LIONS GATE SECONDARY Wastewater Treatment Plant

September 22, 2013

Issues, Comments, Questions and Metro Vancouver Responses

Local Business Meeting

Summary

Wednesday, September 18, 2013, 4:30 – 6:30 p.m.
iDance Studio
#219 – 1305 Welch Street, North Vancouver, BC

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SERVICES AND SOLUTIONS FOR A LIVABLE REGION

TABLE OF CONTENTS

1. Opening Remarks

Marie Griggs, Public Involvement (PI) Manager, Metro Vancouver (MV) called the meeting to order at 4:52 p.m. and welcomed the local business members to the Local Business Meeting (meeting) for the Lions Gate Secondary Wastewater Treatment Plant (LGSWWTP). Consultations have been ongoing since March 2012 on the project. MV recognizes that Norgate residents and local businesses are a high priority in terms of engagement as it is the closest community to the new plant site. The input provided during the meeting and over the next two months will be very helpful in finalizing the Indicative Design and will become part of the political and public review process that will occur during the fall of 2013.

Ms. Griggs provided a presentation during which she highlighted:

- Overview of the consultation process
- Political decision process for regional facilities
- Political review of Indicative design and procurement options and scheduled meeting dates
- Public review of Indicative Design and procurement options and scheduled meeting dates
- Survey posted on the MV website.

2. Agenda Review

Andrea Winkler, Policy Coordinator (PI), MV, reviewed the agenda, introduced the Metro Vancouver resources present and led a roundtable of introductions of the meeting participants.

3. Lions Gate Public Advisory Committee (LGPAC) Presentation on Study Tour

Jan Timmer, LGPAC member, provided a presentation during which he reviewed the tour in June, 2013 of four modern wastewater treatment facilities in Washington State, and offered the following comments:

- The tour of four distinct plants was very informative
- Clean and/or reclaimed water were the terms used at all the plants; sewage was rarely mentioned
- Top insights about all four plants:
  - No odours were detectable in all but the oldest of the plants toured
  - Automation of monitoring saves operating costs
  - Future proofing for tertiary treatment in the event that regulations change and to allow the water to be used for different purposes
  - Create community partnerships early
  - Develop satellite stations in neighbourhoods.
- Lighthouse Point, Blaine:
  - Located on the water in a park on a peninsula with a small footprint
  - Works well: “Cute”; excellent fit in the park; shell fish habitat restored
  - Concerns: All major mechanical equipment below high water mark; dam planks retaining wall already leaking.

- Brightwater Center, Seattle:
  - Very large vehicle-oriented plant which has a significant energy requirement and impressive level of automation; a park was created by restoring the habitat around the plant and an education centre was built (however programming was not integrated at outset)
  - Works well: Superb odour control; automated monitoring; junkyards became restored wetlands
  - Concerns: Extremely expensive (e.g., odour control works very well but the cost was $70 million); over-engineered; distant from community; delayed education component.

- LOTT Alliance, Olympia:
  - A pedestrian-oriented plant, LOTT undertook significant efforts to engage the community including an education centre, a multi-use building, and a children's water museum
  - Works well: Focus on clean reclaimed water; pursued active partnerships early on; engages entire community; pedestrian-oriented facilities; functioning community satellite treatment centres
  - Concerns: People and timing are critical to bringing the project together.
- Edmonds:
  - Next door to a residential area, this twenty-year-old site incorporates a mini-park that is used by the community; the plant uses incineration and large open ponds that emit odours occasionally
  - Works well: Pride in keeping costs low; pleasant mini-park
  - Concerns: Open tanks emit odours during maintenance; reactive.

4. Project Process – Evolution of Current Design

Laurie Ford, Senior Engineer, MV provided a presentation during which she highlighted:

- Build Scenario B – one of three potential build scenarios that was presented at the Public Meeting in April 2013 – fared the best during the evaluation of the three scenarios and will form the basis of the indicative design that is currently being developed
- Elements from Scenario B to be included in the indicative design concept:
  - Secondary treatment
  - Discharge to existing outfall
  - Digestion on site (sewage only)
  - Biosolids sent off site for beneficial use
  - Energy recovery
  - Odour control system.
- Elements from Build Scenario B that will not be included in the indicative design concept:
  - Food waste imported to site
  - Thermal reduction of solids.

- Odour control strategy components:
  - Equipment containment
  - Foul air treatment and dispersion of treated air
  - Redundant covers over access hatches.
- Odour monitoring equipment is currently being tested at existing plants
- Chemical storage and use
  - Sodium hypochlorite, commonly known as liquid bleach, will be used and stored safely on-site
  - Chlorine gas will not be used on this site.
- Energy recovery for district energy

5. Site Amenities and Urban Design Opportunities

Matthew Woodruff, Matthew Woodruff Architecture advised that site amenities and urban design opportunities are currently being considered. Mr. Woodruff provided a presentation during which he highlighted community context, public art, interior and exterior public space development, the opportunity to use the property at the foot of Pemberton to increase community integration, and plant functions.

Mr. Woodruff posed three questions to the participants:

- How might the project affect your community along First Street?
- How might a public space at the foot of Pemberton Avenue affect your community?
- What uses for the plant rooftop space would best strengthen your community?

7. Evaluation of Consultation Process

Ms. Winkler requested that the meeting participants complete and submit the evaluation forms on the consultation process. The scheduling of separate meetings for business representatives is the result of feedback received in April 2013. The feedback received will assist in the design of the next two phases of the consultation process.

8. Public Meeting

Ms. Winkler advised that a public meeting has been scheduled for October 10, 2013 from 6:00 p.m. to 9:00 p.m. at the Norgate Elementary School. Information on the indicative design, cost and funding will be provided and discussed at the public meeting.

Ms. Griggs encouraged the local business members to attend the public meeting to share their perspectives, issues and concerns with the residents. Elected officials will be in attendance at the public meeting to hear the public perspective.

9. Wrap-Up

Ms. Winkler thanked participants for their time and valuable contribution. The local business meeting concluded at 6:18 p.m.

10. 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
Comparable Sites	
Did any of the plant owners or operators of the wastewater treatment plant sites visited in Washington State solicit feedback from the community regarding odour, impact on property values, noise, etc. after the plant was built?	There was a lot of discussion with the operators during the tour about the effects of the plant, both financially and operationally, on the community. All of the comments seemed to be extremely positive.
What is the odour control system for the Brightwater plant?	The odour control system at Brightwater has three stages: biological scrubber; chemical scrubber; and an activated carbon unit. They have those three units in a series. It is a very conservative design. Sometimes only one stage is required and sometimes two stages. The Brightwater plant uses an approach with an extra level on top of that.
How does the carbon get recharged? Do they ship it off site or do they handle it on site?	The carbon is generally shipped off site for disposal.
IRR - Biogas	
Will you be pumping the heat down to First Street and Fell Avenue or will this be a separate situation?	The plans are not fully developed at this time. The idea would be to extract the heat at the site and then to send it east if it were to go to the Lonsdale Energy Corporation (LEC). The District of North Vancouver (DNV) is also interested in using some of the heat for the Lower Capilano Marine Village Centre. It is not designed, at this point in time, but it would make sense to do some of the high-grade heat extraction at the site.
Will energy recovery be designed to tie into existing and new infrastructure in North Vancouver?	The Lonsdale Energy Corporation have expressed interest in connecting because there is a node at Harbourside (First Street and Fell Avenue) and that would be the closest node.

IRR - Biogas	
Will there be a net energy benefit for the district energy heating application?	There is a lot of energy available in the effluent heat. If we were able to harness that for district energy, then it would be net energy positive relative to the amount that we are using.
What is the energy consumption of the plant?	This is being finalized, but based on numbers from June 2013, there is 27 megawatts (MW) of energy available in the effluent heat and we are looking at the unit that using approximately 5 MW. We were looking at a system that consumes approximately 105,000 gigajoules per year net positive with energy recovery.
Location	
Where would the outfall be located?	The plant will use the existing outfall under the Lions Gate Bridge.
Will Metro Vancouver be twinning the pipe that is coming in?	We will likely re-purpose the interceptor that runs to the west of the current plant. We will need one new effluent line to get to the outfall. One line will have to be constructed.
Will the port and rail activity be impacted by the location of the new effluent line?	The effluent line will be located north of the railway tracks, along First Street. A new railway will be required.
Traffic and Parking Impacts	
Why would you use trucks to remove biosolids from the site when you can load them onto the railcars that are next to the plant?	We do not have storage capacity for biosolids on the site and we would need to get it to the railway whenever the rail option has been looked at, we have found that the quantities have been too small and the rail logistics are extensive in terms of moving the material to the interior of BC for more reclamation.
Will there be sufficient public parking to accommodate the meeting space?	There is parking in three locations. There are 20 parking stalls for staff, visitors and a bus drop off. There is parallel parking in place on both sides of First Street. The combined parking capacity would accommodate approximately 50 cars.
I am torn about creating a destination in an industrial area where tractor-trailers are speeding by. I am reluctant about drawing young children here.	This issue of it being a destination consistently comes up. The way that we envision it is, because through education outreach, classes of schoolchildren will visit, but it is not a picnic or water park destination.

Traffic Impacts	
Traffic calming is a very touchy subject in this area. When the Spirit Trail was put in, the first thought was to put it along Welch Street. This building only has access from Welch Street. They bumped out the intersection at Pemberton and we have 18-wheelers that come through here and it is hard enough to make it through. We are still running businesses here and traffic calming is all right but within limitations. A 52-foot trailer with a tractor cannot get around traffic circles.	Comment noted.
Wastewater Treatment	
Would the water feature use water that has undergone secondary treatment only?	The water used in the water feature is the rendering tertiary treated water. We are looking at reclaimed water for use inside the plant for plant processing purposes, for some water features and for any business cases that make sense for offsetting drinking water with the neighbouring industries.
What is the definition of tertiary treatment? What percentage water on the site will be treated this way?	There is extra filtration after secondary treatment. Less than 5% would be subject to tertiary treatment.
Community Integration	
Will there be a water feature on the site?	We are looking at a number of strategies at the east end of the site. There is a water feature being contemplated at this time.
How much space will be allotted to the administration building?	The building footprint is 4,000 to 5,000 square feet. There is 1,000 – 1,500 square feet that is potentially available for ground floor public meeting space. This opportunity arises because the flood elevations do not allow for critical equipment to be placed on the ground floor.
Community Integration	
Will there be greenery or some other aesthetic treatment around the digesters?	We are looking into planting a row of tulip trees that would have the potential to grow to screen the digesters from view. The de-watering building is a tall structure that would be clad in some material that will not be of an industrial character but is more polished.

Odour Control	
Is there a possibility to include a grow wall to make the building more aesthetically pleasing?	There are two types of grow walls. One is where it is vertically planted, with plants actually on the wall. Those have a poor survival rate and require a lot of maintenance. We are looking at the potential for climbing plants, which give greenery and have a much higher success rate. We are looking for a species that will be successful but will not be too invasive.
What type of architectural treatment will you be considering for the south side of the plant, which is also light industrial?	In terms of design, we are paying equal attention to the south side. The south side of the plant has a different character because of truck access and the railway. The railway is limiting some of the opportunities for planting. However, we are looking very carefully at the massing and breaking down the apparent mass of that wall with materials and colours rather than with berms, which we are able to do on the north side. We will be looking into some climbing plants and perhaps localized areas of tree planting.
Will the south (industrial) side receive equal treatment for odour control as the north (community) side of the site?	Odour control will be all around the plant and there is no differentiation between the areas from an odour control perspective.
Community Integration	
Could the rooftop space be an opportunity for a restaurant?	There may be some possibility but there are some problems with unfettered public access to the rooftop because it is an operating industrial facility. The trouble with rooftop restaurants is that they have to be so well known to be a draw to justify going up four storeys. We are contemplating installing a roof deck on the administration building for a public viewing area.
I would like to see a local business opportunity there such as growing organics for local restaurants on the rooftop.	There are opportunities for the private sector to partner with government. On opportunities like this for the use of the roof space. This will be considered between now and when the plant is finished in 2020.

Reference Material Distributed to Workshop Participants

1. Agenda for Local Business Meeting – September 18, 2013 (Orbit No. 7755855)

2. Lions Gate Secondary Wastewater Treatment Plant Feedback Form (Orbit No. 7788795)

Attendance

LGPAC Members: Christine Banham, Jan Timmer

Metro Vancouver Resources: Raman Bhangu (MV), Paul Dufault (MV) Laurie Ford (MV), Marie Griggs (MV), Jaspal Marwah (MV), Fred Nenninger (MV), Andrea Winkler (MV), Matthew Woodruff (Matthew Woodruff Architecture)

Recording Secretary: Carol Lee, Raincoast Ventures Ltd.