Overview of the proposed project

As part of its focus on continuous improvement and environmental leadership, Neptune Terminals is planning to upgrade the dust suppression system for its steelmaking coal stockpile. Neptune has applied to the Vancouver Fraser Port Authority (the port authority) for a permit to remove its existing spray poles and install new ones.

Spray poles are an important part of Neptune’s environmental management system. Their purpose is to spray a fine mist of water onto the steelmaking coal pile which coats it and creates a fine crust. This in turn prevents coal dust from blowing to neighbouring sites around the terminal.

The current spray pole system is working effectively, but is old and no longer up to current environmental best practices. Dust suppression experts have advised that upgrading the system would allow for better coverage of the steelmaking coal pile, even during dry and windy conditions.

Neptune’s current system includes 12 poles, 10 of which are the old wood style and two that are the new steel style. The proposed project would include the removal of 10 wooden spray poles and the installation of 13 poles as follows, for a net addition of three poles:

- 8 new poles the same height as the existing poles;
- 5 new, larger spray poles to protect the site from offshore and onshore winds from Burrard Inlet;
- 13 new yard sprays mounted on the poles, which function like oscillating lawn sprinklers to spray the steelmaking coal; and
- Replacement of the 40-year old water line feeding the poles.
Details of notification methods

In order to notify the community and other stakeholders about the project and seek feedback, Neptune undertook the following communications activities.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Audience</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community notification</td>
<td>Terminal area residents and Park &amp; Tilford area businesses. (see map in Appendix B) Copies were also mailed to North Van MLAs, MPs, Mayors &amp; Councils, Chamber of Commerce, and Squamish and Tsleil Waututh First Nations.</td>
<td>Website – live on Feb. 15th/17</td>
</tr>
<tr>
<td></td>
<td>- Mail drop, website, twitter and email notice re: proposed spray pole replacement and 20 business day feedback period between February 20 and March 17, 2017. (including contact info for feedback and comments)</td>
<td>Community Notification – delivered w/o Feb. 20th via Canada Post.</td>
</tr>
<tr>
<td></td>
<td>- Notification also featured information on Neptune’s environmental systems overall</td>
<td>Letters to stakeholders mailed w/o Feb. 20th. Tweets posted Feb 20, 28 and Mar 6/17</td>
</tr>
<tr>
<td>Media Relations</td>
<td>North Shore Waterfront Liaison Committee</td>
<td>Feb. 23/17</td>
</tr>
<tr>
<td>Neptune did an interview with the North Shore News which resulted in an article in the paper on Feb. 23/17 (See Appendix G)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation to North Shore Waterfront Liaison Committee</td>
<td></td>
<td>March 23/17</td>
</tr>
</tbody>
</table>

Details of the consultation materials produced

Materials produced for the above activities included:
- Community and stakeholder mailer (Appendix A)
- PowerPoint presentation (Appendix C)
- Tweets (Appendix E)
- Website content (Appendix F)

Level of public participation
There were three emails received from neighbours residing in the Lynnmour South and Riverside West neighbourhoods.

Summary of feedback received
All three emails received from the community expressed support for this project as a means of reducing dust and enhancing overall air quality in the area.
Additional comments and questions were received from committee members and guests at the North Shore Waterfront Liaison Committee meeting (March 23, 2017), and are as follows:

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the towers require lighting?</td>
<td>The existing towers already have lighting, and the new towers will have lights at the same height. They will be angled downwards to minimize disturbance on surrounding neighbours.</td>
</tr>
<tr>
<td>Are there catch basins for the run-off from the spray?</td>
<td>Yes, there are sumps at 5 locations. The run-off is pumped to settling ponds and it is then treated off-site.</td>
</tr>
<tr>
<td>Why is the water not recycled back on to the pile?</td>
<td>Recycled water does go back to be used on the conveyor, but it does not get used on the spray poles because of concerns about particulate clogging up the sprays.</td>
</tr>
<tr>
<td>Where is the excess water pumped?</td>
<td>The water is pumped into the Burrard Inlet, but is first treated and must meet strict environmental standards set by the BC Ministry of Environment. The water is regularly tested for compliance.</td>
</tr>
<tr>
<td>Why can the terminal not use salt water?</td>
<td>There are concerns about how the salt would interact with coal, as well as the possibility of the salt damaging the equipment.</td>
</tr>
<tr>
<td>How much water is used in a year at Neptune Terminal?</td>
<td>In 2016, Neptune’s water use was 804,244 cubic meters, or 0.05 cubic meters per metric tonne of product handled. This is a significant reduction from 1.29 million cubic meters, or 0.09 cubic meters per metric tonne used in 2013, thanks to significant water conservation efforts undertaken at the terminal.</td>
</tr>
<tr>
<td>How much water is recycled?</td>
<td>Water is currently only recycled on the coal side during dry months, and that equates to approximately 5% of use. We continue to explore additional opportunities to recycle water at the terminal.</td>
</tr>
<tr>
<td>What are the boundaries for the community notification of the project?</td>
<td>Neptune notified adjacent residents east to Riverside Drive, north to Keith Road, and West to Lonsdale.</td>
</tr>
<tr>
<td>Is there anything that can be done to offset water use during dry seasons?</td>
<td>Neptune is planning to work on a project to reduce water use. In the meantime, mitigation measures include shutting down the car wash and operating the sprayers manually.</td>
</tr>
<tr>
<td>When will construction start?</td>
<td>Construction is planned to start in the summer of 2017.</td>
</tr>
</tbody>
</table>
Neptune Terminals has been part of the North Shore community for over 45 years. We are driven by our commitment to safe, environmentally responsible operations, continuous improvement and consideration for our neighbours.

DUST SUPPRESSION UPGRADE

As part of our commitment to continuous improvement at Neptune Terminals, we have applied to the Vancouver Fraser Port Authority for a project permit to replace and upgrade the current water spray pole system which is used for dust suppression around our steelmaking coal stockpile.

One of the most effective ways to minimize the potential for dust is to keep the coal damp. The water creates a layer on the outside of the coal, keeping it in place. Our site currently has a series of 12 spray poles, which are strategically located to create a water curtain around the coal storage area. We also use a water spray truck around the perimeter of the facility.

The proposed upgrade would provide best-in-class proven technology for minimizing any potential coal dust from leaving the site. It involves replacing 10 existing wooden poles with 13 new steel poles as follows:

- 5 larger spray poles to further protect the site from offshore and onshore winds from the inlet (43.9 m)
- 8 spray poles the same height as the existing poles (24 m)
- Each of the new poles will have one yard spray – like an oscillating lawn sprinkler – mounted on it, for a total of 13

This upgrade would improve the functionality of the on-site spraying system and would mean:

- More spray nozzles that produce a finer mist for improved coverage of the stockpile
- Spray poles in better locations for protecting against high winds
- Full automation to reduce water use – particularly in summer months – and increased responsiveness to changing weather conditions

It is anticipated once a project permit is received that the upgrades will be done in phases, and could take up to three years to complete. There will be no impact on neighbours from construction. Consistent with past projects, we will ensure construction notices are posted on our website and distributed via email.

neptuneterminals.com

COMMENTS?

As part of the project permit review, we are collecting feedback from the community on this proposal. Please provide any feedback to Lisa Doolding, Director of Community & Stakeholder Engagement, Neptune Terminals at ldooling@neptuneterminals.com by Friday, March 17, 2017.

LEARN ABOUT THE VANCOUVER FRASER PORT AUTHORITY’S REVIEW OF THIS PROJECT

Visit their project webpage www.portvancouver.com/development-and-permits/status-of-applications/neptuneterminals-dust-suppression-upgrade/

If you have any comments or questions for the port authority, contact Patrick Coates, Senior Planner, at patrick.coates@portvancouver.com.
RECENT TERMINAL IMPROVEMENTS

We are continually upgrading our terminal infrastructure and equipment and enhancing our environmental protection measures.

We are proud that our environmental performance meets or exceeds compliance with standards set by the Port of Vancouver, the BC Ministry of Environment, Metro Vancouver and other regulators.

In the last five years, we have added:

1. Electric indexer – used to move steelmaking coal railcars on our rail tracks. This electric equipment creates zero emissions.

2. Hybrid locomotives – three ultra low-emission, low-noise locomotives that work like hybrid vehicles, using 25 per cent less fuel as they move potash railcars at our terminal.

3. Stacker reclaimers – features controlled flow chutes and a built-in spray system to keep coal damp, both of which reduce dust as the coal is added and removed from our stockpile.

4. Conveyor systems – upgraded with special controlled flow chutes that minimize product disturbance and potential dust through natural contour shaping.

BEING A GOOD NEIGHBOUR

Keeping the products we handle on our site is a big part of being a good and responsible neighbour. That’s why we work hard to keep the steelmaking coal, potash and phosphate rock being transported through Neptune Terminals where they belong – on the terminal.

THIRD PARTY ENVIRONMENTAL CERTIFICATION

Neptune is certified by Green Marine and Climate Smart, two independent organizations that help us measure our environmental performance and identify ways in which we can continuously improve to reduce our footprint and exceed regulatory requirements.

To review our Report Card results or learn more about Green Marine, visit green-marine.org.

For more info on our Climate Smart certification and our commitment to environmental protection visit neptuneterminals.com/safety-and-the-environment/.

ABOUT NEPTUNE TERMINALS

Operating in North Vancouver since 1970, Neptune Terminals handles Canadian goods that help feed people and build communities around the world. Our terminal handles Canadian steelmaking coal, Canadian potash and imported phosphate rock. The latter two materials are used in the production of fertilizer.

Looking for more information on Neptune? Have a question?

E: community_questions@neptuneterminals.com
T: 604.983.7935

neptuneterminals.com
Appendix B - Distribution Area for Community Mail-Out
Appendix C - PowerPoint Presentation to NSWLC and NSWLC Minutes of March 23/17 Meeting

Neptune Terminals Dust Suppression Upgrade Project
North Shore Waterfront Liaison Committee Presentation
March 23, 2017

Current Project Status
- The proposed Dust Suppression Upgrade Project is in the technical review stage of the Vancouver Fraser Port Authority’s Project and Environmental Review process
- Consultation activities in progress
  - Community notice
    - 26 business day period was February 20 – March 17, 2017
  - Presentation to North Shore Waterfront Liaison Committee
    - March 23, 2017
  - Stakeholder letters
    - Feedback period was February 22 – March 23, 2017

Overview of Work
- Removal of original steel water line and replacement with new HDPE pipe
- Removal of ten existing wooden spray poles

Overview of Work
- Installation of five new steel spray towers (43.9 m tall)
Overview of Work

- Installation of eight new steel spray poles (24.5 m tall)

Overview of Work

- Thirteen new oscillating yard sprinklers (one on each pole of dryer)

Overview of Work

- Installation of three new booster pump and valve houses to pressurize the water line

Overview of Work

- Project to be phased over three years
Security Building Replacement and Paving

- New security building would replace the existing temporary structure.
- Additional space would be created for safety and security training for all staff and contractors.
- New gate configuration would allow easier access to large construction or delivery vehicles.

Questions?
## North Shore Waterfront Liaison Committee – Meeting Notes

<table>
<thead>
<tr>
<th>Date:</th>
<th>March 23, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time:</td>
<td>8:00 am – 10:00 am</td>
</tr>
<tr>
<td>Location:</td>
<td>Committee Room, District of North Vancouver</td>
</tr>
<tr>
<td>Chair:</td>
<td>Glen Webb, Community Representative, District of North Vancouver</td>
</tr>
<tr>
<td>Vice Chair:</td>
<td>n/a</td>
</tr>
</tbody>
</table>

### Agenda Topic

| 1. Welcomes and Introductions | Committee members introduced themselves. Special guests included:  
- Babs Perowne, North Vancouver Community Association Network  
- John Miller, North Vancouver Community Association Network  
- Lisa Dooling, Neptune Terminal  
- Dana Nielsen, Neptune Terminal |
| 2. Review of Notes and Actions | a) Organize presentations on LNG (planned for May 4) and Green Marine (planned for June 29)  
b) Noise working group Terms of Reference (deferred to next meeting) |
| 3. Presentation from Neptune | Lisa Dooling and Dana Nielsen from Neptune Terminal presented on their dust suppression upgrade project:  
- Removal of original steel water line and replacement with new HDPE pipe  
- Removal of ten existing wooden spray poles  
- Installation of five new steel spray towers (43.9 m tall)  
- Installation of eight new steel spray poles (24.5 m tall)  
- Thirteen new oscillating yard sprinklers (one on each pole or tower)  
- Installation of three new booster pump and valve houses to pressurize the water line  

The benefits of the project include:  
- More spray nozzles produce finer mist for improved coverage of stockpile  
- Spray poles in better locations for protecting against high winds  
- Full automation to reduce water use  
- Automation also contributes to increased responsiveness to changing weather conditions  

Discussion  
Q: Do the towers require lighting?  
A: The existing towers already have lighting, and the new towers will have lights at the same height. They will be angled downwards to
minimize disturbance on surrounding neighbours.
Q: Are there catch basins for the run-off from the spray?
A: Yes, there are sumps at 5 locations. The run-off is pumped to settling ponds and it is then treated off-site.
Q: Why is the water not recycled back on to the pile?
A: Recycled water does go back to be used on the conveyor, but it does not get used on the spray poles because of concerns about particulate clogging up the sprays.
Q: Where is the excess water pumped?
A: The water is pumped into the Burrard Inlet, but must first meet standards set by the BC Ministry of Environment. The water is regularly tested for compliance.
Q: Why can the terminal not use salt water?
A: There are concerns about how the salt would interact with coal, as well as the possibility of the salt damaging the equipment.
Q: How much water is used in a year at Neptune Terminal?
A: Neptune will get back to the committee with an answer.
Q: How much water is recycled?
A: Neptune will get back to the committee with an answer.
Q: What are the boundaries for the community notification of the project?
A: Neptune notified adjacent residents east to Riverside Drive, north to Keith Road, and West to Lonsdale.
Q: Is there anything that can be done to offset water use during dry seasons?
A: Neptune is planning to work on a project to reduce water use. In the meantime, mitigation measures include shutting down the car wash and operating the sprayers manually.
Q: When will construction start?
A: Construction is planned to start in the summer of 2017.

**Action:** Neptune Terminal will get back to the committee with information about how much water is used a year, and how much of that water is recycled.

| 4. Neptune Community Tour Day | Neptune will be providing tours of the terminal all day long on April 22nd, through pre-booked bus tours. Its community partners, such as Green Marine, the port authority, and local community organizations, will have booths set up in an adjacent field where people are arriving. The North Shore Waterfront Liaison Committee is invited to have a presence as a community partner.

**Action:** Frances to get feedback from the committee on how they would like to participate. |
5. **Presentation from North Vancouver Community Association Network**

The North Vancouver Community Association Network (NVCAN) was formed less than a year ago, and is an umbrella organization of 17 community associations in the District of North Vancouver. It is also open to membership from community associations in the City of North Vancouver. The group is composed of directors, members with voting rights, and non-voting charter members. The group meets monthly to share issues and experiences. Recent priorities include concerns about traffic, especially along the Marine Drive corridor, and development. NVCAN is working with the planning department to limit the amount of development.

NVCAN can distribute any information that the NSWLC and its members would like to share to the community.

**Q:** Does NVCAN have a staff point of contact in the District?

**A:** There is not an official point of contact; NVCAN members would share potential contacts.

**Q:** How many people attend meetings?

**A:** Approximately 15-20 people attend each meeting.

---

6. **Recruitment of new City of North Vancouver representatives**

Heather Drugge has come to the end of her two-year term and has decided not to renew her position. In addition, Ian McMurdo has served on the committee for five years and will be stepping down.

**Action:** A recruitment process for new representatives will commence.

---

7. **West Vancouver updates**

a) **Ambleside boat launch:** A feasibility study is to be provide to council in June 2017, and until that time the boat launch remains closed. The Spirit Trail is being well used.

b) **Information bollards:** Information bollards about the port are being installed along the Spirit Trail in North Vancouver.

**Action:** Committee members requested that they have input into the information being conveyed on the bollards, and that the port consider installing bollards in West Vancouver because of how popular Ambleside Park is.

c) **First Narrows Marine Restricted Area:** The port authority will soon release the boundaries of a new Marine Restricted Area around the First Narrows. The MRA will exclude the Hollyburn Sailing Club and the waterfront at Ambleside Park. However, the port is unable to permit a boat launch under the Lions Gate Bridge and also unable to financially contribute to a District of West Vancouver boat launch.

d) **Information pamphlet for ships:** Frances distributed the information pamphlets provided to ships, which has information on reducing lights and noise to the minimum safe levels.
8. Project application for extension on Seaspan dry docks

Vancouver Dry Dock proposes to construct a three-storey, metal-clad addition to the rear of the existing heavy machine shop on site. The ground floor of the addition will provide a new store room and steel shop for welding personnel, second floor will be reserved as a staff lunchroom while the third floor will be used as offices for staff. The current office staff and lunch rooms are currently being accommodated in temporary work trailers in the existing employee parking lot on site and will be removed once the addition is completed and occupancy is obtained (approximately May 2018). This is a Category B application and is currently in pre-application review by the port authority.

9. North Shore community complaints

There have been two individuals who have made several complaints to the port authority recently. One complaint is to do with whistling noise from CN, which will be conveyed to the new community relations contact once she begins. The other complaint was about garbage in front of the Seaspan dry dock building; this has been forwarded to Jeff Taylor.

10. Committee correspondence

n/a

11. Any other business

Venue for next meeting: Committee Room, District of North Vancouver

12. Date of next meeting

6:00 pm – 8:00 pm, May 4, 2017
District of North Vancouver Municipal Hall

<table>
<thead>
<tr>
<th>Action</th>
<th>Lead</th>
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<tbody>
<tr>
<td>Neptune Terminal to get back to the committee with information about how much water is used a year, and how much of that water is recycled.</td>
<td>Lisa Dooling</td>
</tr>
<tr>
<td>Get feedback from the committee on how they would like to participate in Neptune’s community day</td>
<td>Frances Tang-Graham</td>
</tr>
<tr>
<td>Recruit for new CNV community representatives</td>
<td>Frances Tang-Graham</td>
</tr>
<tr>
<td>Find out about location of information bollards (West Vancouver?) and how NSWLC members can have input into the type of information being conveyed</td>
<td>Frances Tang-Graham</td>
</tr>
</tbody>
</table>

| Attendance |

**Guests**

- Babs Perowne, NVCAN
- John Miller, NVCAN
- Lisa Dooling, Neptune Terminal
- Dana Nielsen, Neptune Terminal
### City of North Vancouver:

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heather Drugge, Community Representative</td>
<td>Regrets</td>
</tr>
<tr>
<td>Ian McMurdo, Community Representative</td>
<td>In attendance</td>
</tr>
<tr>
<td>Larry Orr, Manager, Lands and Business Services, Community Development, City of North Vancouver</td>
<td>Regrets</td>
</tr>
</tbody>
</table>

### District of North Vancouver:

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Glen Webb, Community Representative</td>
<td>In attendance</td>
</tr>
<tr>
<td>Kathy Heise, Community Representative</td>
<td>In attendance</td>
</tr>
<tr>
<td>Charlene Grant, General Manager of Corporate Services, District of North Vancouver</td>
<td>In attendance</td>
</tr>
</tbody>
</table>

### District of West Vancouver:

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Evison, Community Representative</td>
<td>In attendance</td>
</tr>
<tr>
<td>Alex Tunner, Community Representative</td>
<td>In attendance</td>
</tr>
<tr>
<td>Kristi Merilees, Manager of Community Relations, District of West Vancouver</td>
<td>In attendance</td>
</tr>
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</table>

### Industry:

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeanette O’Brien, Western Stevedoring - Representing Wharf Operators Association</td>
<td>Regrets</td>
</tr>
<tr>
<td>Dave Lucas, Western Stevedoring - Representing Wharf Operators Association</td>
<td>In attendance</td>
</tr>
<tr>
<td>Ron Sander, Neptune Bulk Terminals Canada – representing North Shore Waterfront Industrial Association</td>
<td>Regrets</td>
</tr>
<tr>
<td>CN Representative</td>
<td>n/a</td>
</tr>
<tr>
<td>Jeff Taylor, Director, Communications and Public Relations, Seaspan</td>
<td>Regrets</td>
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</tbody>
</table>

### Vancouver Fraser Port Authority

<table>
<thead>
<tr>
<th>Name</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duncan Wilson, Vice President of Corporate Social Responsibility</td>
<td>Regrets</td>
</tr>
<tr>
<td>Frances Tang-Graham, Municipal and Community Engagement</td>
<td>In attendance</td>
</tr>
<tr>
<td>Naomi Horsford, Executive Municipal Liaison</td>
<td>Regrets</td>
</tr>
</tbody>
</table>
Appendix E - Tweets

Neptune Terminals
@neptuneTerminal

Provide feedback 'til March 17 on proposed upgrades to Neptune's dust suppression system (spray poles) bit.ly/2kurKjf #NorthVan

REPOST 1
3:21 PM - 6 Mar 2017

Retweet 1
3:21 PM - 6 Mar 2017

Retweet your reply

Visit our website to learn more about Neptune’s proposed dust suppression upgrades & share your thoughts. bit.ly/2kurKjf

REPOST 1
1:18 PM - 28 Feb 2017

Retweet 1
1:18 PM - 28 Feb 2017

Retweet your reply

Provide feedback 'til March 17 on proposed upgrades to Neptune's dust suppression system (spray poles) bit.ly/2kurKjf #NorthVan
Appendix F - Website Content

TERMINAL IMPROVEMENTS

Dust Suppression (Spray Pole) System Upgrade Project

As part of our efforts to continuously improve our environmental performance, Neptune has applied to the Vancouver Fraser Port Authority for a project permit to replace and upgrade our spray pole system. These spray poles are an integral component of the dust suppression system on our steelmaking coal pile. Our site currently has a series of 12 spray poles, which are strategically located to create a water curtain around the coal storage area.

The proposed upgrade would replace 10 wooden poles with 13 new steel poles containing more nozzles to improve the crushing of the coal piles. Five of the new poles would be 43.9 m in height and strategically located to optimize the water coverage of the coal pile – further preventing coal dust from leaving our terminal site. The other eight new poles would be the same height as our existing spray poles. To find out more, read our recent community update.

The project permit application is currently under review with the port authority. For information regarding the port authority's review of this project, please visit their project webpage.

If you have any comments or questions for the port authority contact Patrick Coates, Senior Planner, at patrick.coates@portvancouver.com.

Rendering photo of the new spray pole system from above Cloverly tennis courts.
Neptune Terminals to up coal dust suppression

BRENT RICHTER / NORTH SHORE NEWS
FEBRUARY 23, 2017 03:56 PM

A spray pole lays down a water curtain at Neptune Terminals’ metallurgical coal pile. The company is looking to install new, larger spray poles for dust suppression. photo supplied

Neptune Terminals is looking to install $6 million worth of infrastructure aimed at keeping more of its coal dust on site. The plan is for a series of new spray poles that create a “water curtain” around the metallurgical coal storage area.

“We’re always looking to do things better. Some of the poles need to be replaced so we’re replacing them with ... better poles for better coverage to prevent dust from leaving the site,” said Lisa Dooling, Neptune spokeswoman. “We know people don’t want coal dust in their yards or in their homes.”

A Metro Vancouver air quality study conducted in 2014 and 2015 did detect some coal particulate in the Moodyville neighbourhood uphill. Since that time, Neptune has spent about $300 million updating its terminal and adding export capacity.

Despite adding more spray poles, there will be less water used overall through better automation, Dooling said.

The project must still be approved by the Vancouver Fraser Port Authority. Members of the public are invited to comment on the project by email to ldooling@neptuneterminals.com. The review period ends March 17.