

**MINISTRY OF ENVIRONMENT
INFORMATION NOTE**

Date: January 28, 2016
File: 280-30
CLIFF/tracking: 295130
Previous notes:
195490/188507/172004/170866

PREPARED FOR: Honourable Mary Polak, Minister of the Environment

ISSUE: Meeting with Mark Strahl, Official Opposition Critic on Fisheries, Oceans, and the Canadian Coast Guard on February 2, 2016

BACKGROUND:

- In 2012, two federal bills were introduced in the House of Commons that included several changes to natural resources legislation and significant amendments to the *Fisheries Act* (FA). The majority of these amendments to S. 35 were brought into force on November 25, 2013.
- Federal FA amended protection provisions to focus on fisheries rather than habitat - primarily commercial, recreational and Aboriginal (CRA) fisheries.
- Serious Harm prohibitions replaced Harmful alteration, disruption and destruction (HADD) of fish habitat and the focus is now on activities that result in death, permanent alteration or destruction to CRA fish or their habitat. As well, the scope of habitat protection was significantly narrowed to that which is considered vital for the ongoing productivity of a CRA fishery.
- The reduction and centralization of the Department of Fisheries and Oceans Canada (DFO) operational staff by 30% has created challenges in coordination and collaboration in the efficient delivery of fish habitat management direction.
- DFO's role in Environmental Assessments (EAs) was reduced to providing advice only for reviewable projects triggered under the *Canadian Environmental Assessment Act* (CEAA) 2012. DFO no longer leads EAs, FA authorizations no longer trigger a CEA review, and DFO participation in BC-led EAs is considered outside of the new mandate, but may occur depending on the project.
- These changes have reduced the number of federally-led EAs as well as DFO's engagement in provincial EAs. Overall, BC views this as beneficial as it reduces regulatory duplication between the two levels of government. However BC also recognizes that some stakeholders may view this as weakening federal environmental assessment standards related to fish and fish habitat.
- DFO's involvement in substituted EAs is critical, and needs to continue. EAO benefits from DFO engagement in BC-only EAs to ensure DFO feedback on impacts and subsequent authorizations by DFO are factored into provincial decisions.
- The *Navigable Waters Protection Act* (NWPA) was amended to limit the application to works in specific navigable waters that were set out in the schedule (currently limited to three oceans, 97 lakes, and 62 rivers in Canada). The listing and delisting of additional navigable waters to the schedule is now largely left up to the discretion of the Minister and Governor in Council, with some guidance provided in the *Act* on factors to consider. The amendments also enabled 'designated' or 'minor' works to be exempt from aspects of the *Act*.
- Prior to changes outlined above, the Province worked closely with DFO on habitat focused legislation to provide complementary, proactive provincial legislation,

regulation, and guidance to ensure certainty, consistency, and flexibility in meeting the federal requirements.

DISCUSSION:

- One of the new federal government's commitments is to review the previous government's changes to the *Fisheries Act* and the *Navigable Waters Protection Act*, restore lost protections, and incorporate modern safeguards.
- Since 2012, the BC Ministry of Environment has coordinated a provincial position and provided input to the DFO on the FA changes. BC has provided feedback to DFO through written letters, bilateral briefings and workshops, and through participation on the Canadian Council of Fisheries and Aquaculture Ministers (CCFAM).
- In May 2014, BC and DFO held a joint workshop with program staff to help BC understand DFO's operational application of serious harm; communicate areas of concern; and identify shared interests and next steps for future bilateral discussions and coordination.
- BC is continuing bilateral engagement with DFO to understand the implications of their new and emerging policies, manage issues arising from the new regime and represent provincial interests through the Fisheries Habitat Committee and the Canadian Council of Fisheries and Aquaculture (AGRI lead).
- BC remains focused on the sustainability of provincial fisheries, habitat protection, the health and conservation of fish stocks, access to recreational opportunities, maximizing economic returns, and creating a clear and consistent regulatory environment that provides consistency, certainty, and flexibility.
- The Province will continue to work with DFO to monitor impacts and respond to issues raised by provincial proponents, industry and stakeholders as they may arise

SUMMARY:

BC would like the opportunity to work with the federal government and other provinces and territories to provide insight into the implications to our jurisdiction from the FA and NWP. BC is well-positioned to offer advice on opportunities to restore lost protections and incorporate modern safeguards.

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Reviewed by	Initials	Date
DM	WSB for WS	Jan 30/16
DMO	BC	Feb 1/16
ADM	KL	Jan 29/16
Exec Dir	AD	
Director	LP	

**MINISTRY OF ENVIRONMENT
MEETING INFORMATION NOTE**

January 26, 2016

File: 280-20

CLIFF/tracking #: 294034

PREPARED FOR: Honourable Mary Polak, Minister of Environment

DATE AND TIME OF MEETING: February 9, 2016 from 9:30-10:00 a.m., Room 112, Parliament Buildings.

ATTENDEES: Scott Wenger, Manager, Government Relations, Suncor Energy Inc.
Ginny Flood, Vice President, Government Relations, Suncor Energy Inc

ISSUE(S): Discuss emission reductions, marine spill response and clean technology.

BACKGROUND:

Suncor Energy Inc. is an integrated energy company. Suncor's global operations include oil sands development and upgrading, conventional and offshore oil and gas production, petroleum refining and product marketing under the Petro-Canada brand. Most recently, Suncor turned their attention to oil sands, bidding to acquire Canadian Oil Sands.

Suncor's British Columbia (BC) presence was more substantial (yet still only about five percent of BC oil/gas sector emissions) until 2013 when they sold their BC conventional natural gas plays. This is reflected in their annual GHG emissions (below). Suncor still maintains ownership of Montney assets (shale gas), evaluated at about 7 trillion cubic feet of "contingent Montney resource". However, in 2014 it suspended plans to develop them.

Suncor's operations in BC are split between Suncor Energy Inc. and its wholly-owned subsidiary, Suncor Energy Products Partnership.

Suncor Energy Inc.'s annual GHG emissions reported to BC (tonnes CO₂-equivalent):

2010:	2011:	2012:	2013:	2014:
224,046	198,487	164,022	31,197	24,543

BC Facilities (as of 2014) - all in Fort Nelson/Fort St. John area, and all classified as upstream, conventional oil/gas extraction facilities:

- One battery¹ with emissions $E > 10,000$ tCO₂e
- One battery with emissions $1,000 < E < 10,000$ tCO₂e
- One well with emissions $1,000 < E < 10,000$ tCO₂e

Current or potential LNG involvement:

¹ "battery" means a facility at which the liquids obtained from one or more wells are stored before those liquids are processed for market or delivered to market or are otherwise disposed of, and may include equipment or other devices for separating the liquids into oil, natural gas and water (EMA, [Oil and Gas Waste Regulation](#))

- No involvement in either current public LNG facility proposals or natural gas transmission lines.
- However, Suncor still own Montney assets (see above);
- If there were to be significant LNG development in BC, it is conceivable that, with its Montney assets, Suncor could provide some feedstock natural gas to an LNG facility that does not have an upstream partner to supply them.

Suncor Energy Products Partnership's annual GHG emissions reported to BC (tonnes CO₂-equivalent):

2010:	2011:	2012:	2013:	2014:
14,446	12,167	12,071	11,200	11,737

BC Facilities (as of 2014):

- Burrard Products Terminal² (Port Moody/Burnaby) - reporting
- 3 other terminals in BC: Nanaimo, Kamloops, Terrace – do not report (apparently below 10,000 tCO₂)

The Province has met with and consulted Suncor regularly over the past several years, including with respect to the development of BC's Renewable and Low Carbon Fuel Requirements Regulation (RLCFRR) in spring 2015, and the development of the Climate Leadership Plan in late 2015/early 2016.

Topics of interest for Suncor include BC's efforts to manage carbon emissions (emissions targets, biofuels and carbon pricing), BC's marine spill response system, and support for the clean technology sector in BC.

1) Managing Carbon Emissions

(a) Emissions targets:

- BC has legislated emission reduction targets of 33% under 2007 levels by 2020 and 80% under 2007 levels by 2050.

(b) Biofuels:

- The RLCFRR establishes annual carbon intensity limits for the supply of transportation fuels in BC, and a market-based mechanism to promote fuel supplier compliance with these limits.
- In spring 2015, Cabinet confirmed BC's commitment to carbon intensity limits that achieve a 10% reduction by 2020 (relative to 2010).
- Petroleum fuel suppliers (e.g. Suncor) have options for achieving compliance with the RLCFRR, such as increasing the supply of higher renewable content fuel blends at the pump, or purchasing compliance credits from low carbon fuel suppliers.

(c) Carbon Pricing:

² "A distribution terminal's primary function is to receive large amounts of transportation fuel (such as gasoline, jet fuel, and diesel) from oil refineries; process the fuel to meet customer specifications, then distribute the fuel to various customers (retail gas stations, airports, etc.) by truck, rail, marine or pipeline."

- BC's revenue neutral carbon tax covers 70 percent of provincial emissions. The tax is set at \$30 per tonne of CO2 equivalent emissions, and all revenues are returned to British Columbians in the form of personal or business tax cuts.
- The Province has stated that the carbon tax will not increase before 2018.

2) Marine Spill Response

- In 2012, the Province released five conditions outlining requirements for BC to support for heavy oil pipelines. The second and third conditions relate to world-leading marine and land-based oil spill response, prevention and recovery systems to manage and mitigate the risks and costs associated with pipelines and shipments.

3) Clean Tech Sector

- BC has a growing clean technology sector, and the Province has been clear that it is open for business in the global low-carbon economy.
- The new BC Tech Strategy, released January 18, 2016, reinforces this message with a strong focus on improving access to venture capital, talent and markets for BC companies, including clean technology companies.
- On December 8, 2015, Premier Clark announced a new \$100 million venture capital fund-of-funds as part of the BC Tech Strategy. The Ministry of International Trade is seeking a private sector investment manager to manage this new fund-of-funds, manage the \$90M of capital currently committed through the BC Renaissance Capital Fund, and build a more robust provincial venture capital system by increasing the supply of local venture capital and drawing other investors into BC.
- The BC Innovation Council is implementing a new program, the Innovation Exchange, that will build on BC's history of natural resource development. The Innovation Exchange identifies key industrial problems and "feeds" them, in a curated environment, to researchers and technology developers to solve, fostering integration of innovative solutions that span multiple domains.

DISCUSSION:

1) Managing Carbon Emissions

s.13

- The CLT recommends establishing a new 2030 target of 40 percent below 2007 levels. Sectoral targets are also recommended for transportation, industry and buildings.

(b) Biofuels:

- In spring 2015, Cabinet committed to review the RLCFRR in 2017. Suncor and other fuel suppliers would be participants in this regulatory review.
- The Climate Leadership Team recently recommended that BC's carbon intensity limits for transportation fuels achieve a 20 percent reduction by 2030 (relative to 2010).

2) Marine Spill Response

- After two years of research and engagement with federal partners, industry, First Nations and local government, BC is proceeding with legislative amendments to the *Environmental Management Act* to introduce new spill preparedness, response and recovery requirements in the spring of 2016.
- Elements of the new regime will include geographically-based planning and response that will see participation by First Nations, first responders and local communities.
- Consultation on a third policy intentions paper is targeted for early 2016 with further consultation planned for spring 2016. Regulatory development is anticipated to continue into 2017.
- BC continues to consult with and provide regular updates to industry associations through a project Advisory Committee on the Spill Response Regime.

3) Clean Tech Sector

- In January 2016, Suncor Energy Inc. and Cenovus Energy Inc. announced the launch of a \$100 million Evok Innovations fund. Evok aims to tap early-stage innovations focused on the oil and gas industry and reduce the time it takes to commercialize technologies. The investments must meet the “double-bottom line” criteria of reducing costs and carbon emissions. Evok will look at technologies that can reduce tailings ponds, improve the upgrading process, reduce diluent, improve steam-oil ratio and particularly through the use of smart centres, big data and analytics.

SUGGESTED RESPONSE:

s.12,s.13

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Reviewed by	Initials	Date
DM	WSB	February 2, 2016
DMO	BC	January 27, 2016
ADM	SLC	January 26, 2016
Exec. Director.	TL	January 26, 2016
Author	DC	January 20, 2016

**MINISTRY OF ENVIRONMENT
MEETING INFORMATION NOTE**

February 3, 2016
File: 280-20
CLIFF/tracking #: 293958

PREPARED FOR: Honourable Mary Polak, Minister of Environment

DATE AND TIME OF MEETING: February 15, 10:30 – 11:00 am

ATTENDEES: Consul General of France Jean-Christophe Fleury; Deputy Minister Wes Shoemaker; Susanna Laaksonen-Craig, Head of the Climate Action Secretariat

ISSUE(S): Follow up on the 21st Conference of the Parties (COP 21) in Paris, France, December 2015.

BACKGROUND:

The 2015 UN Climate Change Conference (COP 21) in Paris, France, saw the nations of the world agree to a framework for the next stage in the global fight against climate change. The Government of France worked diligently to ensure that COP 21 was a success; in contrast to the 2009 negotiations in Copenhagen, the conference and agreement have been lauded internationally. However, the actions required to implement the agreement are significant, and it will fall to all levels of government, industry and civil society to take action.

British Columbia (BC) was present at COP21 to ensure that our interests were reflected in Canada's negotiating position, and to feature BC's climate leadership on the international stage.

The Paris Agreement will be open for signature and ratification from April 22, 2016 to April 21, 2017; it will enter into force 30 days after at least 55 parties, accounting for at least 55% of total GHGs, have ratified or approved it.

The aim of the Paris Agreement is to:

- Hold the increase in global average temperature to “well below” 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C;
- Increase the ability to adapt to climate change in a manner that does not threaten food production; and
- Make finance flows consistent with a pathway to low greenhouse gas emissions and climate resilient development.

Each party must prepare and maintain successive “Nationally Determined Contributions” (NDCs); NDCs are required every five years for developed countries. Successive NDCs will represent a progression over previous NDCs.

Canada's intended NDC commits the nation to reduce emission to 30% below 2005 levels by 2030; the new federal government is now characterizing this commitment as the "floor" to Canada's ambitions.

DISCUSSION:

Consistent with its 2015 election platform, and following the successful conclusion of COP21, the federal government is engaging provinces and territories in a process to develop a pan-Canadian Framework to Address Climate Change. A First Ministers Meeting will be held in early March to seek agreement on the principles, priorities and process for developing the Pan-Canadian Framework.

BC believes that flexibility is required within the Framework to recognize and accommodate the unique circumstances of each jurisdiction and the climate actions they have already taken. BC is currently in the second phase of consultation on a new Climate Leadership Plan for the province; the actions of our new plan will help position BC to take advantage of the new low carbon economy and keep BC on track to our 2050 greenhouse gas reduction target.

The consul general's office made significant efforts to connect Minister Polak with the French government's Director General of Globalization, Anne-Marie Descôtes, at COP 21 in December. The purpose of the meeting was to thank France for their diplomatic efforts and discuss the role of sub-nationals in the implementation of the Paris Agreement. The meeting did not go forward due to scheduling conflicts.

There may be an opportunity for the French government to engage at the GLOBE 2016 conference, from March 2-4 in Vancouver, BC. The conference would be an opportunity to connect with the Canadian federal government and provinces and territories and to highlight the economic opportunities that clean tech presents in the fight against climate change.

SUGGESTED RESPONSE:

- BC is grateful for the valuable assistance provided by the consul general and staff to British Columbia to make our efforts in Paris in December a success and we thank the French government for their gracious offerings of assistance to British Columbia prior to and during the Conference of the Parties.
- BC was proud to participate as part of Canada's team at COP 21, which we hope will be remembered as the turning point in global momentum in the fight against climate change. No small part of the success of this event is due to the government of France's diplomatic efforts in the lead-up to the conference, and French Foreign Affairs Minister Laurent Fabius.
- BC supports the development a Pan-Canadian Framework to Address Climate Change.
- BC is fully engaged in the process and is working hard with our FPT partners to ensure that our priorities are reflected in the Pan-Canadian Framework.
- BC is of the view that climate action and economic growth go hand in hand, and supports seeing this principle embedded in the Framework.

- GLOBE 2016 will be an opportunity to feature the opportunities for economic growth associated with the implementation actions that are needed to fulfil the Paris Agreement.

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Attachments: Biography – Consul General of France Jean-Christophe Fleury

Reviewed by	Initials	Date
DM		
DMO	BC	12/2/16
ADM	SLC	5/2/16
Dir./Mgr.	DC	4/2/16
Author	CC	4/2/16

Attachment 1 - Biography: Consul General of France Jean-Christophe Fleury



Mr. Jean-Christophe Fleury was named Consul General of France in Vancouver in September, 2016.

Previous positions with the Ministry of Foreign Affairs:

- Assistant Director, external audiovisual and communications technology policy, at the Directorate-General of Global Affairs;

- Press counselor at the Embassy of France in Ottawa;
- 1st Secretary in Port-of-Spain, Trinidad and Tobago;
- Assistant Secretary-General for the organization of the Ministerial Conference on Drug Routes;

- 1st Secretary in Copenhagen: support mission during the Danish presidency of the European Union;

- Director of the West Africa office of the Foreign Office

- United Nations Economic Affairs Editor

- Editor at the former Directorate for Economic and Financial Affairs.

**MINISTRY OF ENVIRONMENT
INFORMATION NOTE**

January 19, 2016
File: 280-20 / 26250-20/UST
CLIFF #: 294507

PREPARED FOR: Honourable Mary Polak, Minister of Environment

ISSUE: Findings of cross-jurisdictional review of residential underground storage tanks

BACKGROUND:

Heating oil storage tanks have been used for residential home heating in BC for over 70 years. Underground storage tanks (USTs) were the most popular type of tank until the 1950s when they were discovered to be more likely to leak due to corrosion and difficulties in detecting leaks. Most houses that heat with oil furnaces have replaced USTs with aboveground storage tanks but in many cases, the USTs were left in place and may not have been emptied and properly rendered inert.

The cost of remediating contamination from leaky USTs is often financially crippling for homeowners. Some recent BC spills/leaks have been known to cost homeowners upwards of \$100,000. The liability provisions of the *Environmental Management Act* (EMA) and Contaminated Sites Regulation (CSR) are such that the cost may be shared by past property owners; however, this often results only after significant legal costs have been incurred.

A recent study by the Insurance Bureau of Canada found that the costs to insurance companies for 663 domestic oil spills in Atlantic Canada between 2008 and 2011 were \$78 million, or an average of almost \$118,000 per claim. The frequency of spills from residential USTs and the potential cost to insurance companies has prompted insurance providers across Canada to exclude coverage for residential UST related spills. In the vacuum of available insurance homeowners are faced with costs for remediation of a leaking tank on their property or a property that they once owned with no financial support.

BC regulates all underground storage tanks and aboveground storage tanks over 2,500L, that supply oil burning equipment, under the BC Fire Code (BCFC) and draws upon examples of good engineering practices listed in the BCFC and Part 9 of the *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products* published by the Canadian Council of Ministers of the Environment.

While the current provisions appear to be sufficient to manage commercial USTs in BC, there are no specific provincial regulations requiring the removal of residential USTs or the effective maintenance of residential above ground tanks used for storage of home heating fuel. Absent funding support, homeowners in BC face potential financial hardship for clean-up of contaminated sites caused by leaky residential USTs. Measures to address the regulatory and insurance gaps in BC's regime have the potential for

significant positive impacts on BC homeowners dealing with contamination caused by USTs.

DISCUSSION:

A review has been undertaken to examine how jurisdictions across North America are managing residential home heating oil tanks and to provide policy direction in BC. The review looked at state and provincial regulatory regimes and measures being undertaken by selected BC municipalities. The findings are summarized below and in Attachment 1.

In Canada, Prince Edward Island (PEI), Nova Scotia, Newfoundland, Ontario and Alberta have each taken measures to proactively manage USTs at the provincial level. No one province has a full suite of measures to manage residential home heating oil tanks; however they each have elements of an effective regulatory regime including:

- Tank registration and inspection;
- Financial incentives to encourage removal of existing USTs;
- Licensing professionals who are installing, inspecting or removing tanks;
- Imposing tank standards and maintenance requirements;
- Remediation funding; and
- Clear governance.

Given the current regulatory gap for residential home heating oil tanks in BC, some municipalities have enacted bylaws regarding the inspection, installation, removal, upgrading or repair of home heating oil systems in an effort to more proactively manage residential oil tanks.

Washington State has a comprehensive oil tank management and insurance program covering small business, local governments and homeowners. Since 1988, they have had requirements addressing the construction, replacement, and upgrading of oil tanks, as well as on-going maintenance such as leak detection, testing, record keeping and other tank management processes. Affordable insurance is available through the Pollution Liability Insurance Agency (PLIA), a state administered reinsurance program which implements four programs to both commercial and residential UST owners.

Neither PLIA nor any of its programs receive funding from the State Government. The main source of revenue for PLIA and its programs is the Petroleum Products Tax, an excise tax of 0.3 percent on the wholesale value of petroleum on the first introduction into the state. Additional funds are generated through a fee of 1.2 cents per gallon paid yearly by heating oil dealers. All revenue is added to two trust accounts administered by the Washington State Government. The State has the requirement to suspend the Petroleum Product Tax when the trust account balance reaches \$15,000,000 and to reinstate the tax when the account balance is less than \$7,500,000.

The funding model adopted in Washington State to sustain their residential oil tank registration and insurance schemes provides one option for consideration should BC activate the 2004 Bill 13 EMA provisions for a Land Remediation Fund (LRF) (see related information note in Cliff# 291904). The LRF was intended to provide funding for government programs in relation to remediation of brownfields, orphan sites, and USTs.

The activation of the LRF would provide the funding needed to develop a cost-neutral provincial residential home heating oil tank program including a registry of residential USTs in BC and funding support to encourage the removal of residential USTs and to assist homeowners who are struggling to remediate contamination from leaky oil tanks. It is proposed that development of such a program be focused on residential home heating oil tanks.

NEXT STEPS:

The Ministry will focus further research on those jurisdictions with programs that look to offer the best approaches to manage residential oil tanks. Ministerial support will be sought to develop a provincial residential heating oil tank program by late 2016/17.

Further analysis in the following areas will inform program option development:

- estimated inventories of residential USTs;
- further assessment of the Washington State and other key jurisdictional models for appropriateness in BC;
- consideration of tank registration and inspection regimes;
- the role of licencing professionals who install, inspect and remove tanks; and
- reviewing funding mechanisms.

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Reviewed by	Initials	Date
DM	WSB for WS	Jan 30/16
DMO	BC	Jan 26/16
ADM	MZ	Jan 22/16
Exec Dir.	MM	Jan 20/16
Dir.	PE	Jan 19/16
Author	CS	Jan 19/16

Attachment 1. Summary of findings from cross jurisdictional review of residential underground storage tanks

In Canada, Prince Edward Island (PEI), Nova Scotia, Newfoundland, Ontario and Alberta have each taken measures to proactively manage USTs at the provincial level. No one province has a full suite of measures to holistically manage USTs, however they each have elements of an effective regulatory regime including:

- **Tank registration and inspection** including prohibiting oil to be delivered into unregistered tanks;
- **Incentives to encourage removal of existing USTs** (e.g. funds) - one province has banned all residential USTs and imposed a deadline for removal of existing USTs;
- **Licensing professionals** who are installing, inspecting, or removing tanks;
- **Imposing tank standards and maintenance requirements**; and
- **Remediation funding** to assist responsible parties clean-up contamination caused by leaky tanks.

There are also differing governance models with some provinces directly managing the UST program while others delegate responsibility to a quasi-government authority or statutory body. In PEI, Nova Scotia and Newfoundland the provincial government directly manages the UST program. However, in Ontario, the Technical Standards and Safety Authority is the delegated authority to fulfil responsibilities of inspection, permitting and law enforcement of residential UST requirements. The Petroleum Tank Management Association of Alberta has authority for management of storage system construction, registration, upgrading, testing, closure, maintenance and operation standards in Alberta.

Given the current regulatory gap for USTs in B.C., some municipalities have enacted bylaws regarding the inspection, installation, removal, upgrading or repair of home heating oil systems in an effort to more proactively manage residential USTs. Activities undertaken by some B.C. municipalities include:

- **Inventory of active and abandoned USTs** using data drawn from previous installation/removal permitting files, building permits, or door-to-door survey (West Vancouver, Oak Bay, Saanich);
- **Permitting removal, installation or abandonment** of UST (West Vancouver, Saanich, Victoria);
- **Imposing an annual fee for a residential UST** – this was an effort by West Vancouver in 2009 to charge homeowners an annual fee where municipal records indicated presence of a UST; and
- **Educational bulletins** outlining risk and responsibilities associated with oil tanks.

Under U.S. federal regulation, owners and operators of commercial USTs (primarily small businesses and local government entities) are required to demonstrate financial responsibility for corrective action and for compensating third parties for bodily injury

and/or property damage, in case of an accidental release of petroleum. The purchase of pollution liability insurance is the only practical alternative for a small business or local government to demonstrate financial responsibility. However, there are excessively high premiums for pollution liability insurance and for most small businesses, the cost was prohibitive.

In support of these requirements Washington State developed a comprehensive UST management and insurance program covering small business, local governments and homeowners. They have requirements addressing the construction, replacement, and upgrading of USTs, as well as on-going maintenance such as leak detection, testing, record keeping and other tank management processes. In 1988 the Washington State Legislature created the Joint Select Committee on Underground Storage Tanks to study and recommend legislation to assist owners and operators of USTs in complying with federal financial responsibility regulations. The remedy chosen was to provide available and affordable insurance through a state administered reinsurance program called the Pollution Liability Insurance Agency (PLIA).

The PLIA implements four program components:

1. **Underground Storage Tank Reinsurance Program (commercial):** PLIA makes pollution liability insurance available and affordable to the owners/operators of petroleum underground storage tanks by serving as the reinsurer of insurance policies.
2. **Underground Storage Tank Community Assistance Program (commercial):** PLIA provided 112 grants in the early 1990s to owners of underground storage tanks at remote and rural gas stations. New grants are no longer being offered, however, PLIA continues to be responsible for the oversight of the original grant recipients.
3. **Heating Oil Pollution Liability Insurance Program (residential):** PLIA offers this program to provide up to \$60,000 of insurance coverage for cleanup of contamination from heating oil tanks that are registered in the program prior to the contamination occurring. There is no cost to the owner for this coverage.
4. **Heating Oil Advice and Technical Assistance Program (residential):** PLIA offers this program to provide technical assistance to the owners and operators of active or abandoned heating oil tanks if contamination resulting from a release is suspected.

Neither PLIA nor any of its programs receive any funding from the State Government coffers. The main source of revenue for PLIA and its programs is the Petroleum Products Tax, an excise tax of 0.3 percent on the wholesale value of petroleum on the first introduction into the state. Additional funds are generated through fee of 1.2 cents per gallon paid yearly by heating oil dealers. All revenue is added to two trust accounts administered by Washington State Government.

In the early 1990s, most U.S. states adopted a petroleum tax to address UST issues, and those taxes have remained constantly imposed. However the Washington State model has saved industry significant dollars by requiring the Petroleum Product Tax to be suspended when the trust account balance reaches \$15,000,000 and the tax to be reinstated when the account balance is less than \$7,500,000.

**MINISTRY OF ENVIRONMENT
MEETING INFORMATION NOTE**

February 12, 2016
File: 280-20
CLIFF/tracking #: 295074

PREPARED FOR: Wes Shoemaker, Deputy Minister of Environment

DATE AND TIME OF MEETING: Monday, February 29 from 2:30 to 3:00 pm

ATTENDEES: Wes Shoemaker, Deputy Minister, Martina Kapac de Frias, Leg Precinct, Ministry of Environment; Ian Bruce, Director, Science & Policy and Kyle Aben, Lead Climate Change Policy Analyst, David Suzuki Foundation

ISSUE(S): Follow up from the Paris meeting on public opinion research on climate change and BC Climate Plan 2.0

BACKGROUND:

Environics Institute in partnership with the David Suzuki Foundation has developed a public opinion research program. The program's purpose is to determine how Canadian public attitudes and priorities are changing towards climate change in response to events and broader social change. The opinions stated within BC on various climate change policy actions are compared with other jurisdictions. The survey is based on telephone interviews conducted with 2,004 Canadians between August 4 and 16, 2015 prior to the federal election and COP21 in Paris.

DISCUSSION:

The public opinion research program on climate change gauges public interest and support for climate change measures. Key findings on public opinion and policy support are:

- Public concern about climate change is most prevalent in BC (61% are extremely or definitely concerned); and particularly among younger generations.
- Experience of local area impacts is important in shaping opinions on climate change; this is most evident in BC where 44% say they noticed changes where they live which they ascribe to climate change (up 25 points since 2011).
- Growing public support for carbon pricing across Canada. In BC, support for the carbon tax is at the highest level since its introduction with support outweighing opposition by 2:1.
- Increased confidence in shifting the energy mix to renewables and a belief in the the possibility of a green energy future is most widespread in BC (82%), as well as among 18 to 24 year olds (87%)
- Canadians look to government rather than industry or consumers to take the leadership role on climate change issues and for concrete climate policy actions;

- Rising majority of Canadians were in support of an international agreement on climate change at COP21 in Paris (survey conducted prior to COP21) even if it affected jobs and consumer prices.

David Suzuki Foundation is likely to be interested in understanding the ambition and contents of the upcoming Climate Leadership Plan. They may present their recommended policy initiatives that are supported by their research findings. They may also have questions regarding the sector-specific engagement process.

SUGGESTED RESPONSE:

The BC Government will release a new Climate Leadership Plan (CLP) in spring 2016 and to aid its development:

- a) Has engaged with British Columbians and received their ideas and priorities for climate action in response to the discussion paper (phase 1);
- b) Received the Climate Leadership Team's 32 Recommendations Report;
- c) Has opened up a second public consultation phase to seek public input on the most important climate actions to reduce the greenhouse gas emissions;
- d) Will conduct sector-specific industry consultations and stakeholder engagements.

BC welcomes and encourages continued engagement with David Suzuki Foundation in meeting our collective responsibilities on climate change. The focus for BC is to reduce its carbon emissions while capitalizing on the opportunities presented by the emerging clean-tech, low carbon economy; and adapting to our changing climate.

BC encourages the Foundation and their members to formally submit responses via the public consultation process and will also inform them of additional opportunities for engagement.

Attachments: none

Contact:

*Susanna Laaksonen-Craig,
Head
Climate Action Secretariat
250 387-9456*

Alternate Contact:

*Neil Dobson, Manager
Climate Action Secretariat
250 387-9981*

Prepared by:

*Karthik Narayan, Policy
Analyst
Climate Action Secretariat
250 387-9239*

Reviewed by	Initials	Date
DM	WSB for WS	Feb 24/16
DMO	BC	Feb 17/16
ADM	SL	Feb 15/16
Dir./Mgr.	ND	
Author	KN	Feb 11, 2015

Appendix A:

David Suzuki Foundation

The Foundation collaborates with Canadians from all walks of life, including government and business; to conserve our environment and find solutions that will create a sustainable Canada through science based research, education and policy work.

About Ian Bruce:

Ian Bruce is the Director of Science and Policy and leads the Foundation's national science-based research, strategy, and stakeholder-engagement initiatives to advance environmental solutions. Ian has led the Foundation's landmark campaign to secure a climate action plan for BC.

Environics Institute for Survey Research

The Environics Institute for Survey Research was established to promote relevant and original public opinion and social research on important issues of public policy and social change. The focus of the Institute's mandate is to survey individuals and groups not usually heard from, asking questions not normally asked.

**MINISTRY OF ENVIRONMENT
DECISION NOTE**

January 13, 2016
File: 280-20 /98100-20/OK
MT-P-0259
CLIFF/tracking #: 293559

PREPARED FOR: Honourable Mary Polak, Minister of Environment

ISSUE: Initiating a Memorandum of Understanding regarding a proposed private land donation to Okanagan Mountain Park.

BACKGROUND:

In 2008, BC Parks was contacted by a private land owner^{s.22}, who owns several lots bordering Okanagan Mountain Park. At that time, the owner was engaged in a subdivision application with the Central Okanagan Regional District. As part of the subdivision application process,^{s.22} made reference to a potential donation of a portion of his lands (approximately 21 hectares) to Okanagan Mountain Park (see Attachment 1).

For several years, BC Parks was in correspondence with^{s.22} regarding the land donation, but due to poor market conditions,^{s.22} did not pursue the subdivision application process. In September 2015,^{s.22} contacted BC Parks with a renewed commitment to pursue the land donation to the park and indicated a strong desire to enter into a formal process to achieve this end.

The 21 hectare area suggested for donation contains high value habitat for species at risk such as Western Rattlesnake and Bighorn Sheep. A popular trail access to the park currently bisects private land in the area and the donation would create an opportunity to incorporate the trail into the park.

DISCUSSION:

Commonly, next steps in a land donation proposal would be achieved through a non-binding Memorandum of Understanding (MoU) between the Province (as represented by the Ministry of Environment) and the land donor. Aspects such as an terms of reference, overall intent, steps in the gifting agreement process, cost-sharing, and timelines are detailed in the MoU. Ministry legal services will often review the MoU prior to approval.

Land donation projects typically involve costs and resources related to land appraisals, legal surveys, property transfer tax, and environmental assessments (e.g., Phase 1 environmental assessment).

The Kootenay-Okanagan Region of BC Parks views this land donation proposal as a great benefit to Okanagan Mountain Park.

OPTIONS:

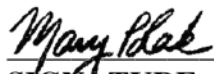
s.13

s.12,s.13,s.17

s.13

RECOMMENDATION:

s.13



SIGNATURE

Honourable Mary Polak
Minister of Environment

March 23, 2016

DATE SIGNED

Attachments:

Attachment 1: Context Map (Proposed Land Donation to Okanagan Mountain Park)

Contact:

Brian Bawtinheimer,
Exec. Director
BC Parks and
Conservation Officer
Service
(250)387-4355

Alternate Contact:

Ken Morrison, Manager

Planning & Land Admin.
Parks Planning & Mgmt
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Prepared by:

Keith J. Baric, Planning
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Reviewed by	Initials	Date
DM	WSB for WS	Jan 30/16
DMO	BC	Jan 29/16
ADM	MZ	Jan 29/16
Ex. Dir.	CC	
Dir./Mgr.		
Author	SL	

Page 23

Withheld pursuant to/removed as

s.22;s.17

**MINISTRY OF ENVIRONMENT
MEETING INFORMATION NOTE**

February 4, 2016
File: 280-20
CLIFF/tracking #:294370

PREPARED FOR: Honourable Mary Polak

DATE AND TIME OF MEETING: February 12, 2016 from 10:00 to 12:00 at the CVRD office in Duncan

ATTENDEES: Honourable Mary Polak, Mark Zacharias, Jennifer McGuire, Cindy Meays, with CVRD board members

ISSUE(S): South Island Aggregates – Proposed Stebbings Road Monitoring Study

BACKGROUND:

- In 2013, the Ministry of Environment issued a permit to Cobble Hill Holdings Ltd. (formerly South Island Aggregates) for a contaminated soil treatment facility and landfill on Stebbings Road in Shawnigan Lake.
- The permit decision was appealed and the permit was upheld; however, local stakeholders including the Shawnigan Residents Association (SRA) and the Cowichan Valley Regional District (CVRD) are concerned about the safety of the ongoing operation.
- Local residents, the CVRD and local and provincial politicians are calling for increased monitoring and oversight by an independent party. Primary concerns relate to EMA-permitted activities on Lot 23, but other concerns exist around adjacent Lot 21.
- This meeting is scheduled with the Regional Directors of the CVRD to discuss a monitoring proposal for the Stebbings Road area of the Shawnigan Lake Watershed.

DISCUSSION:

- The Ministry of Environment is proposing that a 1-year intensive monitoring study be conducted in the Stebbings Road area of South Shawnigan Creek, in collaboration with the CVRD and with input from other agencies, local stakeholders, and First Nations.

SUGGESTED RESPONSE:

- It is proposed that an independent qualified professional with pertinent knowledge, experience and credentials, be hired in early 2016 to develop, implement and report out on a monitoring study in South Shawnigan Creek near Stebbings Road.

- It is important that the qualified professional is independent of the ministry, CVRD, permit holder and the SRA.
- The qualified professional would be hired by the ministry, considering recommendations from CVRD staff.
- The purpose of the program is to determine if existing permitted activities on Stebbings Road, Lot 23 or historical activities on Lot 21 are impacting downstream surface water quality.
- The program would focus on sampling the mainstem of South Shawnigan Creek and the major flows coming off of Lot 23 (ephemeral stream) and 21 (seepage).
- Other agencies, stakeholders, and First Nations would be invited to contribute ideas and comment on the draft study design. These stakeholders and First Nations would also receive the data updates over the course of the year, and may contribute to the finalization of recommendations at the end of the 1-year study.
- The qualified professional would provide quarterly reports to the ministry and CVRD as well as a year-end report with recommendations for future monitoring.
- The ministry will hire an independent facilitator for a 1-day workshop which will provide an opportunity for agencies, select key stakeholder representatives, and First Nations to review and provide input on the 1-year monitoring study proposed by the independent qualified professional. These parties would be invited to contribute ideas and comment on the draft study design.
- The 1-year study should be conducted as an addendum to the existing Water Quality Objectives Attainment Monitoring Program, which should also be implemented in 2016 by the same qualified professional.

Attachments:

1. Shawnigan Lake Watershed 2016 Stebbings Road Monitoring Study Draft Terms of Reference
2. PowerPoint presentation - Proposal for a 1-year Monitoring Study in the Stebbing Road are of South Shawnigan Creek
3. Draft Shawnigan Lake Watershed Monitoring Proposal Meeting Agenda

Contact:

*Mark Zacharias
EPD
250-356-0121*

Alternate Contact:

*Jennifer McGuire
EPD/ROB
604-582-5284*

Prepared by:

*Cindy Meays
Regional Operations Branch (ROB)
250-882-2652*

Reviewed by	Initials	Date
DM		
DMO	BC	Feb 10/16
ADM	MZ	Feb 10/16
Dir./Mgr.	JM	Feb 10/16
Author	CM	Feb 10/16



Shawnigan Lake Watershed Monitoring Proposal

Meeting Agenda

Date: February 12, 2016

Time: 10:00 a.m. – 12:00 p.m.

Location: 175 Ingram Street, Duncan BC

Purpose: To discuss options for a monitoring study in the Stebbings Road area of the Shawnigan Lake Watershed

Attendees:

- | | |
|--------------------------------------|--------------------------------|
| 1. Honourable Mary Polak | 11. Mel Dorey (CVRD) |
| 2. Mark Zacharias, ADM | 12. Mary Marcotte (CVRD) |
| 3. Jennifer McGuire (Exec. Director) | 13. Klaus Kuhn (CVRD) |
| 4. Cindy Meays (A/Deputy Director) | 14. Bob Day (Vice-Chair, CVRD) |
| 5. Kerry Davis (CVRD) | 15. Aaron Stone (CVRD) |
| 6. Sonia Furstenuau (CVRD) | 16. Phil Kent (CVRD) |
| 7. Matteus Clement (CVRD) | 17. Jon Lefebure (Chair, CVRD) |
| 8. Lori Iannidinardo (CVRD) | 18. Tom Walker (CVRD) |
| 9. Alison Nicholson (CVRD) | 19. Kate Marsh (CVRD) |
| 10. Ian Morrison (CVRD) | |

Item / Action & Owner

1. Agenda Review
2. Presentation of monitoring proposal
3. Questions
4. Next Steps
5. Adjourn

CVRD Board Members



Kerry Davis: Area A – Mill Bay/Malahat

- former provincial candidate for the Green Party
- big issues include water, contaminated soil and transportation



Sonia Furstenau: Area B – Shawnigan Lake

- teacher
- history of volunteer work and activism



Matteus Clement: Area C – Cobble Hill

- Pressing issues include: water, farms and people
- external-executive of the Camosun College's student society
- history of working with municipal governments (Victoria)
- business background running a communications firm



Lori Iannidinardo: Area D – Cowichan Bay

- elected Area Director in 2008
- prior to becoming Area Director, was active member of CVRD Area D Parks and Recreation Commission (13 yrs)
- former board member of Cowichan Bay Improvement Association and Cowichan Bay Residents Association



Alison Nicholson: Area E- Cowichan Station/Sahtlan/Glenora

- ecologist, farmer, mother and principal of Vis-à-vis Management Resources (small company that provides management advice to governments and not-for-profits)
- experience with strategic and business planning, managing projects and programs, communications, and board governance



Ian Morrison: Area F – Cowichan Lake South/Skutz Falls

- first elected as an Area Director in 2008
- member of the Cowichan Watershed Board



Mel Dorey: Area G – Saltair/Gulf Islands

-



Mary Marcotte: Area H – North Oyster/Diamond

- Director since 1996
- Chair of the Regional Agricultural Advisory Commission in 2013
- Vice Chair of Corporate Services Committee
- First Vice President of the Association of Vancouver Island and Coastal Communities



Klaus Kuhn: Youbou/Meade Creek
- Board member on Cowichan Watershed Board



Vice-Chair Bob Day: Town of Cowichan
- first elected in 2008
- Chair Parks and Recreation Committee and Lakeview and Fire Department Committee
Other committees include: Public Works Committee; Finance and Administration Committee; Representative on Advisory Planning Commission; Representative on Cowichan Lake Seniors' Association; and Personnel Committee



Aaron Stone: Town of Ladysmith
Serves on: Municipal Services Committee; Parcel Tax Review Panel; Advisory Design Panel; Ladysmith Chamber of Commerce; Heritage Revitalization Advisory Commission; Ladysmith Community Health Advisory Committee (alternate); Ladysmith Downtown Business Association (alternate); and Social Planning Cowichan Affordable Housing Dictorate (alternate).



Phil Kent: City of Duncan
- Chair of Island Coastal Economic Trust since 2012
- Mayor since 2005
- serves on CVRD Economic Development Commission

- self-employed in business for over 3 decades
- certificates in Business Management and Strategic Planning from Royal Roads and Sustainable Community Development from SFU.



Chair Jon Lefebure: Municipality of North Cowichan

- Bachelors Degree in Political Science from Carleton University
- operates a design and build construction business
- was elected for 4th term as Mayor of North Cowichan in 2011
- Co-Chair of Cowichan Watershed Board with Chief Seymour (Cowichan Tribes)



Tom Walker: Municipality of North Cowichan

- Acting Mayor
- Committees: Audit Committee; Community Planning Advisory Committee; Protective Services Committee; and Public Works Committee (Chair)
- Additional external appointments: B.C. Forest Discovery Centre; Cowichan Communities Health Network (CVRD); Island Savings Centre Commission; Mayor's Advisory Committee on Disabilities (City of Duncan); Vancouver Island Regional Library Board (alternate)



Kate Marsh: Municipality of North Cowichan

Committees: Audit Committee; Environmental Advisory Committee; Public Works Committee; and Parks & Recreation Committee.

Cost Estimates

1) Estimate for a one-year monitoring program: ^{s.17}

- Estimates include: shipping samples, lab analysis, field work, office costs (study design, data analysis, quarterly summaries and year-end report).
- Actual cost will be dependent on the study design.

2) Estimate for a facilitated workshop: ^{s.17}

3) Estimate for water quality objectives attainment monitoring: ^{s.17}

- Estimate includes: lab analysis, field work, data analysis, and finalized attainment report.

Cost Estimates

1) Estimate for a one-year monitoring program: s.17

- Estimates include: shipping samples, lab analysis, field work, office costs (study design, data analysis, quarterly summaries and year-end report).
- Actual cost will be dependent on the study design.

2) Estimate for a facilitated workshop: s.17

3) Estimate for water quality objectives attainment monitoring: s.17

- Estimate includes: lab analysis, field work, data analysis, and finalized attainment report.

Cost Estimates for 1-year Monitoring Program:

Option	Cost
A1: Monthly samples @ 8 sites with 2 5/30's during critical time periods	s.17
A2: Monthly samples @ 6 sites with 2 5/30's at critical time periods	s.17
B1: Quarterly samples @ 8 sites with 2 5/30's at critical time periods	s.17
B2: Quarterly samples @ 6 sites with 2 5/30's at critical time periods	s.17
C1: Monthly samples @ 8 sites	s.17
C2: Monthly samples @ 6 sites	s.17

Notes:

- *Costs in brackets include analysis for some basic organics – Extractable Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons*

Costs for Objectives Attainment Monitoring:

- 1/4ly sampling of lake at 4 deep basin locations (3 depths for 2 sites, 2 depths for 2 sites)
- 5 in 30 sampling (during 2 critical periods) for 8 lake shoreline sites & 2 lake drinking water intake sites
 - Late summer (low flows)
 - Fall (rain – high flows)
- 9 tributary stream sites
 - sampled monthly plus
 - 5 in 30 for spring and fall

WQO attainment lab = s.17

Shipping samples = s.17

Field = s.17 (can be reduced if local stakeholder support for shoreline 5/30 sampling)

Data analysis and reporting = s.17

Approximately: s.17 total

Facilitated Workshop

Estimate costs: s.17

Cost Estimates for 1-year Monitoring Program:

Option	Cost
A1: Monthly samples @ 8 sites with 2 5/30's during critical time periods	s.17
A2: Monthly samples @ 6 sites with 2 5/30's at critical time periods	s.15
B1: Quarterly samples @ 8 sites with 2 5/30's at critical time periods	s.17
B2: Quarterly samples @ 6 sites with 2 5/30's at critical time periods	s.17
C1: Monthly samples @ 8 sites	s.17
C2: Monthly samples @ 6 sites	s.17

Notes:

- Costs in brackets include analysis for some basic organics – Extractable Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons

Costs for Objectives Attainment Monitoring:

- 1/4ly sampling of lake at 4 deep basin locations (3 depths for 2 sites, 2 depths for 2 sites)
- 5 in 30 sampling (during 2 critical periods) for 8 lake shoreline sites & 2 lake drinking water intake sites
 - Late summer (low flows)
 - Fall (rain – high flows)
- 9 tributary stream sites
 - sampled monthly plus
 - 5 in 30 for spring and fall

WQO attainment lab = s.17

Shipping samples = s.17

Field = s.17 (can be reduced if local stakeholder support for shoreline 5/30 sampling)

Data analysis and reporting = s.17

Approximately: s.17 total

Facilitated Workshop

Estimate costs: s.17

Shawnigan Lake Watershed 2016 Stebbings Road Monitoring Study Draft Terms of Reference

The Ministry of Environment is proposing that a 1-year intensive monitoring study be conducted in the Stebbings Road area of South Shawnigan Creek, in collaboration with the Cowichan Valley Regional District (CVRD) and with input/engagement from First Nations, other agencies, and local stakeholder representatives. This 1-year study will be conducted as an addendum to the existing Water Quality Objectives Attainment Monitoring Program.

Summary Bullets

- It is proposed that an independent qualified professional with pertinent knowledge, experience and credentials, be hired in early 2016 to develop, implement and report out on a monitoring study in South Shawnigan Creek near Stebbings Road.
- It is important that the qualified professional is independent of the ministry, CVRD, permit holder and the Shawnigan Residents Association (SRA).
- The qualified professional would be hired by the ministry, considering recommendations from CVRD staff.
- The purpose of the program is to determine if existing permitted activities on Stebbings Road, Lot 23 or historical activities on Lot 21 are impacting downstream surface water quality.
- The program would focus on sampling the mainstem of South Shawnigan Creek and the major flows coming off of Lot 23 (ephemeral stream) and 21 (seepage).
- The ministry will hire an independent facilitator for a 1-day workshop which will provide an opportunity for key stakeholder representatives and First Nations to review and provide input on the 1-year monitoring study proposed by the independent qualified professional. These parties would be invited to contribute ideas and comment on the draft study design.
- The qualified professional would provide summary quarterly reports and a year-end report with recommendations for future monitoring to the ministry, the CVRD, First Nations, and the stakeholder representatives.
- The 1-year study should be conducted as an addendum to the existing Water Quality Objectives Attainment Monitoring Program, which should also be implemented in 2016 by the same qualified professional.

Background

In 2013, the Ministry of Environment issued a permit to Cobble Hill Holdings Ltd. (formerly South Island Aggregates) for a contaminated soil treatment facility and landfill on Stebbings Road in Shawnigan Lake. The permit decision was appealed and the permit was upheld; however, local stakeholders including the

SRA and the CVRD are concerned about the safety of the ongoing operation. Local residents, the CVRD and local and provincial politicians are calling for increased monitoring and oversight by an independent party. Primary concerns relate to EMA-permitted activities on Lot 23, but other concerns exist around the adjacent Lot 21.

The Ministry of Environment has existing Water Quality Objectives (WQO) and an Objectives Attainment Monitoring Program in the Shawnigan Lake Watershed. The Objectives Attainment program includes quarterly sampling of the lake at four “deep basin” locations (multiple depths), and weekly sampling for five weeks in a row during two critical time periods (summer and fall) at 8 lake shoreline site and two lake drinking water intake sites. Nine tributary stream sites are also sampled monthly plus weekly during the two critical times. However, this program is part of a rotational program that is not currently scheduled to be completed until at least 2017.

In response to the concerns, and in an effort to build on existing monitoring programs, a special 1-year monitoring study is proposed to be completed as an addendum to the existing WQO program. It is proposed that in 2016, full Objectives Attainment Monitoring be carried out in the watershed, concurrently with this special 1-year monitoring study. Combining these programs will greatly increase the ability of the ministry to interpret the data in the larger watershed-wide context.

Purpose

The purpose of the proposed 2016 Stebbings Road Monitoring Study is to collect water quality data for 1 –year from South Shawnigan Creek in the vicinity of South Island Aggregates / Cobble Hill Holdings Ltd. properties on Stebbings Road. This will be done as an addendum to the existing WQO monitoring program that is in place for the entire watershed. Data will be used to:

- Determine if existing permitted activities on Stebbings Road. Lot 23 or historical activities on Lot 21 are impacting downstream water quality
- Establish baseline conditions for future watershed monitoring
- Augment data already being collected by the ministry and the Permittee to assess effectiveness of the EMA Permit
- Inform potential updates (if necessary) to Shawnigan Lake Community Watershed and Tributaries WQO

Program Delivery

To ensure transparency, it is proposed that the program be developed and implemented by an independent consultant, with no direct ties to the ministry, CVRD, Permittee or SRA.

The consultant should be a Qualified Professional registered with a professional association in BC. They should have extensive knowledge and experience in designing and implementing water quality monitoring and impact assessment studies, and must have the abilities and capacity to fully implement

the monitoring program and the water quality objectives attainment program, including data analysis and reporting.

Responsibilities for the consultant will include:

- Prepare a draft study design
- Present draft study design to the ministry, CVRD, key stakeholder representatives and First Nations for input, during a facilitated workshop.
- Finalize study design and submit to MOE and CVRD.
- Plan and execute fieldwork – use accredited lab for lab analysis
- Receive, analyze and summarize data on a quarterly basis and report back to MOE and CVRD.
- Prepare summary report and recommendations from the 1-year study at end of the year.
- Prepare Water Quality Objectives Attainment report for Shawnigan Lake Community Watershed and Tributaries.

As indicated above, the proposed 1-year monitoring program should be completed concurrently with WQO Attainment Monitoring in the entire watershed, as part of a larger contract (with the same consultant).

Proposed Study Design for 2016 Stebbings Monitoring Study

Sites:

At the conceptual level, sampling should be conducted near the property including the main flow off of each property (i.e. Lot 21 seepage; Lot 23 ephemeral creek) and some South Shawnigan Creek sites upstream and downstream of the main flows (e.g. upstream and downstream of Lot 21 seepage; and upstream and downstream of Lot 23 ephemeral creek). It is anticipated that there will be a total of 6-8 sampling sites.

Sampling Schedule and Parameters:

The independent qualified professional will propose a sampling schedule as well as what parameters should be sampled at each site. Parameters will be compared to existing BC water quality guidelines. It is anticipated that sampling will occur on a monthly basis for 12 months, with an additional 4 weekly samples in late summer low flows and fall rains (5 samples in 30 days, “5/30”), to capture variability during the critical time periods.

Facilitated Project-Specific Workshop

An independently facilitated workshop is recommended as an opportunity for stakeholder representatives and First Nations to review and provide input to the proposed 1-year monitoring program developed by the qualified professional. The monitoring program would be finalized based on the feedback given at the workshop.

Expected participants would include, but not necessarily be limited to the following:

- Ministry of Environment
- Ministry of Energy and Mines
- Cowichan Valley Regional District
- Shawnigan Residents Association – small number of key representatives
- Department of Fisheries and Oceans and/or Environment Canada
- Malahat First Nation
- Cowichan Tribes
- Cobble Hill Holdings Ltd.

DRAFT

Proposal for a One-Year Monitoring Study in the Stebbings Road area of South Shawnigan Creek

B.C. Ministry of Environment

February 12, 2016



Context

1. Ongoing legal activities
2. High public concern
 - DMO:
 - Standard responses: 6 batches with 512 letter/emails total
 - Individual responses: 105 individual letters/emails
 - 33 media request
 - 88 emails/texts received by compliance staff
 - 12 complaints through complaint mailbox/RAPP
 - 31 spill reports
3. Recent inquiries
 - Last week - 9 emails to staff from group of 12 residents referring to themselves as a research group
 - Each response generates more requests
4. Existing datasets
5. Need identified by CVRD for additional monitoring

Summary of the Monitoring Proposal

1. One-year intensive monitoring study be conducted in the Stebbings Road area of South Shawnigan Creek
 - in collaboration with Cowichan Valley Regional District
 - With input from local stakeholders and First Nations
2. An independent qualified professional be hired to develop, implement & report out
3. The one-year study is an addendum to the existing water quality objectives (WQO) attainment monitoring program

Purpose of Monitoring Study

1. Collect water quality data for 1-year from South Shawnigan Creek in the vicinity of South Island Aggregates/Cobble Hill Holdings Ltd. properties
2. Addendum to existing WQO monitoring program
3. Determine if existing permitted activities on Lot 23 or historical activities on Lot 21 are impacting downstream water quality

Program Delivery

1. Implemented by an independent qualified professional (QP) with no direct ties to the ministry, CVRD, permittee, or SRA
2. QP should have extensive knowledge and experience designing and implementing water quality monitoring and impact assessment studies and must be able to fully implement the monitoring program and the WQO attainment program

Proposed Study Design – Conceptual Level

1. Sampling should be conducted near the property including the main flow off each property
 - Lot 21 seepage
 - Lot 23 ephemeral creek
2. Upstream and downstream of Lot 21 seepage and Lot 23 ephemeral creek.
3. The QP will propose sampling schedule and parameters to sample at each site.
4. Anticipate sampling will occur monthly for 12 months
 - additional 4 weekly samples (5 samples in 30 days)
 - late summer low flows
 - fall rains

Facilitated Project-Specific Workshop

1. Independently facilitated workshop is recommended
 - Opportunity for stakeholders and First Nations to review and provide input to the proposed one-year monitoring program developed by the QP
2. Monitoring program would be finalized based on the feedback given at the workshop
3. Expected participants would include, but not necessarily limited to:
 - Ministry of Environment
 - Ministry of Energy and Mines
 - Cowichan Valley Regional District
 - Shawnigan Residents Association (key representatives)
 - Department of Fisheries and Oceans and/or Environment Canada
 - Malahat First Nations
 - Cowichan Tribes
 - Cobble Hill Holdings Ltd.

Proposed Timeline and Key Actions

An aggressive schedule/timeline is required to complete the monitoring study by early next fiscal year:

Task	Complete by
Shortlist of consultant names from CVRD	February 19
Award contract with consultant	February 26
Award contract with facilitator	February 26
Draft study design	March 11
Facilitated workshop to consult on study design	Mid-March
Final study design	March 25
Commence sampling	April
Quarterly reporting	June, Sept, Dec
Final reporting	March 31 2017

Topics to discuss:

1. Thoughts on the monitoring proposal?
2. Incoming information requests and enquiries to MOE?
3. Next steps for engagement with CVRD and the community?

**MINISTRY OF ENVIRONMENT
BRANCH-ORIGINATED INFORMATION NOTE**

November 30, 2015
File: 280-20
CLIFF/tracking #: 293478

Prepared for: The Honourable Mary Polak, Minister of Environment

What: Alberta's proposed carbon tax

Why: To prepare the Minister for questions she may receive about comparing carbon tax programs.

BACKGROUND:

On November 23, 2015, Alberta announced its new "Climate Leadership Plan," the centrepiece of which is a carbon price covering much of the economy. Other key aspects of the announced plan were a cap on oil sands emissions, a program to reduce methane emissions from the oil and gas sector, and a phase-out of coal-fired electricity by 2030.

Many fundamental aspects of the carbon tax program remain to be designed, but core known design details are as follows:

For large industry:

- The program will be applied in a manner similar to Alberta's existing carbon price. It will continue to apply to emitters with greater than one hundred thousand tonnes of annual emissions. Only those emissions beyond a pre-determined level will have a carbon price applied. Flexibility options will continue to exist for compliance, including trading credits among covered facilities, buying offsets, or contributing to a fund for a fixed price (this latter option functioning as the binding 'tax' level and creating a ceiling on the price of compliance).
- Where in the existing system the benchmark level below which emissions do not have a carbon price applied was based on historical emissions at the facility level, the new benchmark will be based on a combination of best practice technology on a product level, and on industry trade exposure.
- The level of the carbon price (fixed cost of contributing to the fund above) will increase to \$20/tonne in 2016 and \$30/tonne in 2016.
- Contributions made to the fund will now be used for clean technology, emissions reductions, and transition assistance for vulnerable populations and businesses, rather than only the former under the existing system. By applying all revenues to these purposes, Alberta is calling their system "revenue neutral."

For "end users" of fuel (households, transport, small business etc.):

- A new carbon price will be applied at the level of producers and suppliers of fuels. It is expected the cost would be passed through the supply chain to the end user.
- There are few design details for this new part of the carbon price system, but it is not expected that it will be administered as a tax (as British Columbia's is), but as an

emissions permit system similar to Quebec's program, but at a fixed price for allowances (\$30 in 2018). It is not known whether any of the allowances will be allocated for free under this program.

- Industrial operators below the 100 kt threshold would pay their carbon price through the end use program unless they opt into the large emitters program.

The carbon price will increase at inflation plus 2% per year after 2018.

DISCUSSION:

Alberta is taking a large step in strengthening its carbon pricing program by expanding the scope of emissions covered, and by changing the manner in which the emissions benchmark is set from its former historical basis, which penalized emitters already operating at higher efficiency, to a standardized technology based approach applied across a given sector.¹ The increase in the level of the carbon price also helps to continue momentum in the right direction.

At the moment, it is not possible to compare the stringency of Alberta's program without key design details that are to be determined. In particular, the level of the benchmarks (which determines the extent of free allocation of allowances, i.e. exemption of tonnes of CO₂ equivalent from paying the carbon price) will be fundamental in determining both the effective scope and the effective price of the program.

Scope: Alberta's new system covers 78-90% of emissions. This is higher than British Columbia's (BC) 70% carbon tax coverage because the Alberta system includes non-combustion emissions from industry. However, large amounts of those emissions in Alberta will not face a carbon price because emissions below the benchmark receive allowances for free (they still have the incentive to reduce those emissions because they could sell the allowances). Alberta has stated that benchmarks will be no less stringent than the 20% intensity reduction required under the existing system, providing a lower-bound for possible coverage accounting for free allowances. ^{s.16}

s.16

Price: Alberta's stated carbon price level will converge with BC's at \$30/tonne in 2018. However, this seeming parity in price does not account for Alberta's free allowances below the benchmark level or for the exclusion in BC of roughly 40% of industrial emissions (non-combustion emissions) from the carbon tax. ^{s.16}

s.16

Revenue Neutrality: BC defines revenue neutrality as no net increase to general revenues, meaning that every dollar the carbon tax generates is returned to British Columbians through cuts to other taxes. Program spending for climate action and growing a green economy is funded through general revenues. Alberta is defining revenue neutrality as no net impact on general revenues for their Climate Plan, meaning

¹ Under the existing program, the threshold is based on a percentage reduction from historical emissions intensity levels, meaning that facilities with higher historical intensity have a larger proportion of their emissions with no price applied.

that the net tax level in Alberta will go up with the enhancements to the carbon price, but that all program spending will come from earmarked carbon price revenues rather than from general revenues. Alberta can expect more drag on their economy resulting from their carbon price than under BC's system, but also had a low overall tax level (no sales or payroll tax) at the outset.

Competitiveness: Alberta is addressing industry competitiveness through adjustments to free allowance levels (no methods have been defined), and through the transition fund from carbon price revenue. BC addresses competitiveness through broad-based tax cuts and through programs for identified sectors (e.g. greenhouses, cement).

Oil and Gas: Alberta's proposed carbon price exempts on-site combustion emissions from the carbon price until 2023. Consumption by oil and gas producers of fuel they themselves produce is also exempt for five years (exact parameters of this exemption are unclear). Instead, Alberta has decided to focus on methane, launching a complementary program to address methane emissions through technology improvements and practice changes. The BC carbon tax includes both onsite combustion and producer consumption of fuels. The Venting and Flaring Guideline addresses a portion of methane emissions.

CONCLUSION or SUMMARY or NEXT STEPS:

Alberta's new carbon tax is a considerable expansion of their existing program which will provide a higher carbon price signal to a broader array of emissions. It adds to the momentum for further carbon pricing in North America.

Alberta's system does not resemble BC's and a comparison of relative stringency is not possible until Alberta's intentions with respect to free allocation of allowances are made clear.

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**MINISTRY OF ENVIRONMENT
INFORMATION NOTE**

Date: January 13, 2016

File: 280-20

CLIFF: NRS 294108

PREPARED FOR: Honourable Mary Polak, Minister of Environment

ISSUE: Access to Cypress Provincial Park through Cypress Mountain Resort.

BACKGROUND:

A recent blog post from Steve Jones has sparked multiple public inquiries as to how Cypress Mountain Resorts controls public access through the ski area to access trails in Cypress Provincial Park. Cypress Mountain Resorts has been authorized under a Park Use Permit by BC Parks to occupy a portion of Cypress Provincial Park for the purpose of operating a downhill ski area. As a condition of the permit, Cypress Mountain Resorts maintains the responsibility to control, regulate and direct the movement of the public throughout the downhill ski area to ensure safe and orderly use of the area. This includes providing safe access through the base area to the backcountry areas of the park for park visitors who are not clients of the ski hill.

DISCUSSION:

In order to ensure safe public access through the downhill ski base area, Cypress Mountain Resorts has an access policy which limits all visitors from accessing the base area from 22:00 hrs to 9:00 hrs. This restriction has been in place for eight years as part of an operation policy to ensure safety while they prepare the base area for the operating hours. Maintenance vehicles, groomers, and snowmaking equipment are all active through the night and early morning in the base area until the opening of the ski hill at 9:00 hrs. This equipment, in particular snow grooming equipment, can pose a significant safety hazard to the public. The Hollyburn Hikers access trail, which does not require transiting the base area, is open at 7:00 hrs and offers an excellent option for early morning skiing or snowshoeing opportunities.

In recent years, we have seen a dramatic increase in winter use of the backcountry areas of Cypress Park, and an increase in the number of park visitors transiting through the base area. Given the exceptionally busy year so far, Cypress Mountain Resorts staff have been overwhelmed by the visitor demand, and have had challenges directing the public to follow safety protocols. BC Parks and Cypress Mountain Resorts have been working together to manage the significant increase in park visitation. One of the measures taken was to post the access policy on signs in the park and on the BC Parks website for Cypress Park to reduce potential conflicts and to ensure public safety.

NEXT STEPS:

BC Parks supports limiting the access to the base area from 22:00 hrs to 9:00 hrs to ensure public safety during the winter months when the ski hill is in operation. BC Parks is working with Cypress Mountain Resorts to continue to ensure that all park users have safe and reasonable access to the park.

BC Parks has improved access restriction information on the BC Parks website for Cypress Park and is working with Cypress Mountain Resorts to improve signs throughout the base area.

BC Parks and Cypress Mountain Resorts will be sending consistent email responses to all inquiries, which will reinforce the access policy to ensure public safety.

The next steps for BC Parks staff will be to work with operators and Park users to address overcapacity challenges at Cypress and Mount Seymour Parks; overcapacity that is impacting visitor satisfaction and threatening staff and visitor safety, as it relates to congested roads and parking areas, as well as impacting ski area profitability.

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**MINISTRY OF ENVIRONMENT
BRANCH-ORIGINATED INFORMATION NOTE**

January 18, 2016

File:

CLIFF/tracking #: 293994

Prepared for: Honourable Mary Polak, Minister of Environment

What: The Ministry is prepared to post the 2014 Industrial Greenhouse Gas Emissions Report Summaries

Why: Annual industrial report summaries have been published on the website since 2011; the year after the Reporting Regulation came into force.

Required by: n/a (at Minister's discretion)

Briefing: If requested

BACKGROUND:

The *Greenhouse Gas Reductions (Cap and Trade) Act* Reporting Regulation requires industrial operations emitting 10,000 tonnes or more per year to report their greenhouse gas (GHG) emissions by March 31. Operations emitting 25,000 tonnes or greater must also have their report audited by an accredited third party before submission. Emissions data is submitted through Environment Canada's Single Window Reporting System to meet the annual reporting requirements of both the provincial and federal governments. Emission report summaries are published on the Ministry of Environment website. Posting the annual industrial reports provides timely, accurate information about significant sources of industrial greenhouse gas emissions in British Columbia (BC).

The Ministry has traditionally published the annual industrial reports in the fall of the year the reports are submitted. However, due to system complications and a focus on implementing the *Greenhouse Gas Industrial Reporting and Control Act* the 2014 reports were intentionally delayed until early 2016. To date, there have been only two inquiries regarding the status of the reports, both in the last week of 2015.

DISCUSSION:

Highlights from the 2014 industrial greenhouse gas emissions reports:

- 108 companies reported with 131 reporting operations in BC, including two electricity import operations;
- Reporting operations represent 31% (20.3 Mt CO₂e) of provincial emissions (electricity imports are not included in the provincial target nor the 31%);
- Reported emissions were 2.1 % higher in 2014 than 2013 (Table 1);
- Including electricity imports, industrial greenhouse gas emissions were 5.7% higher in 2014 than in 2013 (Table 1).

Table 1: BC Industrial Greenhouse Gas Emissions Summary (tonnes CO₂e based on updated GWPs)

Sector	2014	2013	2012	% change from 2013
Oil and Gas	11,267,000	10,631,000	10,456,000	6.0
Cement and Lime	1,921,000	1,905,000	1,647,000	0.8
Mining and Smelting	3,202,000	3,496,000	3,770,000	-8.4
Electricity and Heat Generation	890,000	914,000	853,000	-2.6
Forest Products	1,721,000	1,662,000	1,751,000	3.5
Manufacturing and Refineries	880,000	835,000	876,000	5.4
Waste Treatment	398,000	427,000	427,000	-6.8
BC Emissions Total	20,280,000	19,869,000	19,780,000	2.1
Electricity Imports	2,149,000	1,342,000	1,158,000	60.1
Industrial Reporting Total	22,429,000	21,211,000	20,938,000	5.8

Table 2: British Columbia's Largest Industrial Greenhouse Gas Emitters by Company and Facility

Company	2014 CO ₂ e	Facility	2014 CO ₂ e
Spectra Energy Transmission	4.1 Mt	Fort Nelson Gas Plant, Spectra Energy Transmission	1.3 Mt
Canadian Natural Resources Limited	1.2 Mt	Transmission Mainline, Spectra Energy Transmission	0.93 Mt
Progress Energy	0.9 Mt	Pine River Gas Plant, Spectra Energy Transmission	0.73 Mt

Electricity Imports

- Emissions were 2.1 Mt, 60% higher than 2013. 2014 was a low water year, meaning that more fossil fuel generation was needed in the region. 2014 emissions were 11% more than in 2011, another low water year.
- Approximately 50% of imported electricity reported in 2014 was immediately exported.

Oil and Gas

- A 6% increase in greenhouse gas emissions in the oil and gas sector was the result of the sector's increase in production.

Cement and Lime

- GHG emissions in the cement/lime sector are virtually unchanged from 2013.

Mining and Smelting

- An 8.4% decrease in emissions in the mining and smelting sector is due in large part to decreased emissions from the RioTinto Alcan aluminum smelter.

Overall, the increase in emissions in the oil and gas sector is partially compensated by decreases in the mining and smelting and electricity and heat generation sectors resulting in a 2.1% increase in total provincial industrial greenhouse gas emissions for 2014.

NEXT STEPS:

- The Ministry proposes to post 2014 industrial greenhouse gas emission reports by January 31, 2016.

Attachments:

- Appendix A: 2014 Industrial Reporting Operation GHG Emissions Report
- Appendix B: Questions and Answers

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Appendix A: 2014 Industrial Reporting Operations GHG Emissions

Company	Facility	Total tonnes CO ₂ e excluding biomass	Tonnes CO ₂ from Biomass
Aitken Creek Gas Storage ULC	Aitken BC Linear Facilities Operation (LFO)	52,127	-
Alliance Pipeline Ltd.	Alliance BC Linear Facilities Operation (LFO)	20,760	-
AltaGas Ltd.	AltaGas BC Linear Facilities Operation (LFO)	72,442	-
Apache Canada Ltd.	Apache BC Linear Facilities Operation (LFO)	40,655	-
ARC Resources	ARC BC Linear Facilities Operation (LFO)	243,665	-
Artek Exploration Ltd.	Artek BC Linear Facilities Operation (LFO)	68,483	-
Aux Sable Canada L.P.	Aux Sable BC Linear Facilities Operation (LFO)	41,095	-
Black Swan Energy	Black Swan BC Linear Facilities Operation (LFO)	40,302	-
Bonavista Energy Corporation	Bonavista BC Linear Facilities Operation (LFO)	66,482	-
British Columbia Hydro and Power Authority	BC Hydro BC Linear Facilities Operation (LFO)	25,114	-
British Columbia Hydro and Power Authority	Burrard Generating Station	28,024	-
British Columbia Hydro and Power Authority	Fort Nelson Generating Station	121,844	-
British Columbia Hydro and Power Authority	Masset Diesel Generating Station	18,333	-
Canadian Autoparts Toyota Inc.	Canadian Autoparts Toyota	16,572	-
Canadian Forest Products Ltd.	Canfor Taylor Pulp	68,498	-
Canadian Forest Products Ltd.	Elko Sawmill	20,765	-
Canadian Forest Products Ltd.	Plateau Division	7,027	-
Canadian Natural Resources Limited	CNRL BC Linear Facilities Operation (LFO)	1,161,830	-
Canbriam Energy Inc.	Canbriam BC Linear Facilities Operation (LFO)	61,709	-
Canexus Corporation	North Vancouver Chlor-alkali Facility	11,008	-
Canfor Pulp Ltd.	Northwood Pulp Mill	157,196	1,597,237
Canfor Pulp Ltd.	Prince George Pulp and Paper and Intercontinental Pulp Mills	157,002	2,014,284
Capital Regional District	Hartland Landfill	13,636	-
Cariboo Pulp and Paper Company	Cariboo Pulp and Paper Company	111,814	1,206,156
Catalyst Paper Corporation	Crofton Division	147,052	1,421,607

Catalyst Paper Corporation	Port Alberni Division	29,981	415,816
Catalyst Paper Corporation	Powell River Division	48,478	630,749
Cequence Energy Ltd.	Cequence BC Linear Facilities Operation (LFO)	12,334	-
CertainTeed Gypsum Canada Inc.	Vancouver Wallboard Plant	20,956	-
Chevron Canada Limited	Burnaby Refinery (Keep)	490,588	-
Chinook Energy Inc.	Chinook BC Linear Facilities Operation (LFO)	90,014	-
CIPA Lumber Co. Ltd.	CIPA Lumber Co. Ltd.	29,187	-
City of Vancouver	Vancouver Landfill	25,277	-
Coastland Wood Industries Ltd.	Coastland Wood Industries Ltd., Annacis Division	18,921	-
Conifex Inc.	Conifex Inc. (SFO)	17,783	-
Conifex Inc.	Mackenzie Site 2 & Power Plant	11,847	-
ConocoPhillips Canada Resources Corp.	ConocoPhillips BC Linear Facilities Operation (LFO)	415,634	-
Creative Energy Vancouver Platforms Corp.	CEVPC 720 Beatty Street	87,883	-
Crew Energy Inc.	Crew BC Linear Facilities Operation (LFO)	49,802	-
Devon Canada Corporation	Devon BC Linear Facilities Operation (LFO)	11,675	-
Direct Energy Marketing Ltd.	Direct Energy BC Linear Facilities Operation (LFO)	110,335	-
Domtar Inc.	Kamloops Mill (SFO)	103,386	1,518,456
Dunkley Lumber Ltd.	Dunkley Lumber Ltd.	23,171	-
Encana Corporation	Encana BC Linear Facilities Operation (LFO)	753,881	-
Endurance Energy Ltd.	Endurance BC Linear Facilities Operation (LFO)	558,929	-
Enerplus Corporation	Enerplus BC Linear Facilities Operation (LFO)	42,334	-
EOG Resources Canada Inc.	EOG BC Linear Facilities Operation (LFO)	31,789	-
FortisBC Energy (Vancouver Island) Inc.	FortisBC BC Linear Facilities Operation (LFO)	44,851	-
FortisBC Energy Inc.	FortisBC BC Linear Facilities Operation (LFO)	95,656	-
Gibraltar Mines Ltd.	Gibraltar Mine (SFO)	103,981	-
Graymont Western Canada Inc.	Pavilion Plant	122,726	-
Greater Vancouver Sewerage and Drainage District	Annacis Island Wastewater Treatment Plant	21,679	-
Greater Vancouver Sewerage and Drainage District	Iona Island Wastewater Treatment Plant	11,797	-
Greater Vancouver Sewerage and Drainage District	Metro Vancouver Waste-to-Energy Facility	267,064	-

Harvest Operations Corp.	HARVEST BC Linear Facilities Operation (LFO)	29,996	-
Houweling Nurseries Ltd.	Houweling Nurseries Ltd. - Delta	19,122	-
Howe Sound Pulp & Paper Corporation	Howe Sound Pulp and Paper Mill	120,743	1,332,630
Husky Oil Operations Limited	Husky BC Linear Facilities Operation (LFO)	120,319	-
Husky Oil Operations Limited	Prince George Refinery	129,117	-
Imperial Metals Corporation	Mount Polley Mine	45,390	-
Imperial Oil Resources Ltd.	Imperial BC Linear Facilities Operation (LFO)	21,280	-
Interfor Corporation	Grand Forks Sawmill	15,875	-
Keyera Corporation	Keyera BC Linear Facilities Operation (LFO)	48,782	-
Kruger Products L.P.	Kruger Products L.P.	16,502	34,652
Lafarge Canada Inc.	Kamloops Plant	167,664	5,587
Lafarge Canada Inc.	Richmond Cement Plant	792,428	9,840
Lantic Inc.	Lantic Inc. - Vancouver Refinery	24,571	-
Lehigh Hanson Materials Ltd.	Delta Plant	774,227	11,117
Lhoist North America Of Canada Inc.	Langley Plant	64,419	-
Lightstream Resources Ltd.	Lightstream BC Linear Facilities Operation (LFO)	11,406	-
Lone Pine Resources Canada Ltd.	Lone Pine BC Linear Facilities Operation (LFO)	16,544	-
Mackenzie Pulp Mill Corporation	Mackenzie Pulp Mill	119,897	656,390
Moly-Cop Canada	Moly-Cop Canada	19,547	-
Murphy Oil Company Ltd.	Murphy BC Linear Facilities Operation (LFO)	157,324	-
Nanaimo Forest Products Ltd.	Harmac Pacific Operations	129,746	1,147,727
Neucel Specialty Cellulose	Neucel Specialty Cellulose (SFO)	90,270	322,049
New Gold	New Afton	13,058	-
Nexen Inc.	Nexen BC Linear Facilities Operation (LFO)	136,472	-
Nyrstar Myra Falls	Nyrstar Myra Falls Ltd	24,585	-
Pacific Northern Gas Ltd.	PNG BC Linear Facilities Operation (LFO)	37,637	-
Peace River Coal Inc.	Trend Mine (SFO)	97,304	-
Pengrowth Energy Corporation	Pengrowth BC Linear Facilities Operation (LFO)	51,107	-
Penn West Petroleum Ltd.	Penn BC Linear Facilities Operation (LFO)	197,155	-

PeroxyChem Canada Ltd.	PeroxyChem Canada LTD	40,128	-
Polar Star Canadian Oil and Gas Inc.	Polar Star BC Linear Facilities Operation (LFO)	17,949	-
Progress Energy Canada Ltd.	Progress BC Linear Facilities Operation (LFO)	882,638	-
Quicksilver Resources Canada Inc.	Quicksilver BC Linear Facilities Operation (LFO)	64,380	-
Quinsam Coal Coporation	QUINSAM COAL CORP	6,159	-
Ramshorn Canada	Ramshorn BC Linear Facilities Operation (LFO)	29,363	-
Rio Tinto Alcan	Kitimat Works	585,249	-
ROXUL Inc.	ROXUL - GRAND FORKS	10,887	-
Shell Canada Limited	Shell BC Linear Facilities Operation (LFO)	350,943	-
Skookumchuck Pulp Inc.	Skookumchuck Operation	54,704	937,539
Spectra Energy Midstream Corporation	Spectra BC Linear Facilities Operation (LFO)	249,150	-
Spectra Energy Transmission	McMahon Cogen Plant	556,501	-
Spectra Energy Transmission	Spectra BC Linear Facilities Operation (LFO)	4,135,555	-
Suncor Energy Inc.	Suncor BC Linear Facilities Operation (LFO)	24,543	-
Suncor Energy Products Partnership	Burrard Products Terminal	11,737	-
Taq North Ltd.	Taq BC Linear Facilities Operation (LFO)	55,273	-
Teck Coal Limited	Coal Mountain Operations	147,094	-
Teck Coal Limited	Elkview Operations	407,115	-
Teck Coal Limited	Fording River Operations	516,882	-
Teck Coal Limited	Greenhills Operations	393,787	-
Teck Coal Limited	Line Creek Operations	168,450	-
Teck Highland Valley Copper Partnership	Teck Highland Valley Copper Partnership	175,392	-
Teck Metals Ltd.	Teck Metals Ltd, Trail Operations	403,423	158
Terra Energy Corporation	Terra BC Linear Facilities Operation (LFO)	32,378	-
Thompson Creek Mining Ltd.	Endako Mine	34,607	-
Tolko Industries Ltd.	Heffley Creek Division	16,907	16,380
Tolko Industries Ltd.	Lavington Planer Mill	16,954	-
Tolko Industries Ltd.	Nicola Valley Division	12,520	-
Tourmaline Oil Corp.	Tourmaline BC Linear Facilities Operation (LFO)	185,433	-

TransCanada PipeLines Ltd.	TransCanada BC Linear Facilities Operation (LFO)	218,554	-
Tree Island Industries Ltd.	Tree Island Industries	12,833	-
V.I. Power L.P.	Island Generation Inc	51,827	-
Veresen Energy Infrastructure Inc.	Veresen BC Linear Facilities Operation (LFO)	92,472	-
VF Clean Energy Inc.	VF Clean Energy, Inc.	34,205	-
Village Farms Canada L.P.	Village Farms - Delta I	20,605	-
Village Farms Canada L.P.	Village Farms Canada - Delta II	9,153	-
Walter Canadian Coal Partnership	Dillon / Brule Mine	38,408	-
Walter Canadian Coal Partnership	Willow Creek Mine	9,848	-
Walter Canadian Coal Partnership	Wolverine Group- Perry Creek Mine	31,686	-
Wastech Services Ltd.	Cache Creek Landfill	24,418	-
West Coast Reduction Ltd.	West Coast Reduction Ltd.	21,385	-
West Fraser Mills Ltd.	Quesnel River Pulp	53,865	-
Weyerhaeuser Company Limited	Weyerhaeuser Princeton Sawmill	22,089	-
Whitecap Resources Inc.	Whitecap BC Linear Facilities Operation (LFO)	13,805	-
Windset Farms (Canada) Inc.	Windset Farms (Canada) Inc. - Ladner	21,710	-
Zellstoff Celgar Limited Partnership	Zellstoff Celgar Limited Partnership	98,957	1,132,705
GRAND TOTAL:		20,279,782	14,411,078
FortisBC Inc.	Warfield Control Centre (EIO)	48,967	-
Powerex Corporation	Powerex EIO	2,099,878	-
TOTAL with Electricity Import Emissions:		22,428,627	14,411,078

Appendix B: Questions and Answers

General

1. Why is British Columbia releasing the facility greenhouse gas emissions reports?

- Publishing B.C. facility greenhouse gas emissions report summaries is an integral part of annual GHG reporting that provides the public with open and transparent data on industrial greenhouse gas emissions in BC.
- The current report covers greenhouse gas emissions from 2014 and this is the fifth year that we have released this type of data.

2. What is the value of the facility greenhouse gas emissions report?

The value of the emission report summaries is to:

- Inform the public about significant sources of GHG emissions in British Columbia;
- Enables industry to take charge of its GHG emissions and identify opportunities for emissions-reducing efficiencies
- Provide timely, accurate, quantitative information to support policy and program efforts to reduce GHG emissions; and,
- Inform public debate with quality data on emission sources.

2014 Facility Emissions Report Summaries

1. What are the total industrial greenhouse gas emissions in British Columbia?

Total industrial greenhouse gas emissions from all reporting operations equal to or greater than 10,000 tonnes in 2014, excluding electricity import operations, were 20.3 Mt CO₂e (million tonnes of carbon dioxide equivalent).

2. Are industrial emissions going up or down?

- Industrial emissions for reporting operations (excluding electricity imports) were 2.1 per cent higher in 2014 than 2013;
- Including emissions attributable to electricity imports, which are reported but not counted towards BC's greenhouse gas targets in accordance with international accounting procedures) were 5.7 per cent higher than in 2013.

3. What are the reported emissions for the different industry sectors?

Sector	2013 (tCO ₂ e)	2014 (tCO ₂ e)	2014 (as %)	Percent change from 2013
Oil and Gas	10,631,000	11,267,000	50	6.0
Cement	1,905,000	1,921,000	9	0.8
Mining and Smelting	3,496,000	3,202,000	14	-8.4
Electricity and Heat Generation	914,000	890,000	4	-2.6
Forestry	1,662,000	1,721,000	8	3.5
Manufacturing and refineries	835,000	880,000	4	5.4
Waste Treatment	427,000	398,000	2	-6.8
BC Emissions Total	19,869,000	20,280,000	n/a	2.1
Electricity Imports	1,342,000	2,149,000	10	60.1
Reported Total	21,211,000	22,429,000	100	5.7

4. What are the emissions associated with electricity imported into B.C.?

- Emissions related to imported electricity were reported to be 2.1 Mt, 60% more than in 2013.
- 2014 was a low water year, meaning that more imports were needed. 2014 emissions were 11% more than in 2011, another low water year.
- Approximately 50% of imported electricity reported in 2014 was not used to serve BC Hydro customers and was instead immediately re-exported.

5. Which companies have the largest emissions in British Columbia?

The three companies with the largest emissions in 2014 (excluding wood biomass) were:

- Spectra Energy Transmission: 4.1 Mt CO₂e
- Canadian Natural Resources: 1.2 MT CO₂e
- Progress Energy: 0.9 Mt CO₂e

6. What facilities have the largest emissions in British Columbia?

The individual facilities with the largest emissions in 2014 (excluding wood biomass) were:

- Fort Nelson Gas Plant - Spectra Energy Transmission: 1.3 Mt CO₂e
- Transmission Mainline – Spectra Energy Transmission: 0.93 Mt CO₂e
- Pine River Gas Plant – Spectra Energy Transmission: 0.73 Mt CO₂e

7. How do these emissions relate to the British Columbia Greenhouse Gas Inventory Report?

Industrial emissions reported in 2014 under the Reporting Regulation represent 32% of the total emissions of 64.0 Mt in the *1990-2013 B.C. Greenhouse Gas Inventory Tables for 2013* – the last year available. The Provincial Inventory Report summarizes total emissions occurring within B.C. for all sources except imported electricity.

8. What portion of B.C. industrial emissions are covered by the carbon tax?

Fossil fuel combustion emissions covered by the carbon tax are approximately 66 percent of industrial greenhouse gas emissions reported through the Reporting regulation.

9. How many individual facilities are there with over 10,000 tonnes of greenhouse gas emissions?

In total, 214 individual facilities had emissions equal to or greater than 10,000 tonnes of CO₂e. 80 of these were single facility operations, 132 were individual facilities within linear facilities operations, and 2 were electricity import operations.

10. How many reporting operations filed reports with the Ministry of Environment?

131 reporting operations (from 108 companies) reported to the Ministry of Environment.

11. How many reporting operations had verification requirements?

89 reporting operations had verification requirements.

12. Why did mining and smelting emissions decrease by 8% between 2013 and 2014?

The 8% decrease in emissions in the mining and smelting sector is due in large part to decreased production at RioTinto Alcan.

13. Why are some carbon dioxide emissions from biomass excluded and reported separately from other emissions?

- Following international greenhouse gas accounting convention, carbon dioxide from wood biomass is not included in reporting operation totals.
- These emissions are reported and published to provide transparency and an understanding of the complete emissions profile of the industrial sector.

14. What global warming potentials (GWPs) are used for calculating CO₂-equivalent emissions in BC?

- The international community has updated the global warming potentials (GWPs) it uses for greenhouse gas accounting purposes to the ones approved by the Intergovernmental Panel on Climate Change (IPCC) 4th Assessment Report. The GWP values previously used were those from IPCC's 2nd Assessment Report. The updates took effect for GHG Industry reporting purposes starting with the 2014 data, reported in 2015.
- In any comparisons below using CO₂-equivalent amounts, the same updated GWP factors were used for 2013 and earlier years.

15. What reports are published? Are all reports published?

All report summaries are published.

16. How can we be sure that industry is reporting their emissions correctly?

- The Reporting Regulation prescribes quantification methods and third-party auditors review all emissions reports for reporting operations with emissions greater than or equal to 25,000 tonnes CO₂e,
- The Ministry of Environment also reviews reports to ensure data quality.

17. Why are stationary combustion and industrial process emissions for cement and lime facilities not reported separately?

These two categories are aggregated for the small number of facilities in BC to ensure that critical business information for these facilities remains confidential.

18. Are any industries or facilities excluded from reporting?

The Reporting Regulation is designed to cover industrial emissions in British Columbia. It does not require reporting of emissions from biomass

decomposition in landfills, from on-road transportation, from facilities covered by the Carbon Neutral Government Regulation, or from forestry and agriculture biological processes.

19. How are the B.C. reporting requirements different from what industry has been required to report in the past to Environment Canada?

- Since the Reporting Regulation prescribes quantification methods and requires third-party verification, BC facility reports may be different than those reported to Environment Canada. In most cases they will be the same.
- Environment Canada uses a 50,000 tonne CO₂e threshold on a single facility basis, while British Columbia has a 10,000 tonne threshold and conventions such as “linear facilities” to provide more comprehensive coverage of emissions sources while easing the reporting burden on industry.

20. Why is verification required? Why has verification status been published?

- Verification is required to provide assurance on the quality of reported data. The publication of verification status provides transparency on compliance with the regulation. 94% of reporting operations either had no or only minor issues found during verification.
- Of the 89 reporting operations requiring verification:
 - 80 had no issues ;
 - 4 had qualifications (generally minor issues which do not impact reports significantly);
 - 3 had no opinion (the verification body could not assess whether the report was accurate due to a technical measurement issue that is being addressed by the facility), and;
 - 2 verifications are still pending.

**MINISTRY OF ENVIRONMENT
INFORMATION NOTE**

Date: December 15, 2015

File: 280-20

CLIFF/tracking #: 293759

PREPARED FOR: Premier Christy Clark

DATE, TIME AND LOCATION OF MEETING: Thursday December 17, 2015

ATTENDEES: Minister Tootoo Minister of Fisheries, Oceans and the Canadian Coast Guard

ISSUE: Investments required from the Canadian Coast Guard to support BC's new World-Leading Spills Regime

BACKGROUND:

- In June 2015, Government announced the development of new spill preparedness, response, and recovery legislation to deliver a world-leading spill response regime in BC.
- The key elements of the new regime include:
 - A provincially-certified, industry-funded Preparedness and Response Organization (PRO) to ensure trained people are ready to immediately respond to any spill, with appropriate equipment and in a coordinated way.
 - New legislative and regulatory requirements for spill preparedness, response and recovery.
 - Increased participation by First Nations and local governments in spill preparedness, response and recovery.
- The Ministry of Environment will be continuing engagement on these new requirements with federal and other provincial agencies, First Nations, industry, local governments and other stakeholders over the next nine months.
- Ministry of Environment staff will be meeting with senior Coast Guard officials early in 2016 to discuss:
 - Opportunities for the Coast Guard to input and collaborate on regulation development under BC's world-leading regime; and
 - Opportunities to work together on the next steps coming out of the Tanker Safety Expert Panel's Phase II Report and other measures to improve spill prevention, preparedness, response and recovery across sectors.
- The Province intends to introduce the new spill legislation in the spring of 2016 and the new regime, including detailed regulations is expected to be in place beginning in 2017.

DISCUSSION:

- Federal measures taken to-date around spill prevention, preparedness and response are steps in the right direction towards meeting two of British Columbia's five requirements for the transportation of heavy oil – world-leading marine-based and world-leading land-based spill preparedness and response regimes.

- BC would like to see the Coast Guard and federal government commit to the following:
 - Provide additional resources to improve spill preparedness and response following the recommendations in the 2013 Tanker Safety Expert Panel.
 - Fully participate with the Province, First Nations, local governments and other key stakeholder in BC on the development of BC's new spills regime.
 - Establishing a lead federal agency for all spills to ensure a consistent approach and to ensure all agencies have a clear understanding of their roles.
 - Ensuring the availability of dedicated rescue tug(s) for the Central and North Coast of BC and assurance of continued coverage of the south coast by the US-based Neah Bay rescue tug to improve response times to assist disabled vessels (e.g. Simushir (October 2014), North Star (November 2015)).
 - Implementation of the measures announced May 13, 2014 in response to the Tanker Safety Expert Panel report.
- We are encouraged by the Canadian Coast Guard's response to the findings of the Marathassa Spill Report and are committed to work with all our partners on those recommendations. These findings and the recommendations from British Columbia's Nuka Research report provide a foundation and roadmap for building a world-leading spill response and preparedness regime.

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Appendix 1

Federal measures announced on May 13, 2014 in response to the Tanker Safety Expert Panel report:

- Modernizing Canada's marine navigation system.
- Establishing new area response planning partnerships for four regions with current or projected high levels of tanker traffic, including the Strait of Georgia.
- Supporting Aboriginal communities so they can participate in marine emergency preparedness and response planning around their communities.
- Amending legislation to provide for alternate response measures such as the use of chemical dispersants and burning spilled oil during emergencies, and to clarify the Coast Guard's authority to use and authorize these measures when there is likely to be a net environmental benefit.
- Strengthening the polluter pay regime by introducing legislative and regulatory amendments to enhance Canada's domestic Ship-Source Oil Pollution Fund.