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CUTTING THE CARBON

Building plans for cleaner air



MEET THE BUSINESS DEVELOPMENT TEAM

Ready to serve our customers

GROWING INDUSTRIAL SPACE DELIVERS SUPPORT

How new capacity is changing the game

FROM THE CEO



As we ring in the new year, it's a good time to reflect on where we are going. Here at The Northwest Seaport Alliance, we are kicking off the year by building upon all the work we put in place in 2017.

I'm grateful to our partners, customers and stakeholders for exploring new opportunities and enduring challenges with us over the past year. While we're proud of our accomplishments, including progress on Pier 4 in Tacoma and Terminal 5 in Seattle, we know our work isn't done.

One of our major goals this year is to continue to increase cargo volumes and the associated jobs while working with our partners to improve air quality in Puget Sound. Through the Northwest Ports Clean Air Strategy, we strive to reduce diesel particulate emissions per ton of cargo by 80 percent, and greenhouse gas emissions per ton of cargo by 15 percent by 2020. While we acknowledge the complexities involved for all parties, we're encouraged to see our progress in the new emissions inventory.

Also in these pages, you'll learn about more than 6 million square feet of warehousing and distribution spaces opening near our two harbors this year and how the growing capacity will add to our business.

We introduce you to Ricardo Charlton, who oversees the maintenance team in our South Harbor. As his team will look after our new super-post-Panamax cranes at Pier 4, his positive energy and breadth of experience in terminal operations will be indispensable.

You'll also meet our dynamic Business Development team with diverse experiences and expertise in containers, breakbulk and intermodal who are ready to assist you in delivering best-in-class service.

As partners of our gateway, we wish you a prosperous year and look forward to new opportunities in 2018.

John Wolfe
Chief Executive Officer, The Northwest Seaport Alliance



On the cover: A Foss Maritime tugboat assists Evergreen Marine Corporation's *Ever Steady* into our South Harbor in Tacoma.

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Peter Steinbrueck

Chief executive officer

John Wolfe

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NEWS BRIEFS



NWSA introduces Commissioner John McCarthy, center, of Port of Tacoma and commissioners Peter Steinbrueck, left, and Ryan Calkins, right, of Port of Seattle.



Crews drove 1,245 piles into the Blair Waterway at Pier 4 as part of the \$250 million terminal improvement project.

NWSA welcomes three new commissioners

The Northwest Seaport Alliance introduced three new faces to the Managing Members in January. For the Port of Seattle's commission, Ryan Calkins and Peter Steinbrueck replaced John Creighton and Tom Albro, respectively. John McCarthy succeeds Connie Bacon on the Port of Tacoma commission. Commissioners Stephanie Bowman, Dick Marzano and Don Meyer were re-elected for the ports of Seattle and Tacoma, respectively.

Last pile driven on reconfigured berth at Tacoma's Husky Terminal

Crews completed pile driving work for the Pier 4 reconfiguration project at South Harbor's Husky Terminal in November. They hammered 1,245 piles into the Blair Waterway at Pier 4 as part of \$250 million in terminal improvements to strengthen and realign a berth and add eight new super-post-Panamax cranes. Once finished, the terminal will be capable of serving two 18,000-TEU container ships at the same time. Construction and the first four cranes are scheduled to be completed in 2018. Four additional cranes will arrive in 2019.

On-terminal fumigation services available at East Blair One

NWSA has partnered with Food Protection Services to offer on-terminal fumigation services for roll-on/roll-off cargo at East Blair One in the South Harbor. Pre-owned cargo, like mining, agriculture and construction equipment, heading to countries like Australia, New Zealand and Chile are required to be covered and fumigated 96 hours before loading to kill off any prohibited insects. This service helps reduce drayage costs and improves convenience for our customers.



SSA Marine took over stevedoring and terminal services for Matson at the West Sitcum Terminal in Tacoma.

NWSA signs lease with SSA Marine to manage Matson's Tacoma terminal

SSA Marine signed a 10-year lease in October to take over stevedoring and terminal services for Matson at the West Sitcum Terminal in Tacoma. Matson provides two weekly services to Alaska. Operations at the West Sitcum Terminal support 200 jobs.

HOMEPORT NEWS

Port of Seattle has biggest cruise season ever

The Port of Seattle welcomed a record 1,071,594 revenue passengers through its cruise terminals this year, with even more expected in 2018. Larger vessels continue to drive passenger increases. Each cruise vessel is estimated to bring in \$2.7 million for the local economy, generating over \$500 million in annual revenue for the region.

"By exceeding a million passengers this year, and more to come next year, the Port of Seattle continues to grow the cruise market, revenue and jobs for our region," said Port of Seattle Commissioner Stephanie Bowman. "The Seattle cruise business means a half a billion dollars in local economic impact, and we want more passengers to experience Seattle while going to Alaska."



The Port of Seattle will welcome the 4,000-passenger *Bliss* on May 30, 2018, making it the largest cruise ship on the West Coast.

RICARDO CHARLTON

His open door and positive attitude keep his maintenance team in good working order

“Come on in,” says the sign posted on the door of Ricardo Charlton’s office.

It’s a slightly risky invitation for someone who oversees maintenance in The Northwest Seaport Alliance’s South Harbor—a job that comes with 24/7 demands.

Charlton demonstrates his unflappable manner as he navigates a vehicle through a sea of moving straddle carriers and parked shipping containers, while the winter sun begins to dip into the Blair Waterway.

As he heads to his upstairs office, Charlton pauses to engage in friendly banter with an employee who’s on his way home.

The open-door policy is at work, even late on a Friday afternoon.

In Tacoma, he oversees a team of about 80 employees, and he says the high point of his job is building relationships with all of them. His crew includes mechanics, carpenters, plumbers, electricians, track crew members and building and grounds workers.

Their duties range from trimming trees and clearing catch basins to maintaining 52 miles of rail lines that traverse port property. They keep HVAC systems humming in port warehouses, work on sprinkler systems and maintain fire hydrants.

They also ensure that a growing inventory of cranes and straddle carriers remains in top working order.

Charlton recently traveled to Shanghai, China, to inspect, test and commission new cranes headed to Tacoma: Four are scheduled to arrive in 2018, and another four in 2019.

Four new straddle carriers arrived recently in Tacoma, bringing the total to 36.

Maintaining the port’s heavy equipment is one of the paramount duties of Charlton’s team. A crane’s cables, for example, must be replaced after a set number of hours of use, and its working parts must be lubricated regularly to keep it running smoothly.

“There’s regularly scheduled maintenance on every piece of equipment we own,” Charlton said. “It’s constantly going on.”

The work of Charlton’s department is vital to NWSA shipping operations.

“Without preventive maintenance on the cranes and straddle carriers, we can’t move cargo,” Charlton said.

When he joined the team in January 2016, Charlton brought more than 20 years of terminal operations experience gained in locations from his native Bahamas to Lake Charles, Louisiana, and West Palm Beach, Florida.

The work is demanding. And when something goes wrong, “that’s when people’s true character comes out,” Charlton said.

“Every tough situation builds our relationships and makes them that much stronger,” he said.

But when the crisis is over, it’s time to move on.

“We can still sit down, drink a cup of coffee and laugh,” he said. “I’m truly blessed with a great group of employees who know their job, and don’t need to be told what to do. They take a lot of pride in their work.”

Charlton’s boss Dustin Stoker, NWSA chief operations officer, calls Charlton a hardworking leader.

“Over the past two years, Ricardo has created a management team that is diverse and a department culture that utilizes the strengths of the team to drive improved performance,” Stoker said.

When difficulties surface, he added, “you can always count on Ricardo to have a good attitude and bring a smile and positive energy to the room.”

When the work week ends, the best place to find Charlton is in the kitchen of his Puyallup home.

Starting with Friday dinner, he said, “I have the kitchen until Sunday night. I make breakfast, lunch and dinner.”

He cooks a variety of cuisines, everything from jerk pork or chicken for dinner to buttermilk biscuits for breakfast. As the youngest of six kids, Charlton remembers spending time in the kitchen with his dad, who taught him how to cook.

“My father was a self-made engineer,” Charlton said. “He worked hard. And he loved cooking. He was off-the-charts awesome.”

ALL ABOUT RICARDO CHARLTON

HOMETOWN:
Freeport, Grand Bahamas

FAMILY MAN:
He and his wife, Tammy, who’s originally from England, and their school-age daughters, Zahara and Zena, live in Puyallup. He also has two older children, Ricardo II and Mariah, from a previous marriage.

PROJECT RUNWAY:
For a high school variety show, he took a stab at modeling. “My buddy taught me some runway moves,” he said, recalling the cross-legged stop, turn, hand-on-chin poses. “I had to practice so much, I still remember them.”

MAKING TRACKS:
He ran track in high school. He was a sprinter, running 100-meter and 200-meter events. He attended Howard University in Washington, D.C., on a track scholarship, where he studied mechanical engineering.

HIDDEN TALENT:
He’s an eclectic chef at home, whipping up everything from barbecue to Chinese food. He even makes his own pizza dough.

He’s trying to be the same kind of dad to his girls, whether it’s attending their sports or musical events or cooking up delicious weekend meals. Sometimes they visit him for lunch on weekends, leaving their notes and artwork behind on the office whiteboard as evidence of their visit.

“Family is important to me,” Charlton said.

MEET THE BUSINESS DEVELOPMENT TEAM

Our Business Development team specializes in container, breakbulk and intermodal business and manages a large facet of the supply chain. This dynamic team draws on diverse expertise and backgrounds with international experience and is ready to deliver best-in-class service to our customers. We invite you to meet the team and hope to hear from you soon.

1 SUE COFFEY: Director of Business Development (Co-lead)

COMMODITY EXPERTISE: Apparel, footwear and retail products

BACKGROUND: Sue brings 30 years of experience working with ocean carriers, Class 1 railroads and overseas assignment in Ireland with a 3PL

CONTACT INFO: scoffey@nwseaportalliance.com
O: 253-230-3282 C: 201-486-8557

HOMETOWN: Baldwin, New York

FAVORITE HOBBIES: Foreign films, international travel and boating

2 TOM BELLERUD: Director of Business Development (Co-lead)

COMMODITY EXPERTISE: Wide range of BCO sales experience along with ocean carrier and marine terminal operator negotiations

BACKGROUND: Tom brings 30 years of operational and commercial experience in ocean carrier, marine terminal operations, intermodal railroad, trucking and warehouse operations

CONTACT INFO: tbellerud@nwseaportalliance.com
O: 253-383-9405 C: 253-226-8011

HOMETOWN: Puyallup, Washington

FAVORITE HOBBIES: Tennis, golf, running and travel

3 STEVE BALASKI: Senior Business Development Manager, Container

COMMODITY EXPERTISE: Hay, forest products, peas and lentils and retail

BACKGROUND: Steve brings over 20 years of international and domestic experience in marine transportation and logistics. His background also includes operations, project management, marketing and business development

CONTACT INFO: sbalaski@nwseaportalliance.com
O: 253-888-4403 C: 206-910-4573

HOMETOWN: Portland, Oregon

FAVORITE HOBBIES: Hiking and running

4 GEORGETTE REIDBURN: Business Development Representative, Container

COMMODITY EXPERTISE: Seafood, toys, meat/poultry and wine and spirits

BACKGROUND: Georgette brings over 10 years of experience in the maritime and transportation industry in business management, statistics and market analysis for ports

CONTACT INFO: greidburn@nwseaportalliance.com
O: 253-383-9415 C: 253-459-5386

HOMETOWN: Tacoma, Washington

FAVORITE HOBBIES: Golf, wine tasting and trying to garden

5 JOHN TULLIS: Business Development Manager, Container

COMMODITY EXPERTISE: Potatoes and forest products

BACKGROUND: John brings over 11 years of experience with a 3PL and ocean carrier, including four years in an overseas assignment in Hong Kong

CONTACT INFO: jtullis@nwseaportalliance.com
O: 253-428-8603 C: 253-219-3338

HOMETOWN: Des Moines, Washington

FAVORITE HOBBY: Squash (the sport)

6 ANDRE ELMALEH: Senior Manager, Business Development, Non-Container

COMMODITY EXPERTISE: Automobiles, ro-ro cargo, military cargo and breakbulk cargo

BACKGROUND: Andre brings over 28 years of automobile logistics experience, having worked for automobile processors, a manufacturer and a 3PL

CONTACT INFO: aelmaleh@nwseaportalliance.com
O: 253-592-6792

HOMETOWN: Lake Oswego, Oregon

FAVORITE HOBBY: Boating

7 MIKE REILLY: Director of Business Development, Intermodal Services

COMMODITY EXPERTISE: Rail services and logistic services

BACKGROUND: Mike brings over 30 years of experience in transportation and logistics services, from an executive level focused on operational and sales and marketing excellence

CONTACT INFO: mreilly@nwseaportalliance.com
O: 253-383-9418

HOMETOWN: Brooklyn, New York

FAVORITE HOBBIES: Attending sporting events, travel, classic films and enjoying his family

8 JEFF BRUBACH: Business Development Manager

COMMODITY EXPERTISE: BCO container customers, non-container project freight, ocean carriers and marine terminal operators

BACKGROUND: Jeff brings more than 11 years of experience at multiple terminal operators in Tacoma and Los Angeles/Long Beach

CONTACT INFO: jbrubach@nwseaportalliance.com
O: 253-592-6211 C: 253-209-9440

HOMETOWN: Sumner, Washington

FAVORITE HOBBIES: Watching Seattle sports, Syracuse Orange basketball and chasing his kids at home



GROWING INDUSTRIAL SPACE DELIVERS OPPORTUNITIES

Portside 55 will be completed in two phases: two buildings by 2018 and a third one by early 2019, all with access to rail service.

As competition within the shipping industry heats up, storage facilities at warehouses and distribution centers are playing an increasingly important role in moving cargo. The rise in third-party cargo-handling services has not only diversified the warehousing landscape, but also shortened the supply chain by locating inventory closer to its consumers who demand faster and more convenient access to their purchases.

Our gateway is home to more than 20 near-terminal transload and cross-dock facilities and the second-largest concentration of warehouse and distribution centers on the West Coast (fourth-largest in the U.S.).

The recent growth in the Seattle region has driven demands for more distribution capacity and transloading services. As a result, developers are taking advantage of available land for new development in places like Kent and Puyallup River valleys, and more recently in the South Sound.

Commercial brokerage reports estimate more than 330 million square feet of existing industrial space in the Seattle-Puget Sound market, including nearly 5 million square feet of new inventory added in the first three quarters of 2017. In addition, there are 24 buildings totaling more than 6 million square feet currently under construction for delivery in 2018. As of the end of 2017, only about 20 percent of that space had been pre-leased.

More than 4 million square feet will be built within Tacoma's port industrial area.

Avenue 55 has partnered with the Port of Tacoma on Portside 55, a 424,000-square-foot warehouse facility located at the port.

Joe Blattner, president and founder of the Seattle-based company, acknowledged the increased scarcity of land available for industrial use in Seattle. While Avenue 55 has property peppered across the Puget Sound area, his company opted for a more creative approach for the Portside 55 project.

"Because of the competitive market, we now look at opportunities to build in areas that we might have overlooked in the past, such as this property at the port," he said. "We saw this as an opportunity to take an unusable property due to environmental regulations and turn it into one that would create jobs and support the port's core business."

Despite environmental remediation required prior to breaking ground, Blattner said the location was one of the reasons they pursued the project. Portside 55 will be completed in two phases: two buildings in 2018 and a third one by early 2019, all with access to rail service.

"We saw the demand from the existing port-related business with a potential to expand," Blattner said. "There are also competitive advantages of being located closer to the seaport and the Interstate 5 corridor that would attract users from outside the area."

The region's growing population and new warehousing facilities opening at strategic locations are two factors reshaping how cargo is transported to Chicago and the Midwest.

Also coming online this year is Prologis' Georgetown Crossroads facility located outside of downtown Seattle. It features multiple levels of distribution space, a first of its kind in the U.S. The 590,000 square-foot structure will have truck ramps leading to the second level for transloading and cross-docking uses. The third floor will be equipped with freight elevators for lighter-scale warehouse operations.

Tom Bellerud, NWSA director of business development, said extra capacity for warehousing space will allow terminals to move containers off the terminals and provide more opportunities for shippers.

"We have seen a recent upward trend in transload operations at our gateway," said Bellerud. "Instead of moving three 40-foot containers, it makes sense for importers to move just two 53-foot domestic containers and cut their overall cost and drayage distance."

Blattner echoed the trend: A good strategic location is a game changer.

"As we see a shift in the amount of commodity being stored to support the growing population locally and in the Midwest," Blattner said, "the more value these new warehousing spaces will add to the gateway."

While Avenue 55 begins construction and markets for building tenants, Blattner envisions a bustling facility that will cater to the NWSA cargo business.

"We expect to see a lot of activity once we're in operation," he said. "We're proud to contribute in keeping our gateway competitive."

COMING SOON IN KING AND PIERCE COUNTIES

PROPERTY	LOCATION	SQ FT
PACIFIC GATEWAY BUSINESS PARK	Kent	155,115
234 DISTRIBUTION CENTER	Kent	125,400
DC 192	Kent	219,910
PACIFIC GATEWAY BUSINESS PARK	Kent	57,546
WEST VALLEY DPI	Pacific	129,526
KNUTSON FARMS INDUSTRIAL PARK	Puyallup	438,065
SUMMIT BUSINESS PARK	Puyallup	59,722
DCT MONSTER DISTRIBUTION CENTER	Renton	162,885
SEATTLE GATEWAY CENTER	Seattle	458,490
PROLOGIS GEORGETOWN CROSSROADS	Seattle	589,615
SUMNER LOGISTICS CENTER	Sumner	74,580
DCT 167 LANDING	Sumner	362,616
DCT BLAIR LOGISTICS	Tacoma	970,978
PORTSIDE 55	Tacoma	423,940
IPT TACOMA	Tacoma	1,124,145
PROLOGIS PARK TACOMA	Tacoma	1,600,000
NEWCOLD ADVANCED COLD LOGISTICS	Tacoma	150,000

RAIL TRANSIT TIMES

(Departing from The Northwest Seaport Alliance)

3 DAYS	4 DAYS	5-7 DAYS
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DELIVERING GOODS BY RAIL

The Northwest Seaport Alliance's rail services offer long- and short-haul connections to serve a variety of our customer needs.

For Class 1 rail service, BNSF Railway and Union Pacific Railroad provide fast transcontinental service, connecting the Pacific Northwest to key distribution points across North America. We also offer three options for convenient domestic and short-haul rail service from the Pacific Northwest.



MARKETS SERVED	
INTERNATIONAL Chicago Denver Kansas City Memphis St. Paul	INTERNATIONAL Chicago Dallas Houston Kansas City Los Angeles Memphis St. Louis
DOMESTIC Chicago Dallas Kansas City Laredo St. Paul	DOMESTIC Chicago Dallas Houston Kansas City Los Angeles Memphis St. Louis

TRANSIT TIME TO THE MIDWEST FROM NWSA

DOMESTIC	CHICAGO & BEYOND
Expedited.....3 days	Ohio Valley.....6-7 days
Standard.....4.5 days	
International.....4.5 days	



OVER 50 Weekly departures



Regular service to and from Portland



On-dock or near-dock rail at all container terminals



OVER \$5 Billion in rail infrastructure investments

KEY NWSA FACT

The NWSA loaded its first 10,000-foot train out of the North Intermodal Yard in Tacoma in November and will be running daily trains up to 10,000 feet in length. Previous trains departing from our facilities were typically 6,000 to 7,000 feet long.

Ocean-going vessels were the region's largest maritime source of air pollution in 2011. However, the NWSA saw a drop in diesel particulates and greenhouse gases in 2016.

CUTTING THE CARBON

Evaluating our progress and building plans for cleaner air in Puget Sound



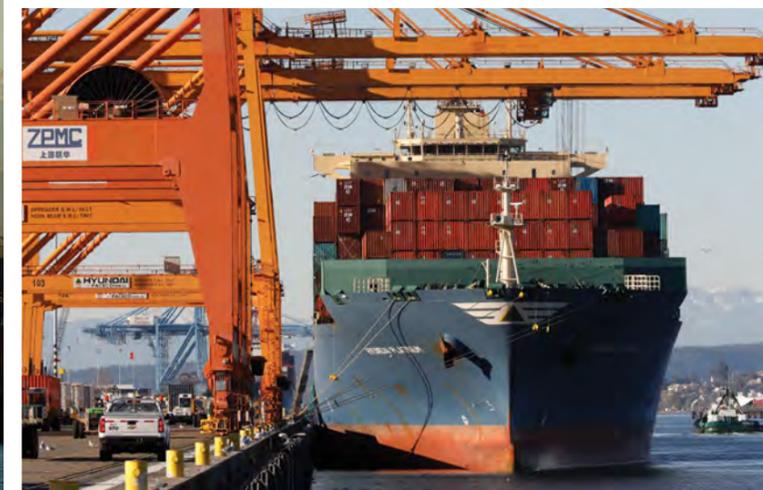
In 2016, ships calling on The Northwest Seaport Alliance released 764 fewer tons of diesel exhaust into the air than they did five years before—enough pollution to outweigh three rubber-tired gantry cranes.

Ports and the shipping industry have worked to improve Puget Sound's air quality for more than a decade, and the alliance's latest emissions inventory shows substantial progress toward that goal.

Diesel particulate matter (DPM) has decreased by 80 percent per ton of cargo since 2005. Greenhouse gas emissions (GHG) are down 19 percent, and other harmful pollutants have declined, as well. With additional reductions needed to meet the region's ambitious targets for the future, the alliance remains busy exploring potential partnerships and technology to make its operations even cleaner.



With the latest emissions numbers in hand, the NWSA now faces its responsibility to meet regional targets for 2020, as well as its commitment to honor the goals of the Paris climate agreement.



A COMMITMENT TO CUT EMISSIONS

Maritime activities account for about a fourth of the region's diesel exhaust, according to the Puget Sound Clean Air Agency, which helped bring ports in Washington and Vancouver, British Columbia, together to measure their combined emissions for the first time in 2005. The ports of Seattle and Tacoma joined other organizations forming the Puget Sound Maritime Air Forum to safeguard public health and the environment—as well as to protect the economic development central to their mission.

At that time, the industry watched anxiously as regulators implemented severe restrictions at ports in Southern California because of deteriorating air quality in Los Angeles. If the Puget Sound region were to reach non-attainment status under federal air pollution rules, regulators could deny its ports access to grants, restrict development projects and cause business impacts adding up to millions of dollars. Even though the region's air was significantly cleaner than the air in Los Angeles, the Northwest ports needed to collaborate to help keep it that way.

“The idea was, how can we proactively and voluntarily come up with a strategy where we can be a good steward of the environment, be a good neighbor, and also be out in front of these issues so we're not facing the same issues as Southern California,” said Jason Jordan, Port of Tacoma's environmental programs director.

Three ports agreed on reduction goals for several pollutants in 2007, leaving each port to find solutions best suited to their needs. They also set targets related to stakeholder outreach, port administration

and emissions upgrades for multiple categories of equipment. Taken together, these efforts aimed to cut diesel particulate pollution per ton of cargo 80 percent by 2020, while reducing GHG emissions by 15 percent.

The Northwest Seaport Alliance devotes three full-time staff to air quality, which has become integrated in all aspects of operations. At the same time, Jordan noted that cutting emissions has become a priority of shippers and their customers: “Greening up their supply chain has been extremely important for a lot of these companies.”

Target and Walmart, for instance, both announced climate initiatives for their supply chains last year. The latter is working with suppliers to cut 1 billion tons of emissions by 2030. “When we go talk to the beneficial cargo owners they're very interested, and it's very important to them that everyone in the supply chain is doing everything they can,” Jordan said.

SHIPS, SULFUR AND CO2

Ocean-going vessels (OGVs) were the region's largest maritime source of air pollution in 2011, accounting for 71 percent of diesel particulates and 44 percent of greenhouse gases. When the NWSA examined its OGV emissions for 2016, these pollutants decreased by 87 percent and 29 percent, respectively, from 2005 levels, thanks in large part to the North American Emission Control Area (ECA). Established by the International Maritime Organization in 2012, the ECA now requires ships in American coastal waters to use low-sulfur fuel that cuts DPM pollution by three-quarters and reduces sulfur oxide emissions by 97 percent.

“The idea was, how can we proactively and voluntarily come up with a strategy where we can be a good steward of the environment, be a good neighbor, and also be out in front of these issues so we're not facing the same issues as Southern California.”

Jason Jordan, Port of Tacoma's environmental programs director

NWSA's Graham VanderSchelden, who oversees work on the new emissions inventory, noted that similar regulations also drove down port emissions from rail. The U.S. Environmental Protection Agency began requiring locomotives to use ultra-low sulfur diesel after 2014. The Port of Tacoma started using low-sulfur fuel in cargo-handling equipment it owns in 2005, before it was required by law, and began using a biodiesel blend in 2008. Harbor craft are also polluting less, VanderSchelden said, and DPM from the cargo-handling fleet has declined, as well, after engine and emissions equipment upgrades.

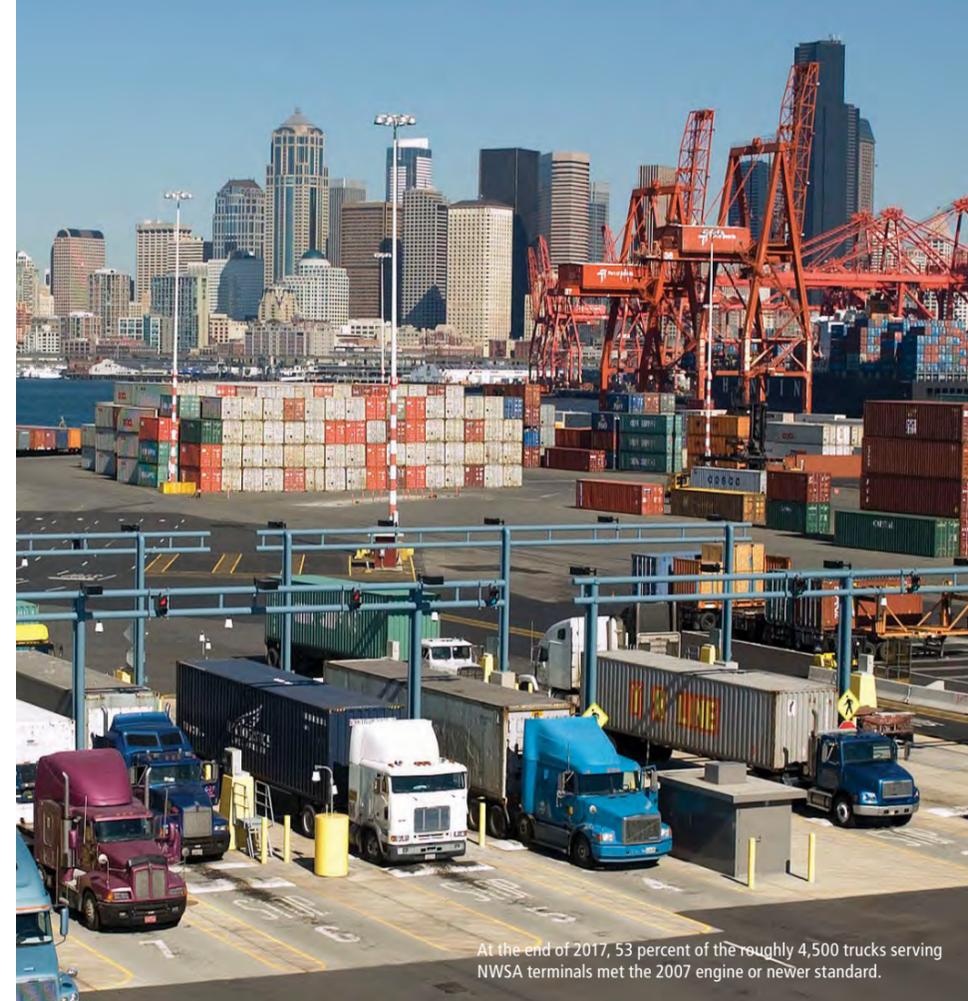
Trucks are the second-largest producers of greenhouse gases at the region's ports and were responsible for 28 percent of GHG emissions in 2011. In response, NWSA facilities have phased out trucks with

older engines over several years. To help owners buy newer equipment, the alliance administered a program offering up to \$27,000 to scrap outdated trucks, taking 413 older vehicles off the road. Leaders at the NWSA continue to discuss the best way to reach its ultimate goal of making all trucks at the ports meet 2007 EPA standards. Compared to standards for 1994, the newer vehicles reduce diesel particulates by a factor of 10. The diesel emissions can contribute to cardiovascular disease and lung cancer.

“We're always concerned about our impacts on public health,” VanderSchelden said. “I think sustainability and climate are big issues as well. And greenhouse gas emissions are always important to us, the public and globally.”



TOTE Maritime Alaska is in the process of switching to LNG-fueled vessels to reduce particulate pollution and greenhouse gases.



At the end of 2017, 53 percent of the roughly 4,500 trucks serving NWSA terminals met the 2007 engine or newer standard.

“Not only are you affecting that truck driver, you’re also affecting that importer or exporter.”

Zack Thomas, NWSA director of Operations Service Center

port money into a loan, we would be able to work through a lender to bring small business training and more market-rate loans,” said Sara Cederberg, a senior project manager on the NWSA environmental team.

In the meantime, the alliance is moving quickly to install the infrastructure needed for terminal operators to enforce the 2007 engine standard in an efficient fashion. By mid-year, the NWSA plans to invest in radio-frequency identification readers in Tacoma to bring the South Harbor in line with the truck registry system in Seattle.

In their discussions, the NWSA Managing Members remain committed to reducing emissions from trucks at the port. They’ll continue to work with stakeholders this year to find the best timeline and approach to make that happen.

NWSA COMMITS TO PARIS CLIMATE AGREEMENT

This spring, the NWSA will update its plan under the Northwest Ports Clean Air Strategy to reduce its greenhouse gas emissions to help meet the goals of the Paris climate agreement.

In addition to its efforts to cut pollutants as a member of the Puget Sound Maritime Air Forum, the alliance became one of the first U.S. port facilities to adopt emissions targets that align with the Paris accord. The international agreement aims to constrain global warming to within 2 degrees Celsius by 2050.

LOOKING AHEAD

With the latest emissions numbers in hand, the NWSA now faces its responsibility to meet regional targets for 2020, as well as its commitment to honor the goals of the Paris climate agreement. The alliance also needs solutions that fit the business plans of its terminal operators, drayage companies, shipping lines and other stakeholders that conduct business at its facilities.

To that end, the NWSA continues to pursue a broad range of initiatives and pilot programs to reduce emissions. These include:

- **Shore power:** Any time the alliance upgrades a wharf, such as the reconfiguration of Pier 4 in Tacoma, the project includes infrastructure to make the facility shore-power capable in the future. Use of shore power or an equivalent way to offset emissions will be a requirement at Terminal 5 in Seattle, once complete.

- **Natural gas conversions:** In the South Harbor, Puget Sound Energy is building a liquefied natural gas (LNG) storage facility to provide fuel for newly modified TOTE Maritime Alaska ships and potentially other vessels. Compared to diesel, LNG cuts particulate pollution by more than 90 percent and greenhouse gases by 35 percent.

- **Electric cargo-handling equipment:** Four new hybrid diesel-electric straddle carriers arrived in Tacoma in December, shortly after the arrival of a fully-electric hostler as part of a pilot program. NWSA staff also are exploring the potential of fully-electric straddle carriers and rubber-tired gantry cranes.

- **Operations Service Center:** A dedicated NWSA team works with port users daily to improve efficiency, including measures to reduce truck idling. After discontinuing the DrayQ app at the end of 2017, the service center turned its attention to research alternative technologies that can track port traffic and improve turn times.

This year, the alliance will craft an update to its clean air strategy with new goals. Sara Cederberg, who manages air quality and sustainable practices for the NWSA, said this will include a glide path to targets set for 2050 as the Puget Sound maritime industry looks to the environmental challenges of the decades ahead.

“We are planning to engage a broad range of stakeholders – certainly all of our industry partners and also other local governments and community organizations – to really help us prioritize where to spend our efforts in the short term, but also help paint a vision for what we want our ports to look like long-term,” she said.

OUTREACH AND OPTIONS FOR CLEANER TRUCKS

The latest emissions inventory found that trucks released 177,909 tons of greenhouse gases and 47 tons of diesel particulate pollution at the ports in 2016. Newer rigs hold the potential to reduce those numbers substantially. But work remains to transition trucking companies to cleaner-burning engines.

The NWSA originally called for trucks operating at the ports to meet 2007 standards from the U.S. Environmental Protection Agency by the end of last year. With only 52 percent of the roughly 4,500 trucks serving NWSA terminals in compliance, though, the alliance leadership pushed that deadline back.

“The impacts of this are not just about trucks,” said Zack Thomas, NWSA director of Operations Service Center. If a large share of drivers lose access to NWSA facilities, it can cause problems up and down the supply chain, he explained. “Not only are you affecting that truck driver, you’re also affecting that importer or exporter.”

Complicating matters are the competing interests of the trucking companies operating at the ports. Larger organizations have better access to capital for equipment upgrades. While many independent owner-operators, who represent roughly half of affected drivers, lack the financing needed for newer trucks that are more expensive to buy and maintain. The alliance has gathered ideas on how to approach the transition during monthly meetings of trucking stakeholders, as well as meetings between trucking company representatives and terminal operators. “We’ve had a lot of participation from the drayage community, lots of feedback,” Thomas said.

One option the alliance is eager to pursue would make loans more affordable. Interest rates available to small trucking companies currently range between 20 percent and 30 percent. The NWSA is advocating for a change in state law to allow the alliance to partner with a nonprofit lender and bring rates down to between 8 percent and 12 percent, with down payments for trucks between \$5,000 and \$6,000. “By investing

PNW IS AGRICULTURAL EXPORT 'POWERHOUSE'



Hay, potatoes and lumber are some of NWSA's top export commodities by volume.



Q&A with Peter Friedmann, Agriculture Transportation Coalition executive director

The Agriculture Transportation Coalition (AgTC) will be holding its 30th Annual Meeting from June 12 to 15 in Tacoma, Washington, where the NWSA is headquartered. The meeting will be the largest gathering of agriculture and forest products transportation professionals and their forwarders to discuss the challenges and issues facing the industry. We caught up with Peter Friedmann, executive director of the AgTC, who shared his thoughts about the significance of the Pacific Northwest to the agriculture transportation industry and what to keep our eyes on in 2018.

The Northwest Seaport Alliance (NWSA): The Agriculture Transportation Coalition (AgTC) teams up with the U.S. Department of Agriculture (USDA) to host several workshops across the country every year? What is the objective of these workshops?

Peter Friedmann (PF): Each of our Ag Shipper Workshops provides a means in which agriculture, forest products and other commodities exporters can be competitive in the global marketplace.

At our Pacific Northwest Workshop, we'll have 100 exporters from a wide range of agricultural products like hay, apples, cotton and lumber. Every one of them fights with foreign producers for market share in countries like Japan, China and Korea.

NWSA: Why is market share important?

PF: It's important because there is nothing that we produce in this country for global export that cannot be sourced somewhere else in the world. So the hay that comes from Washington state can also come from Australia, Canada, Argentina and other countries. For example, the hay produced in Washington state currently goes to Japan, Korea and China. But if our prices are too high; if we can't deliver it affordably and dependably; if our transportation network isn't efficient; if our ports aren't functioning efficiently, then those consumers in Asia will say, "If we can't get it affordably and dependably from the U.S. farmers, then we'll go to other countries that source the same products." So it's a very competitive global market. Often times, the differentiating factor is how

efficient our transportation network is, and if port authorities are not operating efficiently, then it kills the sale.

NWSA: What is the significance of the Pacific Northwest to the agriculture transportation industry?

PF: The Pacific Northwest is one of the powerhouses for production of agriculture and forest products that are exported globally. Probably per capita, the Pacific Northwest is the strongest in the world in terms of volumes of exports. The AgTC was essentially founded in the Pacific Northwest, as well as California's Central Valley, where so much of the global production of agriculture is based. In California, you have products like wine, grapes, cotton, citrus and rice. In Oregon and Washington, you have hay, apples, potatoes, fresh fruits, onions, lumber and logs. Those are all the entities that formed the AgTC 30 years ago.

NWSA: What do we need to consider for the future of trade?

PF: I think the future of trade – particularly for exports out of the Pacific Northwest – is more dependent on the high value of the dollar, which has become a major impediment to U.S. exports, making our products more expensive overseas. We also need to consider the weak markets in China with slower economy. Those factors probably have greater impact on our trade competitiveness than anything else. But right behind it is sort of the inefficiency of many of our ports in the U.S., relative to ports elsewhere. There is a reason cargo has migrated to Prince Rupert. It wasn't because it's such a pretty city. It's only because people got better transportation

efficiency going through there. So for that reason, the AgTC is always trying to work with every U.S. West Coast port, including The Northwest Seaport Alliance, to improve efficiency.

NWSA: What should the agricultural exporters pay attention to in 2018?

PF: At our recent Ag Shipper Workshops in Boise and Minneapolis where NWSA was a sponsor, we discussed two primary challenges facing exporters in 2018. Further consolidation of the ocean carriers, from 18 to 10 this year, and larger ships mean that ports and terminals will need to adapt their practices to handle these concentrated volumes and avoid congestion. Trucking will be the most challenging of all components of the supply chain here in the U.S. Dealing with the driver shortage, hours of service requirements and enforcement through electronic logging devices and requirements to invest in new trucks to meet emissions requirements will all have large impact on exporters. ■

AGTC'S 30TH ANNUAL MEETING

June 12-15, 2018

Tacoma, Washington

Register at www.agtrans.org/events

BIG APPLE CAPITAL

Washington state is nation's top crop producer

They may be crisp, sweet or tart. Red, green or golden. But they're always delicious.

Apples are Washington's top crop, making up an estimated 20 percent of the value of all agricultural production in the state.

They're also one of the top refrigerated commodities that moves through The Northwest Seaport Alliance harbors in Seattle and Tacoma.

Washington produces more apples than any other state, and NWSA is the number one gateway for North American apple exports, by both volume and dollar value.

In 2016, NWSA shipped 26,609 TEUs (twenty-foot equivalent units) of apples, valued at more than \$413 million. The prior year saw even higher figures, with 32,749 TEUs valued at more than \$441 million.

"The ports of Seattle and Tacoma, and by association, the NWSA, are critical to the success of the Washington apple industry, exporting 30-plus percent of our total volume," said Todd Fryhover, president of the Washington Apple Commission. "It is the ease of access to (these) world-class ports that have assisted the Washington apple industry's world class reputation."

Washington apples are valued by consumers around the world. But they are especially popular in Asia, where most apples shipped from NWSA ports are bound.

In 2016, India was the top volume destination, with 4,186 TEUs valued at \$61.4 million shipped through Seattle and Tacoma. Taiwan was close behind, with 3,940 TEUs valued at \$67.6 million.

Indonesia, Hong Kong, Vietnam, Thailand and China are also among the top Asian destinations for NWSA apple exports by volume.

Rounding out the top 10 list are countries in other parts of the world: the United Arab Emirates, Saudi Arabia and the Dominican Republic.

NWSA apple export volumes have remained steady over the past four years, said Steve Balaski, NWSA's senior business development manager. But there's budding competition from overseas producers in China, who are working to satisfy their country's demand for apples.

Consumer tastes vary by nation, and Washington growers oblige by producing a variety of the popular fruit. The Chinese prefer Red Delicious, Gala or Granny Smith

apples, while in Taiwan, the favorite variety is Fuji and in India, Red Delicious is the most popular, according to the Washington Apple Commission.

There are more than 2,000 varieties of apples grown in the United States, but Washington growers focus on a few primary varieties. Red Delicious—the best-known and most iconic apple variety—makes up 34 percent of the state's apple crop. Gala accounts for 19 percent, Fuji 13 percent, Granny Smith 12 percent and Golden Delicious 10 percent.

"Red Delicious remains our number one export variety, and the primary variety vehicle for Washington state apple consumer introduction," Fryhover said.

But he said that as countries around the world experience the growth of a middle class, "more Washington varieties are experiencing growth."

Washington orchards are concentrated in the eastern half of the state, where rich soil and a sunny climate create favorable growing conditions.

More than 10 billion apples are harvested each year in Washington—each picked by hand. That's enough apples, placed side-by-side, to circle the Earth 29 times.

Harvest season begins in August and continues through early November. But advanced cold storage technology means fresh apples are available year-round. The bulk of NWSA apple shipments begin in mid-October and run through mid-April.

Apples are harvested, then transported by truck from the orchard to the packing house, where they are chilled and placed into 42-pound tray pack boxes. They journey to NWSA ports in refrigerated shipping containers and head to destinations worldwide.

CALENDAR

Meet Northwest Seaport Alliance staff at upcoming events.

Jan. 17-18

Washington State Hay Growers Association Annual Expo and Trade Show
Kennewick, Washington

Jan. 23

AgTC Workshop
Portland, Oregon

Jan. 23-25

Washington-Oregon Potato Conference
Kennewick, Washington

Jan. 25

Long Island Import Export Association 2018 New Year Networking Celebration
Woodbury, New York

Jan. 25

CSCMP Puget Sound Roundtable Emerging Technologies in the Supply Chain
Tacoma, Washington

Feb. 2

NY/NJ Forwarders Dinner
New York, New York

Feb. 6-8

Cargo Logistics Canada
Vancouver, British Columbia

Feb. 15

19th Annual Tri-Cities Regional Economic Outlook
Pasco, Washington

Feb. 22

Traffic Club of NY 112th Annual Anniversary Dinner
New York, New York

Feb. 22

CSCMP Puget Sound Roundtable State of Logistics: Accelerating into Uncertainty
SeaTac, Washington

Feb. 22-25

Alaska Cold Storage Employers' Convention
Indian Wells, California

Feb. 25-28

RILA Retail Supply Chain Conference
Phoenix, Arizona

March 4-7

18th Annual TPM Conference
Long Beach, California

March 11-13

Seafood Expo North America
Boston, Massachusetts

April 10

CONNECT Northeast Transportation & Trade Conference
Newport, Rhode Island

April 4

The Northwest Seaport Alliance Annual Breakfast
SeaTac, Washington

April 18-19

Home Delivery World 2018
Atlanta, Georgia

April 20

Global Specialty Coffee Expo
Seattle, Washington

May 3

FDRA Footwear Executive Summit
Washington, D.C.

May 6-8

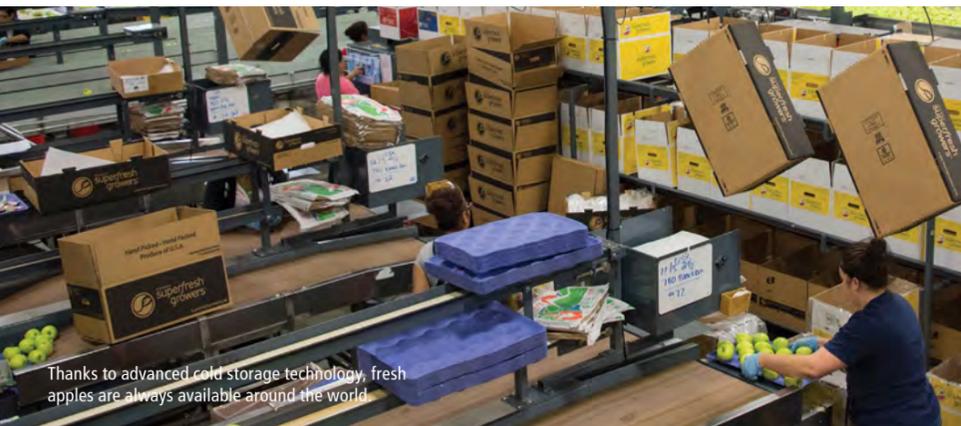
International Pulp Week/Softwood Log & Lumber Conference
Vancouver, British Columbia

May 18

Columbus Logistics Conference
Columbus, Ohio

June 12-15

AgTC Annual Meeting
Tacoma, Washington



Thanks to advanced cold storage technology, fresh apples are always available around the world.

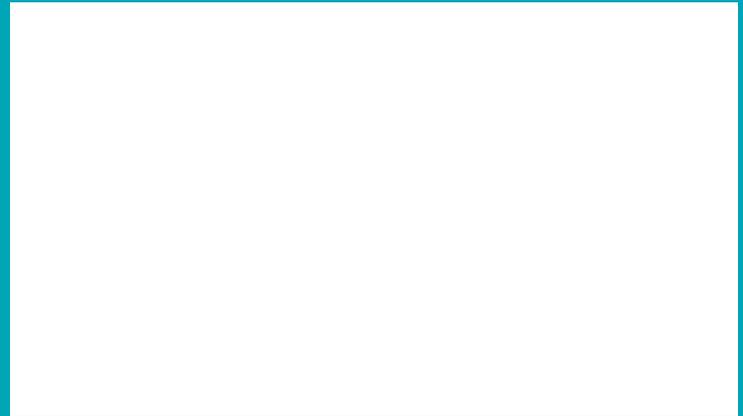
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