

SERVICE DATE – DECEMBER 11, 2020

SURFACE TRANSPORTATION BOARD

DECISION

Docket No. EP 704 (Sub-No. 1)

REVIEW OF COMMODITY, BOXCAR, AND TOFC/COFC EXEMPTIONS

Digest:¹ The Board revises certain appendices included in its September 30, 2020 decision in this proceeding and will provide revised workpapers to all parties who previously obtained workpapers.

Decided: December 11, 2020

In a decision served on September 30, 2020, the Board requested public comment on an approach developed by the Board's Office of Economics (OE) for possible use in considering class exemption and revocation issues. The approach is intended to help the Board evaluate market conditions by taking into account a variety of metrics related to or indicative of rail transportation competition. Review of Commodity, Boxcar, & TOFC/COFC Exemptions, EP 704 (Sub-No. 1), slip op. at 1, 6 (STB served Sept. 30, 2020). The Board provided a procedural schedule and stated that it would make the workpapers underlying the appendices to its decision available to interested parties under an appropriate confidentiality agreement pursuant to 49 C.F.R. § 1244.9.

By decisions served on November 25 and December 4, 2020, the Board announced that it would hold a technical conference on December 18, 2020, at which Board staff would provide a presentation on, and answer technical questions related to, the approach developed by OE. In preparing for the December 18 conference, OE determined that a series of intermediate queries should have been included in one of the files released in the Board's workpapers. The file with these intermediate queries is used to assign latitude and longitude locations to movements in the 1992 and 2018 Confidential Carload Waybill Samples (CCWS). The locations are then used in the assignment of movements to particular categories included in the proposed approach (e.g., potential rail influence).

In revising its workpapers to include these intermediate queries, OE identified two coding errors that have a minor impact on the assignment of movements to particular categories. Together, the coding errors affected the approach's processing of 10,086 records, out of the 1,071,897 total records in the 1992 and 2018 CCWS. OE has made revisions to correct these coding errors.

¹ The digest constitutes no part of the decision of the Board but has been prepared for the convenience of the reader. It may not be cited to or relied upon as precedent. See Pol'y Statement on Plain Language Digests in Decisions, EP 696 (STB served Sept. 2, 2010).

These coding errors,² while minor in nature, necessitate several minor adjustments to the analysis contained in the appendices to the September 30 decision. Although the “Overall Dashboard Signal” does not change for any of the commodities in the Indicator Dashboards provided in Appendices B and C of the September 30 decision, six discrete indicators do shift, as shown below.

6 Indicators Change in Revised Indicator Dashboards				
<u>Dashboard Version</u>	<u>Commodity</u>	<u>Indicator</u>	<u>Sept. 30 Signal</u>	<u>Revised Signal</u>
Exemption Revocation Using R/VC	Hydraulic Cement	Competitive Influence Change	Weak	Moderate
Exemption Revocation Using R/VC	Hydraulic Cement	Competitive Influence R/VC Difference Change	Weak	Moderate
Exemption Revocation Using RPC	Hydraulic Cement	Competitive Influence Change	Weak	Moderate
Exemption Revocation Using RPC	Lumber	Competitive Influence RPC Difference in Most Recent Year	Moderate	Strong
Additional Exemption Using RPC	Industrial Sand	Competitive Influence RPC Difference Change	Moderate	Strong
Additional Exemption Using RPC	Asphalt Sheathings	Competitive Influence RPC Difference in Most Recent Year	Moderate	Strong

OE has also updated the data visualizations and tables provided in Appendix B of the September 30 decision (associated with Hydraulic Cement (STCC 32411)). The visualizations for all other commodities included in the workpapers underlying Appendices B and C, and the source code underlying the various components of the approach, have likewise been updated.

With this decision, the Board is providing revised versions of Appendices B and C to correct for these errors. All parties who previously obtained workpapers in this proceeding will receive revised workpapers. Because OE informs the Board that the coding errors and the missing intermediate queries have only minor impact on the overall analysis and do not undercut the overall value of the technical conference, which is intended to discuss the general approach developed by OE, and because the Board does not want to unnecessarily delay the conference, the Board will proceed with the technical conference as scheduled. If any party has additional technical questions related to these minor revisions, they should submit those questions as soon as practicable prior to the technical conference by email to Economic.Data@stb.gov.

It is ordered:

1. Revised versions of Appendices B and C to the Board’s September 30, 2020 decision are provided, as discussed above. Revised workpapers will be provided to all parties who previously obtained workpapers.

2. This decision is effective on its service date.

By the Board, Board Members Begeman, Fuchs, and Oberman.

² The first coding error was due to the inadvertent use of a table that joined the 1992 and 2018 CCWS, attributing potential railroad influence (or the lack thereof) in error on some movements. The second coding error involved the assignment of the latitude and longitude coordinates to movements that were observed in the 1992 CCWS, assigning slightly different, albeit plausible, locations in limited circumstances.

Revised Appendix B

Example of Indicator Dashboard and Data Visualization Components as Applied to Hydraulic Cement (STCC 32411)

Indicator Dashboard Using R/VC Ratios

Commodity		Overall Dashboard Signal	Initial Screens		Indicators							
STCC5	STCC Name		2018 % of Cars RVC 180	2018 % Intermodal	All Traffic Recent RVC	All Traffic RVC Change	Comp Inf Recent	Comp Inf Change	Length of Haul Recent	Length of Haul Change	Comp RVC Recent Diff	Comp RVC Diff Change
32411	Hydraulic Cement, Natural, Portland or	Moderate	52.2%	0.4%	Strong	Strong	Weak	Moderate	Moderate	Strong	Moderate	Moderate

Looking at the Indicator Dashboard results for hydraulic cement, 52.2% of the carloads are R/VC 180 traffic (greater than Initial Screen One's 5% threshold), and 0.4% of the carloads are moving as intermodal traffic (less than Initial Screen Two's 40% threshold). As a result, neither of the initial screens send a "weak" signal, and the analysis proceeds to the indicators.

Both of the R/VC indicators send "strong" signals, meaning that R/VC ratios tended to be more than 5 percentage points higher for hydraulic cement than for all carload traffic in 2018, and they tended to see increases that were more than 5 percentage points above the increases for all carload traffic from 1992 to 2018. The "Length of Haul Change Indicator" also generated a "strong" signal for hydraulic cement, as the average length of haul increased by more than 5 percentage points above the increase for all carload traffic.

However, these "strong" signals were balanced by a "weak" signal from the "Competitive Influence in Most Recent Year Indicator." This means the proportion of hydraulic cement traffic which was on longer haul moves and/or which didn't have any railroad or water carrier alternatives tended to be more than 5 percentage points below those proportions for all carload traffic. Since the "Competitive Influence Change Indicator" was "moderate," those values tended to change by an amount within 5 percentage points of all carload traffic from 1992 to 2018.

Lastly, there are three more "moderate" signals sent by the "Length of Haul in Most Recent Year Indicator" and both competitive influence R/VC difference indicators. The former means the average length of haul for hydraulic cement in 2018 was between 500 and 1,000 miles. The latter means the markup for hydraulic cement traffic without rail or water carrier alternatives, as well as the change in that markup, tended to fall within 5 percentage points of the corresponding figures for all carload traffic.

Overall, hydraulic cement tended to have higher R/VC ratios which increased more than other traffic and lengths of haul that increased more than other traffic. However, it also tended to have less traffic without modal influences (as assigned by the GMIM and CCWS analyses) to exert competitive pressure. All the other metrics measured by the indicators tended to be similar to other traffic. Once the values assigned to these indicators are averaged, the Overall

Dashboard Signal becomes “moderate” for hydraulic cement.³ This means there is moderate evidence that an exemption revocation could be warranted. The full Data Visualization analysis then provides additional information on the market conditions that might support or weaken the case for exemption revocation.

³ $2+2+0+1+1+2+1+1=10$, $10/8=1.25$, and $0.67 < 1.25 < 1.33$, which means the Overall Dashboard Signal is “moderate.”

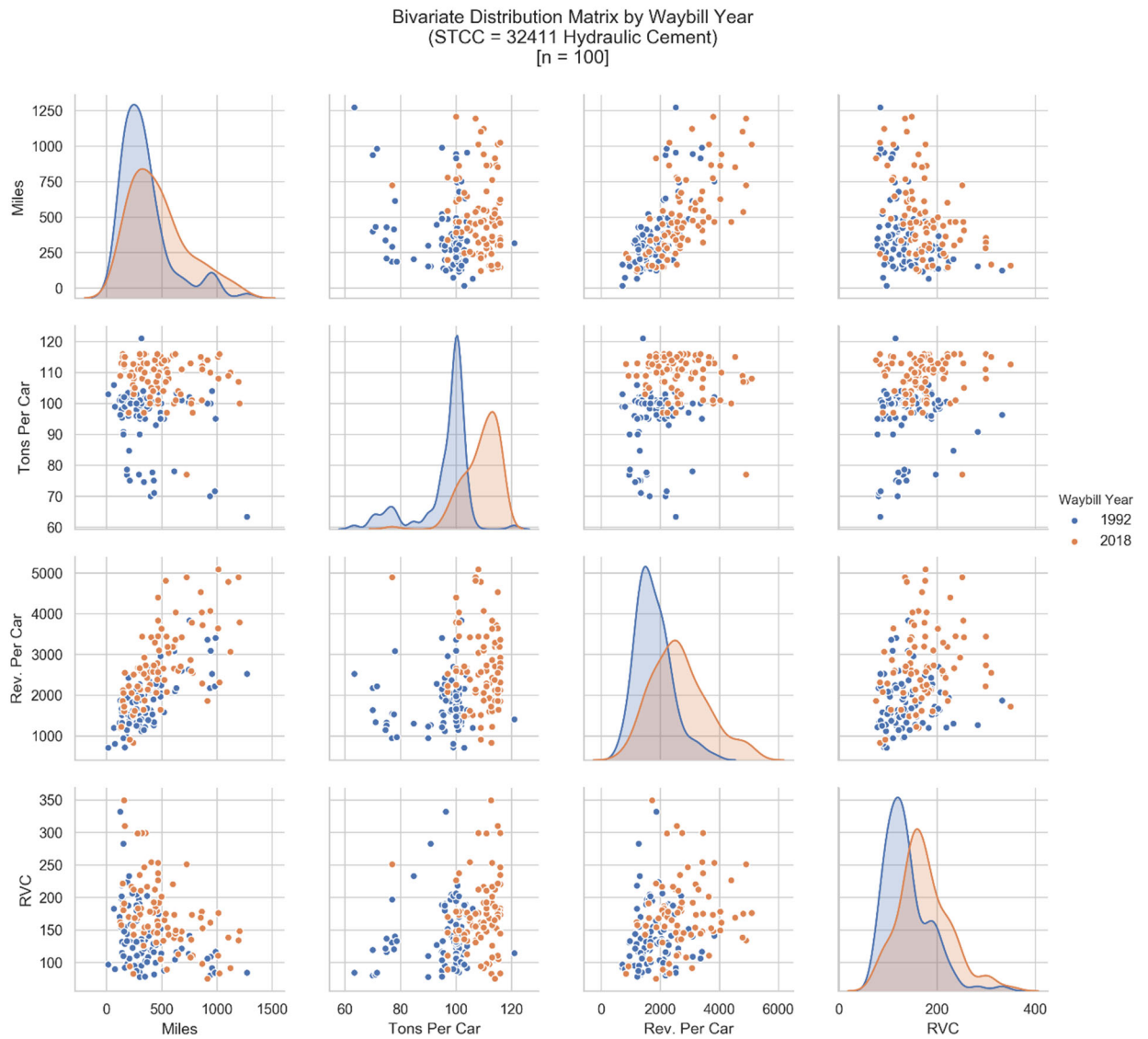
Indicator Dashboard Using RPC Values

		Overall Dashboard	Initial Screens		Indicators							
STCC5	STCC Name		2018 % of Cars	2018 %	All Traffic	All Traffic	Comp Inf	Comp Inf	Length of Haul	Length of Haul	Comp RPC	Comp RPC
		Signal	RVC 180	Intermodal	Recent RPC	RPC Change	Recent	Change	Recent	Change	Recent Diff	Diff Change
32411	Hydraulic Cement, Natural, Portland or	Moderate	52.2%	0.4%	Weak	Strong	Weak	Moderate	Moderate	Strong	Weak	Moderate

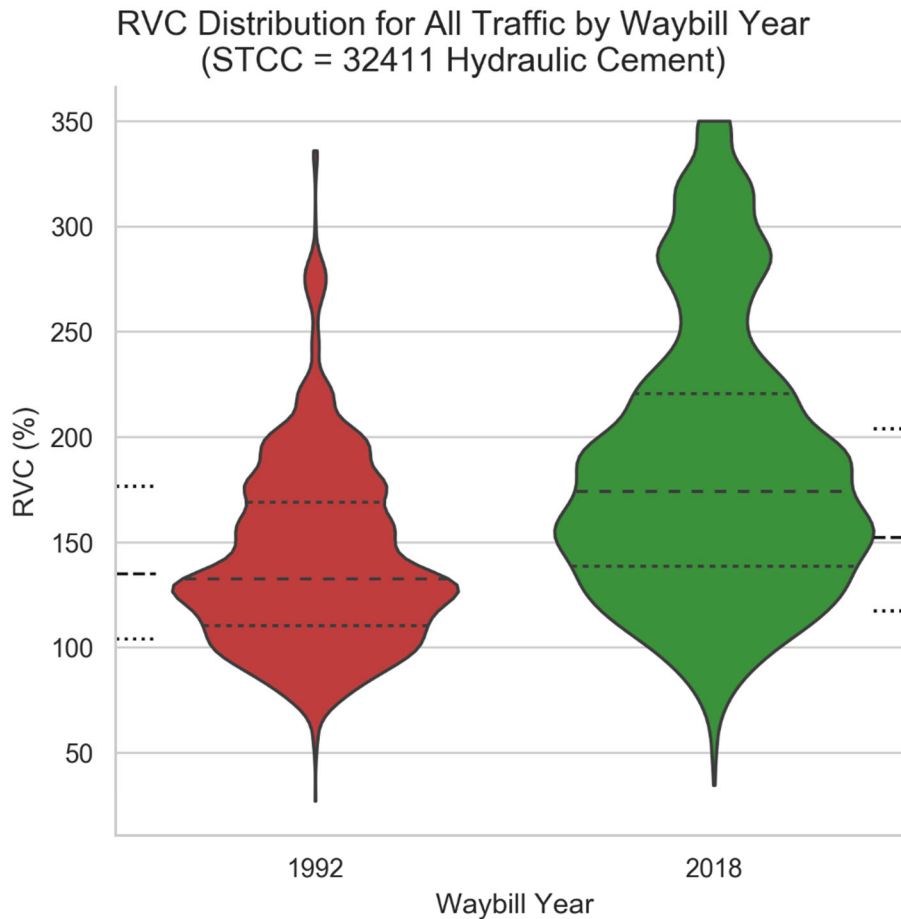
Note that when the Indicator Dashboard calculations are run for RPC rather than R/VC ratios, there is now a “weak” signal for the “All Traffic in Most Recent Year RPC Indicator” and the “Competitive Influence RPC Difference in Most Recent Year Indicator.” This means the values for both of those indicators tended to be more than 5 percentage points below the corresponding values for all carload traffic. RPCs may send different signals than R/VC ratios for various reasons. Because RPCs tend to be higher as length of haul increases and hydraulic cement had less than half the average length of haul of all carload traffic in 2018, it is not surprising that it sends a weaker signal than R/VC ratios. However, the signals generated by the changes in RPCs are consistent with those generated by the changes in R/VC ratios, and the Overall Dashboard Signal once the scores of each of the indicators are averaged is still a “moderate” signal.⁴

⁴ $0+2+0+1+1+2+0+1=7$, $7/8=0.875$, and $0.67<0.875<1.33$, which means the Overall Dashboard Signal is “moderate.”

Data Visualization



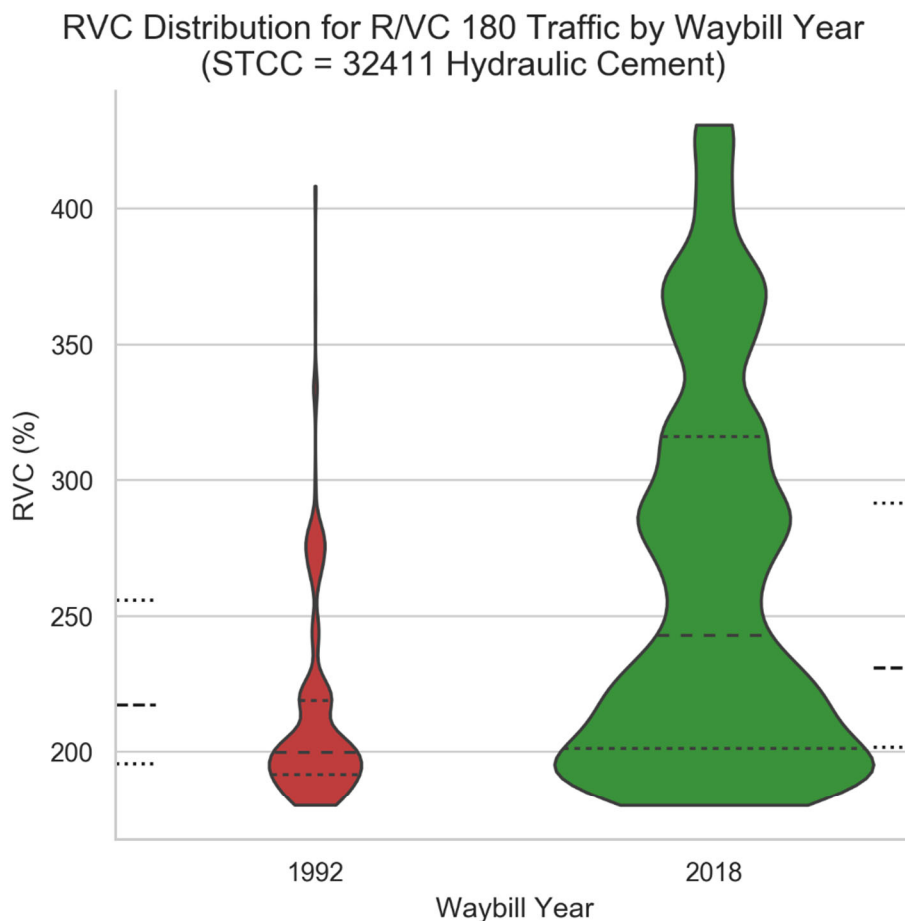
Among the results shown in the Bivariate Distribution Matrix, there has been a shift from 1992 to 2018 towards heavier cars with more variance in tons per car. There has also been an upward shift, corresponding at least in part, in RPC and R/VC ratios.



Item	1992	2018	Change
Avg. Haul Length (Mi.)	364.5	508.7	39.6%
No. of Waybills	3,081	3,966	28.7%
Cars	173,198	216,614	25.1%
Revenue	\$311,459,999	\$561,897,456	80.4%

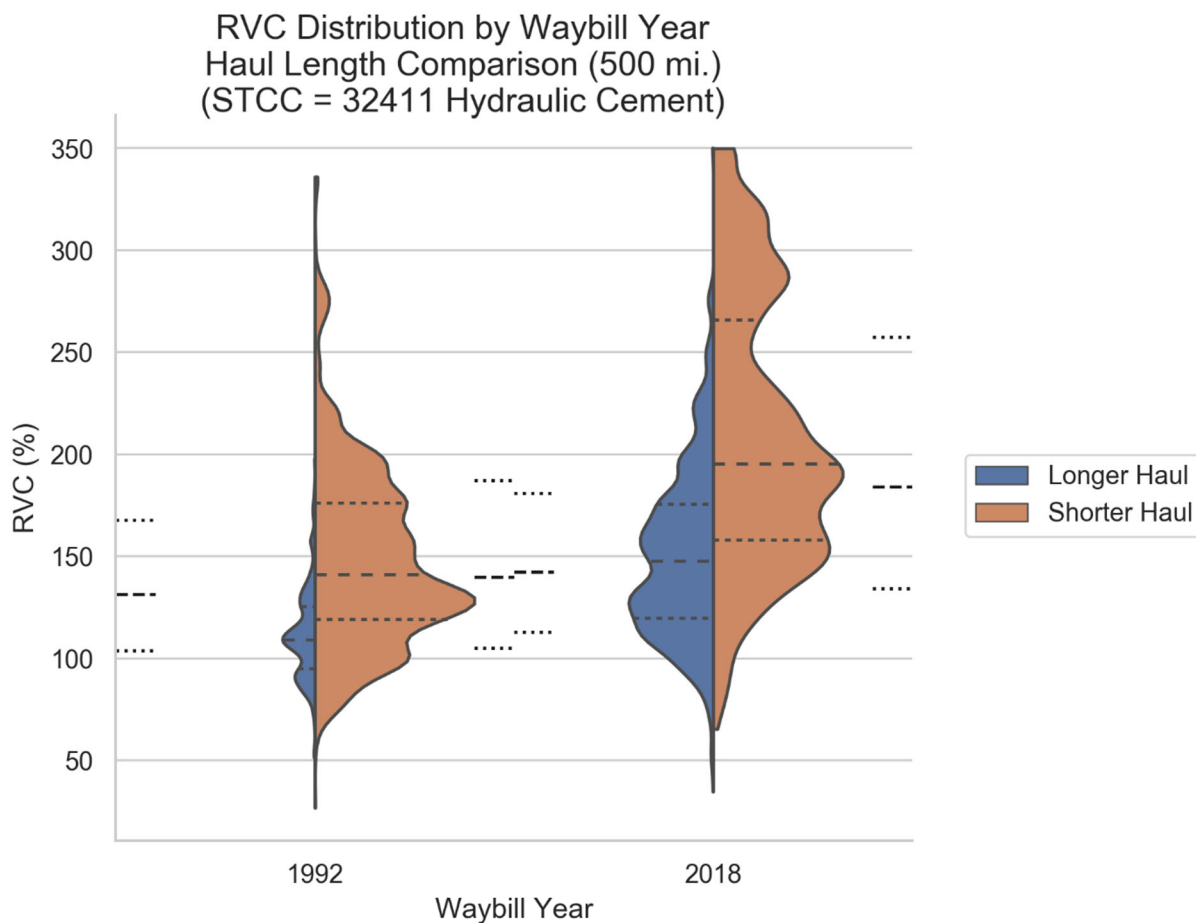
Large R/VC ratio increases lifted the median quartile R/VC ratio in 2018 up to the vicinity of the upper quartile R/VC ratio for 1992. The lower quartile R/VC ratio moved in 2018 up towards the median R/VC ratio in 1992. This lift signified an additional 25% of the hydraulic cement traffic in 2018 was above the median R/VC ratio from 1992. R/VC ratios at each quartile were higher for hydraulic cement than for all carload traffic in 2018, whereas they had been lower than for all carload traffic in 1992.⁵

⁵ Quartiles for the commodity in a given year are drawn as dotted lines within the violin plot, while quartiles for all carload traffic in a given year are drawn as dotted lines in the margins.



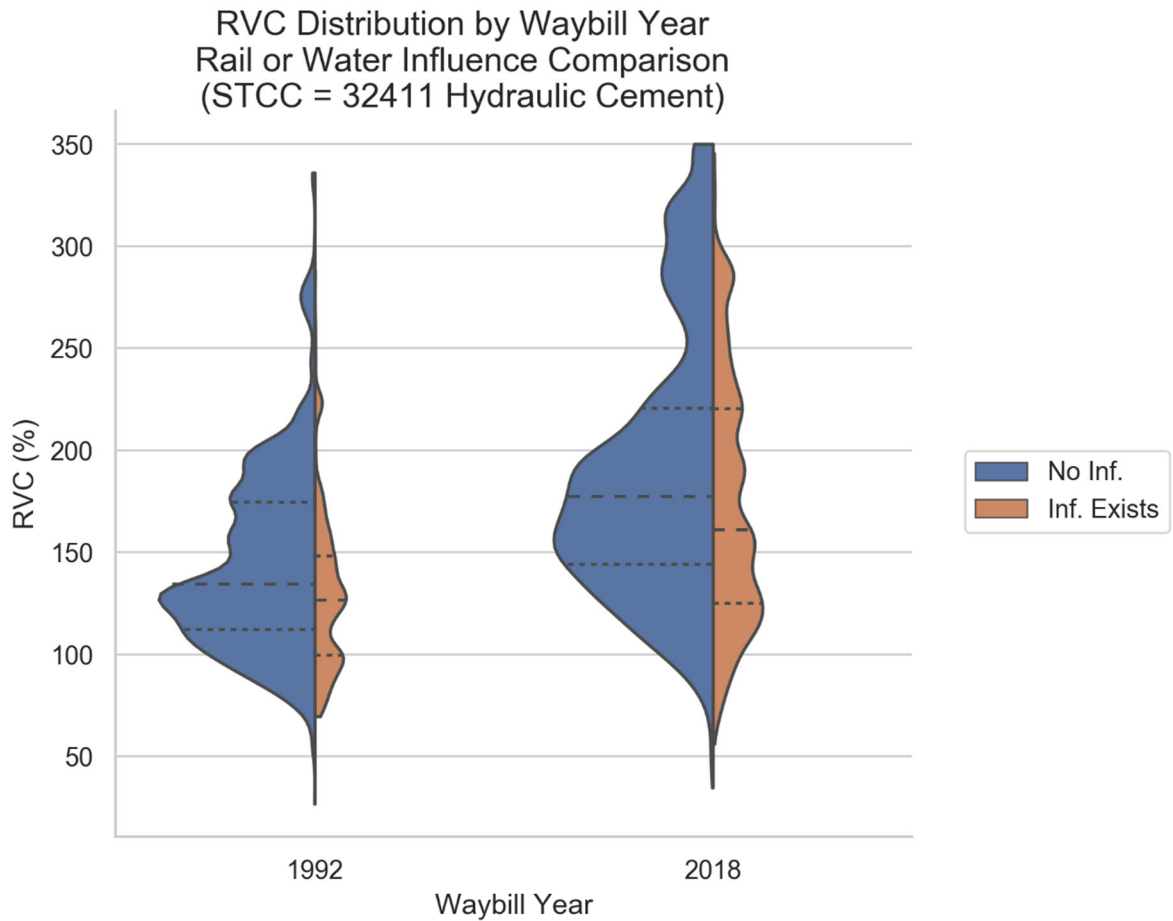
Item	1992	2018	Change
Avg. Haul Length (Mi.)	247.0	357.4	44.7%
No. of Waybills	379	1,612	325.3%
Cars	30,728	113,012	267.8%
Revenue	\$56,939,063	\$283,584,498	398.0%

There were more than four times as many R/VC 180 traffic movements in 2018 as there were in 1992 for hydraulic cement. Also, hydraulic cement R/VC 180 traffic moved at significantly higher R/VC ratios in 2018. These increases for R/VC 180 traffic were similar to the increases observed for hydraulic cement overall.



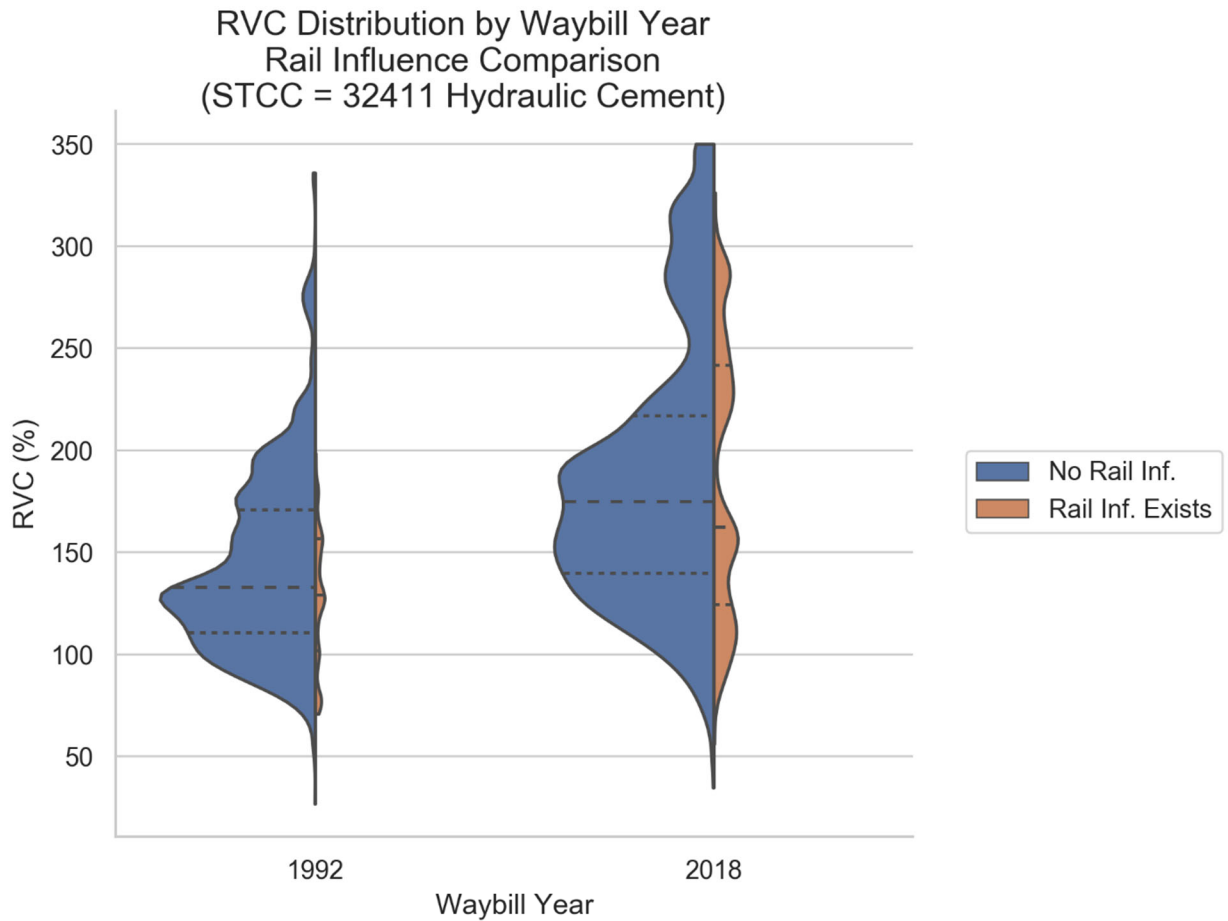
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	774.8	271.3	809.2	309.6
No. of Waybills	570	2,511	1,580	2,386
Cars	29,420	143,778	76,778	139,836
Revenue	\$78,765,302	\$232,694,697	\$258,260,090	\$303,637,366

Longer haul traffic volumes more than doubled for hydraulic cement from 1992 to 2018, while shorter haul traffic volumes decreased. This shift towards longer haul movements would tend to make trucking a less viable transportation alternative.



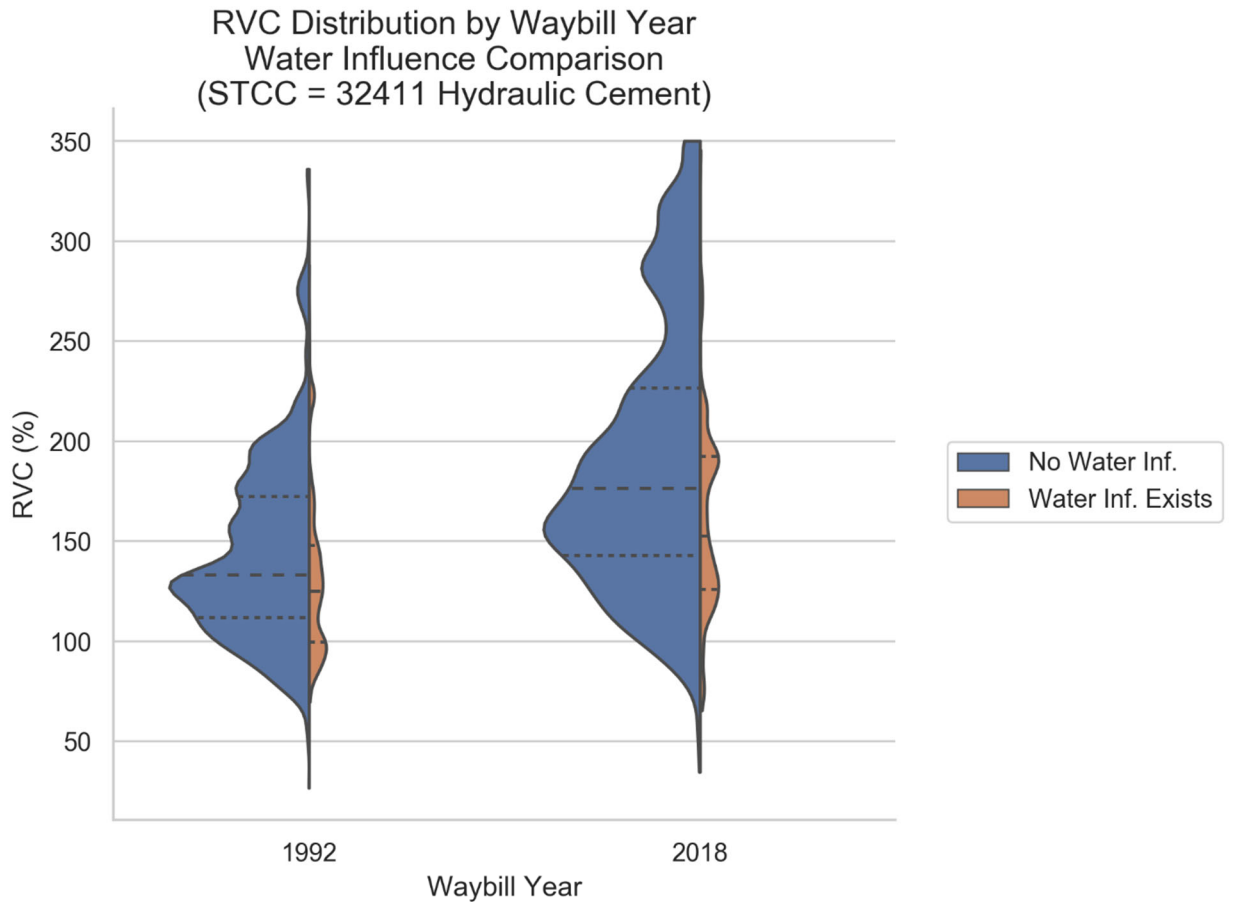
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	386.8	273.5	536.3	421.6
No. of Waybills	2,473	608	3,011	955
Cars	144,306	28,892	168,662	47,952
Revenue	\$267,102,184	\$44,357,815	\$452,902,072	\$108,995,384

Traffic which has a railroad or water carrier influence identified in the GMIM grew at a faster rate from 1992 to 2018 than traffic without such influences for hydraulic cement. However, R/VC ratios increased regardless of whether railroad or water carrier influences existed such that the 2018 median R/VC ratio was higher than 150% and the 2018 upper quartile R/VC ratio was higher than 200% for both groups of traffic.



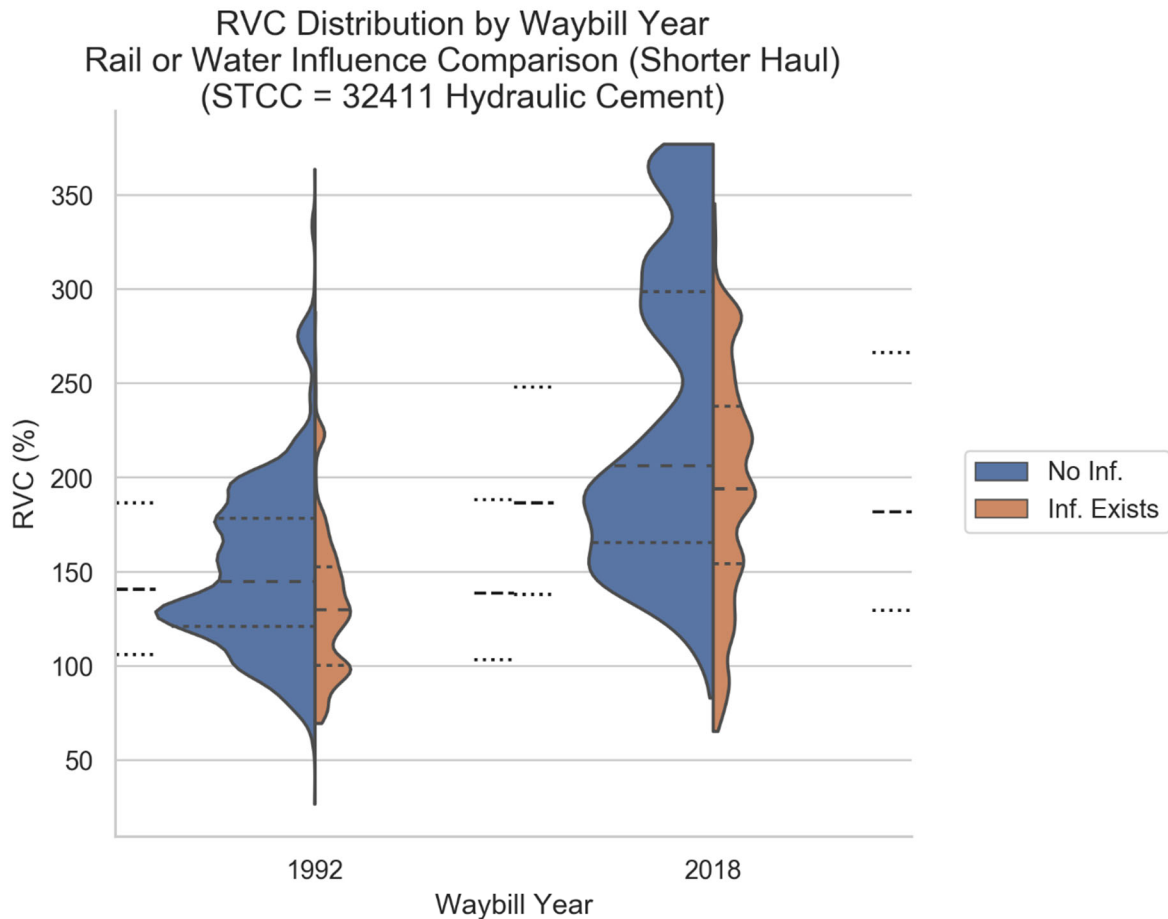
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	372.1	274.7	517.8	444.2
No. of Waybills	2,839	242	3,471	495
Cars	163,206	9,992	189,242	27,372
Revenue	\$296,068,996	\$15,391,003	\$499,343,392	\$62,554,064

The results for traffic with rail influences are similar to the results for railroad or water carrier influences, though the 2018 upper quartile R/VC ratio for traffic with railroad influences is even closer to 250%.



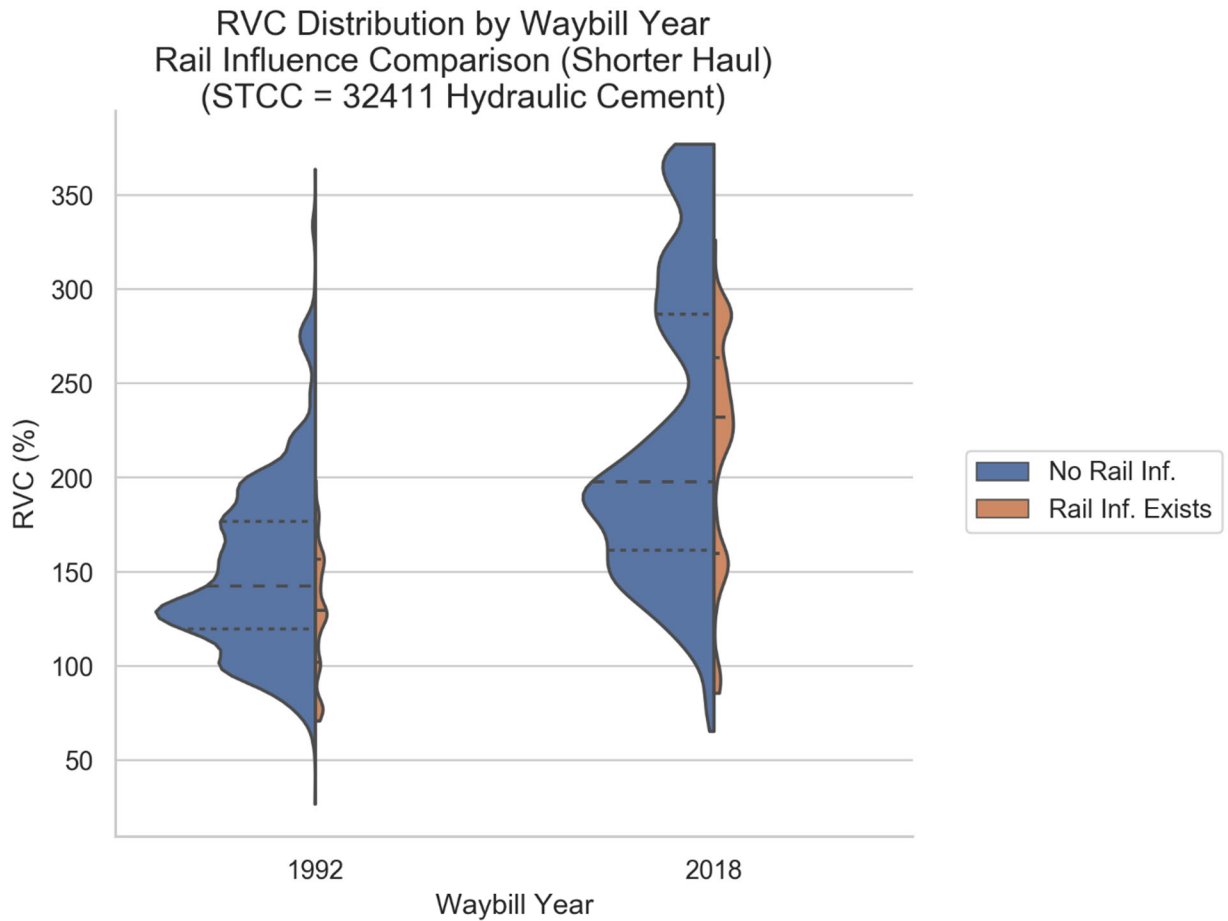
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	377.0	272.3	523.3	397.1
No. of Waybills	2,713	368	3,506	460
Cars	154,138	19,060	196,034	20,580
Revenue	\$282,303,473	\$29,156,526	\$515,456,136	\$46,441,320

The results for traffic with water carrier influences are similar to the results for railroad or water carrier influences, though the 2018 upper quartile R/VC ratio for traffic with water carrier influences is slightly below 200%.



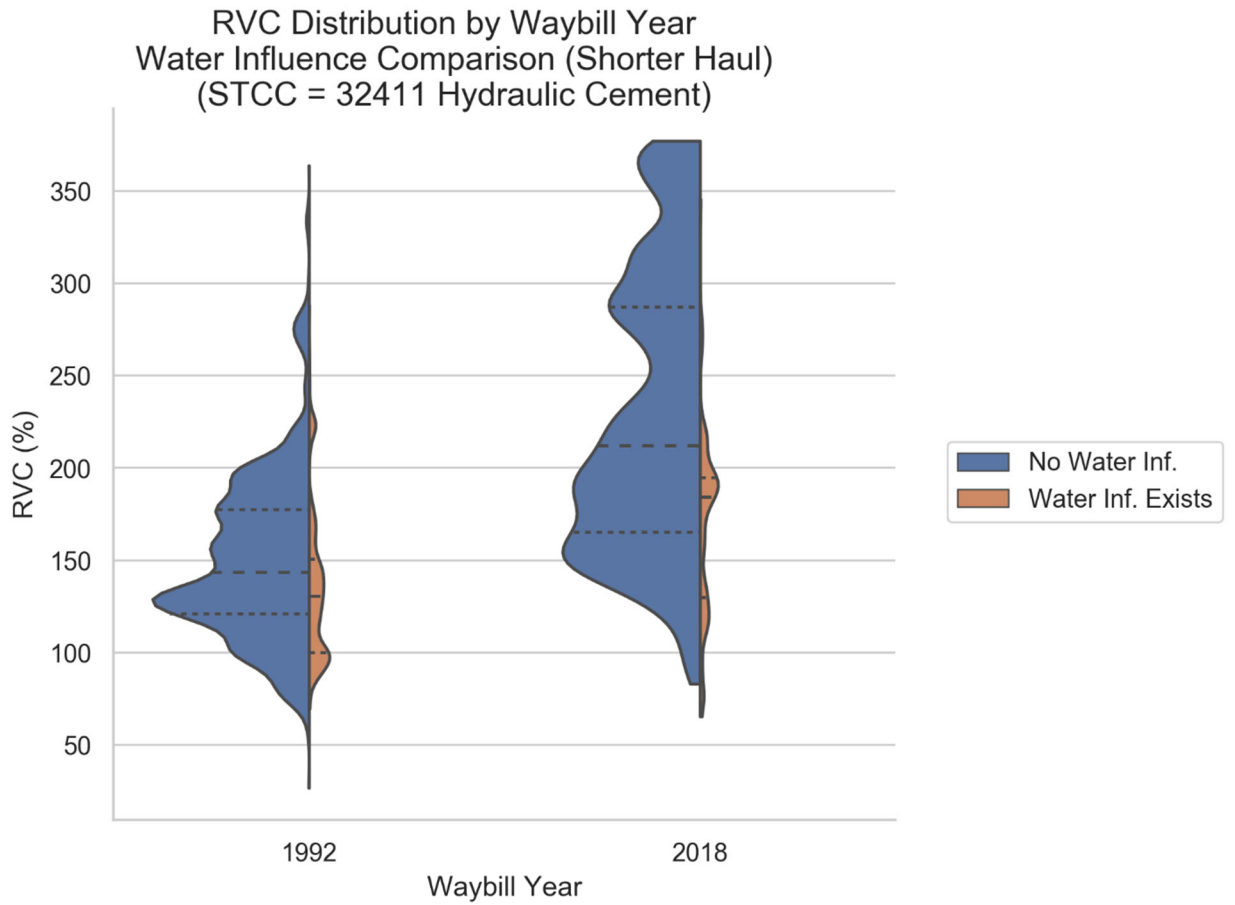
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	279.4	243.4	323.4	273.7
No. of Waybills	1,948	563	1,723	664
Cars	117,434	26,344	106,740	33,136
Revenue	\$194,179,441	\$38,515,256	\$237,299,470	\$66,381,176

Looking at just shorter haul moves below 500 miles, the upward shift in R/VC ratios are even more pronounced. The median R/VC ratios for both groups are around 200% in 2018, and the upper quartile R/VC ratio for traffic without railroad or water carrier influences is almost at 300%. Shorter haul traffic does tend to have higher R/VC ratios. However, in 2018 all quartiles for hydraulic cement traffic with and without influences are now above their corresponding values for all carload traffic, except for the upper quartile of traffic with influences.



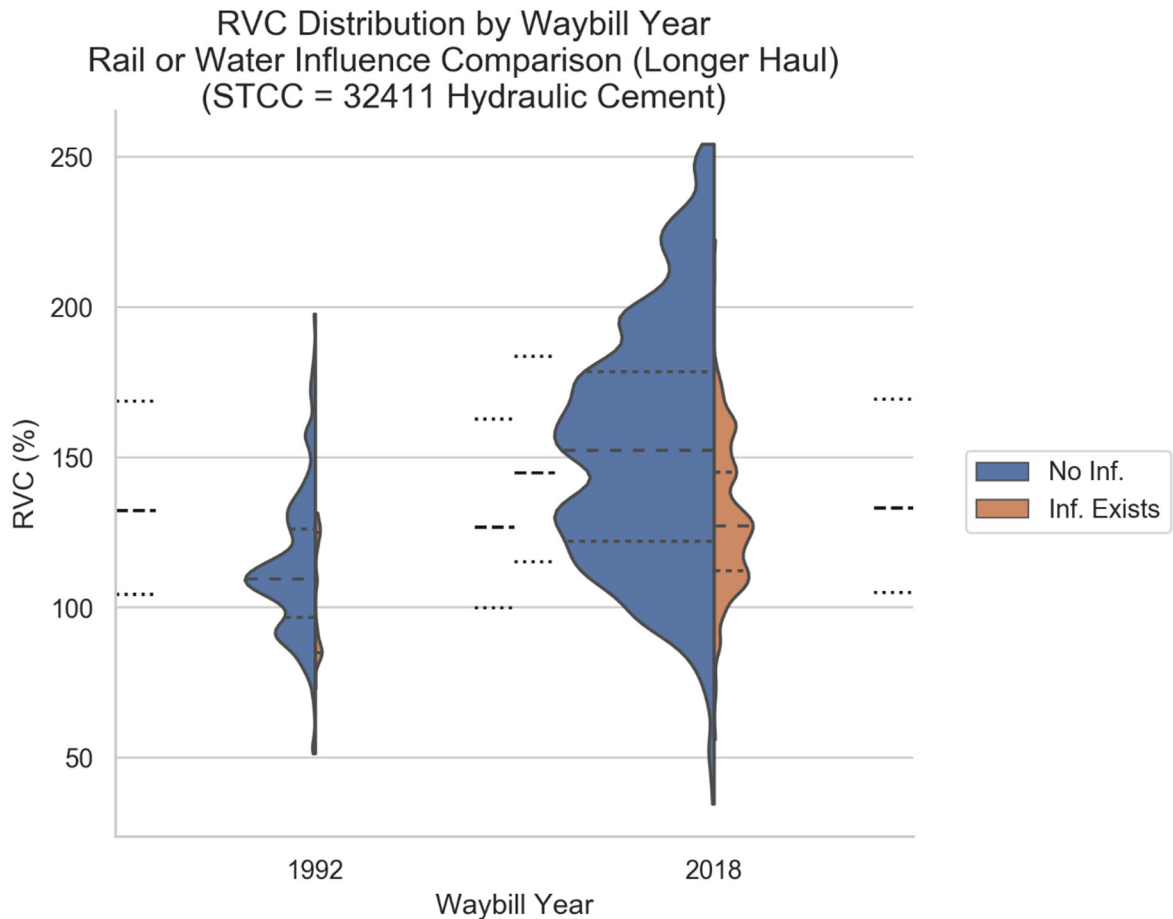
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	271.4	270.6	318.1	255.4
No. of Waybills	2,273	238	2,060	327
Cars	133,946	9,832	121,564	18,312
Revenue	\$217,593,926	\$15,100,771	\$265,946,850	\$37,733,796

The results for shorter haul traffic with railroad influences are similar to the results for shorter haul traffic with railroad or water carrier influences, though there is a smaller share of shorter haul traffic with railroad influences.



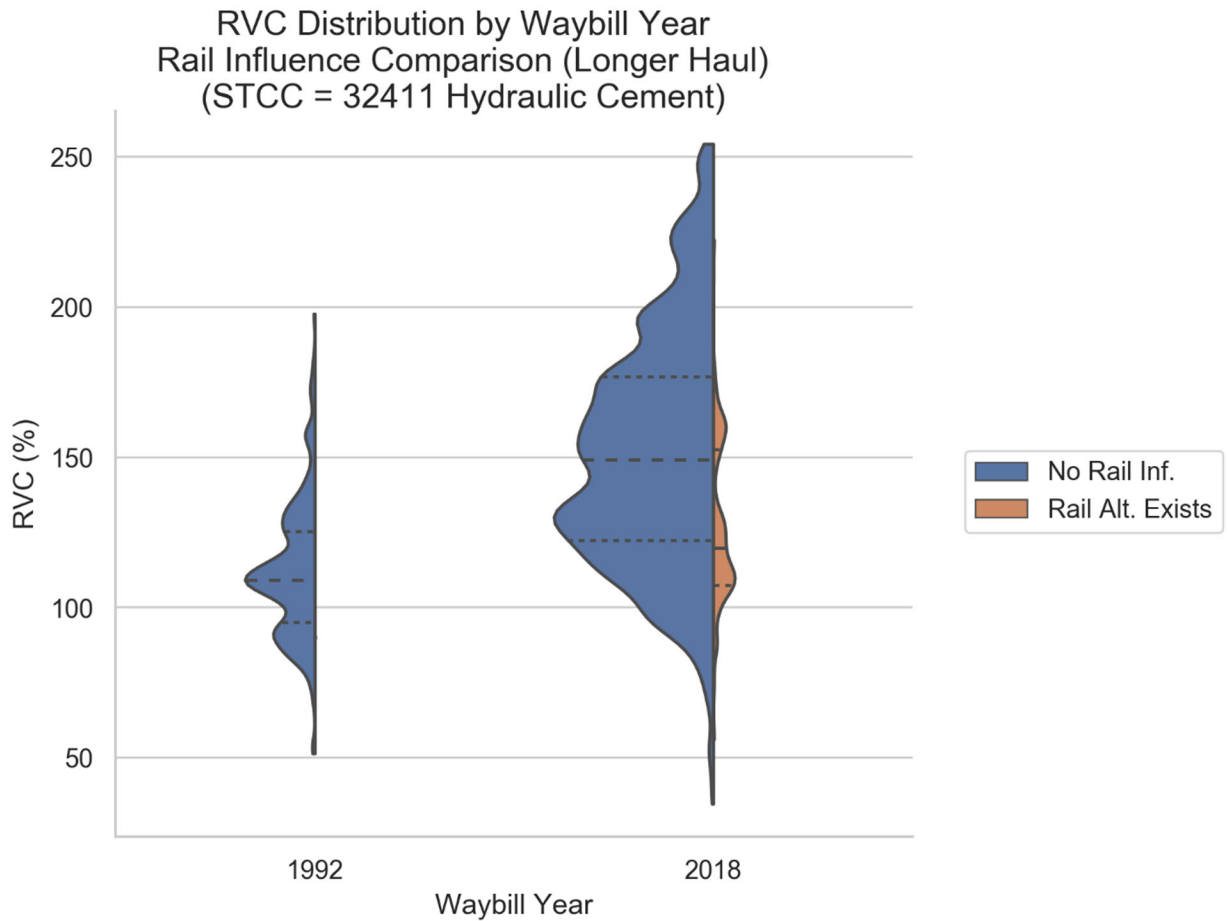
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	278.5	223.3	312.5	291.4
No. of Waybills	2,184	327	2,050	337
Cars	127,106	16,672	125,052	14,824
Revenue	\$209,090,498	\$23,604,199	\$275,033,266	\$28,647,380

The results for shorter haul traffic with water carrier influences are similar to the results for shorter haul traffic with railroad or water carrier influences, though there is a smaller share of shorter haul traffic with water carrier influences.



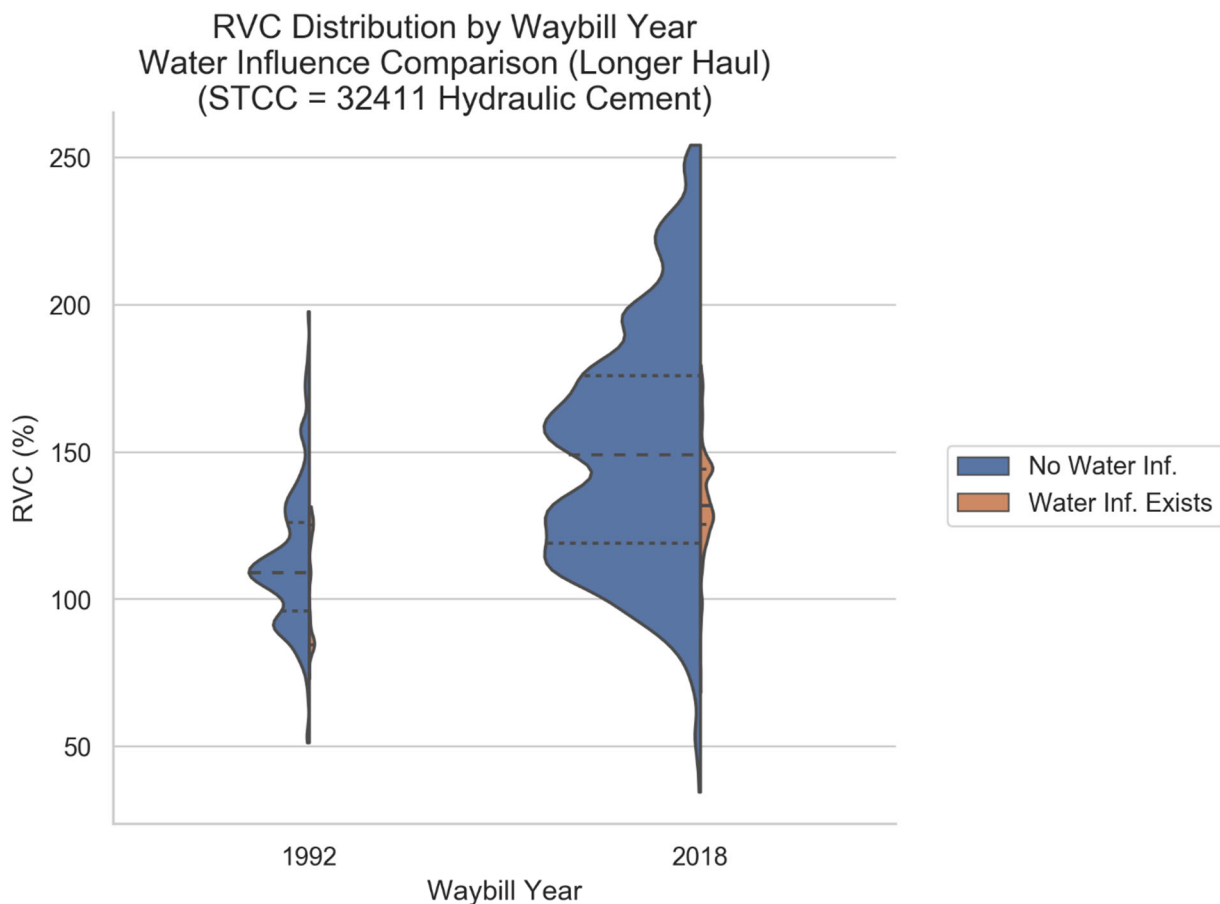
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	786.0	650.0	827.8	759.6
No. of Waybills	526	45	1,307	293
Cars	26,912	2,548	62,682	14,896
Revenue	\$72,969,912	\$5,842,559	\$216,701,522	\$42,722,128

The difference in R/VC ratios between traffic with and without railroad or water carrier influences becomes much more pronounced for hydraulic cement traffic in 2018. The upper quartile R/VC ratio for traffic with influences is about the same as the median R/VC ratio for traffic without influences. The 2018 R/VC ratios at each quartile for traffic with influences also tend to be lower than the corresponding R/VC ratios for all carload traffic, whereas the R/VC ratios for traffic without influences tends to be higher.



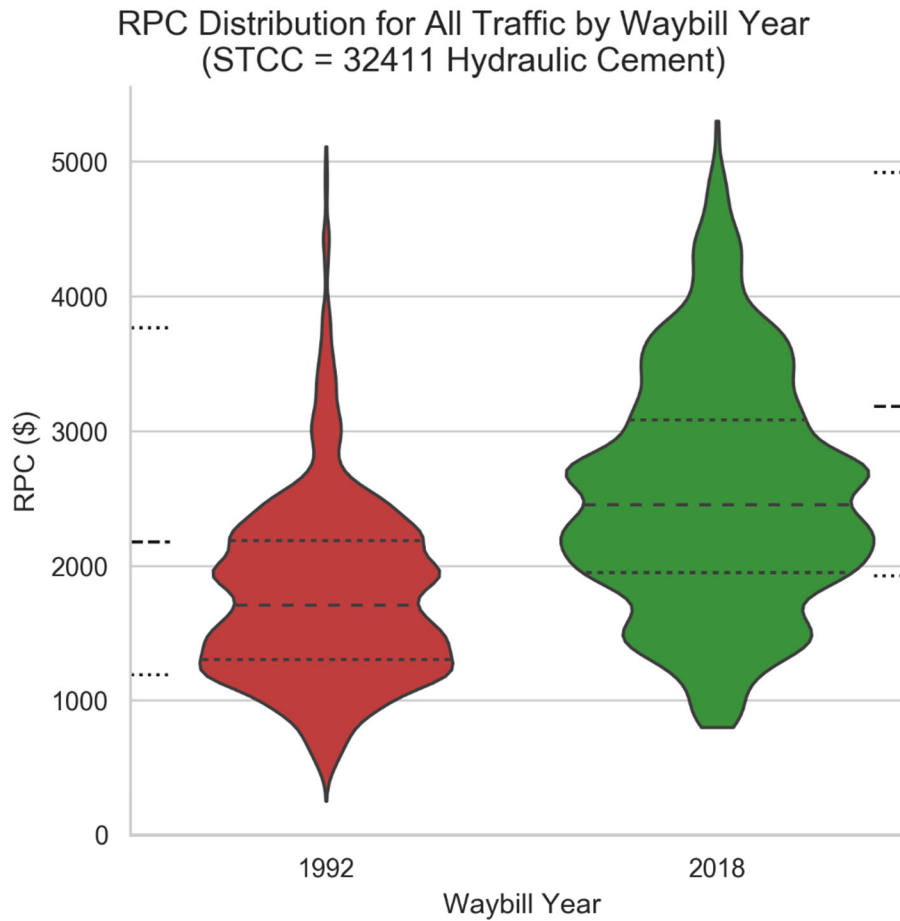
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	777.1	521.7	815.7	811.9
No. of Waybills	567	4	1,432	168
Cars	29,300	160	68,518	9,060
Revenue	\$78,522,239	\$290,232	\$234,603,382	\$24,820,268

The results for longer haul traffic with rail influences are similar to the results for longer haul traffic with railroad or water carrier influences, though there is a smaller share of longer haul traffic with railroad influences.



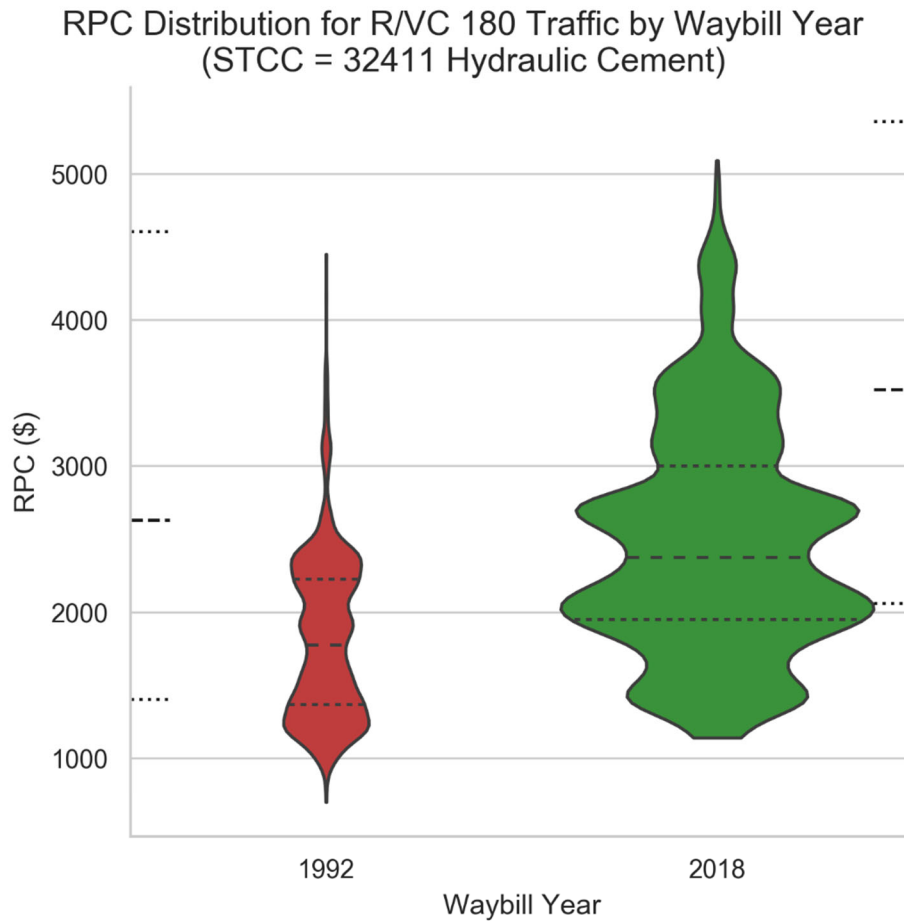
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	784.1	662.6	826.0	689.3
No. of Waybills	530	41	1,475	125
Cars	27,072	2,388	71,742	5,836
Revenue	\$73,260,144	\$5,552,327	\$241,521,790	\$17,901,860

The results for longer haul traffic with water carrier influences are similar to the results for longer haul traffic with railroad or water carrier influences, though there is a smaller share of longer haul traffic with water carrier influences.



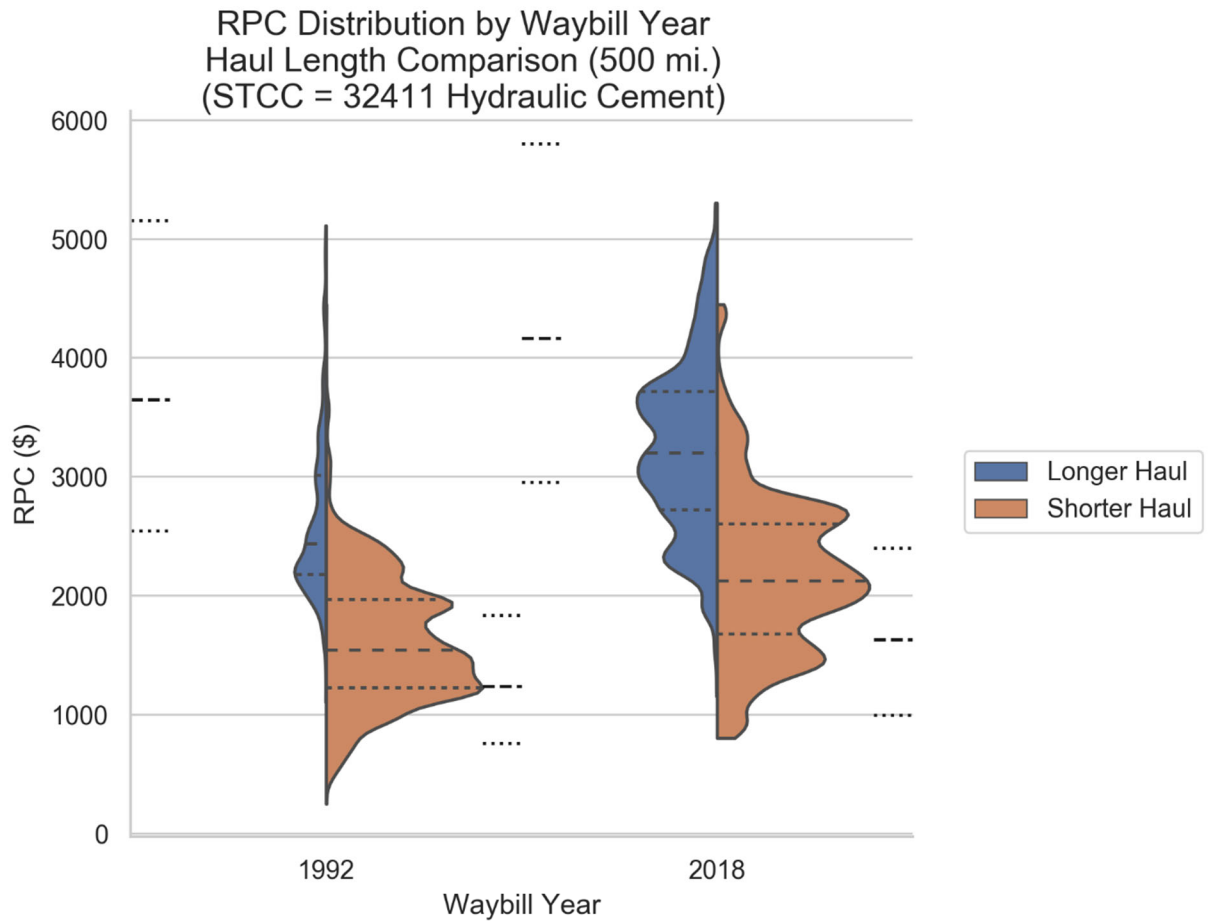
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Cars	173,198	216,614	25.1%
Revenue	\$311,459,999	\$561,897,456	80.4%

Rates are also rising for hydraulic cement over time in terms of RPC, though the RPCs at each quartile now tend to be lower than the corresponding values for all carload traffic in both years.



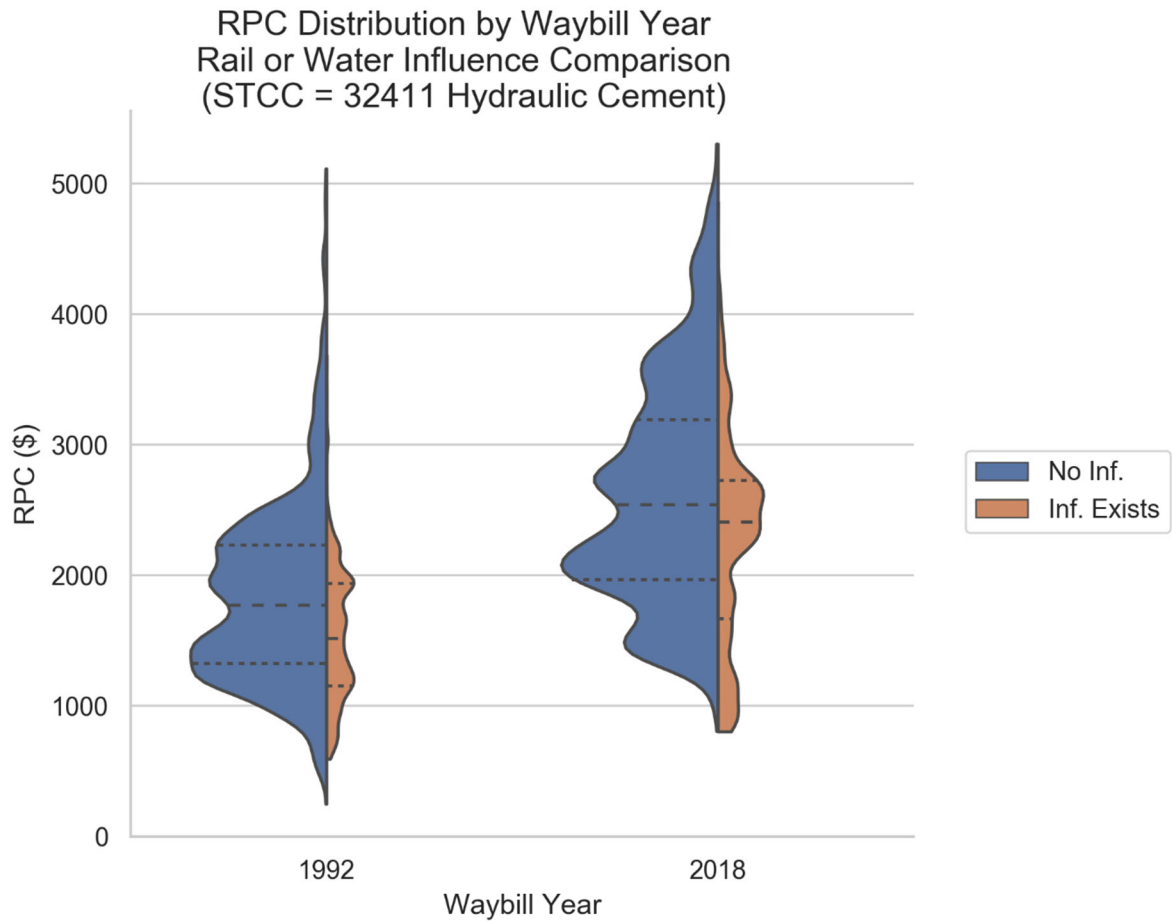
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No. of Waybills	379	1,612	325.3%
Cars	30,728	113,012	267.8%
Revenue	\$56,939,063	\$283,584,498	398.0%

The trends in the RPCs for hydraulic cement R/VC 180 traffic are similar to the results for all hydraulic cement traffic, except that the difference between the RPCs at each quartile for hydraulic cement and for all carload traffic are even more pronounced.



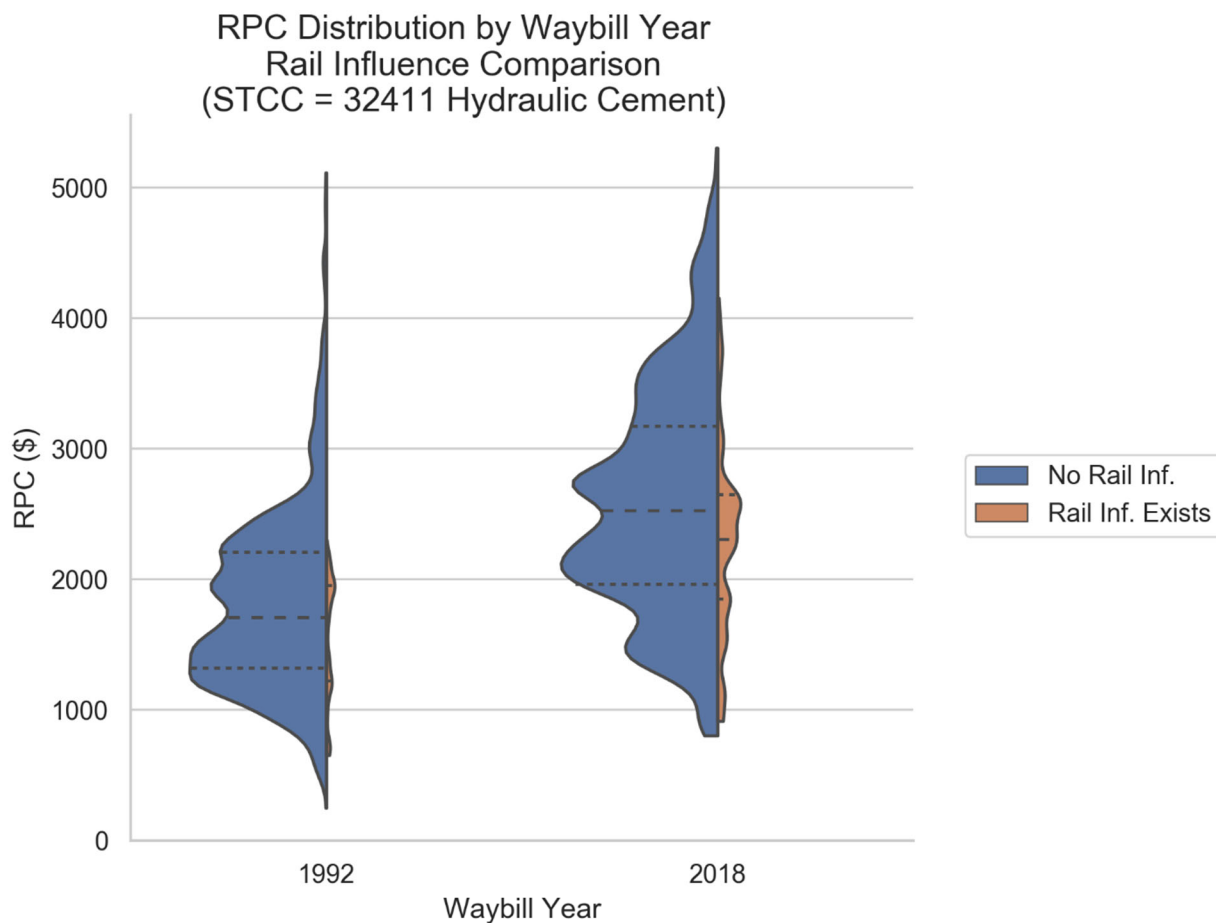
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Cars	29,420	143,778	76,778	139,836
Revenue	\$78,765,302	\$232,694,697	\$258,260,090	\$303,637,366

RPCs for shorter haul hydraulic cement traffic are much lower than those for longer haul traffic, as would be expected since railroads earn more revenue on longer moves. However, the RPCs for longer haul hydraulic cement traffic are much lower at each quartile than the corresponding RPCs for all carload traffic, compared to being slightly higher for shorter haul traffic.



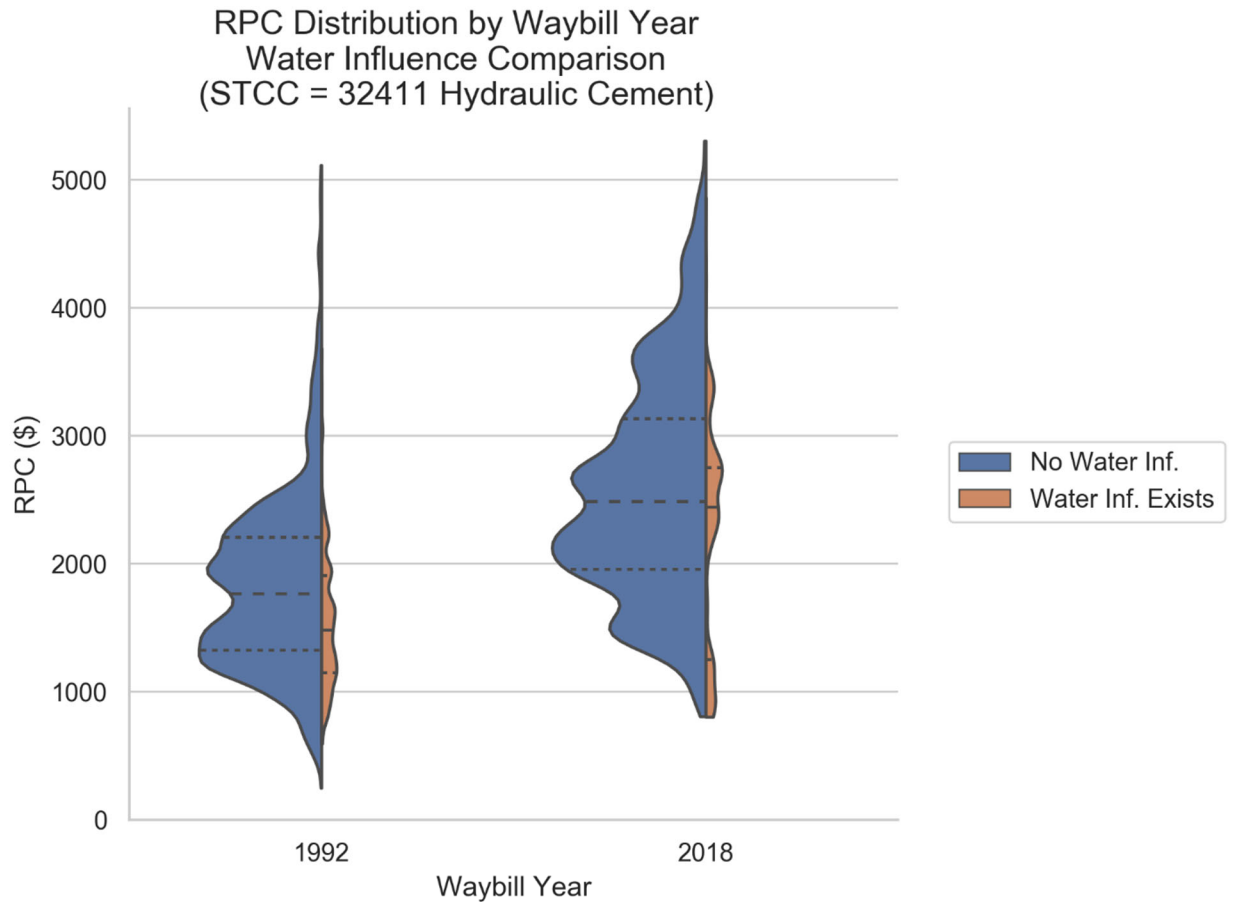
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Cars	144,306	28,892	168,662	47,952
Revenue	\$267,102,184	\$44,357,815	\$452,902,072	\$108,995,384

Similar to the results for R/VC ratios, RPCs for hydraulic cement have risen from 1992 to 2018 regardless of whether they had rail or water influences identified in the GMIM.



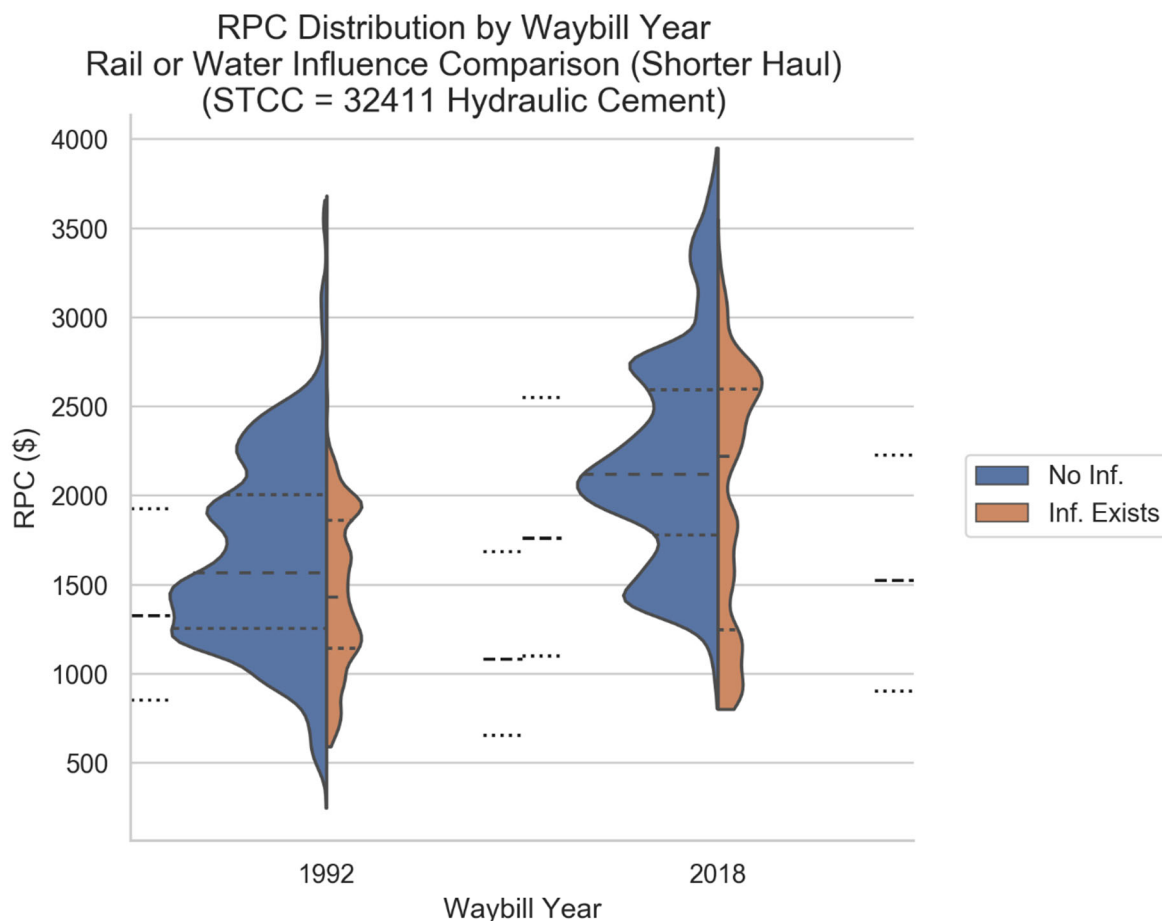
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Revenue	\$296,068,996	\$15,391,003	\$499,343,392	\$62,554,064

The results for traffic with railroad influences are similar to the results for railroad or water carrier influences, though there is a smaller share of traffic with railroad influences.



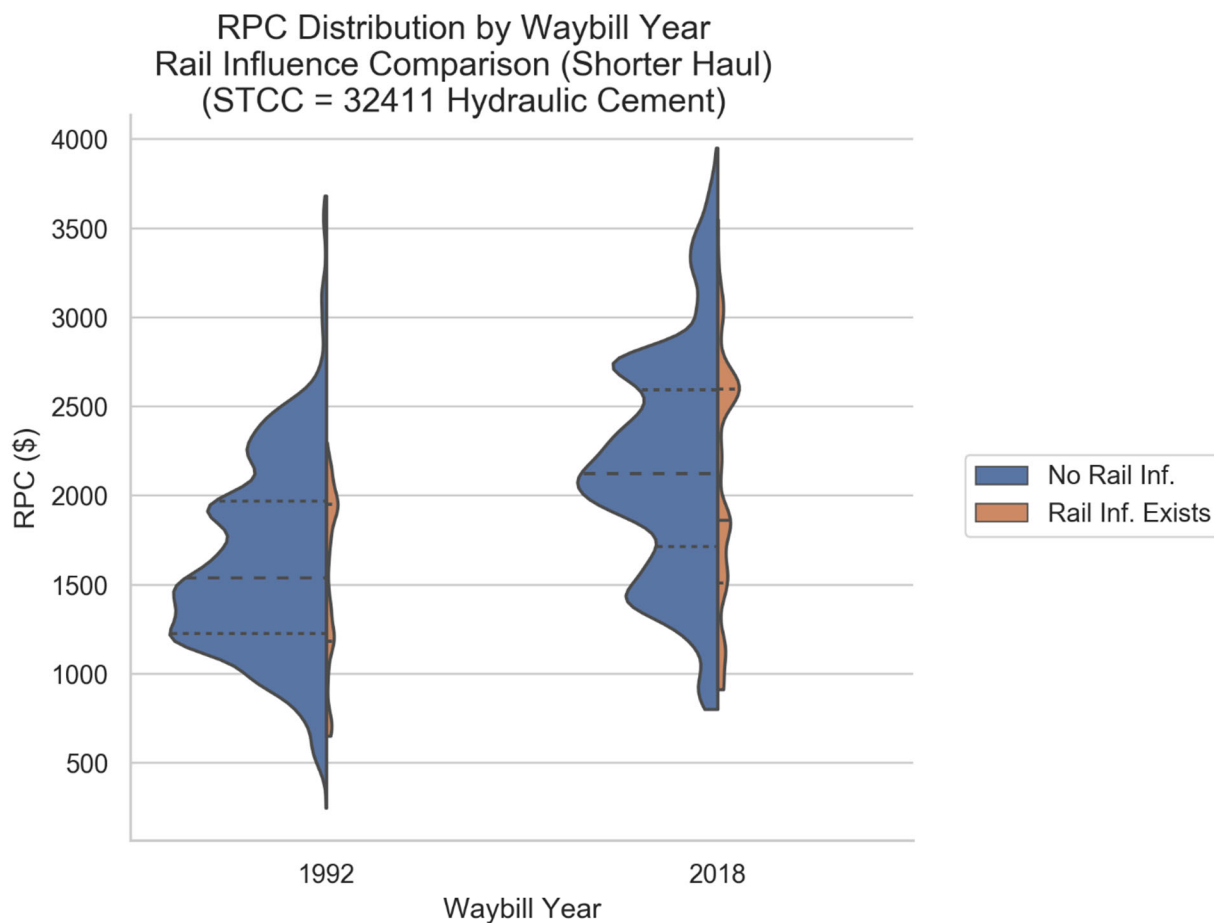
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Revenue	\$282,303,473	\$29,156,526	\$515,456,136	\$46,441,320

The results for traffic with water carrier influences are similar to the results for railroad or water carrier influences, though there is a smaller share of traffic with water carrier influences.



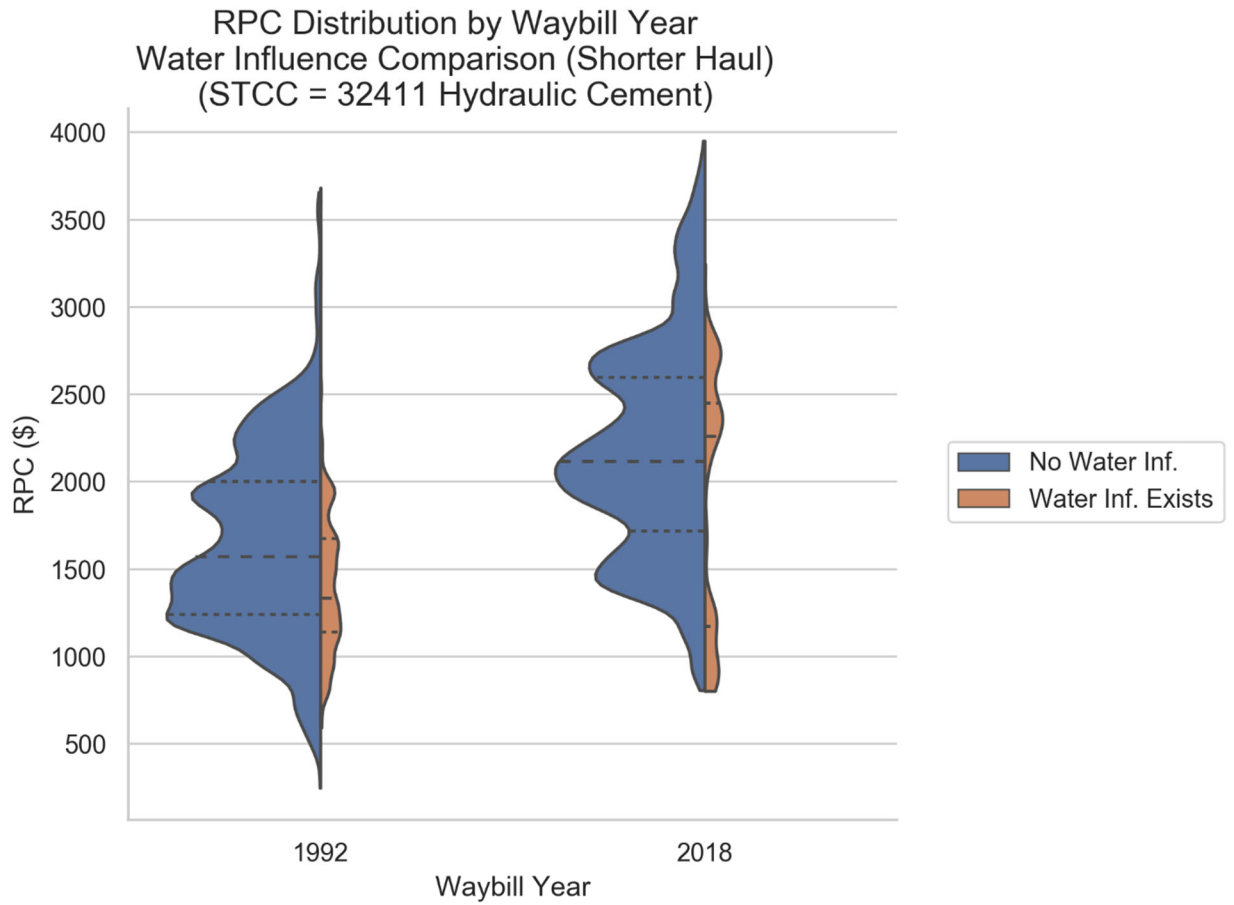
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Cars	117,434	26,344	106,740	33,136
Revenue	\$194,179,441	\$38,515,256	\$237,299,470	\$66,381,176

The results for shorter haul traffic with railroad or water carrier influences indicate hydraulic cement traffic tends to have higher RPCs than all carload traffic in both years, regardless of whether they had railroad or water carrier influences. However, the RPCs do not reach as high levels as with all traffic, because railroads do not earn as much revenue on shorter moves.



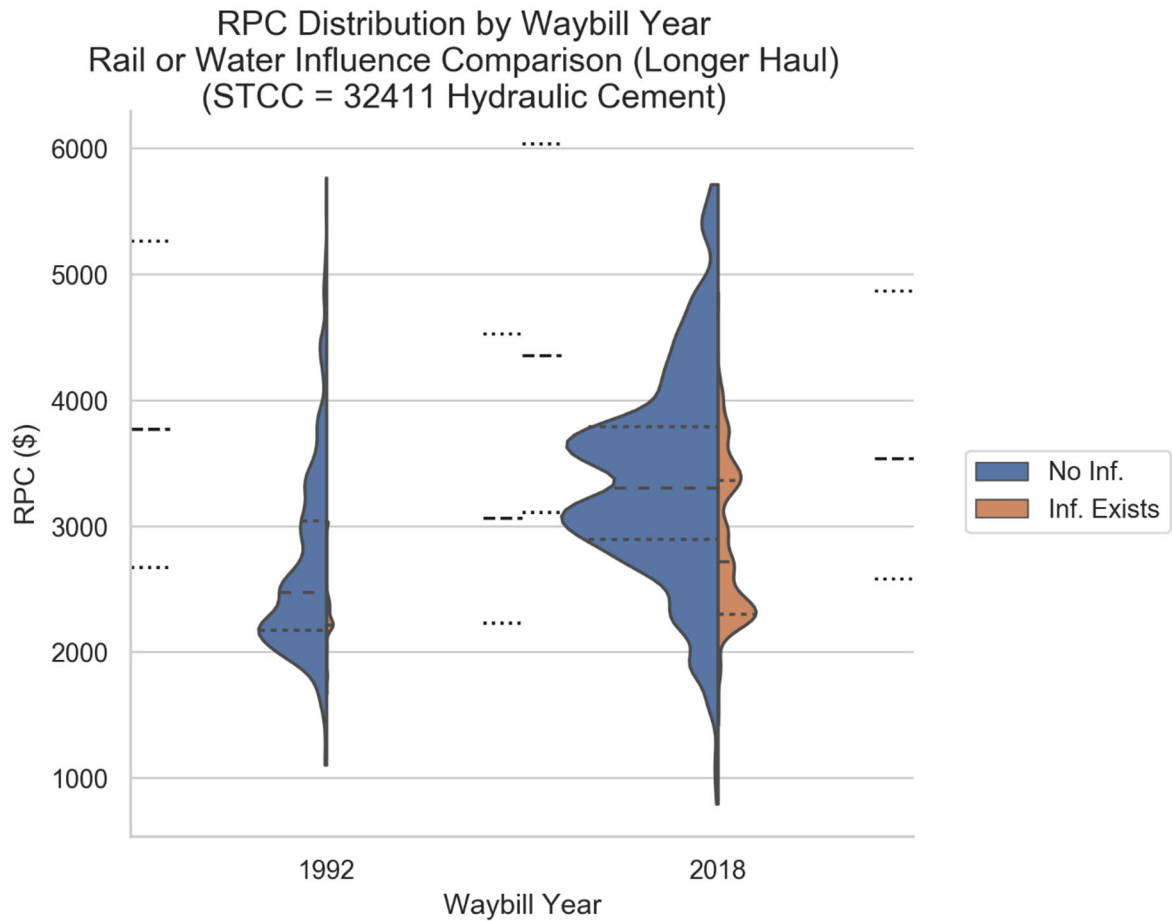
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Revenue	\$217,593,926	\$15,100,771	\$265,946,850	\$37,733,796

The results for shorter haul traffic with railroad influences are similar to the results for railroad or water carrier influences, though there is a smaller share of traffic with railroad influences.



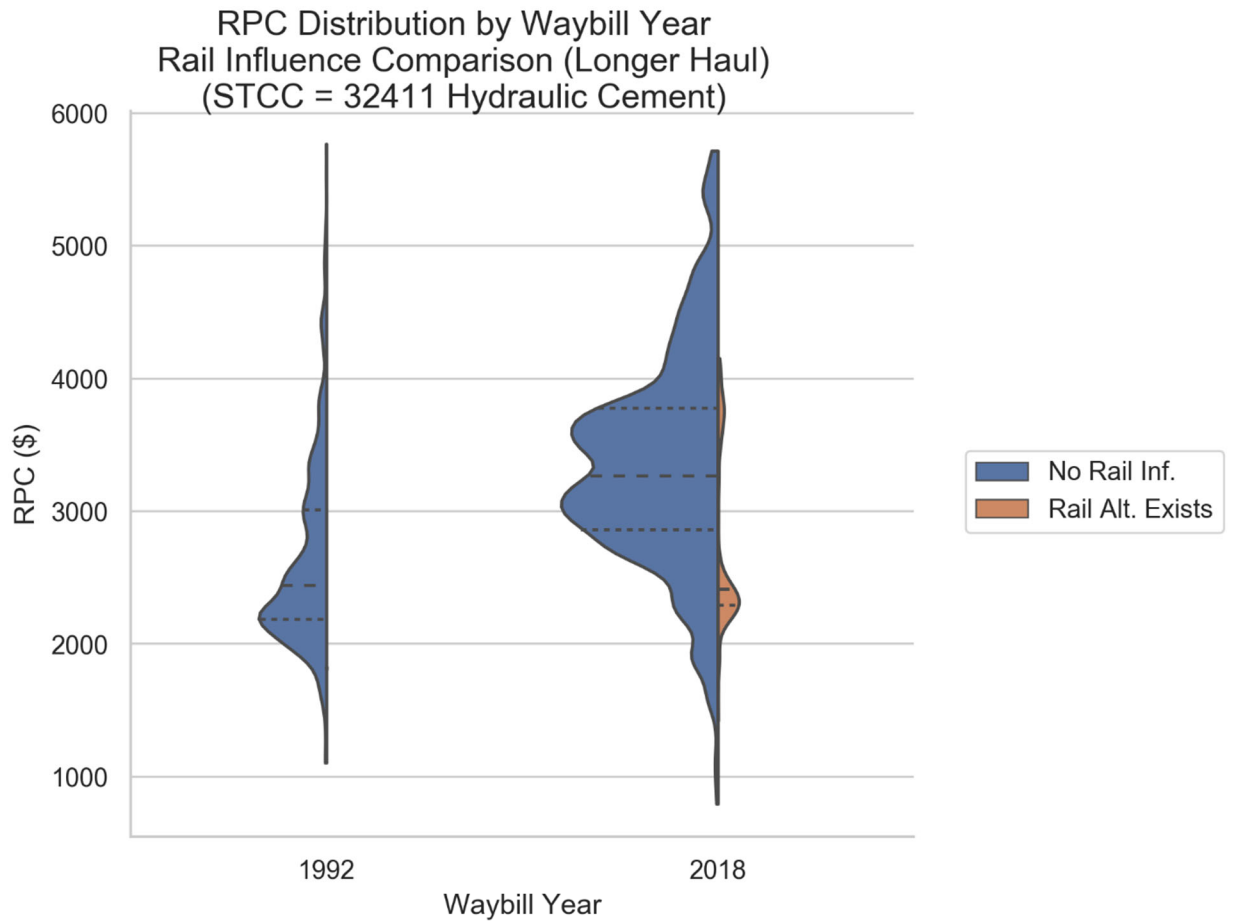
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	278.5	223.3	312.5	291.4
No. of Waybills	2,184	327	2,050	337
Cars	127,106	16,672	125,052	14,824
Revenue	\$209,090,498	\$23,604,199	\$275,033,266	\$28,647,380

The results for shorter haul traffic with water carrier influences are similar to the results for railroad or water carrier influences, though there is a smaller share of traffic with water carrier influences.



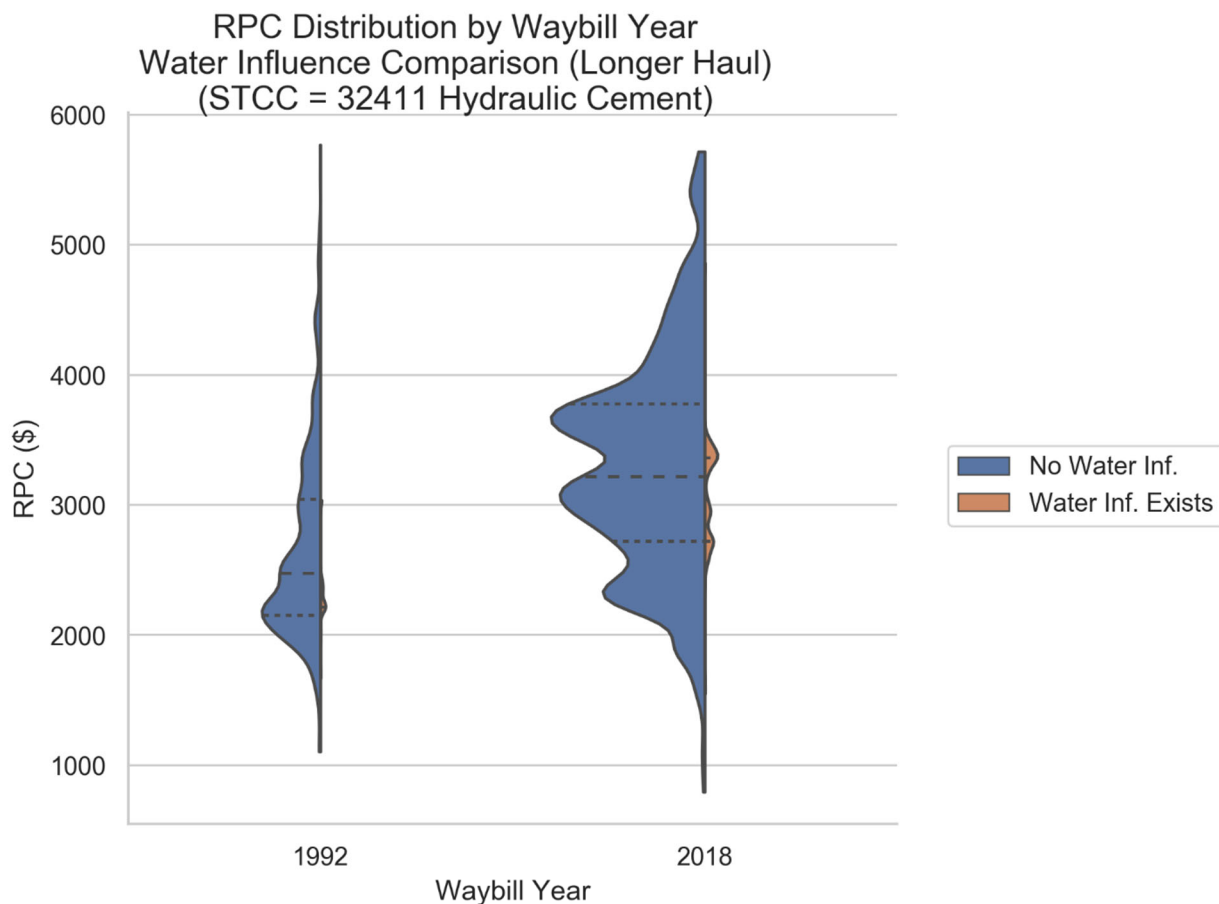
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	786.0	650.0	827.8	759.6
No. of Waybills	526	45	1,307	293
Cars	26,912	2,548	62,682	14,896
Revenue	\$72,969,912	\$5,842,559	\$216,701,522	\$42,722,128

The results for longer haul traffic with railroad or water carrier influences indicate hydraulic cement traffic tends to have much lower RPCs than all carload traffic in both years, regardless of whether they had railroad or water carrier influences. With shorter haul traffic, it had been higher. Note that the RPCs are concentrated at higher levels for longer haul traffic, because railroads earn more revenue on longer moves.



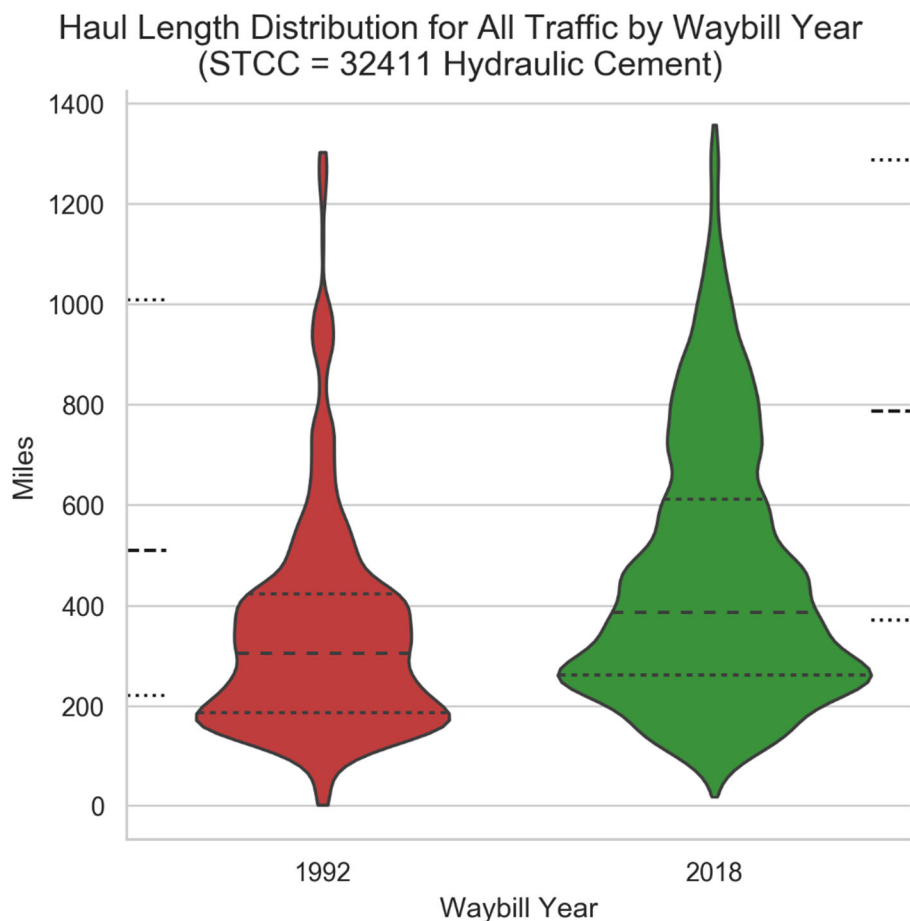
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	777.1	521.7	815.7	811.9
No. of Waybills	567	4	1,432	168
Cars	29,300	160	68,518	9,060
Revenue	\$78,522,239	\$290,232	\$234,603,382	\$24,820,268

The results for longer haul traffic with railroad influences are similar to the results for railroad or water carrier influences, though there is a much smaller share of traffic with railroad influences.



Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	784.1	662.6	826.0	689.3
No. of Waybills	530	41	1,475	125
Cars	27,072	2,388	71,742	5,836
Revenue	\$73,260,144	\$5,552,327	\$241,521,790	\$17,901,860

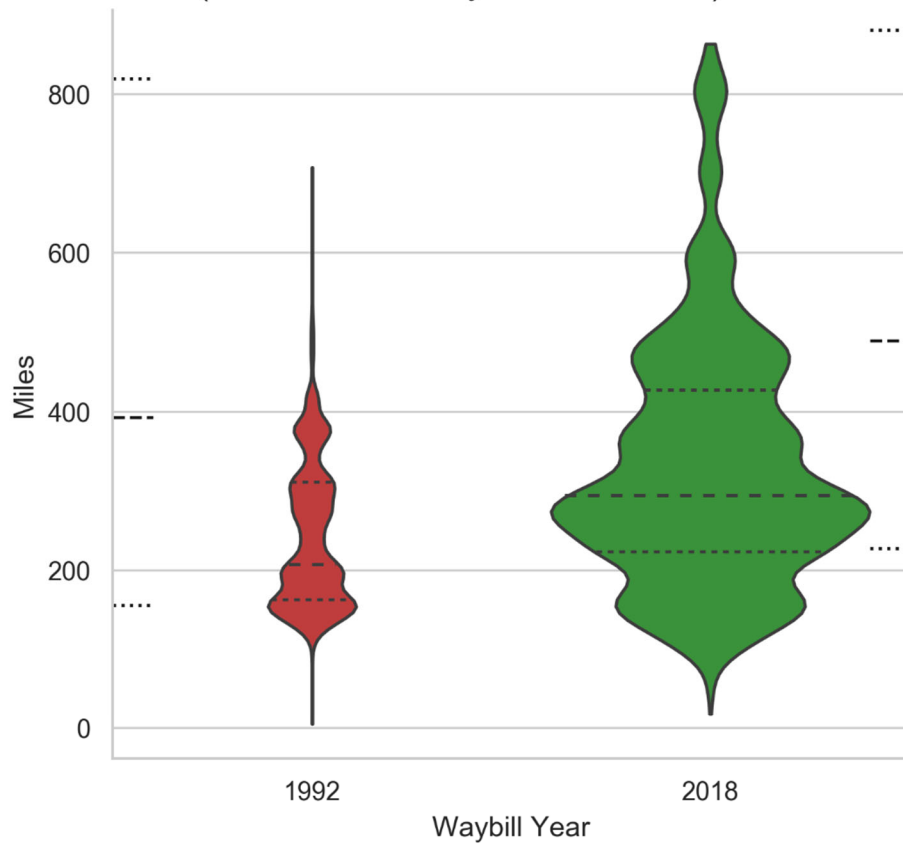
The results for longer haul traffic with water carrier influences are similar to the results for railroad or water carrier influences, though there is a much smaller share of traffic with water carrier influences.



Item	1992	2018	Change
Avg. Haul Length (Mi.)	364.5	508.7	39.6%
No. of Waybills	3,081	3,966	28.7%
Cars	173,198	216,614	25.1%
Revenue	\$311,459,999	\$561,897,456	80.4%

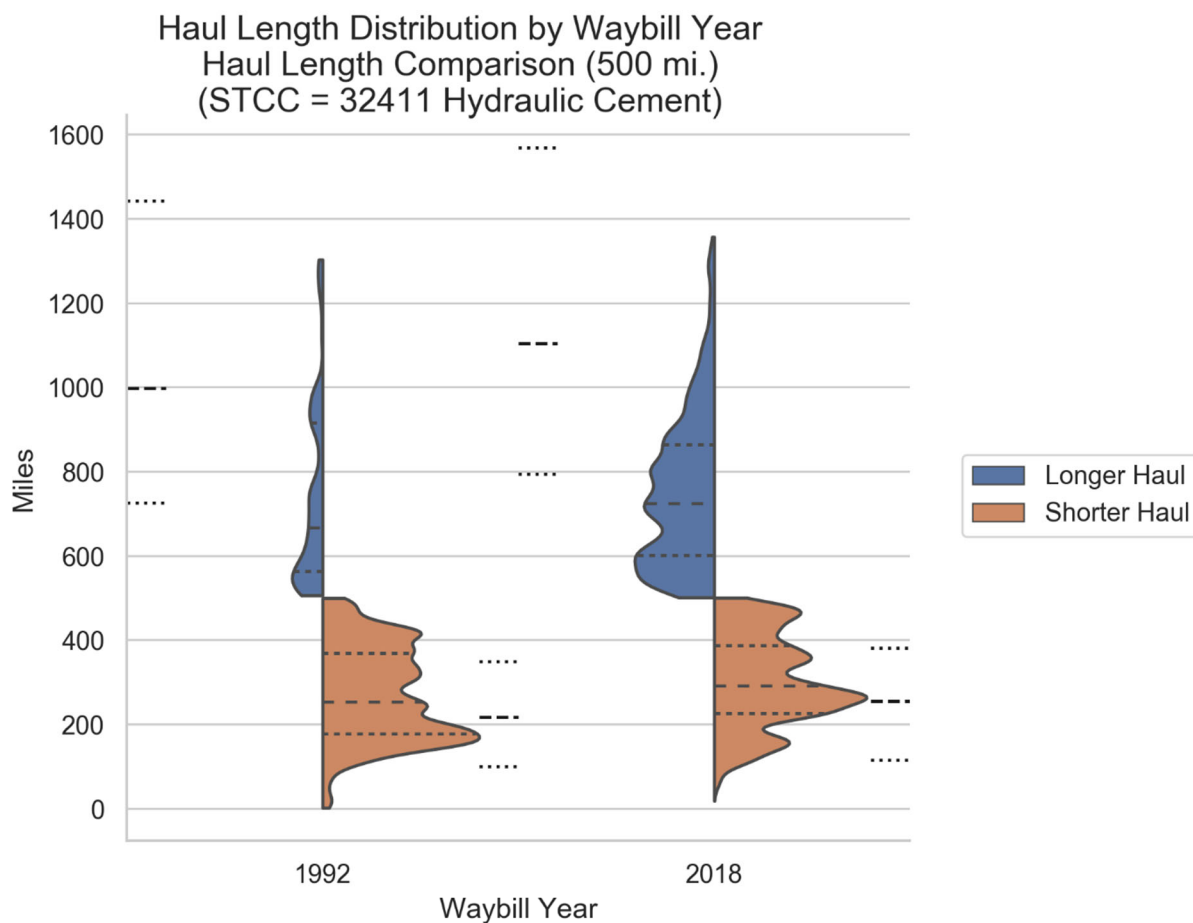
Hydraulic cement traffic is much more concentrated at movements at the higher end of its distribution in 2018 than it was in 1992, with the median mileage in 2018 about at the same level as the upper quartile mileage in 1992. The mileage at each quartile for hydraulic cement is still lower than the corresponding mileage for all carload traffic.

Haul Length Distribution for R/VC 180 Traffic by Waybill Year
(STCC = 32411 Hydraulic Cement)



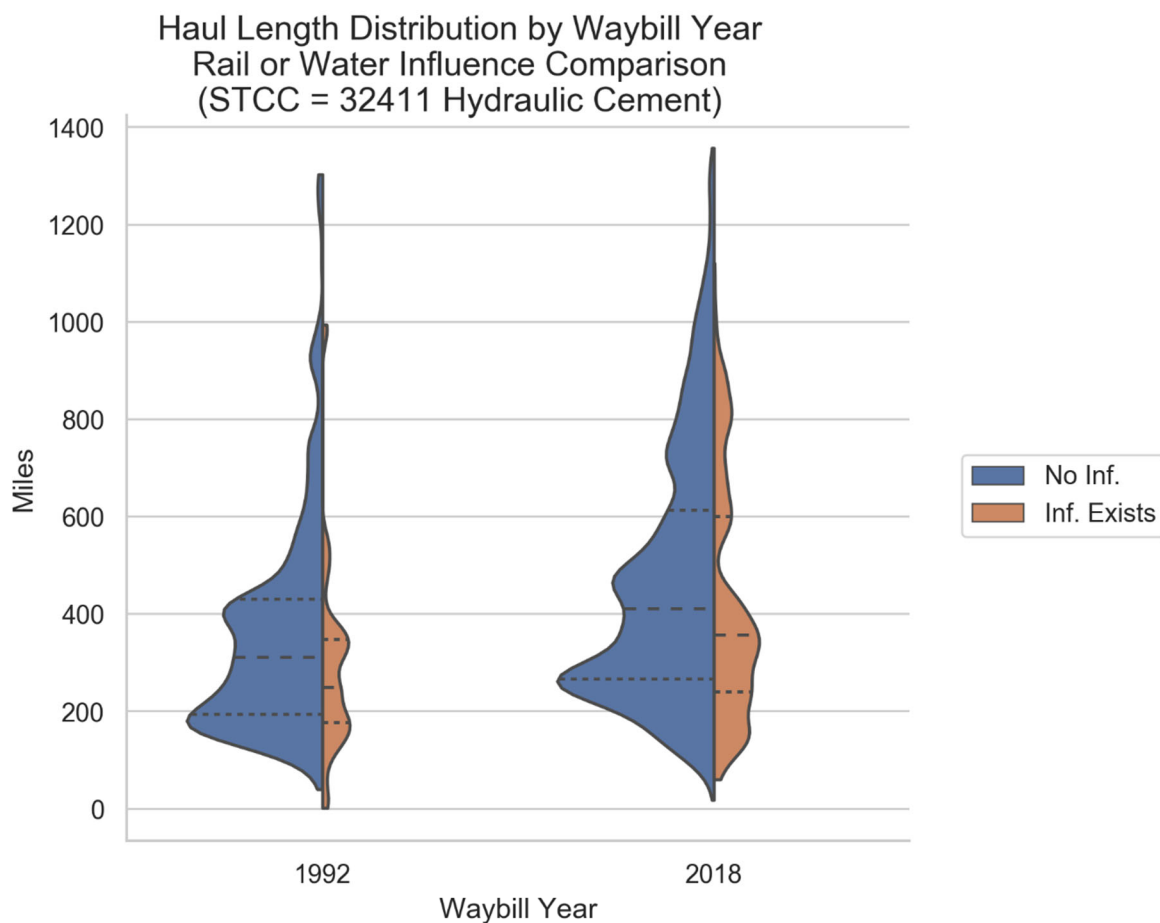
Item	1992	2018	Change
Avg. Haul Length (Mi.)	247.0	357.4	44.7%
No. of Waybills	379	1,612	325.3%
Cars	30,728	113,012	267.8%
Revenue	\$56,939,063	\$283,584,498	398.0%

The same trend towards longer miles is also true for hydraulic cement R/VC 180 traffic.



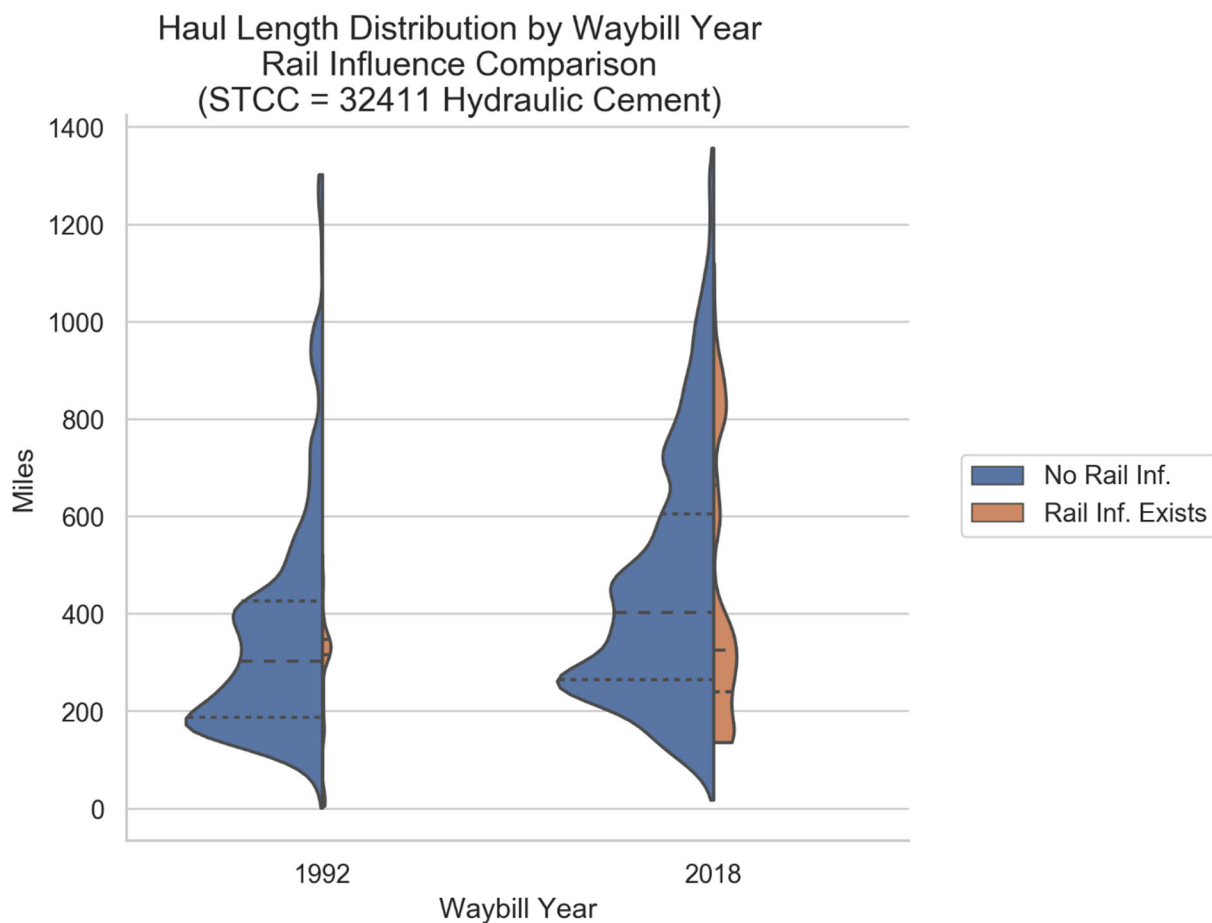
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	774.8	271.3	809.2	309.6
No. of Waybills	570	2,511	1,580	2,386
Cars	29,420	143,778	76,778	139,836
Revenue	\$78,765,302	\$232,694,697	\$258,260,090	\$303,637,366

Longer haul moves of hydraulic cement tend to be much shorter than longer haul moves of all carload traffic, whereas its shorter haul moves tend to be slightly longer.



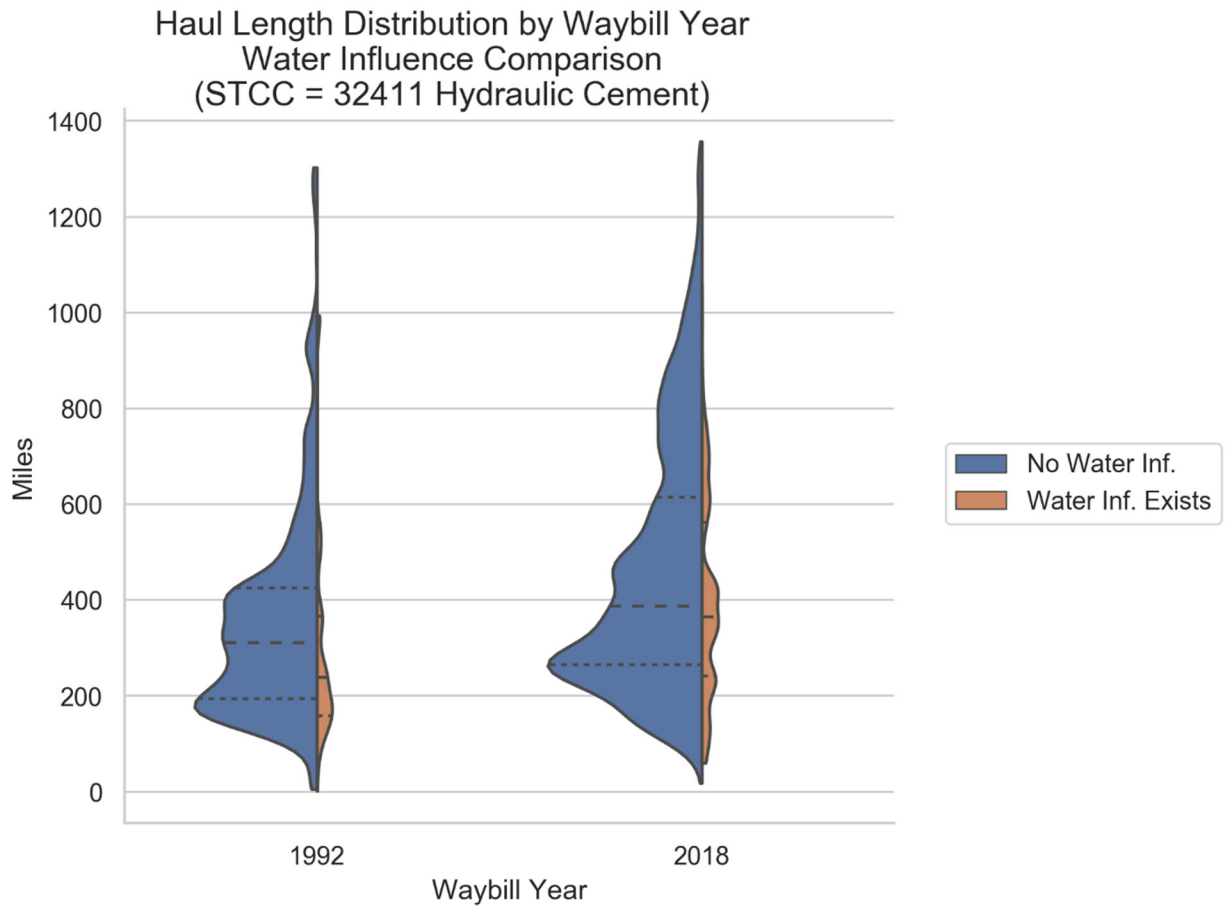
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	386.8	273.5	536.3	421.6
No. of Waybills	2,473	608	3,011	955
Cars	144,306	28,892	168,662	47,952
Revenue	\$267,102,184	\$44,357,815	\$452,902,072	\$108,995,384

Hydraulic cement traffic without any railroad or water carrier influences tend to have higher mileages than those with influences in each year, and the length of haul has gone up over time regardless of whether the traffic has railroad or water carrier influences.



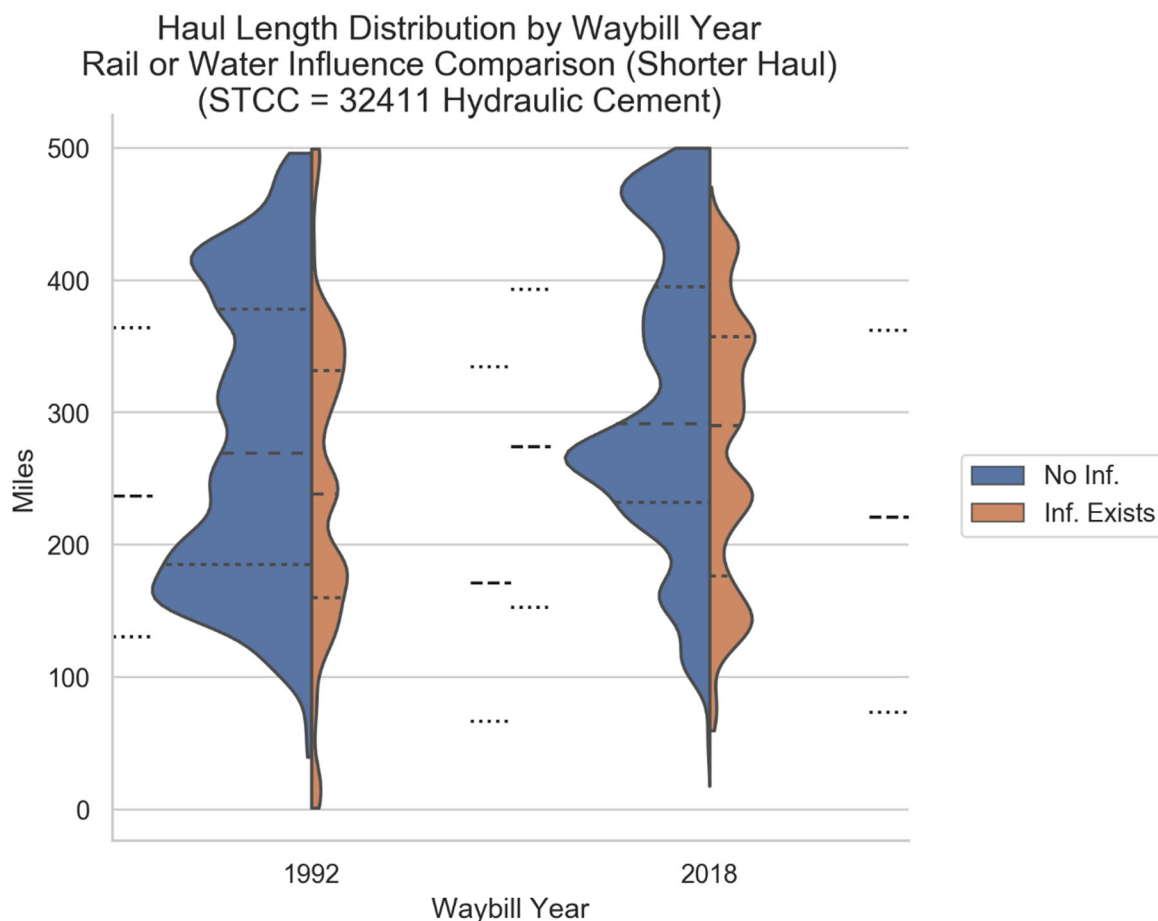
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	372.1	274.7	517.8	444.2
No. of Waybills	2,839	242	3,471	495
Cars	163,206	9,992	189,242	27,372
Revenue	\$296,068,996	\$15,391,003	\$499,343,392	\$62,554,064

Hydraulic cement traffic with railroad influences actually had a slightly higher median mileage than traffic without railroad influences, though there was significantly less of that traffic.



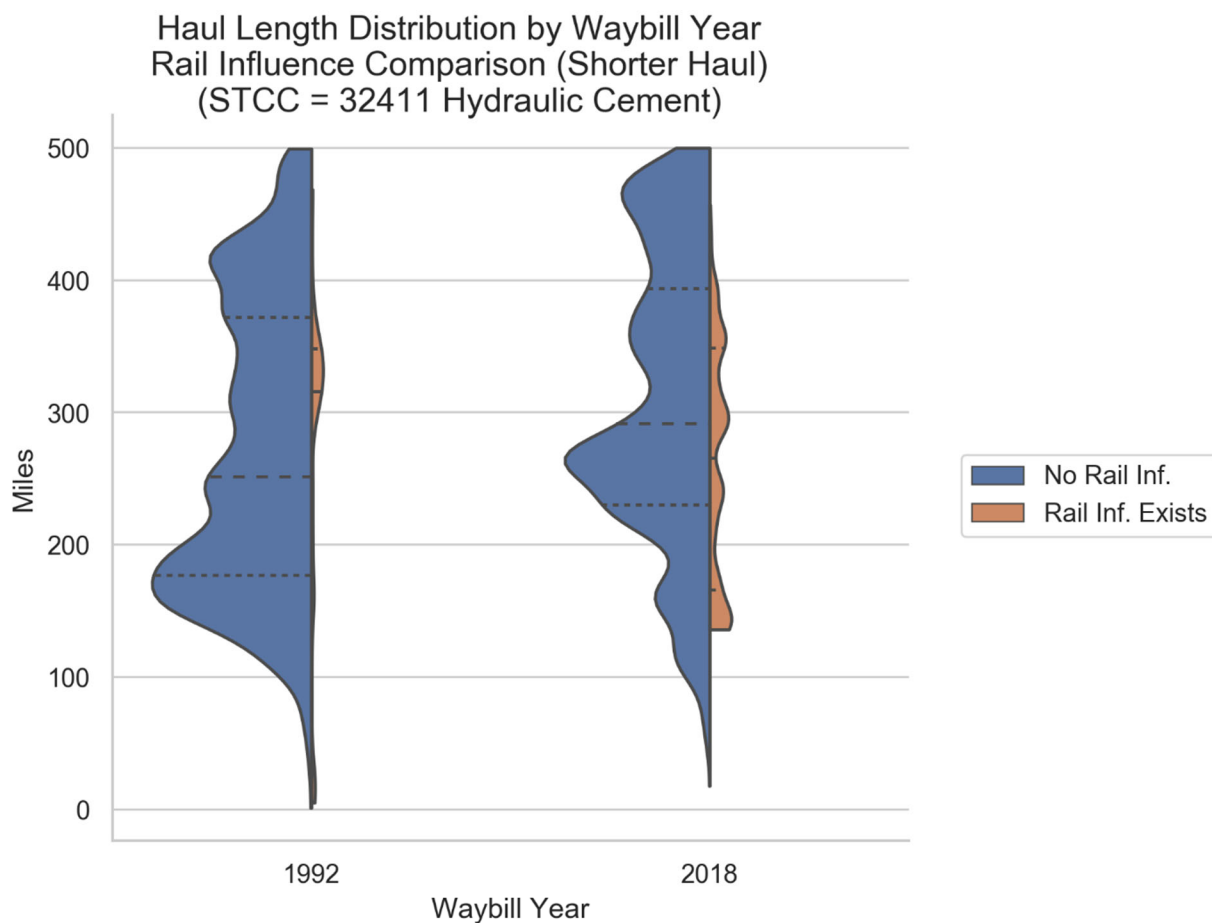
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	377.0	272.3	523.3	397.1
No. of Waybills	2,713	368	3,506	460
Cars	154,138	19,060	196,034	20,580
Revenue	\$282,303,473	\$29,156,526	\$515,456,136	\$46,441,320

Hydraulic cement traffic with water carrier influences was more similar to the results with railroad or water carrier influences.



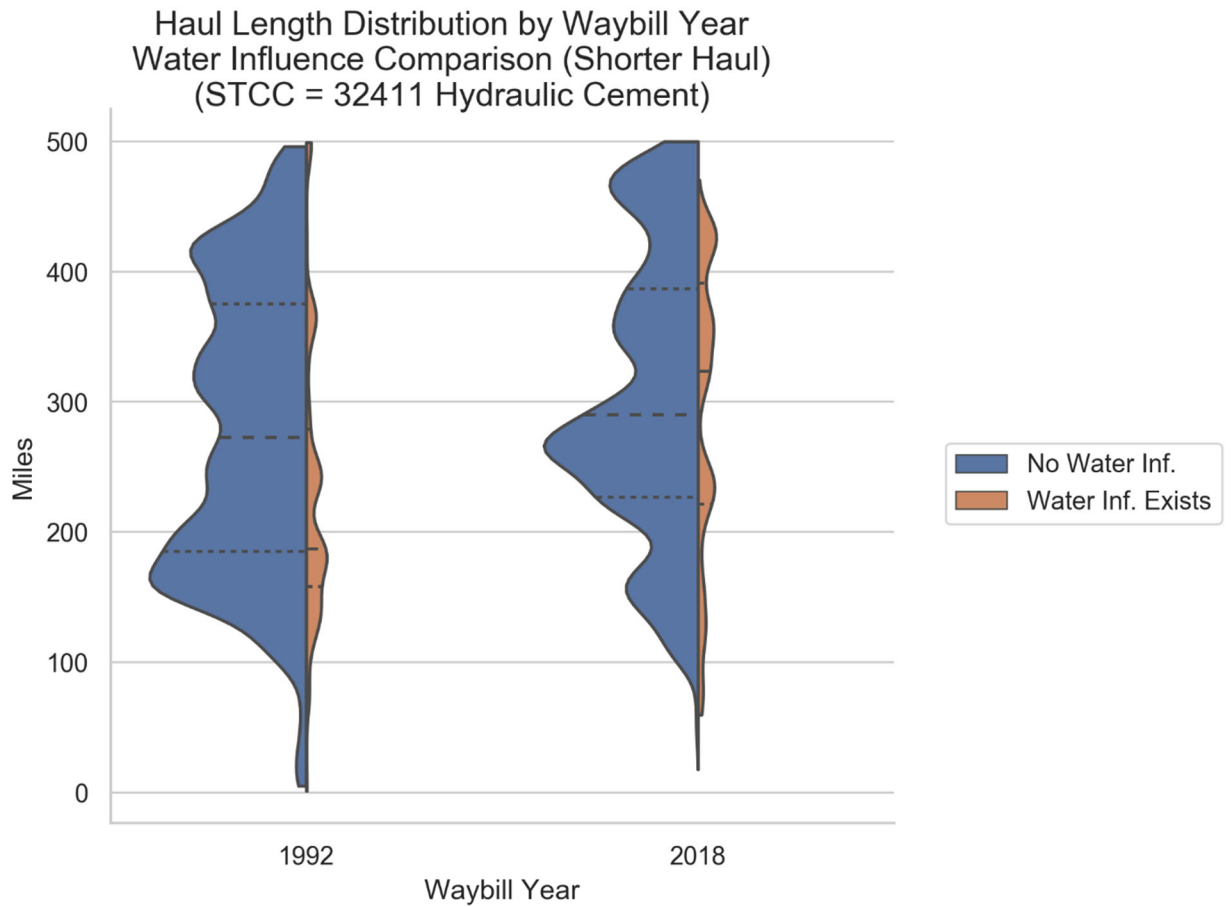
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	279.4	243.4	323.4	273.7
No. of Waybills	1,948	563	1,723	664
Cars	117,434	26,344	106,740	33,136
Revenue	\$194,179,441	\$38,515,256	\$237,299,470	\$66,381,176

In 2018, shorter haul hydraulic cement traffic had about the same median mileage regardless of whether railroad or water carrier influences were present, though traffic with influences still had lower upper and lower quartile mileages.



Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	271.4	270.6	318.1	255.4
No. of Waybills	2,273	238	2,060	327
Cars	133,946	9,832	121,564	18,312
Revenue	\$217,593,926	\$15,100,771	\$265,946,850	\$37,733,796

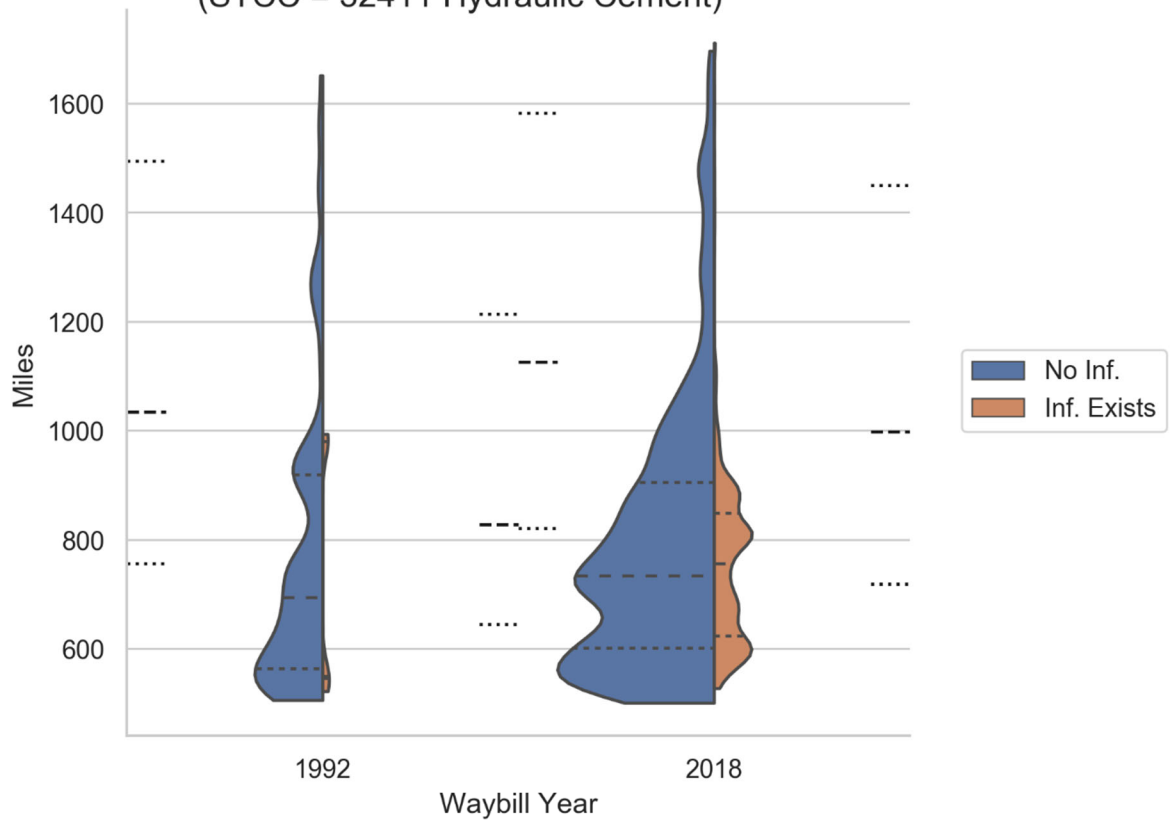
In 2018, shorter haul hydraulic cement traffic had about the same median mileage regardless of whether railroad influences were present, though traffic with railroad influences still had lower upper and lower quartile mileages.



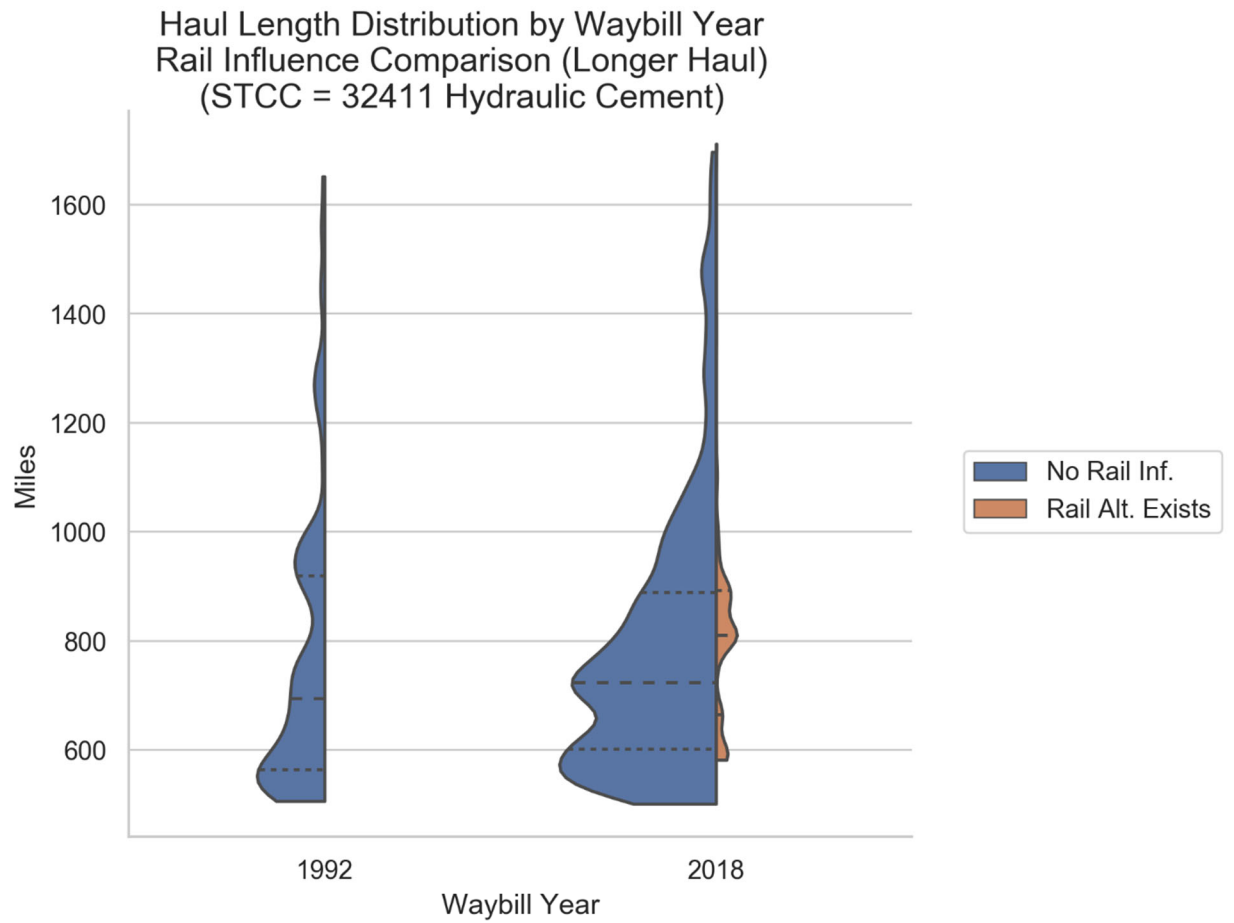
Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	278.5	223.3	312.5	291.4
No. of Waybills	2,184	327	2,050	337
Cars	127,106	16,672	125,052	14,824
Revenue	\$209,090,498	\$23,604,199	\$275,033,266	\$28,647,380

In 2018, shorter haul hydraulic cement traffic had about the same upper and lower quartile mileages regardless of whether water carrier influences were present, though traffic with water carrier influences had a slightly higher median mileage.

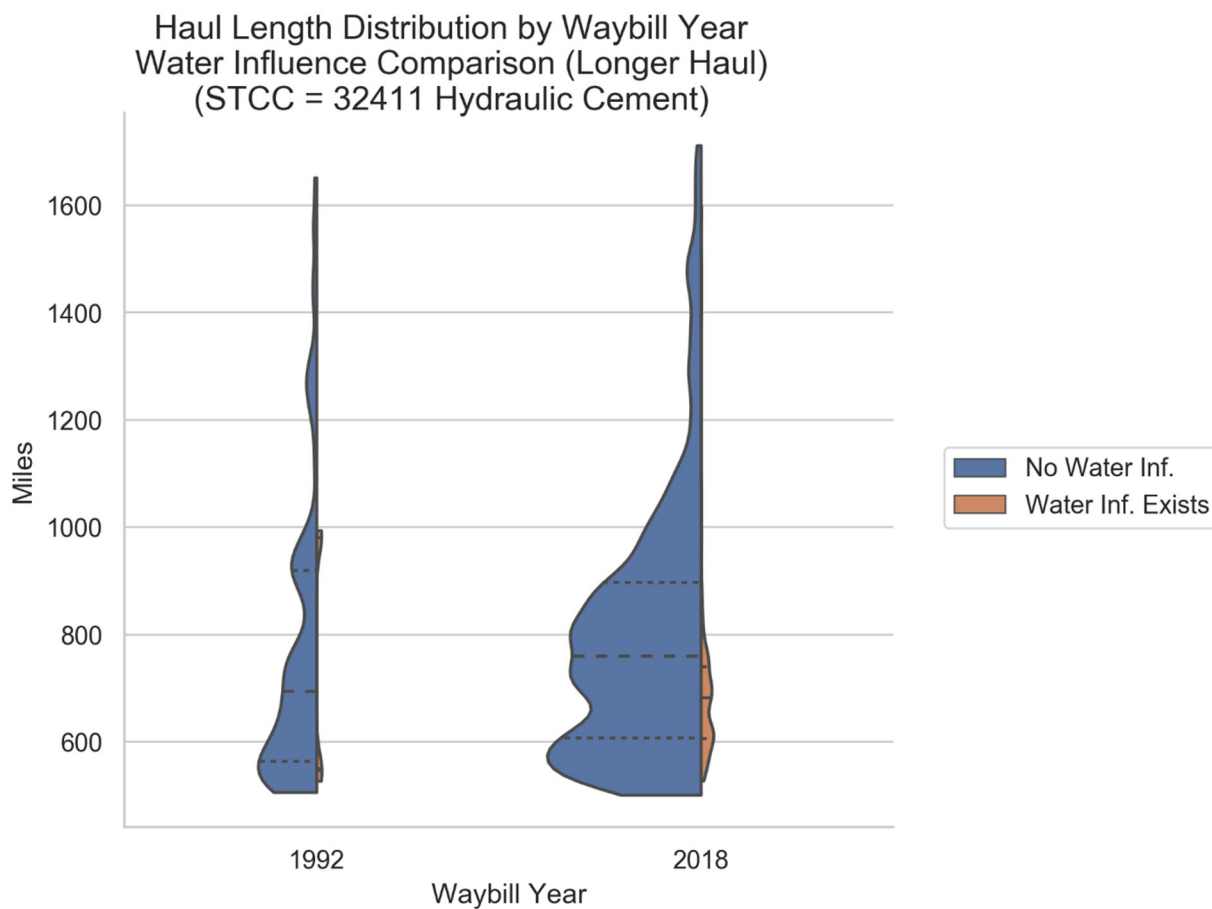
Haul Length Distribution by Waybill Year
 Rail or Water Influence Comparison (Longer Haul)
 (STCC = 32411 Hydraulic Cement)



Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	786.0	650.0	827.8	759.6
No. of Waybills	526	45	1,307	293
Cars	26,912	2,548	62,682	14,896
Revenue	\$72,969,912	\$5,842,559	\$216,701,522	\$42,722,128



Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	777.1	521.7	815.7	811.9
No. of Waybills	567	4	1,432	168
Cars	29,300	160	68,518	9,060
Revenue	\$78,522,239	\$290,232	\$234,603,382	\$24,820,268



Item	1992	1992	2018	2018
Modal Influence	No Inf.	Inf. Exists	No Inf.	Inf. Exists
Avg. Haul Length (Mi.)	784.1	662.6	826.0	689.3
No. of Waybills	530	41	1,475	125
Cars	27,072	2,388	71,742	5,836
Revenue	\$73,260,144	\$5,552,327	\$241,521,790	\$17,901,860

In 2018, the mileages for hydraulic cement traffic with water carrier influences tended to be lower than hydraulic cement traffic without water carrier influences. The lower quartile mileage was about the same, but the upper quartile mileage for traffic with water carrier influences was below the median mileage for traffic without water carrier influences.

Revised Appendix C

Complete Indicator Dashboard Results

The following four versions of the Indicator Dashboard show the complete results for the commodities to consider for exemption revocation using R/VC ratios, the commodities to consider for exemption revocation using RPC, the commodities to consider adding to the exemption list using R/VC ratios, and the commodities to consider adding to the exemption list using RPC.⁶ The Data Visualizations for each of these commodities will be made available upon request. Again, the approach uses these strength designations as an initial or partial step in evaluating whether an existing commodity class exemption should be revoked or whether a commodity should be exempted from regulation in the first instance. The Board would not expect that the Indicator Dashboard (or the approach as a whole) could fully answer the question of whether revocation or exemption is appropriate, given the market-specific issues, among other matters, that might also need consideration.

Commodities to Consider for Exemption Revocation Using R/VC Ratios

		Overall Dashboard	Initial Screens		Indicators							
STCCS	STCC Name		2018 % of Cars	2018 %	All Traffic	All Traffic	Comp Inf	Comp Inf	Length of Haul	Length of Haul	Comp RVC	Comp RVC
-	All Carload Traffic	Signal	RVC 180	Intermodal	Recent RVC	RVC Change	Recent	Change	Recent	Change	Recent Diff	Diff Change
-	All Carload Traffic		37.6%	46.1%	-	-	-	-	-	-	-	-
14211	Agricultural Limestone, Broken or Crushed	Weak	50.7%	1.2%	Moderate	Strong	Weak	Weak	Weak	Weak	Indeterminate	Indeterminate
14212	Fluxing Limestone or Stone, Broken or	Weak	100.0%	0.0%	Strong	Strong	Weak	Weak	Weak	Weak	Indeterminate	Indeterminate
14213	Dolomite, Broken or Crushed	Weak	37.1%	0.0%	Moderate	Weak	Weak	Weak	Weak	Weak	Strong	Indeterminate
14219	Broken or Crushed Stone or Riprap, Nec	Moderate	59.7%	0.1%	Strong	Strong	Weak	Weak	Weak	Moderate	Strong	Strong
24114	Pulpwood Logs	Weak	11.8%	3.4%	Weak	Strong	Weak	Weak	Weak	Strong	Weak	Weak
24115	Pulpwood or Other Wood Chips	Weak	17.6%	0.3%	Weak	Weak	Weak	Weak	Weak	Strong	Weak	Weak
24211	Lumber, Rough or Dressed	Moderate	19.6%	4.1%	Weak	Strong	Strong	Weak	Strong	Weak	Moderate	Weak
24321	Plywood or Veneer or Built-up Wood	Strong	26.7%	12.1%	Moderate	Strong	Strong	Moderate	Strong	Weak	Strong	Strong
24991	Strand Board Wood Products	Insufficient	20.5%	0.0%	Moderate	Indeterminate	Strong	Indeterminate	Strong	Indeterminate	Moderate	Indeterminate
24996	Wood Particle Board	Strong	26.4%	3.1%	Moderate	Strong	Strong	Moderate	Strong	Moderate	Moderate	Moderate
26217	Special Industrial Paper	Weak	29.7%	97.2%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26311	Fibreboard, Paperboard or Pulpboard	Moderate	22.3%	2.6%	Weak	Strong	Strong	Weak	Strong	Moderate	Moderate	Weak
29914	Coke Produced From Coal	Strong	57.0%	0.0%	Strong	Strong	Weak	Weak	Moderate	Strong	Strong	Strong
32411	Hydraulic Cement, Natural, Portland or	Moderate	52.2%	0.4%	Strong	Strong	Weak	Moderate	Moderate	Strong	Moderate	Moderate
32412	Ready-mix Cement or Concrete, Dry	Weak	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33121	Steel Ingot or Semi Finished Shapes	Weak	34.3%	1.9%	Weak	Moderate	Weak	Weak	Moderate	Strong	Weak	Weak
33122	Iron or Steel Plates	Moderate	38.9%	1.5%	Moderate	Strong	Strong	Weak	Strong	Weak	Weak	Weak
33123	Iron or Steel Sheet or Strip	Moderate	27.0%	4.9%	Weak	Weak	Weak	Moderate	Moderate	Weak	Strong	Strong
33124	Iron or Steel Bars, Bar Shapes or Rods	Strong	47.7%	1.9%	Strong	Strong	Strong	Strong	Moderate	Moderate	Weak	Strong
33125	Structural Shapes or Piling Products	Moderate	50.4%	0.0%	Strong	Strong	Strong	Weak	Strong	Weak	Weak	Weak
33126	Iron or Steel Pipe, Tubes or Fittings	Strong	58.1%	6.3%	Strong	Strong	Strong	Strong	Strong	Weak	Strong	Weak
33127	Tin Mill Products	Moderate	31.1%	7.2%	Moderate	Strong	Weak	Weak	Moderate	Weak	Strong	Strong
33128	Railway Track Material	Moderate	65.2%	1.6%	Strong	Strong	Weak	Weak	Moderate	Weak	Moderate	Strong
33129	Primary Iron or Steel Products, Nec	Weak	0.0%	54.5%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
37111	Motor Passenger Cars, Assembled	Weak	13.0%	0.3%	Weak	Weak	Moderate	Weak	Strong	Weak	Weak	Weak
37112	Motor Trucks or Truck Tractors, Assembled	Weak	19.1%	0.0%	Weak	Weak	Moderate	Weak	Moderate	Weak	Strong	Weak
37143	Motor Vehicle Frames	Moderate	82.0%	0.0%	Strong	Moderate	Weak	Weak	Weak	Weak	Moderate	Strong
40211	Iron or Steel Scrap, Wastes or Tailings	Moderate	36.6%	4.7%	Moderate	Strong	Weak	Strong	Moderate	Strong	Weak	Moderate
40241	Paper Waste or Scrap	Moderate	14.9%	24.2%	Weak	Strong	Strong	Strong	Moderate	Weak	Weak	Weak

⁶ All commodities on the record in this proceeding are included.

Commodities to Consider for Exemption Revocation Using RPC Values

		Overall Dashboard	Initial Screens		Indicators							
STCCS	STCC Name		2018 % of Cars	2018 %	All Traffic	All Traffic	Comp Inf	Comp Inf	Length of Haul	Length of Haul	Comp RPC	Comp RPC
-	All Carload Traffic	-	RVC 180	Intermodal	Recent RPC	RPC Change	Recent	Change	Recent	Change	Recent Diff	Diff Change
14211	Agricultural Limestone, Broken or Crushed	Weak	50.7%	1.2%	Weak	Weak	Weak	Weak	Weak	Weak	Indeterminate	Indeterminate
14212	Fluxing Limestone or Stone, Broken or	Weak	100.0%	0.0%	Weak	Weak	Weak	Weak	Weak	Weak	Indeterminate	Indeterminate
14213	Dolomite, Broken or Crushed	Weak	37.1%	0.0%	Weak	Weak	Weak	Weak	Weak	Weak	Weak	Indeterminate
14219	Broken or Crushed Stone or Riprap, Nec	Weak	59.7%	0.1%	Weak	Weak	Weak	Weak	Weak	Moderate	Weak	Strong
24114	Pulpwood Logs	Weak	11.8%	3.4%	Weak	Strong	Weak	Weak	Weak	Strong	Weak	Moderate
24115	Pulpwood or Other Wood Chips	Weak	17.6%	0.3%	Weak	Weak	Weak	Weak	Weak	Strong	Weak	Moderate
24211	Lumber, Rough or Dressed	Strong	19.6%	4.1%	Strong	Strong	Strong	Weak	Strong	Weak	Strong	Strong
24321	Plywood or Veneer or Built-up Wood	Strong	26.7%	12.1%	Strong	Strong	Strong	Moderate	Strong	Weak	Strong	Strong
24991	Strand Board Wood Products	Insufficient	20.5%	0.0%	Strong	Indeterminate	Strong	Indeterminate	Strong	Indeterminate	Strong	Indeterminate
24996	Wood Particle Board	Strong	26.4%	3.1%	Strong	Strong	Strong	Moderate	Strong	Moderate	Moderate	Weak
26217	Special Industrial Paper	Weak	29.7%	97.2%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26311	Fibreboard, Paperboard or Pulpboard	Moderate	22.3%	2.6%	Strong	Strong	Strong	Weak	Strong	Moderate	Weak	Weak
29914	Coke Produced From Coal	Moderate	57.0%	0.0%	Weak	Strong	Weak	Weak	Moderate	Strong	Weak	Strong
32411	Hydraulic Cement, Natural, Portland or	Moderate	52.2%	0.4%	Weak	Strong	Weak	Moderate	Moderate	Strong	Weak	Moderate
32412	Ready-mix Cement or Concrete, Dry	Weak	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33121	Steel Ingot or Semi Finished Shapes	Weak	34.3%	1.9%	Weak	Strong	Weak	Weak	Moderate	Strong	Weak	Weak
33122	Iron or Steel Plates	Strong	38.9%	1.5%	Strong	Strong	Strong	Weak	Strong	Weak	Strong	Strong
33123	Iron or Steel Sheet or Strip	Moderate	27.0%	4.9%	Strong	Weak	Weak	Moderate	Moderate	Weak	Strong	Moderate
33124	Iron or Steel Bars, Bar Shapes or Rods	Moderate	47.7%	1.9%	Strong	Strong	Strong	Strong	Moderate	Moderate	Weak	Weak
33125	Structural Shapes or Piling Products	Strong	50.4%	0.0%	Strong	Strong	Strong	Weak	Strong	Weak	Strong	Strong
33126	Iron or Steel Pipe, Tubes or Fittings	Strong	58.1%	6.3%	Strong	Strong	Strong	Strong	Strong	Weak	Strong	Strong
33127	Tin Mill Products	Moderate	31.1%	7.2%	Strong	Weak	Weak	Weak	Moderate	Weak	Strong	Strong
33128	Railway Track Material	Moderate	65.2%	1.6%	Strong	Strong	Weak	Weak	Moderate	Weak	Strong	Strong
33129	Primary Iron or Steel Products, Nec	Weak	0.0%	54.5%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
37111	Motor Passenger Cars, Assembled	Weak	13.0%	0.3%	Weak	Weak	Moderate	Weak	Strong	Weak	Weak	Weak
37112	Motor Trucks or Truck Tractors, Assembled	Weak	19.1%	0.0%	Weak	Weak	Moderate	Weak	Moderate	Weak	Weak	Weak
37143	Motor Vehicle Frames	Weak	82.0%	0.0%	Weak	Weak	Weak	Weak	Weak	Weak	Weak	Weak
40211	Iron or Steel Scrap, Wastes or Tailings	Moderate	36.6%	4.7%	Weak	Strong	Weak	Strong	Moderate	Strong	Weak	Strong
40241	Paper Waste or Scrap	Moderate	14.9%	24.2%	Weak	Strong	Strong	Strong	Moderate	Weak	Weak	Weak

Commodities to Consider Adding to Exemption List Using R/VC Ratios

		Overall Dashboard	Initial Screens		Indicators							
STCC	STCC Name		2018 % of Cars	2018 %	All Traffic	All Traffic	Comp Inf	Comp Inf	Length of Haul	Length of Haul	Comp RVC	Comp RVC
-	-	Signal	RVC 180	Intermodal	Recent RVC	RVC Change	Recent	Change	Current Level	Change	Recent Diff	Diff Change
-	All Carload Traffic	-	37.6%	46.1%	-	-	-	-	-	-	-	-
1441310	Industrial Sand	Weak	48.9%	1.1%	Weak	Weak	Weak	Weak	Moderate	Weak	Strong	Strong
26211	Newsprint	Moderate	15.9%	28.5%	Strong	Strong	Weak	Weak	Weak	Weak	Strong	Strong
26212	Ground Wood Paper Uncoated	Moderate	16.3%	24.3%	Strong	Strong	Weak	Moderate	Weak	Weak	Moderate	Moderate
26218	Sanitary Tissue Stock	Strong	57.1%	95.6%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26471	Sanitary Tissues or Health Products	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26611	Insulating Board	Insufficient	Indeterminate	Indeterminate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26612	Construction Paper	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26613	Wallboard	Strong	50.0%	50.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26614	Insulating Material	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26615	Construction Panels, Partitions	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26619	Building Paper or Building Board, Nec	Insufficient	37.5%	0.0%	Weak	Indeterminate	Weak	Indeterminate	Moderate	Indeterminate	Indeterminate	Indeterminate
2818446	Anhydrous Ethyl Alcohol	Moderate	34.8%	0.0%	Strong	Weak	Weak	Strong	Weak	Strong	Weak	Weak
28422	Specialty Cleaning Bleaches	Strong	88.2%	83.7%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2871450	Phosphate Fertilizer Solution	Weak	51.6%	0.0%	Weak	Weak	Weak	Strong	Moderate	Strong	Weak	Weak
29111	Gasoline or Jet or High Volatile Petroleum	Moderate	36.1%	2.0%	Strong	Weak	Strong	Weak	Moderate	Weak	Moderate	Weak
29112	Kerosene Exc. Jet Fuels	Strong	0.0%	50.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2911610	Asphalt	Weak	35.3%	0.2%	Weak	Weak	Weak	Weak	Weak	Weak	Strong	Strong
29521	Asphalt or Tar Saturated Felts, Boards or	Strong	66.7%	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29523	Asphalt Sheathings, Shingles or Sidings	Moderate	46.7%	12.7%	Weak	Weak	Weak	Moderate	Moderate	Strong	Strong	Strong

Commodities to Consider Adding to Exemption List Using RPC Values

		Overall Dashboard	Initial Screens		Indicators							
STCC	STCC Name		2018 % of Cars	2018 %	All Traffic	All Traffic	Comp Inf	Comp Inf	Length of Haul	Length of Haul	Comp RPC	Comp RPC
-	All Carload Traffic	Signal	RVC 180	Intermodal	Recent RPC	RPC Change	Recent	Change	Current Level	Change	Recent Diff	Diff Change
-	All Carload Traffic	-	37.6%	46.1%	-	-	-	-	-	-	-	-
1441310	Industrial Sand	Weak	48.9%	1.1%	Weak	Weak	Weak	Weak	Moderate	Weak	Strong	Strong
26211	Newsprint	Weak	15.9%	28.5%	Weak	Weak	Weak	Weak	Weak	Weak	Moderate	Weak
26212	Ground Wood Paper Uncoated	Weak	16.3%	24.3%	Weak	Weak	Weak	Moderate	Weak	Weak	Strong	Strong
26218	Sanitary Tissue Stock	Strong	57.1%	95.6%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26471	Sanitary Tissues or Health Products	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26611	Insulating Board	Insufficient	Indeterminate	Indeterminate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26612	Construction Paper	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26613	Wallboard	Strong	50.0%	50.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26614	Insulating Material	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26615	Construction Panels, Partitions	Strong	Indeterminate	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
26619	Building Paper or Building Board, Nec	Insufficient	37.5%	0.0%	Weak	Indeterminate	Weak	Indeterminate	Moderate	Indeterminate	Indeterminate	Indeterminate
2818446	Anhydrous Ethyl Alcohol	Moderate	34.8%	0.0%	Weak	Strong	Weak	Strong	Weak	Strong	Weak	Weak
28422	Specialty Cleaning Bleaches	Strong	88.2%	83.7%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2871450	Phosphate Fertilizer Solution	Moderate	51.6%	0.0%	Weak	Strong	Weak	Strong	Moderate	Strong	Moderate	Moderate
29111	Gasoline or Jet or High Volatile Petroleum	Moderate	36.1%	2.0%	Strong	Weak	Strong	Weak	Moderate	Weak	Strong	Strong
29112	Kerosene Exc. Jet Fuels	Strong	0.0%	50.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2911610	Asphalt	Weak	35.3%	0.2%	Weak	Moderate	Weak	Weak	Weak	Weak	Moderate	Moderate
29521	Asphalt or Tar Saturated Felts, Boards or	Strong	66.7%	76.9%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29523	Asphalt Sheathings, Shingles or Sidings	Moderate	46.7%	12.7%	Weak	Weak	Weak	Moderate	Moderate	Strong	Strong	Moderate