



# Environmental Law Clinic

UNIVERSITY OF VICTORIA

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Dear Mr. Bridgeman:

You have asked me to provide you with information about whether or not the stormwater management practices of the District of Saanich may be violating the federal *Fisheries Act* and/or the provincial *Environmental Management Act*. I will discuss your position and state the options that are available to you to address the issue.

In summary, the stormwater management practices of the District of Saanich may be violating sections 36(3) and 35(1) of the federal *Fisheries Act*. However, because Fisheries and Oceans Canada is doing very little enforcement and most private prosecutions in British Columbia are not allowed to proceed by the Attorney General,<sup>1</sup> seeking prosecution for an offence would likely not be the most effective process for the Friends of Mount Douglas Park Society (FOMDPS). Nevertheless, since all the elements of these two offences could reasonably be proven, it could be useful for the student to prepare a presentation to inform the District of Saanich Council of possible *Fisheries Act* violations. This course of action is in keeping with the FOMDPS's goal of having Saanich improve their stormwater management practices to conform with modern low impact development techniques -- so that the society's conservation efforts in Douglas Creek will not be continuously compromised by unnecessary stormwater pollution.

On the issue of whether a stormwater outlet in the Douglas Creek area could potentially be designated as a contaminated site under the Contaminated Sites Regulation of the *Environmental Management Act*,<sup>2</sup> it may be best for you to wait until Spring 2012 when the most recent Capital Regional District (CRD) sediment data from 2008-2011 will become publicly available.

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<sup>1</sup> See Appendix A for legal analysis and summary of the process of mounting a private prosecution.

<sup>2</sup> See Appendix C for a detailed discussion on the Contaminated Sites Regulation and its application to this case.

## ISSUES:

I have identified the issues as follows:

1. Is the District of Saanich violating section 36(3) of the *Fisheries Act* with their stormwater management practices?
2. Is the District of Saanich violating section 35(1) of the *Fisheries Act* with their stormwater management practices?

## FACTS:

I base my opinion on the following facts:

1. The Friends of Mount Douglas Park Society (FOMDPS) is a local Victoria, B.C. conservation group dedicated to safeguarding the welfare of the park. They also work to rehabilitate Douglas Creek and to reintroduce salmon into Douglas Creek.
2. Pollution from stormwater runoff is common and hampers FOMDPS's conservation efforts.
3. The District of Saanich has failed to comprehensively implement modern stormwater practices to reduce environmental impacts despite numerous requests from FOMDPS for Saanich to adopt better stormwater management practices.<sup>3</sup>
4. FOMDPS does not wish to pursue formal legal action at this point in time, but wishes the student to make a presentation to the District of Saanich Council of possible violations of sections 36(3) and 35(1) of the *Fisheries Act*.

I have made the following assumptions in forming my opinion:

1. The District of Saanich owns highways and roads pursuant to s. 35 of the *Community Charter* and may provide any service that the council considers necessary or desirable pursuant to s. 8(2) of the *Community Charter*. Section 1 of the *Community Charter* defines "service" as, in relation to a municipality, an activity, work or facility undertaken or provided by or on behalf of the municipality. Provisions that relate to sewerage systems and other municipal works in the *Community Charter* are essentially "enabling"

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<sup>3</sup> For example, when the newest updates of the Shelbourne Street corridor were constructed, a broad range of LID techniques were not implemented. Note that street swales were constructed near Mount Douglas Park, which are long and narrow landscaped depressions used to collect and convey stormwater runoff. However, when these street swales are inundated with too much water, they overflow into the storm drain system, essentially causing the same problem of status quo stormwater runoff which this measure is actually intended to address. Another example of Saanich's failure to implement LID techniques was with the Gordon Head Greenway and work on Grandview. (This information provided by client Robert Bridgeman in personal email correspondences).

provisions, and ownership and operations regulations are normally dictated by each municipality's bylaws. My assumption is that the District of Saanich owns its storm drain system which transports and eventually deposits stormwater into Douglas Creek.<sup>4</sup>

2. The data contained in Saanich's sediment data from 1993-2007 received from the CRD is complete and correct. Sediment data reflects soil samples at stormwater outlets, which is the data required to pursue having a site designated as a contaminated site pursuant to the Contaminated Sites Regulation.

3. There are no permits (neither provincial nor federal) governing discharge into stormwater outlets in the CRD.<sup>5</sup>

4. The data contained in the Thoreau Group Report provided by the client is complete and correct. This data only reflects passive sampling conducted over time. A specific sample would be required to pursue prosecution for an offence pursuant to s. 36(3) of the *Fisheries Act*.<sup>6</sup>

5. The District of Saanich would reasonably be aware of best stormwater management practices, such as the implementation of Low Impact Development (LID) techniques.<sup>7</sup>

6. FOMDPS has documentation of informing the District of Saanich of various pollution incidents that have occurred at Douglas Creek which they want Saanich to address.

If there are other relevant facts, or if I have misstated the facts or made incorrect assumptions, please tell me immediately. New information may change my opinion.

## **ANALYSIS OF FACT AND LAW**

### **Issue 1: Is the District of Saanich violating section 36(3) of the *Fisheries Act* with their stormwater management practices?**

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<sup>4</sup> The CRD Liquid Waste Management Plan (2000), Chapter 10 "Stormwater Quality Management," p. 10.2 states that "[t]he storm drain systems are owned and operated by... municipalities." Last accessed online 12 November 2011 at <http://www.crd.bc.ca/wastewater/lwmp/documents/chap10.pdf>.

<sup>5</sup> Author's personal email communication with Barri-Lynn Rudolph, Environmental Science Officer – CRD Stormwater, Harbours and Watershed Program, 7 October 2011.

<sup>6</sup> Thoreau Group, Hazard Waste Management Course, HPEO 407, Environmental and Occupational Health Program, University of Victoria, Continuing Education (Victoria, BC), "The Management of Hazardous Waste Hydrocarbons on the Douglas Creek Watershed," July 2005, Prepared for the Friends of Mount Douglas Park Society, unpublished.

<sup>7</sup> See the discussion below, and see Environmental Law Clinic, University of Victoria, "Re-Inventing Rainwater Management: A Strategy to Protect Health and Restore Nature in the Capital Region," February 2010. Available online at <<http://www.elc.uvic.ca/press/documents/stormwater-report-FINAL.pdf>> Last accessed 21 October 2011.

## *Fisheries Act*

Section 91(12) of the *Constitution Act* 1867 confers on Parliament the power to exercise exclusive jurisdiction over sea coast and inland fisheries. Accordingly, the *Fisheries Act* is federal legislation.

### **A. Overview**

Section 36(3) of the *Fisheries Act* states:

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.

The exceptions to s. 36(3) are outlined in subsection (4), which essentially allows the deposit of a deleterious substance when done in accordance with a license or regulation. This is inapplicable to the situation in Saanich, as there are no federal or provincial permits for stormwater outlet discharges.

Section 34 defines several terms that are important for the offence set out in s. 36(3):

34 (1) For the purposes of sections 35 to 43, "deleterious substance" means  
(a) 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  
(b) 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,...

"deposit" means any discharging, spraying, releasing, spilling, leaking, seeping, pouring, emitting, emptying, throwing, dumping or placing;

"water frequented by fish" means Canadian fisheries waters.

Section 40(2) makes it an offence to contravene subsection 36(1) or (3).

The Crown (if a Crown prosecution) or individual (if a private prosecution) must prove the three elements of the offence beyond a reasonable doubt.

- (1) depositing or permitting the deposit of
- (2) a deleterious substance

(3) in water frequented by fish or where the substance may enter such water.<sup>8</sup>

There is a significant amount of case law that has considered this offence and commented on its meaning. In short, it is a strict liability offence. As long as the act of depositing a deleterious substance has been carried out, irrespective of the intent of the offender, the offence has been committed (*R. v. Sault Ste. Marie (City)* [1978] 2 SCR 1299 (SCC)). However, the defendant may be able to raise the defences of due diligence and necessity (see below).

It may also be helpful to remember that s. 36(3) is a public welfare offence. “The primary objective of public welfare offences is to ensure the person in the best position to care will act to ensure public standards or values of safety and environmental protection are upheld.”<sup>9</sup>

## **B. Statutory Interpretation**

The manner in which courts interpret statutory law will affect how an offence may be prosecuted. Section 36(3) of the *Fisheries Act* in particular merits a discussion of judicial interpretation of three key phrases in the offence: “deposit or permit the deposit”, “deleterious substance” and “water frequented by fish”.

### **a. “Deposit or permit the deposit”**

The plain meaning of “depositing” is that the accused has active and direct control over the situation where a deleterious substance is deposited.

On the other hand, “permitting” has been interpreted fairly broadly in case law, to include circumstances “where the active cause is beyond the direct control of the accused.”<sup>10</sup> For example, in *R. v. Cloverdale Paint & Chemicals Ltd.* [1986] BCJ No 738 (CA), a vandal actively caused the deposit of a deleterious substance by entering a fenced compound and opening a valve of a chlorophenate storage tank, which caused fish in a nearby creek to be killed. Nevertheless, Cloverdale Paint & Chemicals Ltd. was convicted of *permitting* the deposit of a deleterious substance in water frequented by fish, even though the company itself did not *actively cause* the deposit.

This is of special importance to the facts at hand because, as discussed above, the District of Saanich has ownership of the roads and stormwater sewer system. Although Saanich may not be actively depositing the deleterious substances, they may be *permitting* the deposit of deleterious substances pursuant to their ownership of municipal infrastructure.

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<sup>8</sup> *Fletcher v. Kingston (City)* [2004] OJ No 1940 (SC) at para. 80.

<sup>9</sup> *R. v. Rhodes* [2007] BCJ 35 (PC), at para 21.

<sup>10</sup> Halsbury’s Laws of Canada – Environment. III. Regulation of the Environment in Canada 4. Water (2) Federal Regulation (a) Statutes. HEN-115 *Fisheries Act*.

## **b. “Deleterious Substance”**

A “deleterious substance” is defined in the leading case of *R. v. MacMillan Bloedel (Alberni) Ltd.* [1979] BCJ No 1498 (CA) as “the substance that is added to the water, rather than the water after the addition of the substance.”<sup>11</sup> This means that once a substance is deemed ‘deleterious,’ the offence is established without having to determine if the water itself is now deleterious with the addition of the “deleterious substance.” This is an important distinction to keep in mind, as it allows a potential offence to be established with more certainty, consistency and clarity. Before this distinction was affirmed in this decision by the British Columbia Court of Appeal, it was unclear whether the receiving waters as a whole needed to be proved deleterious to fish in order to establish an offence under s. 36(3).

This same interpretation was reaffirmed in the more recent decision of *Fletcher v. Kingston (City)* [2004] OJ No 1940 (CA). Justice Gillese explains in paragraph 65 that “[t]he focus of s. 36(3) is on the substance being added to water frequented by fish. It prohibits the deposit of a deleterious substance in such water. It does not prohibit the deposit of a substance that causes the receiving water to become deleterious. It is the substance that is added to water frequented by fish that is defined, not the water after the addition of the substance.”

## **c. “Water Frequented by Fish”**

In *R. v. MacMillan Bloedel (Alberni) Ltd.*, supra, the phrase “water frequented by fish” was interpreted broadly, not restricting this phrase to situations where fish must be present in the water at the exact moment of the deposit of the deleterious substance. In other words, the water need only be an area where fish frequent at some point in time.

## **D. Defences to the Offence:**

There are two defences to a s. 36(3) offence, that of due diligence and necessity.

The defence of due diligence is available by common law and is codified in s. 78.6 of the *Fisheries Act* with respect to *Fisheries Act* offences:

No person shall be convicted of an offence under this Act if the person establishes that the person

- (a) exercised all due diligence to prevent the commission of the offence; or
- (b) reasonably and honestly believed in the existence of facts that, if true, would render the person’s conduct innocent.

The accused bears the burden of proof to establish that they exercised due diligence on the balance of probabilities, meaning more likely than not to have occurred. As the Newfoundland Court of Appeal outlines in *R. v. Alexander* [1999] 171 Nfld & PEIR 74, “[t]he defence of due diligence requires the act of diligence to relate to the external

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<sup>11</sup> *R. v. MacMillan Bloedel (Alberni) Ltd.* [1979] BCJ No 1498 (BCCA) at para. 8.

elements of the specific offence that is charged. The accused must establish on a balance of probabilities that he or she took reasonable steps to avoid committing the statutorily-barred activity. It is not sufficient to simply act reasonably in the abstract or to take care in a general sense.”<sup>12</sup>

The rare defence of necessity is also available, when

1. Compliance with the law is demonstrably impossible
2. There is no legal alternative, and
3. The harm inflicted must be less than the harm sought to be avoided.<sup>13</sup>

Additionally, the Supreme Court of Canada in *Perka v. R.* held that “the defence [of necessity] only applies in circumstances of imminent risk where the action was taken to avoid a direct and immediate peril.”<sup>14</sup>

The defence of necessity requires a very high standard of proof and will not commonly be a successful defence. For example, in the case of *R. v. Rhodes* [2007] BCJ No 35 (PC), the defendants attempted to argue the common law defence of necessity to a charge under s. 35(1) of the *Fisheries Act*. The defence was rejected because the court pointed out that the *Fisheries Act* allows for other legal alternatives such as seeking out permits that an accused can take make use of.

See Appendix B for selected case law relevant to s. 36(3) violations.

### **Application to Case**

The Friends of Mount Douglas Park Society wishes to be informed of how Saanich’s stormwater practices may violate s. 36(3) of the *Fisheries Act*. The next part of this memo will apply the previous discussion to the facts at hand.

First, the three elements of the offence under s. 36(3) must be shown: (1) depositing or permitting the deposit of (2) a deleterious substance (3) in water frequented by fish or where the substance may enter such water.

Because the District of Saanich owns municipal infrastructure including roads, drains, pipes and stormwater outlets, they are depositing or permitting the deposit of stormwater, as required by the first element of the offence.<sup>15</sup>

In order to prove the next element of the offence in a court setting, it would be necessary to gather specific samples from the stormwater outlet that deposits stormwater into Douglas Creek and have these samples sent to a laboratory that could perform the “acute

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<sup>12</sup> *R. v. Alexander* [1999] 171 Nfld & PEIR 74, at para 81.

<sup>13</sup> *R. v. Rhodes* [2007] BCJ 35 (PC), at para 25.

<sup>14</sup> Quoted in *R. v. Rhodes* [2007] BCJ 35 (PC) at para 26.

<sup>15</sup> See discussion under Assumption 1 and footnotes 4 and 5.

lethality test” described in *Chapman v. BC* (see Appendix B), which is required to prosecute a s. 36(3) offence.

The Thoreau Group data provided to the client provides information that strongly supports the possibility that stormwater is depositing deleterious substances (that could ultimately conform to an “acute lethality test”) into Douglas Creek:

“A wide range of contaminant organics were detected in these samplers, though the extracted ion profiles were dominated by petroleum hydrocarbons, sampling system artifacts and plant sterols. Major compounds confirmed by MS were normal alkanes, a wide range of PAH [polycyclic aromatic hydrocarbons] (primarily naphthalene, alkyl naphthalenes, phenanthrene, fluorene, fluoranthene, pyrene), alkylated PAH, pentacyclic triterpanes (hopanes/steranes), alpha-farnesene, squalene, several Phthalate esters (plasticers) were the most common components and with pentacyclic triterpanes, normal alkanes and isoprenoid hydrocarbons which indicate the present of various sources of petroleum hydrocarbon in Douglas Creek.

Levels of petroleum hydrocarbons varied greatly over the year, and levels increased substantially (by up to two orders of magnitude) following heavy rain, higher water levels and increased discharge rates.”<sup>16</sup>

Assuming that the second element of the offence has been proven (ie. the deposit of a deleterious substance), the third element of the offence requires proof of a deposit in water frequented by fish. The water in question, Douglas Creek, would be considered water frequented by fish as required by s. 36(3) of the *Fisheries Act* because the Creek was a salmon bearing stream and the more recent efforts of the FOMDPS to reintroduce salmon species to the creek. As stated in *R. v. MacMillan Bloedel Ltd.* (discussed above), the fish do not have to be present at the exact moment of the deposit of the deleterious substances, only that the water body is a water frequented by fish in general.

As there is a strong possibility that the three elements of this strict liability offence could be successfully proven, the burden of proof would then shift to the potential defendant, the District of Saanich, to show that they have exercised reasonable care to make use of the due diligence defence.

To counter the defence of due diligence on the part of Saanich, we would argue that they did not exercise due diligence -- because their stormwater management practices do not conform to modern low impact development techniques that any municipal government should reasonably be aware of and should implement to avoid violating s. 36(3). It may be difficult for Saanich to mount a strong due diligence defence, because of its lack of

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<sup>16</sup> Thoreau Group, Hazard Waste Management Course, HPEO 407, Environmental and Occupational Health Program, University of Victoria, Continuing Education (Victoria, BC), “The Management of Hazardous Waste Hydrocarbons on the Douglas Creek Watershed,” July 2005, Prepared for the Friends of Mount Douglas Park Society, unpublished.



comprehensive use of low impact development and lack of modern pollution prevention devices on the stormwater outlets into Douglas Creek.

The Environmental Law Clinic (ELC) produced a report in February 2010 entitled “Re-Inventing Rainwater Management: A Strategy to Protect Health and Restore Nature in the Capital Region” which was submitted to the Capital Regional District (CRD), of which Saanich is a member. This report was also presented by the ELC to a Saanich Municipal Committee and Saanich staff. Saanich should therefore have been reasonably expected to be aware of the best practices for stormwater management described in that report. In addition, Saanich has received much other information about the need to reform stormwater management to protect fish, from Waterbucket.ca and other sources.

When considering the due diligence defence, courts will often consider whether any viable alternatives were available for the accused to employ in the circumstances which could have prevented or mitigated the offence.<sup>17</sup> Low Impact Development (LID) techniques may be considered a viable alternative for Saanich to have employed instead of its current stormwater management practices.

“By properly designing new development (and retrofitting old development), we can keep rainwater on the land where it falls – and dramatically reduce most of the negative impacts of runoff. Modern ‘Low Impact Development’ (LID) techniques mimic the natural water cycle, by allowing water to percolate into the ground and gradually release into the watershed.

Even if a watershed is covered with a high percentage of impervious surface, the use of LID can reduce the ‘*effective impervious surface area*’ by facilitating infiltration on the ground.”<sup>18</sup>

For the purposes of this memo, LID techniques can be considered a form of pollution prevention. By decreasing stormwater runoff, LID techniques prevent pollution in the form of stormwater runoff.

There are numerous other examples that can be used as examples to support the assertion that Saanich has not exercised due diligence because they have not employed best practices. Among best practices techniques, the ELC report *Reinventing Rainwater Management* references the website Waterbucket.ca, which is the communications site for the Water Sustainability Action Plan:

Waterbucket.ca provides information about how LID [low impact development] and other water conservation measures can be implemented The website is

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<sup>17</sup> See for example, the discussion of *R. v. Gibsons (Town)* in Appendix B. Note also that the defence of necessity requires a lack of alternative measures for the accused, which is covered by this discussion of alternative measures in the context of due diligence.

<sup>18</sup> Environmental Law Clinic “Re-inventing Rainwater Management,” February 2010, at page 48. For a table listing a number of examples of Low Impact Development Practices, see the table adapted from the US Environmental Protection Agency Report *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices* at page 49 of the ELC Report.

designed to provide this information to elected officials government agencies, water utilities, water suppliers and managers.<sup>19</sup>

Indeed, it is in large part because of the well-documented devastating effects stormwater has on salmon populations, that the Washington State Pollution Control Hearings Board now requires the use of LID stormwater practices throughout the western portion of Washington State.<sup>20</sup> This fact was included in the ELC report. Having received this report and other documents on the issue, Saanich would have been well aware of the importance of using LID techniques to protect fisheries.

Assuming that the due diligence defence cannot be made out by the District of Saanich (which the above discussion supports), this would mean that Saanich would be violating s. 36(3) of the *Fisheries Act*. (Clearly the defence of necessity does not apply, since reasonable measures could avoid the violation and the circumstances do not involve imminent risk where the actions of the municipality are taken to avoid a direct and immediate peril.) See the above discussion on staying private prosecutions, which may be a realistic expectation if the FOMDPS would choose to pursue a private prosecution.

However, in the context of the ELC student presenting this information to Saanich Council, and given the application of the offence to the facts at hand, it may be an effective strategy to inform Saanich Council of possible violations of s. 36(3). This is because the FOMDPS ultimately wants Saanich to improve its stormwater management practices using LID techniques in order to minimize the devastating impacts stormwater outflow poses to their conservation efforts to reintroduce salmon into Douglas Creek. Saanich may choose to implement more LID techniques in constructing new and retrofitting old municipal infrastructure after being informed of their potential liability under the *Fisheries Act*.

## **Issue 2: Is the District of Saanich violating section 35(1) of the *Fisheries Act* with their stormwater management practices?**

### ***Fisheries Act***

Section 91(12) of the *Constitution Act 1867* confers on Parliament the power to exercise exclusive jurisdiction over sea coast and inland fisheries. Accordingly, the *Fisheries Act* is federal legislation.

#### **A. Overview**

Section 35(1) of the *Fisheries Act* states:

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<sup>19</sup> Environmental Law Clinic, University of Victoria, “Re-Inventing Rainwater Management: A Strategy to Protect Health and Restore Nature in the Capital Region,” February 2010. Available online at <<http://www.elc.uvic.ca/press/documents/stormwater-report-FINAL.pdf>> Last accessed 21 October 2011.

<sup>20</sup> Environmental Law Clinic, “Re-inventing Rainwater Management,” February 2010, at page 23.

35(1) No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.

The exceptions to s. 35(1) are outlined in s. 35(2) whereby one may contravene subsection 1 if it is by any means or under any conditions authorized by the Minister or under regulations made by the Governor in Council under the *Fisheries Act*.

Section 40(1) makes it an offence to contravene subsection 35(1). The penalties allowed under this section range up to one million dollars and/or imprisonment for three years.

Again, section 35(1) is a strict liability offence. The test for establishing a s. 35(1) offence was articulated by the British Columbia Supreme Court in *British Columbia v. Posselt* [1999] BCJ No 1141 (SC):

I do not think that harm to fish is an element of the offence. What is prohibited by s. 35(1) is the harmful alteration, disruption or destruction of fish habitat, not the alteration, disruption or destruction of fish habitat that results in harm to fish. In my view, the *actus reus* of the offence is established if the Crown proves beyond a reasonable doubt that the accused interfered with the fish habitat in a way that has impaired the value or the usefulness of the habitat for one or more of the purposes described in the definition of "fish habitat" in s. 34(1). Thus, neither proof of actual harm to fish nor the assumption of such harm is necessary, as that fact is not material.<sup>21</sup>

The defences of due diligence and necessity are open for the accused to establish on the balance of probabilities.<sup>22</sup>

## **B. Statutory Interpretation**

### **a. "Work or undertaking"**

"Work or undertaking" is not defined in the *Fisheries Act*. Furthermore, neither Black's Law Dictionary nor the Oxford English Dictionary provide applicable definitions for "work" or "undertaking" within the meaning of s. 35(1) of the *Fisheries Act*.

Clearly, storm sewer pipes are "public works" pursuant to s. 315.2 of the *Local Government Act*, which may be a useful definition in interpreting "work or undertaking" in s. 35(1) of the *Fisheries Act*.

Additionally, s. 1 of the *Community Charter* defines "service" as, in relation to a municipality, an activity, work or facility provided by or on behalf of the municipality. One of these municipal services is the provision of sewerage systems. This bolsters the

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<sup>21</sup> *British Columbia v. Posselt* [1999] BCJ No 1141 (SC), at para 23.

<sup>22</sup> See the above discussion of strict liability and the defences of due diligence and necessity, which are applicable in the context of s. 35(1).

argument of having the sewerage system (including stormwater pipes and drainage) considered a “work or undertaking” pursuant to s. 35(1) of the *Fisheries Act*.

Case law also provides a basic starting point as to what Canadian courts have considered to be a “work or undertaking” in the context of s. 35(1) of the *Fisheries Act*. Cutting down trees (which harmed fish habitat by reducing ability of creek to support fish population),<sup>23</sup> the removal of stumps,<sup>24</sup> excavating a trench,<sup>25</sup> depositing soil and debris materials from a housing excavation on the shoreline of a bay,<sup>26</sup> extracting gravel from a fish habitat,<sup>27</sup> and suction dredging in a creek known to be a salmon spawning area<sup>28</sup> have all been held to be “works or undertakings” within the meaning of s. 35 of the *Fisheries Act*.<sup>29</sup> These “works or undertakings” considered in case law commonly suggest that “works or undertakings” are direct actions or interferences with fish habitat.

However, construction and maintenance of a stormwater infrastructure that delivers stormwater could well constitute a “work or undertaking.” that directly interferes with fish habitat.

#### **b. “...that results in the harmful alteration, disruption or destruction of fish habitat”**

As discussed above, harm to fish is not an element of the offence. “What is prohibited by s. 35(1) is the harmful alteration, disruption or destruction of fish habitat, not the alteration, disruption or destruction of fish habitat that results in harm to fish.”

This is an important distinction to make, as it only requires the prosecution to prove that a “harmful alteration, disruption or destruction of fish habitat” has occurred in order to make out the offence.

#### **C. Application to Case**

To prove that the District of Saanich has committed a s. 35(1) *Fisheries Act* offence, one must first establish that the pipes and stormwater outlet in Douglas Creek are a “work or undertaking.” As discussed above, there is likely a strong argument that a sewerage system (and thus stormwater pipes and outlets) would be considered a “work or undertaking” within the meaning of s. 35(1).

Assuming that the first element of the offence can be made out, it is necessary to establish that the “work or undertaking *resulted in the harmful alteration, disruption or destruction of fish habitat.*” Again, as noted previously, it is not necessary to prove harm to fish. Stormwater runoff has numerous well-documented negative impacts on fish

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<sup>23</sup> *R. v. Larsen* [2010] BCPC 274.

<sup>24</sup> *R. v. Zuber* [2004] OJ No 2989 (SCJ).

<sup>25</sup> *R. v. Leveque* [2001] OJ No 4437 (SCJ).

<sup>26</sup> *R. v. Yellowknives Dene First Nation* [2000] NWTTC 2 (NWT Terr Ct).

<sup>27</sup> *R. v. Douglas* [2004] BCJ No 1737 (PC).

<sup>28</sup> *R. v. High* [2003] BCJ No 385 (PC).

<sup>29</sup> Fishing, for example, is not a “work or undertaking” within the meaning of s. 35 of the *Fisheries Act* (*Ecology Action Centre Society v. Canada (Attorney General)* 2004 FC1087).

habitat. For example, the ELC's "Re-inventing Rainwater Management" report notes that:

The velocity picked up by runoff travelling through storm sewers leads to erosion, straightening and "channelling" of streams, and flash flooding [which ultimately damage streams (fish habitat)]... High velocity stormwater destroys fish spawning grounds and causes sedimentation that can kill fish. Elevated stormwater temperatures can also kill fish. The rapid diversion of water into storm sewers ultimately reduces summertime stream levels that are critical for fish. Finally, the broad range of toxins found in stormwater devastates fish populations.<sup>30</sup>

The ELC report explains that:

Under conventional management, stormwater flows across impervious surfaces (roofs and pavement) and gathers contaminants and velocity – both of which damage fish streams. In fact, studies show that when impervious surfaces exceed the relatively low level of 10-15 per cent of a watershed's area, streams generally become poor habitat for fish. At that level of imperviousness, a watershed destabilizes. Streams begin to erode, straighten and channelize, losing the pool and riffle sequences that fish need... begin[ning] to suffer from 'urban stream syndrome.' ... [Effects of urban stream syndrome'] include: increased surface runoff and peak flow events, increased mobilisation and transportation of nutrients such as nitrogen and phosphorous, erosion, enlargement and aggradation of stream channels, conveyance of urban pollutants into aquatic ecosystems and toxicity effects on aquatic biota, and degraded aquatic biological conditions and reduced biodiversity."<sup>31</sup>

In *Medomist Farms Ltd. v. Surrey (District)* [1991] BCJ No 3591 (CA), the British Columbia Court of Appeal held that the cause of an overflowing channel (which damaged the plaintiff farmers' downhill land and crops) was due to urbanization of higher lying areas. Justice Hinkson stated that "with the development of [the uphill area], water which had previously been absorbed by the ground could no longer be absorbed in those areas covered by blacktop and houses. As a result more water ran off downhill. Further, the speed with which water reached a given point downhill was increased. This in turn resulted in greater peak flows as a great volume of water reached a given point at the same time." This essentially recognizes in law the fact that increased urbanization (ie. more paved surfaces, roofs, etc.) cause increased stormwater runoff.

In addition, the Friends of Mount Douglas Park Society have kept a detailed log book of all possibly toxic spills into Douglas Creek, which may also be considered a harmful alteration, disruption or destruction of fish habitat. FOMDPS are also in possession of compelling evidence of a harmful alteration, disruption or destruction of fish habitat, in the form of numerous photographs of the destructive storm surges which occur after

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<sup>30</sup> Environmental Law Clinic, "Re-inventing Rainwater Management," February 2010, at page 18.

<sup>31</sup> Environmental Law Clinic, "Re-inventing Rainwater Management," February 2010, at pages 24-25.

heavy rainfall (which is not uncommon in Saanich). Such surges cause the creek banks to erode which destroys fish habitat.

Overall, there is ample evidence that would help establish the second element of the offence, the harmful alteration, disruption or destruction of fish habitat.

Once the elements of the offence have been established, it is open for Saanich to argue that they exercised reasonable care in order to successfully argue a due diligence offence. The discussion on due diligence in the context of s. 36(3) (above) is also relevant in the context of a possible violation of s. 35(1). As discussed, FOMDPS does have a range of opportunities to cast doubt upon Saanich's due diligence defence -- because of their awareness of LID techniques and opportunities to employ alternative stormwater management practices when constructing new and retrofitting old municipal infrastructure.

### **Summary of *Fisheries Act* Analysis**

It is likely that all the elements of s. 36(3) and s. 35(1) violations could be proven. Further, it would be difficult for the District of Saanich to successfully argue that they exercised due diligence, due to the ample evidence that Saanich should be aware of implementing LID techniques when constructing new and retrofitting old municipal infrastructure.

Furthermore, the author's personal email correspondence with Marko Goluzza of Environment Canada's Enforcement Branch, offered very helpful insight into *Fisheries Act* prosecutions. Mr. Goluzza notes that:<sup>32</sup>

The nature of the pollution incidents we [Environment Canada – Enforcement Branch] respond to makes it difficult for Environment Canada - Enforcement Branch to cite a specific instance where we charged a municipality for a stormwater pipe, deleterious discharge. However, municipalities are responsible for their infrastructure and are potentially liable under the *Fisheries Act* for any deleterious discharges into water frequented by fish originating from their infrastructure.

In the event that Environment Canada becomes aware that a substance deleterious to fish has been released from a municipal storm water outfall, an investigation will determine whether the municipality was duly diligent in preventing the discharge. One enforcement response Environment Canada may take of those described in the Compliance & Enforcement Policy is to recommend a prosecution under the *Fisheries Act*. [underlining mine]

In conclusion, Mr. Goluzza explained that:

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<sup>32</sup> Author's personal email correspondence with Marko Goluzza, Environment Canada – Enforcement Branch, 4 November 2011.

Any release of a deleterious substance that occurs out of the normal course of events by a municipality into fish bearing waters is contrary to the *Fisheries Act*. When these releases occur they must legally be reported. Environment Canada - Enforcement Branch may consider these reports in their enforcement actions.

Mr. Goluzza's insight is very helpful in considering Saanich's stormwater management and possible *Fisheries Act* violations with regards to stormwater output into Douglas Creek.

## CONCLUSION

In conclusion, based on my analysis of the facts and the law, it is my opinion that:

1. The stormwater management practices of the District of Saanich may be violating sections 36(3) and 35(1) of the federal *Fisheries Act*. As private prosecutions are mostly stayed by the Attorney General, this would likely not be the best strategy for the FOMDPS to pursue at this time.
2. Since all the elements of sections 36(3) and 35(1) offences, including negating Saanich's potential due diligence defences, could reasonably be proven, it would be useful for the student to prepare a presentation to inform Saanich Municipal Council of possible *Fisheries Act* violations. This course of action is in keeping with the FOMDPS's goal of having Saanich change and improve their stormwater management practices to conform with modern low impact development techniques so that their conservation efforts in Douglas Creek will not be continuously compromised by unnecessary stormwater pollution. The data in the July 2005 Thoreau Group Project will suffice to give a preliminary idea of what types of deleterious substances are being deposited in Douglas Creek.<sup>33</sup> Similarly, there is ample evidence to conclude that stormwater runoff from the Douglas Creek stormwater outlets causes the harmful alteration, disruption or destruction of fish habitat.
3. Based on the CRD's 1993-2007 data on Saanich stormwater outlets, it would appear unlikely that a stormwater outlet in the Douglas Creek area could be designated as a contaminated site pursuant to the Contaminated Sites Regulation. (See Appendix C.) The newest data from 2008-2011 will become publicly available in Spring 2012 and there would be value in comparing this data to Schedule 9 of the Contaminated Sites Regulation once it becomes available to see if any changes have occurred in the last four years.

The ELC would be happy to make a public presentation of these findings to Saanich Council.

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<sup>33</sup> Note that the Thoreau Group Project's samples are not recent – the samples were gathered between January 14, 2001 and February 10, 2002 – and that the samples were collected using passive sampling techniques to collect an integrated sample of organics in surface waters. This differs from the types of samples required by an “acute lethality test”.

Please inform me of the course of action you wish to pursue, and feel free to contact me if you have any questions or require additional information.

Best regards,

“Katrina Andres”

Katrina Andres, law student

A handwritten signature in black ink that reads "Calvin Sandborn". The signature is written in a cursive style with a large initial 'C'.

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Calvin Sandborn, lawyer

Legal Director

UVic Environmental Law Clinic



## Appendix A: Private Prosecutions

The right to pursue a private prosecution is codified in section 504 of the *Criminal Code of Canada*:

Anyone who, on reasonable grounds, believes that a person has committed an indictable offence may lay an information in writing and under oath before a justice, and the justice shall receive the information...<sup>34</sup>

The federal *Interpretation Act* provides in section 35(2) that:

All the provisions of the *Criminal Code* relating to indictable offences apply to indictable offences created by an enactment, and all the provisions of that Code relating to summary conviction offences apply to all other offences created by an enactment, except to the extent that the enactment otherwise provides<sup>35</sup>.

In plain language, this section of the *Interpretation Act* provides for s. 504 (the right to pursue a private prosecution) to apply to all federal acts (including the *Fisheries Act*) unless explicitly stated otherwise in the statute. In fact, the *Fisheries Act* actually “contemplates and encourages private prosecutions by statutory mandate. Section 62 of the Act provides that a citizen will receive one half of the proceeds of any forfeited articles that are seized and sold.”<sup>36</sup>

To file a private prosecution, the Informant (the individual wishing to file a private prosecution) must prepare a one-page “Information” (or Indictment), which outlines that they have “reasonable and probable grounds to believe that [someone, eg. an individual, corporation, municipality] did, on a certain time and date, at a certain place, commit an offence, to wit: by doing [an action] contrary to [a certain section or sections] of [a regulation or other statutory law]”<sup>37</sup> Next, the Informant must go to a Provincial Courthouse and make an appointment with a Justice of the Peace. After a sworn oath or solemn affirmation, the Informant signs the Indictment in front of the Justice of the Peace, who then opens a file and places the Indictment in it and finally sets a court date where the complainant will appear. Although the accused does not have to be served, the complainant must serve either (or both) the federal or provincial Attorney General.<sup>38</sup>

After the provincial court hearing and a summons or warrant has been issued to the accused, the Attorney General may exercise his or her discretion to intervene in a private prosecution. This seems to be one of the main obstacles to successful private prosecutions. Interventions may be in the form of the Attorney General assuming control

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<sup>34</sup> *Criminal Code*, RSC 1985, c C-46 s 504.

<sup>35</sup> *Interpretation Act*, RSC 1985, c I-21, s 34(2).

<sup>36</sup> Jones, Jeff, “Private Prosecutions in Canada: A Citizen Enforcement Alternative” (Paper presented to the Renewing Environmental Law Conference, Vancouver, 4 February 2011), [unpublished], online: <<http://envlawforum.ca/pdfs/jones.pdf>> at page 6. Last accessed online 20 October 2011.

<sup>37</sup> Jones, “Private Prosecutions in Canada,” at page 8.

<sup>38</sup> Jones, “Private Prosecutions in Canada,” at pages 8-9.

of the prosecution or the Attorney general staying the prosecution. The Attorney General may also do nothing, allowing the private prosecution to proceed on its own.

If the Attorney General directs a Stay of Proceedings in a private prosecution, there is a very limited appeal process. A prosecutorial review is only available if the Crown has acted with “flagrant impropriety,” which is defined as conduct “bordering on corruption, violation of the law, bias against an individual or bias against an offence.”<sup>39</sup> Indeed, this sets a high standard for prosecutorial review, which will inevitably be successful only in rare cases.

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<sup>39</sup> *Werring v. British Columbia (Attorney General)* [1997] BCJ No 2952 (CA), at para 7.

## Appendix B: Selected s. 36(3) Case Law

*Fletcher v. Kingston (City)* [2004] OJ No 1940 (CA) (hereafter “*Fletcher*”)

In this case, two separate actions were brought against the City of Kingston for depositing deleterious substances frequented by fish contrary to s. 36(3) of the *Fisheries Act*. The first was a private prosecution by Ms. Fletcher, a local environmentalist, who laid charges against the City after testing samples of leachate, a deleterious substance. The Ontario Ministry of Environment also laid separate charges against the City and Mirka Januszkiewicz (the City’s Director of Environmental Services), after testing samples of leachate from the same area.

The circumstances giving rise to the charges were at a site where the City had operated a municipal dump site from the early 1950s until the early 1970s. After its closure, the City opened a recreation area at the same site. The trial judge found as fact that little was done to address the possibility of leachate (a deleterious substance) generation and migration.

Fletcher collected four samples and had acute lethality tests performed on them which conformed to Environment Canada protocol. Similarly, the Ministry of Environment collected samples which underwent acute lethality tests in accordance with Environment Canada protocol. Experts at trial agreed that ammonia was the main toxic substance that rendered Fletcher’s samples acutely lethal.

The trial judge found that the City created and owned the landfill site, was responsible for the site’s ongoing operation and maintenance and had deposited or permitted the deposit of a deleterious substance in water frequented by fish. Leachate was deemed to be a deleterious substance because of the test in *R. v. MacMillan Bloedel* (explained above) whereby the prosecution only had to prove that the substance introduced to the water was deleterious or harmful to fish. The defence of due diligence was rejected because the trial judge found that the City and Ms. Januszkiewicz were aware that leachate was flowing into the river and they chose to ignore the problem. Ultimately, the City was convicted on all four counts brought by Fletcher and three of the four counts brought by the Ministry of Environment.

The Ontario Court of Appeal upheld the trial judge’s interpretation of the *Fisheries Act*, affirming the *MacMillan Bloedel* interpretation of “deleterious substances.” Because Fletcher’s samples were conducted at 100 per cent concentration and not added to water, the appeal court could not conclude beyond a reasonable doubt that, “had the Fletcher leachate samples been added to water, the water would have been rendered deleterious to fish.”<sup>40</sup> This technical error meant that the City was ultimately not convicted on the four counts related to Fletcher’s samples. The Court of Appeal did restore the three original convictions on the Ministry’s samples.

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<sup>40</sup> *R. v. Fletcher* [2004] OJ No 1940 (CA) at para 84.

In summary, the private prosecution failed, while the Crown successfully prosecuted the City on three of four counts of contravening s. 36(3) of the *Fisheries Act*. The Court of Appeal interpreted “deleterious substance” as referring to “the substance that is added to water, rather than the water after the addition of the substance.”<sup>41</sup> It is also important to note that the acute lethality tests must be performed in accordance with strict standards, as the improper method in the private prosecution did not lead to a successful conviction. The defence of due diligence was rejected, allowing the Crown conviction.

***Chapman v. British Columbia*** [2007] BCJ No 703 (PC) (hereafter “*Chapman*”) – Pre-inquiry trial

*Chapman* provides a clear overview of the acute lethality test developed by Environment Canada to determine whether discharge is acutely lethal to fish. If discharge is found acutely lethal to fish by the acute lethality test, this will also render the substance deleterious to fish as required by s. 36(3) of the *Fisheries Act*. The acute lethality test, known as the “96hr – LC50 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.<sup>42</sup>

***R. v. Gibsons (Town)*** [2001] CarswellBC 3069 (PC)

The Town of Gibsons was charged with two counts of violating s. 36(3) of the *Fisheries Act*. All three elements of the offence were made out: (1) the deposit or permitting the deposit of (2) a deleterious substance (in this case, a sewage overflow caused by a blockage) (3) in water frequented by fish. The Town admitted that the offence had taken place, but argued that they exercised due diligence. As explained above, due diligence functions as a defence to a strict liability offence such as s. 36(3) of the *Fisheries Act*.

The Town brought forward compelling evidence of the exercise of due diligence. The Town’s employees responded in a very timely manner to a citizen’s call alerting them of a sewage overflow and dealt with the situation very professionally. Despite this persuasive evidence of due diligence, the court did not accept the due diligence defence. The court found that the Town was aware that blockages could and would happen and knew that if there was a blockage at this particular site that sewage overflow would result in harm to the environment and fish.<sup>43</sup> Continuing with its reasoning for rejecting the due diligence defence, the court concluded that:

...in light of the previous... blockages [and] the fact that despite an excellent preventative maintenance program on the sewer system to enter blockages, in light of the fact that the Town of Gibsons knew a blockage at this site would cause sewage to enter Shoal Channel [the water frequented by fish], and that the Town of Gibsons knew this water was frequented by fish, there were several alternatives and options available to the Town of Gibsons on [the date of offence] and [the court does] find that those options were reasonably available, in other

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<sup>41</sup> *R. v. Fletcher* [2004] OJ No 1940 (CA) at para 64.

<sup>42</sup> *Chapman v. British Columbia* [2004] BCJ No 703 (PC), at para 5.

<sup>43</sup> *R. v. Gibsons (Town)* [2001] CarswellBC 3069 (PC), at para 61.

words, not overly expensive, and that the town of Gibsons did not avail itself of those options.<sup>44</sup>

In summary, this case is a useful illustration of the high standards that British Columbian courts have adopted in order for the accused to establish the due diligence defence. The accused's knowledge of previous events and reasonable future foresight is relevant in the court's analysis of the due diligence defence. Ultimately, the Town was convicted of one count of violating s. 36(3) of the *Fisheries Act*. The other count resulted in a conditional stay.

***R. v. Gemtec Ltd.*** [2004] NBJ 389 (QB)

At trial, the City of Moncton entered a guilty plea for depositing leachate, a deleterious substance into waters frequented by fish contrary to s. 36(3) of the *Fisheries Act*. This is yet another case where a Municipality was held to be in violation of this section. Like the circumstances in the *Fletcher* case, the site emanating the leachate was a former municipal landfill site.

This case is also important because it illustrates an aspect of the due diligence defence. After the landfill's closure, the City retained the engineering firm Gemtec Ltd. (the respondents in the case) to conduct a study of the former landfill area and prepare an acceptable closure plan so that the *Fisheries Act* would not be violated.<sup>45</sup> The Closure Report identified two options, which were reviewed by Dr. Louis Lapierre, an Environmental Studies professor at the Université de Moncton. He "was concerned that Option 1 would not meet the regulatory requirements of the *Fisheries Act*."<sup>46</sup> Nevertheless, Option 1 was not amended to reflect Lapierre's warning and was adopted as the closure plan. Even though the City relied on the report prepared by Gemtec Ltd., the fact that Lapierre warned of possible *Fisheries Act* violations means the City would have had difficulty pleading the due diligence defence had they not entered a guilty plea.

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<sup>44</sup> *R. v. Gibsons (Town)* [2001] CarswellBC 3069 (PC), at para 89.

<sup>45</sup> *R. v. Gemtec Ltd.* [2004] NBJ 389 (QB), at para 8.

<sup>46</sup> *R. v. Gemtec Ltd.* [2004] NBJ 389 (QB), at para 15.

## Appendix C: Contaminated Sites

### Could any of the stormwater outlets in the Douglas Creek area be designated as contaminated sites under the Contaminated Sites Regulation?

#### Contaminated Sites

The *Environmental Management Act (EMA)* provides two distinct avenues for which a responsible person (as defined in ss. 45 and 46) may be found responsible and/or liable for the contamination of a site:<sup>47</sup>

The first avenue is found at s. 48 of the *EMA* and the related provisions of the Contaminated Sites Regulation (“CSR”), which provide that a Manager may issue a *remediation order* to any *responsible person*. The second avenue is found in s. 47(5) of the *EMA*, which provides a statutory cause of action for a *person* against one or more *responsible persons* where that person has incurred reasonable costs of remediation.<sup>48</sup>

Under s. 39(1) of *Environmental Management Act* (the definitions section), “contaminated site” means:

an area of the land in which the soil or any groundwater laying beneath it, or the water or the underlying sediment, contains

(a) a hazardous waste, or

(b) another prescribed substance in quantities or concentrations exceeding prescribed risk based or numerical criteria or standards or conditions.

Schedule 9 of the Contaminated Sites Regulation provides clear numerical criteria guidelines of what constitute acceptable levels of various inorganic and organic substances in sediment samples.

Once contamination has been established, “the determination of liability, and specifically the determination of who is a *responsible person*, lies at the heart of the legislative scheme of the [EMA].”<sup>49</sup> Section s.39(1) of the *EMA* provides these important definitions:

“person” includes government body and any director, officer, employee or agent of a person or government body;

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<sup>47</sup> Sections 45 and 46 of the *Environmental Management Act* are extremely long and not directly relevant for the purposes of this discussion, as we are assuming that a Municipality would be a “responsible person.”

<sup>48</sup> Bereti, Richard E. And Frank L. Mandarino, “Contaminated Sites and Migration”, prepared for the Continuing Legal Education Society of British Columbia Environmental Law Conference, February 2004.

<sup>49</sup> Bereti and Mandarino “Contaminated Sites and Migration,” February 2004.

“operator” means, subject to subsection (2), a person who is or was in control of or responsible for any operation located at a contaminated site  
“owner” means a person who is in possession of, has the right of control of, occupies or controls the use of real property, including, without limitation, a person who has an estate or legal interest, legal or equitable, in the real property.

## **B. Application to Case**

The Capital Regional District provided the ELC student with their Saanich stormwater sediment sampling data from 1993-2007. The data from 2008-2011 will become publicly available in Spring 2012.

The data for stormwater outlets in the Douglas Creek area does not necessarily provide strong evidence to support the conclusion that these stormwater outlets are exceeding the numerical standards of the Contaminated Sites Regulation Schedule 9. We are not experts in evaluating such data, and the data still needs to be examined carefully by an expert. However, a cursory lay observation of the data does not appear to raise a compelling case. Assuming that the soil sediment at Douglas Creek’s stormwater outlets would qualify as ‘sensitive’ freshwater sediments (as defined in Schedule 9 as a site with sensitive aquatic habitat and for which sensitive sediment management objectives apply), only two samples from sample site 558 apparently exceed the allowable levels for zinc.<sup>50</sup> However, these samples are very outdated, having been collected in June 1999 and July 2000. Indeed, the most recent sample from sample site 558 in July 2003 did not have any compounds exceeding the numerical standards of Schedule 9. Again, you should have this data analyzed by experts to confirm this tentative observation.

Despite this assessment, an interesting report prepared by MacDonald Environmental Sciences Ltd. in May 2006<sup>51</sup> in part led to former Minister of Environment Barry Penner ordering the Capital Regional District to “submit an amendment to the CRD Core Area Liquid Waste Management Plan detailing a fixed schedule for the provision of sewage treatment” pursuant to s. 24(3)(a) of the *Environmental Management Act*.<sup>52</sup> The MacDonald report concluded that based upon the preliminary CRD data, the sewage outfalls at Macauley Point and Clover Point warranted designations as a contaminated site under the Contaminated Sites Regulation. This case study provides a great example of a situation in which a preliminary analysis of CRD sediment data resulted in a potential designation of a contaminated site which led to the provincial government to take action by ordering the CRD to amend its Core Area Liquid Waste Management Plan.

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<sup>50</sup> The detailed explanation of the exact area of the sampling sites can be found in Appendix B of the ‘Core Area 2007 Stormwater Quality Annual Report’ at <<http://www.crd.bc.ca/watersheds/monitoring.htm>>. Last accessed 21 October 2011.

<sup>51</sup> MacDonald Environmental Sciences Ltd., “An Evaluation of Sediment Quality Conditions in the Vicinity of Macauley Point and Clover Point Outfalls,” May 2006. Available online at <[http://www2.canada.com/victoriatimescolumnist/features/sewage/contaminated\\_sites\\_report.pdf](http://www2.canada.com/victoriatimescolumnist/features/sewage/contaminated_sites_report.pdf)> Last accessed 21 October 2011.

<sup>52</sup> Barry Penner, Minister of Environment, “Letter to Chair Alan Lowe and CRD Directors,” Reference Number 88918, 21 July 2006. Available online at <[http://www.wastewatermadeclar.ca/media/reference-library/letters/\\_ministerletter/minister\\_letter.pdf](http://www.wastewatermadeclar.ca/media/reference-library/letters/_ministerletter/minister_letter.pdf)> Last accessed 21 October 2011.

It may be best for FOMDPS to wait until the new CRD data from 2008-2011 becomes publicly available in Spring 2012 and have it properly analyzed by an expert before exploring this particular avenue.