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E-Filing

Ms. Cynthia T. Brown
Chief, Section of Administration
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

Re: STB Docket 1305X
Great Redwood Trail Agency, formerly named North Coast
Railroad Authority – Ab Exemption -- in Humboldt, Trinity
and Mendocino Counties, CA

Dear Ms. Brown:

Great Redwood Trail Agency (“GRTA”), formerly named North Coast Railroad Authority (“NCRA”), pursuant to the protective order entered in this proceeding on October 13, submits a motion contesting OFA-applicant Mendocino Railway’s designation of what amounts to its entire case on financial responsibility and rail need/feasibility for Highly Confidential treatment. The motion also notes that Mendocino Railway on the face of the OFA fails to show financial responsibility and in conjunction with a report discussing inter alia the sole shipper on which it relies, has not established rail need or feasibility.

GRTA anticipates filing additional and more specific documents supporting rejection of Mendocino Railway’s OFA inter alia for failure to establish financial responsibility and rail need/rail feasibility as required under 49 CFR

1152.27(c)(1)(iv)(B) & (E), and otherwise reserves all rights to seek dismissal of any OFA in this proceeding.

By my signature below, I certify service by email attachment on October 18, 2022 upon all parties listed by the Board for service in this proceeding.

Thank you for your assistance in this matter.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Ch. H. Montange', with a stylized flourish at the end.

Charles H. Montange
for Applicant

Att: Motion to Redesignate, etc.

cc (w/att.) all parties per STB docket list

Elizabeth Coleman, Esq. (for Applicant) (by email)

BEFORE THE SURFACE TRANSPORTATION BOARD

Great Redwood Trail Agency, formerly North)
Coast Rail Authority –) AB 1305X
Abandonment Exemption –)
In Mendocino, Trinity and Humboldt Counties, CA)

Great Redwood Trail Agency's
Motion to Re-Designate Portions of "Highly Confidential" Designations to
"Public" or Merely "Confidential" Status under the Protective Order
and for Other Appropriate Relief

This is a motion by Great Redwood Trail Agency (GRTA) pursuant to paragraph 6 of the protective order applicable in this proceeding to challenge the "highly confidential" designation which OFA-applicant Mendocino Railway (MR) has placed on the entirety of certain key documents. The "highly confidential" designations to the extent challenged here are unjustified, obstruct the preparation of appropriate responsive pleadings and meaningful discussion of key issues with decisionmakers, and despite good faith efforts by GRTA's counsel, have not been resolved through discussions to date with counsel for MR.

Background. This Board entered a protective order in this proceeding by decision served October 13, 2022.¹ The protective order provides that any party “may challenge the designation of any other party of information of documents as “CONFIDENTIAL” or “HIGHLY CONFIDENTIAL” by filing a motion with the Board.

Paragraph 1(b) of the order insofar as relevant here defines “confidential information” to mean “traffic data ...; the identification of shippers ... in conjunction with shipper-specific or other traffic data; the confidential terms of contracts with shippers or carriers; confidential financial and cost data; and other confidential proprietary business or personal information.”

Paragraph 3 of the protective order provides that “[i]f any party ... determines that any part of a document it submits ... contains “specific financing information or other competitively sensitive or proprietary information,” then the party may designate it as “Highly Confidential.”

“Confidential” information may be shared only with outside contractors and attorneys and employees or agents (in-house personnel) of a party that sign an undertaking set forth in Protective Order exhibit A.

¹ GRTA had proposed an alternative form, and generally objected to the form proposed by MR which was adopted by the Board. The Board did adopt two specific changes at GRTA’s request, including paragraph 15.

“Highly confidential” information may only be seen or shared by outside counsel and contractors who execute an undertaking set forth in Exhibit B to the protective order. No employees or in-house personnel of a party may be made privy to such information.

However, at GRTA’s behest, the protective order at paragraph 15 provides that “[i]nformation that is publicly available or obtained outside the proceeding from a person with a right to disclose it shall not be subject to the Protective Order even if the same information is produced and designated as “CONFIDENTIAL” or “HIGHLY CONFIDENTIAL.”

Specific Challenges to Designations

1. Shipper Letter at OFA pp. 140-42

This Board’s regulations require an OFA-applicant like MR to demonstrate rail need/rail feasibility. MR’s entire case on these key issues (see OFA at page 18) rests on a single shipper letter attached as Exhibit A (OFA pp. 140-42) to the Pinoli Verified Statement (OFA pp.121-38). The letter purports to adduce that shipper’s need for the line. However, MR has designated the entire letter, including the shipper’s very identity, as “Highly Confidential.”

On Saturday evening, within hours of receiving the OFA, GRTA’s counsel noted to MR’s counsel concerns over such a broad black out of an essential

element of MR's case, as well as an apparent effort to introduce a support letter by that shipper into the proceeding without identifying to any party or its decisionmakers, much less the public, the identity of this quasi-party to the proceeding, much less what it was claiming. This kind of black-out of a key part of MR's case calls into question due process rights of the parties and the public, and if allowed would threaten the integrity of STB proceedings, because it would necessarily hamper case preparation by opposing parties. GRTA's counsel, reserving the right to challenge protected status for the entire letter, asked for immediate redesignation of the letter from HC to C so he could discuss it with GRTA staff. GRTA's counsel noted that GRTA in all events had long known the identity of the shipper from multiple other sources and would use that independent material publicly in any event.

On October 17, MR's counsel (Mr. Mullins) responded to the request for a change in designation as follows: "we cannot change the designation without the shipper's consent. The shipper requested us to designate the letter Highly Confidential due to concerns over being retaliated against for its support of our OFA." Mr. Mullins suggested that GRTA "obtain [the shipper's] consent to reducing the letter from HC to C. Absent the shipper's consent, we [MR] will not consent to your request." Email, Mullins (MR) to Montange (GRTA), Oct. 17, 2022. No one has identified any actual threat or potential threat in the nature of

“retaliation” to any shipper or potential shipper in this proceeding and counsel is aware of none. In general, shippers sometimes express concern about retaliation for complaints about rail service. NCRA/GRTA has not provided service to any shipper north of Willits since the 1998 embargo, and no shipper has requested service. NCRA/GRTA has thus not threatened anyone, has nothing to threaten them with, and would be ignored as a kind of joke if it claimed any capability to retaliate against a shipper. GRTA conjectures that MR and/or the shipper are thus concerned about general public perception of their activities.

With respect, paranoia (alleged “fear of retaliation” but really fear of public relations fall-out) concerning a filing at STB is NOT grounds for “Confidential” or “Highly Confidential” designations under the protective order. GRTA has no intention of making fear of public relations fallout a ground for protection by engaging in a pointless argument with the shipper, when MR professes to be hamstrung on the issue.

The relevant portion of the protective order defines material entitled to protection as “the identification of shippers ... in conjunction with shipper-specific or other traffic data.” The identity of the only possible potential shipper is well known.

In MR's "Verified Opposition to NCRA's Petition for Exemption from 49 U.S.C. 10904" filed in this proceeding on August 16, 2021, MR on page 14 identifies a number of shippers in Fort Bragg including inter alia Geo Aggregates, and then specifically notes that it is in discussions with Wylatti "which owns a quarry at Dos Rios (NWP 166.50) and moves 40,000 – 50,000 tons per year from there to Fort Bragg." Essentially all of the shippers identified by MR were in Fort Bragg except Wylatti which also does business as Geo Aggregates. As a result of MR's specific identification of shippers and MR's expressed business intent to cultivate shippers from Nashmead and Dos Rios (north of Willits) to Fort Bragg as well as to provide service from Willits to Fort Bragg, NCRA/GRTA began studying publicly available information concerning each shipper identified by MR to determine the extent possible the shipper's actual demand for rail, and whether it was feasible to provide rail service to that shipper.

As MR indicates ("Verified Opposition" supra), Wylatti mines gravel at Dos Rios. GRTA quickly ascertained that Grist Creek Aggregates is on highway 162 between Dos Rios and Longvale, and likewise confirmed that Wylatti, Grist Creek, and Geo Aggregates were linked and that Wylatti does business as Geo Aggregates.² More importantly, GRTA retained an expert consultant (Marie

² For example, Wylatti does business as Geo Aggregates per <https://opengovus.com/california-contractor-license/1041331>. Per Dunn and

Jones) to research and to compile a report entitled “MARKET ANALYSIS OF TRANSPORTATION ALTERNATIVES FOR MAJOR COMMODITIES BETWEEN “LONGVALE” AND THE CITIES OF FORT BRAGG AND/OR WILLITS.” A copy of that report, dated September 30, 2022 is attached as an Exhibit. The report provides extensive analysis of the potential freight use of the GRTA line segment from Longvale to Willits, but also to or from Fort Bragg because, based on MR’s August 16, 2021 filing, because prior to actual filing of its OFA, MR appeared to be hinging its case not simply on Longvale to Willits but on a run all the way to Fort Bragg. As can readily be seen, GRTA’s expert consultant concluded that there was no freight rail move between Longvale and Willits, or between Longvale and Fort Bragg, or between Willits and Fort Bragg, that made any economic sense. Report at 6-8 and 17. In short, trucks in all cases were cheaper for the move, and generally far cheaper. It follows that freight rail service can simply not be regarded as “needed” and moreover is not economically feasible and would bankrupt any entity that tries. This conclusion applied to all rail moves that would be possible for Wylatti dba Geo Aggregates between Longvale and Willits, or between Longvale and Fort Bragg.

Bradstreet, the principal (and per other sources the agent) of Grist Creek is the same as the owner of Wylatti. Identity information is also publicly available from mining permits in Mendocino County.

GRTA supplies the report at this time to demonstrate that Wylatti dba Geo Aggregates is well known as the only possible shipper on the Longvale to Willits segment, that it has been well known for a long time, and that this knowledge is totally independent of the shipper letter which MR has designated as “highly confidential” in this proceeding.

In light of MR’s own identification over a year ago of the identity of Wylatti dba Geo Aggregates to all parties in the proceeding and to the public at large, and the extensive study of this shipper already based on publicly available information, as manifest in the attached report from Marie Jones Consulting, it is pointless for MR to designate the entire shipper letter in its OFA for Highly Confidential or even Confidential treatment as a means to conceal the well-known identity of the shipper given the facts recited above.

This conclusion applies even if public relations fears or other paranoia were a ground for a “highly confidential” or “confidential” designation under the protective order, which they are not. Under the protective order, paragraph 15, GRTA is entitled publicly to identify Wylatti dba Geo Aggregates as the sole potential shipper in the Longvale to Willits segment whatever designation MR chooses to place on the shipper letter.

The only possible item in the shipper letter which GRTA’s counsel can identify that may qualify for “Confidential” designation is the forecast of carloadings and

tonnages set forth in the letter, because that in context is “shipper-specific” inasmuch as the identify of the only possible shipper is well-known from public sources. However, MR in effect has largely already disclosed that information. At page 14 of its August 16, 2021 pleading, MR indicates that Wylatti moves 40,000 to 50,000 tons per year from Dos Rios to Fort Bragg. Based on this and other factors, GRTA’s consultant in the report examined if rail was feasible for the Longvale to Willits segment for a movement of 70,000 cubic yards (the permitted maximum for Wylatti and Grist Creek at a projected Longvale rail head). Again, as the consultant shows, trucks are essentially an order of magnitude cheaper than rail (report at 6-7 and Table 5 p. 8). If MR were to change its case in favor of a Longvale to Fort Bragg move, the consultant indicates (Table 10 at p. 17) that trucks are still cheaper than rail. GRTA’s consultant in the report in essence shows that there is no traffic source for which freight rail service is feasible on these lines in Mendocino County.

If the Board determines the shipment level has effectively been disclosed by MR already (which is GRTA’s counsel’s opinion), then nothing in the letter merits even “Confidential” treatment. If the Board determines that the number in the letter still merits “Confidential” treatment notwithstanding the disclosure by MR already on August 16, 2021, then the exact tonnage (and related arithmetically derived carloadings) used in the letter are the only items that should be scrubbed

from the public version of MR's filing, and they would constitute the only portion of the document that could possibly remain "Confidential." In all events, the remainder of the document must be made public, for nothing in it merits "Highly Confidential" treatment.

2. MR Financial Responsibility Showing (OFA pp. 212-16)

MR also designated for "Highly Confidential" treatment its entire showing as to financial responsibility, namely a bank statement, its current balance, and a letter from its CFO discussing same. MR made an earlier version of its financial statement available to the public in connection with its Notice of Intent to File an OFA (see MR filing dated May 31, 2022, at Exhibit C), blacking out only its account numbers. By this earlier action, MR has effectively waived a claim to any protected status for its bank statement, other than for the bank account numbers themselves. When challenged on this by GRTA's counsel by email on the evening the OFA was filed and served (October 15), MR's counsel said that there was no protective order in place at the time of the notice of exemption. Email, Mullins (MR) to Montange (GRTA), 17 October 2022. This misses the point that if disclosure would have been damaging on May 31, MR could have requested a protective order in advance. This Board has already demonstrated that it can grant protective orders promptly in OFA proceedings, as it did in this one. MR simply did not ask, presumably because the amount of money in the Sierra Railroad

account on which it relied was not business-sensitive. If it was not sensitive enough to prompt MR to seek any protection then, MR has waived the right to claim it has suddenly become so sensitive it must be treated as “highly confidential” and concealed from all parties. To the contrary, the only material meriting protected status now as then is the specific account numbers in the statements.³

MR’s financial responsibility showing is critical, for if the Board finds MR lacks financial responsibility, then the Board must reject MR’s OFA as inadequate. Ironically, the bank statement and current balance set forth in OFA pp. 212-16 are insufficient to cover MR’s low-ball estimates for acquisition of the line (\$4,399,095 or alternatively \$5,483,039)⁴ and for rehabilitation (\$7,242,000).⁵ That warrants immediate rejection of the OFA, even without considering a full two years of operating and maintenance costs. See UP – Ab Exemption – in Rio Grande, et al Counties, CO, AB 33 (Sub-no. 132X) (financial responsibility includes showing ability to meet acquisition and two years of operating and

³ Mr. Mullins for MR offered a “compromise” by which MR would reduce the designation to "Confidential" allowing the material to be viewed by parties to the proceeding. At the very least, the Board must order the proffered compromise.

⁴ MR OFA at 16.

⁵ MR OFA at 15.

maintenance of actual rail service).⁶ MR's designation of its inadequate financial responsibility showing deprives virtually all parties of the opportunity to point out that MR's OFA is fatally deficient.

Obviously if the Board promptly rejects the OFA for failure to comply with either or both of 49 CFR 1152.27(c)(1)(iv)(B) & (E) (demonstration of financial responsibility and rail need/feasibility), or by reason that it is based on evidence and argument derived from an unlawful trespass and breach of STB regulations, then this motion concerning the protective order designations will be moot.

However, if the proceeding is nonetheless to continue, then MR's designation of its financial responsibility as "Highly Confidential" serves mainly to conceal its failure to show financial responsibility from the parties to the proceeding. This concealment threatens the due process rights of participants in this case.

Conclusion

Unless the Board moots the issue by rejecting the MR OFA first, the designations of the shipper letter and the financial responsibility showing for

⁶ GRTA's 1152.27(a) information filed September 15, 2022, valued the property at \$ 10,375,000 (p.11) and established rehabilitation costs at \$22,496,781 (p. 12). Obviously, MR fails to show anything approaching these amounts. MR argues that GRTA overstates these items, but GRTA is preparing to show that MR understates them. GRTA's point here is that MR cannot show responsibility adequate for its own numbers. GRTA reserves all rights.

Highly Confidential Treatment must be removed. The documents in question, or at least the bulk of the documents, should be public. The documents once public will indicate that MR lacks financial responsibility and (particularly in light of the Marie Jones report attached and other evidence GRTA expects shortly to adduce) also fails to demonstrate rail need or feasibility. In other words, the designations for Highly Confidential treatment must be removed because they are unwarranted on their face and they obstruct consideration of MR's failure to make the showings required in 49 CFR 1152.27(c)(1)(iv)(B) & (E).

Certificate of Service. I hereby certify service of the foregoing by email attachment on October 18, 2022 on all parties of record in AB 1305X per the STB website service list as of said date.

Respectfully submitted,

s/Charles H. Montange

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Exhibit: MARKET ANALYSIS OF TRANSPORTATION ALTERNATIVES
FOR MAJOR COMMODITIES BETWEEN “LONGVALE” AND THE CITIES
OF FORT BRAGG AND/OR WILLITS

For filing: 18 October 2022

MARKET ANALYSIS OF TRANSPORTATION ALTERNATIVES FOR MAJOR COMMODITIES BETWEEN “LONGVALE” AND THE CITIES OF FORT BRAGG AND/OR WILLITS



September 30, 2022

Prepared by: Marie Jones Consulting

Over 35 years, MJC has served numerous communities, businesses and non-profits in the areas of economic and market analysis, development feasibility analysis, land use planning, economic development, and environmental review. Marie Jones served as Community Development Director for the City of Fort Bragg for 13 years and worked for the San Francisco Partnership, Bay Area Economics, the Michigan Manufacturing Technology Institute, the Center for Economic Conversion, and Ithaca Neighborhood Housing Services. She holds a Masters in Regional Planning from Cornell University and a BS from the University of California at Santa Cruz.

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1. Executive Summary

This report explores freight options for moving goods and commodities from Longvale to Willits and from Willits to Fort Bragg. It makes the following key findings:

Longvale to Willits

- Longvale is a long-abandoned community located at approximately MP 152.5. The nearest business is Grist Creek, approximately two miles north and west on state highway 162, but with (gravel) mining permits at various locations along Outlet Creek.
- Aggregate is the only likely rail freight business from this location.
- Trucking is more price competitive than rail from Grist Creek/Longvale to Willits.
- Willits has multiple low-cost suppliers of aggregate, and it is a very price-competitive market. The lowest transportation cost per delivered ton of gravel to Willits is \$1.86/ton; a 13-mile rail line cannot compete with this pricing.
- Given (a) “net liquidation value” and rehabilitation cost estimates for Longvale to Willits exceed \$22,496,781 while property acquisitions costs are \$6,725,000 and (b) STB’s most recent railroad cost of capital determination is 10.37%, the Longvale to Willits segment must generate in excess of \$3,030,299 per year in revenue over and above overhead and operating expenses to constitute a viable investment. Gravel production along Outlet Creek inclusive of Dos Rios is limited by permits to 79,100 ton per year. This equates to a maximum of 988 carloads/year (assumes 100-ton cars, which hold a maximum of 80 tons/car). Total annual capitalization costs of \$3 million/988 carloads/year results in a per car cost of \$3,063. Additionally, annual operations costs are estimated at \$939,724 for this segment of rail line, which add a further \$950 to the cost of each rail car, for a total cost of \$4,014/railcar, which is much higher than the average trucking cost of \$211 for 80 tons of aggregate delivery (\$2.64/ton) from all sources to Willits Ca (see Tables 5 & 4, Page 7 & 8).

Conclusion: Rail is not competitive for freight transportation from Longvale to Willits, and the Longvale to Willits rail line is not financially feasible.

Willits to Fort Bragg

The Economy & Housing

- Mendocino County and the Mendocino Coast have flat population growth and a small regional economy. The total population of Mendocino County is only 86,061. Eighteen thousand people reside on the Mendocino coast and only 7,279 people live in Fort Bragg, CA.
- The Gross Domestic Product of Mendocino County is small (\$4.5 billion) and flat/declining, with an annual compound growth rate of -0.1%.
- Employers in Mendocino County lost 157 jobs (-0.35% growth) between 2010 and 2020.
- While natural resource sectors were a dominant force in the economy until about 1980, they have since declined significantly and now comprise less than 7% of jobs in the County as whole. The most likely commodities for freight transport are wood products, mined aggregates and manufactured goods.
 - Mining is a very small component of the economy (0.3%) and experienced a significant contraction from 121 jobs in 2010 to 71 jobs in 2020, a decline of 41%. Mining in Mendocino County is almost exclusively related to gravel and sand extraction.

- Forestry and Fishing has experienced a slight increase of 170 jobs (+12.36%) since 2010. Fishing products are not a suitable product for rail transport due to perishability. Timber is a difficult item to transport via rail because timber harvests take place in a very wide geographic area and transfer by rail would require a truck, rail and truck transfer scenario, with a corresponding increase in total transport miles and cost.
- Manufacturing is a relatively small sector of the Mendocino Coast economy. It represents just 6% of all jobs in Mendocino County and experienced a nominal growth of 1.86% over the past ten years.
- Mendocino housing production averages 148 units/year with just 0.36% annual growth rate.

Freight Options

- There is currently no operating rail freight service between Fort Bragg and Willits. Mendocino Railroad recently started to advertise freight services on the Skunk Train website at a rate of \$1,440/railcar or \$18/ton. However, this service is presumably a fiction or subcontracted to a trucking company as the train tracks are blocked by a tunnel collapse and thus unusable.
- Additionally, the advertised pricing must be hypothetical, as the Skunk Train would need to charge a higher rate to capitalize rail line repairs and recover operating costs. The total capitalization cost of repairing the rail line between Fort Bragg and Willits is \$19,934,331 per Mendocino Railroad's own estimate. Operating costs for this same line would amount to \$3,616,337/year. Capitalizing the repair costs at 10.37% amounts to \$2,084/rail car, given maximum realistic annual demand of 992 cars for this line. Spreading the operating costs across those same rail cars would add an additional \$3,646 in costs/railcar, bringing the total cost to \$5,730/railcar or \$71.62/ton. Even at this high and very uncompetitive freight rate the Skunk Train would not make any profit.
- Truck freight from Willits to Fort Bragg is currently provided by a variety of independent operators and trucking companies, which provide freight service either at an hourly rate of between \$145 and \$175/hour or at a mileage rate of \$9.50/mile for an average transport cost of \$305 for a 24-ton truck to \$500 for a 39-ton truck. These rates are significantly less than the "advertised" fictional rail line freight rate (\$1,440) or the more realistic capitalized rate \$5,730, even after adjusting for the smaller weight limit of truck transport (24-39 tons per load) versus rail transport (80 tons/car). The adjusted transport rates are as follows: 24-ton trucking rate is \$14.58/ton; the 39-ton freight truck rate is \$12.82/ton; and the realistic rail freight rate is \$71.62/ton.
- Including the Longvale to Willits acquisition and rehabilitation costs to the Willits to Fort Bragg costs results in a total freight cost per railcar of \$8,795. By comparison, delivery costs via truck from Longvale to Fort Bragg average the equivalent of only \$1,322/railcar or \$16.53/ton. Rail freight will cost six times (665%) more than truck freight (\$8,795/\$1,322) for the Longvale to Fort Bragg line.
- No freight services are provided via the Noyo Harbor, Soldiers Bay or the small Little River airport.

Skunk Train (aka Mendocino Railroad) as a Transportation Option

- Mendocino Railroad has many freight-related disadvantages in addition to uncompetitive pricing, including a discontinuous rail line, considerably longer transport time, more transfers and material handling, reliability issues, and legal limitations. In contrast, Mendocino Railroad offers a historic and charming excursion service for tourists which is well-loved. According to Mendocino's acquisition application, tourist excursion use was the line's source of revenue at acquisition in 2004. Tourism remains Mendocino Railroad's current source of revenue although the Railroad is increasingly involved in real estate development, where it argues that its status as an interstate railroad exempts it from otherwise applicable state and local regulation.

Supply & Demand for Various Commodities

- Many aggregate suppliers, pits and reclamation sites are sprinkled throughout the County. Transportation costs are a significant driver of gravel costs; therefore, having a gravel supply that is relatively close to areas with demand is a key success factor for suppliers.
- In general trucking gravel is currently half the cost and six times faster than proposed train service, additionally it does not require multiple mode transfers and extra material handling.
- A number of significant Caltrans capital improvement projects are planned for the Mendocino Coast, but most will happen before train service is re-established to Fort Bragg. In addition, rail freight would need significant subsidies to be competitive with truck freight.
- Contrary to claims repeatedly made by the Mendocino Railroad in denied Build grant applications, the only significant potential rail freight customers have little to no actual demand:
 - North Coast Brewery has no interest in rail freight for either the delivery of hops or the transport of finished beer, due to higher costs, unreliability, and time of transport.
 - If rates were competitive, Flow Beds could ship three railcars of latex per year, but only if Mendocino Railroad was connected to the interstate rail network. Due to an embargo imposed by the federal government as well as tunnel collapse south of Willits, it is not.
 - Timber is not a major market for rail transport. The lumber mill at Fort Bragg which used to ship out finished product permanently ceased operations approximately 20 years ago. The market to ship logs to mills in the Willits area is limited due to the vast geographical distribution of timber harvests and the need to transport logs out of the woods by truck. It is easier, more efficient, and less expensive to continue via truck to lumber mills which are generally located less than 1.5 hours away from the location of any given timber harvest.
 - All solid waste generated on the coast would fit in 1 railcar/day. However, rail freight is not a good fit because State law requires removal of all solid waste from a transfer station within 24 hours. In any event, the pertinent solid waste processing facility is in Ukiah which is not connected by rail to Fort Bragg or Willits.

Conclusion

Overall, there is little market demand for rail freight service between the Willits and Fort Bragg. Rail freight is not an economically viable business when needed rail rehabilitation and annual operating costs are considered. This raises the question of why Mendocino Railroad has expressed interest in an “OFA.” Mendocino Railroad (d/b/a) Skunk Train benefits from the fiction that it is a freight railroad on three accounts.

1. Pursuant to the pretense (legal fiction) that it is a freight railroad, the Skunk Train maintains that it is exempt from local land use control over their 300-acre coastal redevelopment project in Fort Bragg either as a “public utility” or pursuant to federal preemption under the ICC Termination Act.
2. The legal fiction is also presumably the basis on which Mendocino Railroad applies to the US Department of Transportation for Federal funds (and to the State of California) to fix the collapsed tunnel on its Fort Bragg to Willits line and otherwise to repair the rail line for tourist excursion purposes. A successful OFA would help Mendocino’s tourist excursion business maintain the fiction that it is a freight railroad and continue to apply for such funds.
3. Moreover, Mendocino Railway will likely contract with itself (or sister companies) to accomplish any federally funded reconstruction work and would likely make money off the construction effort. In the end, the chief

freight that would be moved on Mendocino/Skunk Train's line would be material for the reconstruction of the line, and not for freight customers of the line, because trucks are cheaper and more flexible.

Truck VS Train Trends (Appendix B)

Additionally, Appendix B of this report examines general transportation trends Nationwide, and finds that the results of this analysis hold true throughout the country, as follows:

- Nationwide truck shipments accounts for \$12,578 billion dollars of shipment value while rail ships \$837 billion worth of goods per year. Indeed 69% of the value of all freight shipments is by truck, while 5% of the value of all shipments is by rail nationwide.
- Trucks also ship more by weight. In 2016 the total weight of truck shipments was 11,619 million tons, while all goods shipped by rail weighed in at 1,835 million tons. By weight, trucks ship 66% of all goods, while railroads ship 10% of all goods.
- Rail is not even competitive with truck freight in "ton miles traveled." Trucks move 40% of all freight by ton miles traveled (2,023 billion) while rail moves 28% (1,527 Billion) of all freight by ton miles traveled.
- Train as a transport mode is in decline. Overall rail carloads declined from 1.5 million in 2000 to a little over 1 million in 2022. Truck freight on the other hand increased by 50% from 2002 through 2022.
- Finally, there is no rail freight activity on the Northern California coast or 101 corridor and very little rail freight activity through the Central Valley. Most rail freight activity is from major shipping ports on the west coast to population centers in the Midwest and east coast.
- Nationwide trends indicate that rail service is not competitive with truck transport, especially for short haul distances such as Longvale to Willits (13 miles) and Willits to Fort Bragg (40 miles).

2. Market Analysis of Transportation Alternatives Between Longvale and Willits

Longvale Demographic and Market Trends

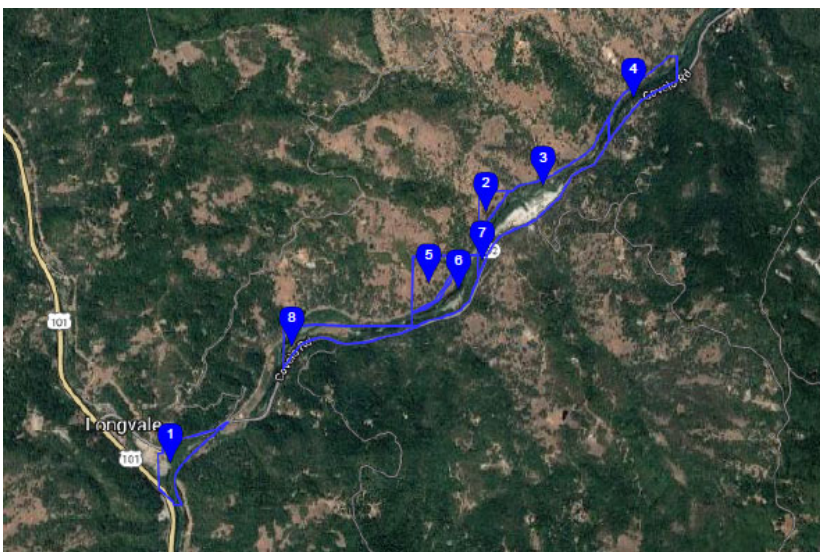
Longvale was a community located at approximately MP 152.5. Its post office, according to Wikipedia, was closed in 1958. As illustrated in Figure 1, there are currently no houses or other structures at that site. The nearest business is a small gravel mining and processing operation located roughly two miles northeast of Longvale. Longvale has essentially not been a viable community for 60 plus years and is no longer a community. As an abandoned community, it will not provide a market for the rail-based transport of any finished goods, manufactured goods, or commuting traffic, and on its face, is not a tourist destination for excursion train use.

Figure 1: Longvale Aerial Photo



Aggregates, gravel and sand, are the only realistic potential freight from this area. Grist Creek Aggregates, affiliated with GeoAggregates and Wylotti, and located to the northeast of Longvale, conducts aggregate mining in this area (Figure 2 & 3).

Figure 2: Properties owned by Grist Creek Aggregates LLC – Only two parcels have permits for extraction.



Grist Creek Aggregate's processing facility is located at marker 3, 2.09 miles north of the intersection of Highway 101 and Route 162. The Grist Creek processing facility is illustrated in Figure 3.

Figure 3: Grist Creek Aggregates LLC



Gravel Extraction: Processing & Timing

Typically, gravel is mined from riverbeds using the following approach:

- Extraction is limited to a specific permitted amount per year (depending on the permit). Annual extraction is further limited to new annual recruitment each year.
- Gravel is removed only in the dry season and the actual amount removed is determined based on a topographic and cross-section survey.
- Gravel is removed in one operation, usually within a four-to-six-week window, at each location. A front-end loader "skims" the gravel bar and loads the gravel into trucks to be hauled off-site. No processing of materials can legally occur on site.
- Extracted material in this river-basin is hauled off site to the aggregate processing facility at Grist Creek (SH 162) where storage and processing is conducted. Access to sites along Grist Creek is by an existing paved road off Highway 162 (SH 162).
- All gravel removal must be consistent with the California Surface Mining and Reclamation Act (SMARA) and Chapter 22.16 of the Mendocino County Code (Surface Mining and Reclamation Ordinance). Both require the formulation of a reclamation plan, which is reviewed by the Department of Fish and Wildlife.

Transportation Alternatives

Gravel is currently loaded into trucks and hauled to the Grist Creek processing site where it is processed and then loaded into trucks again for transport to the company's gravel yard or for sale directly to customers.

Cost, Volume and Shipping Time. Grist Creek Aggregates/Wylotti, per Mendocino County, has permits for two separate operations at Outlet Creek which together allow for 70,000 Yards (79,100 tons) maximum of gravel extraction per year (see Table 10). Outlet Creek runs through Longvale. Grist Creek Aggregates currently charges \$155/hour to deliver 24 tons of rock in a transfer trailer or belly dump to a customer. The distance from Grist Creek to Willits is 12.9 miles with a 16-minute travel time. Assuming a round trip time of 30 minutes and loading and unloading time of 20 minutes, the

current price to truck gravel from Longvale to Willits is approximately \$3.44/ton (Table 4). To be competitive with Grist Creek's trucking prices, a railcar from Longvale to Willits would need to cost less than \$275 for an 80-ton railcar (\$3.44 X 80=\$275) excluding material loading and unloading costs. As noted below, this rail line cannot offer this competitive pricing because train service must capitalize the estimated \$20 million in purchase costs and rehabilitation expenses (see **Addendum C**) on this section of railroad with a realistic 988 carloads of aggregate per year (79,100 tons at 80 tons per railcar), which amounts to a \$2,345/railcar/year (see table 5). This high cost excludes operating costs which are considered under the Fort Bragg to Willits analysis later in this report (page 17).

Additionally, Grist Creek/Wylotti is one of four aggregate suppliers in the Willits area (Table 4) and gravel delivery costs must also be competitive with other suppliers. Aggregate transportation costs are very competitive within the Willits market. Northern Aggregates Inc (located at 500 Cropley Ln, Willits, CA 95490) provides the lowest delivery costs to the Willits area and is also the largest supplier of gravel in Mendocino County. Northern Aggregates is supplied by Harris Quarry which is located just south of Willits. The Harris Quarry is permitted to process 258,000 cubic yards (285,380 tons) of gravel per year. Northern Aggregates provides both drain rock and road base at the cheapest rates per ton in the County (\$21.50/ton and \$19.50/ton) and has the lowest transportation costs to Willits (shortest distance) at \$1.94/ton delivered. The low cost and significant supply of gravel in Willits indicate that this market is saturated with supply, and there is no space within the market for non-competitive transportation pricing. The average trucking cost for delivery to Willits is \$2.64/ton, after considering travel time and supplier distance to Willits and the hourly cost for delivery for each supplier (see Table 4 below). Thus, the cost per railcar for delivery of aggregate to Willits should be less than \$211/railcar for a competitive delivery price (80 tons * \$2.64/ton).

Table 4: Willits Aggregate Suppliers, Price & Delivery Costs (2022)

Willits: Aggregate Suppliers, Price and Delivery Costs (2022)									
Company	Products	Price/ Ton 3/4 Drain Rock	Price/ Ton Road Base	Double Transfer Trailer (tons)	Delivery cost per hour	Drive Time + 20 minutes unload (Minutes)	Cost of Delivery/ton to Willits	Delivery Cost/ton	Total Cost/Ton Delivered to Willits
Nor-Cal Recycled Rock & Aggregates	Sand & Gravel, Ready Mixed Concrete	\$ 34.50	\$ 20.00		no delivery		\$ -	\$ -	NA
Grist Creek Wylotti	Sand & Gravel	\$ 30.00	\$ 20.00	24	\$ 155.00	32.00	\$ 82.67	\$ 3.44	\$ 33.44
Northern Aggregates Inc	Sand & Gravel Concrete	\$ 21.50	\$ 19.50	24	\$ 155.00	18.00	\$ 46.50	\$ 1.94	\$ 23.44
Granite Construction Co	Sand & Gravel Concrete	\$ 30.00	\$ 15.00	24	\$ 170.00	44.00	\$ 124.67	\$ 5.19	\$ 35.19
Average		\$ 29.00	\$ 18.63		\$ 160.00		\$ 63.46	\$ 2.64	\$ 30.69
<i>Source: MJC, 2022</i>									

Rail Capitalization Recovery Costs (Table 5). The estimated "net liquidation value" price of GRTA's line from Longvale to Willits plus the rehabilitation costs exceeds \$22,469,781 million for this stretch of rail line.¹ Per the *August 2, 2022, Surface Transportation Board Decision Docket No. Ep 558 (Sub-No. 25) Railroad Cost of Capital—2021*, the capitalization rate (railroad cost of capital) for the current year is 10.37%. The STB uses the RR COC inter alia for determining whether rail abandonment is justified. Accordingly, the construction costs for this stretch of railroad would be capitalized at a rate of \$2,332,916 per year, which with a maximum 989 rail car demand, would result in a \$2,359/Railcar/year in capital recover costs. In short, the capital recovery requirements alone exceed the \$211/railcar delivery cost which the market would support. The rail line extension appears to be infeasible from a capitalization perspective which is the typical methodology to evaluate all private sector development projects. Additionally, the property acquisitions costs of \$6,725,000 would add \$697,388 in annual capitalized costs for an additional \$705/railcar. Finally, annual operations

¹ Dave Anderson, Railroad Rehabilitation Assessment Willits MP 139.5 to Longvale MP 152.5, American Rail Engineers, 2022, Page 22

costs are estimated at \$939,724 for this segment of rail line, which add a further \$950 to the cost of each rail car, for a total cost of \$4,014/railcar, which is much higher than the average trucking cost of \$211 for 80 tons of aggregate delivery (\$2.64/ton) from all sources to Willits Ca (see Table 4).

Indeed, Mendocino Railroad would need 18,000+ freight cars of demand per year on this rail section to capitalize this railway sufficiently at a price competitive rate of \$211/railcar (trucking costs are \$2.64/ton and there are 80 tons in a railcar for a competitive price of \$211/railcar), clearly this project is not economically feasible.

Table 5: Capitalization Analysis of Longvale Rail Segment (Longvale to Willits)

Table 5: Capitalization Analysis of Longvale Rail Segment (Longvale to Willits)					
	Cost	Capitalization Rate	Annual Capitalization Amount	Number of Rail Cars	Annual Cost/ Rail Car
Longvale to Willits Acquisition (1)	\$ 6,725,000	10.37%	\$ 697,383	989	\$ 705
Long Vale to Willits Reconstruction (2)	\$ 22,496,781	10.37%	\$ 2,332,916	989	\$ 2,359
Total	\$ 29,221,781		\$ 3,030,299	989	\$ 3,064
Operating Costs (3)			\$ 939,724	989	\$ 950
Total Operating Costs			\$ 3,970,023	989	\$ 4,014
Notes: 1) BRI, <i>Appraisal Report of Great Redwood Trail Agency Mile Post 139.5 to Mile Post 152.5 along the former Northwestern Pacific Railroad Willits, California</i> , September 2022; 2) Dave Anderson, <i>Railroad Rehabilitation Assessment Willits MP 139.5 to Longvale MP 152.5</i> , American Rail Engineers, 2022, Page 22 ; 3) Dave Anderson, <i>Operations Assessment Report Longvale to Willits and Willits to Fort Bragg</i> , Sept 2022, Mendocino Railway OFA 139.5 to 152.5.					
Required Rail Car Volume for Competitive Railroad Freight Cost on Mendocino Railroad Line (Longvale to Willits)					
			Annual Amount	Number of Rail Cars	Final Rate/Rail Car
Total Annual Costs (1)			\$ 3,970,023	18,797	\$ 211
Truck Delivery Costs (@\$2.64/ton) (2)					\$ 211
Sources: MJC, 2022; AMERICAN RAIL ENGINEERS CORPORATION, 2022					

Conclusion. Willits is a very competitive marketplace for aggregate with the lowest cost/ton and lowest transport cost/ton in Mendocino County. Rail transport of Grist Creek gravel could not be priced competitively for the Willits' aggregate marketplace.

3. Market Analysis of Transportation Alternatives Between Fort Bragg and Willits

Mendocino County Economic Overview

Appendix A of this analysis includes a brief overview of the Mendocino Economy to identify if current or future economic or population growth could support the re-establishment of rail freight along the Fort Bragg Willits corridor. Here are some of the top-level findings of this summary:

- Overall, Mendocino's population growth is constrained by its remote location, low housing production numbers and very slow job growth. In 2020 Mendocino's population was 86,061, which is just 0.2% of the State population. Mendocino County's population has remained relatively flat for the past 70 years. The Mendocino Coast is relatively isolated from inland Mendocino due to the Coast Mountain Range. The Mendocino Coast has a population of around 18,000 residents.
- Mendocino's economy is very small and stagnant. Overall Mendocino GDP ranks 38th from the top of California's 58 counties. Since 2010, Gross Domestic Product has grown only 0.78%/year in Mendocino (ranked 38 out of 58 counties). Ranked #46 out of 57 Counties, Mendocino County total employment shrank by -0.35% from 2010 to 2020.
- Of the 45,293 jobs in Mendocino County, only a very small portion result in freight trips as follows.
 - Mining is a very small component of the economy at 0.3% and experienced a significant job contraction from 121 jobs in 2010 to 71 jobs in 2020, a decline of 41.32%. Mining in Mendocino County is almost exclusively related to aggregate extraction.
 - Forestry and Fishing experienced a slight increase of 170 jobs (+12.36%) in the ten-year timeframe. Fishing products are not a suitable product for rail transport due to perishability. Forestry is a difficult item to transport via rail because timber harvests are geographically dispersed and transport by rail would require a truck, rail and truck transfer scenario with very large logs for an average 40-mile transport distance.
 - Manufacturing is a relatively small sector of the Mendocino Coast economy. It represents just 6% of all jobs and experienced a nominal growth of 1.86% during this timeframe, most of the manufacturing jobs are located along the Highway 101 corridor in and around Ukiah.
- Mendocino County per capita income has ranged between 85% and 100% of the US average per capita income from 1970 -2020, illustrating that the area has struggled economically for decades.
- Mendocino housing production averages 148 units/year or a 0.36% annual growth rate, which represents a very slow increase in housing units.

Freight Transportation Alternatives

The Mendocino Coast is a relatively geographically isolated community with limited freight service options. Current and potential freight service is evaluated for rail, truck, boat and air.

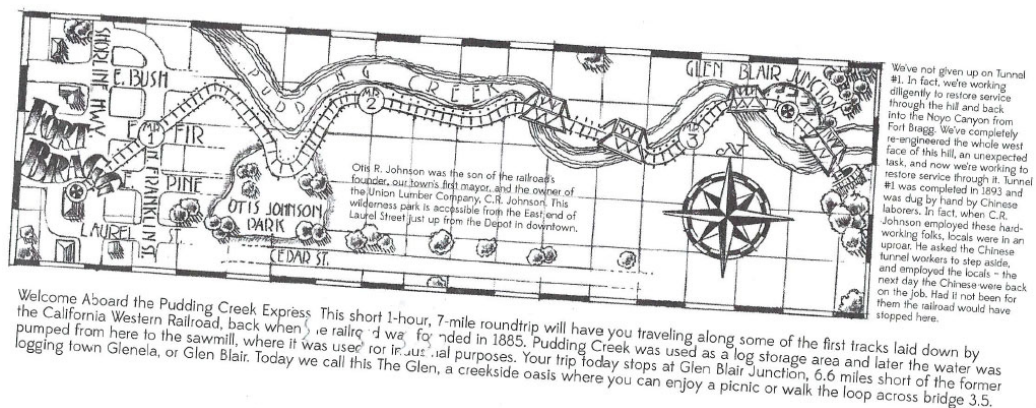
Rail Freight

Currently there is no freight service via rail to, from or through Mendocino County. While the Skunk Train recently added pricing for freight service on their website, they do not actually provide rail freight between Fort Bragg and Willits due to a tunnel collapse and tracks that are not rated for freight. One could speculate that Mendocino Railway either provides freight service via trucks and/or provides this website information to mislead regulators and State or Federal agencies that supply rail subsidies in the form of loans or grants. The pricing for this freight service is noted in Figure 7 at \$1,440 per car for a one-way trip from Willits to Fort Bragg.

Figure 7: Mendocino Railroad Freight Rates. Source: www.Skunktrain.com

MENDOCINO RAILWAY			
CWR 9500			
SECTION 2			
Switching charges			
(Charges in dollars and cents per car, except as otherwise noted)			
LINEHAUL CHARGES (Rule 11)			
ITEM 2000			
BETWEEN	AND	COMMODITY	CHARGE
Willits CA.	Northspur, CA (Willits Subdivision)	All Other, FAK (Note 1)	\$1080.00 per car
Willits CA.	Fort Bragg, CA (Fort Bragg Subdivision)	All Other, FAK (Note 1)	\$1440.00 per car
ITEM 2010			
BETWEEN	AND	COMMODITY	CHARGE
Willits CA.	Northspur, CA (Willits Subdivision)	Empty rail cars for dismantling or furtherance to off rail points (Note 1)	\$480.00 per car
Willits CA.	Fort Bragg, CA (Fort Bragg Subdivision)	Empty rail cars for dismantling or furtherance to off rail points (Note 1)	\$720.00 per car
ITEM 2020			
BETWEEN	AND	COMMODITY	CHARGE
Willits CA.	Northspur, CA (Willits Subdivision)	Hazardous Materials, STCC 28,29,48,49	\$1320.00 per car
Willits CA.	Fort Bragg, CA (Fort Bragg Subdivision)	Hazardous Materials, STCC 28,29,48,49	\$1680.00 per car

The Skunk Train currently only provides tourism excursion services (not commuter access). The tourist excursion from Fort Bragg extends roughly 3 miles up the tracks where it is stopped by a tunnel collapse. The tourism excursion from Willits extends 7 miles up the tracks to "wolf tree" (Crowley) before it returns to Willits. Crowley is no longer a town, and there are no other towns along either excursion route. See website ad and ticket stub below illustrating current tourism excursions for the Skunk train. As noted in Figure 8, the tourism train (Pudding Creek Express) is a slow ride, traveling the roughly 7-mile round trip in 75 minutes.



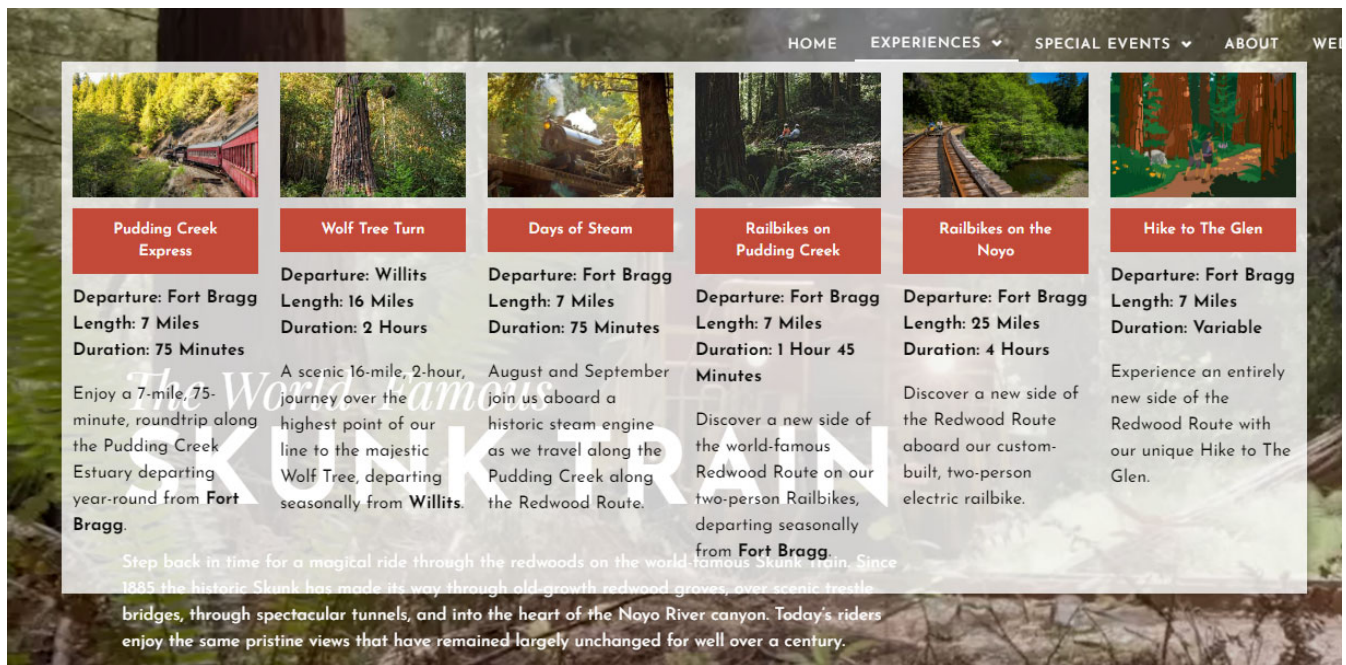


Figure 8: Skunk Train Tourism Services Source: <https://www.Skunktrain.com/>

Currently, Mendocino Railway provides only recreational/tourist train services via its Skunk Train rail line. It also promotes and provides railbike excursions on the line, which would likely conflict with freight use. The somewhat dated graph below illustrates Skunk Train recreational ridership, which Skunk used to support an unsuccessful application for government subsidy ostensibly for freight rail purposes

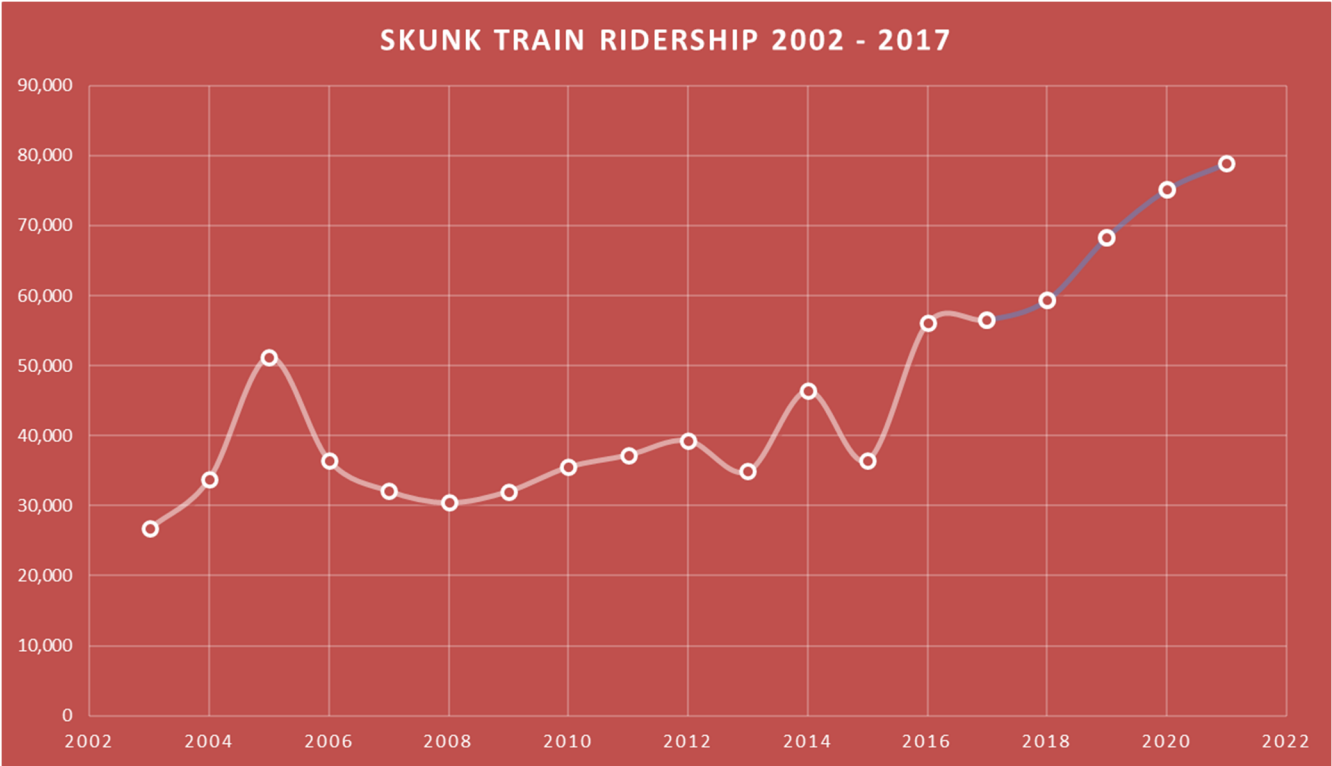


Figure 7: Skunk Train Ridership 2002-2017; Source: Skunk Train 2018 Build Grant

Truck Freight

Truck freight services are provided by the following routes into and through the County.

- Highway 101 is the primary highway to and through Mendocino County. It runs through the county from Sonoma to Humboldt County on a north-south axis. For most of its length it is a two-lane highway which can easily accommodate a modern truck and trailer combination (53 feet).
- Highway 20 runs east to west from Sacramento to Fort Bragg, and is a winding two-lane highway, which due to curves can only accommodate 48' tractor trailers. Forty-eight-foot tractor trailers are permitted to carry up to 78,000 lbs. or 39 tons.² However, aggregate is typically brought in double hauled trucks, transfer loads and belly dumps, which haul between 24 and 41 tons respectively. Double hauled and transfer trailer trucks are used primarily for delivery to customers, while belly dumps are used to transport larger quantities of gravel from the reclamation site to a company's processing facilities and storage yards or to customers requiring larger quantities.

- Route 1 runs south to north along the coast and is used for local truck delivery only, due to its curvy geometry.

Truck freight services are provided locally by Mendocino Coast Express. Rates vary depending on weight of items hauled and destination. The only likely rail freight customer received a quote of \$500 for a 48-foot truck of latex mattresses from Willits to Fort Bragg. Otherwise, truck freight is provided by specialized operators (timber) or companies that deliver their own products.

Ocean Freight

Noyo Harbor is operated by the Harbor District and provides 256 slips in the Marina. The harbor is used by pleasure boats and an active fishing fleet. The harbor is not suited for freight transfer as it can only accommodate vessels of less than 65' in length. It does not currently offer a fuel dock, fuel services or a hoist rental for loading or unloading freight. To the extent Mendocino Railroad were to rely on transload of product to or from barges or coastal vessels, it necessarily must rely on Soldier's Bay, located north of Noyo Harbor. Soldier's Bay is currently not developed for maritime activities. To be sure, it was used to ship finished lumber prior to the establishment of the in-state highway system from Fort Bragg to Willits. A pier used to extend 300 feet into the Bay, where small ships were tied up for finished lumber shipments. But the Bay has a very wide mouth and a highly active wave environment. This would be a very difficult location to establish a modern port, due to the active wave environment and the relatively shallow bay. It is not suitable for barges.

Air Freight

Little River Airport (LLR), located 14 miles southeast of Fort Bragg, is a small county-owned public-use airport. Built by the Navy in 1945, this airfield contains one asphalt paved runway which measures 5,249 by 150 feet (1,600 x 46 m). The airport averages approximately 10 aircraft per day: 98% general aviation and 2% air taxi. Chartered flights start at \$766 per passenger to Boonville and \$1,200 to Oakland. No freight service is provided.

Mendocino Railroad (aka Skunk Train) as a Transportation Solution

Rail faces a number of issues as a freight solution for between Willits and Fort Bragg, including:

²Compilation of Existing State Truck Size and Weight Limit Laws, Report to Congress, May 2015, United States Department of Transportation Federal Highway Administration https://ops.fhwa.dot.gov/freight/policy/rpt_congress/truck_sw_laws/index.htm

1. **Discontinuity.** The Skunk Train railroad tracks are currently discontinuous (due to a tunnel failure) and therefore it cannot provide any real freight services. Even if the collapsed tunnel and the railroad tracks are upgraded to handle freight, the Skunk line ends in Willits, and is discontinuous with the rest of the intercontinental rail system due to expensive tunnel failures and other track failures on the rail line from Willits south to Windsor as well as upgrades necessary to reach American Canyon (actual interconnection with the national rail network). The line north of Windsor is embargoed. The line from Cloverdale to American Canyon is owned by a commuter rail service (SMART). There is no evidence of sufficient rail traffic to justify the substantial rehabilitation costs necessary to restore the line south of Willits. And even if the line could be physically restored, the number of operators with whom interchange must be made to reach the national rail system is non-trivial and would make for high operating costs.
2. **Higher Cost.** Trucks cost 56% to 63% of the quoted rail freight price, depending on the type of truck. Truck freight is currently provided by a variety of independent operators and trucking companies, which provide freight service either at an hourly rate of between \$145 and \$175/hour or at a mileage rate of \$9.50/mile for an average transport cost of \$305 for a 24-ton truck to \$500 for a 39-ton truck. These rates are significantly less than the fictional advertised rail line freight rate (\$1,440), even after adjusting for the smaller weight limit of truck transport (24-39 tons per load) versus rail transport (80 tons/railcar). The adjusted transport rates are as follows: 24-ton trucking rate is \$14.58/ton; the 39-ton freight trucking rate is \$12.82/ton; and the fictional advertised train rate would be \$22.84/ton.
3. **Longer Transport Time.** As defined further in Addendum D, if the rail line owned by Mendocino Railroad were renovated to a condition that supported freight transport, transport time across the 40-mile distance from Fort Bragg to Willits would be approximately six hours as the train speed would be limited to eight miles/hour. Trucks take 45 minutes to an hour to traverse this same distance, making rail freight haulage time inconvenient for all potential customers and uncompetitive for that reason alone for commodities where time to market is important (key commodities in Fort Bragg which are not suited to this transport time include fish, beer, and other perishables).
4. **More Transfers & Material Handling.** Commodities shipped west to Fort Bragg via rail will have to be shipped via truck to the rail line, transferred to the rail line and upon arriving in Fort Bragg, transferred again to a truck for transportation to the destination. While this is typical for most rail transport, the very short distance of this line (40 miles) makes the extra material handling prohibitive.
5. **Long-Term Reliability Concerns.**
 - a. The Skunk Train is a very old railroad. It was built between 1885 and 1911.
 - b. The track is technically challenging. It extends up the Noyo River headwall with a 3.3 percent grade and has five 33-degree horseshoe curves and climbs 932 feet (284 m) in its initial railway distance of 6.5 miles (which is only 1.5 miles as the crow flies). The very steep mountains coupled with significant track curves, means that the train must travel very slowly.
 - c. The tracks cross 30 single bridges and trestles and passes through two deep tunnels (one of which is closed due to tunnel collapses in 2013 and 2016). Mendocino Railroad has attempted to fix the tunnel but so far with no success. Mendocino Railroad has repeatedly sought government subsidies in that regard.
 - d. There have been two major crashes on the rail line. In 1964 a westbound railcar collided with an eastbound railcar and in 1970 a derailment on a horseshoe curve destroyed three diesel locomotives.
6. **Short Term Reliability Concerns.** The Skunk Train business model is currently entirely focused on short tourist excursions. Tourist excursions run daily from both Fort Bragg and Willits through the summer months and on the weekends in the off season. It is likely that the Skunk Train would need to run freight trips at night to avoid track conflicts with the tourist trains. However, night train trips are more likely to face difficulties and would

further delay transport and result in night-time loading and unloading. All of these issues add to unreliability over the short term.

7. **Historic Freight Operations and Current Legal Limitations.** From 1921 into the late 1980s, the railroad's freight consisted almost entirely of raw and finished redwood lumber. By the 1980s Georgia-Pacific started to shift all lumber shipments to the more flexible highway truck system. By the 1990s Skunk Train lumber shipments numbered fewer than 500 railcars/year and tourist entertainment service became the line's main source of revenue. All freight service was discontinued in 2001, and the Federal Railroad Administration's emergency order in 1998 in all events effectively cut the rail line off from the national rail network.
8. **Legacy Charm.** The railroad offers a lot of legacy and historic charm; however, this historic charm is mostly a selling point for tourism operations and would not be important to freight operations.

Supply and Demand of Various Commodities

Purpose

This section provides an overview of potential freight demand for the transport of raw materials and products which are currently produced or consumed on the Coast. It explores the following specific commodities: Aggregates, Hops, Bear, Latex, and Solid Waste. All of these commodities have been suggested by Mendocino Railroad as viable freight customers in past grant applications to the Federal Government or in conversation with Fort Bragg City Staff. In a 2018 Build Application, Mendocino Railroad identified demand for 514 rail car service/year for a \$16,893,231 project that included a BUILD grant request for \$8,510,222. This grant application was denied. Mendocino Railroad prepared another grant application to BUILD in 2019 for a \$24,849,950 project which was also denied. And Mendocino Railroad prepared another grant application to Build in 2020 for \$18,779,790, which was also denied. In each of these applications Mendocino Railroad makes various claims about the amount of potential freight business that would open up if the railroad could operate a freight line, for example: "Various industries are eagerly awaiting the reopening of MR's rail line for freight services, including Flowbeds, North Coast Brewing Company ("NCBC"), Willits Redwood Company, Geo Aggregates, Mendocino Land Trust, Lyme Redwood Forest Company, ER Energy (propane), the City for transportation of water and municipal solid waste ("MSW")." The specific tons of freight claimed in these BUILD applications is noted in Tables 7 and 8 below.

Table 7: Mendocino Railroad 2018 Build Application: Claimed Freight Amount

Commodity	Truck Loads	Railcars	Tons
Hops	450	225	22,500
Beer	550	275	27,500
Latex	28	14	1,400
Total	1,028	514	51,400

Source: Mendocino Railway Build Grant 2018

Table 8: Mendocino Railroad 2020 Build Application: Claimed Freight Amount

Commodity	Truck Loads	Railcars	Tons
Hops	450	225	22,500
Beer	550	275	27,500
Latex	28	14	1,400
Solid Waste	500	1,000	100,000
Total	1,528	1,514	151,400

Source: Mendocino Railway Build Grant 2020

The author of this market study, Marie Jones, also submitted these grant applications for the City of Fort Bragg on behalf of Mendocino Railroad in 2018 and 2019. At that time, as Community Development Director for the City of Fort Bragg, I also completed an economic impact analysis for the proposed project. However, the estimated freight demand, which formed that basis for that economic analysis was provided by the Harts (Skunk Train owners) and was not independently verified. In the sections that follow, I have tried to independently verify these numbers by speaking directly with the business owners and candidly have found the Hart’s numbers to be fabrications and certainly no longer valid. Actual potential rail demand, based on recent interviews with potential shippers is only 300 tons, or 3 railcars, per year as illustrated in Table 8 below. Full details about these discussions can be found on pages 20 through 22 of this report.

Table 8: Mendocino Railroad Actual Annual Potential Freight Demand

Commodity	Truck Loads	Railcars	Tons
Hops	-	-	-
Beer	-	-	-
Latex	6	3	300
Solid Waste	-	-	-
Total	6	3	300

Source: MJC, 2022: interviews with business owners

Aggregates

As discussed below, aggregates are not a likely freight component for Mendocino Railroad, due to a variety of issues including: the high cost of rail transport, competitive pricing of truck delivery, and the diverse locations for more than sufficient aggregate supply. It should be noted that as recently as 2000, Mendocino Railroad did not consider aggregates a likely freight customer as it was not listed in any BUILD grant applications.

Cost to Transport. Transportation is a major part of the cost of aggregate to the consumer. Aggregate is a low-unit-value, high-bulk-weight commodity, and it must be obtained from nearby sources to minimize both the dollar cost to the aggregate consumer and other environmental and economic costs associated with transportation. This makes the mining of aggregate much more competitive than most other mined commodities. The location, distance to market, and access to major transportation routes greatly influence the economic feasibility of an aggregate mine. Most aggregate in California moves to its final point of use by truck. Trucking is typically charged at an hourly rate and rates vary in different regions of the state. Transportation cost is the principal constraint defining the market area for an aggregate mining operation and the cost of transporting aggregate over long distances can equal or exceed the base cost of the aggregate. The cost of construction aggregate – a low-unit-value, high-bulk-weight commodity – is heavily dependent on the distance it must be hauled from its source.³

Cost of Transport Truck Versus Train.

Truck. In Mendocino County the cost to transport aggregate via truck varies from \$145 to \$175/hour and averages \$154/hour (Table 9). Delivery costs include the time to load the truck, drive to the delivery location, unload the truck and return the truck to the gravel supplier’s yard. Table 9 below illustrates deliver costs to the Fort Bragg/Coastal market.

³ John P. Clinkenbeard and Fred W. Gius, *Aggregate Sustainability In California: Fifty-Year Aggregate Demand Compared to Permitted Aggregate Reserves*, 2018

Table 9: Aggregate Price & Delivery Cost, Fort Bragg CA 2022

Mendocino County: Aggregate Suppliers, Price and Delivery Costs To Fort Bragg (2022)										
Company	Products	Service Area	Price/ Ton Drain Rock	Price/ Ton Road Base	Truck Size (tons)	Delivery Cost/ Hour	Delivery Time (minutes)	Delivery Cost to Fort Bragg	Delivery Cost/Ton	Cost/Ton Delivered to Fort Bragg
GeoAggregates	Sand & Gravel, Concrete	Mendocino County	\$ 51.00	\$ 20.50	24	\$ 145.00	30	\$ 72.50	\$ 3.02	\$ 54.02
Kibesillah Rock Co	Sand & Gravel	Coast	\$ 25.00	\$ 19.50	24	\$ 145.00	64	\$ 154.67	\$ 6.44	\$ 31.44
Greenwood Aggregates Inc	Sand & Gravel, Concrete	Mendocino County	\$ 26.99	\$ 17.99	24	\$ 155.00	129	\$ 333.25	\$ 13.89	\$ 40.88
Nor-Cal Recycled Rock & Aggregates	Sand & Gravel, Ready Mixed Concrete	Inland	\$ 34.50	\$ 20.00	no delivery					
Grist Creek Wylotti	Sand & Gravel	Inland	\$ 30.00	\$ 20.00	24	\$ 155.00	164	\$ 423.67	\$ 17.65	\$ 47.65
Northern Aggregates Inc	Sand & Gravel Concrete Contractors General	Mendocino County	\$ 21.50	\$ 19.50	24	\$ 155.00	128	\$ 330.67	\$ 13.78	\$ 35.28
Granite Construction Co	Sand & Gravel Concrete	Mendocino County	\$ 30.00	\$ 15.00	24	\$ 170.00	180	\$ 510.00	\$ 21.25	\$ 51.25
Average Cost all Sources to Fort Bragg			\$ 31.28	\$ 18.93		\$ 154.17		\$ 304.13	\$ 12.67	\$ 43.42
Average Cost from Inland Sources to Fort Bragg			\$ 29.00	\$ 18.63	24	\$ 160.00	125	\$ 333.33	\$ 13.89	\$ 42.89
Average cost from Fort Bragg Sources to Fort Bragg			\$ 38.00	\$ 20.00	24	\$ 145.00	47	\$ 113.58	\$ 4.73	\$ 42.73

Source: MJC, 2022: data collected via phone interview with company sales people

- On average, truck transport costs are based on a 125-minute delivery from Willits to Fort Bragg including loading, delivery, unloading and return time. By comparison a local delivery is just 47 minutes from a Fort Bragg supplier, when it includes loading, delivery, unloading and return time.
- Total truck delivery costs for 24 tons of aggregate to Fort Bragg range from a low of \$72.50 for GeoAggregates (which is owned by Grist Creek/Wylotti) to a high of \$510 for Granite Construction, which is located the furthest from Fort Bragg. However, Northern Aggregates and Kibasilah Rock are the cheapest overall sources of gravel in Fort Bragg at \$34.73/ton and \$31.44/ton respectively, when the total cost of the gravel and delivery is considered together.
- All six aggregate suppliers provide competitive pricing for gravel delivery to the Fort Bragg. The average cost amongst all suppliers for a delivered ton of drain rock is \$43.42.
- Average cost of delivery is \$12.67/ton although the cost of delivery for local suppliers is much lower at \$4.73/ton.

This is a very competitive market for aggregate pricing. There is no space in this market to support the extra handling and delivery costs that would be required for rail freight as detailed in the section below.

Train. Aggregate delivery by train would be significantly more expensive than delivery by truck to Fort Bragg.

- The Skunk Train's fictional advertised "cost of delivery" from Willits to Fort Bragg is \$1,440/carload or \$18/ton. By comparison, delivery costs via truck, from inland sources, average \$13.89/ton. Advertised Skunk Train aggregate delivery price would not be competitive with truck delivery from Willits due to this price premium and the additional material and handling, including the need to hire a truck at either end to transport rock to the train depot and from the train depot to its final destination.
- In addition, as previously discussed, the advertised price is not a realistic price for delivery from Longvale to Fort Bragg. A number of costs must be capitalized as illustrated in Table 10. Reopening the rail line from Longvale to Willits alone (leaving aside reopening the Mendocino Railroad line) would capitalize at a cost in

excess of \$22 million. Additionally, as previously described the cost to repair the line from Willits to Fort Bragg would cost in excess of \$19 million, and purchase of the Longvale line adds another \$6 million for a total of \$49 million in capitalization costs. Applying the railroad cost of capital to that amount would suggest that each and every carload of aggregate shipped from Longvale to Fort Bragg would require a rail tariff in excess of \$5,149 to recover acquisition and capital costs alone, which is far in excess of the tariff listed on the Skunk Train website for traffic between longvale and Willits and Willits and Fort Bragg. An additional \$3,646 would be needed per rail car to recover operating costs for a total cost of \$8,795/railcar. See Table 10.

Table 10: Capitalization & Operating Analysis of Both Rail Segments (Longvale to Fort Bragg)

Table 10: Capitalization & Operating Analysis of Both Rail Segments (Longvale to Fort Bragg)					
	Construction Amount	Capitalization Rate	Annual Capitalization Amount	Number of Rail Cars	Annual Capitalization/ Rail Car
Longvale to Willits Acquisition (1)	\$ 6,725,000	10.37%	\$ 697,383	989	\$ 705
Longvale to Willits Construction (2)	\$ 22,496,781	10.37%	\$ 2,332,916	989	\$ 2,359
Willits to Fort Bragg Repair (3)	\$ 19,934,331	10.37%	\$ 2,067,190	992	\$ 2,084
subtotal	\$ 49,156,112	10.37%	\$ 5,097,489		\$ 5,149
Operating Costs (4)	\$ 3,616,337		\$ 3,616,337	992	\$ 3,646
Total Costs	\$ 52,772,449		\$ 8,713,826	992	\$ 8,795
Notes:1) BRI, Appraisal Report of Great Redwood Trail Agency Mile Post 139.5 to Mile Post 152.5 along the former Northwestern Pacific Railroad Willits, California, September 2022; 2) Dave Anderson, <i>Railroad Rehabilitation Assessment Willits MP 139.5 to Longvale MP 152.5</i> , American Rail Engineers, 2022, Page 22 ; 3) Construction Amount is based on a 2018 BUILD Grant proposal submitted by Mendocino Railroad value of \$16,893,231 was adjusted for inflation to 2022 dollars; 4) Dave Anderson, IBID, Scenario 1.					

Additionally, as illustrated in Table 11, the train would have to run 6,589 railcars/year to achieve a rate of return that would allow it to repay capitalizations and operating costs while still remaining competitive with the average truck delivery cost rate of \$16.63/ton (\$13.89/ton for Willits to Fort Bragg plus \$2.64/ton for Longvale to Willits) or \$1,320 for a railcar equivalent amount of aggregate. Clearly the proposal to ship aggregate via railcar from Longvale to Fort Bragg is financially infeasible. No purchaser would pay almost \$6,589 in rail freight costs when they could pay \$1,322 for the same amount of aggregate shipped by truck.

Table 11: Required Rail Car Volume for Competitive Railroad Freight Rate (Longvale to Fort Bragg)

Required Rail Car Volume for Competitive Railroad Freight Rate (Longvale to Fort Bragg)					
	Amount		Annual Amount	Number of Rail Cars	Final Rate/Rail Car
Total Capitalization	\$ 49,156,112		\$ 5,097,489	3,855	\$ 1,322
Operating Costs	\$ 3,616,337		\$ 3,616,337	2,735	\$ 1,322
Total Rail Delivery Costs	\$ 52,772,449		\$ 8,713,826	6,589	\$ 1,322
Truck Delivery Costs Willits to Fort Bragg - (@\$13.89/ton)					\$ 1,111
Truck Delivery Costs Longvale to Willits (@\$2.64/ton)					\$ 211
Total Longvale to Willits Delivery Costs					\$ 1,322
Sources : MJC, 2022; AMERICAN RAIL ENGINEERS CORPORATION, 2022					

Required Rail Car Volume for Competitive Railroad Freight Rate (Longvale to Fort Bragg)

	Amount	Annual Amount	Number of Rail Cars	Final Rate/Rail Car
Total Capitalization	\$ 49,156,112	\$ 5,097,489	4,587	\$ 1,111
Operating Costs	\$ 3,616,337	\$ 3,616,337	3,254	\$ 1,111
Total Rail Delivery Costs	\$ 52,772,449	\$ 8,713,826	7,842	\$ 1,111

Truck Delivery Costs - (@\$13.89/ton)

				\$ 1,111
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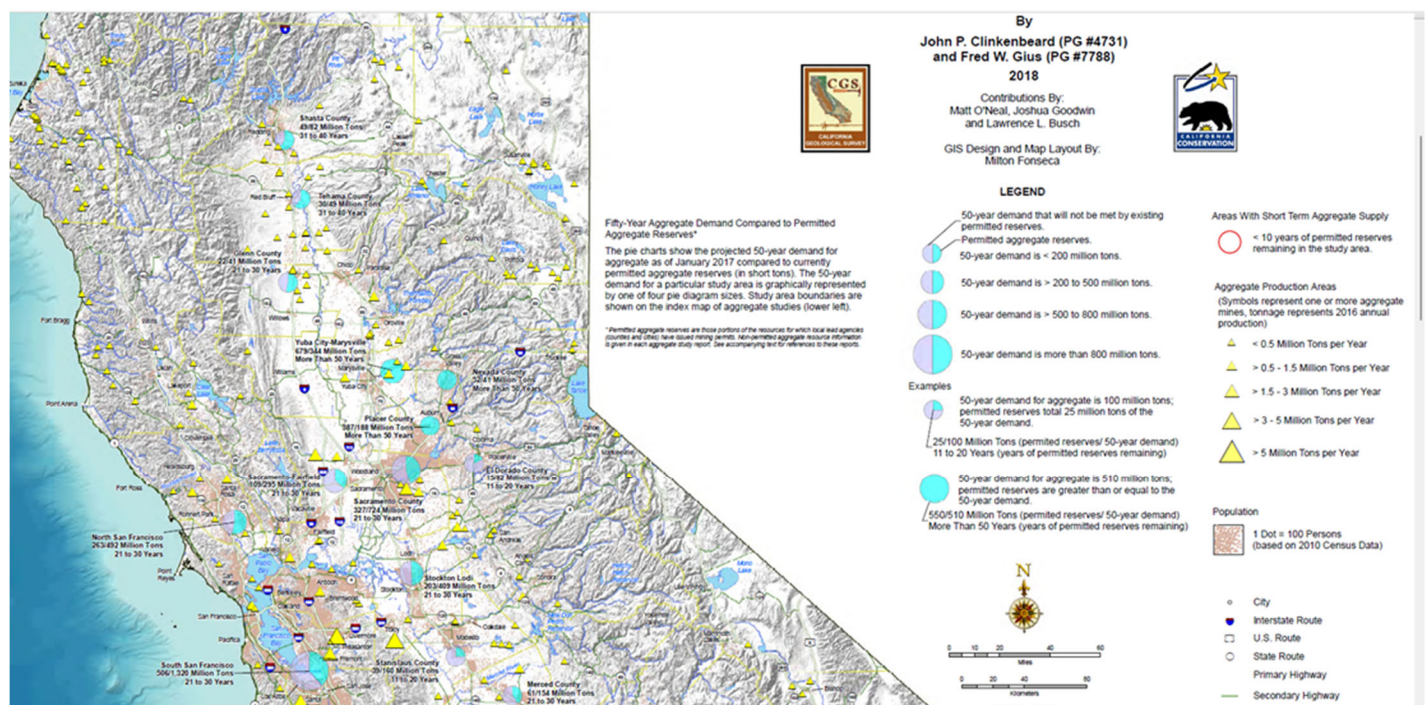
Sources: MJC, 2022; AMERICAN RAIL ENGINEERS CORPORATION, 2022

- Rock from Kibesilah Rock Co is quarried less than 15 miles from Fort Bragg, for an average delivery cost of \$6.44/ton to Fort Bragg, which is 6% of the cost of delivery via train at \$110/ton (\$8,090/railcar @ 80 tons/railcar). One major flat work contractor, Gary Swanson, purchases bulk aggregate (1,000 tons/year) from the Willits based Harris Quarry (which is located south of Willits and not on a rail line) because it is less expensive per yard and has better qualities as a road base (hardness and angularity). The other major flat work contractor, Akeef Construction, uses his own recycled aggregate. Neither of these medium-sized Fort Bragg-based flat work contractors would benefit from, or be a market for, rail shipped aggregate: one because his source is far from any rail line and the other because he recycles his own job aggregates for future jobs.

Aggregate Supply

There are six active quarries in Mendocino County for which the County has current permitting information. As noted in Table 10 (next page), there are currently vested/permitted removal rights for up to 101,000 cubic yards of aggregate/year on the coast, while inland quarries are permitted to extract up to 606,000 cubic yards of aggregate/year. The Grist Creek facility can process up to 70,000 cubic yards from two sources. Competitive pricing of aggregates (Table 9) indicates that there is not a supply shortage in either the coastal or inland aggregate market. A 2018 study, by John P. Clinkenbeard and Fred W. Gius, confirms that supply and demand are well balanced in Mendocino County (Figure 8).

Figure 8: Aggregate Demand Vs Reserves 2018-2048



Additionally, the following quarries are listed as active by Minesdatabase.com:

Active Quarries - Mendocino County

Quarry Name	Mine Number	City	Materials	Owner
Ten Mile River Plant	401755	Mendocino	Construction Sand and Gravel	GeoAggregates
Wilsey Ranch Quarry	405353	Ten Mile	Construction Sand and Gravel	Kibesillah
Harris Quarry	405139	PORTALBE	Crushed, Broken Stone NEC	Northern Aggregates Inc
Blue Ridge Quarry	405355	Hopland	Crushed, Broken Stone NEC	Syar Industries
Ford Gravel	401770	Ukiah	Construction Sand and Gravel	Nor-Cal Recycled Rock & Aggregates.
Greenwood Aggregates	405703	Philo	Sand, Industrial NEC	Greenwood Aggregates Inc
Grist Creek Aggregates	405833	Willits	Construction Sand and Gravel	Grist Creek Aggregates LLC
Johnson Pit	405592	Boonville	Construction Sand and Gravel	Robert Pardini Logging

Table 10: Active Aggregate Quarry Permits, Mendocino County 2022

Date	Applicant	Owner	Permit Description	Location:	Status
Vested	Kibesillah Rock Co	Rohnni McMahon	This operation has a vested right for the extraction, processing (screening and washing) of up to 50,000 cubic yards of material per year.	Coast: Wilsey Ranch Quarry, Inglenook (5 miles north of Fort Bragg)	Vested Right
12/28/2017	Geo Aggregates	Parker Ten Mile Ranch	Reclamation Plan Renewal and Modification to extend existing hillside quarry mining operation for an additional 5 years. The operation includes the extraction of up to 40,000 cubic yards of material per year, and the processing (screening and washing) of approximately 51,000 CY/year.	Coast: Ten Mile Second Crossing Quarry	Vested in stream gravel and sand minning of 51,000 Cubic Yards per year since 1988
4/2/2019	Grist Creek Aggregates	Richard & Margaret Rowland	Reclamation Plan Modification to include a secondary gravel bar to the existing riverbed gravel extraction operation. The operation, for which a vested right has been granted for both the existing and secondary gravel bars; includes the extraction of up to 50,000 cubic yards of sand and gravel per year.	Inland: Confluence of the Middle Fork and Mainstem of the Eel River (APNs: 035-040-36 & -45), AKA Rowland Bar (CA MINE ID# 91-23-0065).	Vested in stream gravel and sand minning of 50,000 Cubic Yards/year since 1977
7/16/2020	Wylatti Resource Management	51110 Covelo LLC	Major Use Permit for seasonal gravel extraction and reclamation activities on Stewart Bar , located on the Middle Fork of the Eel River. Total annual extraction limit of 20,000 CY/Year for ten years.	Inland: 50751 Covelo Road, Dos Rios (APNs 035-030-17, -49, -65) AKA Stewart Bar.	Site was used for gravel extraction until 2004. The use permit reactivated extraction activities.
1/11/2016	SYAR INDUSTRIES, INC	MCCUTCHAN JAMES F JR & GLORIA	Use Permit Renewal for Blue Ridge Rock Quarry (CA MINE ID 91-23-0039). Allows extraction of up to 200,000 CY/year of in situ aggregate; import of up to 40,000 CY/year of recycled asphalt, concrete, and/or other aggregate materials; import of up to 10,000 CY/year of soil; processing of a maximum of 220,000 CY/year (crushing, screening, and sorting) of virgin and recycled materials; production of up to 348,000 CY (441,400 tons) of finished product annually; a 30-year term.	South County: 3.5± miles north of Cloverdale and 10± miles south of Hopland. 24951 Geysers Road (APNs: 050-350-23, -24; 050-410-40, -41; 050-450-26; 050-460-05, -06, -07, -09, -11, and -20).	35 year use permit approved
9/3/2010	Northern Aggregates, Inc.		Use Permit Renewal/Modification (UR 19-83/2005) for 30 years to allow expansion of the Harris Quarry ; extraction of up to 200,000 in-place cubic yards (approximately 258,000 cubic yards processed) of material per year; production of up to 150,000 tons of asphalt per year; and nighttime operations that could occur up to 100 nights per year.	East County, South of Willits on highway 101.	30 year Use Permit approval
Total annual cubic yards at other locations in Inland Mendocino County			606,000		
Total annual cubic yards at proposed eastern rail head			70,000		
Total cubic yards on the Coast			101,000		

Potential Demand for Aggregates

Current demand is largely met by current supply, as reflected by the competitive delivery costs and low pricing on the coast. Although rail freight does not offer competitive pricing or better reliability in current market conditions, it might be possible that the situation would change if there were reasonably foreseeable (imminent) additional demand that might arise from atypical or unusual large infrastructure projects. Major infrastructure projects are likely the only potential market for the sand, gravel, rock and other items that the Mendocino Railroad hopes to ship on the proposed

line that would be acquired under the OFA. The inherent analytic problem is the rail lines in question must be rehabilitated to support rail use, and this process will take significant time, during which most projects that are currently scheduled will be bid and contracted. In other words, the projects will be committed before rail is an option. However, this section examines prospective public projects in this section.

Most major infrastructure projects within Mendocino County are undertaken by State (Caltrans), County (Mendocino Department of Transportation) or local governments. All must be competitively bid. Capital Improvement Budgets were analyzed to identify major public works projects planned for the next five years. Table 11 summarizes all planned and proposed projects for the next five years in Fort Bragg, Willits, the unincorporated areas of Mendocino County, and by Caltrans that could possibly be served by OFA applicant Mendocino Railroad. The Capital improvement projects at the County and municipal level are very similar to budgets in years past and so do not constitute atypical demand.

Table 11: Five-Year Capital Improvement Budgets, Public Agencies, Mendocino County 2022

Agency	Total Five Year Capital Improvement Budget	Capital Improvement Projects Which Require Aggregates, Concrete and/or Asphalt
Caltrans	Unknown	\$138,215,000
City of Fort Bragg	\$102,602,236	\$54,930,702
City of Willits	\$1,166,122	\$0
Mendocino County	\$157,088,765	\$121,097,334
Total	\$260,857,123	\$314,243,036
Average/Year	\$52,171,425	\$62,848,607

Source: FY 2022-23 Capital Improvement Budgets for City of Fort Bragg, Mendocino County and City of Willits; Caltrans District 1 Project Budgets

While Caltrans is in the planning phase for a number of significant bridge replacement projects in the coming five years (Addendum 3), three of the projects will likely be completed before the Skunk Train could provide service. The Pudding Creek and Jack Peter's bridge widenings will take place in 2023 and 2024 and total \$18 million. The \$4 million Navarro Ridge safety project will also be completed by 2023. Additionally, only two projects may happen late enough to be served by gravel brought on the Skunk Train, namely the \$48 million Albion Rover Bridge replacement project which is slated for 2027, and the \$35 million Salmon Creek Bridge replacement project which is currently under review by DTSC, and which has an uncertain construction date. However, these very large projects will be competitively bid, and given the competitive pricing from a number of gravel suppliers, it is likely that the gravel for these projects could come from any of the suppliers located throughout the County. Rail-delivered gravel from inland does not offer a competitive advantage to any of these projects.

Beer & Hops

This study finds no demand for rail freight for beer or hops. Fort Bragg is home to the North Coast Brewing Company, which is located immediately adjacent to the Skunk Train's parking lot.

- In 2018/19 the Mendocino Railroad submitted Federal BUILD grant applications which indicated market support for rail transportation of 22,500 tons of hops (225 train cars) and 27,500 tons of beer (275 train cars). However, the North Coast Brewing Company has a maximum brewing capacity of 90,000 barrels of beer per year due to a use permit limitation. Ninety thousand barrels of beer weighs 5,895 tons (58 railcars), significantly less than the railcars submitted in the 2018/19 BUILD grant applications.
- MJC spoke with Brewery CEO, Jennifer Owen, who indicated that train freight is not a viable freight solution for the Brewery. The Brewery requires immediate and highly reliable service for delivery of hops to the brewery and the transportation of finished product to customers. Train freight service is not feasible because it is too expensive, unreliable, unavailable, takes too long and does not provide immediate service for the highly

perishable products. The brewery CEO indicated that the Skunk Train would never be a viable option for freight services for these reasons.

Latex

There is very limited demand for Rail Freight for latex and no compatibility at this time. Fort Bragg is home to a relatively small latex bed manufacturer called Flowbeds.

- In 2018/19/20 the Mendocino Railroad submitted Federal BUILD grant applications which indicated market support for rail transportation of 1,400 tons of latex (14 train cars) per year. However, the owner of Flow Beds, Dave Turner, told MJC that they use only 6 truckloads of latex per year (3 railcars), again significantly less than the tonnage submitted in the 2018/19 BUILD grant applications.
- The owner is interested in a competitively priced railroad-based shipping for his latex raw materials, only if the Skunk Train becomes connected to the interstate system, as latex is a delicate product and suffers from multiple handling. Currently he ships one truck load of latex to his manufacturing facility in Fort Bragg from Texas for \$4,000 per load every two months. Rail service would have to comparably priced to be considered. Additionally, they order one truck load every two months, and would have to be able to similarly ship the equivalent amount (a half railcar) via rail every two months for rail service to be a viable solution.

Solid Waste

- As the Mendocino community has a relatively small population it also produces a relatively small amount of Solid Waste. According to C&S Waste Solution, the franchise operator for all solid waste collection in Fort Bragg and the unincorporated areas of Mendocino County, the coast produces two to three truckloads of solid waste a day (the equivalent of 1 to 1.5 railcars/day or about 400 railcars per year). C & S Waste solution is prohibited by its State License from hauling more than 99 tons of solid waste and recyclables per day. This is much less than the amount identified in the Mendocino Railway's 2022 build application, which claimed 1,000 rail cars/year.⁴
- By State law, solid waste must be transferred to a solid waste processing facility within 24 hours of collection. The solid waste processing facility for C&S waste solution is in Ukiah, CA, which would require a subsequent truck transport from the rail station at Willits to Ukiah.
- Rail transportation is unrealistic for Solid Waste because it would require extra handling (two truck trips for each train trip), would take too long (8 hours by train plus handling time for transfers to truck and truck transit time to Ukiah), would not likely provide the state mandated required daily service (insufficient other freight business to justify a daily train trip for one railcar of solid waste) and would be too expensive.

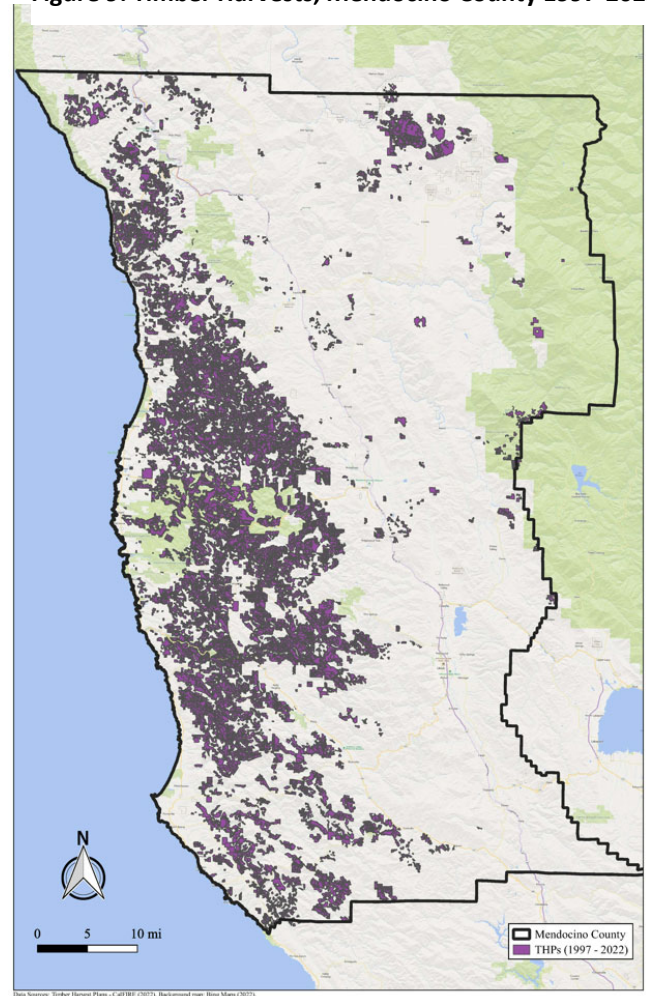
⁴2020 Build Application, footnote 7 on page 2

Timber

Wood products is a small but important economic sector in Mendocino County, accounting for 973 jobs or 2% of all jobs within the County. All approved timber harvests between 1997 and 2022 have been mapped in Figure 9. These timber harvests covered 422,915 acres in total, and as illustrated by the map, timber is harvested over a wide geographical range throughout the County. All areas of timber harvest are located to the east, south-east and north-east of the Skunk Train station in Fort Bragg.

- Felled timber is currently loaded into short haul trucks at the timber harvest site and then brought to a mill where it is offloaded and sawn into trim, beams, decking and fencing. There are no active lumber mills on the Mendocino Coast. Lumber mills are located in Willits (east), Calpella (east), Ukiah (east), and Philo (southeast).
- The majority of operators will continue to utilize trucks because the travel distance, time and cost are less than by rail.
- Additionally loading and unloading large redwood trees requires specialized equipment (loaders) which would have to be staged at the Skunk Train station.
- The current process includes loading timber onto trucks and driving from 1 to 1.5 hours to one of the mills located in the inland part of the County. To ship by rail the process would need to include: 1) load timber into trucks and drive west to the Skunk Train station (15 to 45 minutes); 2) unload the timber from the trucks onto the Skunk train; 3) transit on the Skunk train for eight hours to Willits; 4) unload timber from the train onto trucks; 5) transit on trucks another 10 to 30 minutes to a mill. Rail freight is impractical for the transport of timber on such short hauls to local mills. Additionally, the cost of rail transport is significantly higher, as previously noted.
- It should be noted that Mendocino Railroad has not listed timber as a potential freight market in any of its BUILD applications, so assumably it has also come to the same conclusion that timber is not a realistic customer for its potential freight business.

Figure 9: Timber Harvests, Mendocino County 1997-2022



4. Conclusion

Due to the short haul distances and competition from trucks, there is insufficient actual demand for rail freight transport from Longvale (Grist Creek operations) to Willits and onward from Willits to Fort Bragg, to justify the significant capital investment required to improve that rail line segments necessary for the rail freight, let alone maintain and operate them. The rail lines if rehabilitated for freight would not be able to recover their capitalization costs with earned income. They would presumably go bankrupt, as California Western was before its assets were acquired by Mendocino Railroad in bankruptcy, and as Eureka Southern was before its assets were acquired by NCRA in bankruptcy.

This leads one to speculate why the OFA has been filed. There are three potential economic rationales for filing the OFA.

1. The Skunk Train (Mendocino Railway) is currently engaged in a lawsuit with the City of Fort Bragg to determine if the Skunk Train is exempt from local land use regulations due to the Interstate Commerce Act. The Skunk Train has recently acquired 300 acres of coastal property located within the City of Fort Bragg, from the Georgia-Pacific corporation. This site is vacant and awaiting rezoning and redevelopment. The Skunk Train owners have asserted their exemption from local regulatory control based largely on federal preemption of local regulation of railroads. However, local and State authorities regard Mendocino Railroad as a tourist excursion operation whose plans for residential and mixed-use development are regulated by local governments. The Skunk Train may be asserting an OFA to buttress its claim of exemption from local and State land use regulations. The eventual redevelopment of these 300 acres of prime coastal real estate has significant potential economic value, especially if the developer can evade the local regulatory process and the state environmental cleanup process mandated for the Mill Site.
2. The Skunk Train has been seeking funds to repair its tunnel for many years with no success. Mendocino Railway has repeatedly submitted grant and loan applications with highly inflated potential freight business to get funding to fix a line which is currently used only for tourist excursions and based on this market analysis, will continue to be used only for tourist excursions. There is no Federal funding source for rail line improvements for tourist trains. By inflating its potential freight business, the Skunk Train makes an economic argument for Federal funding to repair a tourist excursion line. Success in an OFA may bolster Mendocino Railways efforts to portray itself as a bona fide freight carrier rather than a rail bike and excursion train operation. Mendocino and an affiliated company evidently have a railroad improvement direct loan proposal pending at U.S. Department of Transportation for \$31.3 million.
3. If the Skunk Train's recently submitted direct loan proposal (2022) for railroad improvements totaling \$31.3 million to the US Department of Transportation is awarded, the reconstruction of the rail line would require significant aggregate. Aggregate producers might support Skunk's applications (including its effort to use OFA procedures) in order to be looked upon favorably as an aggregate supplier to the Skunk Train if it prevails in the OFA and ever obtains financing to rehabilitate the Longvale to Willits line, or its line from Willits to Fort Bragg.
4. In past applications for government assistance, Skunk Train proposed using its own or affiliated work forces to do work. This may allow Mendocino Railway to achieve some additional profit from managing the construction itself.

In conclusion, the Skunk Train benefits from the fiction in the OFA that they are a freight railroad on many fronts:

- 1) It may be viewed as support for their federal preemption of state and local regulation for their real estate development activities in Fort Bragg and Willits;
- 2) It may support their efforts to access Federal funding which would otherwise not be available to fix the collapsed tunnel and repair their old rail line for a tourism excursion train; and
- 3) It may provide opportunities to profit from the rail repair project itself.

Appendix A: Mendocino County Demographic, Economic & Housing Trends

Purpose & Findings

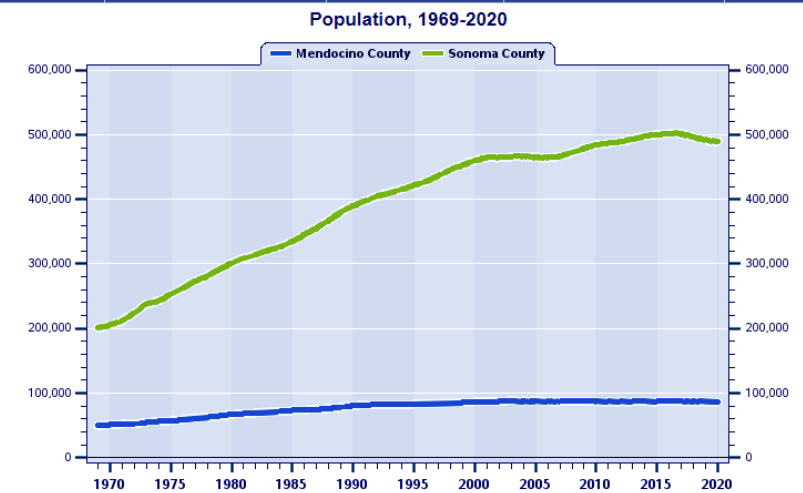
In the event the OFA proponent seeks to justify the OFA on the basis of rail moves from Longvale through and including Willits to Fort Bragg, this appendix provides an overview of the Mendocino economy. It includes an overview of demographic, economic and housing trends which have the potential to shape freight business to and from the Mendocino coast.

Demographic Trends

Population

- Overall, Mendocino's population growth is constrained by its remote location, low housing production numbers, and very slow job growth. In 2020 Mendocino's population was 86,061, which is just 0.2% of the State population. Mendocino County's population has remained relatively flat for the past 70 years (Figure 3, blue line).
- By contrast, Sonoma County, which has the closest economic ties to Mendocino County has a total population of 489,819, or 1.2% of the State's population. Sonoma County's population has doubled from 200,920 residents in 1969 to 489,819 in 2020.
- Both counties have large, low-density, unincorporated areas.
- The Mendocino Coast is relatively isolated from inland Mendocino due to the Coast Mountain Range. The Mendocino Coast has a population of around 18,000 residents.

Figure 3 Population Growth 1969-2020



Economy Overview

Gross Regional Product for the two-county region was \$35 billion, with Sonoma contributing 87% and Mendocino County contributing just 12% of GDP.

- ✓ Overall Mendocino GDP ranks 38th from the top of California's 58 counties, while Sonoma County's Gross Domestic Product (GDP) ranks 17th.
- ✓ Since 2010, Gross Domestic Product has grown only 0.78%/year in Mendocino (ranked 38 out of 58 counties) while it has grown by 2.59%/year in Sonoma (ranked 17). See Figure 4.

Local Government, Education and Hospitals are the biggest economic sectors of the region in terms of GDP, which is not atypical, as these sectors serve the needs of existing communities. Other large regional economic sectors include Wineries, Crop Production, Instrument Manufacturing, Breweries, Tourism, Insurance, and Electric Power Distribution, while the state as a whole specializes in the tech sector, commercial banking, agriculture and tourism.

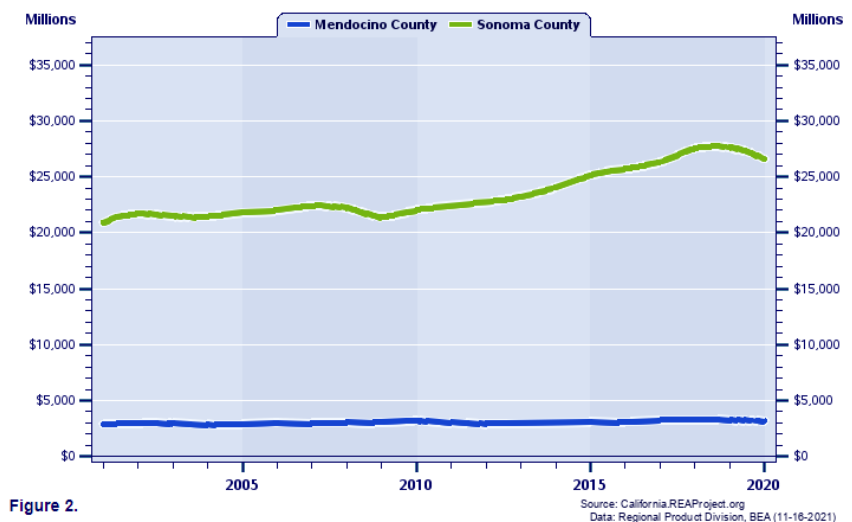
Figure 4 Gross Domestic Product, Sonoma & Mendocino County

Conclusion: Mendocino's economy is very small and has experienced minor growth in the past 20 years. It provides a small, localized, and somewhat stagnant market for freight services. Currently all freight services are provided by trucks.

Jobs Analysis

This section explores Mendocino County's job growth in a relative context.

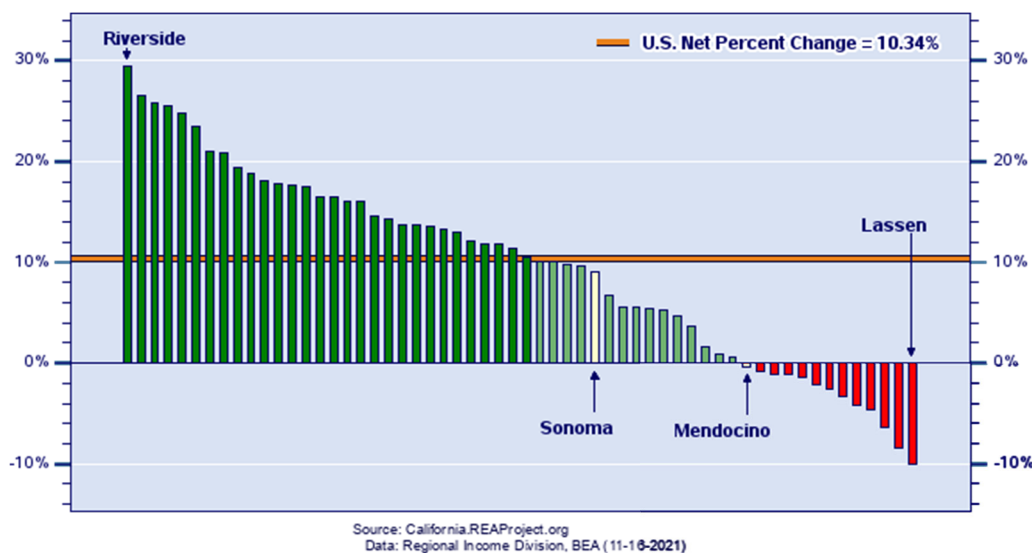
The bar chart below portrays all 57



California Counties' job growth over the interval 2010-2020. Some of the most salient highlights include:

- Ranked #46, Mendocino's employment growth (-0.35%) surpassed that of 12 counties and trailed 45.
- Ranked #35, Sonoma's employment growth (9.00%) surpassed that of 23 counties and trailed 34.

Figure 5: Employment Growth by County, 2010 vs 2020, Net Percent Change



Mendocino County's employment change over 2010-2020 of **-0.35%** trailed the **10.34%** growth of employment nationally by **-10.68%**. Accounting for this difference was a local industry mix that included more industries that experienced slower growth (-1.8% or -814 jobs) nationwide, coupled with a large share (-8.89% or -4,026 jobs) of local industries that underperformed their counterparts nationally.

Actual Growth		National Growth		Industry Mix		Regional Shift
-0.35%*	=	10.34%	+	-1.80%	+	-8.89%
(-157)		(4,683)		(-814)		(-4,026)
*Percent growth figures may not add due to rounding by a factor of ± 0.01%.						

Table 5 contains the details of shift-share analysis for Mendocino County. It illustrates that Mendocino County underperformed the nation in almost all economic sectors, except for Forestry and Fishing, Utilities, Health Care and

Social Assistance, and state government (**blue**). Declines in Mendocino County employment were particularly stark in Mining, Construction, Finance and Insurance, Professional Scientific and Technical services, Accommodations and Local Government (**red**). These data illustrate that Mendocino's economy is in a period of stagnation with small economic shifts up and down. **The following sectors are particularly of interest for rail freight as they are likely the only sectors that would participate in rail freight from or to the Coast via the Skunk Train (Table 5).**

- Mining is a very small component of the economy at 0.3% and experienced a significant contraction from 121 jobs in 2010 to 71 jobs in 2020, a decline of 41.32%. Mining in Mendocino County is almost exclusively related to aggregate extraction.
- Forestry and Fishing experienced a slight increase of 170 jobs (+12.36%) in the ten-year timeframe. Fishing products are not a suitable product for rail transport due to perishability. Forestry is a difficult item to transport via rail because timber harvests are geographically dispersed and transport by rail would require a truck, rail and truck transfer scenario with very large logs. The average transport distance for logs is approximately 40 miles. It is more efficient and less expensive to truck the logs directly to a lumber mill, rather than to truck them to a railhead (Skunk), then load them on a freight car, and then unload them at the other end.
- Manufacturing is a relatively small sector of the Mendocino Coast economy. It represents just 6% of all jobs and experienced a nominal growth of 1.86% during this timeframe.

Table 5: Mendocino County Employment Growth, 2010-2020

Major Industry	Employment				Actual Growth		Standardized Growth ²		Employment ³ 2020
	2010 Level	2010 Share ¹	2020 Level	2020 Share ¹	Percent	Net	Percent	Net	
Farm Employment	1,967	4.3	1,581	3.5	-19.62	-386	-1.71	-34	1,933
Forestry, Fishing, and Related Activities	1,375	3.0	1,545	3.4	12.36	170	8.46	116	1,491
Mining	121	0.3	71	0.2	-41.32	-50	-25.76	-31	90
Utilities	161	0.4	189	0.4	17.39	28	0.67	1	162
Construction	2,948	6.5	2,894	6.4	-1.83	-54	23.71	699	3,647
Manufacturing	2,736	6.0	2,787	6.2	1.86	51	5.91	162	2,898
Wholesale Trade	906	2.0	910	2.0	0.44	4	2.81	25	931
Retail Trade	5,641	12.5	5,429	12.0	-3.76	-212	2.15	121	5,762
Transportation and Warehousing	690	1.5	1,025	2.3	48.55	335	65.85	454	1,144
Information	488	1.1	280	0.6	-42.62	-208	0.68	3	491
Finance and Insurance	1,369	3.0	989	2.2	-27.76	-380	14.39	197	1,566
Real Estate and Rental and Leasing	1,872	4.1	1,842	4.1	-1.60	-30	16.01	300	2,172
Professional, Scientific, and Technical Services	2,711	6.0	2,263	5.0	-16.53	-448	21.89	593	3,304
Management of Companies and Enterprises	224	0.5	242	0.5	8.04	18	31.99	72	296
Administrative and Waste Services	1,987	4.4	2,408	5.3	21.19	421	12.89	256	2,243
Educational Services	490	1.1	447	1.0	-8.78	-43	12.45	61	551
Health Care and Social Assistance	4,629	10.2	6,298	14.0	36.06	1,669	17.68	818	5,447
Arts, Entertainment, and Recreation	1,108	2.4	967	2.1	-12.73	-141	-5.39	-60	1,048
Accommodation and Food Services	4,009	8.9	3,665	8.1	-8.58	-344	1.62	65	4,074
Other Services (except Public Administration)	2,714	6.0	2,769	6.1	2.03	55	7.85	213	2,927
Federal Civilian	333	0.7	290	0.6	-12.91	-43	-1.75	-6	327
Military	173	0.4	156	0.3	-9.83	-17	-9.00	-16	157
State Government	406	0.9	480	1.1	18.23	74	0.56	2	408
Local Government	6,235	13.8	5,609	12.4	-10.04	-626	-2.33	-145	6,090
Total Employment	45,293	100.0	45,136	100.0	-0.35	-157	8.54	3,869	49,162

1Share: The percentage share of total employment by industry.

2Standardized Growth: at the same rate as its counterpart at the national level had each industry grown.

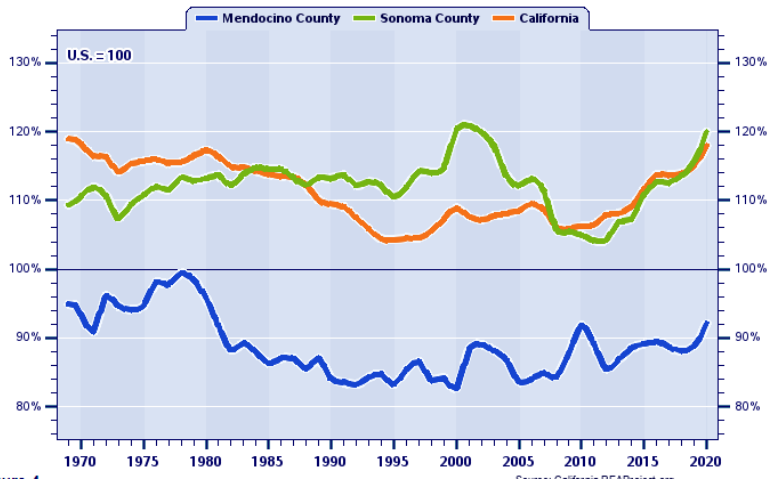
3Standardized Employment, 2020: The 2020 level of employment in each industry had it grown at the same rate as its counterparts at the national level since 2010. Note: Percent growth figures may not add due to rounding by a factor of $\pm 0.01\%$

Employment, Income & Poverty

Employment growth in Sonoma County averaged 1.52% per year between 2010 and 2020, ranking 28th in California, while employment growth in Mendocino was just 0.51% per year earning Mendocino County a rank of 47th among 57 counties in California. Mendocino County also consistently has higher unemployment rates (6.3% in 2022) than Sonoma (3.5%).

- Mendocino County per capita income has ranged between 85 and 100% of the US average per capita income from 1970 -2020, illustrating that the area has struggled economically for decades (blue Lines). By comparison Sonoma per capita income is consistently 110 to 120% of the US average per capita income (Figure 6).
- Median Household Income for Mendocino (\$46, 528) ranks 13th from the bottom among California counties, while Sonoma Household Income (\$71,386) ranks 13th from the top, again illustrating the divergent nature of these two economies.
- In 2020, the Mendocino County poverty rate was 19.1% (or 1 of every 5 households), while Sonoma’s poverty rate was 7.8%.

Figure 6: Per Capita Personal Income as a Percent of the US Average



Housing

Overall housing production has not kept pace with demand. As illustrated in Table 6, Mendocino housing production averages 148 units/year or a 0.36% annual growth rate. Sonoma County by contrast averages 1,702 new units/year, or 0.83% annual growth.

Implications: New housing production is unlikely to be a significant source of demand for rail freight of products such as aggregates and finished lumber. The population of the Mendocino Coast offers a very small market for such products and grows at a slow pace.

Table 6: Housing Permits and Production, Mendocino & Sonoma County 2014-2023

	Mendocino County	Sonoma County
Timeframe	6/30/2014 - 6/30/2019	1/31/2015 - 1/31/2023
	Permits	Permits
Very Low Income	123	476
Low Income	49	628
Moderate Income	192	765
Above Moderate Income	377	4941
Total Building Permits	741	6810
Building Permits /year	148.2	1702.5
Total Housing Units	41,055	206,362
% growth Units/year	0.36%	0.83%

Source: California Housing and Community Development (HCD).

Appendix B: Freight Overview

This Appendix examines general transportation trends Nationwide, which indicate that rail service is generally not competitive with truck transport. This is especially true for short haul distances such as Longvale to Willits (15 miles) and Willits to Fort Bragg (40 miles).

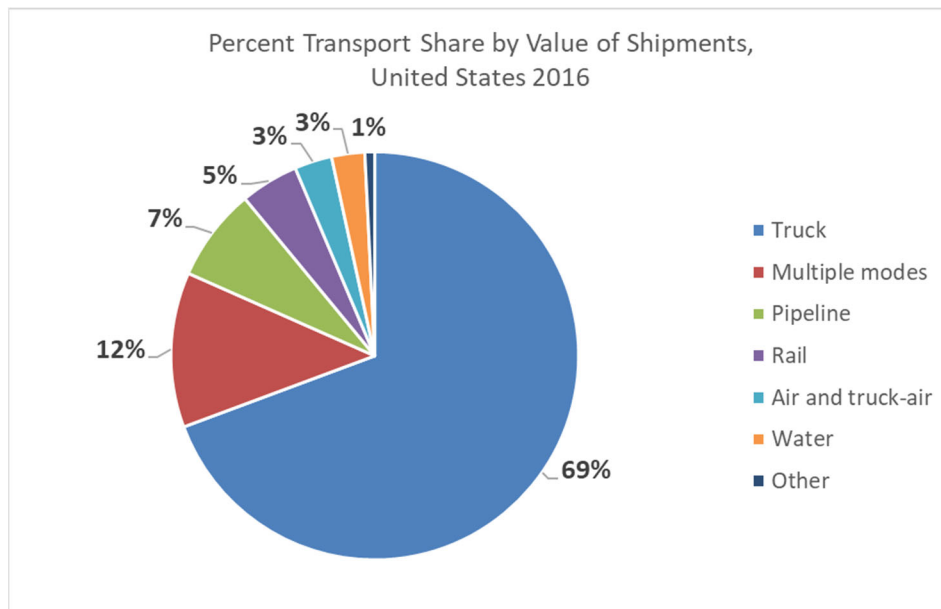
Freight Modes Overview

Freight is moved by rail, waterways, pipeline, truck, and air throughout the United States.

According to the US Department of Transportation, more freight is shipped by Truck within the United States than any other mode. As noted in Table 1, truck shipments accounted for \$12,578 billion dollars of shipment value while rail shipped \$837 billion worth of goods in 2016.⁵

Table 4-1: Value of Shipments by Freight Mode (\$billions)

Mode	2012	2016	2045
Truck	12,216	12,579	24,001
Rail	721	837	1,629
Water	431	477	872
Air and truck-air	674	539	3,208
Pipeline	1,325	1,339	1,901
Multiple modes ^a	2,122	2,230	4,970
Other ^b	241	141	484
Total	17,729	18,142	37,064



Another way to think about these numbers is illustrated in Chart 1, which indicates that 69% of the value of all freight shipments is by truck, while 5% of the value of all shipments is by rail.

⁵ U.S. Department of Transportation, [2019 Pocket Guide to Transportation](#), Page 19

Trucks also ship more by weight. In 2016 the total weight of truck shipments was 11,619 million tons, while all goods shipped by rail weighed in at 1,835 million tons. By weight Trucks ship 66% of all goods, while railroads ship 10% of all goods. Rail is twice as likely to ship heavy commodities than other items within the US. However, by weight trucks still ship significantly more than rail overall.

Table 4-2: Weight of Shipments by Freight Mode (million tons)

Mode	2012	2016	2045
Truck	10,711	11,619	16,435
Rail	1,828	1,835	2,277
Water	658	740	945
Air and truck-air	7	5	26
Pipeline	3,031	2,904	4,766
Multiple modes ^a	418	486	800
Other ^b	342	97	273
Total	16,996	17,686	25,521

Rail is competitive with truck freight only in “ton miles traveled.” Trucks ship 40% of all ton miles traveled (2,023 billion) while trains ship 28% (1,527 Billion) of all ton miles. This illustrates that rail is slightly more competitive for long haul interstate travel of heavy bulk items. Heavy freight such as coal, lumber, ore that are going long distances are slightly more likely to travel by rail, or some combination of truck, rail, and water. Trucks with more flexible routes and scheduling are much more competitive for shorter-haul and medium-haul goods, although many interstate trucks also ship significant goods around the country.

Table 4-3: Ton-miles of Shipments by Freight Mode

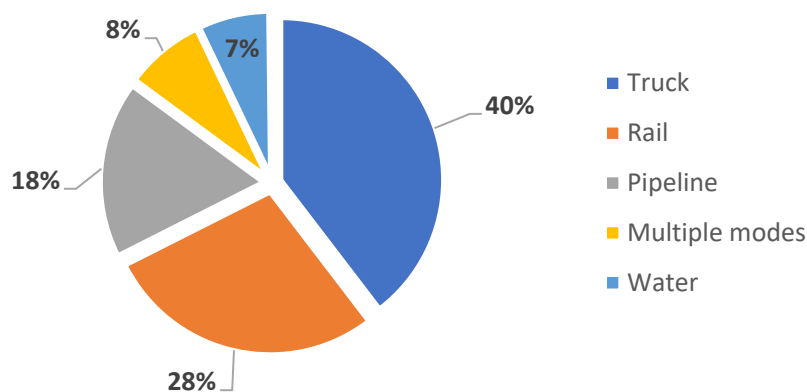
Mode	2012	2016	2045
Truck	1,891	2,023	3,282
Rail	1,481	1,427	1,776
Water	323	354	419
Air and truck-air	6	6	21
Pipeline	857	896	1,414
Multiple modes ^a	339	398	765
Other ^b	7	3	16
Total	4,903	5,108	7,692

^aIncludes mail. ^bIncludes other, unknown, and imported crude oil with no domestic mode.

Notes: Details may not add to totals due to rounding. Includes domestic trade and the domestic portion of imports and exports.

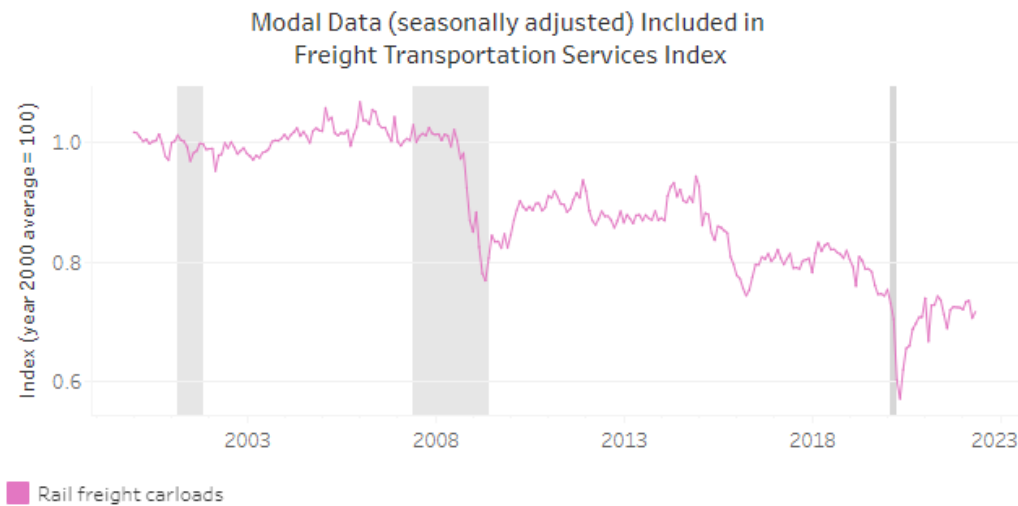
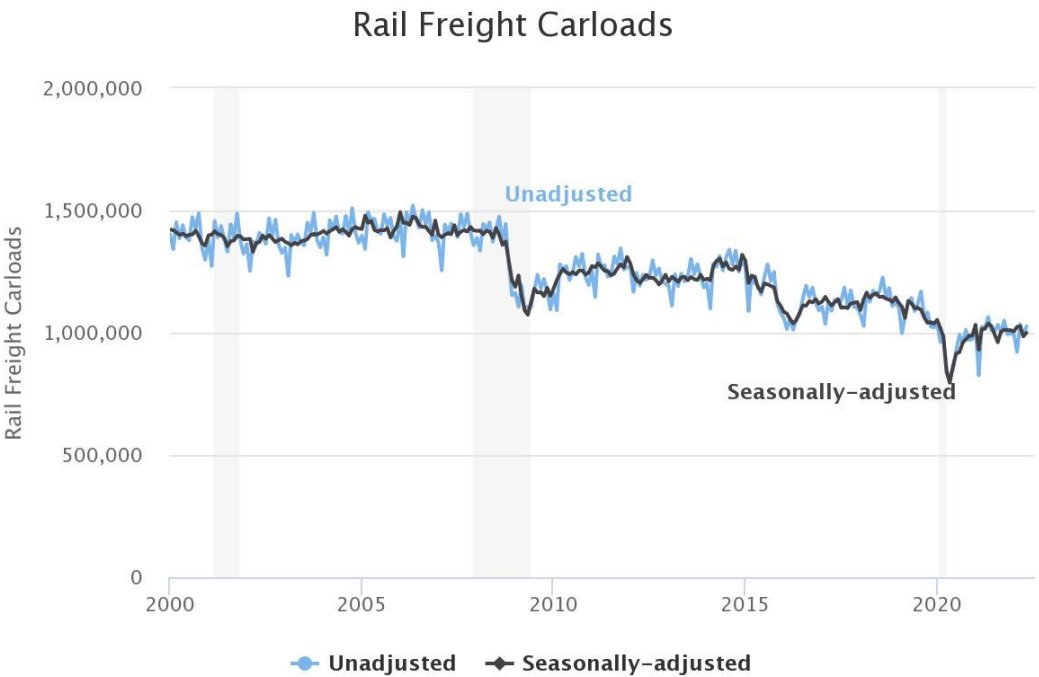
Source: U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, Version 4.4.1, available at www.bts.gov as of November 2018.

Percent Transport Ton Miles of Shipments, United States 2016



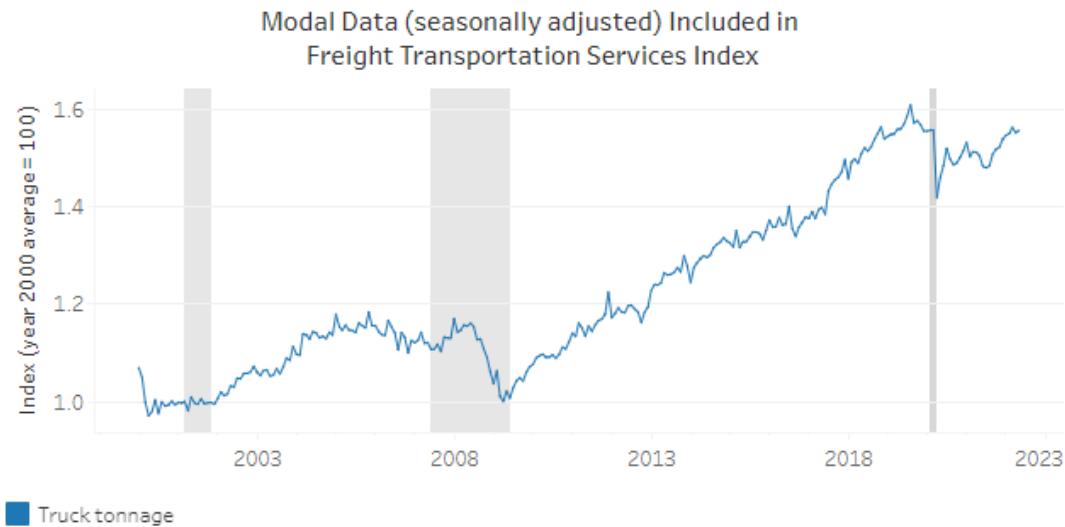
Freight Trends

The charts below, excerpted from the U.S. Department of Transportation report *Transportation-as-an-Economic-Indicator*, illustrate a steady decline in the use of rail carloads for freight: overall carloads declined from 1.5 million in 2000 to a little over 1 million in 2022.



Conversely, there was a significant increase in the tonnage index for freight delivered by trucks: from 80 to 120 during this same period for a total of 50% growth over the past 20 years.⁶

⁶ <https://data.bts.gov/stories/s/Transportation-as-an-Economic-Indicator/9czv-tjte>

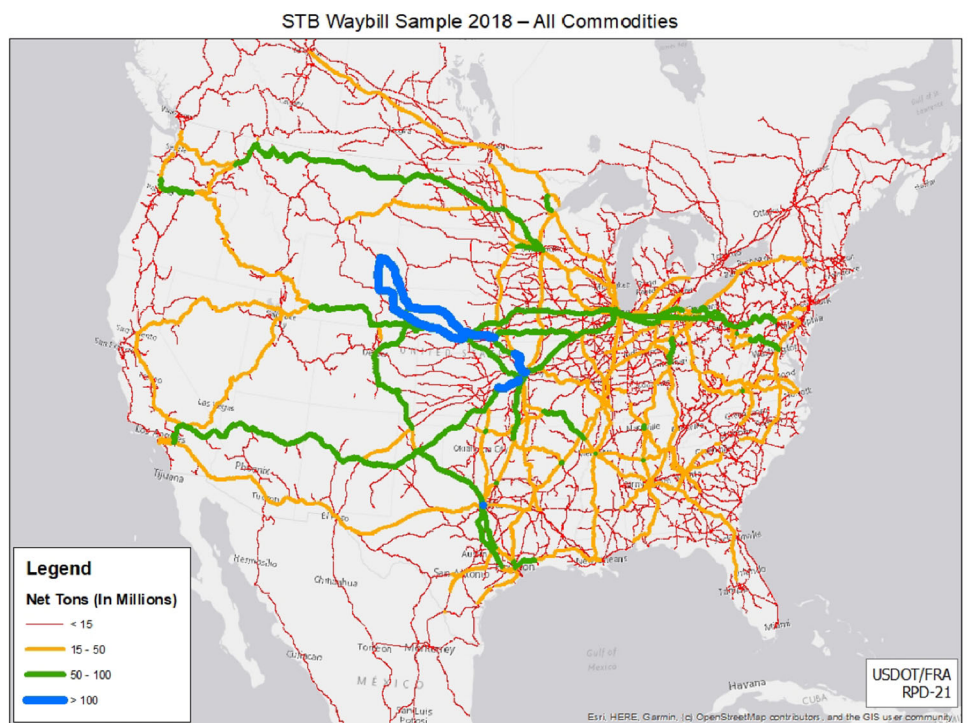


To conclude, overall rail transport continues to decline as a freight delivery method, while truck transport continues to increase.

Freight Activity by Area

This Waybill Sample map shows U.S. rail routes by tonnage of the commodities they carry. As illustrated in the map, rail coverage and use are more common on the East coast and Midwest than it is in the Western United States. Rail coverage in California is relatively sparse, with most rail transport from the western United States, occurring between the major Ports of LA, Oakland and Seattle to the Midwest and east coast.

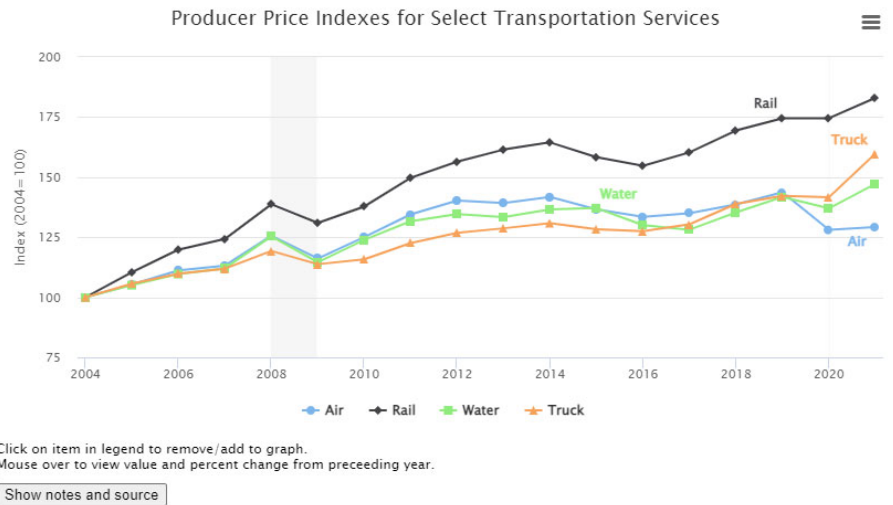
Other than some limited rail freight on SMART's passenger rail system in southern Sonoma and Marin Counties, there is currently no rail freight service on the north coast of California.



The Waybill is a stratified sample of carload waybills for all U.S. rail traffic submitted by those rail carriers terminating 4,500 or more revenue carloads annually. Image created by Federal Railroad Administration, Office of Railroad Policy and Development (Office of Policy), based on Surface Transportation Board's 2018 Carload Waybill Sample.

Truck Vs Rail Pricing

The table below illustrates price trends relative to the 2001 index for each mode of transport. The overall price of all transport options has increased between 2004 and 2020; however, it has increased fastest for rail.⁷



⁷ Bureau of Transportation Statistics. *Cost of Transportation: Costs Faced by Businesses Purchasing Transportation Services*; <https://data.bts.gov/stories/s/2yqq-baqd/>

Appendix C: Capital Improvement Projects

Caltrans - Planned Projects, Mendocino County							
	Right of way capital	Construction Capital	Start Date	Distance from Fort Bragg	Location	Closest Gravel Supply	Description
Pudding Creek Bridge Widening	Na	\$ 8,666,000	Summer 2023	2	Central Coast	Geoaggregates / Kibisilla Rock	Caltrans proposes to rehabilitate the existing Pudding Creek Bridge (Caltrans Bridge 10-0158) on State Route 1 (SR1) in Fort Bragg in Mendocino County (post miles 61.9). The project includes widening the bridge to accommodate two 12-foot-wide lanes, two 8-foot-wide shoulders, two 6-foot walkways and new bridge railings to meet current standards.
Jack Peters Bridge Widening	\$ 717,000	\$ 9,596,000	May 2023 - October 2024	9.8	Central Coast	Geoaggregates / Kibisilla Rock	The Jack Peters Creek Bridge Widening and Rail Upgrade Project is located on State Route 1 (SR1) in Mendocino County (post miles 51.87). The project includes widening the bridge to accommodate two 12-foot-wide lanes, two 6-foot-wide shoulders and a 6-foot wide separated pedestrian walkway on the west side of the widened structure that will link the segment of the California Coastal Trail from County Road 5000 to Lansing Drive.
Albion River Bridge Replacement/Rehabilitation Project	\$ 8,465,000	\$ 58,637,000	5/1/2027	17.1	Central Coast	Geoaggregates / Kibisilla Rock	Albion River Bridge Replacement/Rehabilitation Project in Mendocino County in California. The Project is located on State Route 1 from post mile 43.3 to 44.2.
Salmon Creek Bridge Replacement	Na	\$ 35,409,000	Unknown. Project is under review by DTSC	18.5	Central Coast	Geoaggregates / Kibisilla Rock / Greenwood Aggregates Inc Philo Ca	The California Department of Transportation (Caltrans) proposes to replace the Salmon Creek Bridge on Route 1 in Mendocino County. The proposed Salmon Creek Bridge Replacement project would replace the existing functionally obsolete and structurally deficient bridge with a structure that would ensure the safety and reliability of this critical link on State Route 1 of the state highway system. The Project's purpose includes improving the structural and geometric deficiencies of the bridge and approach roadways to ensure uninterrupted traffic movements in the event of an accident, seismic event, or other catastrophic failure and reduce ongoing maintenance costs; provide wider shoulders for bicyclists and for motorists experiencing breakdowns and providing safe bicycle and pedestrian movement across Salmon Creek.
Salmon Creek Sandblast Waste Abatement	\$ 5,200,000	\$ 9,000,000	Unknown. Project is under review by DTSC	18.5	Central Coast	Geoaggregates / Kibisilla Rock / Greenwood Aggregates Inc Philo Ca	Located along State Route (SR) 1 at post miles 43 through 43.2 in Mendocino County south of the community of Albion and approximately 2.2 miles north of the SR 128 junction. The purpose of the project is to remediate lead-impacted shallow soil in the State Right-of-Way and on the privately-owned parcels adjacent to the Salmon Creek Bridge. The project is needed because historic bridge painting practices resulted in elevated lead concentrations in shallow soils beneath and east of the Salmon Creek Bridge. Caltrans entered into a voluntary cleanup agreement with the California Department of Toxic Substances Control (DTSC) for regulatory oversight of the cleanup project.
Navarro Ridge Safety	\$ 600,000	\$ 3,900,000	Spring 2023 - Fall 2023	28	Central Coast	Greenwood Aggregates Inc Philo Ca	Located in Mendocino County near Albion from 1.5 miles north of the junction of Route 128 to 0.1 mile south of Navarro Ridge Road. This shoulder widening project proposes to widen existing shoulders in both directions to 4 ft., install edge-line rumble strip, perpetuate the existing centerline rumble strip, and install metal beam guardrail. Work will include replacement of four culverts, nine drainage inlets and the extension of three culverts. The project was initiated by District 1 Traffic Safety Office in response to a high incidence of run-off-road collisions.
Gualala Downtown Streetscape Enhancement	NA	\$ 1,820,000	Not scheduled	58.6	South Coast	Greenwood Aggregates Inc Philo Ca	Caltrans, in partnership with MCOG, proposes an enhancement project on State Route 1 (SR 1) through downtown Gualala in Mendocino County (post miles 0.6 to 1.0). The current design of the downtown area of Gualala has several deficiencies that could increase conflicts between motorized users, cyclists, and pedestrians.
Hopland ADA		\$ 11,187,000		77	South 101 Corridor	Granite Construction, Ukiah CA	Caltrans proposes to construct improvements on U.S. Highway 101 in downtown Hopland in Mendocino County (post miles 10.8 and 11.2) for compliance with the Americans with Disabilities Act (ADA). Work would include improving curb ramps, sidewalks, and driveways, reconstructing the roadway, rehabilitating pavement, upgrading drainage systems, signage, and Transportation Management Systems (TMS) facilities.
Total	\$14,982,000	\$ 138,215,000					
Total Coastal		\$ 121,308,000					
Source: https://dot.ca.gov/caltrans-near-me/district-1/d1-projects ; email correspondence with Manny Machado, Public Information Officer, Caltrans District 1, Mendocino/Lake Counties 707-496-6879							

Appendix E: Map of Gravel Suppliers

