



FRASER RIVERKEEPER

May 4, 2010

**Submission on Enforcement Matters to the Commission for Environmental Cooperation (CEC) pursuant to Article 14 of the North American Agreement on Environmental Cooperation**

**Submitted to: Commission for Environmental Cooperation, 393, Rue St-Jacques  
Quest, Bureau 200, Montreal, Quebec Canada H2Y 1N9**

**By: Fraser Riverkeeper Society, #303-207 W. Hastings St. Vancouver, BC. V6B1H7**

**Co-submitters:** Lake Ontario Waterkeeper, Ottawa Riverkeeper, Fundy Baykeeper, Grand Riverkeeper, Georgian Baykeeper, Petitcodiac Riverkeeper, David Suzuki Foundation, T Buck Suzuki Environmental Foundation, Georgia Strait Alliance (all based in Canada); and Waterkeeper Alliance (based in United States).

## **I. SUMMARY**

1. Fraser Riverkeeper ("FRK") is a non-governmental registered charity established and operating in Canada (BN 862234374 RR0001). Based in Vancouver, British Columbia, FRK is dedicated to the protection, conservation, and improvement of the water quality and fish habitat of the Fraser River and its surrounding waters, including the waters of the southern Georgia Strait. A licensed member of the international Waterkeeper Alliance, FRK patrols the watershed by boat, responds to citizen complaints of pollution, and monitors water quality.
2. FRK has prepared this Submission on Enforcement Matters ("submission") pursuant to Article 14 of the North American Agreement on Environmental Cooperation ("NAAEC"). The submission is based on the Canadian federal government's failure to enforce section 36(3) of the federal *Fisheries Act* with respect to sewage discharges from the Iona Island Wastewater Treatment Plant (the "Iona WWTP") in Richmond, a suburb of Vancouver in British Columbia.
3. Article 5 of the NAAEC requires Canada to "effectively enforce its environmental laws and regulations through appropriate governmental action". This includes, "initiating, in a timely manner, judicial, quasi-judicial or administrative proceedings to seek appropriate sanctions or remedies for violations of its environmental laws and regulations".
4. **Canada is failing to effectively enforce its environmental laws with respect to discharges of a substance deleterious to fish from the Iona WWTP.** Pursuant to Article 15 of the NAAEC, FRK hereby requests that the Commission on Environmental Cooperation ("CEC") prepare a factual record that demonstrates such a failure.

## II. STATUTORY FRAMEWORK

5. The Canadian federal government has exclusive legislative authority over “sea coast and inland fisheries” pursuant to section 91.12 of the *Constitution Act, 1867* ((U.K.), 30 & 31 Vict., c.3, reprinted in R.S.C. 1985, App.II, No. 5). The *Fisheries Act* (R.S.C. 1985, c. F-14) was enacted pursuant to this authority to regulate and protect Canada’s fisheries. The Canadian *Fisheries Act* is a federal statute within the meaning of “environmental law” set out in Article 45 of the NAAEC.
6. The primary purpose of subsection 36(3) of the *Fisheries Act* is to protect fish and fish habitat through the prevention, abatement, or control of the release, discharge, or emission of pollutants or environmental contaminants, referred to in the *Act* as “deleterious substances”. Under subsections 36(3) and 40(2), it is an offence to deposit or to permit the deposit of a deleterious substance in water frequented by fish, unless authorized by regulation.

**36(3)** Subject to subsection 4, no person shall deposit or permit the deposit of a deleterious substance of any type in water frequented by fish or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water.

**40 (2)** Every person who contravenes subsection 36(1) or (3) is guilty of  
(a) an offence punishable on summary conviction and liable, for a first offence, to a fine not exceeding three hundred thousand dollars and, for any subsequent offence, to a fine not exceeding three hundred thousand dollars or to imprisonment for a term not exceeding six months, or to both; or  
(b) an indictable offence and liable, for a first offence, to a fine not exceeding one million dollars and, for any subsequent offence, to a fine not exceeding one million dollars or to imprisonment for a term not exceeding three years, or to both.

**Exhibit 1: *R. v. MacMillan Bloedel (Alberni)*, [1979] B.C.J. No. 1498 (BCCA), aff’g (1978) 42 C.C.C. 2d 70.**

6. According to subsection 34(1) of the *Fisheries Act*:

“**Deleterious substance**” means, in part,

any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water, or

any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

“**Water frequented by fish**” defines as “Canadian fisheries water”.

“**Fish habitat**” is defined as “spawning grounds and nursery, rearing, food supply and migration

areas on which fish depend directly or indirectly in order to carry out their life processes”.

“**Deposit**” means any discharging, spraying, releasing, spilling, leaking, seeping, pouring, emitting, emptying, throwing, dumping or placing.

7. Canadian citizens are encouraged to launch private prosecutions against violators of the *Fisheries Act* through its “fine-splitting” provision. Section 62 of the *Fishery (General) Regulations*, SOR/93-53 states that:

Where an information is laid by a person [other than a fishery officer or a fishery guardian employed by the Government of Canada or a provincial government]... relating to an offence under the *Act*, the payment of the proceeds of any penalty imposed arising from a conviction for the offence shall be made (a) one half to the person; and (b) one half to the Minister...

### III. BACKGROUND FACTS

#### a. Metro Vancouver and the Greater Vancouver Sewerage and Drainage District operate the Iona Wastewater Treatment Plant.

8. Metro Vancouver (formerly the Greater Vancouver Regional District (“GVRD”)) is a federation of municipalities and electoral areas in Greater Vancouver, British Columbia. Metro Vancouver directs the Greater Vancouver Sewage and Drainage District (“GVSD”) in the operation of five wastewater treatment plants in the Greater Vancouver area. While strictly speaking a separate legal entity from Metro Vancouver, the GVSD shares the same Board of Directors and is functionally part of Metro Vancouver. Metro Vancouver and the GVSD operate five wastewater treatment plants in the Greater Vancouver area, including the Iona Island Wastewater Treatment Plant (“Iona WWTP”) situated in the City of Richmond, just north of the Vancouver International Airport.

**Exhibit 2: Operational Certificate ME-00023, issued by Ministry of Water, Land and Air Protection to the Greater Vancouver Sewerage and Drainage District for Iona Island WWTP, April 23, 2004.**

**Exhibit 3: Greater Vancouver Sewerage & Drainage District (2001) “Quality Control Annual Report, Volume 1”, at 61.**

9. The Metro Vancouver facilities are licensed by Her Majesty the Queen in Right of the Province of British Columbia (“Province”). Prior to April 23, 2004, each of Metro Vancouver’s wastewater treatment plants held a provincially-issued permit that allowed it to operate and discharge treated effluent into receiving waters. The permits have since been replaced with “Operational Certificates”, which continue to function in law as permits. Operational Certificates were first issued in April 2002 by the Provincial Ministry of Water, Land, and Air Protection (now the Ministry of Environment) under the provisions of the then provincial *Waste Management Act* (now the *Environmental Management Act*, S.B.C., c.53).
10. On April 4, 2002, the provincial Ministry of Water, Land, and Air Protection approved Metro Vancouver’s Liquid Waste Management Plan (LWMP). On April 23, 2004, the Ministry issued Operational Certificate ME-00023 to the GVSD for

operation of the Iona WWTP.

**b. The Iona WWTP discharges waste collected from a variety of domestic and industrial sources.**

11. The source of the Iona WWTP's wastewater includes the domestic sewage collected from approximately 600,000 people in Vancouver, the University Endowment Lands and areas within the City of Burnaby, and the City of Richmond. The facility also receives storm water from combined sewage areas.

**Exhibit 3: Greater Vancouver Sewerage & Drainage District (2001) "Quality Control Annual Report, Volume 1", at 20.**

**Exhibit 5: Greater Vancouver Sewerage & Drainage District (2002) "Iona Island Wastewater Treatment Plant 2001 Analytical Data Assessment Report".**

12. The Iona WWTP also receives wastewater from industrial and commercial sources, including wastewater from dental offices, printing facilities, laboratories, photofinishers, recreation facilities, automotive businesses, dry cleaners, car wash facilities, U-Brew/Wine premises, carpet cleaning services, and funeral homes. Additionally, the Iona facility receives industrial wastes trucked in from Metro Vancouver and other areas.

**Exhibit 6: Metro Vancouver, "Liquid Waste Regulatory Program", online: <<http://public.metrovancouver.org/services/permits/Pages/sewerage.aspx>>.**

**c. The Iona WWTP uses only primary treatment.**

13. Primary treatment is a mainly mechanical process that removes only 30 per cent of BOD and approximately 50 percent of TSS. Sewage from the Iona WWTP is discharged into the Strait of Georgia through a 7.5 kilometre pipe that runs west from the Iona Island shoreline and discharges at an average depth of 90 meters. Prior to being discharged, the waste undergoes primary treatment. In contrast, three of the other five WWTPs operated by Metro Vancouver and the GVSDD use secondary treatment.

**Exhibit 2: Operational Certificate ME-00023, issued by Ministry of Water, Land and Air Protection to the Greater Vancouver Sewerage and Drainage District for Iona Island WWTP, April 23, 2004.**

**Exhibit 8: Metro Vancouver, "Wastewater treatment", online: <[www.metrovancouver.org/services/wastewater/treatment/Pages/default.aspx](http://www.metrovancouver.org/services/wastewater/treatment/Pages/default.aspx)>.**

**Exhibit 9: Metro Vancouver, "Treatment Plants: Iona Island Wastewater Treatment Plant", accessed 2006, 2010, online: <[www.metrovancouver.org/services/wastewater/treatment/Pages/treatmentplants.aspx](http://www.metrovancouver.org/services/wastewater/treatment/Pages/treatmentplants.aspx)>.**

14. Secondary treatment refers to a treatment system that includes a biological process to remove organic matter from, and reduce the toxicity of, the wastewater effluent. The biological process employed by secondary treatment removes up to 90 percent of biochemical oxygen demanding substances (BOD) and of total suspended solids (TSS). Secondary treatment also removes over 90 percent of the toxic, bio-hazardous substances like heavy metals and persistent organic

pollutants (including PCBs, PAHs, pesticide residues) from sewage effluent.

**Exhibit 7: Statement of John Werring, Registered Professional Biologist, at para. 25.**

**IV. IN CONTRAVENTION OF SUBSECTION 36(3) OF THE FEDERAL *FISHERIES ACT*, THE SEWAGE DISCHARGES FROM IONA CONSTITUTE THE RELEASE OF A DELETERIOUS SUBSTANCE INTO WATERS FREQUENTED BY FISH,**

**a. The sewage is discharged from Iona into “water frequented by fish”.**

15. The Iona discharge outfall is located in the tidal waters of the Georgia Strait, immediately adjacent to the Fraser River estuary, through which millions of salmonids pass annually. The Fraser River is one of the world’s most productive salmon rivers and the Strait of Georgia is well known as both a commercial and sport fishery.

16. John Werring, a registered fisheries biologist, has assessed whether the Strait constitutes “waters frequented by fish”:

The Strait of Georgia ecosystem includes diverse marine, estuarine and terrestrial environments that provide habitat to a wide range of species. It includes an area known as the Sturgeon Banks and the Fraser River estuary which encompasses the estuarine zones of the North Arm, Main Arm and Main Stem of the Fraser River. These areas are extremely important migration routes for juvenile and returning adult salmon. To leave or reach the river, the fish must cross the Sturgeon Banks and pass by the area where the Iona discharge takes place. The estuary is also a rearing area for various salmon and trout. There are 14 fish species using the lower Fraser River that are migratory, six species having periodic migration and 18 species that are not known to migrate regularly. The Fraser River is home to one of the largest wild salmon runs in the entire world. The waters of Georgia Strait are fish-bearing waters. The three channels of the Fraser River also are used for irrigation, secondary-contact recreation (fishing, boating) and by industry for transportation.

**Exhibit 7: Statement of John Werring, Registered Professional Biologist, at paras. 6 - 8.**

**b. Canadian courts and authorities have accepted the Acute Lethality Test as a means to determine whether a substance is deleterious to fish.**

17. Black’s Law Dictionary defines “deleterious” as “hurtful, morally or physically; injurious, as influence; poisonous; unwholesome”. The *Fisheries Act* defines “deleterious substance”, in part, as any substance that, if added to water, would render that water deleterious to fish or fish habitat, or to the use by humans of those fish. In order to determine whether a substance, when added to water, makes that water deleterious to fish, the Canadian courts have accepted a scientifically accepted Environment Canada standardized test known as the 96 hour LC<sub>50</sub> Acute Lethality Test (“the Acute Lethality Test”).

**Exhibit 10: *Black’s Law Dictionary* (St. Paul: West Publishing, 1979) at 384.**

**Exhibit 11: *Fletcher v. Kingston (City)*, [2004] O.J. No. 1940 (QL).**

**Exhibit 12: *R. v. Ontario (Ministry of the Environment)*, [2001] O.J. No. 2581 (QL).**

18. The Acute Lethality Test determines whether discharge is deleterious by

measuring the rate of mortality of the fish that have been placed into the effluent for a 96 hour period. As summarized by the British Columbia Provincial Court, the Acute Lethality Test “involves placing 10 juvenile trout in a tank of the effluent to be tested. If over 50% of the fish die within 96 hours, the effluent is deemed to be acutely lethal. The test then measures how much the effluent needs to be diluted in order for 50% of the fish to survive. If any dilution is required, the discharge is deemed to have failed the test and to be acutely lethal to fish”.

**Exhibit 13: *Chapman v. British Columbia*, [2007] B.C.J. No. 703 (QL) at para. 5.**

19. Municipal, provincial and federal governmental regulatory authorities across Canada rely on the Acute Lethality Test as a measure of the toxicity of effluents being discharged to fish-bearing waters. The Acute Lethality Test is used by the Province of British Columbia and is directly referred to in the Province’s *Municipal Sewage Regulation*. In a May 1999 Metro Vancouver document entitled *Caring for Our Waterways*, Metro Vancouver acknowledged the following: “The *Fisheries Act* prohibits the discharge of deleterious substances into fish-bearing waters and protects fish habitat. Over the years the courts have determined that discharges that are acutely toxic to fish, based on the 96 hour fish bioassay test, are deemed to be deleterious.”

**Exhibit 14: *Municipal Sewage Regulation*, B.C. Reg. 129/99, s. 9, online: <[www.bclaws.ca](http://www.bclaws.ca)>.**

**Exhibit 15: Greater Vancouver Sewerage & Drainage District (1999) “Caring for Our Waterways: Liquid Waste Management Plan, Stage 2, Discussion Document”, at 3-1.**

20. In its “Quality Control Annual Report for 2003”, Metro Vancouver describes the toxicity test:

Under present permit requirements the GVRD [now Metro Vancouver] is required to monitor effluent toxicity at each of the wastewater treatment plants using a standardized test for acute toxicity. The standard procedure exposes test organisms (rainbow trout) to a series of effluent dilutions and determines the survival rate at the end of 96 hours. The final result is reported as the 96-Hr LC<sub>50</sub> which is the % by volume (of the original sample) at which 50% of the test fish survive. A “pass” or satisfactory result for all sewage effluents requires that the LC<sub>50</sub> value must be equal to or greater than 100%. This means that 50% or more of the test fish must survive to 96 hours in the original undiluted sample. The short term acute toxicity test relates only to the immediate characteristics of the undiluted effluent and cannot be used to provide information on long term or chronic effects on aquatic or marine organisms.

**Exhibit 16: Greater Vancouver Sewerage & Drainage District (2003) “Quality Control Annual Report, Summary Report”, at 4.**

**Exhibit 17: Environment Canada Biological Test Method, Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout, Reference methods, EPS 1/RM/13 July 1990, latest amendment, May 2007.**

**c. Documented exceedances from the Iona WWTP were deleterious to fish.**

21. The Iona Island Operational Certificate (“Iona OC”) regulates the daily rate of the sewage discharge into Georgia Strait and the concentration and loadings (tonnes/day) of TSS and BOD. The Iona OC requires the GVSDD to monitor for certain substances and to conduct a monthly fish Acute Lethality Test to determine

whether the sewage effluent discharged into Burrard Inlet is acutely toxic to fish.

22. The Iona OC also requires GVSDD to report the results of its monthly Acute Lethality Tests to the British Columbia Ministry of Environment, its provincial regulator. The Iona OC does not specifically prohibit the discharge of effluent that is acutely toxic to fish; it only requires the operator to determine, once a month, if the discharge is acutely toxic to fish. If the monthly tested sewage discharge is toxic to fish, Metro Vancouver is required to conduct a Toxicity Identification Evaluation (TIE) to determine the cause of the toxicity.

**Exhibit 2: Operational Certificate ME-00023, issued by Ministry of Water, Land and Air Protection to the Greater Vancouver Sewerage and Drainage District for Iona Island WWTP, April 23, 2004 at 5 - 6.**

23. While the Iona OC does not prohibit discharges that are deleterious to fish, subsection 36(3) the *Fisheries Act* makes this an offence. Section 78.1 of the *Act* stipulates that each day a contravention of the *Act* is committed constitutes a separate offence.

24. Prior to the time period covered by FRK's charge against Metro Vancouver and GVSDD (see paragraph 39), there were seven days when acutely toxic sewage was discharged from the Iona WWTP to the Strait of Georgia: July 9, 2001; August 14, 2001; June 3, 2003; October 7, 2003; May 6, 2004; June 1, 2004; and August 18, 2004.

**Exhibit 18: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2001 – 2004.**

25. During 2005 and 2006, the period covered by FRK's charge against Metro Vancouver and GVSDD, there were eight days when acutely toxic sewage was discharged from the Iona WWTP to the Strait of Georgia: May 3, 2005; June 1, 2005; July 7, 2005; September 13, 2005; July 20, 2006; August 14, 2006; September 12, 2006; and October 11, 2006.

**Exhibit 19: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2005 – 2006.**

26. Since the charge was stayed by the federal government, acutely toxic sewage has been discharged from the Iona WWTP on at least eleven additional occasions: May 7, 2007; July 10, 2007; September 12, 2007; May 7, 2008; June 9, 2008; July 8, 2008; August 14, 2008; May 6, 2009; August 12, 2009; and September 10, 2009 and October 6, 2009.

**Exhibit 20: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2007 - 2009.**

**Exhibit 21: Addendum to Statement of John Werring, Registered Professional Biologist (29 January 2010) at paras. 1-4.**

## V. THE CANADIAN GOVERNMENT FAILED TO ENFORCE THE *FISHERIES ACT*

a. The matter has been communicated in writing to the relevant Canadian authorities.

27. The *Fisheries Act* violations at the Iona Wastewater Treatment Plant (“Iona WWTP”) have been documented extensively by the relevant Canadian authorities. Evidence of the violations has been communicated in writing to these authorities by non-governmental groups and by the authorities themselves, both online and in communications to other governmental bodies.

28. On approximately 25 monthly testing days between the years 2001 and 2009, Metro Vancouver discharged primary treated sewage effluent that was acutely toxic to fish from the Iona WWTP into Georgia Strait. As required by the Iona Operating Certificate (“Iona OC”), Metro Vancouver reported these test failures in writing to the province. Metro Vancouver also posts these monthly toxicity test results on its web site at [www.metrovancouver.org/services/wastewater/treatment/Pages/monitoring.aspx](http://www.metrovancouver.org/services/wastewater/treatment/Pages/monitoring.aspx).

**Exhibit 18: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2001 – 2004.**

**Exhibit 19: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2005 – 2006.**

**Exhibit 20: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2007 - 2009.**

29. Environment Canada (“EC”), a federal authority, has consistently informed Metro Vancouver that its discharges of sewage effluent were subject to section 36(3) of the *Fisheries Act*. Starting in January 2001, EC began to comment on Metro Vancouver’s proposed liquid waste management plan (LWMP). EC conducted an inspection of the Iona WWTP, finding the discharge to be acutely lethal to fish and in contravention of the *Fisheries Act*. In a letter from its director Brian Wilson, Metro Vancouver was informed that the LWMP was not completely consistent with *Fisheries Act* requirements. EC indicated that it “intends to conduct further inspections at the facilities to verify compliance with the *Fisheries Act* and to take appropriate enforcement action should the violations continue.” Letters continued throughout early 2001, but compliance with *Fisheries Act* requirements was not achieved in the view of EC.

**Exhibit 22: Letter from Environmental Protection Branch, Pacific and Yukon Region to Ken Cameron, Manager, Policy and Planning Department, Greater Vancouver Regional District (14 June 2001).**

30. In the months of April, June, August, October and December of 2001, and in February 2002, EC inspectors visited the Iona WWTP and took samples of the sewage being discharged into Georgia Strait. Three of the six samples subsequently failed the 96 hour LC50 Acute Lethality Tests. These and other toxicity test failures were acknowledged by Metro Vancouver and GVSDD, who recognized the fact that they were not in compliance with the *Fisheries Act*.

**Exhibit 38- Environment Canada, “2001 Annual Compliance Report Summary Highlights Pacific and Yukon Region”, Environment Canada, p. 11-12, online at:**



[http://www.pyr.ec.gc.ca/enforcement/01sumhigh\\_e.htm#fish](http://www.pyr.ec.gc.ca/enforcement/01sumhigh_e.htm#fish).

31. EC warned Metro Vancouver about violations at Iona WWTP by issuing a document constituting a legal warning on March 20, 2001 to George Puil, Chairman of the Board of Metro Vancouver, and Johnny Carline, Chief Administrator of Metro Vancouver. The document, entitled "Warning Respecting An Alleged Violation", advised the recipients that the Iona WWTP effluent had been found to be acutely toxic to fish after being subjected to the Acute Lethality Test. The warning further advised Metro Vancouver officials of Metro Vancouver obligations under the *Fisheries Act* and of penalties thereunder. This warning states that, "further steps will be considered by Environment Canada if you do not take the necessary action to prevent the release of a deleterious substance".

**Exhibit 23: Letter from Inspector Nick Russo, Environment Canada to George Puil and Johnny Carline, Greater Vancouver Regional District, "Warning Respecting an Alleged Violation" (20 March 2001).**

32. In a letter dated May 15, 2001, EC advised the City of Vancouver, a Metro Vancouver member municipality, "that the GVRD [now Metro Vancouver] must also achieve compliance with the *Fisheries Act* at all of its wastewater discharge points". The letter further stated that recent EC inspections had determined that the Iona WWTP discharges were not in compliance with the *Fisheries Act* and that EC was not satisfied that the LWMP that Metro Vancouver had submitted to the province of British Columbia ("Province") for approval would meet *Fisheries Act* requirements. This information was again communicated in June 2001.

**Exhibit 24: Letter from Don Fast, Environment Canada to Diane Clairmont, City of Vancouver (15 May 2001).**

33. On April 4, 2002, the Province officially approved Metro Vancouver's LWMP. With this approval, it gave Metro Vancouver 18 more years, until the year 2020, to upgrade to secondary treatment.

**Exhibit 25: Letter from Joyce Murray, British Columbia Minister of Water, Land and Air Protection to George Puil, Chair and Director, Greater Vancouver Regional District (4 April 2002), Item 5(a), at 2.**

34. The Province's approval of the LWMP was followed by its issuance of the Iona OC on April 23, 2004. On April 28, 2004, EC thanked the Province for being offered an opportunity to comment on the draft Operational Certificate and advised the Provincial government official that even though there was an Operational Certificate, section 36(3) of the *Fisheries Act* still was applicable.

**Exhibit 2: Operational Certificate ME-00023, issued by Ministry of Water, Land and Air Protection to the Greater Vancouver Sewerage and Drainage District for Iona Island WWTP, April 23, 2004.**

**b. Mr. Douglas Chapman attempted to enforce the *Fisheries Act* using a domestic remedy before applying to the CEC.**

35. On December 14, 2006, Mr. Chapman, now with the Fraser Riverkeeper ("FRK")

and then working with Ecojustice (formerly Sierra Legal Defense Fund), swore an information (no. 50766-1) before a Justice of the Peace in Richmond. This was the first step in pursuing a private prosecution under section 504 of the Criminal Code of Canada (“Criminal Code”). The case was assigned the style of cause: *Chapman v. Her Majesty the Queen in right of the Province of British Columbia* [“*Chapman v. B.C.*”].

36. The accused parties in the prosecution were the GVRD, GVSDD and the Province of British Columbia. The information alleged that between January 1, 2005 and November 30, 2006, all three accused parties contravened s.36(3) of the *Fisheries Act* at the Iona WWTP in the City of Richmond.

37. Counsel for the accused and the Attorney General (“AG”) were notified about the swearing of the information orally on January 17, 2007 at the Richmond Provincial Courthouse. Copies of the prosecution brief were delivered to Counsel for the accused and Counsel for the Attorney General [Mr. John Cliffe] in late January 2007. These letters informed the accused parties and the AG that there was a process hearing scheduled for March 8, 2007 relating to the Iona Prosecution.

**Exhibit 26: Letter from John Cliffe, Counsel for the Attorney General, to Sierra Legal Defence Fund (17 January 2007).**

**Exhibit 27: Letter from Susan Coristine, Counsel with Coristine Woodall, to Sierra Legal Defence Fund (18 January 2007).**

**Exhibit 28: Letter from Sierra Legal Defence Fund to John Cliffe and Counsel for the accused, accompanying the prosecution brief (23 January 2007).**

38. At the March 8, 2007 process hearing for the Iona Prosecution, Mr. Cliffe cross-examined Mr. Chapman extensively. At the close of the hearing, Mr. Cliffe argued that process could not be issued against Metro Vancouver or the province because there was “no evidence” or insufficient evidence to connect them to the GVSDD.

**Exhibit 29: *Chapman v. British Columbia* (8 March 2007), Transcript: Proceedings at Application (B.C. Prov. Ct.), Chen J.**

**Exhibit 30: *Chapman v. British Columbia*, [2007] B.C.J. No. 703 at para. 9 (QL).**

39. Despite the assertions made by Mr. Cliffe on behalf of Canada, process was issued by way of summons against all three accused on March 22, 2007. In his reasons for issuing process, Judge Chen found that there was “at least some evidence” that GVSDD operated sewage facilities of Metro Vancouver and carried out the policies of Metro Vancouver. He further held that the Operational Certificate issued by British Columbia amounted to “sufficient evidence to establish a prima facie case that both [the Province and Metro Vancouver] exercised, or are able to exercise, some control over the activities of the [GVSDD] including its operation of the Iona Island [WTP].”

**Exhibit 30: *Chapman v. British Columbia*, [2007] B.C.J. No. 703 at para. 24 (QL).**

40. On November 18, 2008, the AG [through prosecutor Mr. Cliffe] formally intervened in the case and stayed the charges that same day. Mr. Cliffe told the Court that the AG was staying the charges because “the public interest did not require this prosecution to be pursued”, and there was “not a reasonable prospect of conviction”. Mr. Cliffe provided no clarification as to why the charges were not in the public interest nor any explanation or evidence to contradict the judiciary finding that there was sufficient evidence for process to issue.

**Exhibit 30: *Chapman v. British Columbia*, [2007] B.C.J. No. 703 at para. 25 (QL).**

**Exhibit 31: *Chapman v. British Columbia* (18 November 2008), Transcript: Proceedings at Pre-Trial Conference (B.C. Prov. Ct.), McKinnon J.**

41. FRK did not seek judicial review of the decision to intervene and stay the prosecution because a decision by the AG to stay a criminal or quasi-criminal proceeding is generally not reviewable by Canadian courts without evidence of “flagrant impropriety” on the part of the AG. This standard may be met with “proof of misconduct bordering on corruption, violation of the law, bias against or for a particular individual or offence.” Intervention by the AG can rarely, if ever, be successfully challenged.

42. In summary, the Canadian justice system accepted the charges laid and issued process in respect of the Iona WWTP discharges. In the case of a private prosecution, the government has four options. They can do nothing, allowing the case to proceed through the courts; intervene, joining the informant in the prosecution; intervene and prosecute the case themselves; or intervene and stay the case. In the Iona WWTP case, the Canadian government intervened to the exclusion of the informant, took over the prosecution, and stayed the charges. This demonstrates a failure of the government to enforce, or allow to be enforced, its environmental laws.

## **VI. CANADA’S FAILURE TO ENFORCE THE FISHERIES ACT HAS RESULTED IN HARM TO THE SUBMITTER**

43. The attached correspondence between EC and Metro Vancouver demonstrates that the Canadian government was aware of the *Fisheries Act* violations at the Iona WWTP, but failed to take action to enforce the law.

**Exhibit 23: Letter from Inspector Nick Russo, Environment Canada to George Puil and Johnny Carline, Greater Vancouver Regional District, “Warning Respecting an Alleged Violation” (20 March 2001).**

**Exhibit 24: Letter from Don Fast, Environment Canada to Diane Clairmont, City of Vancouver (15 May 2001).**

44. The decision by the AG to intervene and stay the prosecution in *Chapman v. B.C.* has resulted in Metro Vancouver continuing to discharge sewage effluent that is acutely toxic to fish on a regular basis. But for the intervention of the AG, the court could have considered the evidence of harm and made an order to protect the environment. Had the case proceeded to trial and resulted in a conviction, the

judge could have ordered the polluter, under the *Fisheries Act*, to stop discharging deleterious substances. Such an order would have likely resulted in the installation of secondary treatment at the Iona WWTP, thus greatly reducing the harm caused to the Georgia Strait, the Fraser River fishery, the submitter, and the people of Canada. Instead, violations of the *Fisheries Act* have continued since the prosecution was stayed, causing additional harm to the environment.

a. The discharges pose a threat to human and aquatic health.

45. In 2000, Metro Vancouver commissioned a consultant to conduct an assessment of the acute toxicity in the effluents from five of its WWTPs, including the Iona WWTP. The study concluded that the main cause of toxicity of the Iona sewage effluent after primary treatment is high dissolved oxygen (DO) demand. A second study, conducted in 2002, confirmed that the Iona effluent samples failed to meet acceptable toxicity levels mainly because of the high DO demand of the effluent.

46. Metro Vancouver acknowledges that primary treatment only reduces biochemical oxygen demand (BOD) by 30%, while secondary treatment would reduce BOD by 90%. In a document published by the Ministry of Water, Land & Air Protection in 2004, the Province states that, "based on the 2002 data, dissolved oxygen concentrations in Burrard Inlet remain a widespread problem for the protection of aquatic life in both surface and deeper waters."

**Exhibit 32: British Columbia, Ministry of Water, Land & Air Protection (2004) "Water Quality Objectives Attainment Monitoring in Burrard Inlet in 2002", at 12.**

47. In addition to BOD, secondary treatment could remove over 90 percent of the toxic, bio-hazardous substances like heavy metals and persistent organic pollutants (including PCBs, PAHs, pesticide residues) that are left in effluent that only undergoes primary treatment.

**Exhibit 7: Statement of John Werring, Registered Professional Biologist, at para. 25.**

48. According to EC's "National Pollutant Release Inventory", Metro Vancouver discharged the following contaminants from the Iona WWTP into the Strait of Georgia in 2007: 17 tonnes of copper; 255 kilograms of arsenic; 84 kilograms of cadmium; 13 tonnes of hydrogen sulphide; 838 kilograms of lead; 15 kilograms of mercury; and 15 tonnes of zinc.

**Exhibit 33: Environment Canada (2007), National Pollutant Release Inventory, "2007 Facility On-Site Releases: Greater Vancouver Regional District - Iona Island Wastewater Treatment Plant", online at:**

**<[www.ec.gc.ca/pdb/websol/querysite/release\\_details\\_e.cfm?opt\\_npri\\_id=0000005189&opt\\_report\\_year=2007](http://www.ec.gc.ca/pdb/websol/querysite/release_details_e.cfm?opt_npri_id=0000005189&opt_report_year=2007)>.**

49. Between 2000 and 2002, Metro Vancouver conducted a sediment quality assessment of the Iona outfall area. Albert van Roodselaar, Metro Vancouver's Senior Engineer and Regional Utility Planning Division Manager, participated in the study and co-authored the resulting report. The study determined that the largest number of PCB congeners were located at the outfall and the lowest number

was located at the furthest sampled point south of the outfall. Trace organics, including PCBs, PAHs and Coprostanol, were found at their highest level near the outfall.

**Exhibit 34: Albert van Roodselaar & Stanley Bertold, "Sediment Quality Assessment of the Iona Deep-Sea Outfall Area, 2000 – 2002" (Paper presented to the Georgia Basin/Puget Sound Research Conference, 2003).**

50. The samples were also compared to sediment quality guidelines designed to protect benthic life and the following contaminants were found to exceed the guidelines for at least one sampling point: arsenic, chromium, copper, nickel, chrysene, flouranthene, naphthalene, and Bis-(2-ethylhexyl) Phthalate. Significantly, the metals, copper and nickel exceeded the sediment quality guidelines at all sixteen sampling points.
51. Tidal currents and mixing disperse the Iona WWTP effluent north in the Strait of Georgia, causing it to flow into Burrard Inlet. Iona WWTP has been identified as a high priority in terms of pollution sources on Burrard Inlet.

**Exhibit 35: Vancouver Port Authority, Burrard Inlet Environmental Action Program (2006) "Review of Upland Issues in Burrard Inlet: A Background Report to Assist in Developing Indicators for Burrard Inlet".**

52. The release of contaminants affects fish and fish habitat. Contaminants settle into sediment and are taken up by the benthic community upon which fish depend for food. In Metro Vancouver's 2001 Quality Control Annual Report, there is a discussion of the contaminants that were sampled in the sediments near the Iona WWTP outfall. It states that:

Concentrations of cadmium, silver, chlorbenzenes, p,p'-DDE, coplanar PCB #77, several PCB congeners, nonylphenol and its ethoxlates, and certain sterols showed trends in concentrations that indicated that their distribution in sediments was related to the Iona outfall... Comparison of measured concentrations to relative marine sediment quality values indicated that arsenic, chromium, copper, nickel, aldrin, total DDT, lindane, acenaphthene, anthracene, flouranthene, flourene, naphthalene, phenanthrene, and bis-(2-ethylhexyl) phthalate (DEHP) exceeded sediment quality values in one or more stations.

**Exhibit 3: Greater Vancouver Sewerage & Drainage District (2001) "Quality Control Annual Report, Volume 1", at 59-60.**

53. In December of 2008, Metro Vancouver presented environmental monitoring results that showed the impacts of the Iona WWTP outfall on the safety of eating fish. Fish samples taken near the Iona WWTP outfall were tested to determine, "Tissue Residue Values" or TRVs for the protection of human health. The TRV values showed that arsenic in the edible tissue of English sole and Dungeness crab exceeded the standard for human-health TRV set by United States Environmental Protection Agency. PCB cancer TRVs were also exceeded in those species. Liver tissue from male English sole fish was found to exceed the British Columbia Ministry of the Environment limit for lead.

**Exhibit 36: Metro Vancouver, "Assessment of Regional Water Bodies and Metro Vancouver's Wastewater Discharges", Presentation to LWMP Reference Panel (10 December 2008), online at:**

**<[#303 W. Hastings St. Vancouver, BC V6B 1H7 778.737.4422 \[www.fraserriverkeeper.ca\]\(http://www.fraserriverkeeper.ca\) 12](http://www.metrovancouver.org/services/wastewater/planning/LWMP%20Docs/LWMP-</a></b></p></div><div data-bbox=)**

54. WWTP effluents and the chemicals therein have numerous biological effects and can be genotoxic and immunotoxic and/or can cause endocrine disruption in fish.  
**Exhibit 21: Addendum to Statement of John Werring, Registered Professional Biologist (29 January 2010) at paras. 1-4.**
55. Violating the *Fisheries Act* through systemic, ongoing contamination causes harm to the watershed. Further, Canada's failure to effectively enforce its environmental laws has caused injury to the submitting parties. As residents of Canada, the submitting parties (or their members) are directly and personally affected by the harm described above. The lack of enforcement against this municipal polluter sets a terrible example to other polluting industries. The Canadian government has failed to prevent the ongoing and continuous discharges of a deleterious substance into our waterways. In addition, the beneficial uses of our natural resources used by submitting parties have been and continue to be degraded.

## VII. THE OFFENCE IS ONGOING

56. On a daily basis, the Iona WWTP facility discharges over 30 tonnes of oxygen demanding substances into the Strait of Georgia. While the Iona WWTP has been discharging sewage effluent after only primary treatment since it began operations in 1963, FRK has data showing Acute Lethality Test failures starting in the year 2000.

**Exhibit 9: Metro Vancouver, "Treatment Plants: Iona Island Wastewater Treatment Plant", accessed 2006, 2010, online:**  
<[www.metrovancouver.org/services/wastewater/treatment/Pages/treatmentplants.aspx](http://www.metrovancouver.org/services/wastewater/treatment/Pages/treatmentplants.aspx)>.

**Exhibit 37: GVSDD Monitoring Results for Operating Certificate, Iona Island WWTP Effluent, November 2009.**

57. Prior to the time period covered by FRK's charge against Metro Vancouver and GVSDD, there were seven days when acutely toxic sewage was discharged from the Iona WWTP to the Strait of Georgia: July 9, 2001; August 14, 2001; June 3, 2003; October 7, 2003; May 6, 2004; June 1, 2004; and August 18, 2004.

During 2005 and 2006, the period covered by FRK's charge against Metro Vancouver and GVSDD, there were eight days when acutely toxic sewage was discharged from the Iona WWTP to the Strait of Georgia: May 3, 2005; June 1, 2005; July 7, 2005; September 13, 2005; July 20, 2006; August 14, 2006; September 12, 2006; and October 11, 2006.

Since the charge was stayed by the federal government, acutely toxic sewage was discharged from the Iona WWTP on at least eleven additional occasions: May 7, 2007; July 10, 2007; September 12, 2007; May 7, 2008; June 9, 2008; July 8, 2008; August 14, 2008; May 6, 2009; August 12, 2009; September 10, 2009 and October 6, 2009.

**Exhibit 18: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2001 – 2004.**

**Exhibit 19: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2005 – 2006.**

**Exhibit 20: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2007 - 2009.**

**Exhibit 21: Addendum to Statement of John Werring, Registered Professional Biologist (29 January 2010) at paras. 1-4.**

58. All the toxicity test failures reported at the Iona WWTP were the result of a lack of Dissolved Oxygen (DO) in the effluent. If secondary treatment facilities were implemented, up to 90% of the BOD would be removed.

**Exhibit 7: Statement of John Werring, Fisheries Biologist.**

**Exhibit 18: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2001 – 2004.**

**Exhibit 19: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2005 – 2006.**

**Exhibit 20: Letters and Monitoring Reports from Staff, Greater Vancouver Sewerage and Drainage District showing 96-hour Rainbow Trout bioassay LC50 test results, 2007 - 2009.**

59. The Province of British Columbia, Metro Vancouver and GVSDD all have been previously convicted of a *Fisheries Act* offence, but have not acted to prevent the ongoing violations by installing secondary treatment facilities at the Iona WWTP.

#### **VIII. THIS SUBMISSION IS CONSISTENT WITH THE OBJECTIVES OF THE NAAEC**

60. The submitters believe that further study and the preparation of a factual record would advance the objectives of the NAAEC, as listed in Article 1 of the Agreement, especially by:
- (a) fostering the protection and improvement of the environment in the territories of the Parties for the well-being of present and future generations; ...
  - (g) enhancing compliance with, and enforcement of, environmental laws and regulations.
61. The aim of this submission is to promote the enforcement of the *Fisheries Act*. By preventing the charge against Metro Vancouver and the GVSDD from being heard by a court of law, the Canadian government has failed to enforce the *Fisheries Act*. Further, by intervening and staying the prosecution, the Canadian government actively prevented a private citizen from accessing the courts to enforce the government's laws. A factual record of this failure could encourage the Canadian government to enforce its environmental laws and regulations, thus fostering the protection of the environment for present and future generations.

#### **IX. REQUEST FOR PREPARATION OF A FACTUAL RECORD**

62. Fraser Riverkeeper hereby request that the CEC document, in a public factual record, the failure of the Canadian government to adequately enforce its environmental laws against Metro Vancouver and the GVSDD, to the detriment of others, including the submitters. This relief is requested with the aim of having the laws of Canada upheld and enforced by the federal government for the protection of the environment.