,500	$ 46,500	$ 46,500
Chief Financial Officer		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 85,000	$ 8,500	$ 38,250	$ 131,750	$ 131,750
Controller		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Human Recourses Manager		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
FRA Safety and Training Officer		$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -		1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Transportation Officer		$ -	$ -	$ -		-	$ -	$ -	$ -		-	$ -	$ -	$ -		1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Labor Sub-total		***$ -***	***$ -***	***$ -***		***-***	***$ -***	***$ -***	***$ -***		***-***	***$ -***	***$ -***	***$ -***		***12***	***755,000***	***75,500***	***339,750***	***1,170,250***	***1,170,250***
Other																					
Contract legal, accounting and consulting services					$ -					$ -					$ -					$ 180,000	$ 180,000
Telecommunications					$ -					$ -					$ -					$ 12,000	$ 12,000
Telephone equipment rental					$ -					$ -					$ -					$ 6,000	$ 6,000
PC rentals					$ -					$ -					$ -					$ 12,000	$ 12,000
Copiers					$ -					$ -					$ -					$ 18,000	$ 18,000
Office supplies					$ -					$ -					$ -					$ 600	$ 600
Payroll Services															$ -					$ 1,920	$ 1,920
Postage															$ -					$ 600	$ 600
Travel and meetings					$ -					$ -					$ -					$ 6,000	$ 6,000
Office lease					$ -					$ -					$ -					$ 72,000	$ 72,000
Other Sub-total					$ -					$ -					$ -					$ -	$ 309,120
Total General Administrative					$ -					$ -					$ -					$ -	***$ 1,479,370***

Assumptions		
Fringes		45
Legal, accounting and consulting fees per month	$	15,000
Advertising per month	$	2,000
Telecommunications per month	$	1,000
Phone equipment per month	$	500
Personal computers		20
PC rentals per month	$	50
Copiers		3
Copier rental per month	$	500
Office suppies per month	$	50
Payroll services per month	$	160
Postage per month	$	50
Coffee and water per month	$	50
Subscriptions per month	$	50
Travel and meetings per month	$	500
Office lease per month (includes janitorial services)	$	6,000

Cost Input Sheet I (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Vehicle/Equipment					**$ -**					**$ -**					**$ -**						
Vehicle and truck expense per year*	$ 45,045																				
* MOW vehicles and equipment are in that section																					
Fuel																					
Price per gallon	$ 1.00					$ 1.00															
Gallons per train mile	2.79					0.57															
Anticipated number of gallons of fuel	113256					960															
Anticipated number of train miles	40560				40,560	1680				1,680					-						
Allowance for spillage and idling	10%					10%															
Total Fuel	$ 124,582				$ 124,582	$ 1,056				$ 1,056					$ -					$ -	***$ 125,638***
Equipment Expenses																					
Locomotive Leases	2	$ 40,000			$ 80,000	1	$ 42,000			$ 42,000					$ -					$ -	$ 122,000
Cars					$ -					$ -					$ -					$ -	$ -
Demurrage																				$ 84,000	$ 84,000
Car Hire 5 days for OS I, 7 days for OS II																				$ 153,640	$ 153,640
Total Equipment Expenses					***$ 80,000***					***$ 42,000***					***$ -***					***$ 69,640***	***$ 69,640***
Assumptions																					
Locomotive lease per year	$ 42,000																				
Demurrage per Month	$ 7,000																				
Car Hire Per Year	$ 153,640																				
Car lease per year																					

Summary of All Categories	
Transportation (different due to forecast year)	$ 707,600
Mechanical	$ 518,368
Equipment/Vehicles	$ 45,045
Maintenance of Way	$ 3,107,791
Insurance	$ 200,000
General and Administrative	$ 1,479,370
Fuel	$ 125,638
Locomotive Lease	$ 122,000
Car Hire / (Demurrage) (different due to forecast year)	$ 69,640
Total Expenses	$ 6,375,452

Cost Input Sheet II

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Transportation																					
Freight Labor																					
Engineer	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -	$ 271,250
Conductor	3	$ 31,200	$ 3,120	$ 14,040	$ 145,080	2	$ 31,200	$ 3,120	$ 14,040	$ 96,720	2	$ 31,200	$ 3,120	$ 14,040	$ 96,720			$ -	$ -	$ -	$ 338,520
Supervisor (Train Master)	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 77,500
Chief Dispater	1	$ 45,000	$ 4,500	$ 20,250	$ 69,750																
Dispatcher	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 108,500
Freight Agent	1	$ 30,000	$ 3,000	$ 13,500	$ 46,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 46,500
Labor Sub-total	***10***	***$ 226,200***	***$ 22,620***	***$ 101,790***	***$ 555,830***	***3***	***$ 66,200***	***$ 6,620***	***$ 29,790***	***$ 150,970***	***4***		***$ 6,620***	***$ 29,790***	***$ 205,220***			***$ -***	***$ -***	***$ -***	***$ 912,020***
Passenger Labor																					
Train Operator	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 162,750
Conductor	1	$ 30,000	$ 3,000	$ 13,500	$ 46,500	2	$ 30,000	$ 3,000	$ 13,500	$ 93,000	0		$ -	$ -	$ -			$ -	$ -	$ -	$ 139,500
Supervisor (Train Master)		$ 50,000	$ 5,000	$ 22,500	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Chief Dispater		$ 55,000	$ 5,500	$ 24,750	$ -																
Dispatcher		$ 40,000	$ 4,000	$ 18,000	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Office Staff (Administrative Assistant)		$ 25,000	$ 2,500	$ 11,250	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Labor Sub-total	***2***	***$ 235,000***	***$ 23,500***	***$ 105,750***	***$ 100,750***	***4***	***$ 65,000***	***$ 6,500***	***$ 29,250***	***$ 201,500***	***-***		***$ -***	***$ -***	***$ -***			***$ -***	***$ -***	***$ -***	***$ 302,250***
Other																					
Low value tools and equipment		200			$ 200		400			$ 400		0			$ -		0			$ -	$ 600
Other outside service					$ -					$ -					$ -					$ -	$ -
Other Sub-total	***$ 200***	***$ -***	***$ -***		***$ 200***					***$ 400***					***$ -***					***$ -***	$ 600
Total Transportation					***$ 656,780***					***$ 352,870***					***$ 205,220***					***$ -***	***$ 1,214,870***
Transportation Assumptions																					
Number of Dispatchers	2																				
Train Crew Size	2																				
Overtime	10%																				
Fringes	45%																				
Tools per operator	$100																				
Mechanical																					
Labor					$ -																
Electrician			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Diesel Mechanic	1	$ 36,000	$ 3,600	$ 16,200	$ 55,800	1	$ 36,000	$ 3,600	$ 16,200	$ 55,800			$ -	$ -	$ -			$ -	$ -	$ -	$ 111,600
Car Mechanic	1	$ 34,000	$ 3,400	$ 15,300	$ 52,700	1	$ 34,000	$ 3,400	$ 15,300	$ 52,700			$ -	$ -	$ -			$ -	$ -	$ -	$ 105,400
Supervisor		$ 55,000	$ 5,500	$ 24,750	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Inventory Clerk			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Transload Facility								$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ -
Foreman	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 54,250
Laborer	1	$ 26,000	$ 2,600	$ 11,700	$ 40,300			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 40,300
Labor Sub-total	***4***	***$ 186,000***	***$ 18,600***	***$ 83,700***	***$ 203,050***	***2***	***$ 70,000***	***$ 7,000***	***$ 31,500***	***$ 108,500***	***-***	***$ -***	***$ -***	***$ -***	***$ -***	***1***	***$ 70,000***	***$ 7,000***	***$ 31,500***	***$ 108,500***	***$ 420,050***
Other																					
Locomotive Materials		$ 81,120			$ 81,120		$ 33,920			$ 33,920		$ 89,232			$ 89,232					$ -	$ 204,272
Car Materials		$ 32,448			$ 32,448		$ 16,960			$ 16,960		$ 44,616			$ 44,616					$ -	$ 94,024
Low Value tools and Equipment per locomotive	3	$ 1,600			$ 4,800	2	$ 1,600			$ 3,200					$ -					$ -	$ 8,000
Cleaning supplies and other Materials					$ -					$ -					$ -					$ -	$ -
Other Sub-total	3	$ 115,168	$ -	$ -	$ 118,368	2	$ 52,480	$ -	$ -	$ 54,080		$ 133,848	$ -	$ -	$ 133,848	-	$ -	$ -	$ -	$ -	$ 306,296
Total Maintenance of Equipment					***$ 321,418***					***$ 162,580***					***$ 133,848***					***$ 108,500***	***$ 726,346***
MOE Assumptions																					
Overtime		10																			
Fringes		45																			
Car Miles (8 miles per train mile on OS I, 10 mi on OS II)		324,480					169,600					446,160									
Train Miles		40,560					16,960					44,616									
Car material cost per car mile	$	0.10																			
Locomotive material cost per train mile	$	2.00																			
Low Value tools and Equipment		100																			
Cleaning materials per train mile	N/A																				

Cost Input Sheet II (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Maintenance of Way																					
Labor																					
Project Manager			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Environmental Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 45,000	$ 4,500	$ 20,250	$ 69,750	$ 69,750
Track																					
Foreman	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250	1	$ 46,000	$ 4,600	$ 20,700	$ 71,300			$ -	$ -	$ -	$ 234,050
Operator	2	$ 31,200	$ 3,120	$ 14,040	$ 96,720	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360	4	$ 44,000	$ 4,400	$ 19,800	$ 272,800			$ -	$ -	$ -	$ 417,880
Laborer	4	$ 26,000	$ 2,600	$ 11,700	$ 161,200	2	$ 26,000	$ 2,600	$ 11,700	$ 80,600	2	$ 34,000	$ 3,400	$ 15,300	$ 105,400			$ -	$ -	$ -	$ 347,200
Supervisor (Track)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Welder	2	$ 35,000	$ 3,500	$ 15,750	$ 108,500			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 108,500
Welder Laborer	2	$ 26,000	$ 2,600	$ 11,700	$ 80,600			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 80,600
Signals																					
Signals/Grade Crossing Maintainer (Supervisor)			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
Signals/Grade Crossing Maintainer	2	$ 37,440	$ 3,744	$ 16,848	$ 116,064	1	$ 37,440	$ 3,744	$ 16,848	$ 58,032	1	$ 46,000	$ 4,600	$ 20,700	$ 71,300			$ -	$ -	$ -	$ 245,396
Bridge																					
Foreman	1	$ 35,000	$ 3,500	$ 15,750	$ 54,250			$ -	$ -	$ -	1	$ 46,000	$ 4,600	$ 20,700	$ 71,300			$ -	$ -	$ -	$ 125,550
Operator	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360			$ -	$ -	$ -	1	$ 44,000	$ 4,400	$ 19,800	$ 68,200			$ -	$ -	$ -	$ 116,560
Laborer	1	$ 26,000	$ 2,600	$ 11,700	$ 40,300			$ -	$ -	$ -	1	$ 34,000	$ 3,400	$ 15,300	$ 52,700			$ -	$ -	$ -	$ 93,000
Supervisor			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 46,000	$ 4,600	$ 20,700	$ 71,300	$ 71,300
Bridge Tender	1	$ 31,200	$ 3,120	$ 14,040	$ 48,360			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	$ 48,360
MOW Sub-total	***18***	***$ 314,040***	***$ 31,404***	***$ 141,318***	***$ 862,854***	***5***	***$ 129,640***	***$ 12,964***	***$ 58,338***	***$ 241,242***	***11***	***$ 294,000***	***$ 29,400***	***$ 132,300***	***$ 713,000***	***5***	***$ 266,000***	***$ 26,600***	***$ 119,700***	***$ 412,300***	***$ 2,229,396***
Other																					
Track	141	$ 183,300			$ 183,300	74.2	$ 96,460			$ 96,460	85.3	$ 121,979			$ 121,979					$ -	$ 401,739
Signals	141	$ 169,200			$ 169,200	74.2	$ 89,040			$ 89,040		$ -			$ -					$ -	$ 258,240
Bridges and structures	141	$ 49,350			$ 49,350	74.2	$ 25,970			$ 25,970	85.3	$ 32,841			$ 32,841					$ -	$ 108,161
Tunnels	141	$ 49,350			$ 49,350	74.2	$ 25,970			$ 25,970	85.3	$ 32,841			$ 32,841					$ -	$ 108,161
Vehicles		$ 731,715			$ 731,715					$ -										$ -	$ 731,715
Ultrasonic Testing per year		$ 35,000			$ 35,000																$ 35,000
Low value tools per track maintainer	12	$ 30,000			$ 30,000	4	$ 1,400			$ 1,400	7	$ 2,450				1	$ 350			$ 350	$ 31,750
Low value tools per signal maintainer	12	$ 12,000			$ 12,000	4	$ 4,000			$ 4,000	7	$ 7,000				1	$ 1,000			$ 1,000	$ 17,000
NCRA track miles	2	$ -			$ -	1	$ -			$ -	1	$ -				0	$ -			$ -	$ -
Other Sub-total		$ 1,259,915			$ 1,259,915		$ 237,440			$ 237,440		$ 197,110			$ 197,110		$ 1,000			$ 1,000	$ 1,695,465
Total Maintenance of Way					***$ 2,122,769***					***$ 478,682***					***$ 910,110***					***$ 413,300***	***$ 3,924,861***

Maintenance of Way Assumptions		
Overtime (%)		10
Fringes (%)		45
Lombard-Willits		
Track materials cost per mile	$	1,300
Crossing/Signal materials cost per mile	$	1,200
Bridge/structure cost per route mile	$	350
Tunnel cost per route mile	$	350
Willits-South Fork		
Track materials cost per mile (10% contingency)	$	1,430
Crossing/Signal materials cost per mile (10% contingency)	$	1,320
Bridge/structure cost per route mile (10% contingency)	$	385
Tunnel cost per route mile (10% contingency)	$	385
South Fork-Samoa		
Track materials cost per mile	$	1,500
Crossing/Signal materials cost per mile	$	1,200
Bridge/structure cost per route mile	$	350
Tunnel cost per route mile	$	350
Low value tools per track maintainer	$	2,500
Low value tools per signal maintainer	$	1,000
NCRA track miles		
Lombard-Willits		141
Willits-South Fork		85.3
South Fork-Samoa		74.2
NCRA track miles: Tunnels		
Lombard-Willits		141
Willits-South Fork		85.3
South Fork-Samoa		74.2
NCRA track miles: Bridges		
Lombard-Willits		141
Willits-South Fork		85.3
South Fork-Samoa		74.2

	0.75
	2.95
	0.82
	1.8
	0.85
	1.19

Cost Input Sheet II (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Un its	Regular	Overtime	Fringe	Total	Employees/Un its	Regular	Overtime	Fringe	Total	Grand Total
Insurance and Claims																					
Total Insurance and Claims					$ -					$ -					$ -		200000			$ 200,000	***$ 200,000***
Assumptions																					
Liability Insurance	$ 200,000																				
Property and compehensive protection																					
Non-insured passengers/workers compensation																					
Self insurance retention																					
General and Administrative																					
Labor																					
President			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 120,000	$ 12,000	$ 54,000	$ 186,000	$ 186,000
Administrative assistant			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 30,000	$ 3,000	$ 13,500	$ 46,500	$ 46,500
VP of Marketing			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Sales Manager			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
Chief Mechanical Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Chief Engineer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Eng. Admin. Assistant			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 30,000	$ 3,000	$ 13,500	$ 46,500	$ 46,500
Chief Financial Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 85,000	$ 8,500	$ 38,250	$ 131,750	$ 131,750
Controller			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Human Recourses Manager			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 55,000	$ 5,500	$ 24,750	$ 85,250	$ 85,250
FRA Safety and Training Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 50,000	$ 5,000	$ 22,500	$ 77,500	$ 77,500
Transportation Officer			$ -	$ -	$ -			$ -	$ -	$ -			$ -	$ -	$ -	1	$ 70,000	$ 7,000	$ 31,500	$ 108,500	$ 108,500
Labor Sub-total			***$ -***	***$ -***	***$ -***		***$ -***	***$ -***	***$ -***	***$ -***		***$ -***	***$ -***	***$ -***	***$ -***	***12***				***1,170,250***	***$ 1,170,250***
Other																					
Contract legal, accounting and consulting services					$ -					$ -					$ -					$ 180,000	$ 180,000
Telecommunications					$ -					$ -					$ -					$ 12,000	$ 12,000
Telephone equipment rental					$ -					$ -					$ -					$ 6,000	$ 6,000
PC rentals					$ -					$ -					$ -					$ 12,000	$ 12,000
Copiers					$ -					$ -					$ -					$ 18,000	$ 18,000
Office supplies					$ -					$ -					$ -					$ 600	$ 600
Payroll Services															$ -					$ 1,920	$ 1,920
Postage															$ -					$ 600	$ 600
Travel and meetings					$ -					$ -					$ -					$ 6,000	$ 6,000
Office lease					$ -					$ -					$ -					$ 72,000	$ 72,000
Other Sub-total					$ -					$ -					$ -					$ -	$ 309,120
Total General Administrative					$ -					$ -					$ -					$ -	***$ 1,479,370***

Assumptions		
Fringes		45
Legal, accounting and consulting fees per month	$	15,000
Advertising per month	$	2,000
Telecommunications per month	$	1,000
Phone equipment per month	$	500
Personal computers		20
PC rentals per month	$	50
Copiers		3
Copier rental per month	$	500
Office suppies per month	$	50
Payroll services per month	$	160
Postage per month	$	50
Coffee and water per month	$	50
Subscriptions per month	$	50
Travel and meetings per month	$	500
Office lease per month (includes janitorial services)	$	6,000

Cost Input Sheet II (cont.)

	Schellville to Willits: Petaluma/Cloverdale and Ukiah Crew Base					South Fork to Samoa: Eureka Crew Base					Willits to South Fork: Island Mountain/Willits					Administrative Offices: Willits					
	Employees/Units	Regular	Overtime	Fringe	Total	Employees/ Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Employees/Units	Regular	Overtime	Fringe	Total	Grand Total
Vehicle/Equipment					**$ -**					**$ -**					**$ -**					**$ 540,540**	**$ 540,540**
Vehicle and truck expense per month	$ 45,045																				
Fuel																					
Price per gallon	$ 1.00					$ 1.00					$ 1.00										
Gallons per train mile	2.79					0.98					2.08										
Anticipated number of gallons of fuel	113256					16560					92976										
Anticipated number of train miles	40560				40,560	16,960				16,960	44616				44,616						
Allowance for spillage and idling	10%					10%					10%										
Total Fuel	$ 124,582				$ 124,582	$ 18,216				$ 18,216	$ 102,274				$ 102,274					$ -	***$ 245,071***
Equipment Expenses																					
Locomotive Leases	2	$ 40,000			$ 80,000	2	$ 40,000			$ 80,000	2	$ 40,000			$ 80,000					$ -	$ 240,000
Cars					$ -					$ -					$ -					$ -	$ -
Demurrage																					
Car Hire 5 days for OS I, 7 days for OS II																				$ 215,096	$ 215,096
Total Equipment Expenses					***$ 80,000***					***$ 80,000***					***$ 80,000***					***$ 215,096***	***$ 215,096***
Assumptions																					
Locomotive lease per year	$ 40,000																				
Demurrage per Month	$ 42,000																				
Car Hire Per Year	$ 215,096																				
Car lease per year																					

Summary of All Categories	
Transportation (different due to forecast year)	$ 1,214,870
Mechanical	$ 726,346
Equipment/Automotive	$ 540,540
Equipment/Vehicles	$ 3,924,861
Insurance	$ 200,000
General and Administrative	$ 1,479,370
Fuel	$ 245,071
Locomotive Lease	$ 240,000
Car Hire / (Demurrage) (different due to forecast year)	$ 146,460
Total Expenses	$ 8,717,518

Vehicles for the *Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January 2003

Cost Center	Vehicles	Number	Type	Lease rate (per mo.)	Lease (per year)	Operating Costs (per year)	Total (per year)
MOW	Bridge Gang	1	Boom truck	$ 3,500	$ 42,000	$ 5,415	$ 47,415
MOW	Welding	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
MOW	Grade crossing	5	Pick up	$ 800	$ 48,000	$ 27,075	$ 75,075
MOW	Chief Engineer	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
MOW	Bridge Supervisor	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
MOW	Signal Supervisor	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
MOW	Project Manager	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
MOW	Track Gang	4	Spot Tamper	$ 5,000	$ 240,000	$ 21,660	$ 261,660
		4	Hyrail backhoe	$ 3,500	$ 168,000	$ 21,660	$ 189,660
MOW	Track Gang	1	Hyrail Speedswing	$ 4,000	$ 48,000	$ 5,415	$ 53,415
		1	Excavator	$ 2,000	$ 24,000	$ 5,415	$ 29,415
					MOW	**Total**	**$ 731,715**
	CEO	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
	Transportation Officer	1	Pick up	$ 800	$ 9,600	$ 5,415	$ 15,015
	Transload Facility	1	Fork Lift	$ 800	$ 9,600	$ 5,415	$ 15,015
						G&A Total	**$ 45,045**
						Grand Total	**$ 776,760**

Appendix D
Interviews for Financial Model

Stephen Benson, Consultant to Northwestern Pacific Railway, 6/21/02: Discussed tariff and assumptions regarding car hire and demurrage.

Jerry Johnson, Assistant Vice-President, Short Line Development, Burlington Northern Sante Fe Railroad, 6/10/02: Discussed possibility of BNSF connecting with California Northern Railroad instead of the Union Pacific Railroad. Also discussed general tariff and other pricing issues.

Dave Parkinsen, California Northern Railroad, 6/12/02: Discussed current operations on the California Northern and their operating practices.

Mike Ongerth, Consultant, former Superintendent for the Southern Pacific Railroad on the Northwestern Pacific Railroad, 1980-1982. Discussed the conditions and maintenance practices through the Eel River Canyon.

John Darling, CEO of the Northwestern Pacific Railway, 6/6/02: Discussed operating practices of the Northwestern Pacific Railway and costs of maintaining the railroad.

Rick Morehead, Dispatcher Northwestern Pacific Railway (1996-1997), 6/3/02: Discussed dispatching of the railroad and what the train compositions were just before they ceased operation in 1997.

Bill Bremer, Chief Marketing Officer, Northwestern Pacific Railway LLC 11/26/03: Discussed tariff for proposed service.

Appendix E
Quality Assurance/Quality Control

PB QUALITY ASSURANCE/QUALITY CONTROL

PB is an ISO-9001 certified firm that ensures a strict Quality Control structure. It is PB's policy that no document shall be released or officially transmitted to the client or any third party without having received a suitable internal quality review. All work performed under this contract will be conducted in accordance with the overall PB Quality Control/Quality Assurance Manual. As with all PB projects, PB will establish a Project Quality Control Plan (PQPC) and Project Management Plan specifically for this project. The PQCP will define specific roles and responsibilities of the PB Team with respect to quality control /quality assurance; procedures for performing, checking and reviewing the services based on the assignment; set standard practices to be met; set procedures for document control and record keeping; and specific measures of quality assurance.

Appendix F
Railroad Technical Advisory Committee

Harbor District:

David Hull
CEO, Project Manager

Ron Fritzsche
Commissioner

Dennis Hunter
Commissioner

City of Eureka:

David Tyson
City Manager

Jack McKellar
Councilmember

Virginia Bass Jackson
Councilmember

County of Humboldt:

Kirk Girard
Director of Community Services

Bonnie Neely
Supervisor

Jimmy Smith
Supervisor

Caltrans District 1:

Theda Hawkinson

Cheryl Willis

Humboldt County Association of Governments:

Spencer Clifton

Mendocino Council of Governments:

Phil Dow

North Coast Rail Authority:

Doug Christy
Team Leader

Appendix G
Rail Operations Analysis Methodology

Northwestern Pacific Railroad Financial Feasibility Study

Rail Operations Analysis Methodology

Purpose

A rail network computer model of the study area of the North Western Pacific route between Schellville and Samoa was developed to simulate anticipated train operations. This modeling instrument accurately represented the characteristics of the rail infrastructure, realistically simulated train movements and identified dispatching conflicts. It presented accurate comparisons of rail network performance associated with, trip time analysis, capacity, and train delays at specified levels of service for current and proposed changes to infrastructure and train operations. In addition, it served as the cornerstone for the development of integrated operating plans and capital improvements that address the service priorities of the NCRA, while supporting the Caltrans statewide rail transportation goals. This working model was designed as a flexible tool that is easily modified and upgraded. It provides significant utility in evaluating the operational and infrastructure improvements that ultimately result in achieving the operational and service objectives of the Port of Humboldt, line shippers and the NCRA.

Background and Model Selection

There are a multitude of simulation software systems available for use in rail operations and capacity planning. The consultant team is a licensed user of three modeling/simulation software systems. It was determined that the best tool for this project is was the Berkeley Simulation Software (BSS) Rail Traffic Controller (RTC) model.

The RTC modeling software is a sophisticated program designed to realistically simulate both freight and passenger rail operations either in a planning environment ***or an online control center***. The characteristic that sets RTC apart from all other rail modeling instruments is that it resolves complex multi-train conflicts in realistic ways. It has proven to be fully capable of handling any many levels of train and/or track complexity. that we have given it. It does not simply resolve conflicts between pairs of trains, but rather looks globally at multi-train conflicts in much the same way as a dispatcher in a control center would.

The logic is also cost based. As the model dispatches, each train's cost and performance are constantly recomputed to ensure that high-priority trains stay on schedule to the extent possible, for a given track configuration. It is the dynamic costing and multi-train view that enables RTC to approximate the performance of a train dispatcher. In addition, RTC accurately depicts train movements in dark territory or can apply a complete interface for specifying signals with up to 5 aspects.

In addition, the history of successful capacity planning projects using this system is well documented over the past several years. RTC is now the standard among freight railroads and is becoming the standard for passenger operations. The majority of the Class I Railroads, including the UPRR, BNSF, CSX, Amtrak, KCS, TFM (Mexico) and others, have selected RTC for operations planning and capacity analysis.

Other features of RTC that are particularly valuable include the ways in which it displays simulation results. While timetables and time-distance charts are useful for analysis on simple networks, they do not show conflict resolutions at a sufficient level of detail. RTC solutions are displayed in all the traditional ways, but it is the animation with its multitude of color modes that brings the solution to life. Everything from train costs and schedule adherence to train lengths are viewed on one screen. The integrity of solutions are clearly illustrated, is verifiable and presentable without examining abstract reports.

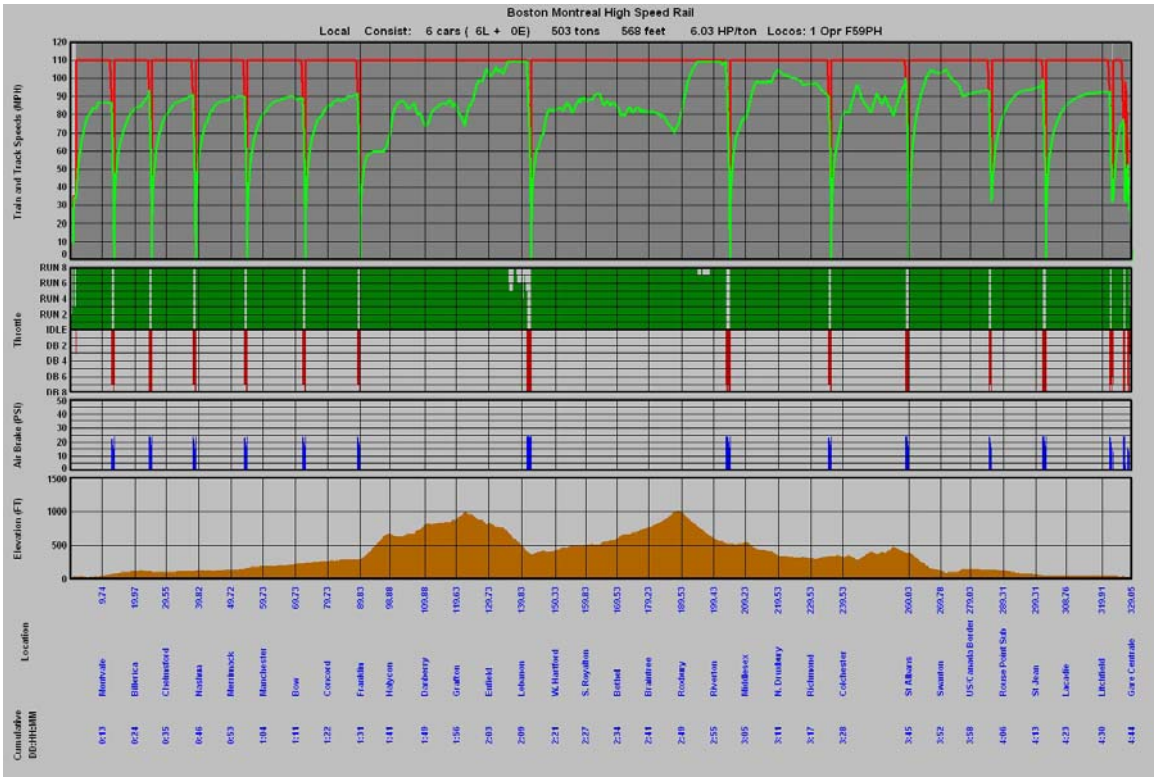
Other simulation systems currently in use require a post-processor to convert the run data into a graphical display form that can be viewed and analyzed. This additional step is time-consuming and compromises the integrity of results because the output data must be modified to make it presentable to operating personnel. This is not required when using RTC because what you see in animation is the genuine solution that the software has found.

Traditional event-based simulations may be adequate at modeling simple mainline track segment configurations, but they have not proven to be very responsive to larger, or more complex networks. This is especially important in shared-use corridors where the dynamics of passenger and freight trains require a dispatching logic that effectively addresses meet, pass, overtake and intensive interlocking routing issues. In summary, RTC was selected for this effort because of proven track record in being able to accurately simulate a full range of rail networks. Furthermore, results of RTC simulations have been accepted as evidence as part of legal proceedings in court cases involving railroads.

Features of the RTC Model

Evaluating Train Performance

RTC contains a uniquely effective user-friendly train performance calculator (TPC). This tool was used for to compute minimum run times for trains running from one specified point to another over the NWP route without interference from other trains. Experimentation with various stopping patterns, routing configurations, dwell times and locomotive and train-set types provided the ability to identify the most effective scheduling/dispatching solution for a particular train type, service attribute and associated specific physical characteristics.



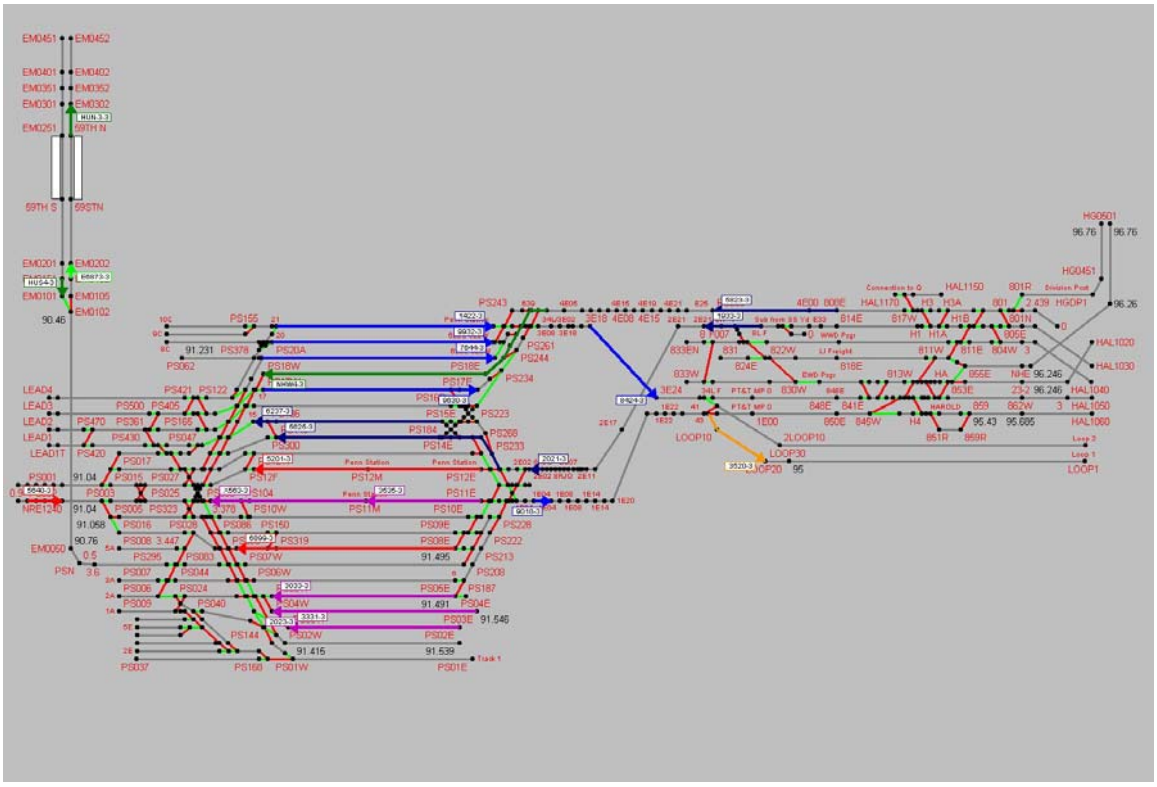
TPC Speed Profile

Developing Realistic Operating Plans

RTC eliminated the traditional practice of developing schedules and train movement alternatives based on average run times, an oversimplification that historically contributed to unachievable operating plans. Arrival and departure times (as well as other parameters) were modified using RTC to improve schedules and craft the most fluid train dispatching scenarios.

Train movements were simulated with the goal of achieving a cost-effective, overall system solution. This approach provided results based upon examination of varying departure times, dwell times for trains picking up and setting off cars, and the dynamics of speed variables in order to test the robustness feasibility of schedules, and the capabilities of the physical plant.

In summary, the RTC model replicated and predicted actual train movements, accurately identifying feasible trip times, crew assignments and operating cost statistics. Each simulation case analysis delivered precise comparisons of capacity and speed and trip time at specific (and varied) levels of train service within a specified definition of infrastructure and physical characteristics.



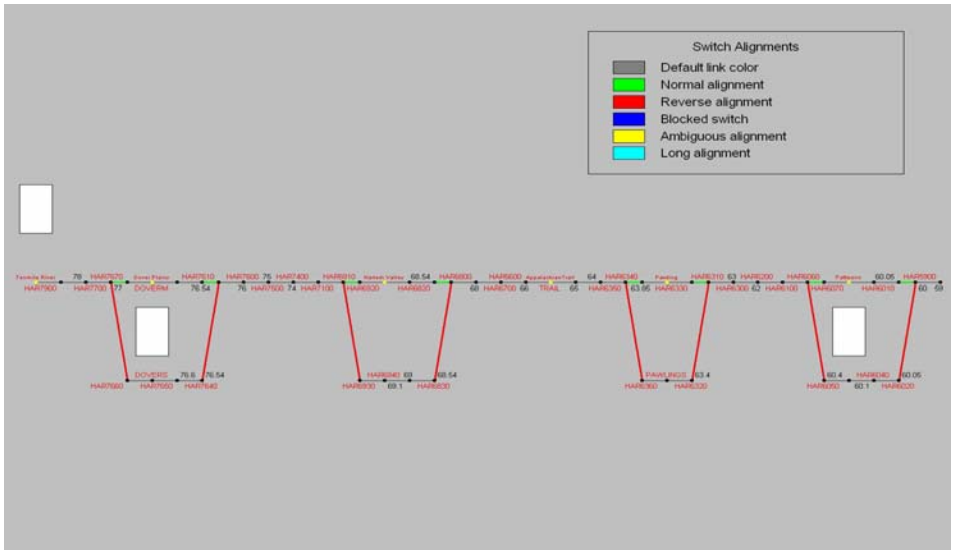
Network with Trains Running

Adding New Service

The effects of adding new trains to the corridor were evaluated using the RTC model. The simulation measured performance resulting from new service by specific train as well as at the more aggregated levels of all trains over the entirel route. These simulations were defined with sufficient duration to encompass all days of the week to duplicate and examine different service requirements, i.e. every other day versus daily, etc.

Evaluating Passing Sidings

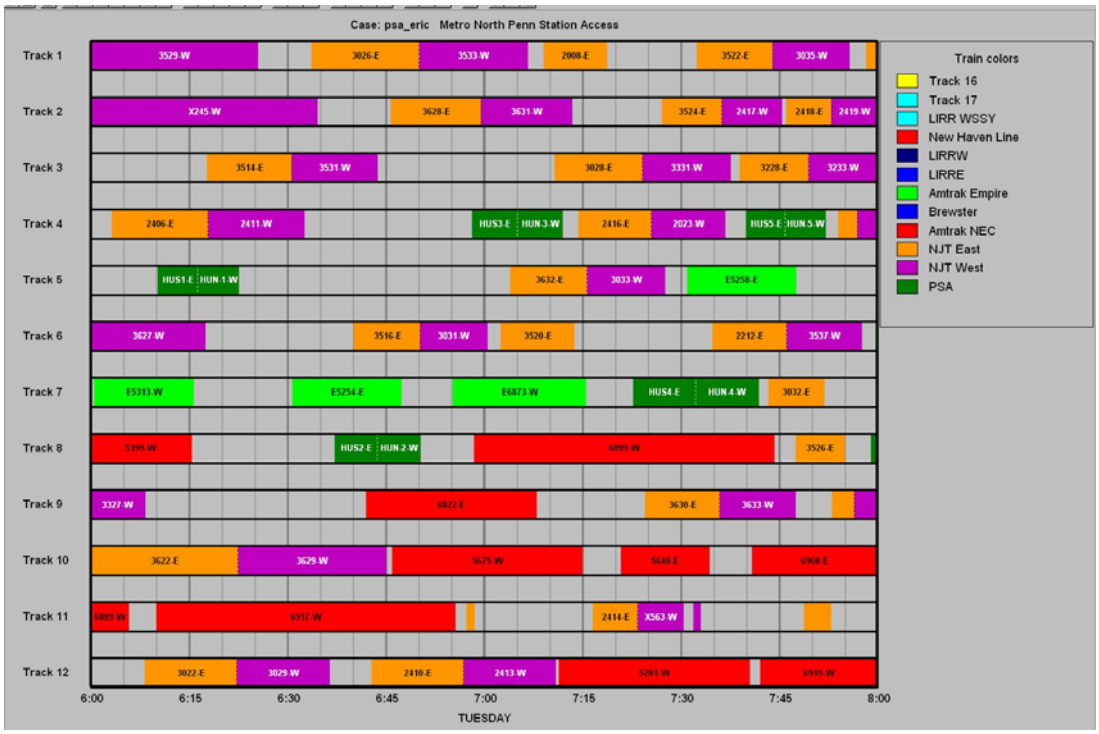
The utility of passing sidings or long segments of main track in multiple track territory is determined by their size and location. The location and size for a passing siding or additional main track segment varies based upon speed limits and service requirements. The RTC simulation model contributed to the analysis which determined whether sidings were of appropriate length and location for the size and speed of the trains being operated, and in identifying the best train sizes and operating speeds to match a specific track configuration.



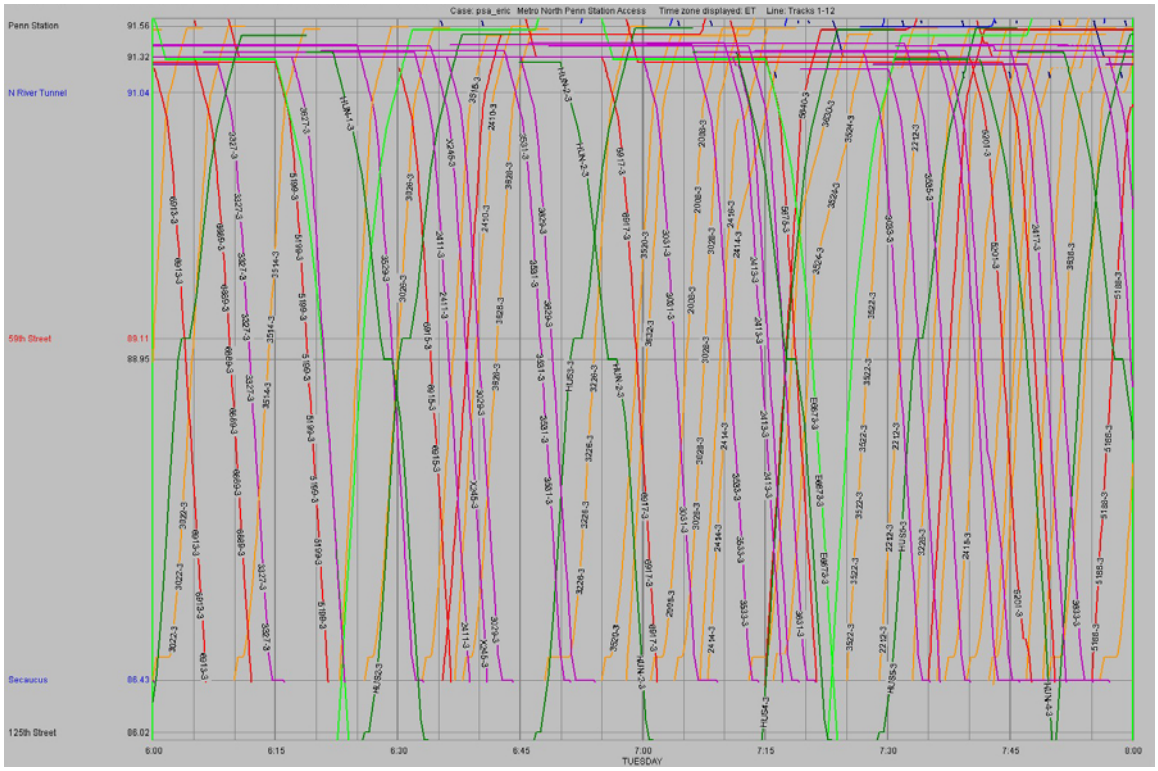
Sidings

Stringlines and Track Occupancy Charts

In addition to producing traditional stringline graphs (time/distance plots), RTC generates track occupancy charts that display which trains occupy specific tracks at any time through the simulation. This is very useful for identifying "slots" at station platforms, and for evaluating track utilization in yards and intermodal facilities. The times displayed for a train are from head-end arrival to rear-end departure. These track occupancy graphics also provide a clear picture of train "linkages". For example, in the following track occupancy graphic, train 3516E arrives into track 6 and departs as train 3031W. Conversely, train 3520E on track 6 retains its identity and departs eastward. The trains are displayed in their proper time slots, thus providing the ability to observe train movements in either a "turn" (3516E to 3031W) or a "run-through" (3520E to 3520E) dynamic.



Track Occupancy Chart



Stringline Graph

Description of the RTC Simulation Model Primary Functional Modes

Network Creation and Modification

Defines and builds the track and signal network and modifies parameters in existing networks. This mode specifies the infrastructure configuration that replicates the physical characteristics and control system of the railroad to be modeled.

Single Train TPC

Simulates the performance of one train running through a network without interference from other trains to obtain a minimum achievable physical run time.

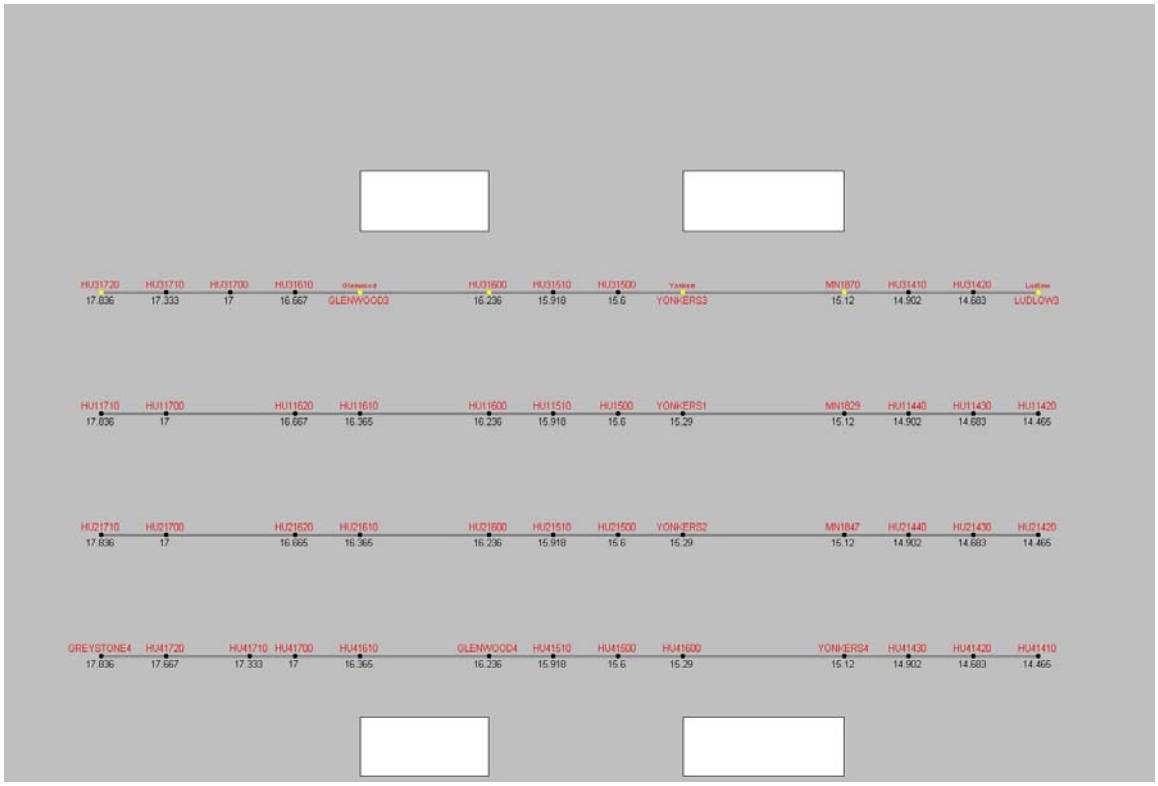
Full train dispatch simulation

Simulates the movement of many trains interacting with one another throughout a the network. While in this mode, RTC applies the operating rules in effect to resolve both following and opposing movements between trains. All train performance computations are fully integrated with the conflict-resolution and path-seeking logic. RTC identifies, accumulates and reports train delays by individual train as well as by train type.

RTC Networks

The fundamental building blocks resident in RTC networks are "links" and "nodes". Nodes represent specific locations and links represent the track connecting the nodes. Only when an accurate description of track and signal layouts using links and nodes is defined in the model can useful results be obtained.

The ***minimum*** level of network detail in RTC requires nodes that represent switch points, foul points, signal block boundary locations, station stops, speed change locations and major grade change locations. The corresponding links connecting the nodes are coded with accurate lengths and speed limits (maximum authorized speed), while the ruling grades are computed from the elevations. Networks can be refined further with link curvature and tightly spaced nodes to increase the accuracy of the train performance computations over specific track geometry.



Links and Nodes

RTC's TPC

The integrated TPC utilizes accurate locomotive and trainset performance specifications in addition to length, weight, etc. The TPC applies this data in combination with tractive effort curves, dynamic braking curves and air brake characteristics to replicate the dynamics of each specific trainset traveling over the defined physical characteristics of the network.

Appendix H
Sources

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Assumptions	Value	Source
Inflation	2.85% per year	PB
		BST Associates
		American Association of Railroads, *Railroad Ten-Year Trends 1991-2000*
Tariff Rates (Freight)	Dependant on Zone	Freight Tariff NWP 8000, Issued January 1, 2000 Effective January 15, 2000
Rate Increase (Freight)	2.85% per year	PB
		BST Associates
		American Association of Railroads, *Railroad Ten-Year Trends 1991-2000*
		Federal Railroad Association (www.fra.dot.gov/policy /freight4.htm
		Surface Transportation Board, *Rail Rates Continue Multi-Year Decline* , December 2000
Market Growth Rate (Freight)	0% per year	PB
		BST Associates
		Regional Economic Studies (see report for specific references)
Tariff Rates (Excursion)	Dependant on Route	PB interviews with excursion railroads
Rate Increase (Excursion)	2.85% per year	PB
		BST Associates
Market Growth Rate (Excursion)	1% per year	PB
		BST Associates
		Regional Economic Studies (see report for specific references), tourism growth to the region.
Assumptions for Cost Model		
All labor positions show are "per year" unless otherwise noted, and reflect straight salary without fringe or overtime. Fringe of 45% and overtime of 10% is applied to all labor positions.		
Transportation		

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Freight Labor			
Engineer	$	35,000	NWPY, 2000 Budget
Conductor	$	31,200	NWPY, 2000 Budget
Supervisor (Train Master)	$	50,000	NWPY, 2000 Budget
Chief Dispatcher	$	45,000	NWPY, 2000 Budget
Dispatcher	$	35,000	NWPY, 2000 Budget
Freight Agent	$	30,000	NCRA
Transportation Assumptions			
Tools per operator	$	100	Sonoma-Marin Rail Plan, 1999
Mechanical			
Labor			
Diesel Mechanic	$	36,000	Sonoma-Marin Rail Plan, 1999
Car Mechanic	$	34,000	Sonoma-Marin Rail Plan, 1999
Supervisor (Mechanical)	$	55,000	NWPY, 2000 Budget
Transload Facility			
Foreman	$	35,000	NCRA
Laborer	$	26,000	NCRA
Maintenance of Equipment Assumptions			
Car Miles (8 miles per train mile on OS I, 10 mi on OS II)		Dependant on Operating Scenario	Page 22 of NWPY, 2000 Budget
Train Miles		Dependant on Operating Scenario	PB
Car material cost per car mile	$	0.10	NWPY, 2000 Budget
Locomotive material cost per train mile	$	2.00	NWPY, 2000 Budget/Metro North
Low Value tools and Equipment		100	Sonoma-Marin Rail Plan, 1999
Maintenance of Way			

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Labor			
Project Manager	$	50,000	NWPY, 2000 Budget
Environmental Officer	$	45,000	NCRA
Track			
Foreman	$	35,000	NWPY, 2000 Budget
Operator	$	31,200	NWPY, 2000 Budget
Laborer	$	26,000	NWPY, 2000 Budget
Supervisor (Track)	$	70,000	NWPY, 2000 Budget
Welder	$	35,000	NWPY, 2000 Budget
Welder Laborer	$	26,000	NWPY, 2000 Budget
Signals			
Signals/Grade Crossing Maintainer (Supervisor)	$	55,000	NCRA
Signals/Grade Crossing Maintainer	$	37,440	NWPY, 2000 Budget
Bridge			
Foreman	$	35,000	NWPY, 2000 Budget
Operator	$	31,200	NWPY, 2000 Budget
Laborer	$	26,000	NWPY, 2000 Budget
Supervisor	$	46,000	NWPY, 2000 Budget
Bridge Tender	$	31,200	NCRA

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Maintenance of Way Assumptions			
Lombard-Willits			
Track materials cost per mile	$	1,500	HNTB
Crossing/Signal materials cost per mile	$	1,200	NWPY, 2000 Budget/Metro North
Bridge/structure cost per route mile	$	350	HNTB
Tunnel cost per route mile	$	350	HNTB
Willits-South Fork			
Track materials cost per mile (10% contingency)	$	1,650	HNTB
Crossing/Signal materials cost per mile (10% contingency)	$	1,320	HNTB
Bridge/structure cost per route mile (10% contingency)	$	385	HNTB
Tunnel cost per route mile (10% contingency)	$	385	HNTB
South Fork-Samoa			
Track materials cost per mile	$	1,500	HNTB
Crossing/Signal materials cost per mile	$	1,200	HNTB
Bridge/structure cost per route mile	$	350	HNTB
Tunnel cost per route mile	$	350	HNTB
Low value tools per track maintainer	$	5,000	Sonoma-Marin Rail Plan, 1999
Low value tools per signal maintainer	$	1,000	Sonoma-Marin Rail Plan, 1999
NCRA track miles			
Lombard-Willits		141	PB
Willits-South Fork		85.3	PB
South Fork-Samoa		74.2	PB
Vehicles (See Table 2)	$	603,870	NCRA
Ultrasonic Testing per year	$	35,000	PB
Insurance and Claims Assumptions			
Liability Insurance (per year)	$	200,000	NWPY audited financial statement 1997
General and Administrative			

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Labor			
President	$	120,000	Sonoma-Marin Rail Plan, 1999
Administrative assistant	$	30,000	Sonoma-Marin Rail Plan, 1999
VP of Marketing	$	70,000	NWPY, 2000 Budget
Sales Manager	$	55,000	NWPY, 2000 Budget
Chief Mechanical Officer	$	70,000	NWPY, 2000 Budget
Chief Engineer	$	70,000	NWPY, 2000 Budget
Eng. Admin. Assistant	$	30,000	Sonoma-Marin Rail Plan, 1999
Chief Financial Officer	$	85,000	NWPY, 2000 Budget
Controller	$	50,000	Sonoma-Marin Rail Plan, 1999
Human Recourses Manager	$	55,000	NCRA
FRA Safety and Training Officer	$	50,000	NCRA
Transportation Officer	$	70,000	NCRA
Labor Sub-total			
Assumptions			
Legal, accounting and consulting fees per month	$	15,000	Sonoma-Marin Rail Plan, 1999
Advertising per month	$	2,000	NCRA
Telecommunications per month	$	1,000	Sonoma-Marin Rail Plan, 1999
Phone equipment per month	$	500	Sonoma-Marin Rail Plan, 1999
Personal computers		20	Sonoma-Marin Rail Plan, 1999
PC rentals per month	$	50	Sonoma-Marin Rail Plan, 1999
Copiers		3	Sonoma-Marin Rail Plan, 1999
Copier rental per month	$	500	Sonoma-Marin Rail Plan, 1999
Office supplies per month	$	50	Sonoma-Marin Rail Plan, 1999
Payroll services per month	$	160	Sonoma-Marin Rail Plan, 1999
Postage per month	$	50	Sonoma-Marin Rail Plan, 1999
Coffee and water per month	$	50	Sonoma-Marin Rail Plan, 1999
Subscriptions per month	$	50	Sonoma-Marin Rail Plan, 1999
Travel and meetings per month	$	500	Sonoma-Marin Rail Plan, 1999
Office lease per month (includes janitorial services)	$	6,000	Sonoma-Marin Rail Plan, 1999

Major Assumptions Used for *The Long Term Financial and Economic Feasibility of the Northwestern Pacific Railroad*, January, 2003

Fuel		
Price per gallon	$ 1.00	AMTRAK / NCRA
Gallons per train mile	See appendix C in report	PB
Anticipated number of gallons of fuel	See appendix C in report	PB
Anticipated number of train miles	See appendix C in report	PB
Allowance for spillage and idling	10%	Sonoma-Marin Rail Plan, 1999
Equipment Expenses		
Assumptions		
Locomotive lease per year	$ 40,000	NWPY, 2000 Budget
Demurrage per Month	$ 7,000	Steven Benson, consultant to NWPY, phone conversation 6/21/02
Car Hire Per Year: $20 a day per car X 5 days on NWP X number of cars per year	See Table 10-1 in report	Steven Benson, consultant to NWPY, phone conversation 6/21/02