

**REGIONAL DISTRICT OF NANAIMO**  
**SUSTAINABILITY SELECT COMMITTEE**  
**WEDNESDAY, JANUARY 16, 2013**  
**2:00 PM**

*(RDN Committee Room)*

**A G E N D A**

**PAGES**

**CALL TO ORDER**

**DELEGATIONS**

**MINUTES**

- 3 - 8                    Minutes of the Regular Meeting of the Drinking Water and Watershed Protection Technical Advisory Committee held on Thursday December 13, 2012.
- 9 - 11                   Minutes of the Sustainability Select Committee meeting held on Wednesday October 17, 2012.

**BUSINESS ARISING FROM THE MINUTES**

**COMMUNICATIONS/CORRESPONDENCE**

**UNFINISHED BUSINESS**

**REPORTS**

- Annual Review 2012: Green Building Incentive Program (Verbal).
- 12 - 15                   Community Charging Infrastructure Planning Project Review and Update.
- Community Energy Association – Honourable Mention for MOA (Verbal).
- 16 - 22                   Carbon Neutral Operations - 2012.
- Green Building Speaker Series and Open House Tours (Verbal).

Distribution: J. Stanhope (Chair), A. McPherson, H. Houle, M. Young, B. Veenhof, B. Dempsey, J. Kipp, D. Brennan, M. Lefebvre, D. Willie, P. Thorkelsson, P. Thompson, C. Midgley, M. Donnelly, N.Hewitt

J. Fell

For information only: G. Holme, J. Ruttan, B. Bestwick, D. Johnstone, T. Greves, G. Anderson, M. Brown, T. Graff, F. Manson, J. Hill, T. Nohr, L. Burgoyne, Matt O'Halloran

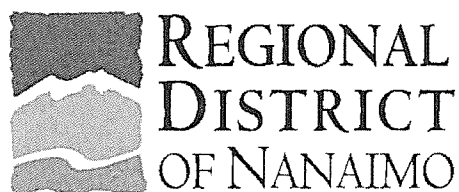
**ADDENDUM**

**BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS**

**NEW BUSINESS**

**ADJOURNMENT**

**IN CAMERA**



**MINUTES OF THE REGULAR MEETING OF THE  
DRINKING WATER AND WATERSHED PROTECTION  
TECHNICAL ADVISORY COMMITTEE  
HELD ON THURSDAY, DECEMBER 13, 2012 AT 12:30 PM**

**Present:**

Mike Donnelly, CHAIR .....	Manager, Water Services, RDN
Chloe Fox.....	Islands Trust Representative
Mike Jessen .....	General Public Representative (North)
Gilles Wendling .....	General Public Representative (South)
Lynne Magee.....	Vancouver Island Health Authority
Pat Lapcevic .....	Ministry of Forests, Lands and Natural Resource Operations
Faye Smith.....	Environment Community Representative
Ken Epps.....	Forest Industry Representative
Oliver Brandes.....	Academic Community Representative
Alan Gilchrist.....	Academic Community Representative (VIU)
Maury Scott.....	Special Projects Assistant, RDN
Mike Squire .....	City of Parksville / Program Manager, Arrowsmith Water Service
Bill Sims .....	Manager, Water Resources, City of Nanaimo
Jacek Scibek .....	SRK Consulting
Fred Spears .....	Director of Public Works, District of Lantzville
Domenico Iannidinardo .....	Forest Industry Representative

**Also In Attendance:**

Christina Metherall .....	Drinking Water and Watershed Protection Coordinator, RDN
Julie Pisani.....	Special Projects Assistant, RDN
Matt Skinner .....	Waterline Resources
Darren David .....	Hydrogeologist, Waterline Resources
Paul Thompson .....	Manager, Long Range Planning, RDN
Ting Pan .....	Sustainability Coordinator, RDN
Shelly Norum .....	Wastewater Program Coordinator, RDN
Craig Sutherland .....	Kerr Wood Leidal
Paul Chapman .....	Nanaimo and Area Land Trust
Morgan Kenneh .....	Island Timberlands Representative
Sean De Pol .....	Manager, Wastewater Services, RDN

**Regrets:**

Bob Wylie.....	Ministry of Transportation and Infrastructure
Shelley Bayne.....	Hydrogeology Representative
Al Magnan.....	Fisheries and Oceans Canada Representative
Rosie Barlak.....	Registered Professional Biologist Representative
Leon Cake.....	Water Purveyors' Representative

## **CALL TO ORDER**

M. Donnelly called the meeting to order at 12:35 pm.

## **DELEGATIONS**

## **MINUTES**

MOVED G. Wendling, SECONDED B. Sims second that the minutes from the regular meeting of the Drinking Water and Watershed Protection Advisory Committee held July 25, 2012 be adopted. CARRIED

## **BUSINESS ARISING FROM MINUTES**

## **COMMUNICATIONS/CORRESPONDENCE**

## **UNFINISHED BUSINESS**

## **REPORTS**

### **Gabriola, Mudge, Decourcey Water Budget Project Results (J. Scibek)**

J. Scibek gave a PowerPoint presentation on the results of the *Gabriola, Mudge, and Decourcey Island Water Budget Project*. This presentation covered: a review of the available information, an overview of the analysis process, and a discussion of the results of the analysis. J. Scibek noted that the report is still in draft stage and has to go through the final review process. J. Scibek also noted that the report was written with the goal of avoiding overly technical information in the body of the report to make it accessible to any interested parties. The technical information has instead been included in the appendices section of the report.

J. Scibek commented on the problematic nature of trying to use the well log records as a source of data. It was problematic because not all well logs contain the same quality of information. J. Scibek noted that the well logs for Gabriola Island were generally of low quality and contained limited information. This resulted in only being able to look at the well logs very generally, not being able to draw accurate cross-sections, and being limited to mostly surficial geologic information.

J. Scibek also noted that groundwater discharge was not specifically calculated. Discharge can be inferred from the remainder of the total available water after the recharge and demand values have been calculated. This was done because there are few small surface water features and no measurement gauges. It was also done because they were unable to measure the amount of groundwater that is discharged to the sea below the surface.

J. Scibek commented that the residential water use questionnaire provided a great deal of useful information. While the surveys provide good information the results may be biased to the consumers on the lower end of the scale, because typically those who participate in voluntary surveys are those who are actively involved in more conservative water use practices.

J. Scibek discussed the general findings of the Water Budget Project. Overall Gabriola Island has high aquifer demand around the coastal sections and low demand in the middle areas of the island. This reflects the settlement pattern. The water budget for each of the identified water regions on Gabriola Island were calculated and showed that there were areas on the island which become stressed in the dry summer months; however, the recharge rates in the remainder of the year was sufficient to replenish the supply. In regards to the water table; variations in height were minor and ranged from 2-4 meters, following a very seasonal and repetitive pattern.

G. Wendling commented on the recommendations outlined by J. Scibek. He noted that there was no recommendation for monitoring water quality and salinity close to shore and believes this could be done easily and cheaply. J. Scibek responded that water quality was outside the scope of this project; however, he did note that he had recommended that awareness of salt water intrusion be increased. J. Scibek also commented that a deep well, drilled close to the shore could confirm assumptions about the thickness of the freshwater lens and would be a very important element to add to the analysis. At this time there is only data relating to the presence of salt water intrusion in wells.

J. Scibek noted that it was difficult to get information on well screens in the well logs for Gabriola. P. Lapcevic commented that the lack of screen information is due mostly to the fact that screens are not installed by the well drillers in the bedrock wells on the island. The wells are usually drilled until they get enough water, therefore, the last 5 to 10 feet of the well is in the bedrock where the water is coming from.

P. Lapcevic asked, in regards to the Gabriola residential water use questionnaire, if there was a comparison of water source usage in the various areas. This was referring to the percentage of usage between groundwater, rainwater, and water deliveries. C. Metherall replied that the survey did look at the percentages which the various water sources were utilized; however, the results are analyzed at the sub-watershed level and do not examine the coast areas separately. P. Lapcevic responded that those properties around the shore may be the first ones to move to sources other than ground water.

C. Metherall asked if there were areas where water deficits were calculated. J. Scibek responded that there were only a few areas where a deficit was calculated; however, this was only seen during the driest months and the aquifers recovered during the following wet periods.

M. Jessen commented that the number of observation wells on Gabriola Island was impressive, especially since the number is equal to that of the entire Englishman River area. He asked if the water quality information is collected from the observation wells. J. Scibek answered that he wasn't sure if this was still happening at the observation wells but there is a lot of water quality information from other sources available (primarily residential wells). J. Scibek also noted that not all the observation

wells were active at the same time. P. Lapcevic commented that there are currently four active observation wells on Gabriola Island and that observation well 194 (in the “Village” area of Gabriola) is no longer functioning. M. Donnelly noted that there is currently an expansion of observation wells occurring in the Region.

P. Lapcevic commented on the naming convention used for North Degnen Bay and how residents of Gabriola don’t normally refer to the area by this name. She suggested this area’s name should be changed to reflect local naming conventions.

A. Gilchrist commented on the stress analysis results and noted that the varying sizes of sub-watersheds affected the results. Sub-watershed areas with larger areas experience more recharge. A key factor in a stress assessment is the ratio of demand to collecting area.

C. Fox asked if there were any scenarios run to examine climate change predictions. J. Scibek replied that there had not been any scenarios run to examine specific climate change predictions, but, this could be modeled though reducing the amount of water available for recharge, and recalculating the stress level.

M. Donnelly stated that members of the DWWPTAC will review the draft report and submit their comments at the end of January 2013. The results of this study will initiate further discussion from the Islands’ residents. It was also noted that the results will provide information on focus areas to collect more data.

#### **Vancouver Island Water Budget Project Results (D. David, C. Sutherland)**

D. David presented an overview of available information, described the analysis process and presented the results of the Water Budget Project. D. David noted that the analysis was performed to a watershed level, not to a sub-watershed level. It was also noted that the stress was analyzed according to the allocated demand not the actual demand.

M. Jessen commented that there was no representative from EPCOR at this meeting and that they have drilled multiple new wells this year. He wanted to know if we are able to take advantage of their related information. M. Donnelly noted that while we haven’t received all of the data they have provided information in the past and that the RDN will be receiving additional information from them. C. Metherall noted that during the data collection phase of the project there was a transition in staffing at EPCOR and that made data collection more difficult.

C. Metherall had a question regarding why the Englishman River Water Region was not identified as stressed and as an area to focus on when the analysis shows that there are stresses on that watershed. D. David replied that the Englishman River Water Region has been identified as a stressed region. The altering of the classification was due to updating of the formulas used for the calculations, and the slide needs to be altered to reflect the changes.

M. Squire asked if the mean average discharge of the natural rivers is known, and if base flow is calculated using 10% of flow volume. C. Sutherland replied that there was some work done on naturalizing river flows. The values reported are mostly from the model. The appropriate base flow value for the streams and rivers in B.C. is considered to be 10% of the mean annual discharge, this value is derived from the Tennant method (1976) [also known as the Montana method]. This percentage is based on habitat suitability rather than actual natural flow regime. It was found that a lot of the time the flow is higher than what the natural flow would have been. M. Donnelly noted that records for the Englishman River go back to the beginning of the century and before the Arrowsmith dam the low flows were well below the 10% of average flow. Now with the dam the flow has been brought up much higher. C. Sutherland commented that there has been an increase in the base flow, at least at locations above where intakes are located.

C. Metherall commented that there were stress levels assigned for both surface water and groundwater; asked if there are plans to combine them. C. Sutherland noted that the interaction between them has been looked at at a higher level. D. David commented that the surface and groundwater elements are de-coupled; however, where there is an obvious interaction they have been factored in to the water budget. With the Geological Survey of Canada (GSC) study there is potential to combine them into one. The GSC study can assist with the conceptual model and identifying where the linkages are. The study can look to confirm these linkages further.

G. Wendling asked when the Google Earth layers may be available to the Committee and to the public. M. Donnelly replied that the data layers should be available in the spring. Staff will need to determine how to package the data and make it available to the public. There may be the potential to have two data sets available: a layman and a technical set. There are also some issues of privacy which need to be explored further at this point. He stated that the water budget has provided more information than initially contemplated and there is a need to look at how to put that information forward.

M. Donnelly noted we will need committee members help in providing feedback on both reports by the end of January 2013.

#### **Volunteer Groundwater Monitoring (C. Metherall)**

C. Metherall outlined a program has been initiated that is looking to monitor water levels in volunteer wells. Thanks to the work on the water budget we have a good idea of those areas in the Region that represent significant data gaps. D. David, and the Vancouver Island Water Budget team, provided maps showing approximately 40 locations where there was a lack of data. Mail outs were prepared, and sent, for 16 of the areas that were identified as high priority. One area that did not receive mail outs, but has already shown interest to participate in these types of programs, is the Yellowpoint area. C. Metherall noted that the aim is to have the data loggers installed by March.

**Geological Survey of Canada (GSC) – Ministry of Forests, Lands, and Natural Resource Operations (MFLNRO) – Regional District of Nanaimo (RDN) Observation Well Expansion (C. Metherall, P. Lapcevic)**

P. Lapcevic provided an overview of the sonic drilling portion of the observation well program. MudBay Drilling has been contracted to perform the installation of 3 wells identified by the GSC, RDN and MFLNRO. At the time of the meeting one well has been completed in the Parksville area; this well is a 2.5inch observation well that will go into the provincial observation well network. The second well was drilled in the Spider Lake area; this well was drilled to a depth of 325 feet when a problem with the drill bit caused the drilling to end at this depth. A multi-level observation well will be installed at this location. The third well is in the Cochrane Road area on the west side of the Island Highway; this well was due to have drilling begin within a few days. It was also noted that a homeowner in the Yellowpoint area approached the MFLNRO/RDN regarding an unused well; this well will now be used as a provincial observation well.

M. Donnelly noted that the observation well expansion program has been funded utilizing the Towns for Tomorrow grant the RDN received in 2009. There have also been significant contributions from the both, in monetary and expertise resources. The GSC began work in the area at the same time as the RDN was investigating the expansion of the observation well network. This partnership has been very successful and has resulted in the establishment of some very important observation wells.

**OTHER**

**Recognition to Christina Metherall**

M. Donnelly recognized Ms. Metherall's hard work and dedication in filling the role as the first Drinking Water and Watershed Protection Coordinator at the Regional District of Nanaimo and on behalf of the committee wished her well in her future endeavors.

**ADJOURNMENT**

The meeting was adjourned at 3:30 pm.

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M. Donnelly, Chair



**REGIONAL DISTRICT OF NANAIMO**

**MINUTES OF THE SUSTAINABILITY SELECT COMMITTEE  
MEETING HELD ON WEDNESDAY, OCTOBER 17, 2012 AT 10:00 AM  
IN THE RDN COMMITTEE ROOM**

**Present:**

Director J. Stanhope	Chairperson
Director A. McPherson	Electoral Area A
Director H. Houle	Electoral Area B
Director M. Young	Electoral Area C
Director B. Veenhof	Electoral Area H
Director D. Brennan	City of Nanaimo
Director J. Kipp	City of Nanaimo
Director B. Dempsey	District of Lantzville
Director M. Lefebvre	City of Parksville
Director D. Willie	Town of Qualicum Beach

**Also in Attendance:**

Director G. Holme	Electoral Area E
Director J. Fell	Electoral Area F
T. Graff	Chief Administrative Officer, District of Lantzville
G. Rudischer	Gabriola Island Trustee
P. Thorkelsson	Interim Chief Administrative Officer
	General Manager of Strategic & Community Development
C. Midgley	Manager, Energy & Sustainability
T. Pan	Sustainability Coordinator
P. Thompson	Manager, Long Range Planning
L. Bhopalsingh	Senior Planner
M. Donnelly	Manager, Water Services
J. Pisani	Special Projects Assistant
N. Hewitt	Recording Secretary

**CALL TO ORDER**

The meeting was called to order at 10:00 am by the Chair.

## MINUTES

MOVED Director Veenhof, SECONDED Director Brennan, that the minutes of the regular meeting of the Drinking Water and Watershed Protection Technical Advisory Committee held on Wednesday July 25, 2012 be adopted.

CARRIED

MOVED Director Veenhof, SECONDED Director Brennan, that the minutes of the Sustainability Select Committee meeting held on Wednesday July 25, 2012 be adopted.

CARRIED

## REPORTS

### **Rainwater Harvesting Best Practices Guidebook.**

MOVED Director Brennan, SECONDED Director Lefebvre, that the Committee endorse the Regional District of Nanaimo *Rainwater Harvesting Best Practices Guidebook* and forward the Guidebook to the Board for adoption.

CARRIED

### **Community Based Social Marketing.**

MOVED Director Brennan, SECONDED Director Willie, that the Board support the use of the Community Based Social Marketing model for program development to create an effective Rural Water Quality Stewardship Programs in the RDN's rural areas.

DEFEATED

MOVED Director Brennan, SECONDED Director Willie, that staff be directed to report back to the Sustainability Select Committee with alternatives for the use of rebates, subsidies, or other incentives for program development for Rural Water Quality Stewardship Program.

DEFEATED

### **Partnership with British Columbia Irrigation Association.**

MOVED Director Veenhof, SECONDED Director Lefebvre, that the Board support the Certified Irrigation Technician training partnership with the Irrigation Industry Association of BC to a maximum of \$3,000.

CARRIED

The Committee took a 5 minute recess.

The following presentations were provided as an overview/update:

- Green Building Incentives Quarterly Update
- DWWP Update on Work to Date (2012)

The following presentations were deferred to the next scheduled Sustainability Select Committee meeting.

- Community Energy Association – Honourable Mention for MOA
- Green Building Speaker Series and Open House Tours
- Regional Growth Strategy Implementation Update

**ADJOURNMENT**

MOVED Director Brennan, SECONDED Director Kipp, that this meeting be adjourned.

CARRIED

Time: 12:42 pm

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CHAIRPERSON



RDN REPORT	
CAO APPROVAL <del>  </del>	
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COW	
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BOARD	
SSC	

**MEMORANDUM**

**TO:** Chris Midgley  
 Manager, Energy and Sustainability

**DATE:** January 7, 2013

**FROM:** Ting Pan  
 Sustainability Coordinator

**FILE:**

**SUBJECT:** Community Charging Infrastructure Planning Project Review and Update

**PURPOSE**

To provide the Committee with a review and an update on the Community Charging Infrastructure Program Planning Project.

**BACKGROUND**

In May 2012, the Regional District of Nanaimo, along with District of Lantzville, City of Parksville and Town of Qualicum Beach, received a Community Charging Infrastructure (CCI) Fund planning grant from the Province of British Columbia. The purpose of the grant was to enable the partners to identify strategic locations for Level II Community Charging Infrastructure across the Region, and prioritize 12 stations for installation by March 31, 2013. The RDN Energy and Sustainability Division carried out the work between May 31<sup>st</sup>, 2012 and November 30<sup>th</sup>, 2012.

In order to identify strategic locations for the charging stations, a long list of locations was created to capture potential commercial and institutional hosts such as hotels, schools, restaurants, shops, cafes, community facilities and parks. Each site was mapped, sorted and evaluated based on criteria established in the UBC TIPS Lab's *Electric Vehicle Toolkit Level 2 Charging Stations Guide* distributed by the Province.

The potential hosts that scored well against desirable criteria in each jurisdiction were initially contacted by phone or email with a summary of the CCI funding's intent, benefits and process. For those with sufficient interest, a site assessment was arranged to estimate the cost of the site preparation and installation. In the end, 12 site assessment reports were completed for a total of 14 locations.

After the site assessment reports were provided, many potential hosts decided not to pursue this opportunity citing three main reasons: 1) financial constraints 2) not being able to meet the March 31<sup>st</sup>, 2013 installation deadline (a condition of the CCI fund) and 3) uncertainty over return on investment.

It is worth noting that at the conclusion of this planning project the only private business that committed to hosting 2 charging stations is located at the junction of Highway 4 and Highway 4A, a strategically important linkage between the east coast of Vancouver Island and Tofino-Ucluelet. The remaining confirmed locations are local government facilities and provincial agencies. Below is the list of the final selection of stations. A distribution map is attached in Appendix A.

Station Host Organization	# of locations	Address(es)	# of stations	# stations to be considered for CCI Funding <sup>1</sup>
Regional District of Nanaimo	2	860 Church Road, Parksville; 1105 Cedar Road, Nanaimo	2	2
MJB Auto & Equipment Sales	1	2701 Alberni Hwy, Coombs	2	2
Town of Qualicum Beach	2	111 Fourth Ave West, Qualicum Beach; 2711 Island Highway West, Qualicum Beach	3	3
City of Parksville	2	100 Jensen Ave East, Parksville; 193 Island Hwy East, Parksville	3	3
Vancouver Island Health Authority	1	1200 Dufferin Crescent, Nanaimo	2	2
<b>TOTAL</b>				<b>12</b>

In the end, two RDN facilities were identified as suitable locations for fleet vehicle charging stations: the Church Road Transfer Station and the Cedar Road Landfill. Site assessments conducted on both locations confirmed feasibility.

**ALTERNATIVES**

There are no alternatives presented. This report is for information purposes.

**FINANCIAL IMPLICATIONS**

Under the CCI Fund Agreement, eligible hosts of charging stations will receive 75% of total eligible costs, up to \$4,000 per station from the Fraser Basil Council. Hosts will cover the balance of the total costs. The RDN does not have ownership or responsibility for the maintenance or operation of any stations except those installed at RDN facilities. The installation of these stations is currently estimated to be \$11,663.19. Of this total, the CCI Fund will provide \$8,000. The remaining \$3,663.19 is in the budget of Solid Waste Department.

**STRATEGIC PLAN IMPLICATIONS**

The RDN collaborated with all member municipalities and private sectors in the planning process to provide the basis for an initial wave of charging station installations. The implementation of the plan intends to fulfill the ultimate vision of establishing the region as a major transportation hub providing alternative transportation choice to residents and visitors, supporting local expertise in electric vehicles and charging infrastructure, and reducing our reliance on fossil fuel based transportation. This initiative

supports the organization's goal of preparing for climate change and demonstrates RDN's commitment to following through on policies to reduce transportation related emissions and to protect air quality

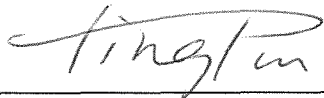
**SUMMARY/CONCLUSIONS**

The Regional District of Nanaimo, with the support from the District of Lantzville, the City of Parksville and the Town of Qualicum Beach, successfully completed the Community Charging Infrastructure (CCI) Fund Planning Project as of November 31<sup>st</sup>, 2012. The project identified 12 Level II Electric Vehicle Charging Stations in our region eligible for CCI infrastructure fund if installed by March 31<sup>st</sup>, 2013.

Once installation of these stations is complete, they will form a part of an extensive network of charging infrastructure that aims to accelerate community-wide adoption of low- or zero-emission vehicles in order to reduce transportation related emissions in the Region, provide transportation alternative to residents and visitors and support an emerging sector of electric vehicles and charging infrastructure.

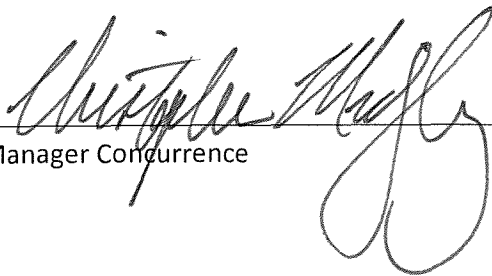
**RECOMMENDATION**

That the report be received.

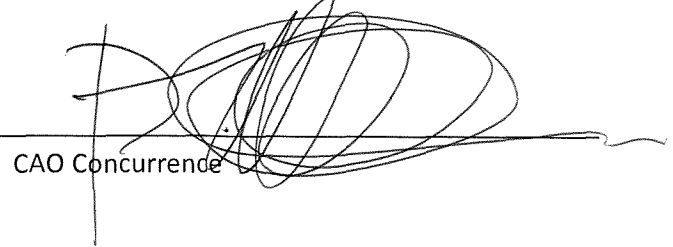


Report Writer

General Manager Concurrence

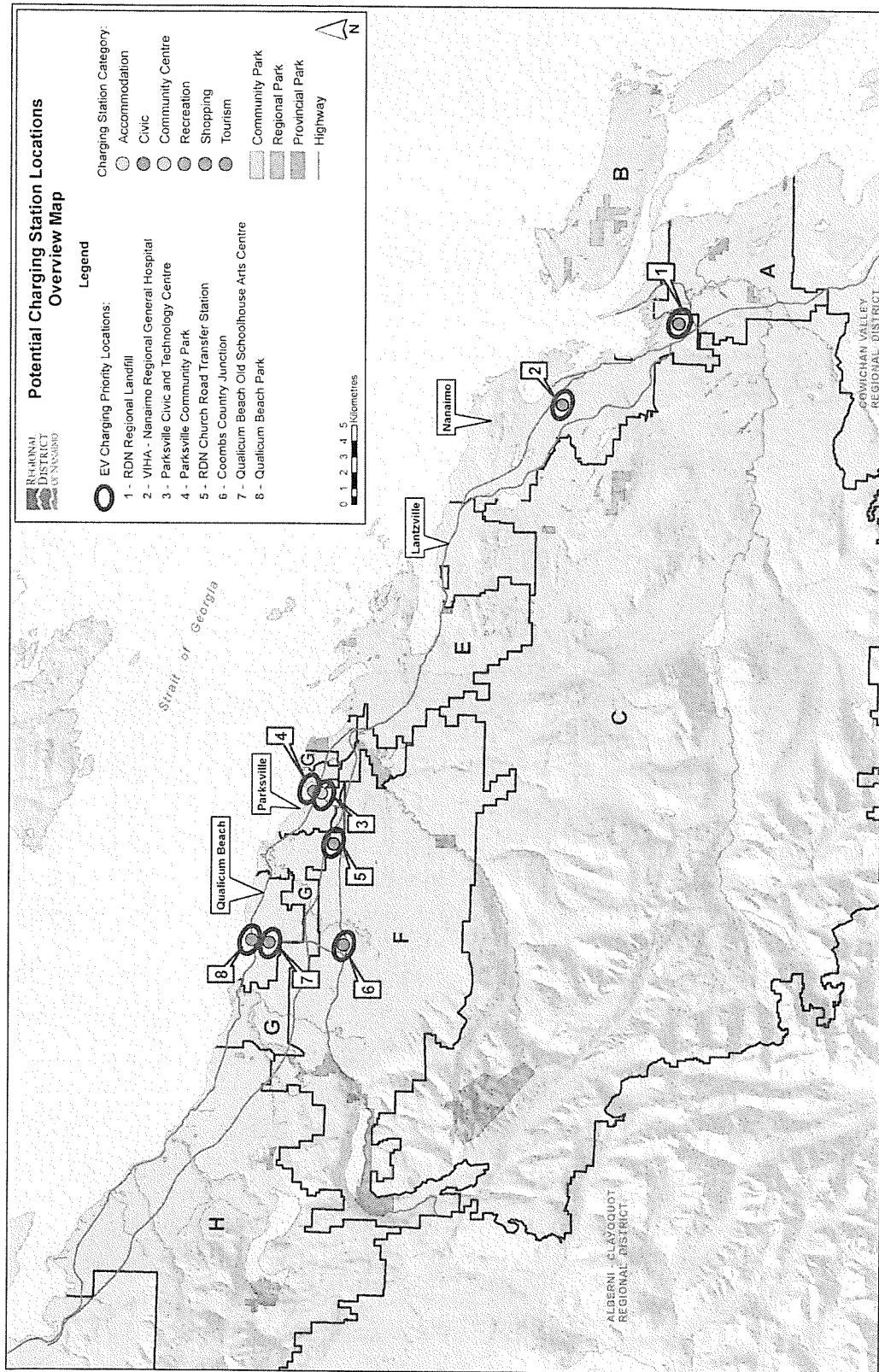


Manager Concurrence



CAO Concurrence

### Appendix A Potential Charging Station Locations Overview Map





RDN REPORT	
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MEMORANDUM

**TO:** Paul Thorkelsson  
Chief Administrative Officer

**DATE:** January 8, 2013

**FROM:** Chris Midgley  
Manager, Energy and Sustainability

**FILE:**

**SUBJECT:** Carbon Neutral Operations - 2012

**PURPOSE**

To update the Sustainability Select Committee on regional local governments progress toward achieving carbon neutral operations.

**BACKGROUND**

Owing to participation in curbside organic collection and diversion, the Regional District of Nanaimo (RDN), the District of Lantzville, the City of Parksville and the Town of Qualicum Beach will each achieve corporate carbon neutrality for the year 2012, thus fulfilling a key commitment made in the Climate Action Charter. The City of Nanaimo will 'neutralize' approximately 40% of its 2012 corporate emissions through participation in organic diversion, making significant progress toward that same goal.

***Climate Action Charter***

In 2008, the Regional District of Nanaimo and member municipalities became signatories to the Climate Action Charter – a voluntary commitment based on the shared understanding that greenhouse gas emissions affect the earth’s climate; that reducing emissions will generate environmental and health benefits for individuals, families and communities; and that protecting the environment can be done in ways that promote economic prosperity.

Among the specific commitments in the Charter, signatory local governments agree to develop strategies and take actions to achieve being carbon neutral in respect of their operations by 2012.

***Carbon Neutral Operations***

In its simplest terms, carbon neutral operations means no net emissions are produced as a result of corporate operations. To achieve carbon neutral operations, a local government must first identify the services it provides that are to be included in determining total corporate emissions<sup>1</sup>; measure the total energy consumed to deliver those services over the course of a year; and convert that consumption to tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). This establishes an annual corporate emission inventory.

<sup>1</sup> Not all services provided by local governments contribute to its corporate emission inventory. For example, emissions produced in the delivery of Transit Services and Emergency Planning are not included.



The second step in progressing toward carbon neutral operations is to reduce annual CO<sub>2</sub>e emissions however practical. Local governments accomplish this by implementing efficiency upgrades and other projects that reduce energy consumption within their operations.

Finally, a local government 'neutralizes' any remaining emissions by purchasing offsets from a credible offset seller such as the Pacific Carbon Trust, or by implementing projects that result in a measurable reduction in emissions.

#### ***Memorandum of Agreement for Regional Emission Reduction Projects***

In the Regional District of Nanaimo, all five local governments came to the recognition that purchasing offsets from a credible offset seller such as the Pacific Carbon Trust represents sending local taxpayer dollars out of the community without a corresponding local benefit.

In response, the RDN, the City of Nanaimo, the District of Lantzville, the City of Parksville and the Town of Qualicum Beach executed a Memorandum of Agreement to undertake regional emission reduction projects for the purpose of achieving carbon neutral operations. The underlying intent of the agreement is to ensure that if money is spent achieving carbon neutral operations, it is spent in the region to implement projects that reduce emissions while generating benefits to local residents.

#### ***Regional Curbside Organic Collection and Diversion Program***

In October of 2010, the Regional District of Nanaimo expanded a pilot curbside organic collection and diversion program into a region wide service. By 2012 over 52,000 households across all RDN jurisdictions were participating in organic diversion with more than 9,900 tonnes of organic waste diverted from the landfill.

For each tonne of waste that is diverted from the landfill to a composting facility, a measurable quantity of emissions is avoided. This is due to the fact that organic decomposition in a landfill produces methane, a greenhouse gas that is much more potent than carbon dioxide. When organic waste is composted properly, methane is not produced.

Considering this benefit, the provincial government, through the Green Communities Committee, established composting of household organic waste as an approved emission reduction project type, and provided a simple method for local governments to calculate and report total reductions against corporate emission inventories.

After two years of full-scale, region wide implementation, 9,903.7 tonnes of organic waste have been diverted from the landfill. Of this total, 4,349.39 tonnes were collected in the City of Nanaimo, and 5,554.31 tonnes were collected in the remaining four jurisdictions. To allocate the 5,554.31 tonnes across the RDN, District of Lantzville, the City of Parksville, and the Town of Qualicum Beach, the total diversion is divided by the number of participating households then converted to reductions. Table 1 highlights the results of participation in organic diversion for each of the jurisdictions in the RDN.

**Table 1: Diversion and Emission Reductions by Jurisdiction from Participation in Organic Diversion**

Jurisdiction	2011 Diversion (t)	2011 Reductions (tCO <sub>2</sub> e)	2012 Diversion (t)	2012 Reductions (tCO <sub>2</sub> e)	Total Reductions (tCO <sub>2</sub> e)	Corporate Inventory (est.)	Net Emissions (tCO <sub>2</sub> e)
RDN	1,692.96	1,136	1739.28	1,167	2,303	1,721	(582)
City of Nanaimo	1,595.3	1,070	2,754.1	1,993	3,063	7,000	3,937
District of Lantzville	147.84	99	150.09	101	200	43	(157)
City of Parksville	506.66	340	514.76	345	685	432	(253)
Town of Qualicum Beach	396.31	266	406.41	273	539	443	(96)

Since reductions associated with organic diversion in 2011 have not been previously counted or reported, they will be applied to 2012 corporate inventories. The result of counting two years of organic diversion reductions against one year of corporate emissions is complete carbon neutrality for the RDN, the District of Lantzville, the City of Parksville and the Town of Qualicum Beach, and significant reductions for the City of Nanaimo. In fact, for all jurisdictions other than the City of Nanaimo, the reductions from organic diversion to date exceed corporate inventories for 2012, leaving a surplus of reductions to apply to the 2013 inventory year.

In future years, organic diversion will remain an important regional emission reduction project but will only completely eliminate corporate emissions for the District of Lantzville. For 2013 and beyond, additional regional emission reduction projects will be necessary to achieve corporate carbon neutrality for the RDN and member municipalities.

#### ALTERNATIVES

1. That staff incorporate reductions associated with curbside organic collection and diversion in annual carbon neutral reporting, and issue letters to each member municipality identifying emission reductions associated with participation in curbside organic collection and diversion.
2. That alternate direction be provided to staff.

#### FINANCIAL IMPLICATIONS

In the current 2013 budget for the Regional District of Nanaimo, each service that generates emissions has included a dollar value to transfer into a reserve account established for the purpose of investing in regional emission reduction projects<sup>2</sup>. The total amount to be transferred in 2013 equals \$51,080. *Appendix 1 - Contributions to Reserve Account by Service (2013)* outlines the dollar amounts by service contributed to this reserve account.

<sup>2</sup> The dollar value equals the total emissions generated in the delivery of the service multiplied by \$25 per tonne.

If Alternative 1 is approved, each service that has included this transfer to reserve in the 2013 budget will be rebated the amount in its entirety.

For the member municipalities, the Regional District of Nanaimo will issue a letter noting that participation in organic diversion has resulted in significant emission reductions or carbon neutral operations. This means that member municipalities other than the City of Nanaimo will not need to invest in additional regional emission reduction projects to achieve carbon neutrality for the 2012 inventory year.

Since these reductions are not offsets in the traditional sense, and have not been verified and validated to a recognized international standard, they are not tradable commodities and cannot be sold to another party. Therefore, revenues cannot be realized from reductions beyond those needed to achieve corporate carbon neutrality.

### **STRATEGIC PLAN IMPLICATIONS**

The Board Strategic Plan *'Working Together for a Resilient Future'* emphasizes building regional resilience by promoting self-sufficiency, regional collaboration, and economic viability and to verify progress through monitoring and reporting. Achieving corporate carbon neutrality through regional organic waste collection and diversion advances each of these strategic priorities.

By capturing emission reductions resulting from an innovative approach to the delivery of a core regional service, local governments in the RDN have taken full responsibility for their emissions with a collaborative region-wide project that benefits local communities. Additional taxation will not be necessary to achieve carbon neutrality for 2012, and the RDN and member municipalities will have the opportunity report this achievement widely.

### **SUMMARY/CONCLUSIONS**

As signatories to the Climate Action Charter, the Regional District of Nanaimo and member municipalities made a commitment to take action on climate change, including making progress toward carbon neutral operations for the year 2012.

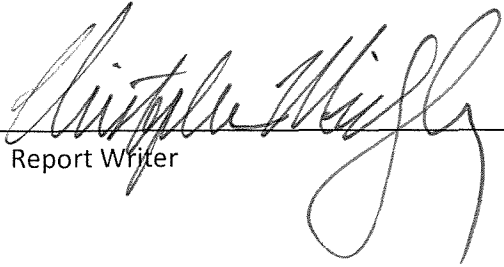
To ensure that the benefits of pursuing carbon neutral operations flow to residents of the region, the RDN and member municipalities executed a Memorandum of Agreement to undertake regional emission projects.

To maintain local governments' commitment to the Climate Action Charter, the province has developed methodologies, including calculation and reporting tools for several project types the result in measurable emission reductions. Included among these is composting of household organic waste.

The Regional District of Nanaimo, in partnership with all member municipalities and the private sector implemented region-wide organic diversion in October, 2010. Using the tools provided by the Province reveals that the 9,900 tonnes of organic waste diverted from the Regional landfill since January 1, 2011 has resulted in sufficient reductions for the RDN, the District of Lantzville, the City of Parksville and the Town of Qualicum Beach to achieve carbon neutral operations for 2012. The City of Nanaimo has not achieved neutrality through organic collection and diversion, but has made significant progress with over 3,000 tonnes of reductions to count against its 2012 corporate emission inventory.

**RECOMMENDATIONS**

1. That staff incorporate reductions associated with curbside organic collection and diversion in annual carbon neutral reporting to the Province; and
2. That staff issue letters to each of the member municipalities identifying total emission reductions for each jurisdiction based on participation in the regional curbside organic collection and diversion program.

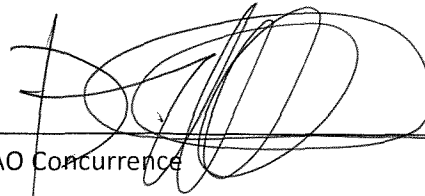


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Report Writer

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General Manager Concurrence



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CAO Concurrence

**Appendix 1:  
 Contributions to Reserve Account by Service (2013)**

In 2012, the Regional District of Nanaimo established a statutory reserve account for the purpose of investing in regional emission reduction projects (Bylaw 1662, 2012). All RDN services that generate emissions contribute a dollar value to that reserve account equal to the total emissions generated in the delivery of the service multiplied by \$25 per tonne. Listed below are the values contributed to that reserve account, by service, as per the current 2013 Budget. Due to implementation of region-wide curbside organic collection and diversion, each of the services listed below will be rebated the amount transferred to the reserve account for 2013.

<b>Service</b>	<b>Transferred to Reserve (2013 Budget)</b>
Corporate Administration	\$1,185
Building Inspection	\$175
Bylaw Enforcement	\$70
Emergency 911 D68	\$5
Solid Waste - Church Road Transfer Station	\$5,120
Solid Waste - Engineering and Disposal Services	\$95
Solid Waste - 3R's/ Zero Waste	\$20
Solid Waste - Recycling and Garbage	\$10,940
Fire Protection - Extension	\$135
Water - Surfside	\$25
Water - French Creek	\$220
Water - Whiskey Creek	\$125
Water - Decourcey	\$5
Water - San Pareil	\$230
Water - Englishman River	\$65
Water - Melrose Terrace	\$15
Water - Nanoose Peninsula	\$1,645
Water - Nanoose Bay Bulk Water	\$95
Streetlighting - Rural Areas (E,G)	\$110
Streetlighting - Fairwinds	\$100
Streetlighting - French Creek Village	\$10
Streetlighting - Morningstar	\$100
Streetlighting - Englishman River	\$15
Streetlighting - Highway Intersection	\$10
Streetlighting - Sandpiper	\$10
Streetlighting - Highway #4 (E.A. F)	\$10
Community Parks - Area A	\$10
Community Parks - Area B	\$15
Community Parks - Area C	\$5
Community Parks - Area D	\$5
Community Parks - Area E	\$20

Community Parks - Area F	\$10
Community Parks - Area G	\$25
Community Parks - Area H	\$10
Regional Parks	\$430
Wastewater - Nanoose/ Fairwinds	\$275
Wastewater - Nanaimo	\$5,500
Wastewater - French Creek	\$4,220
Wastewater - Duke Point	\$130
Recreation - D69 Coordinator	\$180
Oceanside Place	\$11,625
Southern Community Recreation	\$10
Ravensong Pool	\$7,670
Sewer - French Creek	\$220
Sewer - Nanoose/ Fairwinds	\$95
Sewer - Pacific Shores	\$15
Sewer - Surfside	\$5
Sewer - Barclay	\$30
Sewer - Cedar	\$40
Total	\$51,080