

An Evaluation of the BC Ministry of Environment's Environmental Public Reporting Program and Recommendations for Improvement

ADMN 598 Report

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EXECUTIVE SUMMARY

The BC Ministry of Environment (MOE) plays a central role in enforcing environmental regulations designed to protect the integrity of the province's air, land, and water. While traditional regulatory instruments such as warnings, tickets, orders, and criminal prosecution remain essential parts of the ministry's compliance and enforcement toolkit, publicly available information on environmental violations is also being used with the intention of modifying behaviour to encourage compliance.

The B.C. Ministry of Environment has been engaged in its current form of publicly reporting of environmental regulation violators since 2006. The primary outlets for this reporting are the Quarterly Compliance and Enforcement Summary (QC&ES), a PDF document released every three months on the Ministry of Environment website, and the Environmental Violations Database (EVD), a searchable repository of all the information contained within the Quarterly Compliance and Enforcement Summary PDF summaries. The Environmental Violations Database was added to the program in 2011.

The public reporting program has two primary goals:

- 1) Increasing the transparency of the Ministry of Environment's enforcement activities; and
- 2) Using the public disclosure of violator names as a deterrent against future violations

The purpose of this report is to evaluate how successful staff members believe the public reporting program has been in achieving the aims stated above (particularly those related to deterrence) and to make recommendations for improvement. In addition, the evaluation gauges staff awareness of the reporting tools, as well as staff use of these tools.

Research Design

In addition to the literature review, the primary research methods that were used to gather data for this evaluation included an electronic staff survey (sent to two separate groups) and interviews with staff. This study employs a purposive sampling method with the intention of seeking out the opinions of those staff most likely to be directly engaged in compliance and enforcement activities.

Primary Research Method 1: Electronic Survey

The electronic survey portion of the evaluation is seeking a mix of quantitative and qualitative data from a broad cross-section of ministry staff members who are directly involved in compliance-related work to varying degrees. The survey asked staff questions related to staff awareness and use of the public reporting system, whether the system has increased transparency around ministry compliance and enforcement activities, and whether the system has a deterrent value. The same survey was sent out to two separate groups of Ministry Staff.

The first group was comprised of seventy staff in various areas of the ministry (but outside of the Conservation Officer Service), representing Parks, Water Stewardship, Ecosystems, the Environmental Protection Division, and Fish and Wildlife. A total of thirty-six responses were received (a response rate of 51%). A purposive sampling method was used to construct the invitation list for this group in

consultation with the client. Potential participants were chosen using the BC Public Service website's staff directory with the assistance of the client based on job description and an attempt was made to attain broad regional representation from around the province.

The second group consisted entirely of members of the BC Conservation Officer Service. An email inviting participants to take the survey was sent out to the entire staff email list of approximately 106 active-duty officers. A total of 28 responses were received (a response rate of 26%).

Primary Research Method 2: Staff Interviews

The staff interview portion of the evaluation was used to acquire a greater depth of qualitative data from a cross-section of supervisor and management-level staff who work directly in the area of compliance and enforcement. The interviews covered topics similar to those of the staff survey (staff awareness and use of the system, whether the system has increased the transparency of ministry activities, and the deterrent value of the system), but also sought greater detail on the overall value of public reporting, the interest in publicly reported information shown by external stakeholders, and possible improvements that can be made to the system in the future. Open-ended questions were used to allow respondents to answer questions with greater depth, while also allowing them to move the conversation into those areas where they had the most to contribute. An attempt was also made to achieve broad geographical representation from across the province. The staff interview portion of the research used a purposive sampling method to construct the invitation list.

Forty staff members were contacted with requests for interviews. A total of fourteen interviews were completed, representing participants from Environmental Protection, Ecosystems, the Conservation Officer Service, and BC Parks.

Recommendations

This section provides a summary of this report's recommendations for possible improvements to the public reporting system. It is divided into five main recommendation areas: raising awareness of the public reporting tools within the organization, raise public awareness of the public reporting tools, increasing the capabilities of the system for greater analysis capabilities, increase the scope of reporting, and recognizing good companies.

Recommendation 1: Raise awareness of the public reporting tools within the organization

Based on the results of the survey and interviews, it appears that staff awareness of the program would benefit from improvement. Several participants felt that increasing staff awareness of the public reporting tools and selling the fact that enforcement work is being done would be beneficial to the organization. The evaluator recommends the following actions for consideration:

- Email staff when Quarterly Summaries are released (to regional offices in particular). These notifying emails could also be used to inform staff about the search capabilities of the Environmental Violations Database specifically, for those who are not currently aware of them.
- Compile annual or quarterly reports that include compliance statistics and trends, such as comparisons between regions, actions taken under specific acts,

a worst offenders list, or the range of penalties actually being assigned by the courts.

Recommendation 2: Raise public awareness of the public reporting tools

The research contained within this report concludes that public awareness of environmental violation information is essential for the program to achieve its deterrence and transparency goals. There was considerable agreement among interview and survey participants that the public would be interested in this information and that wider publication and distribution could increase both the transparency value and the deterrent value of the public reporting tools. The evaluator recommends the following actions for consideration:

- Engage to a greater degree with the media and environmental non-governmental organizations. All of the research in this report suggests that these are primary means of maximizing both the deterrence and transparency potential of the public reporting system. Local governments, First Nations governments, business and investor groups, and interested community organizations might also benefit from having these tools brought to their attention.
- Improve use of social media platforms for the purpose of disseminating the information in the public reporting tools. This could include the use of facebook, twitter, RSS feeds, and email subscriptions sent out to interested parties. These distribution channels could be specific to the online public reporting program or the Compliance Policy and Planning Section could use feeds from other parts of the Ministry of Environment or other ministries as dissemination tools.
- Publish in the Hunting and Angling Synopsis (released every two years) or other applicable publications such as industry, environmental, or recreational publications.
- Post links to the website in other areas of government (the Conservation Officers Service website, for example).

Recommendation 3: Increase the capabilities of the system to include geographic display

The jurisdictional scan and the staff participants have raised the possibility of being able to do more with the existing data might make the system useful to a wider audience. The evaluator recommends the following action for consideration:

- Consider using a mapping interface, similar to that of the US EPA's ECHO system. Such a system could be used to locate facilities within communities and cross-reference this information with compliance histories.

Recommendation 4: Increase the scope of reporting

Participants in both the staff survey and interviews have suggested extending the scope of the current reporting system beyond what is currently reported. The evaluator recommends the following actions for consideration:

- Broaden the scope of the legislation covered by the public reporting system (include other areas of the natural resource sector, *the Land Act, the Mines Act*).
- Find ways to report warnings and notices of non-compliance (perhaps only general statistics).
- One participant has suggested that their area would like to tell their enforcement story on an annual basis (there could be an opportunity for others to do the same and have it combined with an existing Quarterly Report release, perhaps on an annual basis).
- Consider the possibility of maintaining a non-compliance list in some form. It could also use some means to simplify the information (as the Indonesian PROPER system did with colour coding) to establish different degrees of compliance statuses and make the information more accessible to the public. This information could also be made available to investors by advertising in trade publications.

Recommendation 5: Recognize good companies

Several staff mentioned the need to recognize the good players in any given industry both to provide a reputational incentive for good behaviour and to create industry leaders and role models for other businesses in their industries to emulate. The evaluator recommends the following actions for consideration:

- Establish a list of businesses in key industries with exemplary compliance records for publication on the Ministry of Environment website.
- Consider the possibility of waiving permit fees or other charges to companies with exemplary compliance records.
- Annual press releases listing companies in key sectors that have not had any compliance issues over the course of the year.

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INTRODUCTION

The BC Ministry of Environment (MOE) plays a central role in enforcing environmental regulations designed to protect the integrity of the province's air, land, and water. While traditional regulatory instruments such as warnings, tickets, orders, and criminal prosecution remain essential parts of the ministry's compliance and enforcement toolkit, publicly available information on environmental violations is also being used with the intention of modifying behaviour to encourage compliance.

The B.C. Ministry of Environment has been engaged in its current form of publicly reporting of environmental regulation violators since 2006. The primary outlets for this reporting are the Quarterly Compliance and Enforcement Summary (QC&ES), a PDF document released every three months on the MOE website, and the Environmental Violations Database (EVD), a searchable repository of all the information contained within the Quarterly Compliance and Enforcement Summary summaries. The Environmental Violations Database was added to the program in 2011.

The public reporting program has two primary goals:

- 3) Increasing the transparency of the Ministry of Environment's enforcement activities; and
- 4) Using the public disclosure of violator names as a deterrent against future violations

The purpose of this report is to evaluate how successful staff believe the public reporting program has been in achieving the aims stated above (primarily that of deterrence) and to make recommendations for improvement. In addition, the evaluation gauges staff awareness of the reporting tools, as well as staff use of these tools. The report documents the results of the evaluation process and provides recommendations for possible changes or improvements to the existing program.

This report is comprised of several chapters beginning with an overview of its scope and purpose. Following this, the literature review analyzes the theoretical foundations of the public reporting program, with attention being primarily paid to the deterrence aspect of the issue. Next, the jurisdictional scan describes similar public reporting programs in Canada, the United States, and Indonesia. This is followed by a brief chapter outlining the conceptual framework that forms the basis of the evaluation. The last sections of the report provide an overview of the survey and interview methodologies used to evaluate the MOE reporting program, the results of the study and, finally, discussion, recommendations, and a conclusion.

PURPOSE AND SCOPE

Purpose

This section outlines the purpose and scope of the process that will be used to evaluate the ministry's environmental public reporting system. This evaluation uses the opinions of staff to assess the effectiveness of the program in achieving its stated aims of improved transparency and using public reporting to deter actors from committing environmental violations. The report includes a brief review of the relevant literature and a jurisdictional scan, followed by a discussion of the primary research methodology, the results of the primary research, and recommendations for improving the functioning of the program.

The purpose of the primary research component was to:

- analyze ministry staff's awareness of the two reporting tools (the Quarterly Compliance and Enforcement Summary and the Environmental Violators Database)
- analyze ministry staff's opinions on the usefulness of these reporting tools to their work
- analyze ministry staff's opinions on the success of the reporting as a transparency mechanism; and
- analyze ministry staff's opinions on the effectiveness of the reporting mechanism as a deterrent against the breaking of environmental laws

Scope

- This report is intended to serve as a formative evaluation of the environmental public reporting tools. The evaluation examines how the program operates with the goal of providing feedback for improvement. This evaluation will not attempt to determine or quantify the outcomes achieved by the public reporting program.
- The ministry's public reporting system is comprised of two primary tools: the Quarterly Compliance and Enforcement Summary – which is a static PDF report; and the Environmental Violators Database – which is a searchable database containing all of the information in all past Quarterly Compliance and Enforcement Summaries, allowing the user to draw out only the information they require. This evaluation will seek to determine if changes are required for any part of the current reporting components to make them more well-known to staff or the public, easier to use, or more effective as a compliance tool.
- This evaluation is aimed at obtaining feedback from staff about how the ministry's public reporting is currently being used and how it could be made more effective. As such, external stakeholders have not been consulted for this evaluation.

Having now considered the scope and purpose of the evaluation, the next chapter of this report will provide an overview of the relevant literature on the topic of public reporting as a compliance mechanism, the primary subject of this evaluation.

LITERATURE REVIEW

This chapter of the report provides a summary of the existing literature surrounding environmental public reporting and information disclosure practices. Although the primary research component of this report will also address other topics of interest concerning the operations of the BC Ministry of Environment's environmental public reporting program, this section is primarily focused on the literature related to the primary research question: does this type of public reporting system serve as an effective deterrent against the violation of environmental regulations? While substantive information is currently available on this area, gaps in the literature do exist and will be discussed in the context of the following sections.

This review is broken into three sections. The first will focus primarily on two theoretical frameworks that describe how a system of this type might be expected to function and the elements that would contribute to its success or failure. The second section discusses the available theory and evidence on how these systems function in theory and in practice. The third section of this review will provide a brief jurisdictional scan of similar programs in Canada and abroad, in both the past and the present.

Theoretical Framework

It is helpful to begin this section with a basic discussion of how a program of the type examined in this report is intended to function as a deterrent to law breaking. In this section, two theoretical models are put forward to explain how a public reporting program of this type is intended to function and what elements might explain its observed level of success or failure. Pawson's model of naming and shaming is considered first, followed Beierle's Cost-Benefit Framework.

Pawson's Framework for Successful Naming and Shaming Policies

Pawson (2002) provides a useful model for how a program of this kind might serve as a deterrent to violations. The framework begins with the intended sequence of events that is supposed to lead to a shift in the violator's behavior. This sequence takes place over four stages: *identification, naming, public sanction, and recipient response* (p. 215). Essentially, the offender is identified by the responsible authorities, the public is informed of the offender's identity and crime by some means, the community provides a response to the offender's actions, and, finally, the community's response generates some change in the offender's behavior.

The deterrent effect is intended to stem from the social (and potentially economic) consequences of violation. Once the violator (individual or organization) has been named, it is presumed that social or economic pressure can be used to bring the offender back into compliance. However, Pawson also points out four possible ways in which the program might fail to achieve its aims. These include: *culprit misidentification, dissemination dissimulation, sanction misapplication, and unintended outcome*. The following paragraphs will discuss each of these possible failures in greater detail.

Culprit misidentification refers to the possibility of inaccurate information or a situation "in which the performance or behavior in question is classified inappropriately, with the measure being over- or under-discriminating, lacking in 'risk' or 'value-added adjustments', or failing through inadequate monitoring or registration" (pp. 15-16). This point is very applicable to a technical area of law such as environmental regulation, particularly when the public reporting mechanism provides a highly summarized version of events to the public. It also speaks to the importance of accuracy and the right to judicial review or some other appeal mechanism to challenge an untrue or inaccurate accusation.

Dissemination dissimulation refers to a situation in which the means of transferring the information into the public consciousness is not well calibrated, or as Pawson puts it, “in which the disclosure is poorly managed by sparse or excessive publicity, over-restricted or over-stretched targeting, over-complexity or over-simplification in presentation, or wrangles about the meaning of the information” (p. 16) Again, this is applicable to an area such as environmental regulation because the instrument being used to transmit information to the public must be examined within the context of the desired outcomes. Inadequate publicity may increase incentives to violate the regulations, while overly vigorous publicity may lead to excessive social pressure for relatively minor offences.

Sanction misapplication and *unintended outcome* refer to situations in which the public and/or the offender do not react to the public reporting mechanism in ways intended by the authorities. *Sanction misapplication* describes a situation in which “the the wider public apply measures that go beyond ‘shaming’ – such as humiliation, deprivation, vigilantism, defamation, banishment, etc. or fall short of shaming – such as disapproval, stoicism, apathy, sympathy, collusion” (p.16). In this case, the authorities providing the information are relying on the public to react to the disclosure by putting the desired amount and type of social pressure on the offender to alter their behavior. However, if the public does not react as expected, then the offender will not receive the appropriate encouragement or pressure to make the desired change. *Unintended outcome* refers specifically to the offender not reacting to public pressure as desired by the authority disseminating the information. A situation, as Pawson puts it, “in which the individual or institution under sanction reacts to shaming’ by accepting the label and amplifying deviant behavior, or by ignoring/rejecting the label and continuing existing behavior, or reinterpreting the label and adopting a perverse modification to behavior” (p.16). This point may be particularly pertinent when discussing the differences between individual and business reactions to being named as an offender in a reporting publication. This is discussed further in the section of this literature review that deals with the theory of deterring individuals.

Finally, Pawson also discusses the types of publicity that might be employed by a public reporting or information disclosure program. He lists these as *active publicity*, *limited disclosure*, and *passive information*. He defines *active publicity* as “general public notified purposefully through any available means”, *limited disclosure* as “information passed directly to a limited number of third party organizations”, and *passive information* as “concerned citizens may obtain information for themselves” (p. 17). He suggests that these methods of disseminating information can have a considerable effect on how a program is designed and what might be expected of it in terms of outcomes. The program this report is meant to evaluate, for instance, would fall under the category of *passive information*, as the information is available on the Ministry of Environment website for public use but is not actively passed on to other organizations or individuals.

Pawson’s framework provides a helpful understanding of how a public information disclosure system, such as the BC Ministry of Environment’s environmental public reporting system, might be expected to act as a deterrent against violation. The next section discusses another theoretical framework that is focused on how to assess the value of the public reporting of law breaking based on the expected costs and benefits.

Beierle’s Cost-Benefit Framework

One way of assessing the value of a policy is to consider the benefits bestowed on society in contrast with the costs imposed. Beierle (2003) has created such a framework in which he defines and describes three benefits and three costs which he sees as determining factors in assessing a public reporting system. These are outlined below.

Beierle describes the three benefits of information disclosure program as being *normative, substantive, and instrumental*. The *normative* benefit refers to the rights of communities to be aware of the risks that are present and may potentially affect them in a negative way. In Beierle's opinion, this question is relatively uncontroversial. As he puts it, "in the political debates about information dissemination policies, there is relative consensus on all sides that local communities have a right to know about the risks they face" (p. 15).

The second benefit he discusses, the *substantive* benefit, refers to the idea that a greater volume of accurate information should lead to greater opportunities for all parties involved to understand themselves and each other better, presumably making better decisions as a result.

The third benefit Beierle mentions is the *instrumental* benefit. This rationale is perhaps the most important in the discussion of deterrence. This refers to the expectation that offending parties will alter their behavior (presumably for the better) in response to the presence of public information about their activities.

He contrasts these benefits with three costs associated with information disclosure programs. These include the costs of *information collection and reporting, unpredictability and loss of control, and unintended use of information* (Beierle, 2003).

The cost of *information collection and reporting* consists primarily of the monetary and other resource expenditures that are required to compile the needed information and deliver it to the public in a usable form. This cost would apply to most programs of the type described in this report, and it is a quantifiable cost metric for consideration in decision-making.

The second cost Beierle discusses is that of *unpredictability and loss of control*. This includes the possibility that the public will misunderstand the information being presented or that parties with an interest in the outcome of a (presumably political) conflict will try to manipulate that information to their own advantage. However, in his view, this cost is not a major factor in reality. He notes that, "although fragmentary information, risk perception issues, and manipulation of information by intermediaries create ample room for public over-reaction to risk information, there is actually little evidence that it is a widespread problem in practice" (p. 19).

The third and final cost Beierle discussed is that of *unintended use of information*. This point is not particularly relevant to the discussion in this literature review, as he is specifically discussing the possibilities of publicly available information being used for the purposes of corporate espionage and terrorism. Since it is unlikely that the information provided by the program that is the subject of this evaluation would provide such opportunities, this cost is not a major factor in this study.

Theoretical Framework Conclusion

This section has discussed Pawson's and Beierle's different conceptions of how information disclosure programs like the one evaluated in this report might operate or be assessed in theory. The next section blends additional theoretical perspectives with available evidence to provide a clearer picture of the effects of a public reporting system.

Additional Theory and Evidence

This section examines separately the effects of a public reporting system on businesses and individuals. These are two distinctly different types of entities operating with different types of incentives. As such, it is reasonable to separately examine their expected behavior in response to having violations publicly reported. The first part of this section will deal with the behavior of business, while the second will discuss the literature surrounding individuals.

Publicly Reporting the Violations of Business

Several factors seem to stand out in the discussion of how business will respond to the public disclosure of environmental violations information.

Several conditions put forward by Pawson (2002) could be seen as specifically effective if used to transmit information to the public about the environmental violations record of a business. These include the possibility that the “the shaming mechanism could be dovetailed with ‘market sanctions’” and the additional attention a case might receive if “the disclosure carried intense ‘media interest’” (p. 227). These conditions could reasonably be expected to add weight to both the public’s reaction to environmental violations and to the response on the part of businesses to rectify their mistakes and, in so doing, possibly repair their relationship with the public. This line of thought is consistent with a 2006 report, submitted to the British Government, which made recommendations on the design of modern regulatory systems. It stated that, “Reputation is an important asset to many businesses. When thinking about how to motivate firms to change their behavior, reputational sanctions can have more of an impact than even the largest financial penalties” (Macrory, 2006, p. 83).

Gunningham (2007) appears to agree with this intuition, saying that:

informational regulation is targeted almost exclusively at large enterprises, and in particular at public companies (which are vulnerable to share price and investor perceptions) and those who are reputation sensitive, because it is essentially these types of enterprise which are most capable of being rewarded or punished by consumers, investors, communities, financial institutions and insurers on the basis of their environmental performance. (p. 209)

Gunningham then goes on to suggest that, “such a strategy becomes even more effective as companies recognize the importance of protecting their ‘social license’ and the need to improve their environmental performance in order to do so” (p.209). This concept of social license relates directly to the issue of whether publicly reporting of environmental violators can help to serve as an effective deterrent mechanism.

Gunningham, Kagan, and Thornton (2002) have suggested that, depending on the sector, the concept of social license can have a powerful effect on an industry’s desire to be accepted by the community in which it operates. Gunningham, Kagan, and Thornton chose to study the pulp and paper mill industry in the United States, Canada, Australia, and New Zealand to determine whether or not the concept of social license played a significant role in how the mills in question conducted their operations. They concluded that social license affected the mill operations in several ways. First, community members often became vigilant overseers of the mills’ regulatory license requirements, pressuring companies to live up to their environmental obligations “and sometimes to invest in beyond compliance measures of the ‘margin of safety’ variety” (p.39). In this case, ‘margin of safety’ refers to a desire to go above and

beyond the regulatory requirements in order to reduce the chances of a violation occurring by accident and being discovered. Second, interested members of the community worked to make environmental permit conditions stricter, both at the individual site level and at higher regulatory levels. And third,

the social license was the primary source of “beyond compliance” measures of the “good citizenship” variety, that is, investments that could not be justified in traditional “return on investment” financial criteria or in terms of regulatory requirements (current or pending). These measures were instead justified in terms of their reputational consequences. (Gunningham et al., 2002, p. 39)

There is additional evidence that is useful for determining whether or not reputational consequences can have a meaningful effect on individuals and companies. The State of Oregon Department of Environmental Quality conducted a survey intended to gauge the value of deterrence based enforcement tools. According to the survey report, “two surveys were executed to assess the deterrent effect of inspections and enforcement as administered by Oregon’s Department of Environmental Quality (DEQ). One survey was given to 300 randomly-selected Oregon residents throughout the state. A second survey was given to 450 Oregon companies having permits or registrations with DEQ” (SODEQ, n.d., p. 1). This report (from a US state that is arguably similar to British Columbia in some respects) reached a conclusion that would seem to support what has been suggested above. It states that, “companies tended to be less concerned with the monetary penalty than other possible effects of enforcement, and expressed most concern about forced shut-downs, environmental damage, criminal prosecution, corporate reputation, community pressure and customer pressure. Those concerns are well placed; 65% of Oregon residents say they would stop or reduce buying from a company that was taking action that is bad for the environment” (p. 2).

However, this report did not reach the same conclusions about small companies that it did regarding large companies, saying that,

In particular, small companies –especially very small companies – have very different beliefs and concerns. Small companies are less likely to work to assure compliance, less likely to belong to organizations that promote environmental compliance, less likely to have made recent environmental changes, and less likely to request technical assistance. Although small companies say the pressure of monetary penalties has a tremendous impact on them, they are less likely to be aware of DEQ compliance and enforcement efforts. For this reason, current enforcement efforts to create deterrence are likely less effective with small companies. (SODEQ, n.d., p. 2)

This concludes the section dealing with business responses to the public release of environmental violation information. On balance, the literature does appear to support the conclusion that some businesses are reputation sensitive and will take steps to remain in compliance when their reputations are threatened. However, the literature also suggests that businesses will not all react the same way to the possibility of environmental public reporting. For example, small businesses may react to a noticeably different set of incentives than large businesses.

The next section looks briefly at what is currently understood about how individual people might be expected to react to having their illegal actions reported to the public.

Publicly Reporting the Violations of Individuals

While there is limited information available that would allow for a succinct answer to the question of how individuals are likely to respond to public disclosure of their law-breaking activities, researchers have advanced some theory on the issue.

Pawson (2002), for instance, puts forward several specific conditions that he believes can have a meaningful impact on the outcomes of these types of disclosure programs. One of these in particular appears to be applicable to the case of individuals who are publicly named in this way: the case in which “the shamed party was an ‘aspirational’ insider” (p. 226) Pawson’s mention of the shamed party being an ‘aspirational’ insider relates directly to the use of reputational sanctions as a deterrent. Specifically, it points to the question of whether an individual cares about the consequences that come with reputational sanction from a regulator or not, or as Pawson puts it, “an ‘aspirational member’ who does what it can to preserve a reputation under threat” or “an ‘antagonistic non-member’, who seeks repute only outside ‘the system’” (p. 219). While some of those targeted by reputational sanction may be strongly affected by it, others may only be brought into compliance by other types of enforcement measures (such as fines, probation, or jail time.). This does suggest that many individuals might not be affected by reputational sanctions as desired. In fact, Braithwaite (2002) argues that in the absence of a community that has an interest in reintegrating violators, the stigmatization that accompanies reputational sanctions might isolate them further and even encourage further anti-social behavior (p. 274). This would be an example of what Pawson (2002) refers to as an *unintended outcome*.

While the absence of an abundance of useful theory or data pertaining to individual reactions to this kind of program represents a gap in the literature, it might be reasonable to conclude that individuals cannot be counted on to react predictably to reputational sanctions in the same way that businesses (large businesses in particular) might.

The next section of the literature provides a short discussion of some of the public reporting programs operating in Canada and internationally.

Jurisdictional Scan

This section includes a brief overview of several existing public information disclosure programs in Canada and abroad. Where possible the focus is on innovations that have been credited with improving the success of the programs.

Canadian Jurisdictions

Ontario

The Ontario Ministry of Environment website posts annual Environmental Compliance Regional Reports and annual reports on Environmental Compliance trends. As stated on the Ontario Ministry of Environment website: “Environmental Compliance Reports provide information about contaminant discharges to water and emissions to air that exceed limits found in legislation, environmental approvals, orders and/or policies/guidelines, including the name of the violator” (Ontario Ministry of Environment, 2013).

Quebec

The Environment Quebec website maintains a list of press releases resulting from environmental violations. Upon conviction and a fine of over two thousand dollars, a press release is issued. These press releases can be searched by administrative region (Government of Quebec, 2002).

Alberta

The Alberta Compliance Enforcement website posts a list of Enforcement Orders/Environmental Protection Orders/Water Management Orders since January 1, 2009 and produces a Summary of Enforcement Actions Quarterly Report. The site also maintains a list of Prosecutions under the Environmental Protection and Enhancement Act and Water (Government of Alberta, 2013).

As the Alberta Government's Compliance and Media Policy states, "Information on charges includes the name of the individual, company or municipality charged; the date the charges were laid and the date of the alleged offence; a brief description on the alleged, the specific charges (including the section of the legislation) and the date and location of the next scheduled court appearance" (Government of Alberta, 2013).

Government of Canada

The Government of Canada has both an Enforcement Notifications webpage and an Environmental Offenders Registry. The Enforcement Notification posts press information detailing all federal environment-related convictions in Canada (Environment Canada, 2013). In addition, the Government of Canada website states that:

The Environmental Offenders Registry contains information on convictions of corporations obtained under certain federal environmental laws. The registry contains convictions obtained for offences committed since June 18, 2009 - when the Environmental Enforcement Act received Royal Assent... this tool allows the media and the public to search for corporate convictions using the name of the corporation, its home province, the province where the offence occurred, or the legislation under which the conviction was obtained. Keywords can also be used to search the registry. (Government of Canada, 2011) (Environment Canada, 2011)

The US Environmental Protection Agency

The US EPA has two programs that are briefly be discussed below: The Toxic Release Inventory Program and the Enforcement and Compliance History Online (ECHO).

The Toxic Release Inventory Program

In 1986, the US Congress created the Toxic Release Inventory (TRI) during the implementation of the Environmental Protection and Community Right to Know Act (EPCRA) (Tietenberg, 1998). As Tietenberg goes on to describe,

It is designed to provide information to the public on releases of toxic substances into the environment. Most of the substances involved are not themselves subject to release standards. TRI states that firms who use 10,000 pounds or more of a listed chemical in a

given calendar year, or firms who *import, process or manufacture* 25,000 pounds or more of a listed chemical must file a report on each of the chemicals in existence within the plant if they also have ten or more full time employees. Reporting of emissions or use of listed chemicals is accomplished annually. The reports include such information as the name of the company, name of the parent company if it exists, toxic release and frequency of release as well as the medium in which the chemical is released. Firms must also report emissions to their state and local authorities as well as fire and emergency officials. The information is available to the public. According to official EPA data total releases are down by over 44%. (Tietenberg, 1998, p. 593)

This program appears to be one of the earliest in the North American experience to demonstrate the sensitivity of individual businesses to public knowledge of their activities. It has been widely credited in the literature with using publically available information to change the behavior of the businesses listed in the inventory.

The ECHO Program: Enforcement and Compliance History Online (ECHO)

ECHO is a visually accessible, map-based online database provided to the public by the United States Environmental Protection Agency. The US Congressional Research Service describes the EPA's ECHO Program as:

an interactive website that allows users to query permit, inspection, violation, enforcement action, informal enforcement action, and penalty information for individual or multiple facilities. Initial queries return a list of relevant facilities, each linked to a Detailed Facility Report, indicating whether a facility has been inspected/evaluated, occurrence and nature of violations (noncompliance), nature of enforcement actions (including penalties) that have been taken contextual information about the demographics surrounding the facility. (Esworthy, 2012, p. 41)

The American EPA's Echo system operates on the same concept as the public reporting system in BC, but has substantially greater capabilities when it comes to mapping facilities and providing detailed histories of facilities' compliance records for a five year period. This program may be of interest as a source of ideas for improving the BC model because of its interactive mapping interface and its extensive search features.

Indonesia's PROPER Program

The PROPER program was a notably successful environmental information disclosure system used in Indonesia in the mid-1990s. The US EPA describes it in the following terms:

In Indonesia, the Environmental Impact Management Agency (BAPEDAL) created the Program for Pollution Control, Evaluation, and Rating (PROPER) to rate factories on their compliance with national wastewater discharge standards; the ratings are then disclosed to the public through the media. The program operated for three years from 1995 until the financial crisis of 1998 but is now being revived. The first of these surveys in June 1995 rated 187 factories. Five color categories were used to rate environmental performance: gold for firms that use best technology and reduce pollution to 5% of the national standard, green for firms that reduce pollution to 50% of national standards,

blue for compliance with national standards, red for firms that fail to meet national standards, and black for those without pollution controls.

Formal as well as informal sanctions applied, depending upon the color class. For example, the Indonesian stock exchange would not list securities of firms that fall short of the blue classification. Cultural factors such as shame avoidance and citizen lawsuits also play a role in motivating polluters. Evidence suggests that this system influenced behavior. In the first survey in June 1995, 35.3 percent of the 187 factories were in compliance with the government's water pollution regulations. Two years later, 49.2 percent of the factories were in compliance (US EPA, 2004, p. 45)

While this program is limited to compliance in the area of wastewater discharge standards, it is one of the few international information disclosure programs discussed in the literature, and appears to have a demonstrated history of achieving results based on reputational sanction. One reason for its success is likely to be the use of color coded categories to express information that might otherwise be too complex to capture the public's attention. While a great deal of detail may be lost in the simplification process, the resulting information may be more useful as a deterrent because the public is more able to make decisions based on it.

The next section provides a summary of themes examined in the literature review chapter.

Summary

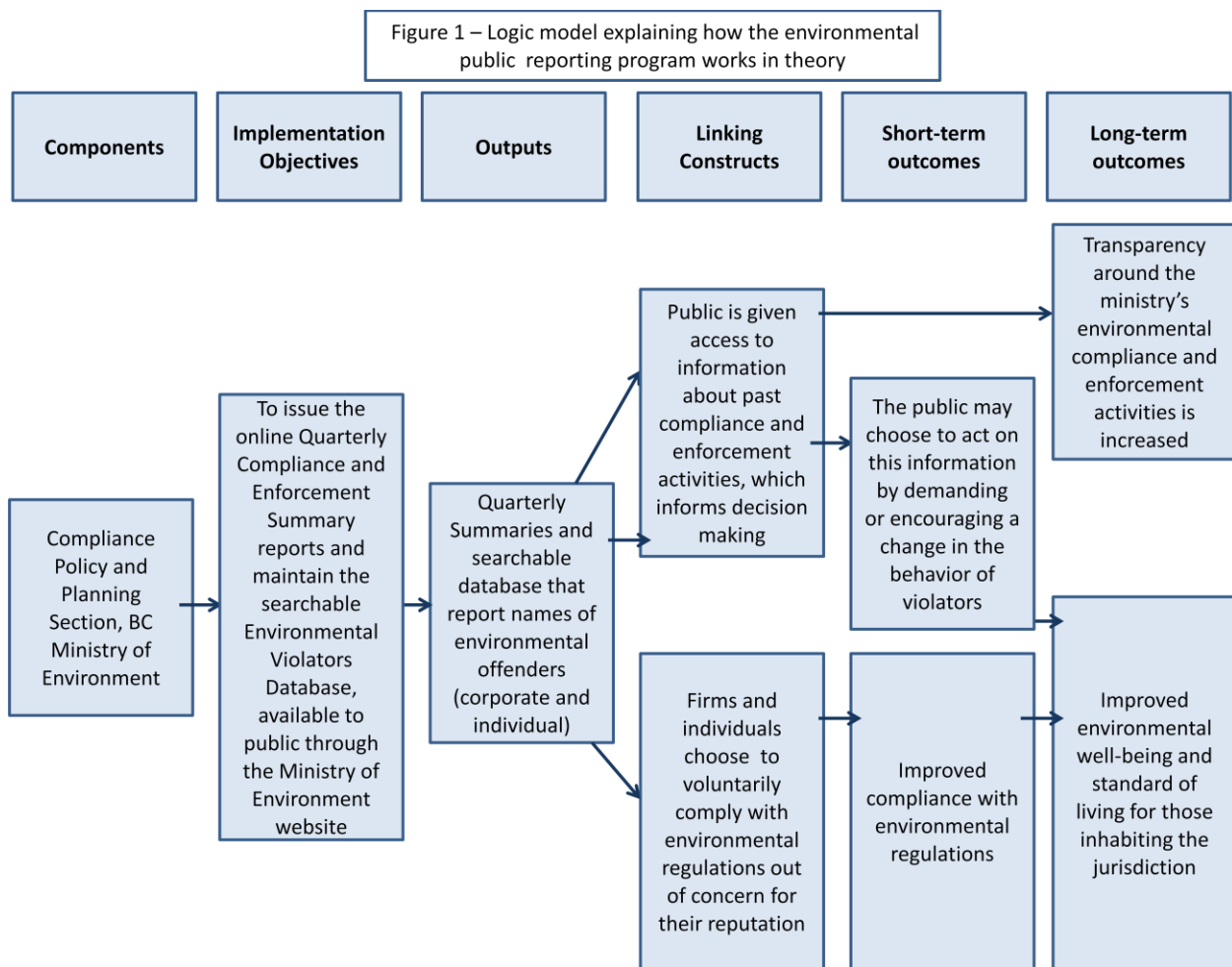
This chapter of the evaluation has examined the literature related to the deterrent effects of publicly releasing information on law-breaking behaviors. The first section of the chapter provided an overview of two theoretical frameworks that describe how a system of this kind might reasonably be expected to function in theory. The second section examined how business and individuals might be expected to respond to the public reporting of their illegal activities. And, finally, the last section discusses several examples of public reporting systems in other jurisdictions. Given the available literature, it seems reasonable to conclude that such a system can perform the desired deterrent function with regard to specific populations under certain circumstances.

The next chapter discusses the conceptual framework that will be used as the basis for conducting this evaluation.

CONCEPTUAL FRAMEWORK

Having considered some of the lessons learned from the relevant literature, this chapter briefly discusses the application of this material to the development of a conceptual framework used to design the evaluation.

The primary research question of the evaluation asked whether or not the Ministry of Environment’s environmental public reporting program is having the effect of deterring individuals and organizations (business in particular) from violating environmental laws. The secondary question asked whether the public reporting tools have improved transparency around the ministry’s compliance and enforcement activities. The logic model below (Figure 1) describes graphically how the program is supposed to accomplish these goals.



The process begins when a staff member at the ministry’s Compliance Policy and Planning Section compiles the quarterly list of resolved compliance and enforcement actions carried out by the ministry, known as the Quarterly Compliance and Enforcement Summary. The Summary names the violators (business or individual) who caused the offenses listed. Along with the Quarterly Summaries, the

ministry website also hosts the Environmental Violators Database, which allows for searches of all of the information contained in past issues of the Quarterly Summaries, including individual and business names. It is possible that the public having access to the names of violators and the nature of the violations in which they were involved might have a deterring effect on those who would commit violations in the first place. This is because businesses and individuals might be expected to value their reputation enough to avoid the attention that might come with being known in the community as an environmental regulation violator. It is also believed that publishing this information online for the public to see increases transparency around the ministry's compliance and enforcement activities. The goal of this chapter is to develop a testable framework for how the public reporting program is supposed to work.

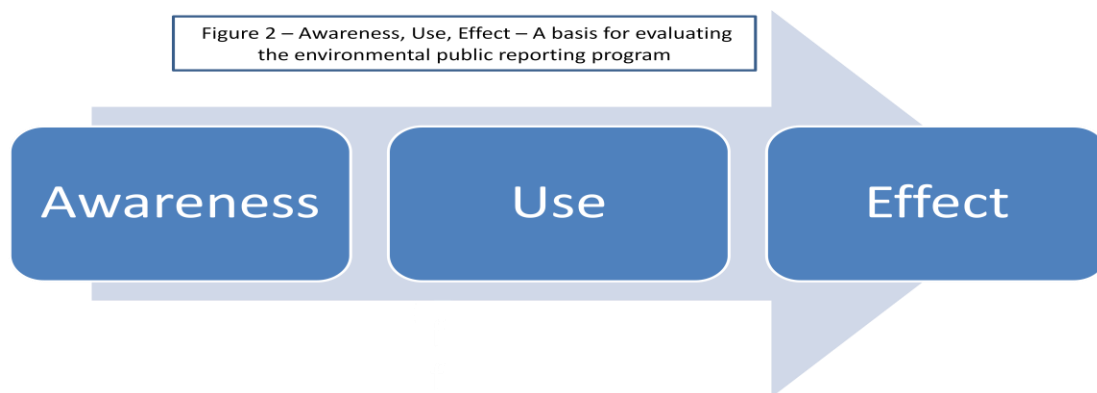
Having now considered the logic behind the public reporting system's achievement of its intended goals, the next section discusses the core elements that determine the success or failure of a system of this kind.

Awareness, Use, Effect

Based partly on the models discussed in the first section of the literature review, the conceptual framework used to evaluate the public reporting program is based on the following questions:

- Who is aware of the environmental public reporting program?
- How is the publicly reported information being used?
- What effect is this information having?

The answers to these questions should provide a basis for determining whether the program is succeeding in its stated aims of deterring potential violators and increasing transparency around the ministry's compliance and enforcement actions. How each of these questions will be used in the evaluation is discussed in greater detail below.



Awareness

The question of awareness will deal with both staff and public awareness. Staff awareness will be the first point to be established. As the primary data for the evaluation is derived from interview and survey responses with ministry staff, it is important to assess staff awareness of the reporting tools in order to determine the value of staff opinions on the matter. The opinions of staff members will be of limited value if staff members prove to be largely unaware of the program's existence.

Public awareness is also a primary point of concern in evaluating this program. This is because both the goals of deterrence and transparency require the public to be aware of the publicly reported information and take an interest in it. One point to consider here is that there are multiple vectors by which this information can reach the public's attention. The most obvious is that individual members of the public will be motivated to go to the ministry's website in search of this information on their own. But another possibility is that an intermediary, such as a media agency or environmental non-governmental organization, will take and deliver the information to an interested public who will then decide how to use it, which is the subject of the next section.

Use

The question of how this information is used by those who are aware of it is being asked in relation to both staff and the public. Staff members are being asked whether they use the public reporting tools and what they use it for, whether to conduct searches for violator names or for any other purpose.

The next question would be that of public use of the program. The question of public use goes to the core questions of the evaluation, particularly the question of deterrence. If the public is found to be aware of the public reporting program, then the next question is what do they use it for? Again, the public in question could refer to individuals, interested organizations (such as NGOs), or organizations that specialize in finding information and transmitting it to an interested public (such as media outlets).

Effect

The final question in this evaluation is that of effect. If the public is aware of this information and if they do use it in some way, then what is the effect? Specifically, in the case of the deterrence question, will potential environmental violators obey the law rather than have their name published in a list of environmental regulation violators? Will they alter their behavior in order to protect their reputation from damage?

The other question of effect is that of transparency. However, this question seems to move from *awareness* directly to *effect*: is the public aware of the environmental public reporting system and, if so, does this on its own constitute an improvement in the transparency of the ministry's environmental compliance and enforcement activities?

Finally, there is a question of possible unintended effects on how staff members deal with compliance and enforcement issues caused by public reporting. Does the possibility of a greater level of public scrutiny affect their performance of their duties?

Summary

This chapter has provided an overview of the conceptual framework used to conduct the evaluation. The framework is primarily based on establishing whether staff or the public are aware of the public reporting tools, whether staff or the public are using the reporting tools, and whether the reporting tools are having the effect of deterring potential violators or improving transparency around the ministry's compliance and reporting activities.

The next chapter of this report outlines the primary research methodology used to conduct the evaluation.

PRIMARY RESEARCH METHODOLOGY

This chapter reports the methodologies employed in collecting the primary data used to evaluate the BC Ministry of Environment’s environmental public reporting program and develops recommendations for improvement.

Research Design and Sampling Method

The primary research methods used to gather data for this evaluation included two electronic staff surveys and fourteen interviews with staff. This study primarily employed a purposive sampling method with the intention of seeking out the opinions of those staff most likely to be engaged in, and therefore knowledgeable about, compliance and enforcement activities. This non-random sampling design was deemed to be the most appropriate because of the type of data being sought. According to Luton (2010), “In purposive sampling, a researcher selects interviewees in order to obtain specific perspectives. Therefore, you would not want to obtain a random sample, the preferred way of sampling in statistical research” (p. 39). Further details on each data collection method are discussed in the next sections.

Primary Research Method 1: Electronic Surveys

The electronic survey portion of the evaluation asked respondents to provide a mix of quantitative and qualitative data (in both multiple choice and text format). Respondents consisted of a broad cross-section of ministry staff members who are directly involved in compliance-related work to varying degrees. The survey asked staff questions related to staff awareness and use of the public reporting system, whether the system has increased transparency around ministry compliance and enforcement activities, and whether the system has a deterrent value.

The survey was conducted using the Canadian-based online survey platform Fluid Surveys and the survey instrument was pre-tested informally by several Ministry of Environment staff to assess the clarity of the questions and the completeness of the responses from the pre-test group.

The survey was then sent out to two separate groups of Ministry Staff along with an invitation to participate in the study.

The first group was comprised of 70 staff in various areas of the ministry (outside of the Conservation Officer Service), representing Parks, Water Stewardship, Ecosystems, Environmental Protection, and Fish and Wildlife. A total of 36 responses were received (a response rate of 51%). A purposive sampling method was used to construct the invitation list for this group. Potential participants were chosen from the BC Public Service directory website with the assistance of the client based on job description. An effort was made to attain broad organizational and regional representation of compliance and enforcement ministry staff from around the province. The numbers of staff contacted by organizational area are displayed in Table 1.

Table 1: Number of staff contacted for general compliance and enforcement staff survey (by program area)

Organizational Area	Number of Staff Contacted
Parks	10
Water Stewardship	12
Ecosystems	14
Environmental Protection Division	18
Fish and Wildlife	16
Total	70

It is not possible to know the organizational or geographical characteristics of the respondents as no demographic data were taken from the electronic surveys. This was partly due to a desire to protect the anonymity of respondents and partly because the version of the web-based survey platform used limited the number of questions that could be asked to twenty.

The second group surveyed consisted entirely of members of the BC Conservation Officer Service. An email inviting participants to take the survey was sent out to the entire staff email list of approximately 106 active-duty officers. A total of 28 responses were received (a response rate of 26%). This group was surveyed separately with the intention of gaining more of a front-line picture of the effects of the public reporting program than was expected from program area staff compliance and enforcement staff and to see if significant differences between the two perspectives presented themselves.

The next section describes the methodology behind the staff interview portion of the primary data collection.

Primary Research Method 2: Staff Interviews

The staff interview portion of the evaluation sought a greater depth of qualitative data from a cross-section of supervisor and management-level staff who work directly in the area of compliance and enforcement. The interviews covered topics similar to those of the staff survey (staff awareness and use of the system, whether the system has increased the transparency of ministry activities, and the deterrent value of the system), but also sought greater detail on the overall value of public reporting, the interest in publicly reported information shown by external stakeholders, and possible improvements that could be made to the system in the future. Open-ended questions were used to allow respondents to answer in greater depth, while also allowing them to move the conversation into those areas where they had the most to contribute. An attempt was also made to achieve broad geographical representation from across the province. The staff interview portion of the research used a purposive sampling method to construct the invitation list with the client's assistance. Once again, the BC Public Service online directory was used to create the invitation list.

Forty staff members were contacted with requests for interviews. A total of fourteen interviews were completed, representing participants from Environmental Protection, Ecosystems, the Conservation Officer Service, and BC Parks. A breakdown of the number of staff interviewed by program area can be found in Table 2. While the Environmental Protection Division is heavily represented in this sample, the staff members interviewed represented diverse occupations and were located in many areas of the province. It is also useful that representation from both program staff and the Conservation Officer Service was achieved, providing both program and front-line enforcement perspectives to the evaluation.

Table 2: Number of staff interviewed by program area

Organizational Unit	Number of Staff Interviewed
BC Parks	1
Ecosystems	1
Environmental Protection	9
Conservation Officer Service	3
Total	14

Interview data were collected by the researcher in the form of hand written notes that performed the function of a transcript. Accuracy was ensured by the researcher frequently reading the participants' words back to them in an effort to confirm accuracy and elicit further details or clarifications. Interviews were conducted both over the phone and in person, with the majority being conducted over the phone as the majority of the participants were located outside Victoria (where the researcher was based). Interviews generally lasted between 30 and 60 minutes.

Instrument Design

The survey instrument (Appendix G) was designed based on the conceptual framework discussed in the previous chapter. The questions used to guide the interviews were essentially identical to those used in the online survey. It included questions that covered the following areas:

- Staff Awareness of the Public Reporting Tools
- Staff Use of the Public Reporting Tools
- The Transparency Value of the Public Reporting System
- The Deterrence Value of the Public Reporting System
- Increased Scrutiny Resulting from Online Reporting

Due to the question limit imposed by web survey platform, a limited number of topics could be covered directly by the survey. While public awareness and use of the reporting tools is a major component, it was anticipated that data on these points would present itself in the form of text comments to other questions and in the form of interview data.

Ethical Procedures

These data collection methods have received the approval of the University of Victoria Human Research Ethics Board. Those chosen to be invited to join the survey and interview groups were contacted with an introductory email and an attached consent form that laid out the nature of the project and what was being asked of participants. All participants were competent adult staff employed in a variety of positions within the BC Ministry of Environment or the BC Ministry of Forests, Lands, and Natural Resource Operations. Participants were informed that the researcher was both a graduate student and a co-op student at the Ministry of Environment at the time the primary research was collected. Participants were informed that they were free to decline to participate, that they could withdraw from the study at any time without providing an explanation.

Survey participants were asked to read the provided letter of implied consent survey (found in Appendix D of this report) form thoroughly and proceed by clicking on the attached link to the electronic survey if they wished to participate. Those who chose to click on the link were assumed to have given implied

consent as described in the information letter sent out with the link to the. The evaluator had no two-way interaction with survey participants and has no way of knowing who did or did not choose to participate in the surveys.

Interview participants were also contacted with an introductory email with a consent form attached (found in Appendix C). They were asked to read the form in detail before deciding whether or not to participate. Those choosing to participate were asked to sign, date, and scan the consent form before returning it to the evaluator. However, because a number of the interview participants were working in regions and conditions that made this process inconvenient, some participants chose the option to give verbal consent over the phone. In these cases, consent was noted with the date, the time, and the evaluator's signature.

Limitations

This evaluation methodology has two notable limitations which should be discussed at this time. First, the purposive sampling method used to construct the survey and interview groups makes it impossible to generalize these results to a larger body of ministry staff. However, as this formative evaluation is primarily intended to seek out information that can be used in the construction of recommendations for improving the program, the ability to generalize the data to a larger population is not a goal of this study.

This evaluation is also limited by the fact that stakeholders outside the BC Public Service were not consulted as a part of it. This decision was made primarily due to time and resource limitations.

Conclusion

This chapter has discussed the primary data collection methods used to elicit the survey and interview data that serves as the basis for the recommendations outlined in the final section of this report. These methods include an electronic survey and interviews with BC Public Service staff engaged in environmental compliance and enforcement activities. These methods primarily used a purposive sampling method, which is intended to provide the benefit of specific perspectives rather than a random sample that can be generalized to a population.

The next chapter discusses the findings of the surveys and interviews.

FINDINGS

This chapter presents the findings of the staff survey and staff interviews. The sections within this chapter present the findings of the primary data collection organized by along the line of the themes identified in within the conceptual framework:

- Staff Awareness of the Public Reporting Tools
- Staff Use of the Public Reporting Tools
- The Transparency Value of the Public Reporting System
- The Deterrence Value of the Public Reporting System
- Increased Scrutiny Resulting from Online Reporting

The chapter is organized into four sections. The first three sections examine the findings of the staff survey, which includes both multiple choice and opportunities to provide text-based comments. The same survey was sent out to two groups. One was sent to a cross-section of ministry staff engaged in environmental compliance and enforcement activities and the other was sent to the entire staff list of the Conservation Officers Service with a request that all active-duty officers consider participating in the survey. The first two sections of this chapter will examine the findings of these two surveys. The third section will compare and contrast the findings of the two surveys.

The final section of this chapter will discuss the findings of the staff interviews before moving on to the discussion section of this report.

Survey Findings

This section outlines the findings the two electronically administered surveys before providing a comparison of the results of the two surveys.

General Compliance and Enforcement Program Staff Survey Findings

The findings of the general compliance and enforcement staff survey are summarized here. The survey response details are available in Appendix E, found at the end of this report. The electronic survey was sent out to 70 Ministry of Environment and Ministry of Forests, Lands, and Natural Resource Operations staff members (representing the areas of Parks, Water Stewardship, Ecosystems, Environmental Protection, and Fish and Wildlife). A total of 36 respondents completed the survey (a response rate of 51%).

The discussion below presents the findings from both the multiple choice questions (in both written and graphic formats) and the text-based comments (written only). The discussion is organized by the themes outlined in the conceptual framework chapter.

Staff Awareness of the Public Reporting Tools

The majority of the respondents, 67%, indicated that they are aware of the Quarterly Environmental Enforcement Summary, while 44% indicated that they are aware of the Environmental Violator's Database. When asked if they were aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator's Database, 69% indicated that they are. Those who indicated they are aware of the program generally responded (to Question 4) in the available textbox that they

had learned about the program from a colleague or by government email. The multiple choice responses for questions one, two, and three are displayed graphically below in Table 3, Table 4, and Table 5.

Table 3: General Compliance and Enforcement Staff Survey Question 1 Responses

1) Are you familiar with the ministry's Quarterly Environmental Enforcement Summary?			
Response	Chart	Frequency	Count
Yes		67%	24
No		33%	12
Not Sure		0%	0
Total responses:			36

Table 4: General Compliance and Enforcement Staff Survey Question 2 Responses

2) Are you familiar with the ministry's Environmental Violator's Database?			
Response	Chart	Frequency	Count
Yes		44%	16
No		47%	17
Not Sure		8%	3
Total responses:			36

Table 5: General Compliance and Enforcement Staff Survey Question 3 Responses

3) Are you aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator's Database?			
Response	Chart	Frequency	Count
Yes		69%	25
No		28%	10
Sure		3%	1
Total responses:			36

Staff Use of the Public Reporting Tools

When asked about their use of the public reporting tools, a total 42% of respondents had read the Quarterly Environmental Enforcement Summary in the last 12 months. However, 62.5% of those who had said they were familiar with the Summary responded that they had read it in the last 12 months. Only 20% had searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months, with 80% responding that they had not. However, 44% of those who had heard of the EVD previously said they had used it to search for information in the last 12 months.

When asked what kind of information they look for when reading the ministry's Quarterly Environmental Enforcement Summary, responses (15 in total) included tickets (27%), court convictions (20%), administrative sanctions (13%), and orders (7%), while 33% responded "other". Several text comments indicated that the reports had been used by staff to search for all of these and for prior incidents of non-compliance. When asked what kind of information they look for when searching the ministry's Environmental Violator's Database, 62% (5 of the 8 respondents to this question) said they had searched for individual or business names in the last 12 months. The multiple choice responses for

questions five, six, seven, and eight are displayed graphically below in Table 6, Table 7, Table 8, and Table 9.

Table 6: General Compliance and Enforcement Staff Survey Question 5 Responses

5) Have you read the ministry's Quarterly Environmental Enforcement Summary in the last 12 months?			
Response	Chart	Frequency	Count
Yes		42%	15
No		58%	21
Not Sure		0%	0
Total responses:			36

Table 7: General Compliance and Enforcement Staff Survey Question 6 Responses

6) If you answered "yes to Question 5", what kind of information do you look for when reading the ministry's Quarterly Environmental Enforcement Summary?			
Response	Chart	Frequency	Count
Tickets		27%	4
Administrative Sanctions		13%	2
Court Convictions		20%	3
Orders		7%	1
Other		33%	5
Total responses:			15

Table 8: General Compliance and Enforcement Staff Survey Question 7 Responses

7) Have you searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months?			
Response	Chart	Frequency	Count
Yes		20%	7
No		80%	28
Not Sure		0%	0
Total responses:			35

Table 9: General Compliance and Enforcement Staff Survey Question 8 Responses

8) If you answered "yes" to Question 7, what kind of information do you look for when searching the ministry's Environmental Violator's Database?			
Response	Chart	Frequency	Count
Tickets		0%	0
Administrative Sanctions		12%	1
Court Convictions		0%	0
Orders		0%	0
Individual or Business Names		62%	5
Other		25%	2
Total responses:			8

The Transparency Value of the Public Reporting System

When asked whether the ministry’s public reporting of enforcement actions increased the level of public transparency with regard to the ministry’s compliance and enforcement activities, 25% of respondents indicated that they believe it does, 31% indicated that they don’t believe it does, and 44% were not sure. The comments given included the suggestions the public reporting tools could be more aggressively advertised to the public, that they should include operations that are currently out of compliance, that they should include warnings, and that they should recognize the good players as well. The multiple choice responses for question nine are displayed graphically below in Table 10.

Table 10: General Compliance and Enforcement Staff Survey Question 9 Responses

9) In your opinion, has the ministry’s public reporting of enforcement actions increased the level of public transparency with regard to the ministry’s compliance and enforcement activities (ie. helps to increase the public's understanding of, and confidence in, the ministry's goals, responsibilities, and activities)?			
Response	Chart	Frequency	Count
Yes		25%	9
No		31%	11
Not Sure		44%	16
Total responses:			36

The Deterrence Value of the Public Reporting System

When asked whether publishing enforcement actions had a specific deterrent effect on the receiver of the action, 34% respondents indicated they feel it has a weak specific deterrent effect, 14% feel it has a strong specific deterrent effect, 11% feel it has no specific deterrent effect, and 40% were not sure if it has a specific deterrent effect. Similarly, when asked whether publishing enforcement actions had a general deterrent effect on the receiver of the action, 42% respondents indicated they feel it has a weak general deterrent effect, 14% feel it has a strong general deterrent effect, 14% feel it has no general deterrent effect, and 31% are not sure if it has a general deterrent effect. Text responses to these questions suggested that a non-compliance list might improve the deterrent effect of the reporting tools, that improving public awareness (especially if investors take notice) might increase the deterrent effect, and that the deterrent effect might be stronger if warnings and advisories are reported as well. The multiple choice responses for questions ten and eleven are displayed graphically below in Table 11 and Table 12.

Table 11: General Compliance and Enforcement Staff Survey Question 10 Responses

10) In your opinion, has publishing enforcement actions had a specific deterrent effect on the receiver of the action (ie. does publicly naming an individual or organization reduce the probability that that party will reoffend)? What kind of effect do you think it has?			
Response	Chart	Frequency	Count
No Specific Deterrent Effect		11%	4
A Weak Specific Deterrent Effect		34%	12
A Strong Specific Deterrent Effect		14%	5
Not Sure		40%	14
Total responses:			35

Table 12: General Compliance and Enforcement Staff Survey Question 11 Responses

11) In your opinion, has publishing enforcement actions had a general deterrent effect (ie. does publicly naming individuals or organizations reduce the general likelihood that environmental violations will be committed by any party)? What kind of effect do you think it has?

Response	Chart	Frequency	Count
No General Deterrent Effect		14%	5
A Weak General Deterrent Effect		42%	15
A Strong General Deterrent Effect		14%	5
Not Sure		31%	11
Total responses:			36

Increased Scrutiny Resulting from Online Reporting

When asked if there is a higher level of scrutiny over enforcement actions because these actions are being published, 46% of respondents replied that there is no higher level of scrutiny, 23% replied that there is a higher level of scrutiny, and 31% responded that they are not sure. When asked whether public reporting of enforcement actions has affected how they deal with compliance issues in any way, 77% replied that there is no difference, 11% reported that there is a difference, and 11% were not sure. Text comments also suggested that public reporting might cause a higher level of scrutiny over enforcement actions in the future (especially where serious incidents draw media interest), that public reporting might have the effect of limiting officer discretion, and that public reporting may have raised the bar in terms of accountability and transparency. The multiple choice responses for questions twelve and thirteen are displayed graphically below in Table 13 and Table 14.

Table 13: General Compliance and Enforcement Staff Survey Question 12 Responses

12) Are you finding that there is a higher level of scrutiny over your enforcement actions because these actions are being published?

Response	Chart	Frequency	Count
Yes		23%	8
No		46%	16
Not Sure		31%	11
Total responses:			35

Table 14: General Compliance and Enforcement Staff Survey Question 13 Responses

13) Do you think public reporting of enforcement actions has affected how you deal with compliance issues in any way?

Response	Chart	Frequency	Count
Yes		11%	4
No		77%	27
Not Sure		11%	4
Total responses:			35

This concludes the section covering the findings of the survey issued to the general environmental compliance and enforcement group. The next section will examine the findings of the survey sent to active-duty officers of the BC Conservation Officer Service.

Conservation Officer Staff Survey Findings

The results of the survey findings are summarized here. The survey response details are available in Appendix F, found at the end of this report. The electronic survey was sent out to approximately 106 members of the Conservation Officer Service, 28 of whom completed the survey (a response rate of 26%).

The discussion below presents the findings from both the multiple choice questions (in both written and graphic formats) and the text-based comments (written only). The discussion is organized by the themes outlined in the conceptual framework chapter.

Staff Awareness of the Public Reporting Tools

The majority of the respondents, 75%, indicated that they are aware of the Quarterly Environmental Enforcement Summary, while only 43% indicated that they are aware of the Environmental Violator’s Database. When asked if they were aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator’s Database, 81% indicated that they are. Of those who used the text box in Question 4 to indicate how they first heard about the program, most responded that they had learned about the program from a colleague or their employer, from a government media release or bulletin, or from an internet search. The multiple choice responses for questions one, two, and three are displayed graphically below in Table 15, Table 16, and Table 17.

Table 15: Conservation Officer Staff Survey Question 1 Responses

1) Are you familiar with the ministry’s Quarterly Environmental Enforcement Summary?			
Response	Chart	Frequency	Count
Yes		75%	21
No		21%	6
Not Sure		4%	1
Total responses:			28

Table 16: Conservation Officer Staff Survey Question 2 Responses

2) Are you familiar with the ministry’s Environmental Violator’s Database?			
Response	Chart	Frequency	Count
Yes		43%	12
No		50%	14
Not Sure		7%	2
Total responses:			28

Table 17: Conservation Officer Staff Survey Question 3 Responses

3) Are you aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator’s Database?			
Response	Chart	Frequency	Count
Yes		81%	22
No		19%	5
Not Sure		0%	0
Total responses:			27

Staff Use of the Public Reporting Tools

When asked about their use of the public reporting tools, a total of 36% of respondents had read the Quarterly Environmental Enforcement Summary in the last 12 months. However, 48% of those who had responded that they were familiar with the Quarterly Summaries said that they had read them in the last 12 months. Only 21% had searched for information in the ministry’s searchable Environmental Violator’s Database in the last 12 months, with 75% responding that they had not. However, 50% of those who had heard of the EVD said that they had used it in the last 12 months.

When asked what kind of information they look for when reading the ministry’s Quarterly Environmental Enforcement Summary, responses (10 in total) included tickets (20%) and court convictions (30%), while 33% responded “other”. Several text comments indicated that the reports had been used by COS staff to search for all of the options given in the multiple choice list and for accuracy and completeness of information. When asked what kind of information they look for when searching the ministry’s Environmental Violator’s Database, 50% (3 of the 6 respondents to this question) said they had searched for individual or business names in the last 12 months. The multiple choice responses for questions five, six, seven, and eight are displayed graphically below in Table 18, Table 19, Table 20 and Table 21.

Table 18: Conservation Officer Staff Survey Question 5 Responses

5) Have you read the ministry’s Quarterly Environmental Enforcement Summary in the last 12 months?			
Response	Chart	Frequency	Count
Yes		36%	10
No		61%	17
Not Sure		4%	1
Total responses:			28

Table 19: Conservation Officer Staff Survey Question 6 Responses

6) If you answered "yes to Question 5", what kind of information do you look for when reading the ministry's Quarterly Environmental Enforcement Summary?			
Response	Chart	Frequency	Count
Tickets		20%	2
Administrative Sanctions		0%	0
Court Convictions		30%	3
Orders		0%	0
Other		50%	5
Total responses:			10

Table 20: Conservation Officer Staff Survey Question 7 Responses

7) Have you searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months?			
Response	Chart	Frequency	Count
Yes		21%	6
No		75%	21
Not Sure		4%	1
Total responses:			28

Table 21: Conservation Officer Staff Survey Question 8 Responses

8) If you answered "yes" to Question 7, what kind of information do you look for when searching the ministry's Environmental Violator's Database?			
Response	Chart	Frequency	Count
Tickets		0%	0
Administrative Sanctions		0%	0
Court Convictions		17%	1
Orders		0%	0
Individual or Business Names		50%	3
Other		33%	2
Total responses:			6

The Transparency Value of the Public Reporting System

When asked whether the ministry's public reporting of enforcement actions increased the level of public transparency with regard to the ministry's compliance and enforcement activities, 37% of respondents indicated that they believe it does, 30% indicated that they don't believe it does, and 33% were not sure. The text comments included the suggestions the public reporting tools could be more aggressively advertised to the public and that lack of public awareness reduces the transparency value of the program, that it is valuable for the public to be able to see that enforcement actions are being taken, that the information needs to be timely to be relevant, that social media could be useful in distributing

this information, and that more regional media releases would be helpful. The multiple choice responses for question nine are displayed graphically below in Table 22.

Table 22: Conservation Officer Staff Survey Question 9 Responses

9) In your opinion, has the ministry’s public reporting of enforcement actions increased the level of public transparency with regard to the ministry’s compliance and enforcement activities (ie. helps to increase the public's understanding of, and confidence in, the ministry's goals, responsibilities, and activities)?			
Response	Chart	Frequency	Count
Yes		37%	10
No		30%	8
Not Sure		33%	9
Total responses:			27

The Deterrence Value of the Public Reporting System

When asked whether publishing enforcement actions had a specific deterrent effect on the receiver of the action, 54% respondents indicated they feel it has a weak specific deterrent effect, 25% feel it has a strong specific deterrent effect, 4% feel it has no specific deterrent effect, and 18% were not sure if it has a specific deterrent effect. Similarly, when asked whether publishing enforcement actions had a general deterrent effect on the receiver of the action, 46% respondents indicated they feel it has a weak general deterrent effect, 25% feel it has a strong general deterrent effect, 7% feel it has no general deterrent effect, and 21% are not sure if it has a general deterrent effect. Text responses to these questions suggested that lack of public awareness undermines the deterrent effects, that there is a strong deterrent effect with reputable companies and in small communities, that it can have a strong effect on business, and that media attention is required to make it effective. The multiple choice responses for questions ten and eleven are displayed graphically below in Table 23 and 24.

Table 23: Conservation Officer Staff Survey Question 10 Responses

10) In your opinion, has publishing enforcement actions had a specific deterrent effect on the receiver of the action (ie. does publicly naming an individual or organization reduce the probability that that party will reoffend)? What kind of effect do you think it has?			
Response	Chart	Frequency	Count
No Specific Deterrent Effect		4%	1
A Weak Specific Deterrent Effect		54%	15
A Strong Specific Deterrent Effect		25%	7
Not Sure		18%	5
Total responses:			28

Table 24: Conservation Officer Staff Survey Question 11 Responses

11) In your opinion, has publishing enforcement actions had a general deterrent effect (ie. does publicly naming individuals or organizations reduce the general likelihood that environmental violations will be committed by any party)? What kind of effect do you think it has?

Response	Chart	Frequency	Count
No General Deterrent Effect		7%	2
A Weak General Deterrent Effect		46%	13
A Strong General Deterrent Effect		25%	7
Not Sure		21%	6
Total responses:			28

Increased Scrutiny Resulting from Online Reporting

When asked if there is a higher level of scrutiny over enforcement actions because these actions are being published, 68% of respondents replied that there is no higher level of scrutiny, 4% replied that there is a higher level of scrutiny, and 29% responded that they are not sure. One comment suggested that public might feel penalties are too soft. When asked whether public reporting of enforcement actions has affected how they deal with compliance issues in any way, 86% replied that there is no difference, 11% reported that there is a difference, and 4% were not sure. The multiple choice responses for questions twelve and thirteen are displayed graphically below in Table 25 and Table 26.

Table 25: Conservation Officer Staff Survey Question 12 Responses

12) Are you finding that there is a higher level of scrutiny over your enforcement actions because these actions are being published?

Response	Chart	Frequency	Count
Yes		4%	1
No		68%	19
Not Sure		29%	8
Total responses:			28

Table 26: Conservation Officer Staff Survey Question 13 Responses

13) Do you think public reporting of enforcement actions has affected how you deal with compliance issues in any way?

Response	Chart	Frequency	Count
Yes		11%	3
No		86%	24
Not Sure		4%	1
Total responses:			28

This concludes the section covering the findings of the survey issued to the active-duty officers of the BC Conservation Officer Service. The next section will compare the findings of the two surveys in order to highlight the similarities and differences in the responses received.

Comparing the Findings of the General Compliance and Enforcement Staff Survey and the Conservation Officer Survey

The question of whether a difference would emerge between the two groups of survey respondents was a primary reason for conducting the surveys separately with different groups. For this reason, a chi square statistical test was conducted in an effort to ascertain whether a significant difference exists between the two survey samples. The results of the test suggest that in all but one question, no significant difference exists between the two groups of respondents. In the case of question 12, a significant difference does appear to exist. In this case, it appears that the general compliance and enforcement staff were more likely to believe that public reporting of enforcement actions has affected how they deal with compliance issues in some way than were the respondents in the conservation officer group. However, there does not appear to be a major difference between the two groups overall.

The next section discusses the findings of the interviews with staff members.

Interview Findings

This section presents the results of the fourteen interviews with staff members, representing participants from Environmental Protection, Ecosystems, Environmental Management, the Conservation Officer Service, and BC Parks. The staff interview portion of the evaluation sought a greater depth of qualitative data from a cross-section of supervisor and management-level staff who work directly in the area of compliance and enforcement. The results are organized by the themes discussed in the conceptual framework chapter.

Staff Awareness of the Public Reporting Tools

Most (but not all) of the staff members interviewed are aware of the existence of the public online reporting tools, but to varying degrees, which seems to be partially related to their individual job descriptions. Some staff members are aware of the Quarterly Compliance and Enforcement Summary, but not the searchable functions of the Environmental Violations Database. Some participants expressed the opinion that other staff in their areas may not be aware of these online tools or the fact that they are available to the public. One participant also suggested that staff morale may be suffering due to a belief that few enforcement actions are taking place and that these tools, if promoted, might improve the situation.

Staff Use of the Public Reporting Tools

The staff use of the online reporting tools varied substantially among interview participants. Approximately half of those interviewed indicated that they read the Quarterly Summaries or Environmental Violations Database rarely or not at all. Other participants mentioned using these tools for the following purposes:

- Out of unofficial professional interest
- As a general reference or to gain some insight into provincial or regional trends, industry trends, or the status of individual companies operating in multiple locations province-wide
- Double-checking enforcement action records for accuracy (participants cited the possibility of breakdowns in communication between various agencies, including Environmental Protection, the Conservation Officer Service, ICBC, and

court system, as possible causes of inaccuracies. However they indicated that such resulting inaccuracies are a rare occurrence)

- The online tools were also described as potentially useful for determining whether a case had made it through the courts or not and what the final outcome had been in cases where interested agencies may not have been informed otherwise

Of the participants who indicated that they rarely use the online reporting tools or do not use them at all, most indicated that their job description generally would not lead them to use the tools, or that they would use another system (such as CVIS or COORS) to access this type of information.

The Transparency Value of the Public Reporting System

There was a general feeling among staff that the public reporting tools are increasing the ministry's level of transparency around reporting compliance and enforcement actions, or that they at least have the potential to. However, several factors were cited as having a dampening effect on the transparency value of the reporting system, including:

- A general lack of staff awareness about the system or its contents, which one participant suggested may be leading to the opinion among some staff that little enforcement activity is taking place
- The possibility that the public is largely unaware of the existence of the online reporting tools or of the fact that they are available for public viewing
- The time lag between the time that incidents occur and the time they appear in the Quarterly Compliance and Enforcement Summary
- The types of enforcement actions that are not reported in the Quarterly Compliance and Enforcement Summary, including legislation not currently included in public reporting, as well as activities such as warnings and inspections

While these types of concerns were raised, there was general agreement that providing a single point of publicly available information detailing the ministry's enforcement actions has improved the transparency of the ministry's enforcement activities overall. The importance of the accuracy of the information was stressed by one conservation officer. It was also noted that information on tickets issued would not otherwise be publicly available. Finally, it was noted by several participants that the system has been useful for saving staff time as public inquiries can now be directed to the online reporting materials themselves.

The Deterrence Value of the Public Reporting System

Opinions about the deterrence impact of the public reporting tools varied substantially among those interviewed. In part, this appears to be a result of the range of responsibilities, locations, and circumstances of those interviewed. It seems to be the case that different deterrence factors are effective in different settings and with different types affected parties.

A major factor affecting the deterrent value of a public reporting system of this kind is the extent to which potential violators value their reputation. Several factors emerged from the interviews that may affect this consideration. These include:

- Whether the party of concern is an individual or a business/other organization
- The size of the community that the party of concern inhabits
- The types of regulations being enforced

Participants generally agreed that businesses and individuals will react differently to being named as violators. There also seemed to be agreement that most businesses care enough about their reputation to want to avoid being published in the Quarterly Summary, although there was less certainty on this point when discussing individuals. One factor that appears to be salient in the case of individuals is community size. Conservation officers operating in areas composed of small communities seemed to be in agreement that illegal activity or unseemly behaviour can have social consequences ranging from social isolation and being barred from local rod and gun club activities to job loss or feeling compelled to relocate away from the community. Whether these events come into the community's awareness is often determined by local media interest in public reporting, which the conservation officers interviewed indicated can be strong. They were of the opinion that publication of enforcement actions has the potential to have a significant deterrent effect on those living in smaller communities who are aware of the publications, and who value their reputation and standing in the community.

In the case of businesses, social and community pressure were also cited as potentially significant deterrence factors. In this case, however, the media and non-governmental organizations play a strong role in determining the focus of social pressure. The conservation officer participants indicated that both environmental NGOs and the media are aware of the public reporting system and often use it to direct their inquiries, investigations, and campaigns. There seemed to be agreement that large businesses, particularly those operating in multiple locations throughout the province, are very concerned about their environmental reputation and the impact it has on their social license to operate in the province. In these cases, it seems to be agreed that negative publicity is far greater deterrent than the value of a monetary fine. While it was generally agreed that the majority of small businesses value their reputation highly as well, participants suggested that the monetary fine may be of greater concern than the potential reputational sanction, or that they may be closer to equal value. It is somewhat difficult to generalize in this area as small businesses operate in wide variety of industries and circumstances in B.C.

It has also been suggested that public reporting may have a noticeable general deterrent effect, as participants did note that businesses seem to be aware of enforcement actions affecting their peers in their geographic regions and industries. Participants also indicated that awareness of enforcement actions on the part of businesses leads to improvements by others in similar industries, but the duration of these behavioural improvements remains an open question.

Participants from other areas, such as BC Parks indicated that public reporting may not play as significant of a role in deterrence with the types of cases they deal with. Education, monetary fines, and the presence of park rangers and staff appear to play a more important deterrence role in this area, although hunting and angling tour operators may still avoid conflicts with the law due, in part, to reputational concerns.

Timeliness was a noted concern in terms of the deterrent effect because a long time lag between the offences and the reporting may reduce the impact of the reputational consequences.

A recurring theme in the interviews was the non-compliance list previously employed by the Ministry of Environment during the 1990s. This list detailed permittees, primarily businesses and municipalities, which were out of compliance with their permit conditions. Several participants suggested that this list may have had a stronger deterrent effect against non-compliance than the current public reporting

system. Several reasons were given for this. First, it was suggested that the non-compliance list did not suffer from the same time-lag effect as the current system, resulting in a more immediate impact to the violator. Second, there was some agreement among the participants that greater effort had been put into publicizing the previous list than is currently put into publicizing the public reporting system. Third, those on the non-compliance list were able to have themselves removed from the list once they were back in compliance with their permits (although the fact that the list was updated only once every 6 months proved to be a problematic feature), which may have provided a stronger incentive for them to return to compliance as quickly as possible. However, this factor may also be partly responsible for staff perceptions about different deterrent values of the two lists. While interview participants were largely of the opinion that no company wants to be on either list, the perceptions of the strong deterrent value of the previous non-compliance list appear to be based largely on the large volume of feedback received by ministry staff from those wanting to be removed from the list. Since the current reporting system is more a historical record than an active list, it offers no possibility of being removed, thereby removing any reason for those on the list to contact ministry staff in an effort to be removed (and cutting off the source of feedback from stakeholders to staff). It was also noted that in the time period when neither the previous non-compliance list nor the current public reporting system were operating, third parties such as the media and NGOs were seeking greater public access to that information. While participants noted the differences in the two systems mentioned above, several also noted technical and legal problems with the previous non-compliance list that are not factors of concern with the current public reporting tools.

Increased Scrutiny Resulting from Public Reporting

Generally, staff directly involved in compliance enforcement did not feel that public reporting affects the way enforcement actions are handled in any significant way. However, two hypothetical exceptions were raised by participants. It was suggested that a warning might occasionally be issued instead of a ticket if there were mitigating factors that might warrant avoiding the embarrassment of a publicly reported ticket. The other effect mentioned moved the choice of action in the opposite direction, suggesting the possibility that increased scrutiny could lead an enforcement official to issue a ticket instead of a warning to avoid any question appearing overly lenient. However, the need for both consistency and discretion was stressed as well.

Summary

This chapter has discussed the findings from both the surveys and interviews conducted with staff engaged in environmental compliance and enforcement activities. The findings in all sections have been organized along the lines discussed in the conceptual framework chapter. First, staff members were queried about their own awareness of the public reporting tools. In general, most (but not all) of the staff surveyed and interviewed appear to be aware of the public reporting tools. Participants generally seemed to think that there would be value in raising staff awareness for a variety of reasons and suggestions were made as to how that might be done.

When queried about how staff use of the public reporting tools, a variety of answers were given, particularly in the interview portion of the data collection process, although many of those surveyed or interviewed reported that they do not regularly use these tools.

When asked about the transparency value and deterrence value of the public reporting system, most staff appeared to feel that this is a useful set of tools, but many reported concerns about issues such as lack of public awareness that may be limiting the reach and effect of these tools.

On the question of increased scrutiny resulting from online reporting, staff generally seemed to feel that the current public reporting tools are not increasing scrutiny over their compliance and enforcement actions, or affecting the way in which they perform those actions at this time.

This concludes the chapter on the findings of the primary research. The next chapter provides a discussion of the information outlined so far before proceeding to make recommendations for improving the effectiveness of the program.

DISCUSSION

The primary purpose of this report is to examine the effectiveness of the BC Ministry of Environment's Environmental Public Reporting Program in achieving its goals of deterring environmental violations and improving transparency around the ministry's compliance and enforcement activities. The report has reviewed the relevant literature on the subject, the findings of a survey administered to two groups of staff involved in the area of environmental compliance and enforcement, and the results of interviews with fourteen staff members knowledgeable in this area in order to reach conclusions that can form a basis for making recommendations to improve the performance of the program. In the course of this investigation, several themes have been identified as being important to the program's stated goals, including whether staff and the public are aware of the reporting tools, how they use them, and what effects they have. This section draws on the literature review and primary data sources to analyze, and reach conclusions about, these themes as they have been discussed in this report.

This chapter considers these questions in order of importance, beginning with the primary research question of this report: does this public reporting system serve as an effective deterrent against the violation of environmental regulations? Following this, the issues of transparency, and staff awareness and use, are discussed.

Deterrence

This section of the chapter examines the question of whether or not the environmental public reporting program has the effect of deterring environmental violations by business and individuals.

Based on the information reviewed in this report, it is reasonable to conclude that the environmental public reporting program does have a deterrent effect on some populations. This section examines the evidence presented in earlier chapters of this report to identify key factors affecting the deterrence value of the program.

Deterrence in General

Considered together, the literature review, surveys, and interviews provide a somewhat nuanced picture of the deterrence value of the public reporting program. All three sources of information generally support the idea that this program has a deterrent effect on those who are concerned about their reputation or about maintaining their social license to pursue certain activities.

Primarily, those identified in this report include:

- larger, reputation-sensitive businesses that are concerned about the potential economic effects of a publicly available record of their environmental compliance history; and
- individuals or groups of individuals that are reputation-sensitive or are concerned about maintaining a positive image within their community, often because they live in a small community or due to their involvement with activities such as hunting and fishing that require ongoing social license to be seen as legitimate

In these cases, the available evidence suggests that an awareness of the possibility that non-compliance behaviour will become known to the community may be enough to prevent the offending actions in the first place. In this case, the public reporting tools can play a role in adding weight to the consequences of violations resulting from intentional wrongdoing, carelessness, or ignorance of the law.

The next three sections discuss the conclusions reached on the subjects of business reactions to public reporting, individual reactions to public reporting, and limiting factors that appear to be dampening the potential deterrence value of the program.

Public reporting as a deterrent against violations by business

The literature review and data from primary sources suggest that the public reporting system can and, to an extent, does serve to deter business from violating environmental laws. This is primarily true in the case of larger businesses that value their reputations and have strong economic incentives to maintain good relations with the public if they want their activities to be seen as legitimate. It appears that negative publicity can be extremely costly in situations where companies value (and need to maintain) their social license to operate within a jurisdiction, or where investors, customers, and residents can easily become aware of a company's poor compliance history.

On the opposite side of the spectrum, however, it is worth recalling the State of Oregon's Department of Environmental Quality conclusion that, "In particular, small companies –especially very small companies – have very different beliefs and concerns. Small companies are less likely to work to assure compliance, less likely to belong to organizations that promote environmental compliance, less likely to have made recent environmental changes, and less likely to request technical assistance" (p. 2). However, the same report concluded that, "small companies say the pressure of monetary penalties has a tremendous impact on them" (SODEQ, N.d., p. 2). This point was also brought up by interview participants, suggesting that a similar logic may prevail in British Columbia. In particular, one interview participant gave a detailed overview of compliance efforts relating to pesticide companies in the province. The participant's experience mirrored the conclusions reached in Oregon, with larger companies primarily responding to the threat of bad press and smaller operations being more concerned about the effects of monetary penalties.

Therefore, while larger businesses with reputational concerns may be effectively brought into compliance by the knowledge that environmental violations are a matter of public record, smaller businesses might be expected to respond more favorably to traditional compliance measures such as fines and penalties.

The next section considers the effects of public reporting on individuals.

Public reporting as a deterrent against violations by individuals

In the case of individuals, the public reporting mechanism may not provide a response from the offender that is as predictable as that of business. Both the literature and interview data suggest that within small communities or in groups such as rod and gun clubs, concern over individual reputation can be highly motivating factor. Interviews with conservation officers in small communities suggest that the public reporting program has had an effect on individual violators in their areas in two ways. First, the officers noted that local media are known to take an interest in the Quarterly Compliance and Enforcement Summaries. Although it is beyond the scope of this evaluation to estimate the level of interest shown by local media, interview data do suggest that violations by individuals do sometimes become public knowledge as a result of the public reporting tools and social consequences can often follow. Second, interview data suggest that groups such as rod and gun clubs, and other hunting and fishing organizations, place a very high value on the principles of conserving wildlife stocks and on being seen

by the community as a collective of law-abiding members. This provides a useful example of a situation in which social license can be practically applied at the individual or non-business organizational level. These organizations may also prove to be useful partners in raising awareness of the public reporting tools if they come to see them as a compliance tool for their own organizations.

This also provides an opportunity to revisit Pawson's distinction between "an 'aspirational member' who does what it can to preserve a reputation under threat" and "an 'antagonistic non-member', who seeks repute only outside 'the system'" (Pawson, 2002, p. 219). As with businesses, there will always be individuals who will not be deterred by the reputational consequences of having their environmental violation made public. And as with the case of small businesses that are much more concerned with monetary penalties than with reputational consequences, there will be individuals who will have to be targeted with more traditional means of enforcement activity (such as fines or prosecution) if compliance is to be maintained.

Factors Limiting the Deterrence Value of the Program

In both the surveys and interviews, lack of public awareness was the most frequently cited reason why the program's deterrent effect is not as strong as it probably could be. While the primary data suggest the media outlets and environmental non-governmental organizations do know about and use these resources to some degree, there is also a strong sentiment among the surveyed and interviewed staff members that these tools could deliver a greater effect if they were more actively promoted.

Transparency

Responses to questions about whether the public reporting program increases the level of transparency around the ministry's compliance and enforcement activities varied considerably.

When considering the survey data, it is helpful that the multiple choice answers are also qualified by text responses. In the general compliance and enforcement staff survey, the most frequently given answer to this question was "not sure" (44%). The comments given included the suggestions the public reporting tools need to be more aggressively advertised to the public, that they should include operations that are currently out of compliance, that they should include warnings issued, and that there should be a greater emphasis on recognizing the good players (specifically businesses) as well. Survey responses from the conservation officer group differed somewhat. Although "yes" was the most frequent answer given, the responses were divided fairly evenly between the three possible answers ("yes", "no", and "not sure"). The text comments included the suggestions the public reporting tools could be more aggressively advertised to the public and that lack of public awareness reduces the transparency value of the program, that it is valuable for the public to be able to see that enforcement actions are being taken, that the information needs to be timely to be relevant, that social media could be useful in distributing this information, and that more regional media releases would be helpful.

Interview participants also gave varied answers to the question of transparency. While many did feel that the public reporting program had increased transparency around the ministry's compliance and enforcement actions, some also stressed the limitations of the current reporting system, specifically concerns about a perceived lack of general staff awareness about the system or its contents, the perception that the public is largely unaware of the existence of the online reporting tools or of the fact that they are available for public viewing, the time lag between the time that incidents occur and the time they appear in the Quarterly Compliance and Enforcement Summary, and the types of

enforcement actions that are not reported in the Quarterly Compliance and Enforcement Summary, including legislation that is not currently included in public reporting, as well as actions like warnings and inspections that are not reported.

While the data do suggest a certain amount agreement that publishing the ministry's compliance and enforcement actions on the ministry's website is a positive step toward greater transparency, the opinions given were heavily qualified by concerns about limited staff and public awareness, the types of actions that still go unreported, and the lack of recognition given to good companies.

The next section discusses the issues of staff awareness and staff use of the public reporting tools.

Awareness and Staff Use

Staff Awareness and Use

The staff members surveyed and interviewed were generally aware of Quarterly Environmental Enforcement Summary (though not in all cases) and that the names of violators are published in these publicly available reports. In both surveys, however, fewer than 50% of respondents reported being aware of the Environmental Violators Database, which has the capacity to perform searches for information listed in all past issues of the Quarterly Environmental Enforcement Summaries. The same perception was mentioned by interview participants as well. For some staff, this may be not entirely surprising as many of these staff members use internal ministry databases (such as CVIS or COORS) to perform these same types of search functions.

While this is understandable, there are a number of reasons why greater staff awareness of these tools could assist in promoting the goals of the organization. First, ministry staff members that are aware of these tools can take an active role in promoting them to the public. For instance, conservation officers that were interviewed indicated that they routinely refer media inquires to the reporting tools on the ministry website which both saves them time and brings the reporting tools to the attention of stakeholders. Conservation officers and other compliance and enforcement staff could also play a role in informing businesses and the public that their names will have be published in the online reports if they are found to be out of compliance with regulations.

A greater awareness of the reporting tools and the enforcement actions that are being taken might also improve morale within the organization by demonstrating that compliance and enforcement actions are taking place. As mentioned in the interview results section, opinions were expressed that some staff are unsure of how much is being done in the area of compliance and enforcement action and this may be affecting organizational morale. It was suggested that a greater awareness of the reporting tools within the organization may help to demonstrate to staff that compliance and enforcement actions are taking place on a regular basis. In addition, interview participant expressed an interest in different parts of the ministry being able to tell their own compliance and enforcement story in greater detail, including a deeper discussion of the actions they've taken that are not reported, such as inspections and warnings.

For those staff members who do not use, or do not have access to, the internal compliance and enforcement databases, these tools may be useful resources for their own work. This may be particularly true for those who are not aware of the searchable functions of the Environmental Violators Database. Since those survey respondents who did mention they were users of the EVD did tend to

mention that they had searched the system for individual and business names, it may be that this would be a useful selling feature if more staff members knew about it.

Finally, as several participants highlighted the importance of accuracy when this information is being publicly reported, it may be useful to ask compliance and enforcement staff to double check the accuracy in their own cases within the publicly reported records, both to ensure accuracy and to improve their awareness and understanding of the public tools.

In terms of an operational means to raise awareness within the organization, many staff members who are aware of these tools have said that they first learned about them from colleagues or through government email. Therefore, this may well be an effective means of spreading awareness further.

Public Awareness and Use

Lack of public awareness was mentioned by many of those interviewed and surveyed as being a major limiting factor in achieving the environmental public reporting program's overall goals of transparency and deterrence. In this case, it is worthwhile recalling Pawson's (2002) comparisons of different types of models for transmitting this type of information to the public. The current public reporting system is what he describes as a *passive information* model. In this case, the information is posted on the ministry's website for those who wish to find it. However, public awareness might be improved if the ministry were to add elements of a *limited disclosure* model (in which third parties are actively given the information or notified that it is available) or to an *active publicity* model (in which the general public is given the information directly or notified directly that it exists).

Interview and survey participants have suggested media and environmental non-governmental organizations are interested in obtaining and using this information (and have done so in the past). Other interested third parties might include local and First Nations governments, investors who might be interested in the compliance histories of companies, and community organizations such as rod and gun clubs (as previously discussed). Therefore, it may be very cost effective to develop ties with these third parties if they are interested in this information or are willing to do the work of transmitting it to the public. It may also be useful to engage the business community directly to inform or remind them of the existence of these resources.

Social media may also be useful and cost effective in transmitting this information to interested individuals and organizations. Using social media tools such as Twitter would allow the ministry to engage interested communities with these tools at very low cost.

Other innovations, such as those discussed in the jurisdictional scan might also create reporting mechanisms that the public would find more accessible. A color coding scheme, like that used by Indonesia's PROPER program, to identify worst or repeat offenders, or an online map-based program, such as that used by the US EPA's ECHO program, might prove useful innovations for engaging a public already overloaded with information.

The next section will summarize the discussion chapter before the report moves on to make recommendations based on this discussion.

Summary

This chapter has discussed the findings of the staff surveys and interviews in the context of literature review. It began by considering the primary and secondary research questions: whether or not the public reporting program has served as a deterrent against violations and whether or not it has served to improve transparency around the ministry's compliance and enforcement activities. Next the issues of use and awareness by the both ministry staff and the public were discussed. This discussion serves as the basis for the recommendations given in the next chapter.

RECOMMENDATIONS

This section provides a summary of the recommendations for possible improvements to the public reporting system. It is divided into five main recommendation areas: raising awareness of the public reporting tools within the organization, raise public awareness of the public reporting tools, increasing the capabilities of the system for greater analysis capabilities, increase the scope of reporting, and recognizing good companies.

Recommendation 1: Raise awareness of the public reporting tools within the organization

Based on the results of the survey and interviews, it appears that staff awareness of the program would benefit from improvement. Several participants felt that increasing staff awareness of the public reporting tools and selling the fact that enforcement work is being done would be beneficial to the organization. The evaluator recommends the following actions for consideration:

- Email staff when Quarterly Summaries are released (to regional offices in particular). These notifying emails could also be used to inform staff about the search capabilities of the Environmental Violations Database specifically, for those who are not currently aware of them.
- Compile annual or quarterly reports that include compliance statistics and trends, such as comparisons between regions, actions taken under specific acts, a worst offenders list, or the range of penalties actually being assigned by the courts.

Recommendation 2: Raise public awareness of the public reporting tools

The research contained within this report concludes that public awareness of environmental violation information is essential for the program to achieve its deterrence and transparency goals. There was considerable agreement among interview and survey participants that the public would be interested in this information and that wider publication and distribution could increase both the transparency value and the deterrent value of the public reporting tools. The evaluator recommends the following actions for consideration:

- Engage to a greater degree with the media and environmental non-governmental organizations. All of the research in this report suggests that these are primary means of maximizing both the deterrence and transparency potential of the public reporting system. Local governments, First Nations governments, business and investor groups, and interested community organizations might also benefit from having these tools brought to their attention.
- Improve use of social media platforms for the purpose of disseminating the information in the public reporting tools. This could include the use of facebook, twitter, RSS feeds, and email subscriptions sent out to interested parties. These distribution channels could be specific to the online public reporting program or the Compliance Policy and Planning Section could use feeds from other parts of the Ministry of Environment or other ministries as dissemination tools.

- Publish in the Hunting and Angling Synopsis (released every two years) or other applicable publications such as industry, environmental, or recreational publications.
- Post links to the website in other areas of government (the Conservation Officers Service website, for example).

Recommendation 3: Increase the capabilities of the system to include geographic display

The jurisdictional scan and the staff participants have raised the possibility of being able to do more with the existing data might make the system useful to a wider audience. The evaluator recommends the following action for consideration:

- Consider using a mapping interface, similar to that of the US EPA's ECHO system. Such a system could be used to locate facilities within communities and cross-reference this information with compliance histories.

Recommendation 4: Increase the scope of reporting

Participants in both the staff survey and interviews have suggested extending the scope of the current reporting system beyond what is currently reported. The evaluator recommends the following actions for consideration:

- Broaden the scope of the legislation covered by the public reporting system (include other areas of the natural resource sector, *the Land Act, the Mines Act*).
- Find ways to report warnings and notices of non-compliance (perhaps only general statistics).
- Give program areas an opportunity to tell their enforcement story on an annual basis (there could be an opportunity for others to do the same and have it combined with an existing Quarterly Report release, perhaps on an annual basis).
- Consider the possibility of maintaining a non-compliance list in some form. It could also use some means to simplify the information (as the Indonesian PROPER system did with colour coding) to establish different degrees of compliance statuses and make the information more accessible to the public. This information could also be made available to investors by advertising in trade publications.

Recommendation 5: Recognize good companies

Several staff mentioned the need to recognize the good players in any given industry both to provide a reputational incentive for good behaviour and to create industry leaders and role models for other businesses in their industries to emulate. The evaluator recommends the following actions for consideration:

- Establish a list of businesses in key industries with exemplary compliance records for publication on the Ministry of Environment website.
- Consider the possibility of waiving permit fees or other charges to companies with exemplary compliance records.
- Annual press releases listing companies in key sectors that have not had any compliance issues over the course of the year.

CONCLUSION

The purpose of this report has been to evaluate the BC Ministry of Environment's environmental public reporting program to determine whether it has a deterrent effect on environmental violators and whether it has improved the transparency surrounding the ministry's environmental compliance and enforcement activities.

The report reviewed the relevant literature on the use of public reporting programs as a form of deterrence and sought staff input in the form of survey and interview responses. Surveys and interviews were used to gather primary data from staff members directly engaged in compliance and enforcement activities. These data collection activities gathered information and grouped the findings into the following themes:

- Staff Awareness of the Public Reporting Tools
- Staff Use of the Public Reporting Tools
- The Transparency Value of the Public Reporting System
- The Deterrence Value of the Public Reporting System
- Increased Scrutiny Resulting from Online Reporting

This report concludes that this type public reporting can and should be an effective part of a wide array of compliance and enforcement tools and has made recommendations for improving the effectiveness of the program in achieving its aims. Specifically, these aim to raise awareness of the reporting tools within the Ministry organization, raise public awareness of the reporting tools, increase the capabilities of the reporting system, increase the scope of reporting, and find ways to recognize those businesses with good environmental records while continuing to bring attention to violators.

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APPENDIX A: EMAIL INVITATION TO PARTICIPATE IN AN INTERVIEW

Hello,

You are being invited to participate in a study entitled “Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators”, conducted by myself, Graeme Scott, a Graduate student at the University of Victoria. This research is part of a Master’s Final Project conducted under the supervision of Dr. James MacGregor. You may contact him by phone at 250-721-6435, or by email at jmacgreg@uvic.ca. Graeme Scott is also currently working as a co-op student in the Strategic Policy Branch of the BC Ministry of Environment. He has no supervisory authority over any potential participants. Potential participants are under no obligation to participate and their relationship with Mr. Scott will not be affected in any way whether they choose to participate or not.

The purpose of this research project is to assess whether publicly reporting environmental regulation violators on the BC Ministry of Environment’s website is an effective compliance tool. The Ministry has been publishing the names of individuals and corporations found in violation of environmental legislation since 2006. It is believed that individual and corporate actors are deterred from committing environmental offences out of a desire to protect their reputations. The Ministry is now seeking to determine whether there is evidence to serve as a basis for this belief. This primary purpose of this project is to gather available evidence and make recommendations on this policy. In addition, The Ministry is interested in a review of possible fine collection mechanisms that might improve the rate of fine collection, particularly for the most harmful behaviors which are prosecuted through the courts.

Your opinion would be of great value to this study.

In order to accomplish this you are being asked to give an interview in-person or over the phone at a time and location of your convenience.

If you have any interest in participating in this study please take the time to read the attached Letter of Consent.

Please feel free to contact me with any question that you may have by phone at 250-953-5139, or email at gjscott@uvic.ca .

Thank you,

Graeme Scott
MPA Candidate
University of Victoria School of Public Administration

APPENDIX B: EMAIL INVITATION TO TAKE THE STAFF SURVEY

Hello,

You are being invited to participate in a study entitled “Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators”, conducted by myself, Graeme Scott, a Graduate student at the University of Victoria. This research is part of a Master’s Final Project conducted under the supervision of Dr. James MacGregor. You may contact him by phone at 250-721-6435, or by email at jmacgreg@uvic.ca. Graeme Scott is also currently working as a co-op student in the Strategic Policy Branch of the BC Ministry of Environment. He has no supervisory authority over any potential participants. Potential participants are under no obligation to participate and their relationship with Mr. Scott will not be affected in any way whether they choose to participate or not.

The purpose of this research project is to assess whether publicly reporting environmental regulation violators on the BC Ministry of Environment’s website is an effective compliance tool. The Ministry has been publishing the names of individuals and corporations found in violation of environmental legislation since 2006. It is believed that individual and corporate actors are deterred from committing environmental offences out of a desire to protect their reputations. The Ministry is now seeking to determine whether there is evidence to serve as a basis for this belief. This primary purpose of this project is to gather available evidence and make recommendations on this policy. In addition, The Ministry is interested in a review of possible fine collection mechanisms that might improve the rate of fine collection, particularly for the most harmful behaviors which are prosecuted through the courts.

Your opinion would be of great value to this study.

In order to accomplish this you are being asked to complete a web-based survey on the Fluid Surveys website. The link to survey is attached in the body to this email.

If you have any interest in participating in this study please take the time to read the attached Letter of Consent.

Please feel free to contact me with any question that you may have by phone at 250-953-5139, or email at gjscott@uvic.ca.

Thank you,

Graeme Scott
MPA Candidate
University of Victoria School of Public Administration



Participant Consent Form

Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators

You are invited to participate in a study entitled Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators that is being conducted by Graeme Scott.

Graeme Scott is a Graduate Student in the School of Public Administration at the University of Victoria and you may contact him if you have further questions by phone at 250-953-5139, or email at giscott@uvic.ca. Graeme Scott is also currently working as a co-op student in the Strategic Policy Branch of the BC Ministry of Environment. He has no supervisory authority over any potential participants. Potential participants are under no obligation to participate and their relationship with Mr. Scott will not be affected in any way whether they choose to participate or not.

As a graduate student, I am required to conduct research as part of the requirements for a Master of Public Administration degree. It is being conducted under the supervision of James MacGregor. You may contact my supervisor by phone at 250-721-6435, or by email at jmacgreg@uvic.ca

Purpose and Objectives

The purpose of this research project is to assess whether publicly reporting environmental regulation violators on the BC Ministry of Environment's website is an effective compliance tool. The Ministry has been publishing the names of individuals and corporations found in violation of environmental legislation since 2006. It is believed that individual and corporate actors are deterred from committing environmental offences out of a desire to protect their reputations. The Ministry is now seeking to determine whether there is evidence to serve as a basis for this belief. This primary purpose of this project is to gather available evidence and make recommendations on this policy. In addition, The Ministry is interested in a review of possible fine collection mechanisms that might improve the rate of fine collection, particularly for the most harmful behaviors which are prosecuted through the courts.

Importance of this Research

Research of this type is important because The Ministry of Environment is interested in determining whether or not the public reporting of environmental regulation violators has a deterring effect on future violations. While it is currently believed that public reporting does serve as a deterrent, the Ministry is interested in gathering evidence to clarify the effectiveness of the policy.

Participants Selection

You are being asked to participate in this study because the researcher believes this study would benefit from your experience working in the Ministry of Environment (or the Ministry of Forests, Lands, and Natural Resource Operations).

What is Involved

If you consent to voluntarily participate in this research, your participation will include an interview, either in person or over the phone (whichever is most convenient for you). Written notes will be taken by the researcher that will reflect your answers to questions as accurately as possible. The interview is expected to last no longer than one hour.

Inconvenience

Participation in this study may cause some inconvenience to you, including the time taken to conduct the interview and the time taken to properly document your informed consent as a participant.

Risks

There are no known or anticipated risks to you by participating in this research

Benefits

The potential benefits of your participation in this research include benefits to the state of knowledge in this area by improving the general understanding of the effectiveness of publicly reporting law breakers and specific fine collection mechanisms. Society may also benefit indirectly as a result of possible improvements to the environmental regulatory system.

Voluntary Participation

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will be destroyed and will not be used in the study.

Anonymity

It will not be feasible to protect your anonymity from the researcher during the selection and interview process, but you will not be identified by name in the results of the study.

Confidentiality

Your confidentiality and the confidentiality of your data will be protected because no names will be used in reporting the results of the study. However, general titles (ie. Conservation Officer, Policy Advisor, Manager, Senior Manager, ect) and references to regions of the province may be used, which may limit the scope of confidentiality due to context. Also, because the cross-section of Ministry employees will be selected (either by departments or as individuals) from the BC Public Service Global Address List, and because participants' email addresses will be associated with their individual names, full confidentiality cannot be guaranteed. The client for this project (Gwenda Laughland, Director, Compliance Policy and

Planning, BC Ministry of Environment) will be assisting in recruitment process, and will therefore be aware of the names on the list of potential participants.

All data will be securely stored and promptly destroyed once the final report is written.

Dissemination of Results

It is anticipated that the results of this study will be shared with others in the form of the final written report.

The results will also be disseminated back to the BC Ministry of Environment in the form of a written report, which may then be circulated within the Ministry at the discretion of the client (the director of the Compliance Policy and Planning section, Strategic Policy Branch)

Disposal of Data

Data from this study will be disposed of once the final report is written and accepted, estimated to occur on approximately March 31st, 2012. Hand written notes will only be held until they can be transferred into electronic form and will then be shredded. This written data will be kept in a locked cabinet that only the researcher will have access to until it can be shredded. All electronic data will be stored in a password protected computer and will be deleted once the final written report has been accepted.

Contacts

Individuals that may be contacted regarding this study include Graeme Scott, who can be contacted by phone at 250-953-5139, or email at gjscott@uvic.ca or James MacGregor (faculty supervisor) who can be contacted by phone at 250-721-6435, or by email at jmacgreg@uvic.ca.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researchers, and that you consent to participate in this research project.

Name of Participant

Signature

Date

APPENDIX D: PARTICIPANT LETTER OF INFORMATION FOR IMPLIED CONSENT FORM (for electronic survey participants)



*Letter of Information for
Implied Consent*

Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators

You are invited to participate in a study entitled Assessing the Deterrent Effect of Publicly Reporting Environmental Regulation Violators that is being conducted by Graeme Scott.

Graeme Scott is a Graduate Student in the School of Public Administration at the University of Victoria and you may contact him if you have further questions by phone at 250-953-5139, or email at gjscott@uvic.ca. Graeme Scott is also currently working as a co-op student in the Strategic Policy Branch of the BC Ministry of Environment. He has no supervisory authority over any potential participants. Potential participants are under no obligation to participate and their relationship with Mr. Scott will not be affected in any way whether they choose to participate or not.

As a graduate student, I am required to conduct research as part of the requirements for a Master of Public Administration degree. It is being conducted under the supervision of James MacGregor. You may contact my supervisor by phone at 250-721-6435, or by email at jmacgreg@uvic.ca

Purpose and Objectives

The purpose of this research project is to assess whether publicly reporting environmental regulation violators on the BC Ministry of Environment's website is an effective compliance tool. The Ministry has been publishing the names of individuals and corporations found in violation of environmental legislation since 2006. It is believed that individual and corporate actors are deterred from committing environmental offences out of a desire to protect their reputations. The Ministry is now seeking to determine whether there is evidence to serve as a basis for this belief. This primary purpose of this project is to gather available evidence and make recommendations on this policy. In addition, The Ministry is interested in a review of possible fine collection mechanisms that might improve the rate of fine collection, particularly for the most harmful behaviors which are prosecuted through the courts.

Importance of this Research

Research of this type is important because The Ministry of Environment is interested in determining whether or not the public reporting of environmental regulation violators has a deterring effect on future violations. While it is currently believed that public reporting does serve as a deterrent, the Ministry is interested in gathering evidence to clarify the effectiveness of the policy.

Participants Selection

You are being asked to participate in this study because the researcher believes this study would benefit from your experience working in the Ministry of Environment (or the Ministry of Forests, Lands, and Natural Resource Operations).

What is Involved

If you consent to voluntarily participate in this research, your participation will include filling out a web-based survey on the website Fluid Surveys. This survey is expected to take no more than thirty minutes to fill out.

Inconvenience

Participation in this study may cause some inconvenience to you, including the time taken to fill out the survey.

Risks

There are no known or anticipated risks to you by participating in this research

Benefits

The potential benefits of your participation in this research include benefits to the state of knowledge in this area by improving the general understanding of the effectiveness of publicly reporting law breakers and specific fine collection mechanisms. Society may also benefit indirectly as a result of possible improvements to the environmental regulatory system.

Voluntary Participation

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will be impossible to remove from the data set as your survey results will be entered anonymously.

Anonymity

In terms of protecting your anonymity, all data entered into the survey by participants will be anonymous. The researcher will not know who chose to participate and who did not.

Confidentiality

Your confidentiality and the confidentiality of the data will be protected by the fact that your survey answers will be entered anonymously. However, because the cross-section of Ministry employees will be selected (either by departments or as individuals) from the BC Public Service Global Address List, and because participants' email addresses will be associated with their individual names, full confidentiality cannot be guaranteed. The client for this project (Gwenda Laughland, Director, Compliance Policy and Planning, BC Ministry of Environment) will be assisting in recruitment process, and will therefore be aware of the individual names or departments on the list of potential participants.

Dissemination of Results

It is anticipated that the results of this study will be shared with others in the form of the final written report.

The results will also be disseminated back to the BC Ministry of Environment in the form of a written report, which may then be circulated within the Ministry at the discretion of the client (the director of the Compliance Policy and Planning section, Strategic Policy Branch)

Disposal of Data

Data from this study will be disposed of when the final written report is accepted, estimated to occur on approximately March 31st, 2012. Any electronic data will be deleted at that time.

Contacts

Individuals that may be contacted regarding this study include Graeme Scott, who can be contacted by phone at 250-953-5139, or email at gjscott@uvic.ca or James MacGregor (faculty supervisor) who can be contacted by phone at 250-721-6435, or by email at jmacgreg@uvic.ca.

In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Please retain a copy of this letter for your reference.

APPENDIX E: MULTIPLE CHOICE SURVEY RESULTS (General Compliance and Enforcement Staff Survey)

Multiple choice survey question results (33 completed responses)

Question 1: Are you familiar with the ministry's Quarterly Environmental Enforcement Summary?

Response	Frequency	Count
Yes	67%	24
No	33%	12
Not Sure	0%	0
	Total Responses	36

Question 2: Are you familiar with the ministry's Environmental Violator's Database?

Response	Frequency	Count
Yes	44%	16
No	47%	17
Not Sure	8%	3
	Total Responses	36

Question 3: Are you aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator's Database?

Response	Frequency	Count
Yes	69%	25
No	28%	10
Not Sure	3%	1
	Total Responses	36

Question 4: If you are aware of the Quarterly Environmental Enforcement Summary and the Environmental Violator's Database, how did you first find out about them?

- This question required a text answer. Responses requiring text answers are summarized in the results section.

Question 5: Have you read the ministry's Quarterly Environmental Enforcement Summary in the last 12 months?

Response	Frequency	Count
Yes	42%	15
No	58%	21
Not Sure	0%	0
	Total Responses	36

Question 6: If you answered "yes to Question 5", what kind of information do you look for when reading the ministry's Quarterly Environmental Enforcement Summary?

Response	Frequency	Count
Tickets	27%	4
Administrative Sanctions	13%	2
Court Convictions	20%	3
Orders	7%	1
Other	33%	5
	Total Responses	15

Question 7: Have you searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months?

Response	Frequency	Count
Yes	20%	7
No	80%	28
Not Sure	0%	0
	Total Responses	35

Question 8: If you answered "yes" to Question 7, what kind of information do you look for when searching the ministry's Environmental Violator's Database?

Tickets	0%	0
Administrative Sanctions	12%	1
Court Convictions	0%	0
Orders	0%	0
Individual or Business Names	62%	5
Other	25%	2
	Total Responses	8

Question 9: In your opinion, has the ministry’s public reporting of enforcement actions increased the level of public transparency with regard to the ministry’s compliance and enforcement activities (ie. helps to increase the public's understanding of, and confidence in, the ministry's goals, responsibilities, and activities)?

Response	Frequency	Count
Yes	25%	9
No	31%	11
Not Sure	44%	16
	Total Responses	36

Question 10: In your opinion, has publishing enforcement actions had a specific deterrent effect on the receiver of the action (ie. does publicly naming an individual or organization reduces the probability that that party will reoffend)? What kind of effect do you think it has?

Response	Frequency	Count
No Specific Deterrent Effect	11%	4
A Weak Specific Deterrent Effect	34%	12
A Strong Specific Deterrent Effect	14%	5
Not Sure	40%	14
	Total Responses	35

Question 11: In your opinion, has publishing enforcement actions had a general deterrent effect (ie. does publicly naming individuals or organizations reduce the general likelihood that environmental violations will be committed by any party)? What kind of effect do you think it has?

Response	Frequency	Count
No General Deterrent Effect	14%	5
A Weak General Deterrent Effect	42%	15
A Strong General Deterrent Effect	14%	5
Not Sure	31%	11
	Total Responses	36

Question 12: Are you finding that there is a higher level of scrutiny over your enforcement actions because these actions are being published?

Response	Frequency	Count
Yes	23%	8
No	46%	16
Not Sure	31%	11
	Total Responses	35

Question 13: Do you think public reporting of enforcement actions has affected how you deal with compliance issues in any way?

Response	Frequency	Count
Yes	11%	4
No	77%	27
Not Sure	11%	4
	Total Responses	35

APPENDIX F: MULTIPLE CHOICE SURVEY RESULTS (Conservation Officer Service Survey)

Multiple choice survey question results (33 completed responses)

Question 1: Are you familiar with the ministry's Quarterly Environmental Enforcement Summary?

Response	Frequency	Count
Yes	75%	21
No	21%	6
Not Sure	4%	1
	Total Responses	28

Question 2: Are you familiar with the ministry's Environmental Violator's Database?

Response	Frequency	Count
Yes	43%	12
No	50%	14
Not Sure	7%	2
	Total Responses	28

Question 3: Are you aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator's Database?

Response	Frequency	Count
Yes	81%	22
No	19%	5
Not Sure	0%	0
	Total Responses	27

Question 4: If you are aware of the Quarterly Environmental Enforcement Summary and the Environmental Violator's Database, how did you first find out about them?

- This question required a text answer. Responses requiring text answers are summarized in the results section.

Question 5: Have you read the ministry's Quarterly Environmental Enforcement Summary in the last 12 months?

Response	Frequency	Count
Yes	36%	10
No	61%	17
Not Sure	4%	1
	Total Responses	28

Question 6: If you answered "yes to Question 5", what kind of information do you look for when reading the ministry's Quarterly Environmental Enforcement Summary?

Response	Frequency	Count
Tickets	20%	2
Administrative Sanctions	0%	0
Court Convictions	30%	3
Orders	0%	0
Other	50%	5
	Total Responses	10

Question 7: Have you searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months?

Response	Frequency	Count
Yes	21%	6
No	75%	21
Not Sure	4%	1
	Total Responses	28

Question 8: If you answered "yes" to Question 7, what kind of information do you look for when searching the ministry's Environmental Violator's Database?

Tickets	0%	0
Administrative Sanctions	0%	0
Court Convictions	17%	1
Orders	0%	0
Individual or Business Names	50%	3
Other	33%	2
	Total Responses	6

Question 9: In your opinion, has the ministry's public reporting of enforcement actions increased the level of public transparency with regard to the ministry's compliance and enforcement activities (ie. helps to increase the public's understanding of, and confidence in, the ministry's goals, responsibilities, and activities)?

Response	Frequency	Count
Yes	37%	10
No	30%	8
Not Sure	33%	9
	Total Responses	27

Question 10: In your opinion, has publishing enforcement actions had a specific deterrent effect on the receiver of the action (ie. does publicly naming an individual or organization reduces the probability that that party will reoffend)? What kind of effect do you think it has?

Response	Frequency	Count
No Specific Deterrent Effect	4%	1
A Weak Specific Deterrent Effect	54%	15
A Strong Specific Deterrent Effect	25%	7
Not Sure	18%	5
	Total Responses	28

Question 11: In your opinion, has publishing enforcement actions had a general deterrent effect (ie. does publicly naming individuals or organizations reduce the general likelihood that environmental violations will be committed by any party)? What kind of effect do you think it has?

Response	Frequency	Count
No General Deterrent Effect	7%	2
A Weak General Deterrent Effect	46%	13
A Strong General Deterrent Effect	25%	7
Not Sure	21%	6
	Total Responses	28

Question 12: Are you finding that there is a higher level of scrutiny over your enforcement actions because these actions are being published?

Response	Frequency	Count
Yes	4%	1
No	68%	19
Not Sure	29%	8
	Total Responses	28

Question 13: Do you think public reporting of enforcement actions has affected how you deal with compliance issues in any way?

Response	Frequency	Count
Yes	11%	3
No	86%	24
Not Sure	4%	1
	Total Responses	28

APPENDIX G: THE STAFF SURVEY AS IT APPEARS ON THE FLUID SURVEYS WEB PLATFORM

MoE - Environmental Public Reporting Survey

The Quarterly Environmental Enforcement Summary (QE+ES) is a PDF report containing all information (including names) related to specific enforcement actions taken under environmental legislation. It is published every three months and is available to the public via the MoE website.

1) Are you familiar with the ministry's Quarterly Environmental Enforcement Summary?

- Yes
- No
- Not Sure

The Environmental Violator's Database (EVD) is a database that allows the user to perform specific searches for the information listed in the Quarterly Environmental Enforcement Summary (QE+ES).

2) Are you familiar with the ministry's Environmental Violator's Database?

- Yes
- No
- Not Sure

3) Are you aware that individuals and organizations are named in the Quarterly Summary and Environmental Violator's Database?

- Yes
- No
- Sure

4) If you are aware of the Quarterly Environmental Enforcement Summary and the Environmental Violator's Database, how did you first find out about them?

5) Have you read the ministry's Quarterly Environmental Enforcement Summary in the last 12 months?

- Yes

- No
- Not Sure

6) If you answered "yes to Question 5", what kind of information do you look for when reading the ministry's Quarterly Environmental Enforcement Summary?

- Tickets
- Administrative Sanctions
- Court Convictions
- Orders
- Other

6b) If other, please specify (optional)

7) Have you searched for information in the ministry's searchable Environmental Violator's Database in the last 12 months?

- Yes
- No
- Not Sure

8) If you answered "yes" to Question 7, what kind of information do you look for when searching the ministry's Environmental Violator's Database?

- Tickets
- Administrative Sanctions
- Court Convictions
- Orders
- Individual or Business Names

Other

8b) If other, please specify (optional)

9) In your opinion, has the ministry's public reporting of enforcement actions increased the level of public transparency with regard to the ministry's compliance and enforcement activities (ie. helps to increase the public's understanding of, and confidence in, the ministry's goals, responsibilities, and activities)?

Yes

No

Not Sure

9b) Additional comments to question 9? (optional)

10) In your opinion, has publishing enforcement actions had a specific deterrent effect on the receiver of the action (ie. does publicly naming an individual or organization reduce the probability that that party will reoffend)? What kind of effect do you think it has?

No Specific Deterrent Effect

A Weak Specific Deterrent Effect

A Strong Specific Deterrent Effect

Not Sure

10b) Additional comments to question 10? (optional)

11) In your opinion, has publishing enforcement actions had a general deterrent effect (ie. does publicly naming individuals or organizations reduce the general likelihood that environmental violations will be committed by any party)? What kind of effect do you think it has?

No General Deterrent Effect

A Weak General Deterrent Effect

A Strong General Deterrent Effect

Not Sure

11b) Additional comments to question 11? (optional)

12) Are you finding that there is a higher level of scrutiny over your enforcement actions because these actions are being published?

Yes

No

Not Sure

12b) Additional comments to question 12? (optional)

13) Do you think public reporting of enforcement actions has affected how you deal with compliance issues in any way?

Yes

No

Not Sure

13b) If you answered "yes" to Question 13, can you provide a description of how the public reporting of enforcement actions has affected how you deal with compliance issues?

APPENDIX H: RESULTS OF THE CHI SQUARE STATISTICAL TEST OF THE DIFFERENCE BETWEEN THE TWO SURVEY GROUPS

Question 1

	staff	Observed Officer		expected		Deviations
yes	24	21	45	25.71429	19.28571429	0.114286 0.152381
no	12	6	18	10.28571	7.714285714	0.285714 0.380952
	36	27	63			
chi-square=			0.93			
p-value						
(significance)			0.334	OK		
check			0.334			
			Not significantly different			

Question 2

	staff	Observed Officer		expected		Deviations
yes	16	12	28	15.66102	12.33898305	0.007337 0.009313
no	17	14	31	17.33898	13.66101695	0.006627 0.008411
	33	26	59			
chi-square=			0.03			
p-value						
(significance)			0.859	OK		
check			0.859			
			Not significantly different			

Question 3

	staff	Observed Officer		expected		Deviations
yes	25	22	47	26.53226	20.46774	0.088489 0.114708
no	10	5	15	8.467742	6.532258	0.277266 0.359419
	35	27	62			

chi-square= 0.84
 p-value (significance) 0.359 OK
 check 0.359
 Not significantly different

Question 4

- Required only a text answer

Question 5

	staff	Observed Officer		expected		Deviations
yes	15	10	25	14.28571	10.71429	0.035714 0.047619
no	21	17	38	21.71429	16.28571	0.023496 0.031328
	36	27	63			

chi-square= 0.14
 p-value (significance) 0.710 OK
 check 0.710
 Not significantly different

Question 6

	Staff	Officer		Expected
Tickets	4	2	6	3.6 2.4
Administrative Sanctions	2	0	2	1.2 0.8
Court Convictions	3	3	6	1.2 2.4
Orders	1	0	1	0.6 0.4
Other	5	5	10	6 4
	15	10	25	

Expected counts too low to reach a meaningful result

Question 7

	staff	Observed Officer		expected		Deviations	
yes	7	6	13	7.33871	5.66129	0.015633	0.020265
no	28	21	49	27.66129	21.33871	0.004147	0.005376
	35	27	62				

chi-square= 0.05
 p-value (significance) 0.831 OK
 check 0.831
 Not significantly different

Question 8

	Staff	Officer		Expected	
Tickets	0	0	0	0	0
Administrative Sanctions	1	0	1	0.571429	0.428571
Court Convictions	0	1	1	0.571429	0.428571
Orders	0	0	0	0	0
Individual or Business Names	5	3	8	4.571429	3.428571
Other	2	2	4	2.285714	1.714286
	8	6	14		

Expected counts too low to reach a meaningful result

Question 9

	staff	Observed Officer		expected		Deviations	
yes	9	10	19	10	9	0.1	0.111111
no	11	8	19	10	9	0.1	0.111111
	20	18	38				
chi-square=			0.42				
p-value							
(significance)			0.516	OK			
check			0.516				
Not significantly different							

Question 10

	staff	Observed Officer		expected		Deviations	
no deterrent	4	1	5				
weak deterrent	12	15	27	12.88636	14.11364	0.060967	0.055665
strong deterrent	5	7	12	5.727273	6.272727	0.092352	0.084321
	21	23	44				
chi-square=			0.29				
p-value							
(significance)			0.588	OK			
check			0.588				
Not significantly different							

Question 11

	staff	Observed Officer		expected		Deviations	
no deterrent	5	2	7	3.723404	3.276596	0.43769	0.497375
weak deterrent	15	13	28	14.89362	13.10638	0.00076	0.000863

strong deterrent	5	7	12	6.382979	5.617021	0.299645	0.340506
	25	22	47	25	22		
chi-square=			1.58				
p-value (significance)			0.455	OK			
check			0.455				
			Not significantly different				

Question 12

	staff	Observed Officer		expected		Deviations	
yes	8	1	9	4.909091	4.090909	1.946128	2.335354
no	16	19	35	19.09091	15.90909	0.500433	0.600519
	24	20	44				
chi-square=			5.38				
p-value (significance)			0.020	OK			
check			0.020				
			Significantly different				

Question 13

	staff	Observed Officer		expected		Deviations	
yes	4	3	7	3.741379	3.258621	0.017877	0.020525
no	27	24	51	27.25862	23.74138	0.002454	0.002817
	31	27	58				
chi-square=			0.04				
p-value (significance)			0.834	OK			
check			0.834				
			Not significantly different				