## Port Community Liaison Committee - Delta

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<tr>
<th><strong>Meeting:</strong></th>
<th><strong>#42</strong></th>
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<tbody>
<tr>
<td><strong>Date:</strong></td>
<td>Tuesday, March 13, 2018</td>
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</table>
| **Time:**    | Breakfast: 7:30 am – 8:00 am  
Meeting: 8:00 am – 10:00 am |
| **Location:**| Delta Community Office (5225A Ladner Trunk Road, Ladner)  
Located in the Trenant Park Shopping Centre next to Shoe Warehouse |
| **Facilitator/Chair:** | Michelle LeBaron |
| **Coordinator:** | Alycia Majorkiewicz-Ata |

### Members:
- **Community Representatives**
  - Leslie Abramson, Ladner
  - Roger Emsley, Tsawwassen
  - Mark Gordienko, Tsawwassen
  - Dennis McJunkin, North Delta
  - Frank Rogers, Tsawwassen
  - Patrick Thompson, Tsawwassen

### Attendees:
- **Organizations**
  - Greg Andrew, Westshore Terminals
  - Tom Awrey, Delta Chamber of Commerce
  - Tom Corsie, Vancouver Fraser Port Authority
  - Kate Hagmeier, Environmental Representative
  - Bernita Iversen, City of Delta
  - Andrea Jacobs, Tsawwassen First Nation

- **Vancouver Fraser Port Authority**
  - Gilles Assier, Director, Infrastructure Sustainability
  - Sarah Pilgrim, Delta Office Representative

- **Guest**
  - Ben Bisset, Tsawwassen First Nation
  - James Rourke, Hemmera

### Regrets:
- Marko Dekovic, Global Container Terminals
- Randy Johnstone, Ladner
- Robert McCandless, Tsawwassen
- Noel Roddick, Delta Farmers’ Institute (alternate)
- Gord Westlake, B.C. Rail Company
## Agenda item

### 1. Presentations

#### Tsawwassen First Nation Overview, Ben Bisset

- Tsawwassen First Nation (TFN) is part of the Coast Salish language group.
- Historically, TFN was a self-sufficient society and the nation is trying to get back to that way of life.
- The nation has a relatively young membership, with almost half of the membership under the age of 20. Just under half of the members live on Tsawwassen Lands and more than half live off Lands.
- After 14 years of negotiations, the treaty was ratified in 2007 and came into effect in 2009. The nation felt that the benefits of certainty outweighed the costs.
- The treaty provisions include a land claim settlement of the former reserve area, area around the reserve, Brunswick Point and other parcels of land. The treaty also provides law-making authority to TFN.
- To TFN, a key benefit of self-government is the ability to increase predictability related to their economic development and relations with external investors.
- Having a land use plan was a requirement as part of the treaty and to join Metro Vancouver. This is a guiding framework of development on TFN lands.
- TFN’s development approach is to prioritize municipal infrastructure pieces (i.e. sewer treatment plant, road network upgrades). Investment in basic infrastructure will help unlock potential growth opportunities.
- TFN’s commercial projects include Tsawwassen Mills and Tsawwassen Commons.
- Tsawwassen Mills was the largest real estate deal in British Columbia in 2014. Negotiations ensured that Tsawwassen artists’ work was included in the development – a direct benefit to TFN.
- Both Tsawwassen Mills and Tsawwassen Commons are on TFN-owned land, leased to a developer.
- Residential development at TFN is regulated by Tsawwassen Government. Under this governance, private land is owned in modified fee simple by Tsawwassen members, who have signed land development agreements with developers. At full build-out, there will be up to 8,000 new residents on Tsawwassen Lands.
- Three hundred acres of TFN land are zoned as industrial land; this is located on the northern side of the lands.
- The first 100 acres of industrial lands are fully leased out to five tenants and a sewage treatment plant. Tenants include Great West Life, Chevron card lock, CBSA’s container examination facility, Euro Asia and Bass Pro.
- Port-related business on the industrial land include CBSA’s container examination facility and Euro Asia.
- Two hundred acres of industrial land remain undeveloped. Marketing of this land has been temporarily paused. Given the scarcity of industrial land, TFN
wants to review the best way to maximize the value of those remaining lands for members. A review is underway on how best to move forward with use of this land.

**Q&A highlights**

- On TFN industrial lands, Great West Life have a large number of buildings to facilitate their real estate side of their business. Euro Asia is also a tenant with the port authority, with an additional 55 acres in Richmond. Euro Asia’s business focuses on exporting lumber and pulses through containers as well as freight forwarding and trucking.
- The empty lots on industrial zoned land is not site prepped yet. Land has been leased to farmers until the site is ready for development.
- TFN supports replacing the existing George Massey Tunnel. TFN shares the concern of Delta and other parties that the current tunnel is gridlocked and is a problem. TFN is interested in having this problem resolved.
- Although the traditional TFN territory includes Point Roberts, it is not included in the Treaty because it is part of the U.S.
- TFN has a 25-year tenure agreement with Delta farmers for Brunswick Point. Some of this land could be purchased by TFN; exercising this option would require public consultation with TFN members and non-TFN communities.
- TFN has environmental oversight of lands and is required to match or exceed provincial standards. A PCLC member observed that it is not always easy to assess whether the standards have been met or exceeded.
- The Treaty provides that TFN members living on and off Tsawwassen lands will elect the Tsawwassen legislature and chief. The Nation is transitioning to having an elected advisory committee comprised of residents, including non-TFN members. The nation also has its own property taxation authority, which ensures that non-member residents have representation in respect to setting residential property tax rates.

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**Biofilm dynamics during western sandpiper northward migration, James Rourke**

- Biofilm is a thin layer of photosynthetic plants, such as diatoms, known to be eaten by shorebird species.
- Roberts Bank provides 37-68% of the daily energy requirements for Western Sandpipers (WESA) during northward migration. The remainder of their diet consists of small invertebrates.
- The Fraser River is a major stop-over site for shorebirds. Migration occurs from approximately mid-April to mid-May, where shorebirds travel from wintering grounds located between California and Peru to breeding grounds in Alaska.
- There are roughly 6-10 major stopover sites located along the Pacific Coast (flyway) where they stop to refuel before continuing their journey northward.
- Birds store fat to fuel their migration, but not much is known about fatty acids in biofilm on which they feed. Recently, particular attention has been paid to omega 3 and 6 fatty acids (i.e. polyunsaturated fatty acids) in biofilm. It has been hypothesized that these are critically important to migrating sandpipers,
possibly because they have been given a lot of attention in the human diet.

- Recent SFU research has demonstrated that 95% of fats packed on by Western Sandpipers to fuel migration are saturated and monounsaturated fats, with omega 3 and 6 fatty acids making up less than 1% of stored fats.

- The objectives of these studies are to identify the suite of fatty acids present during WESA northward migration at Roberts Bank, to quantify fatty acid abundances and distributions, and investigate environmental factors influencing fatty acid abundance.

- Due to the annual spring freshet, which discharges large quantities of freshwater into the system, a natural salinity gradient is established, from freshwater dominated sites close to Canoe Passage (Fraser River) to more brackish/marine sites close to the Roberts Bank causeway. The size of the freshet can vary greatly, with peak discharges ranging between 500 $m^3/second$ to 8,500 $m^3/second$ among years during migration, and this can affect the salinity regime at Roberts Bank.

- For the study, seven monitoring stations were established across the salinity gradient. At each station the water column temperature, salinity and whether a site was inundated with tidal water or exposed to the sun was recorded every five minutes.

- Six surveys were completed to collect biofilm, which was then sent to Ryerson University.

- Findings revealed a diverse suite of fatty acids. Twenty-eight different fatty acids were found at all sites on every survey. It was also learned that fatty acids varied together (i.e. if one increased, generally all increased and if one decreased, they all decreased).

- The average biofilm found in Roberts Bank is made up of 39% saturated fats, 36% mono-unsaturated fats and 25% poly-unsaturated fats. This relationship was documented across Roberts Bank.

- Comparably high fatty acid abundances were found in the freshwater environment close to Canoe Passage compared to more marine sites close to the causeway. The lowest fatty acid levels were consistently found just south and west of the tip of Brunswick Point (at stations X and J on the map). This is likely a result of increased water velocity in this area, as is indicative of coarse, sandy sediments compared to the finer muds and silts found at the other sites.

- Saturated, monounsaturated, and polyunsaturated fatty acids were produced across the entire salinity gradient under all environmental conditions.

- The largest factor effecting the amount of fatty acids in biofilm at Roberts Banks was the amount of time the mudflats were exposed (i.e., not inundated), with longer periods of exposure being associated with higher fatty acid abundances. This applied to the amount of total fatty acids available, as well as the amount of saturated and monounsaturated fatty acids.

- Polyunsaturated fatty acid abundance was more influenced by water column salinity levels, with higher salinity levels associated with higher polyunsaturated fatty acid abundance. Across all sites polyunsaturated fatty acid abundance ranged from approximately 140 to 200 mg/m$^2$.

- The data shows that because fatty acids in biofilm are produced across the
salinity gradient it is likely that regardless of the size of the freshet, fatty acids are available to migrating sandpipers.

- Also, if we look at the distribution and abundance of Western Sandpipers at Roberts Bank during northward migration, they are seen intensively using both the freshwater dominated habitats close to Canoe Passage and marine/brackish habitats close to Brunswick Dyke. In fact, when we look at the areas of highest usage, we see that sandpipers actually use the freshwater areas more intensively than brackish marine areas. Research has shown it is physiologically more expensive for sandpipers to feed in areas with higher salinity because they consume more salt, which they have to spend energy processing to maintain their osmotic balance.

- Birds feeding in marine areas spend approximately 15% more energy processing and extruding salt compared to sandpipers feeding in freshwater environments. Therefore, since both freshwater and brackish/marine areas possess similar abundances of fatty acids, and freshwater sites are energetically less taxing, freshwater sites might be higher quality foraging sites compared to more brackish/marine locations.

**Q&A highlights**

- It is difficult to pinpoint which stop in WESA’s migratory travel is the most important feeding grounds. Biofilm has been most heavily researched at Roberts Bank; however, it is known to occur in other locations around the world and is likely a common component of estuaries.

- This particular study did not consider predation risk as a factor. There are additional studies that demonstrate that if predatory birds (i.e. falcons) are close to the shore, the area will be used less intensely by shorebirds, as the area is more dangerous (i.e. they don’t want to become prey). As an example, in a WESA usage map of Roberts Bank, the corner where Brunswick Dyke and the causeway meet was not used as intensely, despite having a high concentration of biofilm. This is likely due to greater danger in the area posed by hunting falcons that can use Brunswick Dyke and the causeway as cover to ambush foraging shorebirds.

- We don’t know the historic distribution of biofilm at Roberts Bank, however based on the current distribution, it is likely that it occurred in higher density within the intercauseway area before the ferry terminal and Roberts Bank causeway were constructed.

- There is still a lot to learn about shorebirds and concerns were shared should the findings presented be incorrect. The member also questioned why the presented findings differed from the message shared by Environment and Climate Change Canada (ECCC). It was explained that throughout the years of research, all the findings from the presented research are pointing in the same direction that the proposed Roberts Bank Terminal 2 (RBT2) project is not going to have a significant adverse effect on biofilm and therefore shorebirds. This research was not done in isolation and was done with other agencies, such as SFU and Ryerson University, who have independent viewpoints. There is much confidence in the findings.

- Concern was additionally raised that if there was a chance of risk, then the proposed RBT2 shouldn’t be considered. This is related to the precautionary
principal shared by ECCC. It was further explained that the research and the findings are not taken lightly by the researchers. There is additional confidence in knowing that the WESA have been using the Fraser River as a migratory stop for thousands of years, and biofilm and WESA are likely adapted to the dynamic environment associated with the natural freshet regime, which changes annually.

- The proposed RBT2 plans call for construction of the pod five kilometres off shore, which would not impact the shorebirds feeding areas. Construction plans purposely reflect building a terminal as far from the shore as possible. From other’s research, the most dangerous areas for shorebirds from predators is approximately 300 metres from shore. Should a terminal be built in the Roberts Bank area, it should not change the way that the birds would use the area.
- Majority of the biofilm research has been done at Roberts Bank and less is known concerning biofilm distribution and abundance in other areas of the estuary. Areas off Westham Island are intensively used by WESA and it likely contains high biofilm levels. It is likely that biofilm in Boundary Bay occurs in lower density since it’s isolated from the seasonal freshet outflows from the Fraser River.
- There was concern raised for potential impacts to juvenile salmon, herring, crab, sturgeon, etc., which was beyond the scope of the presented research.
- A question was asked about the possibility of creating additional biofilm habitat if the RBT2 project was built. It was explained that biofilm habitat enhancement adjacent to the terminal is planned in areas where conditions are expected to be suitable.
- Japan is the only place where biofilm habitat is known to have been created/developed. Studies show that biofilm occurs along coastal environments where the conditions are right. At this time, our knowledge of biofilm’s distribution across North America is limited.
- After looking at all perspectives, evidence, and scientific findings, it is the role of the panel to make the final decision about building RBT2. The panel draws on information from others and seeks clarification on materials. As such, the panel has been asking for feedback from ECCC in addition to other organizations. The recent letter sent by ECCC was in response to the panel’s request. The port authority has also been actively engaging and answering information requests from the panel and looks forward to working together with ECCC and other federal agencies on the items that have been raised.
- The port authority has a data sharing agreement with ECCC. The port authority has advanced knowledge in the area of biofilm and shorebirds and has done multiple years of studies. Regardless if the terminal project is approved or not, studies conducted as part of the RBT2 project have greatly increased our understanding of biofilm ecology in estuarine environments.

### Proposed Roberts Bank Terminal 2 Project update, Gilles Assier

- The panel is still in the process of going through the first pass of the Environmental Impact Statement. The Port Authority has responded to over 220 of 311 questions from the panel. The port authority is expecting additional
questions from the panel in April as part of an information request package.

- Once the panel finishes this first pass, they may ask more questions or move to the next step in the process – a full public hearing. This may occur late in the fall or next year.
- The panel can summon anyone to answer their questions.
- A new panel manager has been appointed. Her role is to help manage the environmental assessment process.
- As a result of engagement with Aboriginal groups, including TFN, further examination of an intermediate transfer pit (ITP) resulted in its removal from the project components.
- A mutual benefits agreement has been signed with Tseycum and the port authority continues to engage and follow-up with concerns with other First Nations.
- In the near future, the port authority is planning a community benefits discussion with TFN and the City of Delta.

2. General Business

2.1 Delta Optimist outreach, Patrick Thompson

Patrick and Bernita asked PCLC members for ideas for an upcoming submission. Patrick will email the committee of shortlist of ideas.

3. Correspondence

3.1 Community - General & PCLC email, Alycia Majorkiewicz- Ata

Since the last meeting, there were no Delta-related complaints sent through the port authority’s feedback line. There was one email related to noise forwarded from the City of Delta to the PCLC inbox. The respondent did not connect further with the PCLC or give additional details.

4. Reports

4.1 Port update, Tom Corsie

Discussions about water and sewage at the Deltaport Truck Staging Area are still in process. Currently, plans for the staging area include bathroom services, but not running water. The Delta police chief and fire department have not identified any issues with the current plan. Delta has voiced concerns about the visual impacts of the site.

The plan for the shore power installation at GCT Deltaport has been delayed. To complete some of the works, the contractor requires the terminal to turn off all power, and this can happen only one or twice a year. The terminal will shut down all power over Labour Day to facilitate these works.
Amendments to the Port Information Guide related to the Fraser River (TCZ-4) are intended to identify safe areas for pleasure use. The provisions encourage paddling as close to the river shoreline as is safe and practical; paddlers are asked to cross the channel only if necessary and when not impeding larger vessels. A PCLC member shared concerns about leisure navigation from the Share the Fraser Coalition. Another PCLC member said that it would have been beneficial to receive confirmation that their email comments on these issues had been received. Clarification of the amendments will be issued in April and will be shared with the PCLC.

On March 12, the federal government issued notice that they intend to conduct a review of the Canada Port Authorities. It has been approximately 20 years since the Canada Marine Act has been reviewed and the Vancouver Fraser Port Authority is supportive of this review.

### Committee member enquiries, Tom Corsie

**Q&A highlights**

Follow-up questions about the increased security at the end of Brunswick Point were deferred to the next committee meeting, when Gord Westlake will be present.

### Delta office report, Tanya Hawke

Recent topics of interest to office visitors have included the purpose of the Delta office, port-related projects occurring in Delta (shore power, truck staging, Tsawwassen Container Examination Facility) and interest in touring port facilities. Many also asked about automation at the proposed Roberts Bank Terminal 2 project.

As part of the Speaker Series, PCLC member, Gord Westlake, will present “Let’s talk trains” on March 15.

### New Business

#### Assistance to the Mission to Seafarers, Tanya Hawke

The Delta Community Office received an immediate request in December from the Mission to Seafarers for winter coats. Through messages to colleagues and family networks, the Delta office was able to collect and donate more than 50 coats. This is not an ongoing initiative.

This effort completed the committee’s endeavours to support the Mission to Seafarers.
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<th>Agenda Ref #</th>
<th>Action Item</th>
<th>Responsible</th>
<th>Due Date</th>
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<tr>
<td>41</td>
<td>4.1</td>
<td>Share a copy of the biofilm presentation by a port authority consultant in November 2017.</td>
<td>Alycia</td>
<td>Complete</td>
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<td>41</td>
<td>5.2</td>
<td>Discussion on potential ways to support the Mission to Seafarers and whether PCLC or the Delta office should be involved in this.</td>
<td>Michelle</td>
<td>Complete</td>
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<td>40</td>
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<td>Presentation to PCLC regarding ECHO Program vessel Slowdown Trial once results have been received.</td>
<td>Alycia M.</td>
<td>Future meeting</td>
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<td>35</td>
<td>2.2</td>
<td>Provide formal presentation on salinity study and next steps.</td>
<td>Leisa L.</td>
<td>Future meeting</td>
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<tr>
<td>33</td>
<td>4.1</td>
<td>Presentation to PCLC regarding the Fraser River including the port’s jurisdiction and long-term strategies.</td>
<td>Ram C.</td>
<td>Future meeting</td>
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