

BEFORE THE
SURFACE TRANSPORTATION BOARD

Docket No. EP 770 (Sub-No. 1)

ENTERED
Office of Proceedings
June 23, 2022
Part of
Public Record

URGENT ISSUES IN FREIGHT RAIL SERVICE—RAILROAD REPORTING

SUPPLEMENTAL SERVICE RECOVERY PLAN OF BNSF RAILWAY COMPANY

I. Introduction

In accordance with the Board’s June 13, 2022 decision (“June 13 Decision”) in this docket, BNSF provides the following supplement to our May 20, 2022 Service Recovery Plan (“SRP”).

At the outset, we note that BNSF’s service has not been meeting our customers’ expectations for several months. While BNSF’s top priority has been to restore our service to the levels we and our customers expect, we have also recognized that while our service would steadily improve, it would be in an uneven manner across the different segments of our network. In the month since we filed our SRP, we have seen signs of recovery across many parts of our network, while some other parts of our network remain more challenged, particularly along our Southern Transcon corridor running from Chicago to Southern California.¹

We want to emphasize that a large and complex rail network straining to restore full fluidity can be impacted by changes in demand, service outages, and weather events, as well as broader external supply chain challenges like chassis shortages, all of which can have an outsized effect on a system that is in a recovery mode. While our network’s service performance has been improving in some key areas as we execute the recovery strategy laid out in our SRP, we continue to adjust our tactics and supplement our efforts as necessary to respond to evolving situations so that we can return our service to the levels our customers expect as quickly as possible. But while our overall recovery may take time and there may be short-term setbacks in specific territories, the general trend is towards recovery.

In this Supplemental SRP, BNSF provides:

- more specificity about our current performance and recovery efforts;
- the additional information about our network requested by the Board in its recent decision;
- updates to our communications with our customers; and
- more detail on our ongoing and evolving efforts.

In addition to this written submission, BNSF will continue to provide thorough and transparent updates on our bi-weekly calls with STB staff. On those calls, we make available subject matter experts from our Service Design, Human Resources and Customer Support teams who are working

¹ See *infra* Part II and Part III.a.

on the front lines of our recovery efforts, and we have appreciated the level of participation and interaction we have seen from the Board's staff.

BNSF understands the Board's role in ensuring transparency for rail customers and the public; we support that overall effort and are committed to the same goal. The Board has appropriately left the design and implementation of recovery plans in the hands of individual carriers rather than prescribing specific actions, and BNSF believes that continuing that approach is essential to promoting the fastest possible recovery on our network and best serves the needs of our customers.

We understand that the Board's approach presumes a high level of transparency from BNSF, and we are committed to providing that transparency on an ongoing basis. To the extent that some of the information in this Supplemental SRP seems duplicative of information we have already been communicating to our customers, the Board, and the Board's staff over the last several weeks, we hope the Board recognizes that as a reflection of our good faith efforts to provide a comprehensive service recovery plan. The Board's June 13 Decision made its expectations for our SRP clear, and we approach this Supplemental SRP as an opportunity to fill the gaps the Board has identified and to express our unrelenting commitment to the recovery our customers need and detail the measures we are taking to recover our network. We trust this Supplemental SRP will meet the Board's expectations.

II. Overview of Current Performance

Before addressing the specific supplemental information requested by the Board's June 13 Decision, we wanted to provide a brief update on our overall current system performance.

We are pleased that there are parts of our network—most notably our Northern region between Chicago and the Pacific Northwest—where our recovery efforts have created improved levels of fluidity in the form of increased velocity and decreased dwell. Velocity on our Northern region increased 5.9% in May versus April, and we have seen a 7.4% reduction in dwell in that region since January. As a result of this improvement in the Northern region, we had both our best loading and velocity days of 2022 during the month of June. These overall improvements have directly correlated to an improved service experience for our customers. For example, we have been able to reduce our past due Ag railcars in North Dakota by approximately 27% over the past thirty days, and through May of this year we have moved 7% more coal than we had through May of last year. We are encouraged by that improvement as it shows that the measures we are taking are having the intended effects, and it helps us calibrate those efforts going forward.

However, we have not yet been able to achieve the same trajectory of recovery on our Southern Transcon, and in particular, we see ongoing challenges on our subdivisions on its western end, particularly in Southern California. We face significant resource imbalances—meaning an imbalance between our westbound and eastbound volume levels that leaves our crews and locomotives imbalanced—on our Southern Transcon in general and particularly on our Needles Subdivision, which runs between Barstow, California and Needles, California. These imbalances, which are driven in large part by congestion at our Chicagoland intermodal facilities on the eastern end of our Southern Transcon, are impacting the fluidity of the western end of our Southern Transcon. Crew availability is an additional challenge as our employees' usage of collectively bargained vacation time increases in the early summer. Crew unavailability due to vacation time

should peak in the week of the July 4th holiday and decrease over the remaining summer months. As detailed below, we are taking steps to mitigate that, but we expect that vacation peak will be a short-term headwind until vacation time likely diminishes from the July 4th holiday through August.

In the sections that follow, we will provide more detail and insights into this regional performance difference, the nature of our issues on our Southern Transcon, and the additional steps we are implementing to drive our recovery there. While we are encouraged by our overall trends and starting to see some green shoots in our challenged areas, our overall message is that recovery in those challenged parts of our network remains choppy.

III. Supplemental Service Recovery Plan Information

a. Causes of Congestion and Delays, and Most Impacted Locations.

The June 13 Decision asks for more specificity regarding the cause of network delays and the geographic areas where service challenges are the most severe. Our 2022 service performance issues are the result of severe congestion on our network that was caused by a combination of factors, which we will summarize below.

First, we experienced significant and unexpected demand increases in 2021 following the volume deficits we experienced during the pandemic. While the macro impacts of that increased demand across the entire supply chain are well documented, those strains have also impacted BNSF. Participants in the supply chain have struggled to find the driver, chassis, and warehouse resources necessary to manage the unanticipated influx of volume in the supply chain, and significant backlogs were created at critical BNSF terminals and on our mainlines as trains were held short of those terminals. At key inland markets like Chicago, we have seen sustained strong volumes, longer dwell times, and chassis constraints resulting from high volumes of eastbound intermodal loads waiting to be removed from our Chicagoland terminals, especially at our largest such facility, Logistics Park Chicago (LPC). This has led to a significant number of Eastbound trains heading for LPC being staged in sidings across the Southern Transcon waiting to arrive at and be unloaded at LPC. This phenomenon has, in turn, reduced the velocity of intermodal flatcars due to their inability to be unloaded and the subsequent slowing of their return to the West Coast to handle the continued strong demand for imported cargo. It has also limited our ability to handle other traffic on the Southern Transcon as sidings, mainline segments and terminals are congested with staged freight.

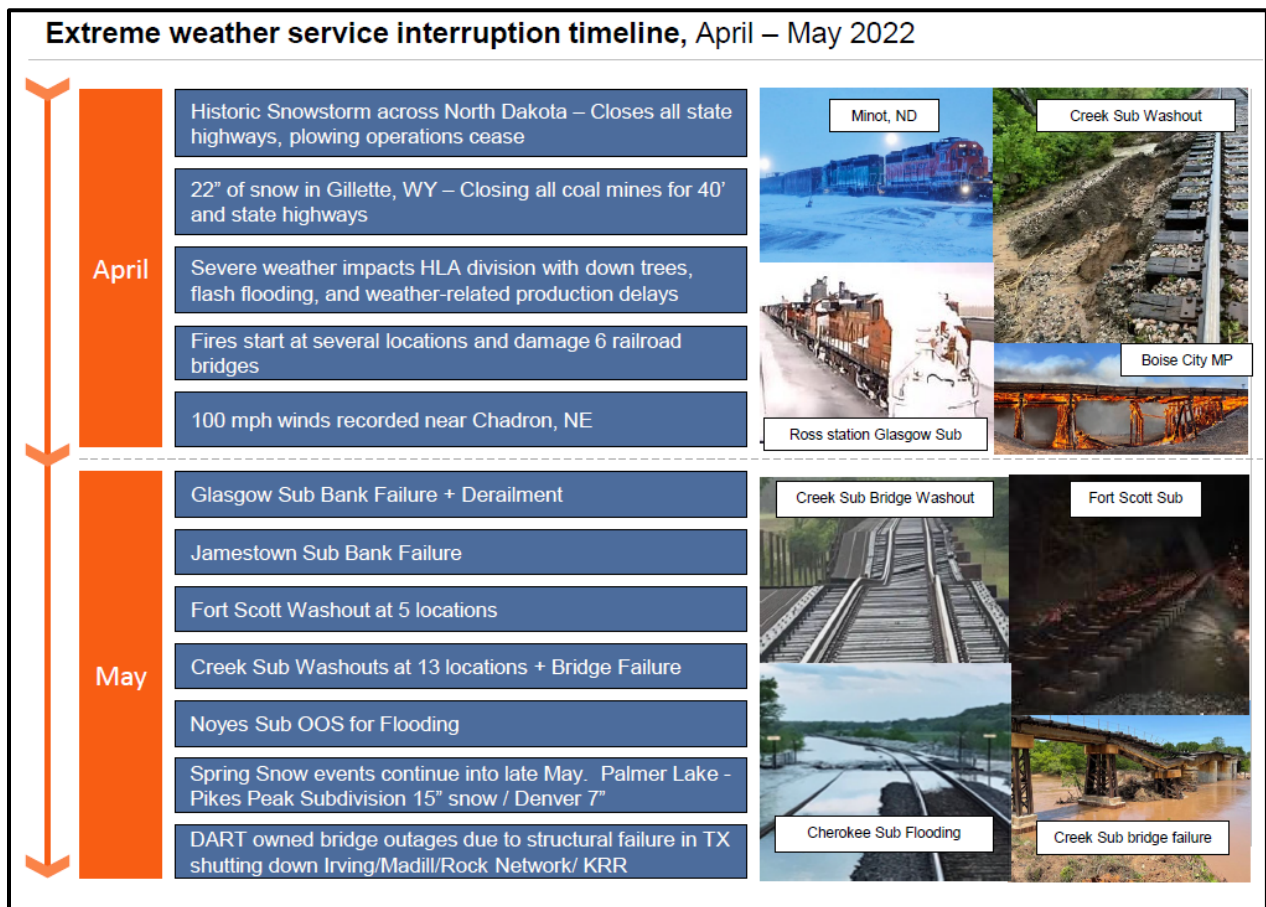
BNSF has undertaken significant efforts with our customers to improve fluidity despite congestion challenges across the entire freight supply chain including ports, trucking and warehousing. Despite these efforts, the core issues of chassis, driver and warehouse capacity have persisted, consuming BNSF resources like crew, locomotive and linehaul capacity around our network in general, particularly at bottleneck areas on the Southern Transcon and areas leading into Chicago and our key intermodal terminals there.

We also saw significant grain demand in the Pacific Northwest in the second half of 2021, and that was a region where we faced the most difficult hiring environment. Grain and feed volumes have remained strong following a 2021 harvest where BNSF moved the most grain volume in its history. We have just finished the seasonal fertilizer push which saw a significant

short-term increase in volumes and consumption of resources, particularly on our Northern Region. We took great care to allocate the resources necessary to protect the critical fertilizer season and ensure that American farmers are able to maximize this year’s harvest.

At the same time, a series of extreme weather events that started in late 2021 and continued through the first half of 2022 have caused major disruptions across our network, which was already more fragile given the existing supply chain issues. And while weather events certainly happen every year—at BNSF we are fond of calling railroading an “outdoor sport”—as discussed above, weather-caused service interruptions can have an exaggerated impact on a network that is in recovery mode.

As detailed in the chart below, the months of April and May were particularly challenging as we experienced a number of service interruptions that impacted numerous lines of business, consuming large amounts of crew and other resources while BNSF was attempting to aggressively pursue our service recovery efforts.



In recent weeks, BNSF has experienced severe weather causing service disruptions and reduced velocity on several parts of our network. Monsoon conditions and flash flooding took portions of our mainline out of service earlier this week on the Gallup subdivision near Laguna, New Mexico, approximately 70 miles west of Belen. Both main tracks were out of service for several hours. BNSF crews have worked to remove heavy debris and repair track as waters

receded, returning those lines to service. Temporary speed restrictions were implemented while crews restored and inspected affected track, which caused significant delays and increased congestion. Heavy rain also resulted in track washouts in multiple locations along a 100-mile span east of Billings, Montana, and between Casper, Wyoming and Laurel, Montana. The BNSF teams are taking all steps to safely restore the network and minimize service outages for our customers.

As a reaction to the overall network delays stemming from these service interruptions, we experienced an increased amount of private car inventory on our network in late 2021 and early 2022. As our velocity slowed with increased demand, there was an understandable instinct from our customers to add more cars to the network in the hopes that increased orders would allow them to get their needed volumes as expected. Unfortunately, adding cars to a strained network had the opposite result, decreasing velocity and increasing dwell, leading ultimately to the delivery of less product for all of our customers. It also more intensely consumes crew resources without increasing service levels.

b. Specific and Concrete Recovery Actions

The June 13 Decision requests more detail on the specific and concrete actions that BNSF will take to mitigate and, over time, resolve our current service issues, and the timeline we expect to eliminate the current disruptions.

Our recovery efforts are focused on three areas: bringing additional crews and locomotives online to have the resources necessary to move volumes to meet customer demand, and reducing excess cars on our network to clear congestion and more fluidly move our customers' freight. Those three areas remain our focus and provided below is additional detail consistent with the STB's June 13 Decision. Also provided below is more granular information regarding actions we are taking specifically related to our Southern Transcon given the significant challenges we face there in light of heightened demand, especially for essential products like animal feed, water treatment and energy supplies.

We are constantly evaluating the actions we have implemented to build towards our service recovery against our internal vision of where we would need to be over the next 30, 60, and 90 day intervals. And as BNSF's witnesses cautioned, in this initial 30-60 day period following the April 26-27 hearing in this proceeding (the "Hearing"), our service recovery is and will be choppy for some of the reasons outlined above, including those external supply chain factors that BNSF does not control. We have more recently begun to see some positive effects from our larger 2022 hiring classes graduating from training, repositioning existing TYE employees through our incentive program, and our recent buyback efforts. Looking forward, we fully anticipate that we will achieve the six-month KPI targets we have communicated to the Board, but we also expect to make progress on an ongoing basis for the practical benefit of our customers. For example, for our Agricultural products customers, our goal is to be current with our past dues in time for harvest. And although we moved 7% more Coal through May of this year compared to of the same period last year, we will strive to continue adding more train sets to our Coal service as the year progresses, which will help us support additional Coal volume growth. In our Intermodal service, we will continue to work down the number of trains holding on the Southern Transcon so that our network is prepared to handle our Fall Peak Season.

i. Increasing Locomotive Availability

BNSF has increased the size of our locomotive fleet, including increasing our active locomotive fleet by 350 units since the start of winter. We are also surging resources to our locomotive shops to get these units ready for active service quickly and minimize downtime for maintenance and repair. When locomotives complete service at our mechanical shops, they are directed to areas of most need, like Southern California. To lessen the impacts of service interruptions due to mechanical issues, we have added Mechanical responders to assist in expediting service restoration by doing more repairs on-site in field locations and increasing the opportunity to avoid having to move the equipment to repair shops. We have also recently finalized arrangements to lease an additional 75 locomotives for our network fleet and have begun taking delivery of those units.

ii. Reducing Railcar Inventory

Having unproductive railcars online consumes capacity in our yards and sidings and slows our velocity, so reducing congestion through the temporary reduction of railcars on the network remains an important lever to generate the additional capacity needed to improve fluidity and service consistency across all parts of our network. We are closely managing the number of unproductive cars across our network to enable us to handle additional volume and deliver shipments faster. Reducing car inventory also enables us to generate more significant velocity improvement, particularly across the northern part of our network that runs between the Pacific Northwest and Chicago. Our car reduction efforts showed some early success. As an example, between the beginning of April and the beginning of June we reduced the active inventory by almost 4.4% and saw our system velocity and our delivered units increase over the same period. As we recover from recent service interruptions, we expect to build on that pattern.

We remain mindful that while our efforts to take cars offline is important to improving overall system health, there can be short-term capacity effects for individual customers. We are engaged closely with them to identify mutually beneficial opportunities to store unproductive cars and are providing incentives to customers who voluntarily take cars offline. It is our hope and our intent to realize the temporary inventory reduction we need to recover our network without imposing embargoes on shippers and facilities. With a handful of exceptions, including an embargo we are implementing to address our Southern California congestion that is described in more detail below, we have indeed accomplished this reduction in car inventory in a bilateral manner working with our customers.

iii. Supplementing Crew and Other Workforces

At the Hearing, BNSF shared our aggressive plan to hire, train and put into service an additional 3,000 employees across our Transportation, Engineering and Mechanical crafts in 2022. That remains our plan and we are making progress against our goal. We have hired approximately 1,420 new employees thus far in 2022, with 805 of them being hired just since the beginning of April. More than 1,700 of the 3,000 total new employees will be additional TY&E employees, which reflects an increase to our TY&E hiring plan from the start of 2022. Thus far in 2022, more than 659 new TY&E employees have either been hired or completed training, and we expect

approximately 300 to complete training in the next 90 days. We have also already hired more than 700 new employees in our Engineering, Mechanical and Dispatch departments in 2022.

Our current forecasted attrition rate suggests that these 3,000 new hires will keep our overall employee count generally flat throughout 2022, although that outcome may change as a result of multiple factors that are difficult to forecast at this time, including market demand shifts and the effects of the macro economy on employee attrition rates. We are encouraged that our hiring plan, coupled with our implementation of a new attendance policy, has thus far resulted in our employees spending more time moving our customers' freight with no impact to how much time off they are able to take and positive impacts to the amount of time they spend off-duty at their home location. Prior to implementing our new attendance policy, approximately 50% of our train crew employees were working less than 40 hours a week on average, a trend that was also present among the relatively small number of train crew employees who have left through retirement and general attrition as well. The newly hired employees replacing those departing employees, and who have joined BNSF to seek full-time employment, will more effectively support our service recovery efforts. Moreover, our new attendance policy has improved the consistency of crews being available for their shifts, which also drives service reliability for our customers and predictability around when all of our crews will be going to work.

We are responding to the challenging labor environment with new programs to support our recruiting efforts. In our hiring process, we are making job offers to a larger number of candidates to counteract the lower acceptance rate and the higher fallout rate we are seeing during training and onboarding. We have also taken steps to streamline and rework the application process to ensure a broader applicant pool for the openings we have. On the onboarding front, we are starting training classes as soon as we can rather than making some employees wait for a larger training class size. We have also used our regional applicant and acceptance data to put in place incentives tailored to attract future employees to high need areas, including California, Montana, and Washington State. Those incentives include sign-on bonuses ranging from \$5,000 to \$15,000 depending upon locality, adjustments to total compensation, and enhanced relocation benefits. In total we are currently offering hiring incentives in 22 states, including city-specific incentives tailored to local hiring circumstances. Attached hereto as Exhibit A is a list of all the hiring incentives BNSF currently has on offer for TY&E, Engineering, Mechanical, and Intermodal Equipment Operator new hires. We continue to monitor the efficacy of these incentives and have increased many offers in recent weeks to attract more candidates.

We have also increased our recruiting and job sourcing activity across our system, creating new levels of engagement with local schools, colleges and military communities. We continue to evolve our culture and our employee experience to make BNSF a workplace that employees want to come to and stay at, and where employees have equal opportunities to achieve their full potential. We also know that some railroad jobs can be challenging ones with non-traditional schedules that involve significant time away from home, particularly for our train crews. Where we have options to mitigate that, we are committed to making those changes. BNSF has been able to negotiate and implement work/rest agreements with several of our unions in recent years, and is actively working towards additional agreements that increase schedule consistency and home rest periods.

We know this has been and will continue to be a challenging year for our railroad and all of our employees. We are committed to improving, which means working on every effort to get new employees on the ground and keep existing employees in their jobs and to safely serve our customers' needs.

iv. Targeted Recovery Efforts for the Southern Transcon

As mentioned above, the western end of our Southern Transcon, including the Needles subdivision, is currently the most challenged location on BNSF's network and is the focus of a number of initiatives that we will detail below. While we are pursuing all these measures in the Southern Region to drive service improvements, these types of actions are part of our playbook that may also be used on other parts of our network to respond to more isolated service interruptions.

Since crew availability is a core issue, BNSF has instituted crew staffing initiatives in the Southern California, including:

- Focused Allocation of New Hires and Transfer Incentives: BNSF has an extensive hiring effort across our network with specific actions to recruit new hires for the Southern California region. For our particularly challenged Needles subdivision, we have increased our TY&E headcount from 373 in January to 417 now through a combination of allocating recent training graduates and securing temporary transfers of existing crew members from other parts of our network. More than half of those transferred employees have already been qualified for active service on the Needles subdivision. These transfers are voluntary given our labor agreements and BNSF has put monetary and other incentives in place to support this program. Working with our employees to secure these temporary transfers allows BNSF to improve our service in the short term, while our hiring pipeline catches up over the remainder of the year and ultimately allows those employees to return to work at their home terminals.
- Vacation Buybacks: As discussed above, we face additional headwinds as our crews take contractually prescribed vacation time during the summer months, with the peak period coming the week of the July 4th holiday. BNSF has extended financial offers around the network for voluntary vacation buybacks with a focus on employees at the terminals and facilities on the Southern Transcon in general and most particularly the Needles Subdivision. We have seen strong positive reaction to these offers, demonstrating again that BNSF's incredibly hard working employees want to be part of the effort to restore our service performance for our customers.

BNSF has undertaken the following additional initiatives specific to the Southern California recovery effort:

- Trip Plan Adjustments: Our service design team has made trip plan adjustments to through trains to either bypass the Needles subdivision and other challenged territories or reduce the number of work events taking place in those areas.

- Locomotive Allocations: As described above, when locomotives are released from repair facilities around the network, they have been pointed to areas of highest need, including the Needles subdivision and terminals on the Southern Transcon. For instance, the additional 75 locomotives that are currently being delivered to us will be directed toward Southern California. We have also reviewed locomotive placements within consists as well as strategic pre-positioning opportunities for high need areas given changing volume expectations and terrain characteristics.
- Addressing Chicago Hub Capacity to Alleviate Port and Hub Congestion in Southern California: Because our Southern Transcon between Southern California and Chicago is our core intermodal artery, congestion issues at our intermodal facilities in Chicago, particularly our LPC facility, continue to create significant upstream congestion at our Southern California intermodal hubs. As described above, we continue to see a significant number of trains queue for intermodal service in our LPC facility because shippers are not pulling containers fast enough to allow BNSF to ground new containers. These conditions are driven primarily by an ongoing chassis shortage that BNSF is extremely limited in its ability to influence; BNSF does not control the supply of chassis at our intermodal facilities, which is instead managed by third parties.² We are forced to stage trains at various places across our network as they wait for landing capacity to become available at LPC, including in areas that are jointly used in Southern California to support business utilizing our Southern Transcon lines. For example, at the start of this week there were 28 trains waiting across the Southern Transcon for arrival slots at our Chicago intermodal facilities. To address these issues and ensure we can maintain production at LPC, we are working with San Pedro Bay port terminals on slot allocations to better ensure volume is loaded to LPC to match the truck/chassis capacity to outgate units, and over the next two weeks will begin limiting the total number of intermodal trains originating from California facilities and destined to LPC. We have taken steps to improve and expand our offsite container capabilities to allow us to process more trains at LPC. We also recently added a new position at LPC to improve our interface with customers and truck drivers to facilitate more efficiency.
- Temporary Limited California Permit Embargo: On June 23, BNSF announced a limited permit embargo of shipments of certain commodities moving westbound to destinations in California. This embargo is designed to meter westbound volumes moving across our Needles subdivision in light of recent service interruptions and ensure that our service in Southern California does not degrade over the 4th of July holiday when our crew availability has traditionally been substantially decreased. The embargo applies to shipments from origins in states located along our Southern Transcon (TX, AZ, NM, OK, LA, AR, AL, TN, MO, MS, KS, IL, IA, and NE). During the first week of implementation, permits will be used to ensure sufficient westbound shipments destined for California of animal feed as well as critical energy, public water and military supply; we continue to monitor the pipeline for flows of those public welfare commodities, including the current high level of carloads already in the pipeline that will not be impacted by the embargo.³

² See Peter Tirschwell, *No short-term fix seen for US chassis shortage*, Journal of Commerce, June 22, 2019 (https://www.joc.com/international-logistics/no-short-term-fix-seen-us-chassis-shortage_20220622.html)

³ See June 13 Decision at footnote 12.

After the first week of the embargo, which includes the July 4th holiday, BNSF anticipates implementing exemptions to the embargo for the public welfare commodities identified above along with other similar commodities. Like the Board, BNSF is aware of the impact that our service issues can have on commodities that are more essential to the public welfare, and our approach to this embargo reflects that sensitivity. This embargo is scheduled to be in place until July 31, 2022, but we will be monitoring developments on an ongoing basis in case it becomes necessary to extend it or possible to terminate it early. While the embargo is in place, customers with commodities not covered by the exemptions can submit requests for permits for shipments a week in advance via a form on our website. Conscious of the short-term impact that this embargo would have on our impacted customers and desiring to give them as much advance notice as possible to plan their own operations, BNSF is reaching out to shippers individually as well as providing detailed communications on our broader customer communications platforms a week in advance of the embargo taking effect.

c. Customer Communications and Support Resources

The June 13 Decision requested information concerning BNSF's customer service efforts, including our provision of timely responses to customer inquiries about delays in meeting expected ETAs, and the hiring of any additional customer service representatives who are familiar with shipper needs and have the ability to resolve issues. As BNSF's Executive Vice President and Chief Marketing Officer Stevan Bobb shared at the Hearing, BNSF's communications goal is to ensure that all of our customers have the timely and accurate information they need about their rail service to make informed decisions for their businesses. As described below, we maintain a robust, multi-layered communications pipeline with our customers to help us achieve this goal. We have always believed that we should be as transparent as possible with our customers, and we understand that is never more important than at times like now when our service is not meeting their expectations.

Every week, we distribute Network Updates via email containing an overview of our performance for the prior week and our service expectations for the week ahead. These updates include relevant information, when applicable, specific to our Agriculture, Automotive, Coal, Industrial Products and Intermodal service. We had previously only provided those updates every two weeks but increased the cadence to every week during our service recovery effort. Every other week, these updates contain several of the KPIs included in our SRP and compare our performance to the prior week and the prior month. In addition to these updates, which are catalogued on our website, we communicate in real-time with customers concerning notable other issues on our network via email, providing specific information on that issue, the areas it affects, and our plans and expectations for resolution.

In addition to this information about our network, our customers can access specific information about their shipments, including progress against expected ETAs, on a 24/7-basis through the myriad of tools on our online Customer Portal. Those tools include:

- Track my Train, which allows customers to track the trains on which their shipments are moving across our network;

- Geofence Notifications that inform our customers on a car-specific basis when their shipments pass into geographic boundaries that have been set by the customer;
- Local Service Notifications are generated every day once the daily plan for local service in an area has been established, and those are sent to subscribing customers within an hour of the local crew going on duty;
- Railcar Management Tool allows our customers to view and manage all cars that are either at or inbound to that customer's facility, with real time status updates as cars are released; and
- Message Us, a tool that gives our carload customers a real time interface to escalate issues within BNSF and see a record of any requests they have previously made.

This information sharing is supplemented by the direct personal interactions people across BNSF have with our customers every single day, including engagement by BNSF's senior leaders. For example, on April 14 BNSF held its annual Agricultural Products Summit, and on June 9, its annual Supply Chain Summit for our intermodal customers. Between those two events, members of BNSF's Executive team directly updated more than 380 shipper attendees on the status of our service recovery efforts. Additionally, on May 4-5, BNSF hosted one of our two annual Customer Advisory Board meetings, which serve as a forum for dialogue, including service recovery discussions, between a small group of BNSF customers representing the various markets we serve and our senior leaders. Representatives from our Agricultural Marketing team also hosted three separate reception events with our Agricultural customers in Minneapolis, Fargo, and Amarillo last week, where over 100 customers were able to ask questions and get up to date information on BNSF's service recovery efforts. We are conducting similar additional events with our Agricultural customers in Wellington, KS and Whitefish, MT in the coming week and expect an additional 90 customers to attend those sessions. Our customers also develop close working relationships not just with their Marketing representatives, but with their local operations teams and our Customer Service group.

BNSF's Customer Service team is currently comprised of 80 employees organized into teams dedicated to supporting our carload customers, intermodal and automotive customers, trans-border customers, and dimensional customers, as well as a separate e-business team assisting our customers with issues regarding our Customer Tools and other technology related topics. BNSF's Customer Service team is available on a 24/7 basis, and the average wait time to speak with a live BNSF employee on the telephone is 80 seconds or less. On June 1 of this year, we also implemented a new call center technology where a customer can choose to hold their place in line and receive a call back at a later time. We have increased the size of our Customer Service team by 5% since the beginning of 2022, and while we do not currently have plans to add additional Customer Service employees this year, we will be prepared to quickly adjust that plan if the need arises.

d. Service Design Perspective

The Board's June 13 decision requested that the railroads discuss their service recovery plans in the context of their broader approach to service design. BNSF's overarching service

design philosophy is to create a service product that consistently meets our customers' expectations while simultaneously positioning BNSF and our customers to grow. Over the past 25 years, BNSF's volumes have grown significantly as a result of our growth strategy, outpacing the industry. That success comes not just from growing volume from our existing customers, but also from having service products that can successfully compete in new markets and bring new business and customers to BNSF. One of the most important things we plan for as a company is having the right resources in the right place at the right time, and our service design process takes that as its central goal.

One of the key ways we support growth is through our capital investments. We work hard to understand our customers' current needs as well as their future growth plans to ensure we have the resources in place to participate in that growth. In 2022, we will spend \$3.55 billion on capital. The largest component, \$2.71 billion, is devoted to maintaining BNSF's railroad infrastructure in top condition. That includes resurfacing or undercutting over 14,000 miles of track and replacing more than 381 miles of track throughout our network. We also leverage technological advances to identify, plan, and execute those maintenance programs. Those investments have made BNSF a leader in reducing rail equipment incidents, resulting in a new record low in 2021 and fewer unscheduled service outages for our customers. We will spend \$259 million for freight cars and other equipment acquisitions based on demand profiles of our customers in our various business units.

In 2022, BNSF will also invest \$580 million on capacity expansion and efficiency projects. As examples, in North Texas, we will complete an approximately four-mile section of new double-track in north Fort Worth. This is the initial phase of a multi-year effort to add double-track segments between Fort Worth and Temple, Texas. On the Southern Transcon, we are beginning a multi-year project to add a third main track between Needles and Goffs, in California, to increase efficiency and capacity. Also, on the Southern Transcon, we are adding double track in Emporia as part of a multi-year effort to add several segments of new double-track in eastern Kansas between Wellington and Emporia. Because of the importance of this project we pulled some of our multi-year spend forward into 2022, and approximately 35 more miles of second mainline track will be placed into service by the end of the year. In the Pacific Northwest, we continue construction of a second mainline bridge span across Lake Pend Oreille at Sandpoint, Idaho. Not only do we continue to invest in physical infrastructure, but also in technology to improve processes and maximize use of our capacity while providing a more reliable and transparent service product to the marketplace.

Our service design philosophy is to invest in and run our railroad to grow our existing customers' business on BNSF and attract new customers that are currently served by other railroads or other modes. Our track record of industry-leading volume growth is a result of strategy.

e. Fuel Conservation and Locomotive Allocation Practices

The June 13 Decision requested that BNSF elaborate on the discussion of our fuel conservation program and locomotive utilization practices contained in our SRP, and our views on how those practices may or may not impact service recovery efforts.

With respect to our fuel conservation program, the Board is correct that we do not intend to systematically suspend our throttle limits as a part of the service recovery plan we have outlined. It is important to note, though, that our throttle restrictions are not velocity restrictions. Our throttle restrictions merely limit the maximum throttle setting that should be used once a train has reached a specified minimum speed. Trains often reach maximum authorized track speed when throttle limits are in place and run below maximum authorized track speed when throttle limits are not in place.

We collect extensive data regarding our fuel conservation program and there has not proven to be a meaningful correlation between throttle limits and velocity performance at a system level. This is because velocity is affected by a variety of factors, including, as the Board's June 13 decision acknowledges, the ability of our terminals to receive and depart trains. Under current operating conditions, removing throttle limits to gain velocity between terminals that remain overly congested, as they are on many parts of our network today, would be counterproductive for our customers from a service perspective while eliminating the positive environmental outcomes those limits produce. Such an approach is akin to drivers speeding ahead after a green light only to end up sitting with the same group of cars at the next red light.

Even when our network is running smoothly, there are not compelling reasons to prioritize running every train at maximum authorized track speed as often as possible. To do so, we would inefficiently consume fuel and increase equipment wear, increasing the likelihood of breakdowns and thus affecting service as well as undermining our sustainability efforts. Further, many trains legally cannot run at maximum authorized track speed. For instance, trains carrying certain hazardous materials are subject to speed restrictions. Running trains as fast as possible up to the point where they are stuck behind a key train or high hazard flammable train would harm network fluidity while providing no benefit to our customers.

Accordingly, BNSF has no plans to systematically suspend all throttle restrictions as part of this plan. Nevertheless, we do review the results of our fuel conservation efforts on an ongoing basis and make tailored, regional adjustments for a variety of reasons, including as a response to high relief crew rates in a particular territory. We will continue to follow that practice and make targeted changes to our throttle restrictions when circumstances indicate such changes would be beneficial to our service recovery.⁴

The June 13 Decision also requests BNSF's view on whether adding extra locomotives to trains would allow us to maintain velocity by having backup power in place should the main locomotives break down en route. BNSF's locomotive maintenance program is designed to ensure that our locomotives perform without degradation while en route. We have dedicated staff in our

⁴ For clarity in response to Footnote 17 of the June 13 Decision, BNSF is not prioritizing sustainability goals over near-term service improvements for customers or business objectives such as volume growth.

Network Operations Center and in numerous field locations to respond to and address mechanical failures. When a locomotive is incapable of repair in the field, we have locomotive sources to pull from around the network and a process to cut out units online to avoid mainline service interruptions caused by mechanical failures. Adding additional, intentionally underutilized, unreliable locomotives to the fleet to provide backup power would unsustainably take inspection and maintenance resources away from the locomotives needed to run trains. We have over 1,000 trains running across our network at any given time and could not power our trains with locomotives assuming failure. We would not expect to retain our customers and remain truck competitive in our markets if we did so.

f. Supplemental KPI Information

In BNSF's May 20 SRP, we outlined the five Key Performance Indicators ("KPIs") that we are using to measure the effectiveness of our service recovery actions, as well as keep customers informed about the current performance of our network. In compliance with the Board's June 13 Decision, BNSF provides the following supplemental information, including the reasons why BNSF chose each KPI and how the specific remedial actions we intend to take will translate into enhanced performance.

The Board has also requested that BNSF further explain our statement that our KPI targets reflect prior periods when we were providing service at levels our customers are accustomed to from BNSF. Our KPI targets were largely determined by reference to our service levels from the time period from 2019 through today, with an emphasis on our service levels in 2019 since that was the last year we operated our network before the impacts of the global pandemic and there were relatively few major shifts in our traffic mix during that year. It is important to note, however, that while such reference points can be a useful benchmark for recovery over relatively shorter-term periods, BNSF's efforts to improve our service performance over the longer term are constantly evolving to reflect changing traffic mix and growth patterns driven by market demand. As such, our 2019 service levels are a helpful reference for our current recovery efforts but may be less relevant as conditions change going forward.

Finally, the Board's June 13 Decision requested that carriers provide 36-month historical views of each KPI on a weekly basis. While the charts of 36-month historical KPI data that BNSF included in our June 3 progress update were displayed on a monthly view due to space constraints, the data we separately submitted in machine readable form was broken down on a weekly basis.⁵

i. Train Velocity

BNSF measures train velocity as the average speed calculated by dividing train-miles by total hours operated and is expressed in miles per hour, excluding yard and local trains, passenger trains, maintenance of way trains, and terminal time. Train velocity indicates the speed at which trains are traversing our network in line-haul service and reflects the effect of intermediate dwell events such as train meets and the expiration of crew hours of service. BNSF includes velocity metrics in almost every service update we provide our customers, including well before the current service issues. We also included Velocity/Train Speed as a key metric in our conversations with the STB during our 2014 service recovery efforts.

⁵ See Status Report of BNSF Railway Company, Ex Parte No. 770 (sub nom 1) (Filing ID 304690) (June 3, 2022).

In the short term, we will drive improvements in this KPI primarily through reductions to our active car inventory. We expect that our limited permit embargo in California and intermodal slotting measures will also contribute to velocity gains. As detailed above, we have seen the positive correlation between the reduction in inventory since early April and the increase in velocity at a system level. We have already seen our system velocity increase from our baseline of 24.4 to 25 MPH. Both the baseline and current velocity are already well above the velocity BNSF was maintaining when we were experiencing service difficulty in 2014. In the medium and longer terms, when our system recovers then we expect velocity to remain high even with higher car inventories.

ii. Terminal Dwell

Terminal dwell is the time a car spends at a terminal location expressed in hours, beginning with a customer release, received interchange, or train arrival event and ending with customer placement (actual or constructive), delivery or offer in interchange, or train departure event. Terminal dwell indicates how long it takes cars to be processed through a terminal as it traverses our network and is a key factor in overall transit time for manifest traffic. Terminal Dwell is a metric that we routinely build into our customer communications, especially when we are experiencing service issues. We also included Terminal Dwell Hours in our 2014 service submissions to the STB.

We will most directly drive improvements in this KPI through increasing our available train crews and locomotive power, which will help reduce terminal dwell by facilitating faster classification and train building within our terminals, as well as shortening the time trains are held for departure. Additionally, by working with our customers to temporarily reduce our car inventory, we will get unproductive cars out of our yards, which will reduce the number of car handlings and allow volume to move through terminals quicker.

iii. Average Trains Holding

Average trains holding is a daily same-time snapshot of trains held on our network short of destination or interchange, averaged each week. Trains holding can reflect our success in aligning crews and locomotives to volumes—although trains are also held for reasons unrelated to crew or power availability. While this is a metric that we included in our Hearing testimony and our customer communications, we continue to note that it is an imperfect metric because it captures trains held at a point on BNSF’s network for numerous reasons entirely separate from railroad performance, including trains that are held as part of their routine operating plan, informed by the needs of shippers, receivers and/or connecting carriers, or for weather events.

We will drive improvements in this KPI through the implementation of our hiring plan and our ongoing effort to keep locomotives in service with a minimum of downtime. Additionally, reducing our active car inventory will drive improvements here by freeing up our locomotive and crew resources for trains moving freight, resulting in overall increased productivity, which is reflected in this metric.

iv. On Time Performance

Pursuant to the Board’s May 5 decision in this proceeding, BNSF included an overall On Time Performance (“OTP”) as a KPI in our plan. Our overall OTP KPI measures the percentage

of individual units (i.e., cars in both manifest and unit service, intermodal units, and individual Vehicle Identification Numbers) that are constructively or actually placed at destination within 24 hours of the original estimated time of arrival. This captured each category of traffic the Board included in its OTP metric definition.

We will drive improvements in this KPI by more consistently operating the service trip plans on individual units, which will result from ongoing terminal dwell improvement, increased availability of train crews, and locomotive utilization efforts. Collaboratively working with our customers to temporarily reduce rail car inventory will also allow more service consistency and improved performance.

The Board’s June 13 decision directed BNSF to also identify six-month OTP targets broken down between the specific categories listed in item 7 of the Board’s May 5 decision (i.e., manifest, intermodal, and unit train types, with unit trains broken down by grain, coal, auto, crude and ethanol). Consistent with the Board’s May 5 decision, BNSF has been reporting data for each of these specific categories in its weekly filings in this docket, and the chart below identifies six-month targets for each of the categories. Also, attached as Exhibit B are charts reflecting 36 months of historical data for those same categories, which BNSF will also file in machine readable format along with this Supplemental Service Recovery Plan.

	Baseline (March 4, 2022)	Current (June 17, 2022)	Progress Against Baseline	Target
Intermodal	66.9%	61.3%	-5.6pp	70.0%
Coal Unit	66.6%	71.3%	+4.7pp	75.0%
Merchandise	46.9%	59%	+12.1pp	63.0%
Grain Unit	62.7%	62.8%	+0.1pp	75.0%
Crude Unit	46.1%	58.2%	+12.1pp	70.0%
Auto Unit	52.0%	59.9%	+7.9pp	63.0%
Ethanol Unit	18.0%	25.7%	+7.7pp	50.0%

v. Local Service Performance

Local service performance is BNSF’s formulation of the First Mile/Last Mile (“FMLM”) measure the Board required in its May 5 decision. Our local service performance metric is the aggregate of each of our customer’s individual service metric, which measures our compliance with each customer’s base service plan and takes into account the days of service the customer receives; the times by which a car must be ordered or released to make same-day service; and the processing time BNSF allots to complete its work with respect to a specific car. For purposes of the industry service metric, and by extension the local service performance metric, a “win” is a car pulled or spotted in accordance with the customer’s base service plan and the metric measures the

“wins” over the total number of cars pulled or spotted at the customer’s facility, essentially similar to the Board’s definition of the FMLM metric set forth in its order in this proceeding.

Local service performance is an important measure of whether we are meeting our commitment to our customers, and BNSF already provides customers with their individual industry service metric and publishes our local service performance metric on a bi-weekly basis. The actions we’ve described that will improve terminal fluidity will help to drive improvements in this KPI as well.

g. Expected Employee Needs

The Board’s June 13 Decision directs BNSF to specify our anticipated workforce needs and identify how many people in total BNSF expects to have employed in six months and one year. As we shared at the Hearing, a critical part of our ability to meet our customers’ service expectations is having the ability to flex our employee resources up and down with volume. We never want to be in a position where we don’t have enough employees to support the volume and growth that our customers bring to us. We are also mindful that we can’t bring new employees on with the flip of a switch, especially given the training times associated with many operations roles. For that reason, we work hard to have the right number of people resources in place to meet current and future demand.

In order to do properly staff our railroad, we consider a number of factors. On a station level, we look at our current employee levels and consider historic employment trends, including attrition rates, furlough recall rates and expected retirements. We consider our operations trends like crew starts in geographical areas. We also look at the customer and commodity forecasts across our network. We use all of this data to forecast the number of employees we will need to have in each of our locations. When volume forecasts play out as expected, our network remains fluid and we meet our customers’ expectations.

When we see unexpected changes in those volume forecasts, we experience impacts to our people resource planning. The result of unexpected surges in volume relative to manpower have been well documented in this proceeding; however, there are also substantial downsides to over hiring. When this occurs, the process of reducing force levels to align with volumes through furloughs is painful for the furloughed employees. There is a real cost to our employees and their families to be hired and trained only to be told there is no longer a job waiting for them. Additionally, being overstaffed results in fewer starts per train crewmember, which can affect the earning ability of employees—this is a concern that labor representatives frequently express when working with BNSF to determine appropriate crew pool sizes under our agreements. For these reasons, BNSF works hard to align our labor force levels to our customers’ expected demand.

Historically, we have seen very even trends around employment, with fairly static, reliable levels of retention, retirement and, for our furloughed forces, recall rates. We incorporated those trends when we did our workforce planning for 2021 and 2022. As we all now recognize, those historic assumptions have proven wrong. In the last two years, we have seen significant, unexpected shifts in customer demand, at the same time that the pandemic spurred a radical restructuring of labor markets for all industries, including the railroad industry. While BNSF includes a buffer in the resource planning processes, particularly for upside customer demand, the accelerated demand experienced beginning in 2021 outpaced our ability to quickly flex up

resources to handle the demand surge, which also came at a time when we experienced higher than average attrition in our workforce.

BNSF wants to assure the Board that we recognize that the historic patterns BNSF and other companies have relied on for so many years in our planning processes are likely no longer realistic. We continue to monitor the current employment trends and our future service design and workforce planning processes will reflect the new employment realities that exist for our industry. At this time, BNSF still intends to follow our plan to hire 3,000 new employees in 2022 and, as directed by the Board’s June 13 Decision, the chart below identifies the number of employees BNSF anticipates it will need, and expects to have employed at the six-month and one-year marks following our March 4, 2022 baseline. As explained above, we expect our overall employee count will generally be flat throughout the remainder of 2022, although BNSF will continue to monitor multiple factors including market demand shifts, network performance and the effects of the macro economy on employee attrition rates. Notably, when compared to our employee counts as of January 2022, the anticipated employee figures in the chart below represent an approximately 5%-6% increase to our overall employee count and a 7%-8% increase to our collective TY&E, MOW & Structures, and Maintenance of Equipment & Stores employee count.⁶

	Expected Employees Six-Months (September 4, 2022)	Expected Employees One Year (March 4, 2023)
TY&E	15,000	15,200
MOW & Structures	8,000	7,800
Maintenance of Equipment & Stores	6,300	6,400
Customer Service	80	80
All Other	6,200	6,300
Total	35,580	35,780

The June 16 Decision also directs railroads to include six-month and one-year projections of the number of extra board employees who will be available to cover for regular employees. At BNSF, the size of specific crew pools and extra boards are determined pursuant to our collective bargaining agreements based on mileage accrued on given territories over a given period. Because of the dynamic nature of this process, BNSF cannot provide an accurate projection of how extra boards will be sized at those time intervals. However, depending on the territory, the relevant agreement and the mileage accrued, we anticipate running extra boards at levels between 15% - 25% of our regular employees.

⁶ The decrease in the anticipated MOW & Structures employee count between the six-month and one-year targets reflects seasonal differences in our maintenance and construction activity.

As also directed by the Board's June 13 Decision, we have attached as Exhibit C data regarding the daily average number of TY&E employees not available for service from March 1 through June 16 and the average causes for such unavailability across that same time period. We do not currently track similar availability data for non-TY&E employees. Further, the expected headcount figures contained in Exhibit C are calculated using assumptions regarding employee availability; thus, as availability trends may adjust over time, the total number of employees we would expect to need in the future might change.

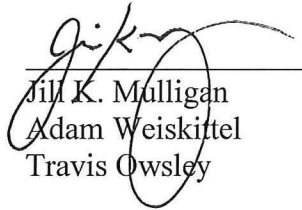
The hiring plan and employment projections BNSF has included in this Supplemental SRP are, of course, subject to adjustment in the coming months due to changing market conditions. There is significant uncertainty as to what direction the American economy will take at the moment. Perhaps nothing better signifies this uncertainty than the Federal Reserve's recent decision to combat rising inflation by implementing the largest increase to its benchmark short-term interest rate in nearly 30 years. BNSF appreciates that the Board's June 13 Decision acknowledges that changing circumstances can substantially impact the projections BNSF has set forth herein.

IV. Conclusion

As noted at the outset of this Supplemental Service Recovery Plan, BNSF has seen our service improve overall but in an uneven manner across the particular segments of our network. As one of the largest freight railroads in the world—and the largest intermodal carrier in the world—we strive to provide the best service possible but also recognize that the service we provide is heavily dependent upon many factors outside of our control and cannot solely be judged in a vacuum at any moment in time. We know from our history that focusing every day on improving those factors within our control sets us on the path towards service recovery. We measure our progress not just on granular KPI targets but on how well we are fulfilling our larger role in the markets in which our customers participate. As such, for example, it is equally important to us that we meet our six-month KPI targets as it is that we move as much harvest production as American farmers need, or move enough coal to help meet the energy needs of American businesses and homeowners over the hot summer months. We remain incredibly proud of the hard working men and women of BNSF who remain committed to returning our service to the levels that our customers expect and need.

It is our intent that this Supplemental Service Recovery Plan reflects the overall positive momentum we are creating while acknowledging the most significant challenges that still remain. We will continue to keep the Board fully informed of our recovery progress through our various filings in this docket and our bi-weekly calls with Board staff.

Respectfully submitted,



Jill K. Mulligan
Adam Weiskittel
Travis Owsley

BNSF Railway Company
2500 Lou Menk Drive, AOB-3
Fort Worth, Texas 76131
(817) 352-2353
jill.mulligan@bnsf.com

Counsel for BNSF Railway Company

Dated: June 23,2022

EXHIBIT A

BNSF New Hire Signing Bonuses as of June 23, 2022

- For all departments, 50% of the signing bonus is payable at four months with the remainder payable at ten months.

TY&E Signing Bonuses by City					
Birmingham	AL	\$7,500	McCook	NE	\$7,500
Phoenix	AZ	\$7,500	Belen	NM	\$7,500
Vancouver (CANADA)	BC	\$10,000	Clovis	NM	\$7,500
Bakersfield	CA	\$10,000	Enid	OK	\$5,000
Needles	CA	\$10,000	Madill	OK	\$10,000
Richmond	CA	\$10,000	Tulsa	OK	\$5,000
Stockton	CA	\$10,000	Klamath Falls	OR	\$5,000
All Other Locations	CA	\$5,000	Aberdeen	SD	\$10,000
Denver	CO	\$10,000	Edgemont	SD	\$5,000
La Junta	CO	\$5,000	Memphis	TN	\$5,000
Creston	IA	\$10,000	Amarillo	TX	\$7,500
Ft. Madison	IA	\$5,000	Beaumont	TX	\$10,000
Sioux City	IA	\$10,000	Galveston	TX	\$7,500
All Locations	IL	\$5,000	Houston	TX	\$10,000
Arkansas City	KS	\$10,000	Slaton	TX	\$10,000
Kansas City	KS	\$7,500	Temple	TX	\$5,000
Dilworth	MN	\$7,500	Wichita Falls	TX	\$5,000
Northtown	MN	\$5,000	Everett	WA	\$15,000
Willmar	MN	\$10,000	Interbay	WA	\$15,000
Chaffee	MO	\$5,000	Tacoma	WA	\$15,000
Thayer	MO	\$7,500	Vancouver	WA	\$15,000
Havre	MT	\$10,000	All Other Locations	WA	\$7,500
Whitefish	MT	\$10,000	Lacrosse	WI	\$7,500
All Other Locations	MT	\$5,000	Superior	WI	\$7,500
Grand Forks	ND	\$7,500	Cheyenne	WY	\$5,000
Minot	ND	\$10,000	Gillette	WY	\$10,000
Alliance	NE	\$10,000	Greybull	WY	\$7,500
Lincoln	NE	\$10,000	Sheridan	WY	\$7,500

Mechanical Signing Bonuses by City			
City	State	Laborer/ Apprentice Amount	Skilled Amount
Barstow	CA	\$7,500	\$10,000
Los Angeles	CA	\$5,000	\$7,500
Richmond	CA	\$5,000	\$7,500
Denver	CO	\$5,000	\$7,500
Chicago (Cicero/ Corwith)	IL	\$10,000	\$12,500
Galesburg	IL	\$7,500	\$10,000
Kansas City	KS	\$5,000	\$7,500
Northtown	MN	\$10,000	\$12,500
Willmar	MN	\$10,000	\$12,500
St. Louis	MO	\$5,000	\$7,500
Havre	MT	\$5,000	\$7,500
Whitefish	MT	\$5,000	\$7,500
Alliance	NE	\$5,000	\$7,500
Havelock	NE	\$5,000	\$7,500
Lincoln	NE	\$10,000	\$12,500
Belen	NM	\$5,000	\$7,500
Clovis	NM	\$10,000	\$12,500
Amarillo	TX	\$5,000	\$7,500
Seattle	WA	\$10,000	\$12,500
Vancouver	WA	\$7,500	\$10,000
Up to \$2,500 relocation reimbursement additionally available at all locations			

Engineering Signing Bonuses by Division	
Division	Amount
California	\$5,000
Montana	\$5,000
Powder River	\$5,000
Twin Cities	\$5,000

Intermodal Equipment Operator Signing Bonuses by City		
City	State	Amount
Cicero	IL	\$5,000
Corwith	IL	\$5,000
Memphis	TN	\$5,000
Seattle	WA	\$10,000

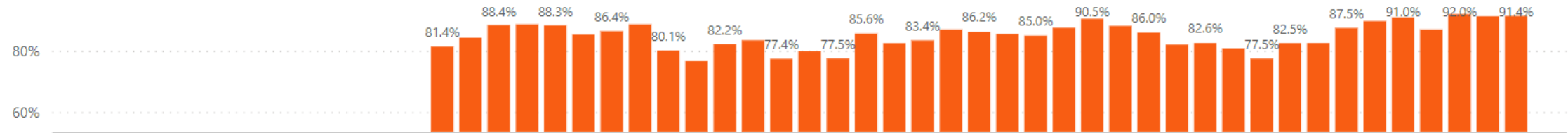
EXHIBIT B-1

OTP History - Intermodal

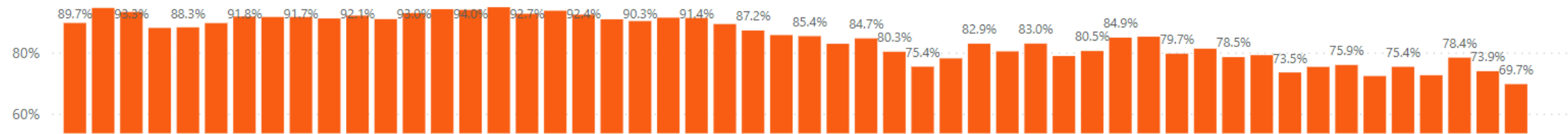


#7 - OTP - Weekly Percentage - IBU

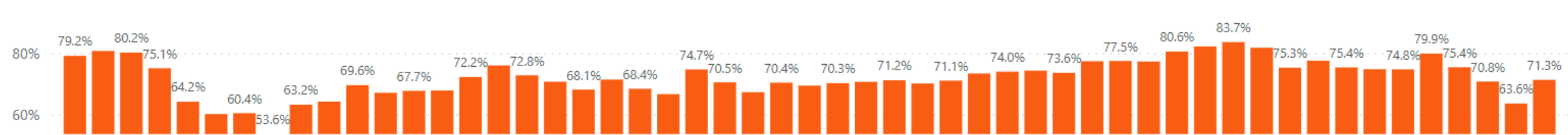
2019



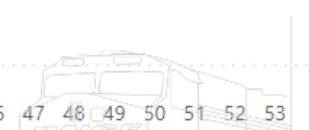
2020



2021



2022

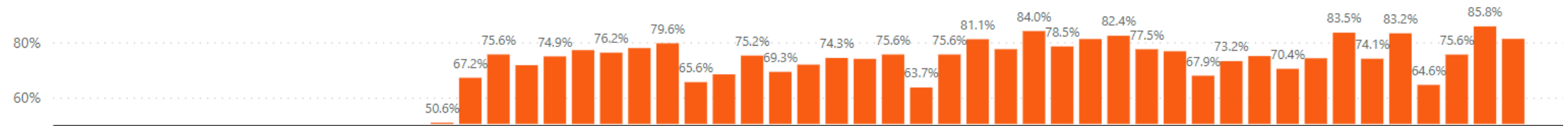


OTP History – Coal Unit

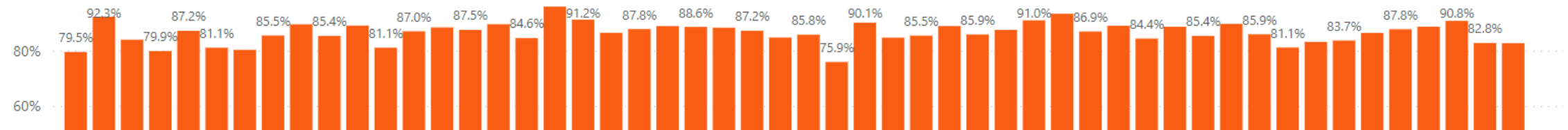


#7 - OTP - Weekly Percentage - COAL UNIT

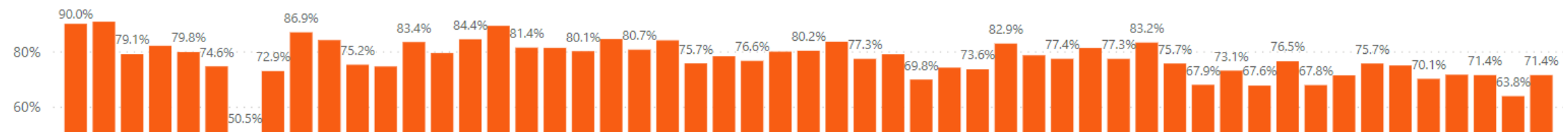
2019



2020



2021

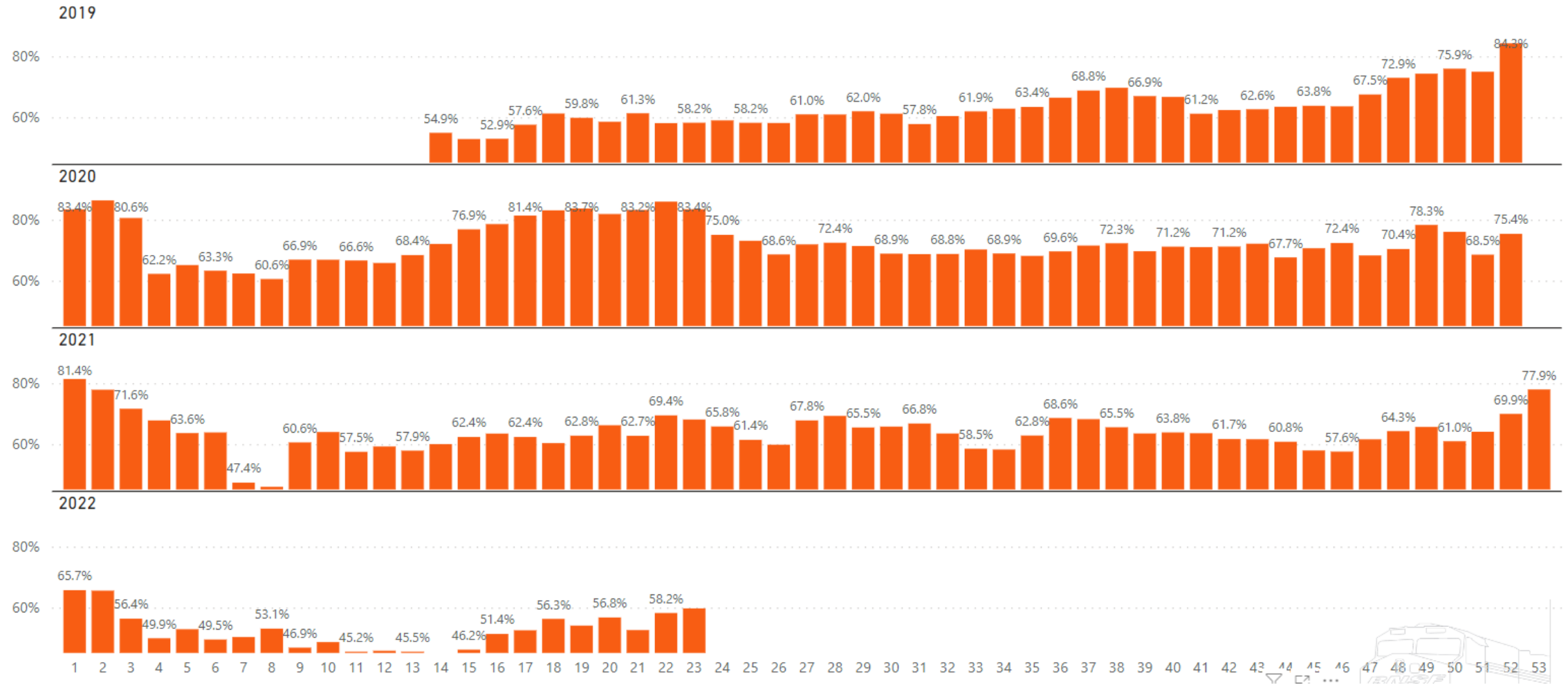


2022



OTP History - Merchandise

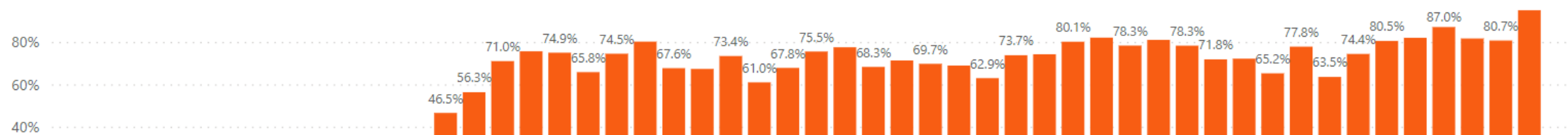
#7 - OTP - Weekly Percentage - MERCH



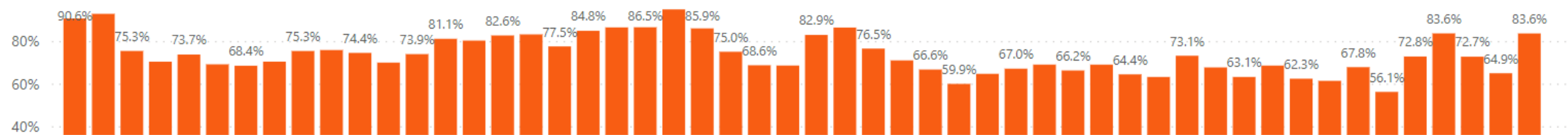
OTP History – Grain Unit

#7 - OTP - Weekly Percentage - GRAIN UNIT

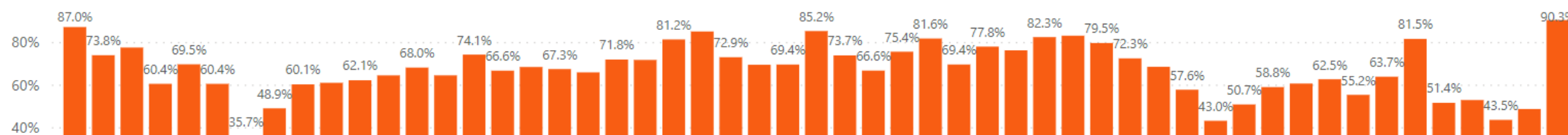
2019



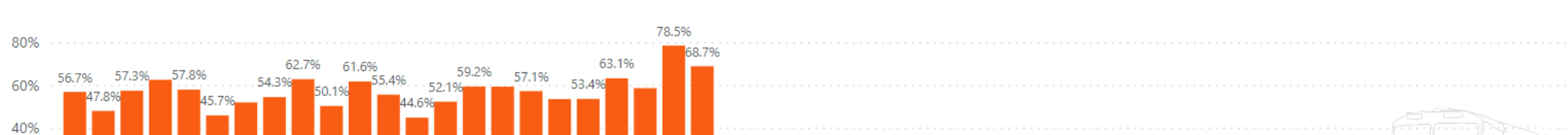
2020



2021



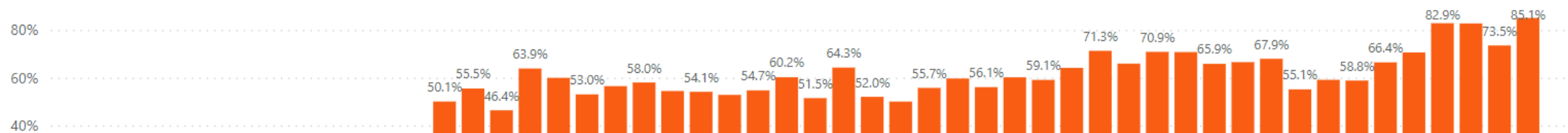
2022



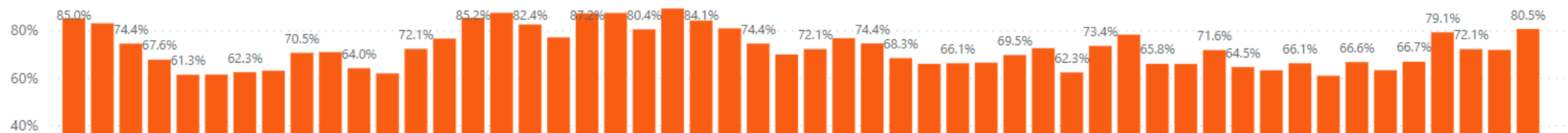
OTP History – Crude Unit

#7 - OTP - Weekly Percentage - CRUDE OIL UNIT

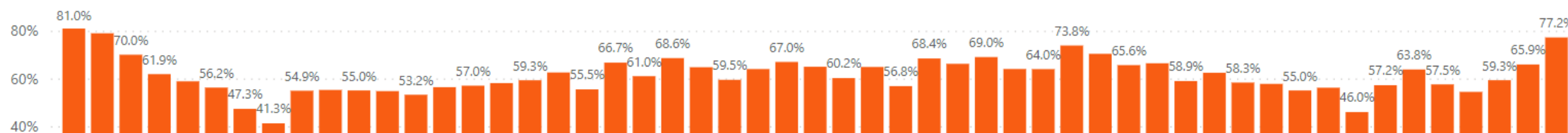
2019



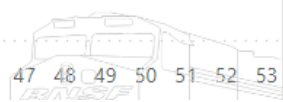
2020



2021

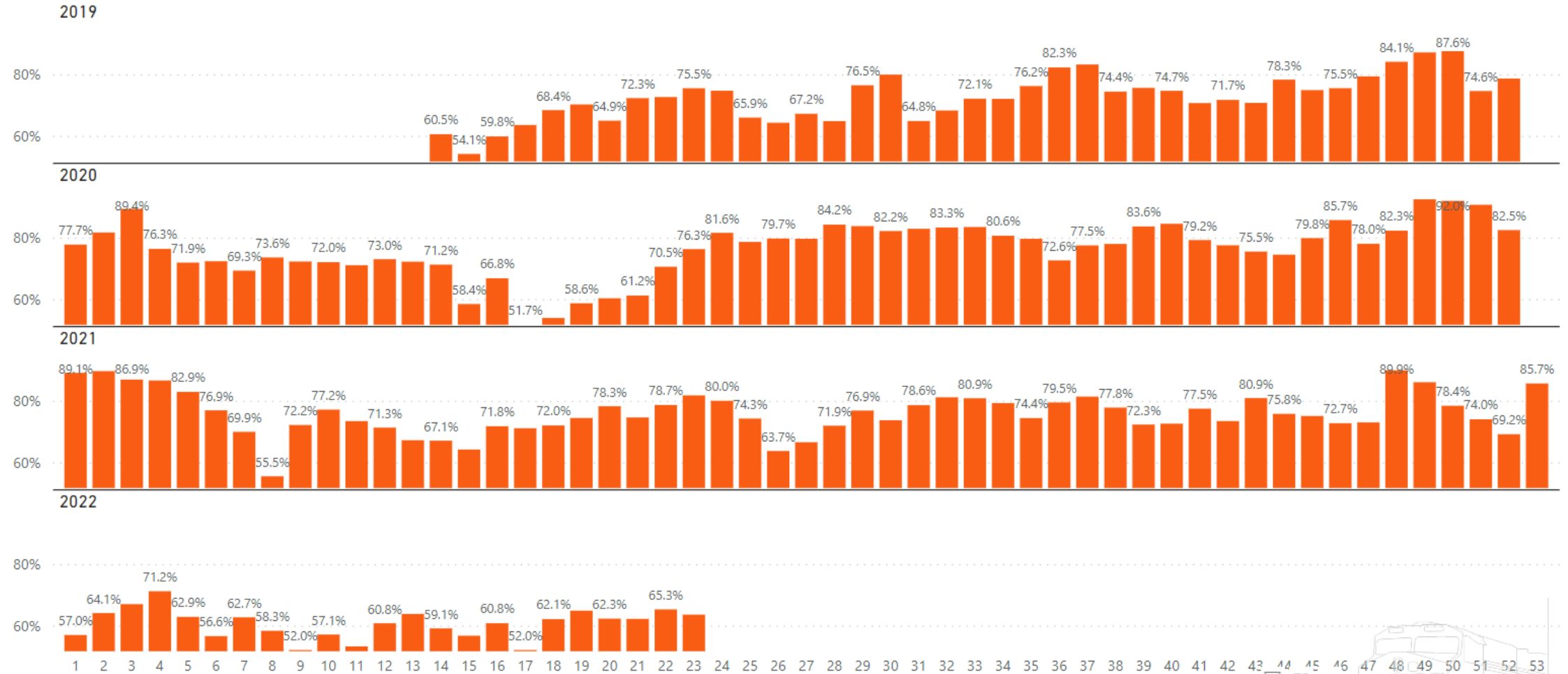


2022



OTP History - Automotive

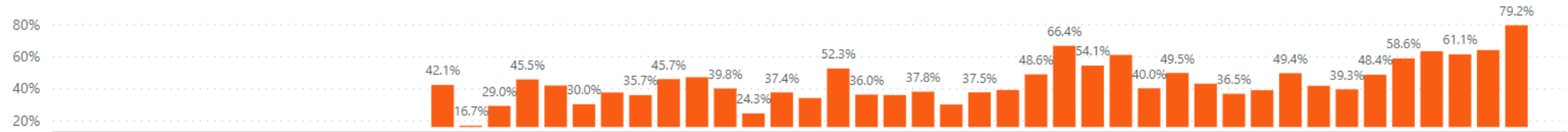
#7 - OTP - Weekly Percentage - AUTOMOTIVE UNIT



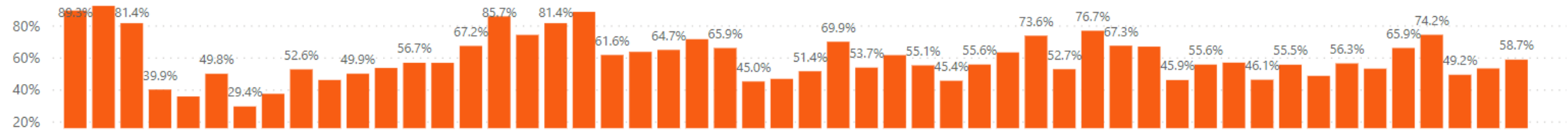
OTP History - Ethanol

#7 - OTP - Weekly Percentage - ETHANOL UNIT

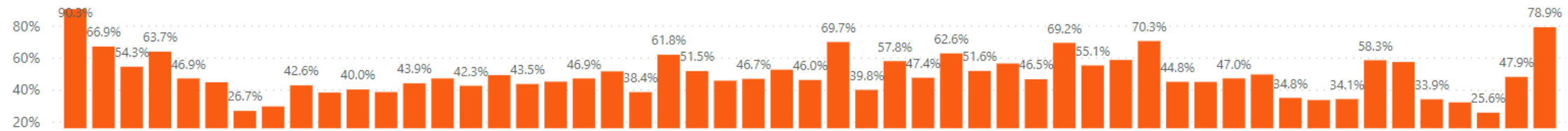
2019



2020



2021



2022



EXHIBIT B-2

[Machine readable data filed as separate attachment]

EXHIBIT C-1

Causes of TY&E Employee Unavailability, March 15–June 16, 2022

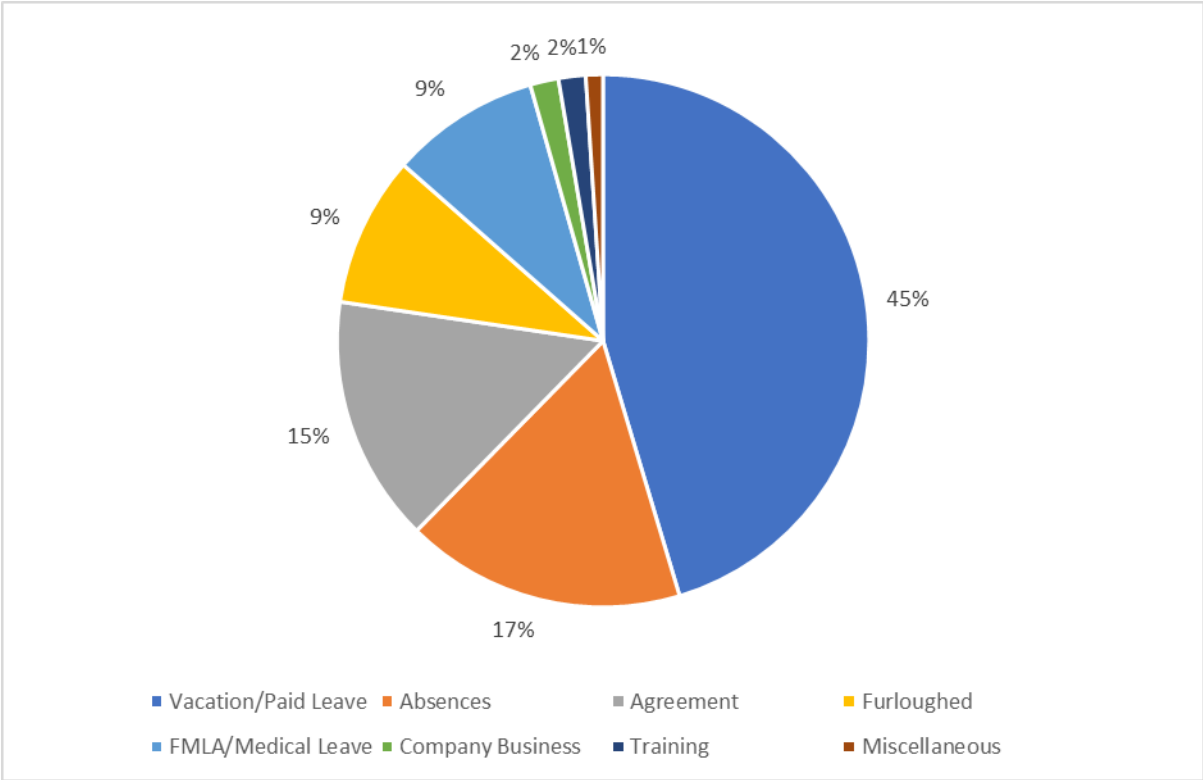


EXHIBIT C-2

[Machine readable data filed as separate attachment]