

**BURNS BOG ECOLOGICAL CONSERVANCY AREA
SCIENTIFIC ADVISORY PANEL MEETING
Monday, February 1 2010 from 4:30 – 7:30 PM
Parks West Area Office, #130 – 1200 West 73rd, Vancouver BC**

MEETING NOTES

ATTENDEES:

Paul Whitfield, Scientific Advisory Panel
Allan Dakin, Scientific Advisory Panel
Dr. Richard Hebda, Scientific Advisory Panel
Angela Danyluk, Corporation of Delta
Sarah Howie, Corporation of Delta
Cassandra Counce, BC Ministry of Environment
Ilja Tromp-van Meerveld
Christina Hendry
Chair, Mitch Sokalski, Metro Vancouver Regional Parks
Greg Paris, Metro Vancouver Regional Parks
Markus Merkens, Metro Vancouver Regional Parks
Loger Aure, Metro Vancouver Regional Parks
Wendy Warn, Metro Vancouver Regional Park
Heather Sinclair, Metro Vancouver Regional Parks

REGRETS:

Dr. Hamish Kimmins, Scientific Advisory Panel
Dr. John Jeglum, Scientific Advisory Panel
Jennifer McGuire, BC Ministry of Environment
Mike Brotherston, Corporation of Delta
Barry Smith, Ministry of Environment

1.0 INTRODUCTIONS

2.0 REVIEW AGENDA & NOV. 17 2009 MEETING NOTES

3.0 ACTION ITEMS FROM LAST MEETING

- 3.1 Metro Vancouver staff will work with SAP and Angela Danyluk to create the information package to go to Delta Council.
Workshop postponed until further notice from Corporation of Delta.
- 3.2 Metro Vancouver staff will extend an invitation to the City of Vancouver engineers working on the landfill capping to discuss the issues with SAP at a future meeting.
Carried forward.
- 3.3 Richard will respond positively to Real Roy and pass on the contact information for Mats Nilsson as well as recommend reading to augment his knowledge of Bogs while working with Real to further refine the proposed study. Proposal will be developed in the future.
Richard, Paul, John, and Sarah met with Real to discuss possible areas of study and provided him with papers as background material; a more concrete conversation will be the next step. There is no timeline in place as yet, but Allan notes this area of study may be very valuable and will require funding.
- 3.4 Markus and Sarah will draft a lagg design proposal and present it to the SAP for review prior to submission to Matcon.

See item 7.0.

- 3.5 Metro Vancouver will follow up with Gateway as soon as possible to try to get further information and arrange an in-person meeting to follow up on the issues.

Carried forward.

- 3.6 Wendy will have two samplers constructed for MV/Delta. Wendy to hold equipment and return to John.

Two samplers have been ordered rather than having fabricated at Lake City Operations Centre.

4.0 LIDAR DATA ANALYSIS

- Allows for estimate of tree canopy in the BBECA
- Could be used to determine direction of water flow, which could be used to plan ditch blocking
- The LiDAR data contrasted the natural dendritic bog drainage structure with the linear artificial drainage systems created by human disturbance of the Bog
- The data showed once again that the northern boundary of the BBECA is the area of highest concern due to low-lying bog surface
- Paul stated he is in the process of buying three telemetric dataloggers to measure water levels, which will cost approximately \$12,000-\$14,000 each

5.0 BBECA CHEMISTRY MONITORING PRESENTATION

- See Attachment 1
- Richard noted that there appears to be a localized contamination at site 07-24 that would account for the unexpected readings at that site; he noted that there was a dump site of waste in the area a number of years ago
- Richard also raised the question of whether there might be long-term, cumulative effects from the landfill
- Allan pointed out that accurate readings are difficult to obtain at very low concentrations and that this might account for the apparent lack of correlation between variables in the winter readings

6.0 SAND PILES WEST OF HIGHWAY 91

- Two piles of left-over preloading material from the building of Highway 91 have been identified as being on BBECA land
- Angela brought them to the attention of the SAP for discussion regarding potential for extraction
- It would be possible to hold onto this as a potential future compensation project for Gateway
- The primary issue that Delta wanted SAP's input on was the impact of the piles versus the impact of their potential removal
- Richard stated his opinion that removal of the piles would be highly disruptive and would have to be weighed against any negative impact the piles might be having
- It was agreed that the piles were likely comprised of sterile, uncontaminated river sand, in which case they might not have a significant detrimental effect; Mike and Angela took samples from the site but they have not yet been analyzed
- The question was raised of what the piles were dumped on, and whether they might be used to study compression
- Richard again stated that he did not feel that it was worthwhile to spend the money on this project and have the vehicles in the Bog that would be necessary to complete this work, that there are more important projects requiring funds

- Richard also noted that it would never be possible to remove all of the material as doing so would create a depression that would turn into a pond
- Allan expressed his agreement, and suggested this could be used as a future study site; if there is a problem with the piles, it would be better to put a barrier around them and mitigate effluent than try to remove them
- Paul agreed and noted it would be very interesting to study chemistry in the area as an example of what effect fill for the South Fraser Perimeter Road may have on the Bog; Gateway has stated that they are using clean fill that won't degrade, and these piles might provide an opportunity to study the impact of study similar fill

7.0 PRINCESS FARMS RESTORATION UPDATE

- See Attachment 2
- More data are required, especially peat profile information, to determine the ideal layout of the proposed 320-metre series of lagg ponds
- Allan noted the need to stipulate that the ditch on the Princess Farms property be continually maintained by the owners to avoid overflow into the Bog as silt will gradually fill the ditch
- Paul added that the water level in the ditch also needs to be controlled to avoid it drawing water out of the Bog during the dry season
- Richard suggested that the face of the berm on the Bog side be lined with peat to help to seal the berm over time, and that a Bog species-centred planting be developed on the top
- Richard also noted that this site could be an opportunity to try a variety of remediation techniques
- In response to Mitch's question regarding the time-frame of the project, Markus indicated that the next several months would be used to collect data and the work would commence in the summer when conditions are dry enough for the necessary machinery to operate in the Bog

8.0 RESEARCH STRATEGY UPDATE

- See Attachment 3
- Comments regarding the research strategy must be received by Markus by February 15, 2010
- Mitch noted that this strategy is fuelling preparations for the 2011 budget to prime the argument for funding
- The research, data management, and communications budgets have yet to be determined and are not included in this draft of the document

ACTION: Markus will distribute the Draft Research Strategy electronically in both Word and pdf versions for comment. – Completed February 2, 2010

9.0 ROAD ACCESS IN BBECA

- At the recent BBECA Operations meeting, recommendations for maintaining or decommissioning access routes were discussed
- Staff will monitor and attempt to control invasive species, such as Japanese knotweed
- There will be no vehicle access during the high fire season
- In the updated access designations, most trails previously rated for ATV use have been downgraded to pedestrian access only; surfacing has deteriorated as the roads are sinking and the water table is rising

- Delta Fire has agreed to these changes; they believe there is less risk of fire in these areas due to high water table, and that if there were a fire in this area it would be fought from the air
- Delta Fire does want continued vehicle access at 96th street
- 96th could be used as a fire break test block
- 72nd also requires full vehicle access to allow for upgrades to the repeater
- Wendy suggested contacting BC Hydro because the set-up of lines in the area has the potential to electrocute birds, which are a fire hazard; apparently such an incident was witnessed on one occasion by someone at the Bog
- 80th requires full vehicle access; however, the two spurs off of 80th might be deactivated in the long-term
- Richard raised the issue of a contaminated dump site located along 80th and suggested in the long term to remove the refuse; currently water flows through the fill and carries the contaminants across the road
- Markus suggested that an inventory be created of all known contaminated sites within the Bog to allow prioritization of projects based on ecological consequences
- Allan noted that there is no need to remove roads for water flow; any removal would be more for the purpose of eliminating contaminants

10.0 NORTHERN BOUNDARY DRAINAGE MANAGEMENT UPDATE

- Metro Vancouver wants to manage water flows with step weirs and control flow into the East-West ditch from the Bog
- There is a need to address overland flow of runoff mineral water and minimize the amount flowing into the East-West ditch
- Using a Triangulated Irregular Network (TIN) map will allow the Bog to be modelled in 3-D form rather than cross-sectional
- Loger noted that he would like to use this technology to identify additional monitoring sites
- Greg communicated that Gateway has provided ditch cross-sections which are geo-referenced; the cross-sections from EBA are not geo-referenced and elevations are approximate
- Richard asked whether Gateway had provided their water balance model to Metro Vancouver yet; Greg replied that it had not been received
- Greg agreed with Richard that a model needs to be in place for this type of work
- Sarah stated that the model was complete and she had seen it, but that her understanding was that it had not yet been shared extensively
- Allan asked how the model could possibly be finished without the elevation data, to which Cassandra replied that she believed they have the elevations because she has seen the detailed elevation model that they have produced
- Cassandra asked which way the water runs in the railway ditch, to which Greg replied that Gateway says there are backflow preventers, so all water in this ditch runs north
- Mitch inquired of Sarah whether she could invite representatives of Gateway to the next SAP meeting

ACTION: Sarah will invite Gateway representatives to the next SAP meeting to present the Water Balance Model to the Panel.

- Allan asked whether MV staff know exactly what is being measured at Gateway's various research sites in the Bog

ACTION: Metro Vancouver will follow up with Golder and Associates and EBA Environmental regarding exactly what they are measuring in the northern boundary area

11.0 MEETING ADJOURNED