

November 6, 2013

Issues, Comments, Questions and Metro Vancouver Responses

Public Meeting *Summary*

Thursday, October 10, 2013, 6:00 – 9:00 p.m.
Norgate Community Elementary School
1295 Sowden Street, North Vancouver, BC



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1. Call to Order

Marie Griggs, Manager, Public Involvement, Metro Vancouver (MV) called the meeting to order at 6:40 p.m. and welcomed members of the public (approximately 50) to the Lions Gate Secondary Wastewater Treatment Plant (LGSWWTP) public meeting.

Ms. Griggs introduced Darrell Mussatto, Mayor of the City of North Vancouver, Director on the MV Board and Chair of the MV Utilities Committee that provides political oversight of the work that will be presented during the meeting.

2. Opening Remarks

Director Mussatto thanked the members of the public for their attendance and welcomed them to the meeting. Director Mussatto introduced District of West Vancouver Councillor Bill Soprovich and acknowledged that the meeting is being held on First Nations' traditional territories.

Director Mussatto noted that after fifty years of service, the time has come to replace the LGSWWTP and provided a reminder of some key features of the new regional facility that will be discussed during the evening:

- Being planned by MV in cooperation with the three North Shore municipalities
- MV is actively seeking funding support from the federal and provincial governments
- The LGSWWTP will be built on the former BC Rail site
- The LGSWWTP will be built to meet the new federal and provincial requirements for a secondary level of wastewater treatment by the end of 2020
- Commitment was made to build the LGSWWTP in MV's Integrated Liquid Waste and Resources Management Plan (ILWRMP) that was approved by the BC Minister of Environment in May 2011
- The existing Lions Gate Wastewater Treatment Plant will be decommissioned and the land will be returned to the Squamish First Nation, however the outfall will remain in its current location under the Lions Gate Bridge
- Consultation and business case work performed to date to arrive at the indicative design that best meets the needs of the North Shore and the region.

The purpose of the meeting will be to seek public feedback on the Indicative Design that has been selected. The Indicative Design will be presented at the November 7, 2013 MV Utilities Committee meeting for consideration and recommendation to the MV Board on Nov 15, 2013. The MV Board will be making a decision on the indicative design in preparation for funding applications.

The public will be provided with additional opportunities for input during the Design and Construction Phase when it commences however, the public meeting is the last major public event before the Indicative Design is finalized and presented to the MV Board.

Director Mussatto introduced members of the Lions Gate Public Advisory Committee (LG PAC) and acknowledged their efforts on behalf of the community. The MV staff and the consultant team were also thanked for their hard work on this project and for addressing the concerns of the community.

3. Agenda Review

Ms. Griggs reviewed the agenda and the meeting objectives to:

- Inform participants about the project
- Receive feedback on the Project Definition.

Ms. Griggs introduced MV staff and consultants present and advised that MV will be making a video recording of the meeting.

4. Process Review

Fred Nenner, Manager, Policy Planning, Analysis and WWTP Upgrade, MV provided a presentation titled “Process Overview” during which he highlighted:

- Secondary treatment requirement
- Location of new plant site
- Key project objectives
- Overall project timeline
- Approach utilized to select indicative design
- Project Definition phase will be completed by the end of 2013
- The six year Design and Construction phase will commence in 2014
- The old plant will be decommissioned in 2020
- Decision-making processes underway:
 - Indicative design
 - Project funding
 - Cost allocation.

5. Consultation Process and Community Values

Ms. Griggs provided a presentation titled “Consultation Process and Community Values” during which she highlighted:

- Overview of consultation process
- Stakeholders engaged during the consultation process
- Themes of the community input received during the consultation process
- An air quality monitoring station will be built shortly at the new site to gather baseline information and will be integrated into the plant to provide ongoing monitoring during operation
- Incorporation of public input into the decision-making process on the Indicative Design.

6. Lions Gate Public Advisory Committee (LGPAC)

Christine Banham, Chair, LGPAC reviewed the process undertaken by the LGPAC in the development of the Indicative Design:

- Mandate and role of the LGPAC that commenced in June 2012
- Through meetings, workshops and presentations, community values have been discovered by the LGPAC that have helped to shape the direction for an indicative design for the LGSWWTP
- Process has been mutually informative, iterative and transparent

- Open discussion regarding key issues and concerns have been provided to the MV team that have been incorporated into the Indicative Design
- MV has been responsive in providing additional information as requested and addressing questions and concerns expressed by the LGPAC
- Topics covered during meetings included issues from sewage treatment to structured decision-making processes
- There are eighteen members, mostly North Shore residents, with a variety of perspectives and expertise
- Report to present to the MV Utilities Committee is being prepared for consideration at the November 2013 meeting that will summarize the concerns, issues and expectations with respect to the LGSWWTP and will provide guidance and advice to MV for respecting and incorporating community values as it moves forward to the next phase
- The LGPAC attempted to reach consensus on issues but is committed to presenting a balanced view if consensus cannot be reached
- Involvement of LGPAC in the Design and Construction phase.

Diana Sollner, Vice-Chair, LGPAC provided a presentation during which she highlighted:

- Study tour of four modern wastewater treatment plants in Washington State:
 - Lighthouse Point, Blaine; Brightwater Centre; Edmonds; LOTT Alliance, Olympia.
- The plant in Olympia most closely resembles the LGSWWTP in terms of size and nature:
 - Focus on clean reclaimed water
 - Pursued active partnerships early
 - Engages entire community
 - Pedestrian-oriented facilities
 - Functioning community satellite treatment centres
 - Key learning is that engaging people and timing are important
- Top five insights from the study tour:
 - Control odour and emissions were not an issue
 - Monitoring automation saves money
 - Future proof for tertiary treatment
 - Create community partnerships early on
 - Develop satellite stations in neighbourhood
- Key general community issues raised with the LGPAC and that will be presented to the MV Utilities Committee:
 - Maintain flexibility to accommodate future changes in technology and regulatory standards
 - Include partnerships with other organizations when developing concepts for integrating the project into the surrounding area
 - Potential partnership opportunities could include MacKay Creek rehabilitation, District of North Vancouver regarding the public lands at the foot of Pemberton Avenue, tertiary educational institutions for establishing a research centre of excellence and school boards for educational programs on water use, wastewater management and source control
 - Good regional health and safety
 - Prudent use of taxpayers' money
 - Equitable project funding

- Mitigating environmental impacts from the project
- Mitigating impacts adjacent businesses in addition to the residential areas
- Specific Norgate community concerns:
 - Odour issues appear to have been addressed but would like assurances from the MV Utilities Committee and the Board that odour control will not be sacrificed or compromised if funding or budget constraints arise
 - Noise reflected from the concrete massing and transmitted through the Philip Avenue noise funnel to the neighbourhood
 - Truck traffic will be restricted to daytime hours and not be significantly increased from the volumes at the existing facility due to the decision not to process food and yard waste at the LGSWWTP
 - Biggest impact will be during construction and this will be discussed during the Design and Construction phase
 - Construction concerns include vibration from pile driving or foundation preparation, noise, dust, air quality from diesel equipment use, construction operating hours, road closures and risk assessment and mitigation plans.

7. Indicative Design – Layout and Function

Rick Bitcon, AECOM provided a presentation titled “Indicative Design – Plant Layout and Function” during which he highlighted:

- Liquid treatment and solids management processes selected
- Plant layout
- Integrated resource recovery elements
- Odour control system including biotowers and activated carbon.

8. Indicative Design – Design

Scott Wolf, Miller Hull Partnership provided a presentation titled “Indicative Design – Design and Circulation” during which he highlighted:

- Site context
- Work with the District of North Vancouver regarding the design of the urban remnant at the foot of Pemberton Avenue
- Site and circulation plans
- Massing diagram
- Strategies to minimize the scale of the plant along West First Street
- Visualizations of the current indicative design.

9. Cost and Procurement

Mr. Nenner provided a presentation titled “Project Delivery Update” during which he highlighted:

- Approximate project cost is \$500 – \$700 million
- Federal funding programs:
 - Build Canada Fund
 - P3 Canada

- P3 assessment business case process
- Three project delivery alternatives considered:
 - Design-Bid Build (DBB)
 - Design-Build finance (DB(f))
 - Design-Build-Finance-Operate-Maintain (DBFOM)
- Financial modelling to assess value for money of a P3 arrangement
- DB(f) and DBFOM delivery models resulted in a lower NPV than the DBB model
- The MV Utilities Committee has recommended that a sub-committee be struck to review the procurement options analysis.

10. Roundtable Discussion and Report Back, Flipchart Notes and Workbook Responses

Ms. Griggs asked the table groups to discuss the six questions contained in the workbooks, record their responses in the workbooks and to leave the workbooks at the table at the end of the meeting. Facilitators assisted each table with the discussions.

The following section document the verbal feedback, notes gathered on flipcharts, in participant workbooks and responses using electronic key pads providing real-time results.

Question 1 – Does the Indicative Design respond to community values?

The table groups reported back on their discussions:

- Generally felt that it did respond to community values except for value for money because there is not enough information about that
- The land could be used for other things as well and that was not really addressed
- Concerns were addressed from a design perspective
- The people and activity areas have a strong community integration
- It is a sewage treatment plant facility first and the other amenities will have a cost to them
- Noise, odour and traffic issues have been addressed in the design
- Very happy with green space, berm, noise buffer
- Good transition between residential and industrial
- Happy that there was quite a bit of work put into the plan
- Educational opportunities available
- Might be a good idea to see the scenario of the possibility of greenhouses on the roof planned and cost
- Plant design is okay
- Concerned about taxes and costs
- The revenue from energy seems unreliable
- Idea of having revenue coming into the community for hosting the plant should be explored
- Generally complied with the concerns that have been brought forward by the community
- Looks like a world class facility from the renderings
- The true value will be in the follow up particularly related to the odour control and sound.

The meeting participants used electronic key pads to respond to question 1 with the following results:

- Strongly agree – 13%
- Agree – 65%
- Neither agree nor disagree – 9%
- Somewhat agree – 13%
- Do not agree at all – 0%

Flipchart Transcripts for question 1:

Flipchart Notes:
<ul style="list-style-type: none">• Value for money - want to have data/ratepayer cost• Design meets requirement for amenities (e.g. school education)
Flipchart Notes:
<ul style="list-style-type: none">• Generally good job relating to community values
<ul style="list-style-type: none">• Reasonable and considered<ul style="list-style-type: none">○ People activity areas○ Strong community integration• It's a sewage treatment facility first<ul style="list-style-type: none">○ cost of other amenities• Priority: noise, odour traffic
<ul style="list-style-type: none">• Taxes, <u>Cost</u>, Energy<ul style="list-style-type: none">○ Room for improvement○ Revenue<ul style="list-style-type: none">– Rooftop, commercial uses– Energy opportunity○ Does respond○ Gain from the cost○ Size
<ul style="list-style-type: none">• If the performance targets are met, then yes• Yes, if the education programs are developed• Cautious/reluctant agreement given that the plant has been imposed
<ul style="list-style-type: none">• Values as shown are acceptable• Want to see follow through especially on odour and sound control

Workbook Responses for question 1:

Strongly Agree	Agree	Neither Agree nor Disagree	Somewhat Agree	Do Not Agree at All	Total Respondents
4	7	2	2	0	15
<p>Is there anything missing?</p> <ul style="list-style-type: none"> • So far unknown, the values are correct • Should also address construction noise • Involve Norgate School directly • Engage federal government • Unable to access “good value for money” since no comparable data (from other like facilities) were provided • Greenhouse roof • Would like a facility that could integrate community activity at the site more • Costs relating to taxes • Possible greenhouses? • Generally it has been very well addressed • Community concern • Looks like a world class facility • Well addressed 					

Question 2 – Does the Indicative Design address potential community impacts?

The table groups reported back on their discussions:

- Needed to have a discussion around the trade-offs if funding was not received for the budget so that we would know what the impacts would be
- As it stands, it is agreeable but what would happen if we did not receive all the funding?
- Glad you took so much effort around odour
- Concerned about construction noise, especially pile driving and heavy equipment use at night
- Hope that you address this through a regular daytime construction scenario
- Shifting the plant around to use the space on the south side and to provide a little more green space on the north side was likely influenced by the community
- Reduces noise from rail
- Visually positive compared to old sewage treatment plants
- Community involvement helped to develop a better design
- What can plant withstand in terms of climate change and the possibility of high tides and floods?
- Happy to hear that odour monitoring will be done to establish a baseline before the plant goes into operation

- The monitoring should not be done on site as that is not where the odour problem will occur
- Odour problems will occur in the residential areas and one option is to have the odour monitoring done at the school to bring in the educational component and incorporate it into lesson planning in science for Grade 5, 6 or 7
- Climate change impacts such as GHG have not been discussed
- No discussion to control the GHG from the natural gas burners or the carbon from the plant itself
- Some measure of using the plant as a focus in terms of having a large commitment from MV in terms of managing GHGs
- Concerned with the Impact of the cost to taxpayers and the value of all the architectural components
- Would it be a major savings if the architectural components were excluded and could it be treated as a separate item?
- Has there been analysis of similar plants throughout the world and comparison with the cost model being reviewed to this point?
- Everything seems to be an improvement
- Would like to get the school involved in helping with the design of the artistic treatment around the building
- Liked the idea of sensors being placed at the school and part of a science project
- If the District of North Vancouver (DNV) cannot keep Pemberton Avenue and First Street from flooding, how are they going to keep water out of the plant once it is built?
- Want to see follow-up on community impacts
- Concern with impacts of construction, primarily noise and dust
- Would construction be during the day only?

The meeting participants used electronic key pads to respond to question 2 with the following results:

- Strongly agree – 4%
- Agree – 54%
- Neither agree nor disagree – 17%
- Somewhat agree – 25%
- Do not agree at all – 0%

Flipchart Transcripts for question 2:

Flipchart Notes:
<ul style="list-style-type: none"> ● 2 monitoring stations for emissions to look at current emissions for Lions Gate
<ul style="list-style-type: none"> ● Odour appears to be addressed ● Pile driving impact concerns
<ul style="list-style-type: none"> ● Positives <ul style="list-style-type: none"> ○ 1 – Shifting use of space south which accentuates green space ○ 2 – Tall side against rail yard ○ 3 – Reduced and 1 way truck traffic ○ 4 – Odour control ○ 5 – Visually positive ○ 6 – Gated entrance
<ul style="list-style-type: none"> ● Climate Change Impacts <ul style="list-style-type: none"> ○ Climate control? <ul style="list-style-type: none"> – Impact on the environment ○ Energy neutral? ○ Agree odour control, aesthetics ○ What is the impact to community? ● Neither agree nor disagree
<ul style="list-style-type: none"> ● Concern about size and scale ● Tennis courts ● Buffering is a benefit ● What is the dollars for the look ● Recreation potential of the flat area ● Case studies of similar size and scale ● Increase in taxes
<ul style="list-style-type: none"> ● Yes ● Looks good ● Seems to be an improvement
<ul style="list-style-type: none"> ● Impacts are identified ● Want to see follow up ● Concerned about construction process <ul style="list-style-type: none"> ○ What are the impacts ○ Will it be only during the day?

Question 3 – As Metro Vancouver considers the project cost and the project delivery method, do you have any comments at this time?

Flipchart Transcripts:

Flipchart Notes:
<ul style="list-style-type: none"> • Would like to know different impacts of cost scenarios • What are the trade-offs (e.g. what would be lost?) • What would go first?
<ul style="list-style-type: none"> • Can we trust the cost models • P3 offers more realistic/accountable costs <ul style="list-style-type: none"> ○ See drinking water tunnel projects ○ DBB not a good model • Should be cheaper • Big issue federal funding
<ul style="list-style-type: none"> • Question re P3 • Get funding commitment first • P3 “carrot” is attractive but is there a risk e.g. public space, etc./amenities • P3 loss of control?? • Cost control and responsibility
<ul style="list-style-type: none"> • Need more information on business case analysis <ul style="list-style-type: none"> ○ “Value for money” • Consider how this could be revenue producing • Should be way to reduce costs
<ul style="list-style-type: none"> • Pick a plan and stick to it • Not fully understood • Isn’t it too late to switch to a P3 based on the design progress?
<ul style="list-style-type: none"> • Not sure understand the costing <ul style="list-style-type: none"> ○ How much input does the community have if the procurement method is a Public-Private-Partnership? ○ Does Metro Vancouver lose control over the operations in a P3 process? ○ Would the new operator be as responsive to community concerns? ○ Would finance offset a private operator? ○ Concerned that the tertiary option for treatment was removed prematurely ○ Should we go beyond required regulatory treatment?

Workbook Responses for question 3:

Strongly Agree	Agree	Neither Agree nor Disagree	Somewhat Agree	Do Not Agree at All	Total Respondents
4	8	2	1	0	15
<p>Is there anything missing?</p> <ul style="list-style-type: none"> • It sounds like odour control is addressed • Not sure how sea level rise is addressed • Odour monitoring great idea – why only on site? How about in community or at the school – couple in education? Norgate School really needs this type of support for S&T (science/tech) teaching. • Construction phase – vibration and noise • It does not address potential loss of a “higher use” of land income (taxes) to DNV • Greenhouse roof? • Cost to taxpayers/value of greed, space compared to simple plant. • Costs to taxpayers has not been addressed at all. Again some scenarios are probably doable. • Pile driving and construction noise needs to be addressed 					

Workbook Responses for question 3:

Resp. No.	Comments
1.	How do the alternative finance options impact accountability and community input?
2.	Not enough info to decide
3.	Not as appealing
4.	<p>“\$500 million to \$700 million to construct (in 2018 dollars)” – unknown value in today’s dollars – unless unstated assumptions are made known (e.g. assumed inflation for project)</p> <p>“Future decisions....along with other factors” – what for example?</p> <p>“Currently, all member municipalities.....upgrading regional wastewater treatment facilities” – not in past?</p> <p>“A long-standing cost allocation” – how long?</p> <p>“The utility fees....wastewater treatment will increase” – when? (before or after completion) – user pay principle?</p> <p>Base-line air quality being gathered (at which sites?)</p> <p>Notwithstanding certain current business practices, I feel uncomfortable with \$500 - \$700m estimate being given in 2018 dollars. The economic recovery is still fragile and thus costs in 2018 MAY be quite different. The sharing of costs with other Metro municipalities, is in my opinion, not a given. It is my understanding that the North Shore did not share costs with Metro for like facilities in the past. This uncertainty is troubling to me. Generally taxpayers are hesitant to write a blank cheque! Phasing of increased taxes to pay for the facility should be fair and equitable. Tax increases should flow in line with actual or imminent benefits.</p> <p>Inflows?</p> <p>“320MLD wet weather capacity” – what is projected overflow expected incident rate and how does anticipated climate change impact this? We don’t want to repeat past errors relating to overflows.</p>
5.	To ensure continued involvement of the community, DBB model might be the most feasible
6.	Good job
7.	P P Partnership could be problematic – A P3 might not have the right fit for community – loss of control of final project, of cost control, maintenance and risk
8.	Would rather that private industry doesn’t get involved. Taxpayer could lose some control in the long run – loss of some amenities
9.	Revenue producing?
10.	\$500 – \$700. We need scenarios of what will be traded off if funding goals are not met
11.	I prefer a model that reduces risk to taxpayers

Resp. No.	Comments
12.	The cost is justified when compared to the amount of water (160,000 m ³) that will be treated at present and will accommodate to 250,000 m ³ in the year 2050.
13.	P3 represents best option for cost containment over length of build period. P3 is most accountable framework. Slightly higher overall cost but better cost control.

Question 4 – How satisfied are you with the manner in which Metro Vancouver is gathering public feedback?

Flipchart Notes:
<ul style="list-style-type: none"> • Political engagement lacking • Public engagement generally good • Would prefer more involvement and guidance from local government (e.g. DNV)
<ul style="list-style-type: none"> • Supportive of process • Good case study • “Proof in pudding” – results look good • Transparent
<ul style="list-style-type: none"> • Handled well/satisfactory • Complex technology • Needs overall vision • Has been put to community in fair manner • Public requires trust, complex
<ul style="list-style-type: none"> • Add a Google Earth link to the MV website to easily understand context • Metro does a good job at reaching/telegraphing updates to community
<ul style="list-style-type: none"> • No one has come door to door • You have to go to Metro Vancouver to find out information • They don’t go to us

Workbook Responses for question 4:

Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Somewhat Satisfied	Not Satisfied at All	Total Respondents
4	9	0	1	1	15
<p>How else could Metro Vancouver seek public feedback on the Lions Gate Secondary Wastewater Treatment Plant (LGSWWTP) project?</p> <ul style="list-style-type: none"> • Almost everything I have heard is via Norgate Community (Arlene King) • Well done • I am satisfied!!! • Very transparent • An exhaustive Q/A should be available on the relevant website. • Update website for status on a regular basis • It appears to be transparent • Radio talk show? (I hate them but lots listen and make comments however they (listeners and commenter's) may not be educated / knowledgeable on the details. • Excellent presentation with easy to follow slides and graphics. Well done! • The project can be discussed in short with students in school at different levels; elementary schools, high school and colleges • Bring the political leadership into engaging the public 					

Question 5 – Based on your experience at meetings/workshops, is it clear to you how public feedback may impact the project?

Flipchart Notes:
<ul style="list-style-type: none"> • Public Feedback Influenced Project <ul style="list-style-type: none"> ○ Building setback ○ We hope so, but may not know for sure ○ Possible priority for odour, traffic ○ Air Quality monitoring
<ul style="list-style-type: none"> • Not clear • Somewhat clear • Should have direct response
<ul style="list-style-type: none"> • The perception is that nothing happens..... • Email/website feedback seems to go into a black hole • More acknowledgement of feedback needed

Workbook Responses for question 5:

Very Clear	Clear	Neither Clear nor Unclear	Somewhat Clear	Not Clear at All	Total Respondents
3	5	4	1	0	15
<p>How could Metro Vancouver increase understanding about the impact of public feedback?</p> <ul style="list-style-type: none"> • Hard to see the link between suggestions and results/decisions. • Weather station – available • Include extensive list of Q/A on website would confirm important issues have been addressed. • Online feedback and questions are not being considered perhaps! At least this is the perception. • Diana Sollner’s presentation – good presentation of issues presented on behalf of residents • Financial support and odour prevention are not tied – see question • I feel well informed about the project and the project appears to reflect the community values. • The public ideas only comes through the people who have knowledge and experience with sewage water treatments 					

Question 6 – Do you have any further comments on the effectiveness of the engagement process?

Workbook Responses for question 6:

Resp. No.	Comments
1.	My interest is in accountability. If the plant smells, if it is noisy, how is that to be addressed? I need to know that it will be addressed, not just discussed. I'm thinking <u>significant</u> penalties payable directly to residents.
2.	Well done
3.	Need information to be discussed well (about 2 weeks) before this meeting (and be informed by email of its availability)
4.	Explain how the delivery method will impact the "finished product" and how the community's input might be impacted by, for example, a P3 method.
5.	Great presentation
6.	It has been effective
7.	It has given all interested a good opportunity. I myself have noted that several of my concerns and requests have been responded to by the next meeting e.g. sightlines from the street view (excellent) and how our feedback is processed.
8.	It is fairly good
Total responses: 8	

11. Closing Remarks

Director Mussatto thanked the members of the public for attending and providing their feedback. He reminded the participants to hand in their feedback workbooks. The online survey will be available at www.metrovancouver.org/lionsgate until October 17, 2013. A summary of the proceedings of the public meeting will also be posted on the MV website.

Director Mussatto welcomed members of the public to attend the open session of the MV Utilities Committee and Board meeting where the Indicative Design for the LGSWWTP will be discussed and decided.

The public meeting concluded at 9:00 p.m.

12. Issues, Comments, Questions

The following table summarizes MV's responses to questions and concerns provided by attendees, throughout the workshop, organized by topic:

Issue, Comment, Question	MV Response
Sensory Impacts – Odour	
What odour will be emitted from the plant?	MV has placed a high priority on dealing with odour. There will be two levels of containment for odours on the site. All of the tanks will be covered. The air will be extracted and taken to an odour control system. Additionally, there will be another level of containment on top of the tanks. Everything will have two levels of containment and it will go to a two-stage odour control system. The capital cost of the odour control system is in the order of \$30 million. It is a big investment on the part of MV. As a result, you will not be able to smell odours from the plant.
Are there any other plants in the world that are similar to this and are in operation at the moment?	It will be similar to the plants that were part of the study tour.
	There were four plants visited during the study tour to WA state. One plant that we visited had some odours and the other three did not have any odours at all. All the plants, except for one, visually and odour wise, you could not tell it was a sewage treatment plant.
Did you consider the main direction of the wind in terms of where the odour may travel?	We did odour modelling and took the wind direction into account over a several year period.
If it is going to be an odourless system, what is the air monitoring system intended to detect?	The community told us at the very beginning of the consultation process that there is a sensitivity in the neighbourhood about any additional air emissions. Because of that sensitivity, we will do some baseline data collection of the existing air quality now and then track the air quality during the actual building and operation of the plant.
	A weather station will be included on the site. The data from the weather system will be used in the detailed design for the odour control system for the plant. The plan is to have the weather station installed in 2014.

Sensory Impacts – Odour	
When will the technical specifications for the odour control system be available?	The technical documentation on the indicative design will be available by the end of 2013.
How does this odour control system compare to the one at Annacis?	It is completely different from the Annacis facility. The design of the Annacis facility had open tankage and did not have an extensive odour control system throughout the plant. The LGSWWTP is a completely covered facility with complete containment and collection of all the odorous air, including the cleaning and scrubbing of the odorous air through the two-stage odour control system that was described earlier. All the foul air is purified prior to any discharge.
Will all the material handling be enclosed as well?	Yes.
	As you heard earlier from the LGPAC members, there were examples where they personally saw the technology that is being described.
Sensory Impacts – Visual	
The design is great. You did a really good job of trying to minimize the impact to the neighbourhood. It looks far better than I expected it would. Your visualizations did not include the new Philip Street overpass. Will it hide the plant looking from the west?	The overpass is a separate project and will come over the track at 13 metres. We think that the structure of the overpass will fit well with industrial, intensive end of the plant. That was one of the drivers to focus the intensive end at the west end of the site.
Will the solid structure of the overpass block a lot of the west side of the plant?	That is correct.
Sensory Impacts – Noise	
What site remediation will be required in the construction or pre-construction, particularly the need for extensive pile driving?	The treatment plant is required by the Building Code to be built to post disaster facility standards. The building must be able to survive a fairly significant earthquake. It will, in all likelihood, require a significant strong piled foundation. Foundation and installation methodology will be considered during the detailed design phase.

Futureproofing	
<p>What is the projected possibility of overflow expected or incident rates? I am worried that climate change will impact inflows.</p>	<p>We took an extensive look at the long-term flows in terms of wet weather and infiltration and inflow from the sewer system. Through the liquid waste plan, there were a lot of actions directed to MV and the municipalities on inflow and infiltration management in the sewer system. There will be a tightening up of the sewer system in the decades ahead. We feel fairly comfortable that the 320ml/d level for wet weather will be within a level that will prevent overflows in the long term. It can also be managed by storage tanks and elimination at the source through the inflow and infiltration reduction programs.</p>
<p>Was part of the decision on the design a compromise and was part of the purpose of the compromise financial? What ideas were left on the table for future consideration?</p>	<p>We selected the best technologies in terms of providing flexibility for the future as well as the best technologies for long-term operating costs and rate stability. There was a trade-off made and a decision made on the idea of bringing together food waste with the materials from solid waste and liquid waste. There was not a good business case for this. The food waste and yard waste is best dealt with for energy production in separate facilities.</p>
<p>Is the tertiary plant option completely off the table at this point?</p>	<p>The technology that we looked at in one of the build scenarios would provide a more polished effluent (tertiary treatment). It was almost double the cost in terms of capital investment and operating costs. It is not needed for effluent discharge at this time. The technology that we have selected allows for future proofing should regulations or environmental needs change. We can go to higher technologies with this design.</p>
<p>What is the capacity of the project? Have you considered the rapid increase in population in the future?</p>	<p>The project is looking out for 80 years to 2100. The population projections show an increase from 200,000 to 300,000 people on the North Shore. The design incorporates an upgrade at 2050 for a process change but no new tank build would be required.</p>

Futureproofing	
<p>During the roundtable discussion, there was a concern expressed about whether the Indicative Design addresses climate change and sea level rise.</p>	<p>The elevation of the existing plant is at about three metres and the LGSWWTP will generally be built up to the four metre level but all equipment within the plant is above an elevation of six metres. The information from the Province is that an elevation six will account for sea level rise for the remainder of the century for the highest king tide, wind surge effect during that high king tide and for tsunami effect, wave run-up and free-board.</p>
Environmental Impacts	
<p>During the roundtable discussion, there was a concern expressed about whether the indicative design controls the greenhouse gas (GHG) emissions from the plant.</p>	<p>One of the criteria in the business casing and the review of the three build scenarios was the GHG profile of the various technologies. The one selected has the lowest GHG profile. The energy from the combustion of biogas is green energy. As we will not be using fossil fuels, it offsets about one-half of the electricity requirements for the treatment plant.</p>
<p>There have been reports that there is heavy contamination on the site. Can you comment on that and what you plan to do about it?</p>	<p>It is an old industrial site. It was a rail site that was purchased from BC Rail Properties with a certificate of compliance from the Ministry of Environment. BC Rail did a lot of clean up on the site. There are minor pockets of contamination that will have to be dealt with during site excavation if they are encountered.</p>
Integrated Resource Recovery – Energy	
<p>There are a number of developments to the north that will be coming on, such as the Capilano Village Centre. Is the plan to have the district energy heat capacity come on stream and on line at the same time as the plant begins operation?</p>	<p>There is a lot of energy available in the effluent in the form of low-grade energy available through heat pumps. The initial plant build includes the space for facilities to extract that heat. In the future, when the plant is running in 2021, there will be plenty of energy to also serve new district energy systems. We just need to find a place to extract the energy and provide it to those new systems.</p>

Integrated Resource Recovery – Energy	
Will that capacity be on stream at the time of the completion of the plant? That decision will affect a lot of the proposed developments further north that are potential customers for that energy but they need the certainty of the energy source for heating.	The new plant and the effluent will be available in 2021. Temporary boilers can be set up by a district energy utility to supply a system until it is up and running in 2021.
Community Impacts – Construction	
When can we expect the next phase and the site remediation to occur?	If the Board approves the Indicative Design, we will be moving to the Design and Construction Phase when the Project Definition Phase is completed. The work can start in 2014.
We were impacted by the extensive pile driving during the construction of the new Trade and Convention Centre. The noise travelled across the water and this is much closer. Will you be using the same technology on this site?	It will have to be determined as part of the foundation design.
What is the timeline that you have built in overage in terms of the length of time to complete the construction beyond 2020? Is there a penalty that could be enforced if it is not completed by 2020?	We are allowing seven years for the Design and Construction Phase. This is considered adequate to deliver the project by the regulatory deadline of the end of 2020.
	We will continue the consultation process. When we commence the design and we have more information on what the construction entails, we will be back working with the community so that you will fully understand the implications of the design proposed.
Project Delivery – Procurement Options	
Which of these methods do you want to use and which do you think you will end up with because you will need to cut corners?	The three different contracting methods are not about cutting corners. They are different ways of getting the project delivered. The big difference is in one there is a long-term operating component. They can all be delivered within the six-year time period. They have implications in terms of the potential grant programs and the business cases.

Site Selection	
Will the primary treatment continue to be done on the old site?	Once the LGSWWTP is in operation, it will provide primary and secondary treatment. The old plant will be deconstructed and decommissioned entirely.
Project Cost	
Will decommissioning the old plant add to the overall cost of the project, over and above the \$500 to \$700 million?	The decommissioning of the existing plant is included in the LGSWWTP budget.
During the roundtable discussion, there were concerns expressed about the Individual cost to the taxpayer of the indicative design.	MV is working through the process to determine cost. It will be highly dependent upon the partnership of the provincial and federal governments and the level of involvement. You will see an increase in your sewage utility but we do not have enough information yet to know the degree of the increase.
	In the New Year, as we continue the consultation process and more information becomes available to us, we will be sharing that with you.

Reference Material Distributed

1. Agenda for Public Meeting – October 10, 2013 (Orbit No. 7934222)
2. Lions Gate Secondary Wastewater Treatment Plant Workbook (Orbit No. 7913381)