Political movement: The role of grassroots activism on the development of wastewater treatment policy in Victoria, Canada

by

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Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

The City of Victoria has been discharging untreated sewage into the Pacific Ocean since 1894 (CRD 2017b; Kines 2020; Meissner 2021). On December 15th, 2020, this practice stopped after the opening of the $775 million McLoughlin Point Wastewater Treatment Plant, which now serves the City of Victoria, 13 municipalities, and six First Nations (CRD 2017b; Kines 2020). The process of deciding whether, where, and how to build the plant was the result of decades of intense political debate and the work of dedicated activism, with groups advocating passionately for a diverse set of outcomes.

This thesis conducted semi-structured interviews with local activists, non-governmental organization (NGO) actors, politicians, and bureaucrats to address the research question, *How did the actions of grassroots activists in Victoria, Canada between 1990 and 2020 affect the decision-making and planning process regarding the Mcloughlin Point Wastewater Treatment Plant?* To address this question, a thematic analysis was conducted, resulting in three themes, which are further contextualized using an analytical framework describing the different forms of power available to actors in a political system.

It was found that activists utilize discursive power, or the power to shape ideas through communication. In this case study, activists primarily accomplished this in two ways: through harnessing scientific evidence, and by appealing to emotions. Additionally, activists can achieve direct power over the policymaking process by running for office and becoming elected representatives. Grassroots activism is considered by some to be one of the most efficient ways of encouraging pro-environmental actions (Alisat & Riemer, 2015). This thesis contributes to the understanding of the actions that activists can take in their work and their potential effectiveness, which can allow activists to make more informed decisions on how to allocate their limited resources to have the highest possible impact.

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List of Abbreviations

ARESST	Association for Responsible and Environmentally Sustainable Sewage Treatment
CRD	Capital Regional District
EBP	Evidence-Based Policymaking
GSA	Georgia Strait Alliance
GVRD	Greater Vancouver Regional District
NIMBY	Not In My Back Yard
NGO	Non-Governmental Organization
POOP	People Opposed to Outfall Pollution
PPCPs	Pharmaceuticals and Personal Care Products
RITE Plan	Respectful of communities, Innovative Technologies, Taxpayer Friendly, Environmentally Sound Plan
RSTV	Responsible Sewage Treatment Victoria
STAG	Sewage Treatment Action Group
TBuck	T. Buck Suzuki Environmental Foundation
VSTA	Victoria Sewage Treatment Alliance

1. Introduction

On December 15th, 2020, the City of Victoria announced the opening of the much-anticipated McLoughlin Point Wastewater Treatment Plant. The occasion was marked with numerous speeches and featured politicians from federal, provincial, and regional governments (CBC News, 2020; Chan, 2020; CTV News, 2020). Most notably, British Columbia Premier John Horgan and Washington Governor Jay Inslee released a joint video to celebrate the accomplishment (CBC News, 2020; Chan, 2020; CTV News, 2020).

On the surface, it might have seemed like a bit much for the opening of a sewage treatment facility. But to many familiar with the saga, the opening of the plant represented either a great triumph or a disappointing policy failure. McLoughlin Point, which entered operation just 16 days before a federal deadline would require the regional government to pay large fines for discharging up to 130 million litres of untreated sewage into the ocean per day (Chan, 2020), was the result of a heated, decades-long battle that divided a community. For over two decades, residents organized into grassroots groups and took persistent and serious actions to promote their favoured wastewater policy outcomes. Some maintained that the existing practice of discharging municipal wastewater to the ocean floor was safe, effective, and sustainable, pointing to decades of water quality monitoring data as evidence. Others insisted that the practice was irresponsible and unsustainable, and worked hard to raise awareness of the practice and pressure local politicians to start treating the waste.

These fiery activists, with the help of some local non-governmental organizations, engaged in a wide range of actions for their cause. They eagerly signed up to speak at public meetings, in some cases forcing the engagements to be extended by multiple nights. Those who attended the meetings recalled that at times there were threats of violence and racist remarks. On the streets, activists spoke with

members of the community and gave public talks to raise awareness for the issue and persuade others to join their cause. There were televised debates, and media coverage of the issue drew attention from those across Canada and the United States. Pro-increased treatment activists debuted their own mascot, a seven-foot-tall turd named Mr. Floatie who used potty humour and puns to make the topic more approachable. This character chatted up tourists and hosted a variety of public events, like a toilet regatta in the Victoria Harbour where participants competed for the grand prize of 'turd place.' He also ran for mayor of Victoria, before officials pulled his nomination, prompting reactions of both glee and outrage among activists and the greater public. Later, other activists championing their own wastewater treatment plan ran for local office and won, changing council voting dynamics, and scrapping numerous aspects of the government-designed project, to the anger of many.

To say the issue was controversial would be an understatement. There were many points over the decades where a given outcome looked like a foregone conclusion, only for an election, new campaign, or higher order government decision to throw everything into question again. Eventually, a decision was made, and a plant was constructed. How did the activism that took place affect this decision, if at all? If the activism did influence the conclusion, what strategies or actions were the most effective? What were the barriers and drivers that affected the activism actions, or the decisions of the politicians? If activism did play a role, what can other activists and scholars learn from the events that took place? As such, the overarching research question for this thesis is: *How did the actions of grassroots activists in Victoria, Canada between 1990 and 2020 affect the decision-making and planning process regarding the Mcloughlin Point Wastewater Treatment Plant?*

This thesis addresses this question by examining a case study of municipal- and regional-level activism aimed at the creation of sustainable wastewater treatment policy. Local grassroots activists, non-governmental organization (NGO) staff, municipal bureaucrats, and local councillors and mayors were invited to talk about their experiences with wastewater-related activism and policymaking in semi-

structured interviews. I then developed three cross-cutting themes that captured the broad ways in which activism affected the policymaking process and its outcomes using thematic analysis. The first theme, The Role of Science, argues that while both pro-increased treatment and pro-evidence-based decision-making activists used science to promote and lend legitimacy to their goals, they drew upon different bodies of evidence with which to do so. The second theme, Emotional Appeals, examines the role of emotions in shaping opinions and persuading others. Activists harnessed emotions like fear, embarrassment, shame, guilt, and disgust to frame wastewater treatment as a moral duty, and at times used humour to elicit emotional reactions. Both themes are demonstrations of activists using discursive power, or the power of communication to shape ideas, to affect the policymaking process. The final theme, Running for Office, describes how activists were able to harness direct decision-making power in the policymaking process by becoming elected representatives. This granted them opportunities to devote increased material resources to their causes and change voting dynamics on councils.

The format of this thesis is as follows: a literature review chapter provides readers with background information regarding the relevant topics included in this thesis. This includes an introduction to wastewater, treatment methods, the socioecological risks associated with sewage, the role of emotions in decision-making, an overview of the policymaking process, and characterizations of how power operates in sociopolitical systems. The literature review culminates with an analytical framework that provides a scaffold for characterizing the different kinds of power that actors can access. The next chapter describes and justifies the study design and methods used. Chapter 4, Case Description and Context, is a background section that provides readers with a timeline of events, introduces the different participants, and classifies them based on their affiliations. Chapter 5 is the data and analysis section, and describes the actions of activists and their impacts on the policymaking process, divided into the three themes described above. A summary section at the end of the data and analysis chapter describes the main actions taken by each of the activist and NGO groups, and uses the analytical

framework to classify the kinds of power from which they drew. Finally, Chapter 6 concludes the thesis and describes opportunities for future research.

2. Literature Review

The purpose of this chapter is to present a summary of the relevant academic literature. This chapter is divided into four main sections. First, there will be a scientific and technical discussion defining wastewater, describing treatment methods, and exploring the potential socioeconomic impacts of wastewater. This is to familiarize readers with the technical terminology and concepts that activists and policymakers used throughout this case study to argue for or against wastewater treatment.

Next, this literature review will describe the role of emotions in communication and decision-making. It will begin by attempting to define emotion and exploring the cognitive effects of emotions on decision-making. Then, it will describe the uses and effects of emotions commonly mobilized by social movements, including fear, guilt, shame, embarrassment, and disgust. This section will also discuss the role of humour in prompting emotions, as well as the ethics of using humour as a political tool.

Following this will be a section describing the policymaking process, with special attention paid to the stages most targeted by activism in this case study. This will be followed by a brief discussion regarding the philosophy of evidence-based policymaking, which was a contentious worldview within the participants of this case study.

Finally, the literature review will culminate in a discussion of different forms of power, and present an analytical framework for understanding how different actors within the case study mobilized in pursuit of their goals.

2.1. Wastewater, Treatment, and Socioecological Risks

This section first defines what wastewater is, and provides an overview of the ways in which wastewater is treated. Then, it describes some of the main risks wastewater poses to ecosystems and society when released into the environment.

2.1.1. What is Wastewater?

Wastewater is a broad term that Yudelson poetically defined as, “water that starts life as clean drinkable water and winds up polluted” (2010, p. 145). In other words, “wastewater” is an umbrella term for water that has been used, rendering it unsuitable for another desired use without some form of treatment to remove undesirable substances (Yudelson, 2010). Wastewater is commonly divided into four categories based on its source: stormwater, industrial, agricultural, or domestic, which is sometimes called sanitary wastewater and colloquially known as sewage. This thesis discusses primarily stormwater and domestic wastewater. Stormwater is defined as water from precipitation that drains off of rooftops, lawns, roads, and other urban surfaces (Environment Canada, 2001). Domestic wastewater is defined as wastewater that contains human excrement. Sources include homes, businesses, institutions, and industries (Environment Canada, 2001). Bodies of water can become polluted with contaminants or wastewater originating from point or non-point sources. Point sources are discernible, confined and discrete points of origin such as open pipes or factory discharges (United States Environmental Protection Agency, 2015). In contrast, non-point sources are diffuse and difficult to identify (Ongley et al., 2010; United States Environmental Protection Agency, 2015; Wu et al., 2011). Non-point sources can include agricultural runoff, mining sites, and railways (Ongley et al., 2010). Municipal wastewater treatment plants are the front lines of defense from the potential harms of wastewater on humans and the environment.

2.1.2. Wastewater Treatment

Any of these four types of wastewater can be further described based on whether or not they have been treated. There are a number of different treatment levels and methods that can be applied to wastewater. These are commonly broken down into the categories of primary, secondary, and tertiary treatment. One of the biggest decisions to be made when developing wastewater treatment infrastructure is which levels of treatment are necessary or affordable.

For wastewater to be treated using higher-level methods, it must first be treated using the lower levels (Environment Canada, 2001). In other words, raw sewage cannot immediately be treated using tertiary methods without first passing through primary and secondary processes. So, as wastewater moves through the stages of treatment in order, it becomes increasingly cleaner.

Primary wastewater treatment is the physical separation of solid particles from the wastewater (Capital Regional District, 2019; Environment Canada, 2001; Government of Ontario, 2019; Sierra Legal Defense Fund, 2004). First, wastewater is screened to remove large debris from the effluent (Environment Canada, 2001; Government of Ontario, 2019). This is done to protect machinery from being damaged by objects and grit, and makes other treatment processes more effective (Environment Canada, 2001; Government of Ontario, 2019, Sierra Legal Defense Fund, 2004). Some scholars and practitioners refer to this as its own treatment stage called preliminary treatment (Government of Ontario, 2019), screening (Johannessen et al., 2015; Sierra Legal Defense Fund, 2004) or pre-treatment (Krogh et al., 2018), while others maintain that it is part of the more general category of primary treatment (Environment Canada, 2001). Once the water has been screened, larger particles are allowed time to settle to the bottom by gravity (Environment Canada, 2001; Government of Ontario, 2019; Sierra Legal Defense Fund, 2004). Sometimes this process is aided by the addition of chemical flocculants, which encourage the particles to stick together and settle out more effectively (Government of Ontario,

2019; Sierra Legal Defense Fund, 2004). Additionally, floating substances like fats, oils, and some organic material may be skimmed off the surface of the water at this stage (Environment Canada, 2001; Government of Ontario, 2019).

Secondary treatment consists of biological processes to remove dissolved and suspended organic compounds from the wastewater (Capital Regional District, 2019; Environment Canada, 2001; Government of Ontario, 2016; Sierra Legal Defense Fund, 2004). The wastewater is introduced to controlled populations of bacteria in a well-oxygenated environment that digest the organic material present in the wastewater (Environment Canada, 2001; Sierra Legal Defense Fund, 2004).

Tertiary treatment comprises of a variety of processes that remove remaining suspended and dissolved substances left over from secondary treatment (CRD, 2019; Environment Canada, 2001; Sierra Legal Defense Fund, 2004). Tertiary treatments can target a variety of specific contaminants, including heavy metals, pharmaceuticals, and nutrients like nitrogen and phosphorus (Environment Canada, 2001; Sierra Legal Defense Fund, 2004). Many tertiary treatments are very expensive to install and maintain, which is a contributing factor to their relative rarity (Sierra Legal Defense Fund 2004). Some scholars consider disinfection of the wastewater through methods like chlorination, UV exposure, or ozonation a part of tertiary treatment (Sierra Legal Defense Fund, 2004, Environment Canada, 2001).

Scientifically speaking, the appropriate level of treatment is dependent on the nature of the contaminants that require removal, the desired quality of the treated effluent, and the sensitivity and characteristics of the receiving environment. However, sociopolitical phenomena like political will, financial resources, and lobbying activities of stakeholders as well as private sector providers can also have a large impact on the treatment methods selected.

The characteristics of the local receiving environment were one of the hotly debated aspects in the evaluation of the appropriate wastewater treatment methods in Victoria. Certain conditions can

break down and assimilate the nutrients in wastewater more quickly, lowering the risk of it harming humans and ecosystems (Krogh et al., 2018). For example, cold waters that move rapidly and have high concentrations of dissolved oxygen help to dilute and oxygenate the waste, promoting the aerobic decomposition of the fecal matter (Krogh et al., 2018; Sedlak, 2014). In addition, exposure to UV light can play a role in disinfection as well as the breaking down of certain chemical compounds (Environment Canada, 2001; Yudelson, 2010). While the conditions of the specific location will vary, due to their size and strong currents, oceans have the potential to be more forgiving receiving environments than most freshwater bodies (Krogh et al., 2018).

2.1.2.1. Sludge and Biosolids

In discussing wastewater systems, it is impossible to have a conversation about the effluent itself without also talking about the solid substances removed from the liquid.

Sludge or biosolids are the terms for the concentrated, solid or semi-solid waste products of wastewater treatment (Canadian Council of Ministers of the Environment Biosolids Task Group, 2010; Sierra Legal Defense Fund, 2004). They are often disposed of in sealed landfills, though this practice is increasingly seen as unfavorable due to the risk of contaminants leaching into the surrounding ecosystem (Paz-Ferreiro et al., 2018; Sierra Legal Defense Fund, 2004). Increasingly, biosolids are being seen as a resource, as they contain high amounts of nutrients like nitrogen and phosphorus which can make them powerful fertilizers, as well as energy that can be harvested through incineration (Paz-Ferreiro et al., 2018; Sierra Legal Defense Fund, 2004).

However, biosolids can also contain a large range of potentially hazardous contaminants, including pathogens, heavy metals, hormones, pharmaceuticals, personal care products, and antimicrobials (Paz-Ferreiro et al., 2018; Sierra Legal Defense Fund, 2004). Applying them on land as fertilizers or putting them in landfills runs the risk of contaminants leaching out and entering soils,

drinking water sources, and food chains, (Canadian Council of Ministers of the Environment Biosolids Task Group, 2010; Paz-Ferreiro et al., 2018; Sierra Legal Defense Fund, 2004). While incinerating biosolids can break down some contaminants like pathogens, it runs the risk of making other contaminants airborne if done incorrectly (Sierra Legal Defense Fund, 2004). Due to these risks, there are strict laws in many countries including Canada detailing how biosolids are processed, incinerated, applied to land, or landfilled (Canadian Council of Ministers of the Environment Biosolids Task Group, 2010). Further, some regions and municipalities, including the CRD, have bylaws further restricting their distribution on land (Romphf, 2023). Research on how to make biosolids safer to use is ongoing (Paz-Ferreiro et al., 2018).

2.1.3. Potential Socioecological Impacts of Wastewater

The most common arguments made in favour of implementing wastewater treatment are around its impacts on the environment and human society. Wastewater release sites can be considered point sources for heavy metals (Jacob et al., 2018; Shamuyarira & Gumbo, 2014), pharmaceuticals and personal care products (PPCPs) (Bilal & Iqbal, 2019; Chinnaiyan et al., 2018; Krogh et al., 2017), microplastics (Talvitie et al., 2017), fecal bacteria (Brown, 2004; Sedlak, 2014), and excess nutrients (Conley et al., 2009; van Puijenbroek et al., 2015). These can contribute to a number of human and environmental health problems, especially if the receiving environment is a source of drinking water or a fishing site.

A 1997 Health Canada report estimated that the cost of treating health problems related to poor water quality in Canada was about $300 million per year (Environment Canada, 2001; Health Canada, 1997). This includes treatment for illnesses caused by waterborne pathogens, damage to the body from heavy metal ingestion, and exposure to other toxins and chemicals found in wastewater (Environment Canada, 2001; Health Canada, 1997). These pollutants can enter the human body through ingestion of

contaminated water, fish, or seafood; absorption through the skin and eyes when swimming; and through the inhalation of contaminated water droplets while showering (Environment Canada, 1997).

While wastewater is associated with many potential ecological hazards, only the concerns that were seen as most pressing by the actors in this case study are presented below. This includes heavy metals, fecal pathogens, and pharmaceuticals and personal care products (PPCPs).

2.1.3.1. Heavy Metals

Heavy metals can enter surface water both naturally and anthropogenically through stormwater runoff and sewage (Jacob et al., 2018; Johannessen et al., 2015). Some heavy metals will naturally weather from rocks and wash directly into waterways (Brown, 2004), whereases runoff from agricultural areas can transport heavy metals from fertilizers and pesticides (Jacob et al., 2018). Major industrial sources of heavy metals include the mining, electroplating, smelting, tanneries, electronics, and paper industries (Brown 2004, Jacob et al., 2018). Sewage sludge can be considered a heavy metal source of average severity, commonly contributing arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, molybdenum, zinc, thallium, and antimony to a receiving environment (Jacob et al., 2018, Shamuyarira & Gumbo, 2014).

Heavy metals such as arsenic, cadmium, lead, copper, chromium, nickel, zinc, aluminum, and manganese have been found to be threats to the environment at high levels (Jacob et al., 2018). These substances can bioaccumulate in organisms causing neurological and developmental issues, which can contribute to population collapses and biodiversity loss (Shamuyarira & Gumbo, 2014). As a result, the US Environmental Protection Agency and the World Health Organization have set maximum permissible limits for heavy metals in various systems (Jacob et al., 2018).

Heavy metals are a tricky pollutant because they are able to persist in the environment for a long time. In aquatic environments, particles of sediment with adsorbed minerals sink to the bottom where

they accumulate over time (Jacob et al., 2018). If they get consumed by aquatic organisms, they can enter the food chain (Jacob et al., 2018). Many heavy metals are not readily biodegradable, and bioaccumulate inside of the cells of the organisms who consume them rather than being excreted (Jacob et al., 2018). This means that prolonged exposure can result in an organism eventually reaching a high enough concentration of metals in the body to be toxic (Jacob et al., 2018). This can cause damage to the lungs, kidney, liver, pancreas, and nervous system (Jacob et al., 2018). In addition, some forms of chromium have been shown to damage DNA (Jacob et al., 2018).

2.1.4.2. Fecal Pathogens

One of the most obvious hazards associated with untreated sewage is the pathogen risk associated with fecal bacteria, viruses, and parasites. There are a number of pathogens that can be found in human waste and cause illness if ingested. For example, Cholera (*Vibrio cholerae*), typhoid (*Salmonella typhi*), diarrhea including dysentery (several species of *Shigella* bacteria), and *E. coli* (*Escherichia coli*) are some of the most common illness-causing bacteria found in wastewater (Namura et al., 2008; Orrett, 2009; Sedlak, 2014; Sikorski & Levine, 2020). Parasites that can be spread from fecal matter include *Giardia* and *Cryptosporidium* (Brown, 2004) and viruses like norovirus, sapovirus, hepatitis A and E viruses, Aichi virus, enteric adenoviruses, rotaviruses, and astroviruses (Nigel Cook, 2013) can be spread through the stool of infected individuals. These pathogens are mainly a threat to humans. Many of these pathogens, such as E. coli and cholera, are native or naturalized to aquatic environments or the guts of humans and some animals and pose little threat to other animals and the greater environment (Ishii & Sadowsky, 2008; Jutla et al., 2013). Most water-related outbreaks of giardia, the most common waterborne disease affecting humans in Canada, have been traced back to human sewage contamination (Health Canada 1997; Environment Canada 2001). Water contaminated with fecal pathogens can cause a number of health issues including gastrointestinal illness and skin, eye, ear, nose,

and throat infections (Environment Canada, 2001). Since these symptoms can be very mild, it is difficult to track outbreaks as they will often go unreported (Environment Canada, 2001).

2.1.4.3. Pharmaceuticals and Personal Care Products (PPCPs)

PPCPs can be a category of interest to many activists since the pollutants themselves as well as their potential impacts are difficult to measure, presenting unknown potential dangers. PPCPs are defined as "a wide spectrum of chemicals which are commonly used in everyday life as human as well as veterinary medicine and for cosmetic care" (Chinnaiyan et al., 2018, p. 287). This includes prescription and over-the-counter medications, veterinary pharmaceuticals, cosmetics, and skin and hair products (Chinnaiyan et al., 2018). The term was first coined in 1999, after they were detected in water bodies and elsewhere in the environment in the early 1980s (Chinnaiyan et al., 2018). Since then, they have been detected worldwide and are considered contaminants of emerging concern (Chinnaiyan et al., 2018). One of the reasons why pharmaceutical products have the potential to be hazardous is because many of them are designed to provide clinical doses that achieve noticeable effects at low concentrations (Krogh et al., 2017). This means that it does not necessarily take a large amount of a contaminant to be present in the environment to have a perceivable effect (Krogh et al., 2017). Some studies have associated high concentrations of PPCPs in the environment to population crashes of fish and other species (Kidd et al., 2007).

Wastewater has been shown to be the biggest source of PPCPs in the environment (Krogh et al., 2017). Since many of these products are used at the household level, they primarily enter via the municipal wastewater system (Chinnaiyan et al., 2018). While most existing wastewater treatment systems are unable to completely remove PPCPs from effluent (Bilal & Iqbal, 2019; Chinnaiyan et al., 2018; Conley et al., 2009; Kidd et al., 2007), lower levels of treatment have been shown to reduce their

concentrations (Krogh et al., 2017). Additionally, some PPCPs, like estrogen, have short half-lives, and will therefore degrade and cease to pose risks to the environment if sources are abated (Kidd et al., 2007).

2.1.4.4. Wastewater and Fisheries

Wastewater policy can be of interest to fishers and fishing organization due to its potential impact on fisheries. Many fish can accumulate toxins in their body to levels that would be harmful to humans if ingested. This includes biotoxins as well as chemicals and bacteria that can be found in wastewater. As a result, large areas of coastline can be closed to fisheries due to contamination from sewage and other human sources (Environment Canada, 2001). The consumption of bivalve molluscs – such as mussels, scallops, oysters, and clams – pose a threat to human health due to their biology (Environment Canada, 2001). These creatures filter large volumes of water to extract food, and in the process can accumulate high levels of toxic substances like metals, pathogens, and chemical compounds from the water (Blanco, 2018; Environment Canada, 2001; Kramer et al., 2016; Pan & Han, 2023). Shellfish exposed to sewage that has not been disinfected can become contaminated with fecal bacteria. When eaten, they can cause illnesses such as gastroenteritis, salmonellosis, typhoid fever, cholera, and hepatitis (Environment Canada, 2001). In Canada, fishery closures due to bacteriological pollution are the most common, followed by pollution from natural biotoxins (Environment Canada, 2001).

2.1.4.5. Wastewater and Tourism

Tourism-related businesses can become interested in wastewater policy due to the potential impacts of wastewater on recreational activities. Untreated wastewater carries high volumes of nutrients, which can cause overgrowths of plants and bacteria, a phenomenon called eutrophication. These organisms can release biotoxins that make water dangerous for recreation, and often lead to the closure of parks and beaches (Environment Canada, 2001; van Puijenbroek et al., 2015). In addition to having ecological consequences, eutrophication can have social and economic ramifications. Even if

waterfronts attractive to tourists and residents alike are not formally closed, they can still become unpleasant to be around. The rapid growth and decay of plants and bacteria can result in water bodies becoming cloudy and shorelines becoming foamy and smelly from the release of large amounts of ammonia (Environment Canada, 2001). This can make beaches, parks, and harbours undesirable for swimmers, boaters, and fishers who may wish to recreate in the area, and potentially affect property values (Environment Canada, 2001).

Even in the absence of eutrophication, wastewater discharges can still be a tourism deterrent. Unpleasant sewage odours or the presence of waste products on shore can dissuade visitors from spending time in the area, which can remove tourism dollars from the local economy. (Environment Canada, 2001). This happened in St. John's, Newfoundland. The municipalities surrounding St. John's contributed 120 million litres of raw sewage and stormwater to the harbour daily, much of which settled to the ocean floor (Environment Canada, 2001). When the harbour expanded to allow for larger cruise ships, it was found that the ships stirred up the sediment, releasing noxious gasses that made people ill from the smell (Environment Canada, 2001). It also brought unfiltered flushed waste like condoms and menstrual products to the water's surface, to the displeasure of tourists and locals alike (Environment Canada, 2001).

On the other hand, tourism itself and the wastewater it creates can present challenges for local residents. Victoria's increasing cruise ship tourism brings with it not only air-based pollutants and unpleasant smells, but also contributes roughly 150 tonnes per month of solid waste to local landfills (Capital Daily Staff, 2019). It has furthermore been estimated that the cruise ships discharge 1.5 billion litres of non-sewage wastewater like dishwater and laundry discharge along the shores of British Columbia annually (Capital Daily Staff, 2019; World Wildlife Fund Canada, 2022).

2.2. Emotions, Decision-making, and Activism

Humans are not purely rational beings. We make decisions not solely based on facts alone, but also according to values, morals, and emotions (Barbalet, 1998; Davidson & Kecinski, 2022; Doliński, 2016; Heinrichs & Rojas, 2022; Izard, 2010; Kleres & Wettergren, 2017; Mankad, 2012; Slovic et al., 2004). Some scholars go as far as to argue that emotions are necessary for communicating and understanding the moral risks of climate change and thus prompting sufficiently large and urgent responses (Roeser, 2012). This section describes the emotions commonly used by activists to broadly communicate about their issues of interest and persuade others to their goals. After a brief discussion on what emotions are and how they can be powerful communication tools, this section explores more closely how negative emotions like fear, guilt, shame, embarrassment, and disgust operate and affect how people perceive of an issue. This section additionally includes a discussion of humour. While more of a communication tool than an emotion itself, the use of humor elicits an emotional response (’t Hart, 2007), and thus is a powerful tool in deploying emotions in arguments.

It is difficult to define what an ‘emotion’ is, as the term is used differently in different disciplines as well as colloquially, with there not being a widely agreed upon definition (Aminzade & McAdam, 2001; Izard, 2010). Scholars who have examined how the word ‘emotion’ is commonly used in academic circles identify that many of the more developed definitions attempt to capture both their structure (within the brain and body) and function (within the mind and in social settings) (Aminzade & McAdam, 2001; Izard, 2010). Biologically and physiologically, emotions are defined in this thesis as follows: emotions are physical and cognitive feeling states that provide information to the person experiencing them, which motivates action (Aminzade & McAdam, 2001; Izard, 2010). This definition is a simplified definition of that synthesized by Izard after their work examining the different ways in which psychologists, philosophers, behaviour and cognitive scientists, as well as computational cognitive

scientists examining artificial intelligence conceive of emotions (2010, see especially pages 364 and 367). Sociologically and culturally, emotions are defined in this thesis as feelings (changes in bodily sensations), often associated with actions and expressions (Aminzade & McAdam, 2001; Thoits, 1989). These expressions are then interpreted by external audiences as a form of communication that can facilitate group bonding (Aminzade & McAdam, 2001; Davidson & Kecinski, 2022; Thoits, 1989). In this thesis in particular, the term 'emotion' is used to describe cognitive affective states, or 'feelings,' that participants describe in response to various circumstances, and that they use to inform their own actions or that they speculate informed the actions of others. Emotions will be identified and described based on the names that participants used to describe them across the dataset.

There is general agreement among psychologists and neuroscientists that emotions affect how people think, make decisions, and act (Davidson & Kecinski, 2022; Doliński, 2016; Izard, 2010). Some researchers have argued that emotions are in fact the drivers of action, and that knowledge on its own is insufficient to prompt action, especially in social movements (Aminzade & McAdam, 2001; Barbalet, 1998; Kleres & Wettergren, 2017). More specifically, when people are in a highly emotionally aroused state, they are more likely to exhibit compliant behaviour in response to a request (Cann & Blackwelder, 1984; Doliński, 2016). There are several theories as to why this is. If the emotional arousal is perceived as unpleasant, then fulfilment of a request might act as a way of reducing the arousal (Doliński, 2016). Alternatively, some scholars believe that people are more likely to exhibit compliance because the emotional arousal temporarily impairs rational thinking and decision-making (Bodenhausen, 1993; Doliński, 2016; Treur & Umair, 2015). Regardless of the mechanism, this known phenomenon means that inducing emotional responses can prompt an individual to be more agreeable.

Another reason why emotions may play a role in decision-making is in relation to self-image. Humans tend to want to think well of themselves, and accordingly wish others to also see them in a positive light (Doliński, 2016). There are two main theories as to why this is. Some scholars ascribe to

Terror Management Theory's conceptualization of self-image, which says that positive beliefs about oneself reduce the terror associated with one's awareness of their own mortality (Doliński, 2016; Pyszczynski et al., 2004; Wolfe & Tubi, 2019). Alternatively, some scholars hypothesize that this phenomenon is more accurately ascribed to human's desire for belonging in a community, and fear of exclusion from the communities we interact with day to day (Baumeister & Tice, 1990; Doliński, 2016). This desire to promote and preserve self-image in decision-making is seen as especially important regarding the emotions of fear, guilt, shame, and embarrassment, emotions that were prominent in this case study (Doliński, 2016).

Activists have long known that emotions can be a powerful communication and persuasion tool. For example, fear of future climate catastrophe is often used as a motivator for environmental movements (Armbruster et al., 2022; Kleres & Wettergren, 2017). However, fear on its own has been shown to produce mixed results in activism (Aminzade & McAdam, 2001; Gravante & Poma, 2016; Harper et al., 2021; Jarymowicz & Bar-Tal, 2006; Kleres & Wettergren, 2017). In some cases, fear can lead to fatalism, where individuals feel a lack of control over the situation, and thus do not bother changing their behaviour (Harper et al., 2021). This has been a criticism of much of the media coverage around climate change issues (Armbruster et al., 2022; Feldman et al., 2017); messaging often focuses on the threats and negative aspects of climate change over pro-climate solutions, which can lead to a public that is unfamiliar with climate solutions, or that doubts their effectiveness (Armbruster et al., 2022; Moser, 2016).On the other hand, fear can be a powerful self-motivator, with activists reporting it as one of the main reasons why they became involved with activism (Kleres & Wettergren, 2017). Some scholars note that fear can be an effective communication strategy in mobilizing support for climate-change policy if it is paired with efficacy statements for the proposed interventions, or hopeful messages (Armbruster et al., 2022; Kleres & Wettergren, 2017).

Other common emotions among activists are guilt and anger. Guilt has been commonly associated with the Animal Rights movement, where some scholars found that activists encouraged guilty feelings to prompt empathy and motivate themselves and others to continue their activism work (Jacobsson, 2016). Anger has also been a well-documented emotion used across social movements as a motivator. Some studies have argued that guilt can transform fear into anger and mitigate fatalistic tendencies (Kleres & Wettergren, 2017). Some scholars have also proposed that anger at a perceived injustice combined with hope for future change experienced together are the necessary emotional foundation on which many social movements are built (Aminzade & McAdam, 2001).

Additionally, Gravante & Poma have described the importance of what they call reciprocal emotions like gratitude, loyalty, trust, and love (2016). They have noted that these emotions are essential for promoting intra-group bonding among activists, encouraging participation in the movement, and strengthening commitment (2016). These emotions have also been found to reduce activist burnout and loneliness (Gravante & Poma, 2016). The authors argued that this is especially important in movements where the activists face stigma (Gravante & Poma, 2016).

Fear, shame, guilt, embarrassment, and disgust appeared frequently in this case study, and will be discussed in more detail below. A discussion of humour as a tool to communicate ideas and prompt emotional responses will follow.

2.2.1. Fear

For the purposes of this thesis, fear is defined as an unpleasant emotion associated with avoidance in response to an actual or perceived threat (Harper et al., 2021). There is a relationship between experiencing fear and the effectiveness of a persuasive message (Doliński, 2016; Harper et al., 2021). For example, fear was shown to be the biggest predictor in positive behaviour change related to COVID-19 prevention (Harper et al., 2021). Some research asserts that the relationship between fear and

the effectiveness of a persuasive message is curvilinear (Janis & Feshbach, 1953), but more studies have found the relationship to be linear (Boster & Mongeau, 1984). It is speculated that curvilinear relationships sometimes occur because it is difficult to account for how much fear a participant is experiencing (Doliński, 2016; Shen & Dillard, 2014).

While fear can be associated with compliance, it can be a risky strategy in practice. In many cases, rather than allowing themselves to be affected, people will instead display avoidance behaviours (Doliński, 2016; Moscarello & Maren, 2018). For example, if a fearful message is delivered via media such as TV, news articles, or social media, there is a chance that instead of engaging, the individual will simply avoid the feeling by changing the channel, putting the newspaper down, closing the tab, or scrolling away.

2.2.2. Guilt and Shame

Like fear, guilt and shame are both negative feelings. They often appear together, and are associated with the experience of regret and contrition (Baumeister et al., 1995; Doliński, 2016; Tangney, 1995). Generally, these feelings occur when an individual feels like they have violated a rule or cultural norm (Doliński, 2016; Nelissen et al., 2013). The biggest difference between shame and guilt is that shame is public in nature, whereas guilt is internal and focused on the self (Doliński, 2016; Nelissen et al., 2013). Some scholars have found that between the two, guilt tends to be more beneficial for the individual in their relationships (Tangney et al., 2007), whereas shame was more associated with self-destructive behaviours (Nelissen et al., 2013; Tangney & Dearing, 2003). Guilt in particular has been shown to be an effective trigger for promoting pro-environmental behavioural intentions (Moore & Yang, 2020). Some have categorized shame and guilt as ‘moral emotions,’ as they elicit concerns for others rather than the self, producing prosocial tendencies, with guilt being identified as the more morally

inclined of the two (Nelissen et al., 2013). In other words, experiencing either shame or guilt is associated with engaging in moral behaviours (Nelissen et al., 2013).

Guilt and shame are associated with a decrease in one's feelings of self-worth (Doliński, 2016; Nelissen et al., 2013). However, positive self-perception can be recovered by doing something that is socially desirable, such as fulfilling a request (Doliński, 2016; Konoske et al., 1979). This is because engaging in such a behaviour can reinforce the feeling that an individual is positive and valuable (Doliński, 2016; Konoske et al., 1979). This behaviour can also act as a distraction from the unpleasant, self-focused feelings (Cialdini et al., 1973; Doliński, 2016). In addition, some people have hypothesized that feelings of guilt and shame are associated with a loss of control over events (McMillen, 1971). As such, intentionally engaging in a task may help alleviate the negative feelings by returning a sense of control to the individual, especially if the activity is successful (McMillen, 1971). Therefore, an individual experiencing shame or guilt may be more amenable to fulfilling a request or complying with a suggestion.

2.2.3 Embarrassment

Embarrassment is a negative, self-conscious emotion that results from the evaluation of oneself from another's perspective, often in response to social transgressions (Doliński, 2016; Hershcovis et al., 2017; Higgs et al., 2020). Embarrassment occurs when people feel a desire for self-preservation because they think that others have formed undesirable impressions of them (Doliński, 2016; Hershcovis et al., 2017). Embarrassment has not been as widely studied as shame and guilt, especially as it pertains to susceptibility to requests (Doliński, 2016; Hershcovis et al., 2017; Higgs et al., 2020), but some studies have demonstrated that individuals who have recently experienced embarrassment are more likely to be agreeable when asked to complete a task (Apsler, 1975; Doliński, 2016). It is theorized that this occurs for two reasons: the individual experiences a desire to 'recover lost face' and leave a good impression on

those who were potentially witness to the embarrassing event, and/or agreeing to help someone can help the individual recover their sense of positive self-image (Apsler, 1975; Doliński, 2016; Higgs et al., 2020). This is also supported by Hershcovis et al., who theorized that when in groups, people are attuned to potential threats to their belongingness (2017). Feelings of embarrassment can signal to someone that they need to hide or change some aspect of themselves. Therefore, feelings of embarrassment can make one more likely to change in an attempt to 'save face', resolve negative feelings towards oneself, and increase their feelings of belongingness in a group.

2.2.4 Disgust, or, the 'Yuck Factor'

Another emotion that plays a role in this case study is disgust. In this thesis, disgust is framed through the lens of the 'Yuck Factor.' The Yuck Factor is a concept originating from the fields of biotechnology and bioethics that attempts to explain why some scientifically sound concepts often face public backlash (Ching, 2010; Schmidt, 2008; Stewart & Lux, 2009). The Yuck Factor refers to the phenomenon where an individual experiences the negative emotion of disgust in response to new idea or technology, making them hesitant to accept or adopt it (Callaghan et al., 2012; Ching, 2010; Schmidt, 2008; Stewart & Lux, 2009). There is documentation of the Yuck Factor being triggered in response to a number of ideas or technologies, including cloning, genetically modified crops, and wastewater recycling (Callaghan et al., 2012; Ching, 2010; Schmidt, 2008; Wester et al., 2015, 2016).

While what elicits the disgust reaction is partially culturally-bound, one common subject that provokes repugnance is fecal matter (Cote et al., 2017; Stewart & Lux, 2009; Wester et al., 2015, 2016). This aversion seems to be near-universal, appearing even in animals (Schmidt, 2008). It has been theorized that this aversion is an evolutionary trait meant to protect animals (including humans) by avoiding contagious pathogens (Rozin & Fallon, 19870501; Schmidt, 2008; Stewart & Lux, 2009; Wester et al., 2015, 2016). This work has been built upon by the field of social psychology and incorporated into

the Terror Management Theory framework. The premise of this framework is that humans will unconsciously try to repress reminders of their mortality, which in turn affects their behaviour (Cote et al., 2017; Cox et al., 2007; Pyszczynski et al., 2004; Wolfe & Tubi, 2019). Some scholars have theorized that humans are disgusted by feces because it reminds them of their likeness to animals, and thus their mortality (Rozin & Fallon, 1987; Stewart & Lux, 2009). Since this reminder is unpleasant, humans thus avoid the feces (or idea of feces) that triggered the reaction in the first place. Other scholars have found that it is specifically 'pathogen disgust', or disgust toward substances harboring disease-causing organisms that deters people from associating with initiatives related to fecal matter (Wester et al., 2015, 2016).

The Yuck Factor is commonly cited as a barrier to wastewater-related initiatives (Ching, 2010; Stewart & Lux, 2009; Wester et al., 2015, 2016). This is particularly the case regarding the implementation of wastewater recycling projects (Ching, 2010; Stewart & Lux, 2009 Wester et al., 2015, 2016), where wastewater, often including sewage, is treated to potable standards and redistributed into the drinking water system. Some scholars posit that this is because these systems also invoke interacting with the recycled water in high contact ways such as through bathing and ingestion, which are inherently perceived as vulnerable to the wellbeing of one's body (Stewart & Lux, 2009). While this case study did not concern wastewater recycling, the Yuck Factor provides a useful lens, as many participants cited the emotion of disgust as a factor that influenced their beliefs and actions.

While disgust is a common reaction to certain topics and can influence decision-making on a personal level, it is not always an effective political tool. There is considerable evidence in the literature that the success of the Yuck Factor derailing support for initiatives is unreliable. For starters, the type of ideas or behaviours that elicit a reaction of disgust is largely culturally dependent (Cote et al., 2017; Stewart & Lux, 2009). This means that the employment of the Yuck Factor will depend on the norms and tastes of the audience. Additionally, there is evidence to suggest that prejudice stemming from the Yuck

Factor can often be overcome when audiences are presented with factual information regarding the safety and ethics of the idea in question (Ching, 2010; Dolnicar et al., 2010; Stewart & Lux, 2009; Wester et al., 2016), and in phrasing educational information about wastewater-related initiatives in ways that are cognitively-focused rather than affectively-focused (Wester et al., 2016). This means that efforts to promote the Yuck Factor could easily be made moot depending on the actions of other people in the system with opposing views.

Additionally, there is evidence to suggest that when presented with information that invokes a disgust reaction, some people will engage in avoidance behaviours rather than advocating for change. This was seen in Walkerton, Ontario, when fecal matter from agricultural runoff contaminated the town's drinking water source, leading to the hospitalization of 65 people and seven deaths (Cote et al., 2017). Researchers found that even years after the incident, when the water had been shown to be consistently suitable for drinking and additional safety measures had been put in place to avoid a repeat incident, many residents still chose to drink exclusively bottled water (Cote et al., 2017). This shows that the Yuck Factor can be a risky strategy as it can prompt behaviours other than what the activists intended.

2.2.5 Humour

Humour is defined as a way of communicating based on ambiguity and incongruity that appeals to the impulse to laugh (Abdel-Raheem, 2018; El Refaie, 2011; Sørensen, 2016; Veale, 2004). While the impulse to laugh appears to be biological (Martin, 2007; Sørensen, 2016), what is considered funny is culturally bound and changes from context to context, individual to individual (Sørensen, 2016; 't Hart, 2007). However, just because something is humorous, it is not automatically non-serious (Sørensen, 2016; 't Hart, 2007); this is especially true when humour is used in political settings, as will be discussed in this chapter. Similarly, humour is neither good nor bad, and can both unite and divide people (Abdel-Raheem, 2018; El Refaie, 2011; Sørensen, 2016; 't Hart, 2007; Veale, 2004).

While there are several theories to explain how humour works, the leading theory in the humour studies literature as of late is incongruity theory (Sørensen, 2016; Weaver & Mora, 2016). This is a cognitive understanding of how one processes something to be funny (Sørensen, 2016). In incongruity theory, "humour is found to include a discrepancy or ambiguity which forces us to think in more than one dimension at the same time" (Sørensen, 2016, p. 7). This theory gives insight into why humour can be a useful tool in activism. By forcing an individual to think about an idea in multiple ways and by highlighting discrepancies, humor invites audiences to consider an issue from a new perspective. This can facilitate the process of one changing their mind on an issue or open up space for nuance in discussion.

Similar to embarrassment and the Yuck Factor, humour can be a useful tool in activism because it can push conversations into spaces that might normally be considered taboo, or break taboos altogether, in ways that are more socially acceptable (Weaver & Mora, 2016). In other words, comedy gives license to disrupt and redefine conversations (Sørensen, 2016; Weaver & Mora, 2016). Some scholars have argued that comedy and humour can provide reinterpretations of the social order in ways that facilitate changing it, since humour can make incongruities visible, at once stating truths and toying with absurdity (Sørensen, 2016; Weaver & Mora, 2016). This can facilitate the ushering in of new ideas and realities, or the evolution of older ones.

Additionally, humour can act as an easy entry point for an issue and gain the attention of broader audiences. Sørensen has stated that often, the target audience of a humorous act in politics is not necessarily politicians or even the members of the public who witness the event firsthand, but mass media, in order to gain attention and awareness for the issue (2016; t' Hart, 2007). In this way, stunts can capture the attention of the media, who can then report on the issue and amplify the message to many more people than the grassroots actors might otherwise be able to reach on their own.

2.2.5.1 The Ethics of Humour as a Political Tool

There are contrasting views within the literature as to whether or not humour should be used as a political tool. Depending on one's perspective, humour could allow a group an unearned political advantage, or it could provide underdogs with a foothold in a debate (t' Hart, 2007; Sørensen, 2016).

Some scholars have argued that saying something under the guise of a 'joke' affords the speaker plausible deniability should the message not be well-received (t' Hart, 2007). This is because some see jokes as inherently unserious (t' Hart, 2007). As such, some scholars have criticized the use of humour in political spheres, including by activists, theorizing that humour is often used in place of other actions that may be more direct or effective, and that it circumvents the 'official' barriers, or checks and balances, of decision-making (t' Hart, 2007). Since one of the qualities of humour is that it can be disarming due to its ability to play on the unexpected (t' Hart, 2007; Sørensen, 2016; Weaver & Mora, 2016), some have described humour as appealing to emotion rather than addressing 'rational' arguments, making statements more difficult to refute and thus short-circuiting debate (t' Hart, 2007). In other words, jokes are used in place of more substantive arguments to 'cut through' obstacles rather than engaging in good-faith (t' Hart, 2007). For these reasons, some have described humour as the "weapon of the weak" (t' Hart, 2007, p. 1).

2.3. Policy

Since the goal of activism in this case study was to bring about policy change, it is important to briefly describe how policy is made and explore different philosophies and influences regarding how policy takes evidence into account. This section presents a policy process framework, with attention given to the stages that were most affected by activism in this case study. Then, a brief discussion of the role of evidence will take place.

2.3.1. The Policy Process

There are ample frameworks that seek to describe how policy is or should be created. Most are either linear (Grindle, 1991) or cyclical (Edwards, 2005; Howlett & Giest, 2015). Many people who create or use policy frameworks do so to make it easier to understand and communicate how policy is made, or how it can be made differently (Edwards, 2005; Howlett & Giest, 2015). Many of the creators and users of such frameworks acknowledge that these frameworks are inherently flawed and over-simplified; policymaking in practice is complicated and varied, and sometimes steps are skipped or completed out of order (Edwards, 2005; Howlett & Giest, 2015). Additionally, these models are often inadequate on their own for describing how much time is spent on each step, as well as which actors are involved (Howlett & Giest, 2015).

Howlett and Giest identified the following five-step model, which builds off of Lasswell's cyclical models first conceptualized in the 1950s, as being one of the most commonly used frameworks within the fields of policy studies and policy sciences today (2015). Howlett and Giest note that there are other iterations of this model that articulate a similar process, but with either more or fewer substages (2015). The five-step version that Howlett and Giest present is favoured as it strikes a balance between being simple enough to be easily understood, while being descriptive enough to provide a nuanced understanding of the policy process. As such, the five-step model will be used as the basis for discussion in this thesis:

1) Agenda setting: a problem is identified by policy actors, and a variety of preliminary solutions are put forward (Howlett & Giest, 2015).
2) Policy formulation: more specific potential solutions are developed and narrowed down. Different actors may promote their favoured solutions at this stage (Howlett & Giest, 2015).

3) Decision-making: formal government actors officially decide which option to adopt (Howlett & Giest, 2015).
4) Policy implementation: governments put their chosen solution into effect using the tools available to them (Howlett & Gist, 2015).
5) Policy evaluation: the policy is monitored by state and non-state actors. The policy problem may then be reconceptualized and addressed with new policy (Howlett & Giest, 2015).

This thesis will primarily be focused on actions that take place in stages two (Formulation) and three (Decision-Making) of this process within municipal and regional governments. These stages are expanded upon briefly below.

A variety of actors can be involved in the policy formation stage, shaping the solution options considered. Many of these people are state-actors with relevant expertise, a category of actors many, including this thesis, refer to as bureaucrats (Howlett & Giest, 2015). Bureaucrats of this nature are professionals with recognized expertise in a particular domain who can authoritatively claim policy-relevant knowledge (Haas, 1992). They use their related expertise to create, critique, and recommend sound policy options that align with their fields' understandings of the problems the policy is trying to address (Howlett & Giest, 2015). Additionally, elected political actors who may or may not have relevant expertise on the subject at hand will sometimes play a role in guiding policy formation (Howlett & Giest, 2015).

Furthermore, non-state actors can also be involved with the policy formation stage (Haas, 1992). Generally, these actors represent non-governmental interest groups, and can include academic researchers, businesses, non-governmental organizations, labour unions, and other formalized groups. (Howlett & Giest, 2015). Additionally, members of the public with no specific affiliations but who have

taken an interest in the topic will sometimes participate (Haas, 1992; Howlett & Giest, 2015). This includes grassroots activists.

It has been argued that within the policy formulation stage, it is important for a variety of actors to interact (Howlett & Giest, 2015). This is because it has been shown that processes that involve actors with a variety of different ideas and positions are more likely to generate policy solutions that are more innovative, radical, and integrative compared to networks of actors that are more similar and have more similar ideas (Howlett & Giest, 2015).

Stage three, decision-making, is done by formalized actors, usually elected, voting representatives. Early scholars who wrote on the topic of decision-making conceived of it as a rational process, where an actor would set a goal, examine the possible methods of achieving the goal, and then select the option that maximized benefits and/or minimized risks (Howlett & Giest, 2015; Overman & Cahill, 1990). In this viewpoint, decision-makers are conceived of as cool, logical, and technical actors (Howlett & Giest, 2015; Overman & Cahill, 1990). Later empirical evidence showed that this was seldom the case in practice (Howlett & Giest, 2015; G. Smith & May, 1980). Rather, decision-makers' process was much less formalized, and was more political (Howlett & Giest, 2015; Smith & May, 1980). Bargaining and negotiation processes tended to outweigh more logistically calculated conceptions of costs and benefits (Edwards, 2005; Everett, 2003; Howlett & Giest, 2015). This highlights the complexity and social nature of decision-making in practice. As such, there is some ongoing discussion about the utility of focusing on policy processes versus the content of the decision-making itself (Everett, 2003).

2.3.2. Evidence-Based Policymaking

As described above, scholarly communities' understanding of *how* policy decision-makers choose which policies to develop and implement has evolved over time. At the same time, there have been evolving schools of thought surrounding how these actors *ought* to make their decisions. One

school of thought that gained prominence and popularity near the end of the 20th century is that of evidence-based policymaking. This is a school of thought for which many actors in the case study advocated.

Evidence-based policymaking (EBP) is a concept that, while present in some form throughout history, developed into its modern iteration in the late 1980s and early 1990s in the United States (Baron, 2018; Parkhurst, 2017). This idea states that public policy should be created based on the conclusions of the best possible evidence (Baron, 2018). The evidence in question is the result of rigorously applied research methodologies, often in the natural and social sciences, to determine how to best improve the human experience while making effective use of resources (Baron, 2018).

Champions of EBP argue it can improve policy and society by reducing bias in the policymaking process and selecting paths forward that have the best chance at producing successful outcomes (Parkhurst, 2017; Young, 2013). Simply put, the evidence shows what solutions 'work,' which can then be implemented at scale. In relying on robust bodies of evidence, policymaking is done in a way that is not reliant on opinions, values, or vanity on the part of decision-makers (Parkhurst, 2017). Implicit in this argument is that quality science generates information that is free of personal prejudices, thus removing ideology from the policymaking process (Parkhurst, 2017; Young, 2013).

More recently, there has been increasing critical discussion amongst scholars on the shortcomings of EBP. Critics point out that relying on evidence does not inherently remove bias from the process, but rather runs the risk of shrouding the values that inform policymaking (Parkhurst, 2017; Young, 2013). Many scholars have pointed out that social policymaking is inherently values-driven, informed by the morals of the society that creates it (Parkhurst, 2017; Young, 2013). Many of the issues with which governments are concerned involve diverse stakeholders with different, sometimes conflicting needs, values, and desires (Parkhurst, 2017; Young, 2013). As a result, policymaking is

frequently about trade-offs; the policies that might best serve one group may be undesirable or harmful to another (Parkhurst, 2017). Simply relying on the evidence alone cannot tell policymakers which values to hold and which compromises to make in each situation (Parkhurst, 2017). Additionally, many governmental issues are complex and without clear solutions. Available evidence may be insufficient even though swift action is needed, or evidence of comparable quality may reach conflicting conclusions (Parkhurst, 2017; Young, 2013). In these scenarios, which critics argue happen very frequently, EBP is insufficient on its own to determine conclusions (Parkhurst, 2017; Young, 2013).

These criticisms do not mean that EBP is useless, however. Some scholars have been vocal calling for an approach that seeks high-quality evidence to inform decisions, but also critically engages with the fact that policymaking is inherently social and political (Parkhurst, 2017). This discussion is not confined to academia; many of the arguments described above both in favour and skeptical of EBP were made by state- and non-state actors within this case study, and created fundamental disagreements about how to proceed.

2.4. Power

While the central goal of the actors in this thesis was policy change, not everyone in the case study had equal ability to shape the policy process. Different actors had different kinds and amounts of power based on their positionality. For the purposes of this thesis, power is defined as the ability of a person or group to influence the course of events or the behaviour of others. This thesis will discuss power relative to one's ability to affect wastewater policy outcomes in their favour. This definition has two main components of note: the subjects (individuals and collectives) and the objects (outcomes and behaviours). The choice to include both individuals and collectives builds off the work of Hay (2002) and Arendt (1972) who acknowledge that in addition to being held by individuals, power often operates in terms of collectives working in concert. By including a subject in the definition of power and explicitly

stating that it can be wielded individually or collectively, the definition captures the political nature of power and the importance of collaboration in a policy context (Béland, 2010). Similarly, this definition explicitly acknowledges that power can target outcomes as well as behaviours. This is because within the field of political science, there are multiple definitions of power, some of which describe power affecting outcomes, (see Béland & Cox, 2016; Carstensen & Schmidt, 2016; Hay, 2002) while others describe power affecting the behaviours of other people (see Fuchs et al., 2016; Fuchs & Lederer, 2007; Morriss, 2002). This definition honours both objects of power as both are exhibited in this case study.

Power can further be described in a number of ways. The following sections present three different aspects of power that will be used to discuss how power operated within this case study. After each aspect is defined and explored, an analytical framework will describe how the aspects can be related to each other.

2.4.1. Direct and Indirect Power

The first aspect of power that will be discussed is its directness. Several scholars have conceptualized policymaking power as direct or indirect, notably Bachrach and Baratz (1962), Dahl (1957), and Hay (2002). In this thesis, direct power is defined as one's ability to participate in the policy-making process, thereby partially or fully dictating what outcomes can and cannot take place. For example, a politician voting for a bill that fulfils a campaign promise is an expression of direct power. In this case, the actor (the politician)'s action (voting) impacts the policy-making landscape in a tangible way, impacting whether the bill will be passed into law. They did not need to influence a third party in order to take this action; they were able to affect the outcome on their own.

In contrast, indirect power does not immediately influence policy; rather, it influences something else in the system, an intermediate, that has direct power over the goal. While expressing indirect power might be necessary in order to realize a goal, indirect power alone is insufficient. Bachrach and Baratz

describe indirect power often taking the form as the creation or reinforcement of social and political values (1962), which influences what policies, issues, and outcomes are given attention by actors with direct power (Béland, 2010). This relates closely to Lukes' work describing the power of preference-shaping for different policy outcomes by other actors in the socio-political system (1974). Broadly speaking, Carstensen and Schmidt describe indirect power as power that has been mediated through other factors in the system rather than directly affecting policy outcomes (2016).

2.4.2. Material and Ideational Power

Many scholars have conceptualized power as being either material or ideational (Carstensen & Schmidt, 2016; Fuchs et al., 2016; Fuchs & Lederer, 2007). Material power stems from "access to and control of technological, natural, or economic resources and assets such as money, oil, communication, and other infrastructures and transport capacity." (Fuchs et al., 2016, p. 301). These resources are a source of power because they facilitate actors' pursuit of their goals. Differences in levels of access to material power can impact the relative effectiveness of different actors. For example, some non-governmental organizations have large sums of money which they can then spend on campaigns, like through advertising, and hiring time and expertise in the form of staff, legal council, and in-house subject matter experts (Doyle et al., 2015). However, many smaller organizations are poorer, forcing them to make tough decisions around how they allocate their resources. In comparison, most grassroots activist groups have little access to material resources, and are limited to the knowledge and experiences held by those within their network, the labour that their members are willing to volunteer, and small amounts of fundraising (Checker, 2004).

In comparison, ideational power sources are more abstract, and frequently invisible (Fuchs & Lederer, 2007; Fuchs et al., 2016). Ideational power tends to derive from social constructs like ideas, values, and norms (Fuchs & Lederer, 2007; Fuchs et al., 2016). Perhaps the simplest and most succinct

definition of ideational power is offered by Carstensen, Martin, and Schmidt: "the capacity of actors (whether individual or collective) to influence actors' normative and cognitive beliefs through the use of ideational elements" (2016, p. 320). While several scholars have conceived of ideational power in different frameworks (For example, Carsten & Schmidt's 2016 model that categorizes ideational power as power through, over, or in ideas), the framing that will be used in this thesis is that of discursive power, described below.

2.4.2.1. Discursive Power

The concept of discursive power was first articulated by Lukes' 1974 work, *Power: A Radical View*, and is sometimes referred to as 'preference shaping' (Carstensen & Schmidt, 2016). Discursive power is concerned with how ideas like policy problems, actors, interests, and solutions are conceived, defined, and communicated (Fuchs & Lederer, 2007; Fuchs et al., 2016). As a form of ideational power, discursive power draws on things like values and norms to influence public debate and political agendas (Fuchs & Lederer, 2007; Fuchs et al., 2016). Discursive power is exercised through communication, including through persuasion, argument, and narrative (Fuchs et al., 2016; Fuchs & Lederer, 2007; Olesen, 2011). Discursive power is crucial in shaping how policy problems and their potential solutions are framed (Fuchs & Lederer, 2007). The concept of discursive power is closely tied to the idea of persuasion (Béland, 2010; R. H. Cox, 2001). Discursive power is often deployed as a means of persuading others to act in a certain way in order to bring about desired policy outcomes (Béland, 2010; Carstensen & Schmidt, 2016; R. H. Cox, 2001).

Discursive power is an important – if not the primary – tool of those engaged in activism. NGOs are known for their use of discursive power in political landscapes, shaping what policy goals and outcomes are seen as desirable by institutions or within social movements (Doyle et al., 2015). Similarly, scholars have asserted that grassroots activists need to think carefully to choose an appropriate medium

and to fine-tune their messages to maximize their potential impact (Frost, 2018; Sovacool et al., 2022). This careful conception and communication of ideas can have long-lasting impacts. Some scholars have pointed to grassroots movements as an important source of social and intellectual innovation, noting that many now-common academic and political concepts originated as the ideas and talking points of grassroots activists (Martinez-Alier et al., 2014; A. Smith & Stirling, 2018). This includes community supported agriculture, repair cafés, credit unions, and seed swapping (Smith & Stirling, 2018).

Discursive power is especially important for larger activist groups. While small, highly-dedicated groups are able to take action through high-risk tactics like civil disobedience, larger groups often prioritize the wide broadcasting of their message to mobilize broader support for their cause (Frost, 2018). If successful, this broad support can be very useful for fundraising, building economic threats through boycotts, or influencing politicians (especially during elections) (Frost, 2018). This is done through the widespread promotion of carefully constructed persuasive messages that prompt others to action.

2.4.3. Power and Sources of Authority

Another aspect of power is the authority of the actor. It has been noted that authority is especially important to consider when examining discursive power, as discursive techniques require their bearers to be seen as authoritative and legitimate (Fuchs & Lederer, 2007). Authority can derive from a variety of sources. For example, politicians can be seen as having authority as a result of having gone through electoral processes (Fuchs & Lederer, 2007). In another case study looking at anti-war activism, the success of a grassroots activist movement was partially attributed to the actors' identity as veterans, which gave them social authority (Weiss, 2009). Fuchs and Lederer described two additional pathways for obtaining authority: through the trust of the public in an actor's "ability to achieve results," and

through their intentions (2007, p. 4). This thesis examines these two concepts more closely, referring to them as authority through expertise and moral authority respectively.

2.4.3.1. Authority through Expertise

By trusting in their ability to competently complete tasks and give sound advice, society places authority, and thus power, in the hands of those it deems experts. The concept of experts and expertise has been thoroughly explored in the philosophical field of epistemology, with many definitions being proposed over the years (Quast, 2018). For the purposes of this thesis, an expert is defined as an individual who has extensive knowledge of a topic, and who uses that knowledge to bridge the gap between knowledge producers and knowledge users. This definition is largely inspired by Quast's (2018) exploration of experts and expertise. Experts occupy roles in society where they are entrusted to use their expertise to make recommendations and decisions for the benefit of individuals or groups. As such, this trust from others in their abilities is a source of power.

Quast described multiple ways of understanding how expertise is developed, which affects how an expert is defined (2018). Quast describes two conceptions of experts that are useful for understanding the role of expertise in this case study: conceptual experts and functional experts (2018). Conceptual experts are competence-driven (Quast, 2018). They are deemed to possess expertise in a given domain that can be harnessed when the need arises. In this way, conceptual expertise serves as a way of identifying who can be entrusted to fulfill certain tasks.

In contrast, functional experts are considered to have output-oriented expertise (Quast 2018). They demonstrate expertise through their ability to reliably perform a task and use their expertise to generate an 'expertise-product' (Quast, 2018). Inherent in the definition of expertise is the reliability of the expert. In the case of conceptual experts, that reliability is achieved through the competence they possess and verified through credentialling processes (Quast, 2018). In functional experts, the reliability

is demonstrated in their ability to consistently deliver expertise-products (Quast, 2018). This concept was also described by Scharpf (1998) as 'output legitimacy', and identified by Fuchs and Lederer as a source of authority (2007).

In addition, Quast conceptualizes experts as being in positions of service for humanity, acting as authority in their domains for the betterment of others (2018). It is essential therefore that the rest of society trusts the expert, their actions, and their decisions. Trust can be developed through reputation, which communicates what tasks the expert can be trusted to handle with competence (Quast, 2018). Another way that trust can be established is by demonstrating that the expert in question has some sort of credentials in the area in which they are operating, which reinforces their reliability (Quast, 2018).

The concept of expertise and its role in solving complex problems has also been re-imagined and reinterpreted through the framework of Post-Normal Science (Funtowicz & Ravetz, 1994). This perspective posits that in cases where decisions must be made under conditions of high system uncertainty in combination with high decision stakes, the traditional methods of study and decision-making are insufficient (Funtowicz & Ravetz, 1994). This includes the overreliance on the perspectives of subject matter specialists, or experts (Funtowicz & Ravetz, 1994). Rather, Funtowicz and Ravetz propose that the complexity of the systems require that perspectives also be sought from the extended peer community of people with a variety of lived experiences in relation to the problem at hand in order to richen the understanding of the system (1994). This framework encourages researchers, policymakers, and other decision-makers to rethink and complicate what constitutes and expert and whose perspectives are valuable.

In summary, it is essential that experts are trusted in society to perform specialized tasks in service of others. Mechanisms like reputation and credentials help to build that trust. Once that trust is established, it acts as a form of authority with which the expert can use to wield power. Additionally,

some scholars call for the broadening of what kinds of knowledge are considered expertise and therefore should be trusted and given authority.

2.4.3.2 Authority through Morality

The second form of authority that will be discussed in this case study is moral authority. Moral authority stems from an actors' intentions related to the change they are aiming to bring (Fuchs & Lederer, 2007). As pointed out by Hoppner and Vadakkepatt, the concept of moral authority tends to be innately understood and is rarely explicitly operationalized in academic literature (2019). In response to this, they offer the following definition: "the potential to influence the morality of others through the use of power and platform granted to an entity based on the perception of its stakeholders that the entity is moral," (2019, p. 418). They further elaborate that moral authority can "provide clarity and guidance" regarding "what is right in terms of values and actions" (Hoppner & Vadakkepatt, 2019, p.419).

Hoppner and Vadakkepatt propose that an entity must have three overlapping components in order to be considered a moral authority (2019). These are that the entity must possess a moral identity, possess the ability to influence via power and a platform, and be perceived by stakeholders as moral (Hoppner & Vadakkepatt, 2019). A moral identity can be conceived of as a self-conception around the actor's moral values that guide their behaviours (Hoppner & Vadakkepatt, 2019). For example, a group could conceive of themselves as being guided by a sense of stewardship for the environment, or a commitment to diversity. It is in the communication that an entity has a moral identity that they are first able to claim moral authority in a social system (Hoppner & Vadakkepatt, 2019). The final component, perception by stakeholders as moral, is important as it validates the entity's moral identity (Hoppner & Vadakkepatt, 2019). The stakeholder's perception ascribes meaning to the moral identity, and determines whether the moral identity is worth adopting (Hoppner & Vadakkepatt, 2019). In this way,

the stakeholders validate the entity's credibility or authenticity in their moral identity, communicating to others that they are trustworthy (Hoppner & Vadakkepatt, 2019).

Other scholars have alluded to the idea of moral authority as it relates to both power, identity, and pro-environmental behaviours. In their discussion of the role of power in consumerism, Fuchs et al. (2016) acknowledge moral authority as an important tool for smaller actors to plant ideas, an expression of idealistic power. Other works have identified the morality or moral authority in ideas, including social inclusion (Béland & Cox, 2016) and climate change (Bradford, 2016), as playing an important role in the policy landscape, in particular during the agenda-setting phase (Risse, 2013). In these cases, and in the case study examined in this thesis, actors who are seen as having moral authority can benefit from the trust this brings to their work, which can further their ideas.

Moral authority is an important aspect of power in particular for NGOs and grassroots activists. Both of these groups often rely on moral authority to legitimize their work in the eyes of the public. For this reason, scholars have stated that NGOs must carefully consider how closely they work with state actors (Cadman et al., 2020; Doyle et al., 2015). While maintaining strong relationships with policymakers can grant them resources and access to information or additional sway over decisions, it can reduce their ability to be critical of these institutions, as they may be hesitant to lose these benefits (Cadman et al., 2020; Doyle et al., 2015). These relationships may then reduce the NGOs' moral authority, and thus diminish the power of their messages to the public (Cadman et al., 2020; Doyle et al., 2015).

Similarly, many activists with more radical leanings are hesitant to align themselves in any way with other actors like policymakers and NGOs for fear of losing moral authority (Doyle et al., 2015). This often takes the form of their goals and ideas being co-opted and defanged by mainstream politics to become more widely palatable (Doyle et al., 2015). This tension in the relationship between grassroots

activists and NGOs is reflected in the literature. Works that mainly discussed the operations of NGOs noted that collaborations with grassroots activists were beneficial, as they boosted the profile of the NGOs, granted them some moral authority, and helped them keep up to date with issues on a community level (Doyle et al., 2015). In contrast, literature that focused on the work of grassroots activists said that many activists are hesitant to collaborate with NGOs, even if they are able to provide additional resources (Bosco, 2007; Checker, 2004; Gravante & Poma, 2016).

2.5. Power: An Analytical Framework

This thesis examines the actions of different actors in a political system as they attempted to bring about policy change. This requires an understanding of how power operates throughout the system, and what kinds of power different actors are able to access. As such, the following analytical framework attempts to put the concepts related to power described above in conversation with each other to facilitate the communication and understanding of the events of this case study. This framework will be referred to throughout the data and analysis section of the thesis to discuss how the various actors operated in the system relative to each other to influence the policymaking process. A visual representation of the framework is presented in figure 1.

This framework subdivides power in the policymaking process in three ways. First, power can be described as either direct or indirect. Direct power is characterized by the actors' ability to influence policymaking themselves, with no intermediaries. Direct power can be deployed by policymakers who write legislation and elected representatives who vote it into law, as well as through the judicial system. In contrast, indirect power affects the policymaking process indirectly, acting through intermediate actors. Indirect power can be further broken down into material or ideational power. Material power consists of control over technological, natural, or economic resources, like money or infrastructure (Fuchs et al., 2016). In contrast, ideational power is the ability to shape ideas. The primary way this

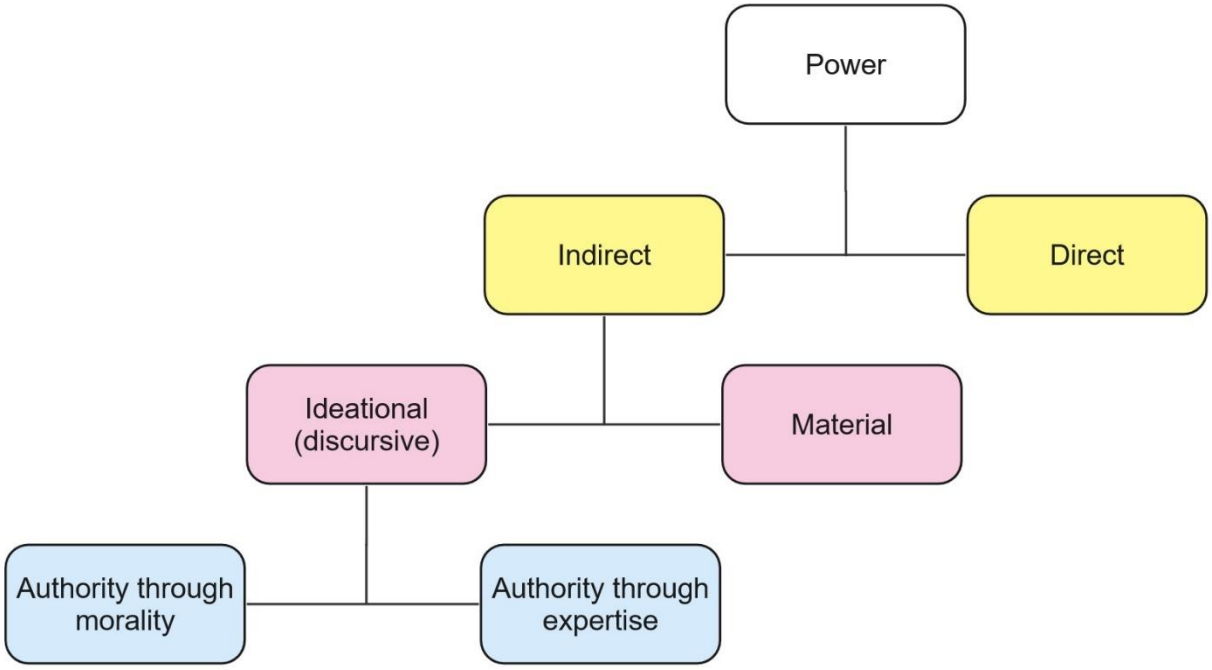
operates is through discursive power, or how policy problems, interests, and solutions are conceived, defined, and communicated (Fuchs & Lederer, 2007; Fuchs et al., 2016). Discursive power draws on values and norms to influence the communication and discussion of policy topics. Finally, this framework considers the authority from which actors draw when using discursive power. While there are many forms of authority (Fuchs & Lederer, 2007), this framework focuses on two: authority through expertise, and authority through morality. Authority through expertise denotes actors who are entrusted to give sound advice because of their established record of relevant education or experiences. Actors who invoke moral authority make the argument that their goals, interests, values, or actions are in service of promoting ethical values.

While the framework presents these dichotomous categories as distinct and mutually exclusive for ease of communication, it is important to note that this may not be the case in reality. Actions may straddle the boundaries of these categories over time, or slide from end to end of a spectrum. For example, direct and indirect power are not mutually exclusive. An actor who has direct power may couple it with the use of indirect power to help achieve their goals. Consider again the example of the politician voting for a bill. On top of voting for it themself, the politician may additionally attempt to persuade their colleagues to vote for the bill as well. In this way, the politician is utilizing both direct and indirect power.

Additionally, it is important to acknowledge that privilege associated with one's identity, such as their race, gender, or socioeconomic class, can also be considered a form of power, but will not be discussed in this thesis.

Figure 1

Visual representation of the analytical framework.



3. Methods

3.1. Researcher Situation

The following section about the researcher's positionality is shared in recognition of the fact that there is no such thing as a neutral perspective, and one's personal, educational, and professional background inherently shape their work (Braun & Clarke, 2013). The very physical embodiment of the researcher can influence how data is gathered and knowledge is produced (Babbie & Roberts, 2018; Braun & Clarke, 2013), and their lived experience affects the assumptions they will make (Braun & Clarke, 2013). By reflecting on one's perspectives early in the research process, it allows the researcher to be more aware of their biases and areas of ignorance and take them into clearer consideration in their work (Braun & Clarke, 2013). Additionally, by sharing this positionality with the reader, it allows for greater transparency in the research process, and makes it easier for the research to be critiqued and for future researchers to build off of the work (Braun & Clarke, 2013). This process is essential for reflexive thematic analysis, the method of analysis used in this thesis which will be discussed further in section 3.8.1.

Throughout the process of this master's degree, I have been asked repeatedly how I, a young woman from Ontario, became interested in the municipal debates around sewage treatment policy on the other side of the country. The short answer is that it stems from a passion for the environment, an interest in water systems, and a commitment to interdisciplinarity.

I am a mixed-race queer woman of colour who grew up in a predominantly white small- to medium-sized town on Algonquin territory in eastern Ontario, and have a history with activism. I first became aware of the environment as an entity endangered by humans in grade three, when my teacher

explained the process of ocean acidification and its impacts on wildlife. I was shocked and devastated. Within a few short years I became a young environmental activist, speaking out against deforestation in my community at town council meetings. As I grew up and became more aware of how racism, sexism, and homophobia have shaped not only my everyday life but society more generally, I became more outspoken on those issues. This included attending occasional peaceful demonstrations, committing to my own continuing unlearning, and sitting on an equity, diversity, and inclusion tasks force. Combined, these factors have given me an eye for environmental justice in my work.

I am fortunate to have an unusually long history of water-related research experience. As a high school co-operative education student, I worked with an interdisciplinary science team from the University of Toronto conducting biogeochemical research on a shallow sand aquifer. Here, I gained not only technical field and lab skills, but an appreciation for the importance of water ecologically and sociologically. This project also kickstarted an interest in interdisciplinary learning and collaborative work that I pursued in university. I earned an undergraduate degree at the University of Waterloo in Knowledge Integration, an interdisciplinary program that emphasized transferrable skills like collaboration, communication, critical thinking, creative thinking, and problem-solving. Here I developed a deep appreciation for complexity and the power of collaboration for tackling the world's most complex problems. I supplemented this broad foundation with a joint honours in Earth Sciences (inspired by the University of Toronto researchers) and a minor in Environment, Resources, and Sustainability. I combined these areas of expertise in my undergraduate thesis, which looked at the effects of contaminants from sewage on aquatic ecosystems. The ultimate takeaway from this research was that wastewater treatment was an important defense against wastewater contaminants.

Wanting to spend more time working on complex environmental problems, I pursued my masters in Social and Ecological Sustainability. It was around the time that I was deciding on a research

project that news stories started coming out of Victoria regarding the opening of a wastewater treatment plant after decades of discharging raw sewage into the ocean.

All of these factors impact how the study participants interact with me (which thus affects the data collection), as well as how I analyze the data. My participants encountered me as a young, female researcher from the environment faculty of a well-known university from across the country. This seemed to make a lot of participants who identified as pro-treatment activists more comfortable, possibly because they saw me as an activist as well, and therefore sympathetic to their work. Rapport was developed quickly and easily, and many were excited to share their stories and experiences with very little prompting from me. Many also expressed gratitude that research into their activism work was taking place, and offered to help me locate any documents I might need or have follow-up conversations. On the other hand, many pro-evidence-based decision-making activists and similarly aligned independents and bureaucrats were much less trusting of me. This experience is described in the limitations section below. Interestingly, several participants from across the ideological spectrum expressed to me that their accounts of events were the most accurate, or the closer to the truth than the accounts of other people I may be interviewing.

While I tried actively to be aware of my biases and to keep an open mind, it is difficult not to have preconceived ideas, and to keep them from colouring the research. I came into this project with the assumption that wastewater treatment was in almost all cases beneficial to the environment, and was confused as to how Victoria, a wealthy capital city in a province known for its lush ecosystems, could have gone for so long without it. In my preliminary literature review and by talking to participants I became more aware of the nuances of wastewater treatment; its energy-intensiveness (Bilal & Iqbal, 2019), the implications of creating new waste by-products (Bates, T. E., 1972; Kang et al., 2022), and the role of the receiving environments (Johannessen et al., 2015), all of which complicated a case study that many seemed to think was simple. Suddenly, outcomes that might have felt like foregone conclusions

could be recognized as hard-fought and uncertain battles. Every participant made a compelling case for their stance, and I was able to see how each perspective could be seen as the best lens to adopt. As such, in my analysis I read each perspective generously, assuming that they were coming from places of true concern and a desire to see a better future. As the author of this thesis, I am abstaining from making a judgement about any one perspective or cause being 'correct,' morally, scientifically, or otherwise. This thesis rather focuses on understanding motivations, actions, and their impacts.

3.2. Study Goals and Objectives

As established in the previous chapter, wastewater treatment can help promote human and ecosystem health and sustainability. Given this, the purpose of this study is to gain an understanding of how the actions of activists in the Capital Regional District (CRD) of Vancouver Island, British Columbia, affected the decision-making process regarding wastewater treatment options. This is to gain an understanding of how communities elsewhere can contribute to the preservation of their own health and the health of ecosystems. There are two main areas of knowledge to which this research will contribute:

1) Provide evidence for what kind of actions grassroots activists can take to influence local decision-making around the creation of water and wastewater infrastructure projects. This way, individuals and organizations can make informed decisions about where to focus their resources.
2) Contribute to the growing body of knowledge around wastewater system development, and how decision makers can make strategic plans regarding wastewater that engage the community and promote human and environmental health.

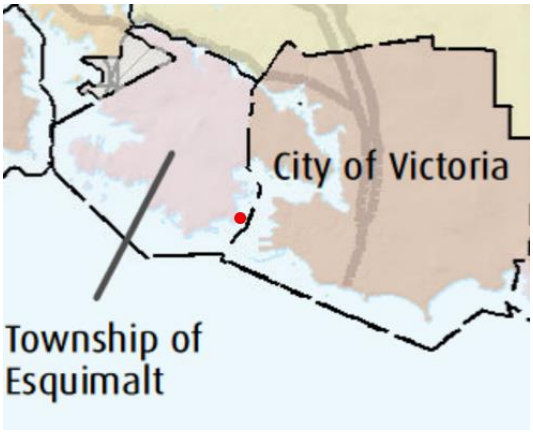
3.2.1. Case Study: Capital Regional District, Vancouver Island, British Columbia

This case study was chosen to understand how grassroots activists, NGOs, decision makers, and bureaucrats interacted with each other in the pursuit of wastewater policy solutions. Geographically, this case study examines the Capital Regional District, or CRD, a regional administrative governing body located on the southern portion of Vancouver Island. It comprises 13 municipalities and three electoral areas, including the City of Victoria, the capital of British Columbia (CRD, 2023). The CRD refers to both the geographical area served by the regional government, as well as the government itself. The CRD governing body is a Board of Directors made up of 24 representatives, composed of one or more elected official from each of the local governments within the CRD's boundaries (CRD, 2023). Due to the diversity of interests among the representatives, the CRD often operates slowly and must navigate decision-making among parties with strong, incompatible interests (Cleverley, 2017; Treleaven, 2016).

In the late 1990s and early 2000s, the CRD gained international attention around their wastewater treatment strategies because Victoria was the last major city in North America to discharge untreated wastewater directly into the ocean (Meissner, 2021). Calls for treatment by local and international actors cited concerns for human and ecological health, especially in light of the fact that the CRD was projected to grow rapidly, increasing the contaminant load on the environment (BC Stats, 2019; Halseth, 2003). The practice of discharging untreated municipal wastewater ended in December 2020 with the opening of the McLoughlin Point Wastewater Treatment Plant (Meissner, 2021). The plant is located on the shores of Esquimalt, one of the CRD's municipalities, on a peninsula about 5km West of Victoria. Figure 2 depicts the municipal boundaries of Victoria and Esquimalt (CRD, 2017a), with the location of the McLoughlin Point Wastewater Treatment Plant demarcated with a red dot.

Figure 2

Map of Esquimalt and Victoria



Note. The red dot added by the author indicates the location of the McLoughlin Point Wastewater Treatment Plant. Original map: Capital Regional District Administrative Boundaries, 2017. 1:366 355 scale. The original map depicting the administrative boundaries of all of the CRD municipalities can be found in appendix A.

Case study methods were chosen to address this research question because they allow for a detailed and holistic investigation into social phenomena (Babbie & Roberts, 2015; Yin, 2014). The research question – How did the actions of grassroots activists in Victoria, Canada between 1990 and 2020 affect the decision-making and planning process regarding the McLoughlin Point Wastewater Treatment Plant? – seeks to understand complex social phenomena that are context-dependant. By focusing on a single case study, the entire case and its nuances can be paid more attention than if multiple cases were considered (Gerring, 2017). In addition, if the case or research question in consideration has been paid limited attention in the literature, case study research can be a descriptive act and provide a generative ground for developing future hypotheses, research questions, or paradigms (Gerring, 2017; Yin, 2014). Case study research is also particularly good for examining the causal mechanisms of a given phenomenon, due to the depth of understanding and familiarity with the local

context that can be achieved (Gerring, 2017; Yin, 2014). While these mechanisms may not always be completely generalizable, it provides insight into how other examples of the phenomenon *might* be functioning (Gerring 2017; Yin, 2014). While single case studies may have more limited applicability compared to cross-case studies, they may be especially applicable to cases with similar contexts (Gerring 2017). This particular case study was selected for a number of reasons. First, in many ways, the opening of the McLoughlin Point Wastewater Treatment Plant in late 2020 can be seen as a culmination of events; local actors had been discussing how to treat their wastewater for decades, and the completion and opening of the plant represents the closing of a chapter in this story. Since research into the case study did not begin until after the end of the study period had passed, the research was able to be non-reactive; there was no chance that the actions of the researcher could impact the chain of events being studied. Second, the decision-making in this case was a long and involved process that actively engaged a variety of stakeholders and followed a defined political process. As such, there were many opportunities for different actors to become involved and express their opinions. This means that there are a lot of possible ways that activism affected the processes and outcome. Third, the decision was seen by many to be high-stakes; it involved large budgets, and the outcome would affect human and ecosystem health for decades if not centuries to come. Finally, many parties were advocating for outcomes that were mutually exclusive and incompatible. As a result, it is possible to gather data from a variety of people with different perspectives, backgrounds, biases, and goals to form a holistic picture of events.

Since the end of the study period was recent, it could be argued that it makes sense to study this case sooner rather than later, while participants' recollections of events and opinions have had less time to be affected by the outcomes, otherwise known as hindsight bias (Fischhoff, 1975). In addition, many of the community members involved are retirees, and some of them were around retirement age when they were most active in the case decades ago. It is important to collect data on this case study before

too many members of this community pass away and their accounts of events are lost. As is, several participants expressed sadness at the loss of their colleagues who they thought would have been valuable participants for this study.

3.3. Preliminary literature review

Before formal data collection took place, I searched for online media regarding the case study to inform the study design and the development of the interview guides.

The majority of the literature review was conducted by using Google in an InPrivate Microsoft Edge browser window. This feature does not utilize the user's data to inform things like advertisements and search results, and was used to generate search results that were not tailored to me. Several additional searches were conducted using databases such as Scopus and ProQuest, but these were less fruitful than the Google searches. The target materials of the literature review were text and audio-visual materials regarding wastewater treatment in the CRD from governments, news outlets, and private citizens. This included press releases, editorials, interviews, blog posts, forum discussions, and comment sections. While no formal analysis was done, I attempted to identify the goals of the authors or contributors, the main arguments that were being made, and the barriers and drivers to action over time. This information served to broaden my understanding of the case in advance of the interviews and inform the design of the interview guide.

3.4. Data Collection

Semi-structured interviews were chosen for this study because they provide structure, ensuring that similar topics are touched on by each participant, while also granting flexibility so that the researcher can pursue topics that they might not have anticipated during the study design (Babbie & Roberts, 2018). Additionally, semi-structured interviews allow the participants space to discuss at length

the topics that they identify as important (Yin, 2014). Since this study seems to be the first examining the social phenomena regarding this case study, this flexibility was important as there is little previously established information available on which to base the analysis.

Two interview guides were created for this study: one for activists, and one for decision-makers. In the event that the participant's identity did not perfectly align with either of those identities, the activist interview guide was used, as it was more general and therefore more flexible. Both of these interview guides can be viewed in appendix B.

3.5. Inclusion and Exclusion Criteria

There were five main inclusion criteria for this study that will be elaborated upon below:

a) Participants had to have actively engaged with the issue of wastewater policy in the CRD with the intent of either informing or influencing the process
b) Participants must have been engaged in these actions at least partially during the study period of 1 January 1990 to 16 December 2020
c) Participants must have been geographically based within the CRD or Greater Vancouver Regional District (GVRD) at least partially during the study period
d) Due to ethics considerations, participants must have been at least 18 years of age at the time of the interviews
e) Due to language constraints of the researcher, the participants had to agree to be interviewed in English.

This study was interested in the perspectives of those who actively tried to influence or inform wastewater policy within the CRD, as these individuals likely had a better grasp on the complexity of the issue; were temporally, reputationally, and emotionally invested in the outcome; and likely have more

robust memories of events. Groups that attempted to influence events include activists, politicians, and NGOs. Groups that informed wastewater policy include scientists and bureaucrats who provided expert information and context relevant to the case to decision-makers. As such, residents of the CRD who simply witnessed the events described in this thesis but did not participate were excluded. While the inclusion of their perspectives may have provided additional insights, their accounts likely would be less detailed, and therefore difficult to verify.

There is a long history of scientists and bureaucrats engaging with the wastewater systems and policies of the CRD before the start of the study period. These people were only included as participants if they also engaged during the study period, and could thus provide insight on the events that took place within that period. The start date of this period was chosen because it was two years before the announcement of a public referendum on wastewater treatment policy. This would allow for the events that prompted the referendum and set the tone to be included, if relevant. The end date of the study period was chosen as it is the date the McLoughlin Point Wastewater Treatment Plant opened, marking the end of a period where changes could be made to this wastewater policy and put into effect. Some participants who were involved before the start of the study period provided information regarding their work at that time in addition to insight on the study period itself. Some of this information is included as context in chapters 4 and 5 if appropriate, but was not the focus of the analysis.

This study pertains to the actions of grassroots activists attempting to influence decision-making within the CRD. As such, it was centered around the perspectives of those who lived within the CRD, as they would have been most invested in and affected by the outcomes. The study area was extended to also include the Greater Vancouver Regional District (GVRD) because it became clear through the interview process that similar wastewater campaigns occurred in both communities around the same time, and some activists and organizations actively worked on both campaigns. This included several participants who had valuable insights and experiences with the CRD campaign, but were based out of

Vancouver. This study did not include the perspective of those based in other areas, such as federal lawmakers based in Ottawa, environmental activists based out of Washington state, or other international commenters in the media. This is because they had limited engagement with the CRD's wastewater system, local communities, and surrounding ecosystem, and were thus less familiar with the case compared to the local activists, scientists, and political actors.

3.6. Sampling Methods

Snowball sampling was used to recruit interview participants. This method was chosen because grassroots activism often occurs as part of ad-hoc groups where membership and contact information cannot be easily found (Babbie & Roberts 2018). In addition, it became clear through the preliminary literature review that there were multiple, incompatible outcomes that different activists were advocating for, and many of their interactions were hostile. As a result, there was a risk that many participants would not want to be found, or not trust a stranger contacting them out of the blue and agree to participate. Snowball sampling allowed for participants to learn about the study through people they already knew and could ask questions from before deciding whether or not to participate. Based on the preliminary literature review, three initial people were selected as potential participants. Two of these people agreed to participate. These two participants were then asked to recommend other potential participants to the study to commence snowball sampling.

3.7. Interviewing Process

Once participants agreed to be interviewed, they were assigned a randomly generated six-digit ID code that would be associated with their interview guide and data. These codes are included in parentheses after quotes throughout this thesis as citations. Consent was collected orally, and recorded in a consent log. The identities of the participants were protected in line with ethical requirements.

Interviews took place over either Microsoft Teams, Zoom, FaceTime, or by telephone, based on whatever platform was most comfortable for the participant. I used transcription software to generate recordings of the interviews and transcripts. Most interviews were approximately 60 minutes in duration, though the shortest was a mere 45 minutes and the longest was nearly two hours. One participant opted to participate in writing only, emailing me written consent and typed responses to each of the questions in the interview guide.

3.8. Data Analysis

3.8.1. Reflexive Thematic Analysis

This thesis used a qualitative, inductive and constructivist form of reflexive thematic analysis. (Braun & Clark, 2013). Constructivist, inductive thematic analysis aims to generate an analysis from "the bottom (data) up," (Braun & Clarke, 2013, p. 175) that is not shaped by existing theory, but rather representations that are constructed based on the perspectives of the participants and the researcher (Braun & Clarke, 2013). In this research paradigm, there is no one objective reality or truth to be discovered, but rather meaning that is constructed through language, representation, and other social processes (Braun & Clarke, 2013).

This thesis used reflexive thematic analysis as it acknowledges that there is no one ultimate and correct story that the data can tell, but that it is shaped by context and the experiences of the researcher (Braun & Clarke, 2013). Additionally, reflexive thematic analysis is ideal for examining the assumptions or contexts that affect processes (Braun & Clarke, 2013). This is appropriate for this research, which seeks to understand not only the actions of certain actors, but how the actors and the broader context related to each other and affected the decision-making outcomes. Additionally, it is compatible with the subject matter and principles of many disciplines, making it ideal for interdisciplinary analyses (Braun & Clarke, 2013). Throughout the process of the analysis, it was clear that there were many possible themes that

could be communicated and insights that could be shared. The specific three themes featured in this analysis are a partial reflection of my experiences as the researcher, the specifics of the research question, and the inherent scoping limitations of a master's thesis.

3.8.2. Theme Development Process

As part of the analysis process, each transcript was reviewed in full at least three times. First, I reviewed the computer-generated transcript while listening back to the audio recordings immediately following the interview. The purpose of this was to correct any errors made by the software, and to become more familiar with the interview content. All of the interview transcripts, as well as the set of written responses, were then uploaded to an NVivo file for analysis.

Once all the interviews had been completed, I then conducted an in-depth reading of all the transcripts in numerical order according to ID number, taking notes of the main ideas and the concepts that the participants were highlighting. Once all of the transcripts had been read through a second time, I reviewed my notes to develop a number of candidate themes. Then, I read through the transcripts in their entirety a third time to look for evidence that supported or contradicted the themes. During this round, I coded the data using an open-coding approach so that the evidence for each theme could be more closely inspected later.

In recognition that an individual's judgement when coding can change over time as they become more familiar with the codes and the dataset, the first six transcripts to be coded, representing just under one third of the total dataset, were returned to at the end of the coding process and recoded. This was to ensure coding reliability over time. This round of coding found that the first two transcripts were slightly under-coded, which resulted in some new codes being applied. The next four transcripts were recoded similarly to the original coding, which served as verification that the transcripts were reliably coded. From this point onwards, I worked primarily from the codebook rather than the original

transcripts. Candidate themes were reviewed and revised. Ultimately, three themes are presented in this thesis.

Throughout this process, I kept a research journal to track my impressions, ideas, conceptual frameworks, questions, and candidate themes over time. This facilitated the process of identifying and tracking things like argument structures, stances, beliefs, and their potential affects on the system.

3.9. Limitations

This study has several limitations regarding the sampling strategy, interviews, and the characteristics of the case itself.

3.9.1. Sampling Strategy Limitations

This study used a snowball sampling strategy, where existing participants invited others to the study. While this method was appropriate given the difficulty of locating activists and the exploratory nature of this study, it presents several limitations. First, participants are more likely to recall individuals that they have personal connections with or who are most prominent in the movement. This can make it difficult to break into different social circles of an activist movement, who may have different perspectives. Additionally, people who were involved for shorter amounts of time or more sporadically, on top of coming to mind less frequently, might be more likely to refuse an invitation if they believe they do not have adequate insights to make their participation worthwhile. Indeed, three prospective participants declined to participate citing this reason. As such, this study is biased towards capturing data from individuals who were the most involved, visible, or memorable.

Not all potential participants are equally vulnerable to this form of bias. It has been shown that women are more likely to underestimate the value of their potential contributions and self-select out of such opportunities (Ehrlinger & Dunning, 2003). Additionally, there is a possibility that certain actor

groups identified in this study may be more vulnerable to this form of bias as well. For example, politicians are likely to be non-experts on the issue, yet surrounded by knowledgeable bureaucrats and dedicated activists. This may prompt them to underestimate their own knowledge of the subject and self-select out of the study, despite their unique perspective and knowledge of things like voting dynamics on the issue.

This sampling strategy has the potential to create several age-related biases. The primary mode of outreach and communication with potential participants was email. This may create a bias towards younger people in the workforce to which email communication is common, and who are habituated to checking their email often. Additionally, people who are still working are more likely to have email addresses that are publicly available, which facilitates recruitment. Conversely, this sampling strategy failed to capture people who were involved with the issue as young people or students. One participant recalled that one activist group called People Opposed to Outfall Pollution (POOP) had a lot of participants who were students, yet this study did not have any participants who identified as being primarily affiliated with POOP, nor did it include anyone who described being involved in their youth. Actors who were involved as students may be more likely to move away from the area than their older peers, and they may have not been in close enough contact with local activists to be invited to the study through the snowball sampling method.

It is not assumed that the activist groups identified and described in this thesis were the only groups involved. The categorization of participants into groups was based on self-reporting. Since participants likely recruited the people they worked most closely to or who were most visible, it is possible that some smaller, more ephemeral activist groups are not represented in the study.

3.9.2. Interviewing Limitations

Interviews present the opportunity for many forms of bias. One common form that is difficult to control for is interviewer bias, where respondents respond differently to the interviewer based on how they present and are perceived. This is an inherent limitation of interviews that cannot be fully accommodated. Additionally, it can affect rapport-building between the interviewer and participant, as previous described.

Another common limitation in interviews is social desirability bias. This is where participants are more likely to respond with answers that they think will cast them in a positive light, even if the response is not completely accurate (Babbie & Roberts, 2018). One particular way that the social desirability bias might have played a role in this study is as a result of priming from the information and consent materials. All of these documents listed the home department of the investigators as the School of Environment, Resources, and Sustainability within the University of Waterloo's Faculty of Environment. It is possible that participants made assumptions about what responses or narratives I as the interviewer might be interested in hearing based on my affiliation. Additionally, these assumptions may have been different or lesser if the same study had been taking place under the umbrella of a more neutral-sounding department like sociology or political science, which may be perceived to have weaker ideological connections. If participants did indeed perceive me as having specific goals or values, they might have withheld information that they thought might be seen as unfavorable to the researcher. Or conversely, they might have failed to share relevant information, assumptions, or motivations if they thought that I also shared those features. Either way, it would result in missing context from the data.

There is evidence that this bias did play a role in how participants engaged with me, whether and how they chose to participate, and the information they shared. This is especially the case regarding activists who were against increased treatment. Several participants who were critical of increased

wastewater treatment behaved more cautiously or defensively in their interactions with me. These participants tended to ask more questions regarding study design, the research question, or the ways in which bias was being eliminated or controlled. These participants were also more likely to prepare in advance for the interviews, and were more likely to read prepared statements, give presentations, or respond in writing rather than participating in a more conversational manner. This suggests that these participants as a group may have been less trusting of me as a researcher and in my ability to control bias in my study design, which could have resulted in them sharing less information than if more rapport was established. Moreover, this lack of trust could have affected the success of snowball sampling within these communities. This would limit the richness of the dataset regarding these participants' experiences.

3.9.3. Other Limitations

Many of the events of this case study took place over 20 years ago. The ability of participants to accurately recall those events might decrease over time, and their accounts may differ as a result of hindsight shifting their perspective. Another consequence of the study period starting many years ago is that some people who may have had valuable experiences to contribute have since passed away. Several participants expressed regret at the passing of two individuals who they say had valuable experiences to contribute to this study.

Participants from some groups were easier to recruit than others. For example, there was only one politician participant in this study. This affects the richness of the dataset. One potential contributing factor is that the interview period took place during the months leading up to a municipal election. This severely limited the amount of time that this population had to give and could have been a contributing factor in many politicians declining to participate.

4. Case Description and Context

4.1. Timeline of Events

In order to understand this case study, the actions of different actors must be understood within the context of the broader social, political, and environmental landscape. Over time, the goals, actions, and actors evolved in response to things like changes in how wastewater treatment was popularly perceived, changes in government, and the implementation of new policies that redefined what was possible.

The following timeline provides a holistic overview of the main events that took place leading up to and during the study period of this thesis. For ease of communication, the timeline is divided into seven different eras defined by events that changed how people understood or interacted with local wastewater policy. The first paragraph of each era description is intended to provide readers with a broad overview of the main characteristics of the era to show how attitudes generally developed over time. Any follow-up paragraphs are included to provide additional details and context that relate to events discussed later in this thesis. This timeline is constructed based on the accounts of participants, the CRD's official wastewater treatment project timeline, and news sources.

Era 1: Outfall development and monitoring – 1890s to 1987 This era is characterized by a general lack of awareness and interest around wastewater policy among the public. Little to no activism takes place.

During the first few decades of this large period of time, the initial outfall system is built and expanded upon in the geographical area that what would in 1966 become the CRD (CRD, 2017b). In the early 1970s, biologists from the University of Victoria started conducting environmental and water

quality monitoring surrounding the outfalls, a program that would later be taken over and expanded by the CRD regional government (CRD, 2017b). This program was unusual at the time, as environmental monitoring was not a common activity. Throughout this period, there were occasionally beach closures due to concerns around elevated coliform counts near shore (CRD, 2017b). Some reports and a liquid waste management plan were written to address the issue of how wastewater should be dealt with in the CRD in the future as populations continued to grow (CRD, 2017b). This included determining the conditions under which increased treatment should be considered, and starting to determine potential sites for treatment facilities (CRD, 2017b).

Era 2: Awareness raising – 1988 to 1992 In this era, the public starts to become aware of the outfalls and starts forming opinions on whether or not this system should change.

Around the start of this era, people outside of regional and municipal governments begin to learn that untreated wastewater is discharged to the ocean via outfalls. Most of these people are established environmental activists and members of fishing unions, and several are participants in this study. These people object to the outfalls out of concerns for human, fish, and ecological health. These three concerns will feature prominently throughout the decades of treatment debates to come. Additionally, two out of the three environmental NGOs that feature prominently in this case study (the Georgia Strait Alliance and the Sierra Legal Defense Fund) are all founded during this era (Gage et al., 2020; The Ocean Foundation, n.d.).

In 1992, the CRD decided to hold a non-binding referendum to determine the wishes of the public regarding wastewater treatment (CRD, 2017b; Rogers, 1995). This included a six-month-long public education campaign regarding the CRD's current wastewater systems and potential options for the system in the future before citizens went to the polls (CRD, 2017b; Rogers, 1995). The winning option, taking 57% of the vote, was for preliminary treatment in addition to source control measures (CRD,

2017b; Rogers, 1995). After the results of the referendum were published, many people were disappointed that higher levels of treatment did not win (Rogers, 1995). The referendum put a spotlight on the CRD's wastewater treatment policies, which sparked activism campaigns in favour of further treatment development as well as counter-campaigns against treatment in the months that followed (Rogers, 1995). The rise of these campaigns marks the start of the study period of this thesis.

Era 3: Debates on the necessity of treatment – 1993-July 2006 This era is characterized by a large amount of activism regarding the necessity of wastewater treatment in the CRD. The debate begins to garner international media attention.

There is a strong presence of activism falling into two main camps: pro-increased wastewater treatment, and pro-evidence-based decision making (which argued that treatment was scientifically unnecessary). The debate is very public, taking place in regional and municipal public meetings, on the streets, in the pages of local and international newspapers, and on TV and radio (CRD, 2017b; MacQueen, 2005; *Sewage Treatment*, 2015). There is increased pressure to treat from international actors like Washington State Governor Jay Inslee, as the upcoming 2010 Olympic games are to be hosted in Vancouver, attracting more scrutinizing eyes on the CRD's wastewater practices (Dunsmuir, 2016; Meissner, 2014, 2021; Seattle Times Staff, 2014). The latter part of this era also saw the debut of Mr. Floatie, a 7-foot-tall pro-treatment mascot in the likeness of a piece of excrement, who for many people became the icon for the entire debate (CRD, 2017b; Nair, 2017). This era ends on 21st July, 2006, when provincial Minister of Environment Barry Penner sends a letter to the CRD requiring a plan for increased wastewater treatment, making the debate of whether or not to treat a moot point (CRD, 2017b).

Era 4: Creating and approving plans for treatment – July 2006-February 2008 In this era, municipal and regional governments begin to draw up plans for wastewater treatment that is affordable,

sustainable, and meets the provincial requirements. While activism is still present, it is less prominent than in the previous era.

Following the order to treat by Environment Minister Penner, most conversations shift from *whether* to treat wastewater to *where* and *how* to treat it. The CRD proceeds to conduct studies and consult with the public on issues regarding the number of plants, their locations, associated costs, and the possibility of incorporating resource recovery technology (energy, water, and biosolids) (CRD, 2017b). While activism is much less prominent, some activist participants in this study recall continuing to recruit, publish information, and advocate for their respective desired outcomes.

Era 5: Site wars – February 2008-December 2016 This era is characterized by large amounts of activism and government indecision regarding the number of treatment facilities, their location, and the technology they would include. A municipal election caused a change in the composition of several municipal governments, which in turn led to some pre-existing and pending treatment plans to be cancelled. Eventually, the provincial government stepped in to resolve indecision and delays and force the planning process forward.

In this era, the CRD announces plans to build a large treatment plant in Esquimalt, a township adjacent to the City of Victoria (CRD, 2017b). Esquimalt residents, alongside other activists who have been critical of sewage treatment in the past, organize against the CRD's plan and create and champion their own plan that calls for a distributed model of treatment and makes use of tertiary-level technologies to treat the water to a very high standard (Atwell, 2014; CRD, 2017b; Maler, 2015).[1] There is increased public awareness and concern over the presence of synthetic chemicals found in wastewater deemed 'emergent contaminants' due to the relative lack of scientific understanding regarding their

[1] For more details on the plan, please see the descriptions of the Respectful of communities, Innovative Technologies, Taxpayer Friendly, Environmentally Sound (RITE) plan in section 4.2.1.5.

effects on the environment (Ofrydopoulou et al., 2021; Omil et al., 2010). These chemicals include Pharmaceuticals and Personal Care Products (PPCPs) and Per- and polyfluoroalkyl substances (PFAS), a group of compounds sometimes called 'forever chemicals' due to their ability to persist in the environment (Ofrydopoulou et al., 2021; Omil et al., 2010).

Several distributed model activists get elected as mayors and councillors, which further delays the CRD's implementation of their plan (CRD, 2017b). Meanwhile, in 2012 new regulations from the Federal government require that secondary treatment be in place by the end of 2020, creating a hard deadline (Fisheries Act, 2012; Harnett, 2012). Some activists and politicians advocated for requesting an exemption from the regulation, citing that it was scientifically unnecessary for the CRD to comply (Harnett, 2012; Palmer, 2012). After several more years of studies and debates, little progress had been made regarding the development and implementation of wastewater treatment plans (CRD, 2017b; Seattle Times Staff, 2014). In May of 2016, the province recommended that the CRD install an independent project board to oversee the project, and warned that project funding may at be at risk should there continue to be delays (CRD, 2017b). The CRD agreed to the recommendations (CRD, 2017b). A modified version of the CRD's plan that included tertiary-level treatment was selected for implementation, the necessary rezonings were approved by the municipalities, and the project development continued (CRD, 2017b).

Era 6: Construction – January 2017-December 2020 Ground breaks on the McLoughlin Point wastewater treatment plant in April of 2017 (Government of Canada, 2017). Some public advisory groups continue to meet periodically to advise on issues of possible community disruptions due to construction (Romphf, 2022). The plant opens on December 15th, 2020, meeting the federal government's deadline with just 16 days to spare (CBC News, 2020; Chan, 2020).

Era 7: Maintenance – **2021-present** The plant is run by the proponent contracted to build it for two years while kinks in operation are resolved to ensure that the plant is in compliance with regulations (Romphf, 2022). Public advisory groups start to wind down. Residents in the communities surrounding the plant have complained of issues of smell, which at the time of writing have yet to be fully resolved (Romphf, 2022). Additionally, the Heartland Landfill, which has been used as an interim storage facility for the biosolids, is reported to be filling up faster than anticipated, resulting in the CRD seeking alternate arrangements (Romphf, 2023; Sidaway, 2023). These include voting to send the biosolids to the nearby community of Nanaimo to be spread as fertilizer (despite Nanaimo claiming they were never consulted on this plan), and suspending regional bylaws therefore allowing the biosolids to be spread for non-agricultural purposes such as mine reclamation (Romphf, 2023; Sidaway, 2023).

4.2. Classification of Study Participants

Participants were categorized into one of five mutually exclusive groups: grassroots activists, environmental non-profit staff (referred to in this thesis as simply NGOs), politicians, bureaucrats, and independents. The breakdown of participants in each of these actor groups is as indicated in table 1.

Table 1

Classification and Number of Participants

Group	Number of participants
Grassroots activists	8
Non-profit staff (NGO)	2
Politicians	1
Bureaucrats	5
Independents	3

Note. Participants were sorted into these categories based on their self-identification and the descriptions of their affiliations during the study period. It is important to note that several participants

inhabited multiple of these identities over the course of the study period. For example, several activists later became politicians, as will be discussed in section 5.3. In these cases, participants are categorized based on the perspective with which they primarily identified and spoke from the most. This is in line with phenomena described by Alisat & Riemer (2015), Stern et al. (1999), and Snow et al. (1986), who note that activists will often move back and forth between being activists in leadership roles and in more passive supporting roles over time. This case study demonstrates a similar phenomenon.

For the purposes of this study, each of these five groups are defined as follows:

4.2.1. Grassroots Activists

In this case study, grassroots activists are individuals who had a specific desired outcome regarding local wastewater treatment policy, and took actions to increase the likelihood of their desired outcome becoming realized. Grassroots activism, or community organizing, is a form of uncompensated political action taken on by ordinary people coming together based on geography or identity (Checker, 2004; Shaw, 2009). Grassroots activists use their local knowledge of the issue and leadership abilities in their activism (Shaw, 2009). Grassroots activist groups are informal in nature, and are often unable to access financial resources through the same means as more formalized groups like non-governmental organizations (Checker, 2004).

Since anyone can become a grassroots activist, the membership of these groups can include a diversity of skills and experiences relevant to the work the group is undertaking. Since there are diverse points of view within a community, there is a possibility for multiple activist groups with different goals or methods regarding the same issue to arise. These groups may be complementary or competitive relative to each other. Small but highly dedicated activist groups tend to be agile, and able to engage in higher-risk tactics that while risky, can be highly effective (Frost, 2018). In contrast, larger groups who prioritize the wide broadcasting of their message are able to mobilize broad support for their cause

(Frost, 2018). This broad support can be very useful for fundraising, building economic threats through boycotts, or influencing politicians (especially during elections) (Frost, 2018). While the size of the activist groups in this study varied, most focused on mobilizing broad support rather than engaging in high-risk behaviour.

Since these groups often do not have formal membership, who is considered a grassroots activist or a member of a particular group can be difficult to determine outside of self-identification on the part of any given individual (Alisat & Riemer, 2015). Once more, activists' involvement in organizing is not static, but rather ebbs and flows over time (Alisat & Riemer, 2015; Snow et al., 1986; Stern et al., 1999). This allows for an individual to be a member of multiple groups if they so choose, which was observed in this study. In order to increase readability, participants in this group and their activities are often referred to as simply 'activists' and 'activism' throughout this thesis.

The following table displays the affiliations of the participants categorized as activists.

Table 2

Grassroots Activists by Group Affiliation

Group affiliation	Number of participants
Association for Responsible and Environmentally Sustainable Sewage Treatment (ARESST)	1
Responsible Sewage Treatment Victoria (RSTV)	2
Victoria Sewage Treatment Alliance (VSTA)	1
People Opposed to Outfall Pollution (POOP)	0
Swage Treatment Action Group (STAG)	2
Other	3
Total number of activist participants	8
Activist affiliated with multiple groups	1

Note. One participant is counted twice in the above table; once as a member of ARESST, and once as a member of RSTV. This is because the participant was involved with both groups, and speaks of both of them in their interview.

4.2.1.1. Responsible Sewage Treatment Victoria – RSTV

RSTV is possibly the first wastewater activist group in the CRD to form, with one participant claiming a founding year of 1991. According to the group's outdated website, RSTV has been attempting to influence political decisions on the matter since 2006 (Responsible Sewage Treatment Victoria, 2017). The group was active until at least 2017 (Responsible Sewage Treatment Victoria, 2017).

This activist group boasted the fact that a high proportion of their membership and leadership was made up of scientists, engineers, healthcare professionals, and university professors who agreed that the scientific data did not support the idea that wastewater treatment beyond the natural treatment provided by the combination of screening and local ocean conditions was needed (Responsible Sewage Treatment Victoria, 2007). As such, RSTV took the stance that any decision-making on the issue should be evidence-based rather than in response to public opinion or emotion. As reported by several participants, RSTV conceptualized the best outcome for the CRD's wastewater was to invest in source control and the prevention of combined stormwater and sanitary sewer overflows resulting from heavy precipitation rather than the land-based secondary treatment that the provincial and federal governments were mandating. Members of RSTV described this as a "one-size-fits-all" approach that they speculated would do Victoria more harm than good (Responsible Sewage Treatment Victoria, 2017). This group had a number of common members with the Association for Responsible and Environmentally Sustainable Sewage Treatment (ARESST), described below.

4.2.1.2. Association for Responsible and Environmentally Sustainable Sewage Treatment – ARESST

Founded in the early 1990s, by participants' account, ARESST was one of the first activist groups to form and persisted over multiple decades. Similar to RSTV, this group formed in response to the CRD's serious considerations of implementing new sewage treatment infrastructure. A participant who was a member of ARESST described the group's mandate as follows: "ARESST is a group of ordinary taxpaying greater Victoria residents deeply concerned about the local and marine environments, who believe that potentially disastrous mistakes are being made in the rush to develop a secondary sewage treatment system" (participant ID: 191385). Similar to RSTV, ARESST took the stance that any decision-making on the issue should be evidence-based rather than in response to public opinion or emotion (*Sewage Plants Victoria*, n.d.). Participants report that ARESST was active in their activism until the announcement of McLoughlin Point's construction in 2017.

ARESST's specific goals and actions changed over time as the landscape shifted. Participants describe early work focused on public education and spreading the message that treatment beyond screened outfalls was scientifically unnecessary. Once the provincial Minister for Environment ordered that some form of additional treatment had to be implemented, the group shifted their messaging to be critical of the wastewater treatment plans the CRD was attempting to implement. One way they did this was through the Stop A Bad Plan campaign to raise awareness of the shortcomings of the CRD's plans and encourage the CRD to appeal to the federal government for a regulatory exemption regarding treatment standards (Harnett, 2012). Participants associated with the Sewage Treatment Action Group (STAG) also described collaborating with ARESST in the late 2000s and early 2010s to delay the CRD's processes and advocate for alternative plans. Some members of this group were also affiliated with the RSTV group.

4.2.1.3. People Opposed to Outfall Pollution – POOP

POOP was a pro-increased treatment activism group founded in 2004 (CRD, 2017b; MacQueen, 2005). From the start, this group's goals were clear: use humor, disgust, shame, and embarrassment to draw attention to the issue of untreated sewage being released into the ocean, and to change the tone of the wastewater conversation (MacQueen, 2005). Much of POOP's activism drew widespread media coverage that noted the humorous nature of their work, with the publications themselves often adopting a lighter tone when reporting on the issue (Girard, 2005; MacQueen, 2005; Toronto Star, 2005). Perhaps their most recognizable work was the creation of Mr. Floatie, a seven-foot-tall excrement mascot with a goofy smile, bowtie, hat, and rainboots (Girard, 2005; MacQueen, 2005). Mr. Floatie made many formal and informal public appearances, often communicating with potty humor and puns (Girard, 2005; MacQueen, 2005). While garnering international acclaim, POOP's work was controversial within the community, receiving criticism for being too focused on emotions, attention-seeking, and lacking nuance (MacQueen, 2005). POOP was most active in the years following their founding, but Mr. Floatie continued to make occasional public appearances until 2017 (Nair, 2017). POOP worked closely with other activists and activist groups, including the Victoria Sewage Treatment Alliance (VSTA) and local NGOs.

4.2.1.4. Victoria Sewage Treatment Alliance – VSTA

Formed in 2005 (Royal BC Museum, 2019), and active through to the end of 2016 (Britten, 2016; Roth, 2016), VSTA was a pro-increased wastewater treatment activist group. VSTA's purpose was to advocate for publicly owned, affordable sewage treatment for Victoria that met the provincial and federal regulations (Skwarok, 2016).

VSTA worked closely with POOP, with some members belonging to both groups. Whereas POOP focused on lighthearted messaging and awareness raising, participants describe VSTA's role as being

more technical. They described their actions as including developing scientific messaging, engaging with the public, speaking in favour of treatment at CRD meetings, contacting their local mayors and councillors, and engaged in some fundraising efforts to support the work of POOP and other allies. VSTA members also regularly attended POOP events.

4.2.1.5. Sewage Treatment Action Group – STAG

Founded around 2006 or 2007, STAG was started by Esquimalt residents who objected to a sewage treatment plant for the region's core area being built in their township. Multiple participants describe STAG as being a NIMBY (not in my backyard) group who objected to the project out of concerns for changes to their quality of life or property values. One STAG participant describes NIMBYism as being their original motivation for joining the group, but that they stayed with the issue out of other concerns around technical feasibility, cost, and sustainability. STAG members who participated in this study self-describe as being pro-wastewater treatment, but objecting to the plan proposed by the CRD due to its high price tag, instead favouring a path forward that was more technically advanced and included different sustainability features.

One participant who was part of this group said that when STAG was founded, they were very intentional to make their goals centered around being in dialogue with the CRD so that their ideas and concerns could be considered (521544). This was because they were fairly sure that the construction of a new treatment system could not be stopped, so they wanted to make sure that they had the opportunity to influence the decision making around what would eventually be built. Group members proceeded to frequently attend council and board meetings as well as public consultation meetings to speak on the issue. Other participants who were not a part of STAG commented that STAG members were highly organized and very persistent, speaking at meetings at every chance they got, and co-ordinating their speakers, messages, and visual aids ahead of time.

After a few years of activism, STAG changed their approach from simply being against the CRD's plan to creating their own plan to champion in its stead. The RITE Plan (Respectful of Communities, Innovative Technologies, Taxpayer Friendly, Environmentally Sound) proposed a distributed wastewater treatment system made up of multiple small plants across the CRD that recovered resources like heat and water, and processed solids through gasification, burning them at very high heats to destroy contaminants (Paterson, 2016; The RITE Plan, 2013). Critics of the RITE plan, some of whom were participants in this study, called it extreme, and stated that it was technically and financially unfeasible, and that acquiring enough suitable sites would have been very difficult. One bureaucrat participant theorized that the goal of the RITE plan was not to have it implemented, but rather that it served as a veil for anti-treatment sentiments, slowing down the project's progression and elevating the price tag until treatment was unfeasible.

Multiple participants recalled that several STAG activists ran for local council and mayoral positions in municipal elections, with a significant part of their platform dedicated to promoting the RITE plan and obstructing the CRD's existing plans. This includes the RITE plan creator, Richard Atwell, becoming elected as mayor of Saanich (Paterson, 2016). Some participants recall that these newly elected politicians delayed local wastewater development through denying rezoning requests. Others emphasized that they played a key role in the negotiation of an amenity fund for the Township of Esquimalt in return for hosting the treatment plant.

Some participants report that STAG members continue to be involved in wastewater treatment at the time of writing, sitting on a liaison committee between the CRD and several townships while the operations arrangements continue to be finalized.

4.2.2. Non-Government Organization (NGO) staff

In this thesis, non-governmental organization staff (often referred to as simply NGOs in this thesis) are individuals who worked for an established non-profit organization in a compensated role. Their work relating to wastewater treatment within the CRD may not have been their sole task or the focus on their work, but they did work in this area in some capacity on behalf of the organization. While these organizations often have volunteers who are not financially compensated, volunteers are not included in this category.

For the purposes of this thesis, environmental non-governmental organizations are defined as non-profit organizations that self-identify as working on environmentalist causes, have established mandates broader than the issue of wastewater treatment in the CRD, and were founded before the beginning of the study period (1990). This narrower definition is an extension of definitions of NGOs, or "professional activists," articulated by Doyle et al. (2015, P. 116) and Checker (2004, P. 35), which focused on the organizations' constitutions that articulate their goals, values, and purposes, and the relative permanence, legitimacy, and stability that it grants them. Additionally, these authors state that NGOs are inherently political organizations, as their main activities are often advocacy and lobbying (Cadman et al., 2020; Checker, 2004; Doyle et al., 2015).

4.2.2.1. Georgia Strait Alliance – GSA

The Georgia Strait Alliance, founded in 1990 (The Ocean Foundation, n.d.), is a British Columbia-based charity that is "grounded in environmental justice" and who "mobilize and support collective action to protect the Salish Sea region" (Georgia Strait Alliance, n.d.).

The GSA has been involved in sewage treatment-related activism in both the GVRD as well as the CRD since shortly after their founding (Trueheart, 1993). Participants say that while the Vancouver campaign started earlier, the CRD campaign was much larger. The overall goal of the GSA's campaign was

to see the implementation of secondary level treatment in Victoria (Georgia Strait Alliance, 2005a). Participants said that at first, the campaign was focused on persuading the public and local politicians that implementing wastewater treatment was necessary for ecological and health reasons. This created a “he-said-she-said”-style campaign (336785) that resulted in high tensions in the community and a political stalemate, since other groups were using data to make arguments advocating for the opposite view. Eventually, they report that the GSA changed their strategy to be focused on the benefits that wastewater treatment could bring the community, like cost savings through resource recovery.

Participants who worked with the GSA described their CRD campaign consisting of public education, government relations, and aiding other NGOs and activists collaborate by facilitating communication. Public education included engaging with people through tabling, hosting events, attending events put on by others, and publishing the views of candidates running for office regarding sewage treatment. Government relations actions included meeting with politicians at the provincial, regional, and municipal levels, and occasionally at the federal level. The purpose of these meetings was to provide education to representatives on the benefits of wastewater treatment, as well as discuss the details of considerations like funding and project development. Since the GSA was very visible as a pro-increased treatment organization, they attracted volunteers from the community who wished to become involved. Some of these volunteers would coalesce into activist groups like the ones mentioned above. In this way, the GSA acted as a hub for information between the groups, and provided them support though sharing plans and advising them on strategy. They also occasionally helped the groups like POOP with funding. Additionally, the GSA had connections to American-based activists. Participants speculate that this is how environmental activists in Washington state found out about Victoria’s system of discharging sewage to the ocean via deep-sea outfalls in the 1990s, prompting them to apply pressure to Victoria through media campaigns and threats of tourism boycotts.

4.2.2.2. T. Buck Suzuki Environmental Foundation – TBuck

The T. Buck Suzuki Foundation is named after 20th century Japanese-Canadian Tatsuro "Buck" Suzuki, who made a living as a fisherman in the Fraser Valley and advocated for its protection (T Buck Suzuki Foundation, n.d.-a). Founded in 1981, TBuck's vision is for "a future of abundant, sustainable fisheries and healthy ecosystems that support thriving coastal communities in B.C." (T Buck Suzuki Foundation, n.d.-a, n.d.-b). Their mission statement on their website reads as follows: "The Foundation takes a flexible, innovative, and collaborative approach to protect habitat, prevent pollution and promote sustainable fisheries for future generations" (T Buck Suzuki Foundation, n.d.-a). Participants describe TBuck's goals in the sewage campaign as being able to eat the seafood from around the harbour safely, as well as achieve an environment where one could participate in recreational activities like swimming and surfing without fearing for one's health. This manifested in an advocacy goal of achieving secondary treatment or better for the CRD (Georgia Strait Alliance, 2005b; R. Shaw, 2013).

Participants described that similar to the GSA, TBuck representatives attended many liquid waste management meetings, read relevant CRD reports, and met with politicians and other stakeholders to build relationships and discuss wastewater-related issues. This included providing education on the issue, persuading the politicians to consider pursuing options for treatment, and suggesting what questions to ask or topics to bring up in council meetings. TBuck also hosted and ran a number of sewage-related workshops and public lectures as part of a public education campaign. Similar to the GSA, TBuck played an important role in co-ordinating between different actors and developing overarching campaign strategies. Additionally, TBuck, along with the GSA, collaborated with a local scientists and environmental specialists to navigate contaminated sites regulations and to conduct independent studies on coliform contamination.

A participant associated with TBuck says that the organization played a pivotal role in encouraging the CRD to commission an independent scientific review to determine the necessity of treatment. The report concluded that in the long-term, the CRD could not rely on the dilution of the Juan de Fuca as a treatment strategy, and recommended implementing treatment, if only to calm the political climate (CRD, 2017b). This report was cited in a letter by minister for environment Barry Penner that ordered the CRD to create and implement a wastewater treatment plan (Penner, B. 2006).

4.2.2.3. Ecojustice/Sierra Legal Defense Fund

Ecojustice (previously known as the Sierra Legal Defense Fund) is an environmental law charity founded in 1990 (Gage et al., 2020). Ecojustice works with organizations and individuals to take governments and other institutions to court over issues related to environmental protection (Gage et al., 2020), and, according to their website, works to "shape new laws to meet the urgency of the climate and ecological crises" (Ecojustice, n.d.).

Ecojustice collaborated with the GSA and TBuck multiple times in the 1990s and 2000s, arguing that the CRD and the GVRD were in violation of the Fisheries Act due to contamination from their lack of wastewater treatment (Georgia Strait Alliance, 2005b; Trumbull, 1993). Specifically, as it relates to clause 35 of the Act, which states that, "No person shall carry on any work, undertaking or activity that results in the harmful alteration, disruption or destruction of fish habitat" (Fisheries Act, 1985). Ecojustice and the GSA brought forward a suit against the GVRD in the early 1990s (Trumbull, 1993), and petitioned the federal Auditor General, alleging that the federal government was failing to adequately regulate the release of harmful substances via sewage in several cities across Canada, including Victoria (Georgia Strait Alliance, 2004). Several participants note that Ecojustice's actions relied heavily on reports and analyses of the CRD's water quality monitoring data conducted by independent actors who collaborated with GSA and TBuck.

4.2.3. Bureaucrats

For the purposes of this thesis, bureaucrats are defined as individuals working on behalf of a government in a compensated role who were not elected to their position, and do not make policy decisions. This group includes people who were hired by a government to provide analysis, advise decision makers, deliver government services, and execute government projects. Some bureaucrats working on specific portfolios or projects may have professional designations or specialized expertise that informs their work. In this thesis, unless otherwise specified, 'bureaucrat' refers to those operating at the municipal or regional level.

4.2.4. Politicians

Politicians are publicly elected officials who hold policy decision-making power. For this case study specifically, participants who are politicians hold municipal office, and may serve on subcommittees or in regional governments.

4.2.5. Independents

This category was created because several participants clearly stated that they had no official affiliation with any of the groups previously described. In some cases, participants took actions similar to activists to advocate for their goals on the issue, but were not explicitly affiliated with any of the activist groups established above. In another case, the participant's employment, in addition to being something other than a politician, bureaucrat, or environmental non-profit staff, prevented them from taking a public political stance on the matter and taking actions themselves, yet they participated in the study because they had relevant information on the case's history. While some of these participants may have collaborated with one or more activist group, government, or environmental non-profit, they themselves did not self-identify as being affiliated with any of these groups.

5. Data and Analysis

This section presents three themes that capture the actions of activists and their subsequent impacts on the political system. Then, a concluding section will summarize the actions of each grassroots activist and NGO group, and describe how each group used the power they had access to according to the analytical framework presented in section 2.5. In places where interview quotes are included, the participant's randomly generated identification number is provided in parentheses.

The first theme, The Role of Science, examines how different activists used science to support their arguments. Many pro-evidence-based decision-making activists were spurred into action out of a sense of duty to promote policymaking based on the local science available, which they argued demonstrated that further treatment was unnecessary. On the other hand, pro-increased treatment activists drew heavily from concepts from the field of biology to describe the contamination risks that wastewater outfalls presented in order to support their call for treatment. In both cases, activists' use of science in their arguments is a representation of discursive power, and draws authority from the expertise of those conducting and interpreting the scientific data.

The second theme, Emotional Appeals, explores how activists employed emotions to frame and attract support for their policy goals. The emotions this section discusses include fear, embarrassment, shame, guilt, and disgust, as well as the role of humour in communicating emotional ideas. Using emotions in their arguments made them more persuasive by appealing to audience's senses of self, safety, and belonging in their communities. Many arguments that induced different emotions also communicated different policy goals as the right or moral thing to do. By incorporating emotions in their arguments, activists were using discursive power and drawing from authority through morality to make their case.

The final theme, Running for Office, describes how activists gained direct policymaking power by becoming elected representatives in their municipal and regional governments. These activists used the notoriety and trust they gained in their communities through their activism to launch successful election campaigns. Once in office, these individuals were able to use their direct power in the policymaking process to put up administrative barriers towards existing wastewater treatment plans while dedicating time and material resources towards their own ideas. In the policy formulation stage, these actors advocated for their preferred policy solutions. In the decision-making stage, they voted for policy decisions that were favorable to the goals of their activist groups.

5.1. Theme 1: The Role of Science

This theme explores how different activists used science to support their framing of the issue of treatment. Even though the natural sciences often cannot capture the full complexity of a policy issue, uplifting evidence that resembles science can lend disproportionate credibility to an argument compared to information from other sources (Lélé & Norgaard, 2005). This makes arguments that include data from the natural sciences seem more legitimate and strongly grounded in fact, thus giving them power and authority through expertise. Given the diversity of perspectives and choices made from discipline to discipline, paradigm to paradigm, and study to study, science will often result in conclusions that do not necessarily paint a single, cohesive picture with a unified, incontestable conclusion (Sarewitz, 2004). It is therefore possible to locate credible scientific evidence in support of multiple points of view (Sarewitz, 2004). It is in the best interest of activists and NGOs to locate and champion science that supports their worldviews and desired policy outcomes. Both pro-increased treatment activists and pro-evidence-based decision-making activists appealed to science to demonstrate that their policy goals were sound, drawing from different disciplines to do so.

In the case study at hand, two natural science disciplines featured prominently among activists: biology and oceanography. Proponents of increased treatment focused their scientific arguments around the short- and long-term damage that biological and chemical contaminants were inflicting on the living beings within the ecosystem. Critics of increased treatment pointed to local oceanographic data, including geochemistry and tidal physics, as evidence that treatment was unnecessary, and further warned that some of the treatment methods in consideration could result in more adverse effects than were being caused by the outfalls. The following two sections describe each perspective in more detail.

5.1.1. Pro-Increased Treatment: Biology and Ecosystem Contamination

Pro-treatment actors stated that finding and promoting science that supported their goals was crucial, as it provided evidence to policy-makers that their concerns were valid and required regulatory attention. One NGO participant recalled a conversation with then-provincial Minister of Environment Barry Penner who told pro-treatment actors, “if you want something to change, you have to come up with some science.” (044356)

The scientific arguments made by the proponents of increased sewage treatment tended to rely heavily on evidence rooted in the field of biology. There were two main categories of science-based arguments in favour of treatment, both around the subject of contamination. The first was around the effects of abiotic domestic sewage contaminants like hormones, medications, personal care products, heavy metals, and nutrients on the ecosystem. The second was around the effects of fecal coliform bacteria on the health and wellbeing of humans and fisheries.

There were several substances that pro-increased treatment activists worried were present in wastewater and affecting the ecosystem. These include heavy metals (including cadmium, copper, chromium, and lead), household cleaners, pharmaceuticals and personal care products (PPCPs), and polycyclic aromatic hydrocarbons (PAHs), a group of chemicals that have been found to increase cancer

risks in humans and other animals (Albert et al., 1991; Ma et al., 2013). Most of the time, the participants discussed these substances collectively, referring to them simply as 'contaminants.' While there was some concern expressed on the potential acute effects of these contaminants on any individual organism, participants were mostly worried about lasting effects in the ecosystem that might occur as a result of years of deposition, and of the potential harms that could be discovered in the future as contaminant science continued to develop. As such, implementing treatment was seen as a precaution against both known and unknown contaminant risks. One concern that frequently arose was around the bioaccumulation of heavy metals up the food chain, eventually resulting in fish that were too toxic to eat, or orcas becoming poisoned.

Many pro-treatment actors were concerned specifically that chemicals from the outfalls were contaminating the local fisheries. Some actors were upset that fisheries were closed due to the presence of contaminants or their proximity to the outfalls, because it was affecting the livelihood of local fishers. In contrast, others thought that more fisheries should close because of the potential threat of contamination and adverse effects on both fishers as well as the people who were eating the local fish and seafood.

Pro-treatment activists largely discussed the risks of these contaminants in the abstract; what could potentially happen to the environment over time, or what might be found if the right studies were carried out. However, they also examined the CRD's water quality monitoring data and scrutinized the standards to which the organization was holding itself. According to an independent environmental expert who collaborated with the NGOs and combed through the CRD's old monitoring data, the CRD had been holding itself to out-of-date contamination standards set for Puget Sound, a contaminated site in Washington state. This expert and the NGOs thought that this standard was inappropriately low, allowing the CRD to "get away with" higher contamination levels without attracting criticism (464438). In addition, this expert put forward an argument that the outfalls should be declared a contaminated site

under British Columbia's Contaminated Sites Regulation based on the CRD's reported data. This became a common talking point of pro-treatment actors, and was cited by Minister Penner in the 2006 letter addressed to the CRD ordering the creation of a plan for treatment.

In addition to concerns around the chemical components of contamination, there was also concern over the presence of fecal coliform bacteria and the potential health hazards that they could cause to humans and animals. A biologist who was generally aligned with pro-treatment activists (504140) conducted biological research on behalf of the activists and showed that swimming scallops near the outfalls were contaminated with E. coli, a fecal bacteria known to cause illness in humans, year-round. This scientist, a microbiologist by training, was able to obtain swimming scallop samples from near the outfalls thanks to a local diver and outspoken pro-treatment activist. The scientist then cultured microorganisms from the samples in a petri dish and counted the E. coli colonies growing in the agar. Notably, this test was repeated at several points over the course of a year, and E. coli was always present in the samples, meaning its presence was not a seasonal phenomenon. This was significant because E. coli has a short lifespan in seawater, meaning that any E. coli present had to have been newly deposited. This strongly implied that the outfalls were a constant source of E. coli contamination in the local environment, and that the E. coli was infecting local sea life. Pro-treatment activists used this finding to support the argument that the outfalls were a risk to human and fish health, and that more than source control would be needed to address bacterial contamination issues in the water column and along the shore.

As previously mentioned, many pro-increased treatment activists thought that those advocating against increased treatment were not taking the relevant science into account. Specifically, several pro-increased treatment activists thought that the CRD and the media were relying too heavily on perspectives from oceanography and not enough from biology. One participant expressed their concern over this fact as follows: "The biologists understood accumulation and understood the harm. […] And

that their [oceanographers'] education was not biology. It was just currents, literally, people who figure out where water flows in the ocean." (464438). They further explained that one of the reasons why this was a problem was because, "this distinction [between the disciplines] is something that [the] public wouldn't really grasp. If a scientist says, 'don't worry about untreated wastewater, it's benign.' They wouldn't realize they're […] hearing from [an] oceanographer who talks about currents, movement of water, not biology." (464438). In other words, audiences like the general public with limited pertinent technical expertise would be incapable of differentiating between the two fields and evaluating the relevancy of their claims. They would likely see them as equally valid, since they were both natural science disciplines.

5.1.2. Treatment Critics: Multi-faceted Local Oceanographic Data on Current Practices

As evidenced by their moniker in this thesis, pro-evidence-based decision-making activists put scientific evidence at the forefront of their campaigns. Many participants with this viewpoint cited their belief that scientific evidence should be the basis of policy-making as a motivator for becoming involved with this issue. As previously stated, many of the leaders of this movement were local marine scientists themselves, or scientists in different fields who believed in evidence-based decision making and trusted the conclusions of their peers.

It is important to note that while multiple pro-evidence-based decision-making activists used the title of oceanographer, several specified that their work was in *biological* oceanography. These scientists had expertise on how different factors in the marine environment – including the outfalls – were affecting organisms in the local ecosystem.

Pro-science-based decision-making activists, several independents and bureaucrats, and the majority of local oceanographers were in agreement that the outfalls were not harmful to the surrounding environment. This included scientists in several subdisciplines working under the umbrella

of oceanography, including geochemistry, benthic ecology, and tidal physics. The general agreement based on several indicators was that due to the rapid mixing of the water around the outfalls, wastewater was very quickly broken up, diluted, and dispersed, rendering it largely harmless outside of an initial dilution zone of about 100m around the outfalls. The wastewater was found to have "no significant impact on the wildlife around the pipe" (665929), with some noting that while the biodiversity around the outfalls was lower, the biomass tended to be higher, likely due to the heat and nutrients that the wastewater was providing (Rogers, 1995). Geochemically, it was found that within the Strait of Georgia, "the ocean overwhelms the human sources" (766304) regarding nutrients like nitrogen and carbon. Studies showed that the outfalls were contributing less than 1% of the nitrogen, organic carbon, and oxygen demand of the Strait (Johannessen et al., 2015). This meant that the nutrient contributions from the outfalls to the larger system were negligible and therefore not promoting eutrophication, which is a common concern regarding wastewater dischargers in smaller, freshwater systems like lakes as it can lead to oxygen depletion and toxin buildup. Multiple other scientist participants stated that eutrophication was rarely a concern in marine environments.

Regarding contaminants, one activist with a background in marine monitoring said that on the whole, the CRD's wastewater was "virtually 100% domestic," and as a result it was "essentially non-toxic" (665929) compared to industrial wastewater. When it came to pollution from PPCPs, available data was limited but promising. One participant recounted a study conducted by a contaminants chemist near Vancouver's outfalls, which they said were similar to the CRD's outfalls. This chemist developed novel methods to measure minute concentrations of pharmaceuticals in the sediment particles, where it would be easiest to detect their presence. These tests also measured caffeine, a substance which tends to stay dissolved in water and therefore does not easily build up in the sediment. Even so, the sediment tests were only able to detect caffeine. The participant said that this spoke to the fact that pharmaceuticals were only present in incredibly small amounts. The participant also said that while

some other contaminants with known adverse health effects like polychlorinated biphenyls (PCBs) might be found in the environment, a number of them were from sources other than the outfalls. Similarly, the participant said that some of the heavy metals found in the system had natural origins or were from mining sites, not sewage, again suggesting that treatment would not affect their presence in the system.

Finally, several evidence-based decision-making proponents expressed fears that removing toxins from the wastewater concentrated them in the extracted solid waste products, which presented different, riskier hazards. They described how removing the contaminants from the wastewater didn't destroy them, but simply resulted in the creation of toxic sludge that would then need to be disposed of on land. Depending on how it was handled and where it was put, this sludge was at risk of leaching into the environment and contaminating local surface and groundwater reservoirs, which serve as drinking water sources. From there, it could enter terrestrial food chains. So, rather than small concentrations of contaminants going "out at the end of a pipe deeply into the ocean and buried by sediment where they're then out of touch to the environment," the contaminants are at risk of becoming "much more environmentally active" (766304).

Pro-evidence-based decision-making actors were very confident in the quality of their data and analyses. Multiple participants said that the CRD's water quality monitoring program was pioneering, established in the 1960s before environmental monitoring was common practice in Canada. It was described as "an outstanding monitoring program" that "got awards from many environmental associates as far as technology goes," (665929). In addition, several studies done by Fisheries and Oceans Canada and reviewed by third parties such as a Society of Environmental Toxicology and Chemistry panel confirmed that the science being conducted on the system was sound, and that there was evidence that treatment, while highly socially desirable, wasn't scientifically necessary.

5.1.3. Science and Values

Both pro-increased treatment and pro-evidence-based decision-making activists used science to support their arguments in an exercise of discursive power. However, they both had different relationships to science and the role it played in their policy goal-setting process.

Pro-evidence-based decision-making activists appear to have let the science lead them to their policy goals. Several participants from this faction stated that they first got involved with activism when they felt like the science wasn't being paid adequate attention by decision-makers. Contrary to the belief of many of their opponents, this group wasn't indifferent to environmentalism; many people in this group self-described as becoming involved in their respective fields or engaging in these research topics out of concern and curiosity for the long-term health of the ecosystem. They took up a position that was ostensibly counter to treatment because they felt it was not adequately supported in the breadth of scientific data that had been collected and analyzed over time. In short, this group valued science, and let the science dictated their policy goals and frame their arguments.

In contrast, pro-increased treatment activists largely had strong pre-existing normative beliefs that treatment was the safest option in preventing any harm that the outfalls may cause, and let those beliefs guide the science they conducted, searched for, and elevated. These beliefs stemmed from a general knowledge of potential marine hazards, like heavy metal contamination, bioaccumulation, and fisheries health; they had little evidence from the start of their organizing that these concerns would bear out in their specific ecosystem. It was concern for the health of their local ecosystem generally that prompted them to advocate for treatment as a policy outcome. It is important to note that compared to the evidence-based decision-making group, these activists had less access to the relevant local science, meaning that it would have been difficult for them to form a stance based on the pre-existing science in the same way. While they did employ science to support their view, the pro-increased treatment activists

argued more from values, morals, and emotions than from science. This will be explored further in the next theme discussion.

This finding, that the scientization of this debate did not result in one clear conclusion and therefore an obvious best path forward, is consistent with the work of other scholars such as Sarewitz (2004). Sarewitz argues that science itself is laden with its own values and interests that inform how different disciplines or actors conduct their inquiry, and can therefore be used to legitimize multiple different stances (2004). Appealing to science in times of disagreement is often done as a way to appeal to an independent body of facts, yet this process simply camouflages the values and preferences behind technical language (Sarewitz, 2004). Increasing scientific study into any given contentious issue therefore often results in the entrenchment of existing controversies, reinforcing rather than resolving decision-making gridlock (Sarewitz, 2004). This entrenchment of positions despite the wealth of scientific data available is plainly apparent in this case study; both pro-increased treatment and pro-evidence-based decision-making advocates drew upon both local studies as well as more general scientific knowledge regarding the effects of wastewater on the environment, yet the result was an increasingly divided community. It is for this reason that examining the role of science in this case study is necessary but insufficient to fully understand how decisions were eventually reached.

5.1.4. Conclusion

It is beneficial for activists to include scientific evidence in their arguments as it lends legitimacy and authority to their policy goals by making them appear to be coming from a place of expertise.

In this case study, pro-increased treatment activists (associated with the grassroots groups VSTA and POOP, the NGO groups GSA and TBuck, and their independent allies) predominantly harnessed concepts and data from the field of biology to discuss the threats and potential dangers of contaminants from the outfalls on the local environment. Some pro-treatment actors thought that decision-makers

and the media wrongly focused too much on oceanographic perspectives and not enough on biological ones, giving false impressions of what was safe.

On the other hand, pro-evidence-based decision-making activists (members of RSTV and ARSST) relied on pre-existing local oceanographic studies that they thought clearly demonstrated that the outfalls were not a threat to the environment, and therefore any increased treatment was a waste of money and presented novel, potentially worse threats to local ecosystems.

Another difference between these two groups was that pro-evidence-based decision-making activists were vocal that they let the science dictate their political opinion on this matter, which in this case happened to be that further treatment was unnecessary. In contrast, many pro-increased treatment activists held pre-existing normative beliefs regarding the role of treatment, partially informed from investigations of other systems, then let those beliefs guide them in their local inquiry and communication. In this way, by putting the fact that their stance was informed by science at the forefront of their messaging, pro-evidence-based decision-making activists were signalling their authority through expertise.

5.2. Theme 2: Emotional Appeals

This section examines how activists framed their arguments in a way that appealed to emotion. This is a form of discursive power that derives authority from morality, as it positions treatment as an issue not of scientific reason, but as a moral duty. In other words, by harnessing emotions, activists persuaded others to their cause by reinforcing that treatment was the 'right thing to do.' The emotions that will be examined in this section are fear, guilt and shame, embarrassment, and disgust (also known as "The Yuck Factor"). Additionally, the role of humour as a tool for activism and political discussion will be explored.

It is important to note that emotions are complex and can be difficult to disambiguate. Indeed, many of the examples referred to in this section can illustrate the appeal to multiple emotions. This thesis largely separates discussions of emotions into their respective sections for the ease of discussion and reader comprehension. Each emotion is not to be seen as mutually exclusive with the rest.

5.2.1. Fear

As defined in the literature review, fear is an unpleasant emotion to a perceived threat to the present or future wellbeing of an individual, or someone or something around them. It has been shown that when people are experiencing fear, they are more likely to exhibit compliance behaviours (Doliński, 2016; Harper et al., 2021). As such, one method to encourage the uptake of a message or behaviour is to frame alternative messages to be associated with fearful outcomes.

There is evidence in this case study that fear played a role in how some people engaged with the issue of wastewater. For starters, several activist participants described fear around the effects of wastewater as one of their reasons for becoming involved with activism. This is aligned with other work that has described fear as a self-motivator within social movements (Kleres & Wettergren, 2017). Fear around the risks wastewater presented to the future wellbeing of humans and the environment was also used to demonstrate why this issue was important. For example, one NGO participant described the goal of their wastewater work as follows: “The ultimate goal here is to be able to eat the seafood safely around the harbor, and to be able to swim in the water, to be able to surf in the water and all that kind of stuff without, fear for your safety and your health.” (044356) In this framing, treatment is the implied solution to fear for the effects of the outfalls on humans and the environment in the present and the future.

One way in which fear was invoked was through the posing of rhetorical questions. Rhetorical questions are defined as having an interrogative structure, but serve as a vehicle for making assertions

(Cerović, 2016; Han, 2002). In this strategy, the speaker can articulate suspicion, opening up space for doubt and deception in mainstream accounts of events, all while maintaining a degree of respectability (Lyons et al., 2019). There are several examples of participants using rhetorical questions as a way of communicating suspicion or intolerance of the risks posed by their opponent's propositions. This includes concerns around the short- and long-term impacts of contaminants from the outfalls, the different hazards and benefits to animals and humans from the spreading of biosolids, the plant's resilience in the event of a tsunami, and the risks associated with a pipeline that was constructed to transport solids from the treatment plant to the local landfill.

One prominent example of rhetorical questions being used to communicate fears was from STAG activists discussing a pipeline. One participant framed their concern as follows: "And then we have the sludge from the secondary treatment plant being pumped 17 kilometers uphill, to our landfill, which has its own set of issues. You know, we're in an earthquake zone, it goes through many sensitive watershed areas and just one break of a pipe. What would that mean?" (642137). Several participants saw this line of questioning as unproductive, given that the relative risks and benefits of the pipe had been considered when the decision was first made. Additionally, the politician participant described concerns expressed around the pipeline as hyperbolic, and said they saw the questions around the safety of the pipe as silly at times. However, they also understood it as an expression of fear of the unknown from constituents, which was something they were familiar with: "And then there was, 'What if the sky falls and it breaks or the pipes loose, or...' You know? It's all those sorts of things. Right? […] 'oh, what if the lead shade line breaks, oh!' […] I've dealt with community for a long time and it's always the fear of the unknown, right?" (3133317)

Similarly, sometimes activists would cultivate fear in their audiences not by talking about risks and future scenarios they thought might happen, but by simply suggesting that there *are* risks and the potential for adverse events with no further elaboration. This leaves the individual to catastrophize

privately, potentially creating scenarios far worse than what informed experts project are likely to occur. Several participants described talking points that utilized this technique, like this RSTV activist quoting from an outreach presentation: “I also ask you to use your imagination as to the adverse effect on the overall environment that will occur from spending this $775 million on land-based sewage treatment facilities.” (191385). By prompting individuals to imagine negative scenarios and risks, activists are able to harness discursive power to frame the issue in a way that places a project as a liability. At the same time, they are able to cast themselves as having good intentions and caring about future safety and sustainability, which reinforces their moral authority regarding the topic in their community.

5.2.2. Guilt and Shame

Guilt and shame are discussed in tandem as they are similar emotions, both associated with the experience of regret and contrition (Baumeister et al., 1995; Doliński, 2016; Tangney, 1995). Guilt and shame are felt when an individual feels like they have violated a rule or cultural norm (Doliński, 2016). Both guilt and shame are associated with a decrease in one’s feelings of self-worth and a lack of control (McMillen, 1971), which can be recovered by doing something that is socially desirable, like fulfilling a request (Doliński, 2016). As such, one way of encouraging desirable actions is to induce feelings of guilt and shame around an issue, and then immediately present an individual with a desirable task to act as a pathway for resolving the negative feelings and regaining control. Similar to fear, this method of encouraging specific behaviours requires deliberate framing of an issue, a form of discursive power, and reinforces certain actions and beliefs and morally superior.

There is evidence that activists induced guilt and shame in several ways in this case study. For example, one common argument that came up repeatedly in interviews with pro-increased treatment participants was that treating wastewater was the “right thing to do” (191385, 798671). Treating wastewater was framed as something that a society did in order to be responsible to the environment; it

was a norm done in service of the greater good. This framing paints the lack of treatment in the CRD as an irresponsible policy decision that transgresses a boundary of acceptability. This in turn prompts feelings of guilt and shame towards those who are indifferent, uninformed, or in favour of the continuation of the CRD's lack of sewage treatment, and reinforces the pro-increased treatment stance as a moral one.

Another common adage of pro-increased treatment folks was, "there's no such thing as clean sewage" (464438, 504140). This statement presents treatment as a binary, where the existing strategy of not treating the waste is implied to be 'dirty,' or the incorrect option. In contrast, treatment is associated with cleanliness. This framing, which clearly sets up treatment as the morally 'correct' option, casts those who are against treatment as having an 'incorrect' stance, which again can subject them to feelings of guilt or shame, making them more likely to change their mind or adopt different views or behaviours.

The idea, that pro-increased treatment actors saw their perspective as morally correct, is supported by other participants. One bureaucrat participant who regularly interacted with activists described them as seeing themselves as stewards who wanted to take care of the environment: "So you have people like that, that were wanting to, just want treatment. […] 'Let's be stewards and treat the sewage,' you know?" (606846)

As previously described, shame is a primarily external emotion (Doliński, 2016). For an individual to experience shame, they must have an audience to witness their transgression. Activists can create shame by creating witnesses to what they see as the undesirable practice. Creating an audience for the issue was one of the motivations and strategies of POOP and Mr. Floatie. By attracting attention nationally and internationally, activists were creating an audience to witness the CRD's behaviour, and inviting that audience to express disapproval. One NGO participant who collaborated with POOP

described how the international media attention that Mr. Floatie drew brought shame to the local community: “There was a transboundary campaign and an effort to you know, put some shaming […] tourists who were in Victoria who were told about it [the CRD’s lack of wastewater treatment] were just horrified, […] Like it just, I think there was some concepts of responsibility,” (336785).

This participant later summarized the attention that the CRD got for their treatment policies by saying, “like, the international shaming that happened,” (336785). Individuals from abroad not only witnessed the CRD’s transgression, but called for them to take responsibility and implement treatment by threatening boycotts and writing op eds on the subject. By forcing the issue into the international eye, activists induced feelings of shame in members of the local community.

In contrast, guilt is a primarily internal emotion that occurs when one recognizes themself as being in violation of a social or cultural norm (Doliński, 2016). Pro-treatment activists attempted to induce guilt in their audiences by pointing out that not only were the outfalls gross and potentially hazardous, but also implying that essentially everybody who lived in the CRD was complicit, since they contributed to the waste that the outfalls distributed. One example of this occurred when an independent criticized the CRD’s use of technical, neutral-sounding language in discussing the results of their water quality monitoring: “To me, what they should say is just simple. It's raw sewage. That's it. No, don't get fancy about the whole thing. Because what you're trying to do is hide the fact that this is just raw, untreated sewage. Okay? This [is] the stuff that everybody contributes to. Everybody, going out Clover Point.” (504140). An NGO participant expressed a similar sentiment through plain language: “We'd always talked about there's no such thing as ‘away’ like, you know, there's just you. You're dumping it into the ocean. Like, let's just be clear on what you're, what you're saying. We are dumping raw sewage.” (336782) By using language such as “we” and “everybody”, pro-treatment individuals are indicating a shared responsibility for any harm that they allege the outfalls are causing, prompting feelings of guilt.

This point, that everyone was complicit, could be further amplified by invoking local animals as the innocent victims of these actions. One NGO participant described how from their perspective, a lot of people easily made the connection between pollution from outfalls and the health of aquatic animals: "Most peoples understood yeah, as soon as they knew, though, like raw sewage is going out to the ocean where the orcas are, and the salmon." (336785) An independent similarly invoked the negative influence humans have had on orcas when discussing why treatment was important:

> "There have been cases of orca whales, being beached and dying in the Pacific Northwest, and where their carcasses have to be treated as hazardous waste. Because the levels of PCBs, polychlorinated biphenyls, in their tissue, was above the criteria for hazardous waste. So they had to be basically taken to a hazardous waste facility, or just so, you know, bioaccumulation is real." (464438)

By demonstrating how animals, including orcas, which are endangered, could be harmed, suddenly the potential impact of the outfalls went from being abstract and spread out to being described in clear relief, complete with a face. This line of discussion encouraged audiences to consider how their individual, continued behaviour via the outfalls could be deadly to animals who have no say in the matter. This framing, which presents both perpetrators and victims, again casts the continued use of the outfalls as one that promotes harm, and thus as immoral. As such, anyone who is not opposed to the outfalls is complicit in harm, which could cause feelings of guilt and prompt more people to be in favour of treatment. By using their discursive powers to tell the story of treatment as one with clear moral implications, pro-treatment activists were able to gain support for their cause.

5.2.3. Embarrassment

As a reminder, embarrassment is a negative, self-conscious emotion that results from the evaluation of oneself from another's perspective. Embarrassment is often felt in response to social transgressions when people think that others have formed undesirable impressions of them, threatening

their belonging in a group (Doliński, 2016; Hershcovis et al., 2017). Individuals who have recently experienced embarrassment are more likely to agree to complete a task, likely because the individual has a desire to "recover lost face" or recover a sense of positive self-image (Apsler, 1975; Doliński, 2016, p. 151). As such, framing a stance as being socially transgressive to prompt embarrassment can encourage the adoption of a different view, which in contrast appears to be desirable and a moral signifier.

For many people in this case study, the sense of belonging that was threatened was the belief that that they and their community were responsible stewards of the environment and of their community's health and wellbeing. Therefore, in learning about the CRD's sewage discharging practices and the potential risks it posed, it became harder to believe those attributes were true. This is supported by the accounts of several participants, including one NGO worker, who said that when people found out about the CRD's lack of treatment, they were often surprised and in disbelief, and quickly supported the call for treatment.

Another axis of one's sense of self that was targeted was their sense of provincial and national pride. This was exhibited by pro-treatment activists' strategy of seeking out tourists to tell them about the CRD's lack of treatment, in an attempt to embarrass local officials. One NGO described tourists were commonly "horrified" to hear about the lack of treatment "because it was so. Beyond. Like the capital of the province doesn't treat its sewage" (336785) They said that this strategy was particularly impactful in the city of Victoria, as people often expected more of a provincial capital. Outside of Canada's borders, activists and politicians from Washington State pressured the CRD into implementing increased treatment by routinely publicly disparaging Victoria in their news and calling for tourism boycotts (Seattle Times Editorial Board, 2015; Seattle Times Staff, 2014; Trueheart, 1993). This included Washington governor Jay Inslee personally and publicly calling for Victoria to treat their sewage (Seattle Times Editorial Board, 2015; Seattle Times Staff, 2014). This underscores the fact that the

embarrassment the CRD was facing was partially due to a threat to their pride and belonging as British Columbians and Canadians in the eyes of international audiences.

The sense of provincial and national belonging was particularly important in the early 2000s in advance of Vancouver hosting the 2010 Olympics. As early as 2005, pro-increased treatment activists called attention to the Vancouver Olympics, and how it could reflect badly on the province if the capital did not have formal wastewater treatment (MacQueen, 2005; Toronto Star, 2005). One bureaucrat explicitly connected embarrassment and the pressure of external expectations to treat the wastewater in advance of the Olympics, speculating that it affected the timing of the province's call for treatment:

> "There was a lot of pressure to treat, there was a lot of embarrassment. I think provincially we were thinking about, we ended up hosting the 2010 Olympics. And, you know, ultimately, I think the province ordered us to treat in 2005 primarily because they wanted to be able to say that we either had sewage treatment coming or it was already under construction, so that when they had the Olympics, and even the Olympic bid may have rested on us having had that order, I think that was very closely tied." (968326)

An independent participant expressed a similar sentiment: "I think there was also political pressure back in before the Olympics and it was one of the sort of capitulations to the Washington state folks that you'll support us getting the Olympics if we install treatment." (798671)

Indeed, Washington State's support of Vancouver's Olympic bid was contingent on the CRD agreeing to implement treatment (Dunsmuir, 2016; Meissner, 2014, 2021; Seattle Times Staff, 2014). In addition to ensuring more support for the bid, starting to implement treatment in advance of the Olympics served as a proactive guard against facing embarrassment on the world stage. Moreover, it indicates that there is some awareness on the part of the CRD or the province that the outfalls are a liability to the province's (and by extension, the country's) reputation. By agreeing to further treatment,

the CRD was also exhibiting conformist behaviour, which is evidence that they may have been experiencing and acting out of embarrassment. In short, when activists and international actors framed the CRD's lack of treatment as a failure to meet expectations, they were expressing discursive power to embarrass them and encourage them to change.

5.2.4. Humour

There are multiple instances in this case study of activists, NGOs, and politicians finding or creating humour in their situation to communicate their messages in a new way or find meaning in their work.[2] Humour is simply defined as a way of communicating based on ambiguity and incongruity that appeals to the impulse to laugh (Sørensen, 2016). Humour can be a useful tool in activism because it can facilitate conversations that might normally be considered taboo, making certain topics more socially acceptable (Weaver & Mora, 2016). This can allow discussions to be reframed to affect one's comfort level and amenity towards a certain outcome (Sørensen, 2016; Weaver & Mora, 2016).

5.2.4.1. Stunts, POOP, and Mr. Floatie

Within this case study, many actors described how humor facilitated awareness-raising by getting the attention of mainstream media. Humorous acts with the intention of attracting media attention to spread messaging can be considered stunts. Sørensen defined stunts as "a performance/action carried out in public which attempts to undermine a dominant discourse" that cannot be ignored or that involves deception (2016, p. 10). In addition, stunts are perceived as humorous by at least some of the people who did not initiate them (Sørensen, 2016). Stunts can be longer-running jokes throughout a campaign, or one-off events (Sørensen, 2016). Often, stunts are designed to maximize their attention-grabbing potential, but not necessarily among the people present.

[2] One could possibly call this the 'yuk-yuk factor.'

The main audience of stunts is often the mainstream media, so that the message can reach broader audiences (Sørensen, 2016).

By this definition, most of POOP's action could be considered stunts. Mr. Floatie, the face of the group, made regular casual public appearances to inform the public of the issue, including locals and tourists. Sometimes this was through wandering the streets of Victoria or the harbor on busy days, and other times he would attend events like parades, picnics, and weddings. In each of these instances, Mr. Floatie made liberal use of puns and potty humour to maximize the silliness and absurdity of an otherwise tense conversation. While some of these appearances were more casual and ephemeral, there were two more highly planned stunts that gained a lot of attention for Mr. Floatie, POOP, and the CRD's wastewater policies more generally.

The first big stunt, and perhaps the most absurd, was a toilet regatta in Victoria Harbour that was planned and executed by POOP themselves. In this one-off event, members of the public were invited to build and race skiffs across the harbour to compete for the grand prize of "turd place" (044356). In order to qualify, each competitor had to be seated on a toilet.

The second, longer-running stunt occurred in 2005, when Mr. Floatie announced his candidacy for mayor of Victoria (Girard, 2005). One NGO participant who collaborated with POOP described how the plan from the start had been to officially register Mr. Floatie in the race, have him attend candidacy events and make statements to gain visibility, then remove him from the race before election day. However, due to reactions to this stunt, it did not go as planned: "Our intention was, pull his nomination papers and at the very last minute. […] The City of Victoria took offense to this and legally had them removed and the media around it was like an, international media, right? So it was, it was better than us removing him, having them try to do it, right?" (044356). City officials intervening to remove Mr. Floatie's

candidacy made for a more salacious story than him simply running as a joke candidate, which attracted even more media attention for POOP and the CRD's wastewater strategy.

Besides attending events planned by POOP, Mr. Floatie would also occasionally crash other people's events. One activist participant described attending a Victoria-based environmental event featuring Canadian environmentalist figures David Suzuki and Elizabeth May with Mr. Floatie. Suzuki and May had not expressed any support for the pro-treatment cause. The activist recalled: "And here comes Mr. Floatie, giant turd walking down the street…well guess who stole the show from David Suzuki. And they, Elizabeth May, she was furious. But they kicked us out. And not before lots of photographs from the press was there." (235140) By attending an event that had already drawn a significant local and national media presence, activists were able to draw attention to themselves in an environment that facilitated their likeness and message to be widely distributed.

The character of Mr. Floatie was designed to perform stunts and attract media attention. One NGO participant described participating in the meeting where the idea was first conceived:

> "We were there at the first meeting when fortunately Mr. Floatie tried to have serious conversations about sewage treatment and we were like, no, this is not gonna work. So we actually strategized that the character would be the humor and make people laugh about sewage treatment and kind of embarrass people into, like, we're dumping poop into the ocean." (336785)

Similarly, there was much agreement that he was visually striking. One politician recalled the first time they saw Mr. Floatie: "This person walked down the aisle in the classroom and he was in an outfit like number two, Mr. Floatie he was called. And he walked down, he had rubber boots on, the outfit was amazing. And stuck to his boot was a piece of toilet paper" (313337). They also described how he would broach the topic of sewage treatment with strangers with humour: "If you were downtown, he'd walk up to you and he'd say, 'have you had your fiber today?'" (313337)

By all accounts, Mr. Floatie was very successful, and became the avatar of the wastewater treatment issue as a whole. One bureaucrat who had worked with the CRD for decades described his legacy as the most visible advocate involved with treatment activism: “I think the biggest advocate group that that I think had the most, I guess what's the word…public? There's visibility. Was Mr. Floatie. He's the one that really got the media, got a lot of media coverage and really got out there,” (798671). Indeed, Mr. Floatie’s media reach was global (MacQueen, 2005), and several participants attributed him with making sewage treatment a matter of international diplomacy: “I think Mr. Floatie was successful in partly and working with. Local politicians, but also getting the ear of Washington state politicians like the Governor Jay Inslee to put pressure on the provincial government to install treatment here or to mandate treatment” (798671). One independent participant described how Mr. Floatie’s effectiveness was tied to both his appearance and his messaging: “I think he was the most effective [activist] because everywhere I went, people had heard of Mr. Floatie. It was such a visceral idea. Ridiculous costume, but a visceral idea too, just the idea of poop floating around in Juan de Fuca Strait” (766304).

It is perhaps unsurprising that Mr. Floatie evoked mixed reactions locally, and that most of those reactions align with one’s stance on treatment more generally. Folks who were advocating for increased treatment saw Mr. Floatie as an invaluable benefit to their cause for how he brought local, national, and international attention to the issue and facilitated conversation: “Like the international shaming that happened. I mean, Mr. Floatie was in American newspapers. USA Today, The New York, one of their daily newspapers. […] [he] allowed people to have the conversation without the tension.” (336785) In contrast, many people who were more skeptical of the calls for treatment saw Mr. Floatie as a liability who short-circuited public discourse by appealing to emotions and avoiding more factual-based discussions. One pro-evidence-based decision-making activists said that Mr. Floatie “did irreparable damage to the whole progress [sic]” because “he didn’t really worry about facts” (665929). They recalled

that people who engaged with Mr. Floatie "generally said, 'oh, well, we should treat it, it's horrible" (665929) rather than looking at the data on whether or not wastewater was damaging.

In summary, Mr. Floatie's effectiveness can be best attributed to the fact that he was fun and funny, which attracted widespread media attention. As plainly stated by a pro-treatment activist: "Mr. Floatie had a big impact. Because he's this visual kind of joke. When he puts on that costume, […] wow, was that a photo opportunity and a quote." (235140)

5.2.4.2. The Ethics of Humour as a Political Tool

As previously described, many people take issue with humour as a political tool. Scholars have theorized that since jokes are inherently unserious, making an argument in the form a joke affords the speaker plausible deniability should the message not land as intended with its audience ('t Hart, 2007). Additionally, some say that humour is often used to circumvent the official checks and balances of decision-making, as it undermines 'rational' arguments, which constitutes engaging in bad-faith ('t Hart, 2007). In short, humour's ability to appeal to one's emotions can be seen as a powerful rhetorical tool that can be harnessed by actors including activists, or as a "weapon of the weak" ('t Hart, 2007, p. 8) that warrants an unearned advantage ('t Hart, 2007, Sørensen, 2016).

This idea, that humour and emotions more generally had an outsized influence in the decision-making around this issue, was expressed multiple times by independents, bureaucrats, and pro-evidence-based decision-making activists. One pro-evidence-based decision-making activists expressed dismay over the process, saying, "that's the way sometimes, the public pressure or lobbying, is that they work on ideas and feelings more than facts." (665929) A bureaucrat expressed a similar sentiment, singling out Mr. Floatie in particular, and succinctly finished their thought by saying, "It was a very emotional issue," (461072).

5.2.4.3. Humour, Bonding, and Coping

The above examples capture humour as an inter-group communication tool. However, humour can also be used as a tool for intra-group communication. The relief theory of humour describes humour as a tool for reducing tensions, expressing forbidden ideas, and interacting with taboo topics with ease (Sørensen, 2016). In this way, humour can facilitate bonding and stress relief, and galvanize people into action by strengthening group ties (Flesher Fominaya, 2007; ’t Hart, 2007).

Many participants expressed how the prolonged public nature of the issue and their personal involvement with it was a major source of stress in their lives for years. Multiple of these participants shared the humorous ways in which they processed these experiences and communicated their emotional needs with those around them. For example, one politician who had been deeply involved with the sewage treatment portfolio for years commonly joked about the issue: “I was called the queen of poo. I had a button someone made for me.” (313337) This participant also described a joke about pharmaceuticals they would tell their colleagues:

> “CRD was always doing these studies, you know what's in the water, wastewater and stuff. But in the water, what we found was there was a lot of ibuprofen chemicals. And I used to I used to tease the staff and say, ‘Could we study them in the winter to see if it's more arthritis-related to that older population group in that area?’” (313337)

This joke likely served a dual purpose: relieving stress related to the work, and bonding with coworkers who were also working on this issue.

Activists also commonly made jokes with each other and with their loved ones to bond over their work and vent emotion. One STAG activist reflected on the events as follows: “honestly that was a very intense period of my life. I now say that I suffer from PTSD, post traumatic sewage disorder.” (642137). On a lighter note, another participant who was a pro-increased treatment activist described

how it became a family joke that every time they saw their grandchildren, the children would ask, “Anything more about sewage?” (235140). This participant’s family knew that this topic was important to them and that they had a lot to say on the issue. Joking about it became a way of affirming the participant’s involvement and giving them an opportunity to vent if needed.

5.2.5. The ‘Yuck Factor’

As a reminder, the Yuck Factor is a phenomenon where an individual experiences disgust in response to a new idea or technology, making them hesitant to accept it (Ching, 2010; Schmidt, 2008; Stewart & Lux, 2009). While culturally bound, there are some things, like fecal matter, that trigger a near-universal reaction of disgust (Schmidt, 2008). As such, playing up the ways in which issue is disgusting can be a powerful force in shaping how it is perceived and what the appropriate behaviour is for engaging with it.

Across the ideological spectrum, many participants stated that the CRD’s practice of discharging sewage into the ocean via the outfalls was gross. However, only some participants saw that as reason to change the system. One independent scientist who was unsure that installing treatment was the best path speculated that even if pro-treatment activists had other reasons for their goal, the heart of the issue for many of them was that the outfalls were gross. After discussing at length the scientific data supporting the argument that the outfalls were safe and sustainable, they said that “all these details are not what upsets people about it [the outfalls],” but rather, “people are upset because it’s gross. […] nobody can argue that it’s not gross, of course it’s gross” (766304). They further asserted, “I believe that that's the real basis on which the regulation was brought down. I think [it] was on the basis of this perceived yucky factor.” (766304)

Similarly, a pro-evidence-based decision-making activist recognized the role that intuition was playing in how many people initially felt about the issue: “Just intuitively, it's not good. To crap in the

bathtub sort of thing. It's clearly something you don't want to do," (665929). They later criticized the pro-increased treatment movement as being driven by self-image, not wanting to be associated with undesirable or "icky" behaviours: "It was image that was promoted. That we don't want Victoria to have this image as discharging icky things to the ocean," (665929).

Indeed, many pro-increased treatment activists thought the outfalls were icky, and played up how the outfalls were "gross" or "disgusting" in their arguments (044356, 227049, 313337, 766304). Some pro-increased treatment participants cited their disgust with the practice as a motivation for becoming involved with the issue in the first place: "I guess part of why I was interested in wastewater is because well, first of all, it was so wanton to put completely untreated sewage into a river" (227049).[3]

Pro-increased treatment activists did not simply rely on their audiences coming to the same conclusion as they did that the outfalls were gross; they actively portrayed wastewater treatment as necessary due to how disgusting the current practices were. For example, activists linked instances where detritus washed up on local shores to the lack of sewage treatment. Several participants described finding things like tampons, condoms, and feces (also described as "nasties") along local shorelines, and connected their presences either implicitly or explicitly to the lack of treatment (313337). This is despite the fact that they could not have originated from the outfall, as all wastewater had been passed through a 6-millimetre screen since the late (CRD, 2017b). The detritus' origins were likely as land-based litter that got washed onto shorelines from precipitation. Regardless of their source, the choice of items described is telling. Tampons, condoms, and feces are all waste products related to bodily processes and usually kept private. By naming these items as supposed to other commonly flushed but more innocuous items such as wipes, activists associated the outfall system with cultural

[3] Note, this participant was involved with multiple campaigns to increase wastewater treatment levels, including within the CRD. Their first wastewater-related campaign involved wastewater discharge into a river, which is what they are referring to here.

taboos associated with bodily functions, which on top of being seen as disgusting may serve as reminders of human's proximity to animals, and thus, their mortality (Wolfe & Tubi, 2019). As a result, highlighting these items specifically could prompt people to adopt a pro-treatment stance as a way of avoiding needing to see these objects on public shores in the future.

Perhaps the clearest examples of the Yuck Factor being evoked in activism is by POOP and Mr. Floatie, who served as a large, walking, talking reminder of the fecal matter present in wastewater and by extension, the ocean. Much of POOP and Mr. Floatie's activism revolved around the visuals that reminded onlookers that fecal matter and bodily functions were a central part of this otherwise dry policy issue. Besides Mr. Floatie's visage, this also included potty humour and toilet imagery. This strategy was designed this way deliberately to point out the absurdity and the repugnance of the issue.

What is notable about this case study is that the Yuck Factor seems to be operating in reverse compared to other case studies in the literature. Typically, the Yuck Factor is in response to an intervention, and if harnessed by activists or politicians, it is to promote the 'naturalistic' or status quo option (Schmidt, 2008; Stewart & Lux, 2009). For example, pushback against genetically modified crops that are pest-resistant or produce higher yields (Schmidt, 2008). In other words, proximity to what is 'natural,' which is often the pre-existing option, is positioned as morally superior.

However, in this case study, the opposite was true. The Yuck Factor was invoked by pro-increased treatment activists to advocate *for* an intervention, against the method that had been in use for over a century and that many people didn't even know about until activists started raising its profile. This finding is significant because it demonstrates that the Yuck Factor can operate in defense of an intervention as well as against it. In addition to being an interesting case for consideration regarding the scholarly body of work around the Yuck Factor, this also has implications for how the phenomenon can be harnessed by activists. This case study illustrates that the Yuck Factor can be successfully employed in favour of an intervention by stigmatizing the status quo.

However, as previously described, employment of the Yuck Factor is not a sure-fire way to argue a political stance. There are many other examples in the literature of the Yuck Factor being mitigated and overcome in the face of factual information regarding the safety and ethics of the idea in question (Ching, 2010; Stewart & Lux, 2009). Additionally, an individual may engage in avoidance behaviours in response to disgust rather than advocating for change (Cote et al., 2017).

5.2.6. Conclusion

This section examined the role of emotions in shaping discourse, and how activists' messaging impacted the events of the case study. Fear, embarrassment, guilt, and shame are all emotions that when experienced, can increase compliance. As such, desirable behaviours can be encouraged by invoking these emotions and then presenting desirable actions or beliefs that can be espoused. This in turn makes the individual feel like they are doing the right or moral thing, and absolves their negative feelings. Commonly cited fears included threats to human and environmental health and long-term sustainability. Sources of shame, guilt, and embarrassment targeted individuals' complicity in the ongoing pollution of the oceans, how it reflected on their provincial and national identity, and by highlighting endangered species as innocent victims.

Humour is a complex and multifaceted tool that can facilitate the raising of awareness for an issue, disarm traditional discussion, and increase intragroup bonding. POOP purposefully created Mr. Floatie as a humorous figure who engaged in public events and stunts to bring levity to the issue and attract international media attention. Still, some scholars criticize humour as a political tool, saying it hinders discussion and short-circuits official processes.

Finally, disgust, or "the Yuck Factor" in response to sewage was identified by participants as being an influential force that shaped people's perceptions of the issue and thus the outcome of the process. The application of the Yuck Factor in this context is unusual; while in most documented cases

the Yuck Factor is employed in opposition to scientific intervention in favour of a more 'natural' state, in this case study the Yuck Factor was harnessed to cast an intervention, wastewater treatment, in a favorable light in contrast to the status quo.

5.3. Theme 3: Running for Office

The previous two themes discussed how activists used discursive power drawing from two different sources of authority: expertise and morality. The later years of the debate on wastewater treatment saw activists attempt a new strategy to push for their desired outcomes: gaining new powers. Using the reputations they had built through years of activism with their communities, several activists ran for municipal office on wastewater-centric platforms. A number of these activists won, which allowed them to directly vote on policies and allot government resources to the examination of their own ideas. By some estimates, their actions as politicians delayed the construction of new facilities by up to four years, and cost the region millions in new studies and cancelled contracts.

5.3.1. Reputations and Running for Office

Many activists of varying persuasions spent countless hours lobbying municipal politicians to make decisions in their favour over the course of the case study. In 2014, some distributed model activists decided to flip the script, running for office and attempting to gain the ability to make decisions for themselves. Participants in this study routinely identified the 2014 municipal election and the new officials it brought into office as a major turning point in both how the issue was discussed as well as the vote breakdown on at least one council.

These actors' previous experience with activism was essential to their success in the election. One bureaucrat described how the activists "were very active on the [wastewater] file and created, you know, a profile for themselves and used that to just take their activism into a political career and local

government." (968326). They described how the activists had become very visible in the community through their activism, and had developed a reputation as wastewater policy experts. The activists then used that platform and reputation to launch their campaigns. One STAG participant described how they and a friend specifically won with a sewage-centric platform: "I became involved in local government, I ran for office, I sat on my council for a term. Another person became active in their council. […] We had come in on the sewage ticket." (521544) In the words of a bureaucrat participant, winning the election allowed "a number of key organizers" to gain direct power as they were "coming right onto our board." (968326). While it is unclear how many activists attempted this strategy and were successful, participants identified at least three incoming mayors and two new councillors who once elected, took action against the CRD's plans.

5.3.2. Actions in Office

Once in power, these activists both blocked the progress of the CRD's plan while promoting their own initiative. Several new mayors who had campaigned on changing the CRD's sewage treatment plans were quick to make good on their promises. One NGO participant recalled how the mayor of Esquimalt became the chair of the CRD's board and "was able to overturn the entire plan." (044356). Another NGO participant shared frustration that the new politicians gutted the CRD's plan, but attributed it to Victoria's new mayor instead: "She decided that the plan had not been consultative. People had not been talked to, which none of this was true, and so she actually forced the whole process to start again" (336785). This participant later described how the new mayor of Saanich and creator of the RITE plan ran on a wastewater platform. According to the participant, the mayor's "sole goal was to make sure that the liquid waste management plan wasn't put in McLoughlin Point" (336785).

While these mayors were working to break down the CRD's plan, other activists-turned-politicians were promoting their own decentralized model for treatment, the RITE plan. One STAG

activist and councillor sat on a sewage treatment subcommittee where they championed a decentralized treatment model. The participant recalled that during their tenure, "the CRD agreed to actually look into that more so there was a lot of money and resources put towards, is this really feasible? What do these higher ends of treatment look like?" (521544). As both mayors and the councillors, the activists were able to have more influence on the project as politicians, where they had direct power over policy and where governments direct their resources.

One of the main barriers to approving and constructing the CRD's wastewater treatment plan, which featured a single plant at McLoughlin Point, was a rezoning that needed to be approved by Esquimalt's council. In 2014, before the municipal election, the Township of Esquimalt's council voted to reject the CRD's rezoning request. The CRD continued to engage Esquimalt in discussions after the election, with the intention of persuading the township to repeal the decision, to no avail. Several years went by and the CRD started to consider other options. Eventually, the provincial and federal governments expressed dissatisfaction towards the CRD for continuing to not have firm plans for implementing wastewater treatment, and started pushing them towards a resolution. One participant described how Esquimalt used the rezoning as a bargaining chip: "We had some leverage, and we lobbied hard for, okay, what was the CRD going to give us to host this thing?" (521544). However, these politicians knew that this could not go on forever; an activist who served as a councillor recalled knowing that the province was able to override their zoning decisions at will. They described how they navigated the situation as follows:

> "We had been informed in so many words from the provincial level that we could have a sewage treatment plant with a $15 million [sic] amenity fund.[4] Or we could have a sewage treatment plant.

[4] Most participants could not recall the amount of money in the amenity fund, citing figures of $11 million, $15 million, $17 million, and $20 million. The correct amount is $17 million (Crescenzi, 2019; Township of Esquimalt, n.d.; Wong, 2017).

So we went into our council and we voted to amend the zoning and take the money. Because it was very clear that at that point, the Feds were breathing on the province and the province was willing to overrule our zoning. But we were able to get that funding." (521544)

5.3.3. Impressions of the Impact from Other Activists

Pro-treatment activists and NGOs were blindsided by the distributed model proponents' election and subsequent political decision. Following the planning that occurred in the wake of Minister Penner's order to treat in 2006 and the federal government's declaration of the 2020 treatment deadline in 2012, many pro-treatment activists and NGOs saw treatment as a foregone conclusion. While some continued to sit on advisory councils, many were stepping back. For some, the 2014 municipal election was a wake-up call of not only how much work still had to be done, but how vulnerable the existing plans were: "We really did not think that, someone would come in and rip it up for political reasons, but they did." (336785). Several pro-treatment activist and NGO participants expressed the impact of the election and the municipal and regional government landscape more generally, saying things like the following:

- "So definitely, the politics in the region matter." (044356);
- "And then in 2012, there were municipal elections, and they were, there was a shift." (235140); and,
- "And in 2012, it was going to be done. And then the election changed everything. Because then the debate became, we don't need it." (235140).

Additionally, changing plans that had already been made and invested in did not come without a cost. A number of pieces of the plan had already been implemented before it was cancelled, as one participant recalls: "Pretty significant impact, pretty costly for the region. They ended up firing the project manager who had been headhunted and I think they paid him, you know, a couple of hundreds of thousands of dollars to relocate to Victoria, to run the project. And so he was fired and given a

severance and whatever." (044356) Though exact estimates vary, many participants guessed that all in all, the distributed model proponents' work as politicians delayed the project by two to four years and cost the regions tens of millions of dollars, to the frustration of many. One activist lamented, "It was a massive waste of money. Contracts had to be cancelled. Millions of dollars had to be paid out. It was really reckless and the new plan was not substantively different," (336785).

Several bureaucrats who worked on the wastewater portfolio expressed how the election impacted their work. One expressed frustration at how the newly elected politicians made the already tense political environment even harder to navigate: "Some of the key players that were supporting the plan that had been developed lost the election, and those that came into power had, you know, that changed the vote on the committee. […] And so for two years, they tried to develop a plan based on what their, they thought would be a better solution," (606846). Another simply marvelled at how much power these activists were able to gain in becoming politicians: "I think that is one of the most fascinating things that happened is just how much political weight ended up going into the hands of the what were activists who then became bona fide legitimate councillors and mayors." (968326)

5.3.4. Conclusion

Due to the nature of democracy, activists can seek direct power by running for office. This was the case of the 2014 municipal election, where distributed model activists assumed office and forced much of the process of enacting the CRD's liquid waste management plan to be restarted, slowing down the process, allowing their preferred options more resources and consideration, and using their voting powers as bargaining chips to gain resources from other governments.

Some participants view this political involvement and resulting project delays as a success for their movement, while others saw it as a needless, expensive diversion. Either way, participants who talked about this period of time agreed that this strategy of seeking and obtaining direct power through

assuming public office was effective. It changed how the issue was discussed, how resources were allotted, and what plans were taken seriously.

5.4. Analysis summary

This data and analysis section addressed the research question – how did the actions of grassroots activists in Victoria, Canada between 1990 and 2020 affect the decision-making and planning process regarding the McLoughlin Point Wastewater Treatment Plant? – by examining two different approaches of activists applying discursive power and one way in which activists acquired direct power.

The first theme explored how activists used authority through expertise to inform their discursive power on the role of science. Pro-increased treatment activists drew mostly upon concepts from biology to draw attention to the risks to the environment and to human health associated with contamination from wastewater. In contrast, pro-evidence-based decision-making activists highlighted the local oceanographic data that showed that the effects of the outfall on the surrounding environment were negligible, meaning that implementing treatment would be a waste of money and introduce new risks. The second theme looked at how activists used the discursive power of emotions to assert authority through morality and shape how wastewater treatment was perceived. This theme focuses on the roles of fear, guilt, shame, embarrassment, disgust as well as humour in shaping people's impressions of what was the morally right course of action regarding treatment. Finally, the last theme described how activists gained direct power over policymaking by becoming elected to their local governments, which allowed them to put resources towards their preferred outcomes.

5.4.1. Summary of Power, Strategies, and Approaches of Actors by Group

The following section summarizes the major actions by actor group and characterizes them based on the power framework presented in section 2.5. First, table 3 presents a visual summary of each

group's stance, their key strategies and actions, and describes them via the analytical framework. Then, a more in-depth verbal summary elaborates on each group's key features.

Table 3

Summary of Analysis by Group

Group	Stance	Direct vs. indirect power	Material vs. ideational power (discursive)	Expertise through authority vs. morality	Notable strategies and actions
RSTV	Scientific evidence shows that the outfalls are a sustainable wastewater solution	Indirect	Discursive	Primarily expertise	- Centered science and data - Drew attention to their highly educated membership - Promoted their views through public talks - Membership overlap with ARESST
ARESST	Policy decision should be made based on science, not public opinion or emotion; supported the outfalls	Indirect	Discursive	Primarily expertise	- Highlighted the potential ecological risks of treatment - Promoted their views at public talks - Spoke in support of their stance at board and council meetings - Membership overlap with RSTV - Collaborated with STAG
POOP	CRD should adopt secondary treatment or better because it was the 'right thing to do'	Indirect	Discursive	Morality	- Originators of Mr. Floatie - Used humorous stunts to attract widespread attention for their cause - Attempted to induce emotions like shame, guilt, embarrassment, and disgust - Membership overlap with VSTA - Collaborated with VSTA, GSA, and TBuck
VSTA	CRD should adopt secondary treatment or better to protect human and environmental health	Indirect	Discursive	Primarily morality	- Communicated with the public to promote treatment as a sustainable, long-term solution - Met with local politicians to discuss treatment options - Membership overlap with POOP - Collaborated with POOP, GSA, and TBuck
STAG	Thought the CRD's plan was outdated and unsustainable. Created and championed the RITE plan which advocated for a high-tech, distributed treatment model	Direct and indirect	Discursive, some material once in office	Primarily morality; those running for office also drew authority through expertise	- Spoke regularly at council and board meetings - Created and promoted the RITE plan - Some members ran for office on a wastewater treatment platform and became councillors or mayors, where they continued to advocate for the RITE plan - Some participants described STAG members as NIMBYs
GSA and TBuck	CRD should adopt secondary treatment or better as soon as possible	Indirect	Discursive and material	Morality and expertise	- Consulted with community stakeholders to determine popular and attainable goals - Engaged with the public to gain support for their goals - Formed relationships with local and provincial politicians - Collaborated with ach other, Ecojustice, independents, and grassroots groups such as POOP and VSTA

5.4.1.1. RSTV

RSTV believed the scientific evidence showed that the outfalls were a sustainable and low-risk wastewater solution that did not need to be changed. They centered science and data in their arguments, and highlighted that many of the people making up their leadership and membership were highly educated in science fields. They disseminated their arguments through public talks and by speaking at local government meetings. RSTV activists used discursive power to persuade others to support their policy goals, and relied heavily on authority through expertise.

5.4.1.2. ARESST

ARESST similarly believed that decision-making should be conducted based on scientific evidence rather than in response to public opinion or emotion, and supported keeping the outfalls. They similarly centered scientific data in their arguments, and later offered critiques of the CRD's plans based on ecological sustainability. ARESST activists disseminated information that supported the outfalls and highlighted the potential risks of treatment at public lectures and in speeches at CRD and town council meetings. ARESST exercised discursive power in a variety of venues, and used primarily authority through expertise to make their case.

5.4.1.3. POOP

POOP relied heavily on humour, embarrassment, and the Yuck Factor to promote the implementation of treatment in the CRD. They did this primarily through stunts meant to grab the attention of both onlookers as well as the media, which brought international attention to the issue. These are strong examples of discursive power, many of which directly drew upon moral authority to communicate that treatment was the 'right thing to do.'

5.4.1.4. VSTA

VSTA was guided by environmentalist values, and believed that treatment was the responsible path for the long-term health of humans and the environment. They raised awareness of the outfalls and their potential threats, and communicated to the public as well as to local politicians that wastewater treatment was the safe, responsible, and desirable alternative. They used both biological principles and collaborated with other activist and NGO groups to promote what they thought of as a socially, ecologically, and economically sustainable path forward. This was done using discursive power, and made use primarily of moral authority.

5.4.1.5. STAG

Many perceived STAG as being driven by self-interest, characterizing their members as NIMBYs who simply did not want a wastewater treatment plant near their homes. While one participant said that was their original motivation for becoming involved, STAG participants in this case study generally refute this characterization, describing their involvement as focused on ensuring that a sustainable, long-term wastewater solution was put in place. STAG created its own wastewater treatment plan (the RITE Plan) to rival that of the CRD, which they promoted to the public and to politicians at CRD and local council meetings. They insisted that their plan was more sustainable and resilient, but many critics including CRD engineers described the plan as unfeasible if not impossible. STAG members became seen as expert authorities on wastewater treatment within their communities, which several members used to support their campaigns for mayor or councillor. Multiple STAG members did win their elections, and used their direct power to promote their plan. Before getting elected, STAG used primarily discursive power, and derived authority through morality and expertise (as demonstrated in the creation of the RITE plan). After becoming elected to local governments, STAG activists had access to direct power.

5.4.1.6. TBuck and GSA

These NGO actors collaborated closely with each other, with Ecojustice, and with local activists to push for treatment. These actors consulted with local stakeholders and met with local and provincial politicians to create policy goals that were popular and attainable. They then promoted these policy goals by speaking to the public and at local council meetings, and by continuing to meet with politicians. Similar to activists, they used primarily discursive power to promote their goals, as well as authority from both morality and expertise granted by the stability of being associated with organizations with established mission statements and values. Additionally, the NGOs used material power to compensate workers for the labour of running campaigns and to support the efforts of grassroots groups with similar goals.

6. Conclusion

6.1. General remarks

This research sought to establish a foundational understanding of the events leading up to the construction of the McLoughlin Point Wastewater Treatment Plant in Esquimalt, British Columbia, with a focus on the actions of grassroots activists. Using semi-structured interviews with activists, scientists, politicians, bureaucrats, and NGO workers, this thesis addressed the research question, *How did the actions of grassroots activists in Victoria, Canada between 1990 and 2020 affect the decision-making and planning process regarding the Mcloughlin Point Wastewater Treatment Plant?*

The findings were presented in the form of three themes. The first examined how activists with different positions used different kinds of scientific evidence in their arguments to lend legitimacy to their goals. The second theme explored activists' use of emotions in gaining attention for their cause and shaping the opinions of audiences to garner support for their positions. The third theme described how activists were able to gain direct power over the policymaking process by running for office and becoming policymakers themselves.

These findings can be further understood through the analytical framework introduced in section 2.5. This framework offers a method of describing the different kinds of power that an actor may have access to in a sociopolitical system. Activists' greatest form of power is discursive, or the power to shape ideas through communication. This power can be given authority through expertise (as through the interpretation of scientific data) or morality (instilling a sense of what outcomes are morally desirable, such as through appealing to emotions). Additionally, activists can leverage democratic

systems to become elected representatives, thus achieving direct power over the creation and implementation of policy and the ability to direct material resources to their base.

This thesis is one of the first pieces of work to look at the social and political dynamics of this case. As such, it contributes to academic bodies of work as well as to the activist community in several ways. First, it establishes a foundational understanding of the goals, strategies and actions of local activists on different sides of a contentious issue, which can act as a jumping off point for future sociological study of this case. Second, it provides an additional datapoint for cross-case examinations of Canadian grassroots activism or infrastructure development. Finally, it can inform the actions of future activists, providing evidence to support which strategies can work, enabling a more informed use of resources.

Most importantly, this work supports the assertion that activists can and do play a powerful role in shaping how policy issues are popularly imagined and addressed, and that they should therefore be taken seriously by decision-makers. Providing scientific evidence to support their goals and reasoning around an issue is important for activists to demonstrate an understanding of the issue and be taken seriously. However, it is the use of emotions to connect with audiences, communicate messages, and prompt action that provide activists with the biggest opportunity to affect change.

There were two surprising findings in this case study. One surprising finding with respect to the literature was how the Yuck Factor was mobilized in support of treatment technology. While most instances of the Yuck Factor, in particular surrounding wastewater initiatives, demonstrate disgust pushing people away from technological solutions towards more ‘natural’ alternatives, this case study is an example of disgust being shown towards the more natural and established system in favour of a technological intervention. From the perspective of the participants, many people were surprised at how much political influence activists were able to gain by running for office. This finding also underscores

the impact of the democratic process on a system, and emphasizes the importance of voting in municipal races.

While this thesis only examines a single case study, the themes presented have broad applicability. There are many contentious policy issues that are widely publicized and thus the subject of discursive behaviours by activists, politicians, and members of the public who are all trying to promote their point of view and therefore influence the outcome of events. Their ability to connect with audiences emotionally may prove their greatest chance at affecting change. While this thesis provides evidence for the use of negatively oriented emotions like fear, shame, guilt, and embarrassment, it also demonstrates the potential of lightness and humour in mobilization. Actors can also appeal to authority through expertise, increasing the chance that they'll be taken seriously, by incorporating scientific evidence into their arguments. This thesis suggests that scientific evidence does not necessarily illuminate a correct path forward, but rather differences in disciplinary norms and values creates space for different parties to highlight evidence in their favour. Finally, this thesis reinforces the importance of the democratic process, demonstrating how discursive power, when successfully focused through the electoral process, can affect substantial and costly policy change. Each of these findings focuses on power, whether direct or indirect, and provides insight into how power can be built both inside and outside of a governmental structure. This power, if successfully mobilized, can make a substantial impact on both policy and the environment.

6.2. Future Work

This thesis aims to provide a background and initial analysis of a long and complex case study. This case study is ripe for future studies as well as comparisons with other pre-existing work related to wastewater development and activism. This section proposes a number of other avenues of investigation to further develop understanding regarding these subjects.

This study did not collect demographic data, and therefore could not perform any analyses on the role of demographics like gender, race, age, or socioeconomic class on the barriers and drivers behind participants' stances, arguments, actions, or access to resources. Future work could examine the demographic aspects of this case study and how it affected the outcomes. Similarly, this work could investigate such questions as the role of class in the development of conceptions around what behaviours or practices are considered moral or environmental. This would build off of the work of those such as Checker, who investigated the role of race and class in conceptions of the environment among Black grassroots activists and predominantly white 'professional activists' (or, as this case study would classify them, NGOs) (Checker & Fishman, 2004, chapter 1). A more in-depth understanding of the role of the demographics and their impact in this case study would provide another axis of comparison with other activist movements, and provide a richer understanding on how different identities shape the kinds of power that activists can access and the impacts they can have. This would especially be interesting for this case study considering the breadth of socioeconomic class representation in this movement, with ample representation among both highly educated individuals as well as long-time labour activists. Additionally, these insights could identify whose voices may have been missing in this study, and inform purposive sampling strategies in future studies to increase the inclusion of marginalized voices.

This thesis briefly touched on the concept of the proliferation of misinformation within a system, but did not explore in depth the question of what qualifies as misinformation, and who gets to make that distinction. Further work could examine how information and misinformation were understood by participants of different worldviews, and how those conceptions differed from group to group. This would be particularly interesting today, given the recent increase in interest around scholarship about misinformation.

This thesis also briefly engaged with the role of science in shaping policy creation. Another potential future study could examine the events of this case study through the lens of Post-Normal Science. Such a study could examine where this process succeeded or failed to take the principles of Post-Normal Science into account, or make suggestions for how similar cases could employ such principles in an attempt to improve or expedite science-informed policy outcomes.

Similarly, this thesis briefly engaged with how the Yuck Factor, or the disgust reaction, was similar to other work that used Terror Management Theory to explore the relationship between human waste and mortality avoidant behaviour. Future work could examine more specifically the role that the subject matter of sewage shaped how people formed their stances and their resulting actions.

Furthermore, this case study saw a plethora of euphemistic language used related to human waste, wastewater, and wastewater treatment practices. Some participants used vocabulary that leaned into more explicit and evocative language such as 'crap' and 'raw sewage' whereas others preferred more technical or clinical terms such as 'feces' and 'wastewater'. Similarly, the outfalls were at times described as 'dumping' sewage, compared to others who said they 'diffused' or 'released' wastewater. Future work could examine the use and effectiveness of euphemistic language and its relation to the desired activism or policy goals of its users. Additionally, this work could tie into a Terror Management Theory analysis, examining the different ways people may choose to distance themselves or lean into mortality reminders depending on their goals.

Additionally, many participants in this study recalled threats and instances of tourism boycotts related to Victoria's lack of wastewater treatment. Within this case study there is a discrepancy between how the boycotts are described. Some participants said they had a huge impact, while others said that they did not amount to any change. A financial analysis of the lost revenues by local businesses as a result of the boycotts could help capture their effectiveness as an activism tool.

Several participants expressed fears that the McLoughlin Point Wastewater Treatment Plant would not have adequate capacity as the CRD continues to grow, or that it would run into problems down the road as a result of key features being removed from the design. Others expressed concern around the effects it would have on the quality of life on Esquimalt residents as well as on property values. Continued studies decades into the future on both the plant's effectiveness as well as attitudes and perceptions towards the plant in the community could continue to inform the long-term legacy of the activism and policy decisions made in this case study.

Finally, the results of this study could be compared to other existing works in order to assess how typical this case study is, and what the most transferrable takeaways are. This could include cross-case analyses examining how other infrastructure projects such as wastewater treatment plants are developed, how the activism actions and outcomes of this study compare to other instances of activism across Canada, or an analysis of how any of these processes have changed over time as politics change and technology advances.

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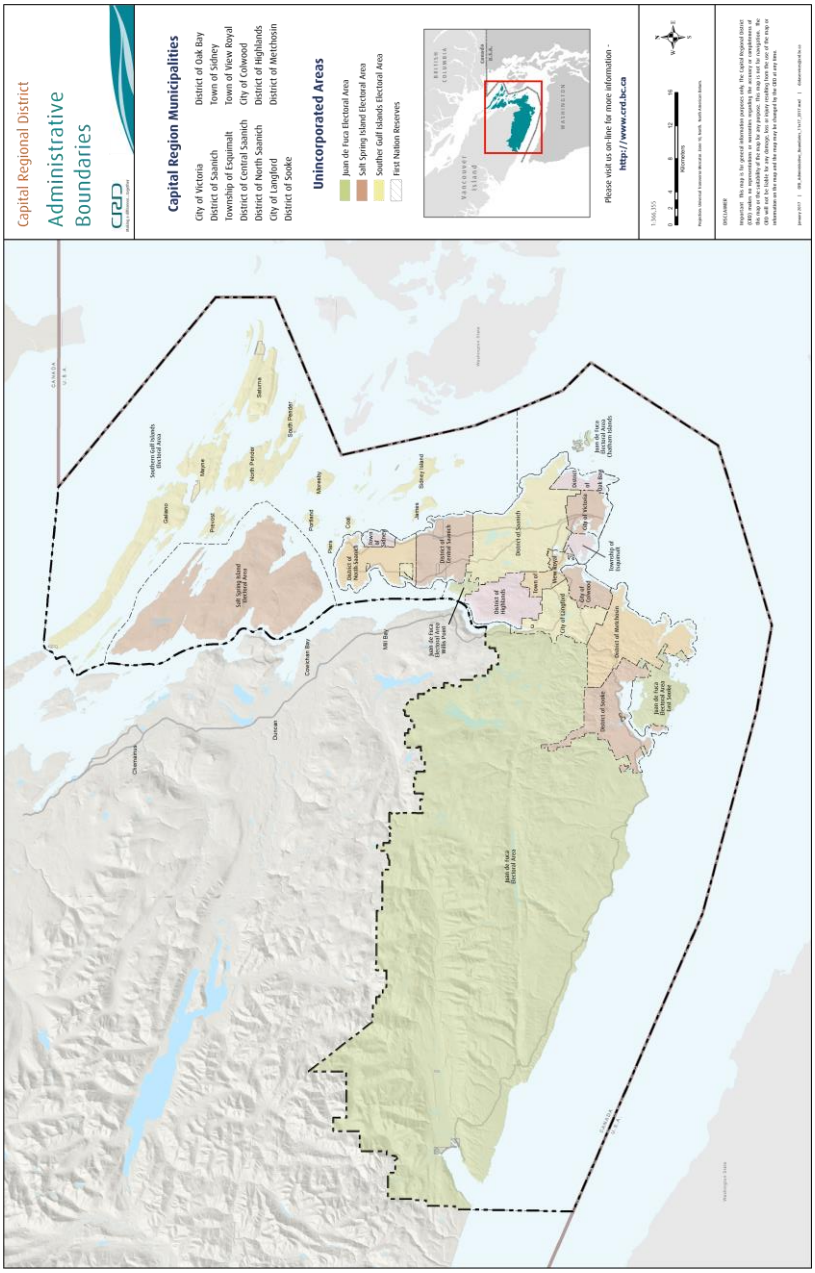
8. Appendix A

Figure 3

CRD Administrative Boundaries Map



Note. (CRD, 2017a)

9. Appendix B

Interview guide – activist

Introduction:

1) Ask participant to introduce themselves:
    a. What is your connection to the city of Victoria?
    b. What is your connection to the McLoughlin Point WWTP, or the broader movement for wastewater treatment in the Victoria area?

Body section:

2) How did you first get involved with activism around wastewater in Victoria?
    a. When (what year) did you first get involved?
3) What were you advocating for?
4) Think back to when you were most active in the movement. What were you doing?
    a. What kind of activist activities were you involved with?
    b. Were you more of a participant or an organizer?
5) When you were most involved with the movement, what would have considered the best-case scenario for your work?
6) What would you consider to be **your** biggest win as part of the movement?
    a. Or, what would you consider to be **the movement's** biggest win?
7) What do you think were the biggest barriers for the movement?
8) Now that McLoughlin Point is up and running, do you think that the movement is over?"
    a. If no, What do you think needs to happen now and moving forward?
    b. If no, What do you see as the biggest potential threats to the movement?

Conclusion:

9) Is there anyone else you think I should speak to as part of my research? ***make sure they have my contact info to pass along***
10) Is there anything that we haven't already touched on that you would like to add?

Do you have any more questions for me?

Interview guide – decision-makers

Introduction:

11) Ask participant to introduce themselves:
    a. What is your connection to the city of Victoria?
    b. What is your connection to the McLoughlin Point WWTP, or the broader movement for wastewater treatment in the Victoria area?

Body section:

12) How did you first get involved with the McLoughlin Point project?
    a. When did you get involved with the project?
    b. What were your titles related to this project?
    c. What were your roles with respect to the project?
13) When you were most involved with the project, what would have considered the best-case scenario for your work?
14) What would you consider to be **your** biggest win as part of the project?
    a. Or, What would you consider to be **the project's** biggest win?
15) What do you think were the biggest barriers to your work on the project?
16) There were a number of outspoken activists pushing for greater wastewater treatment before and during the development and construction of the McLoughlin Point Plant. What did you and your colleagues think about these actors?
17) Now that the McLoughlin Point Plant is up and running, do you think that the project is over?
    a. What needs to happen now and in the future?
    b. Are there any threats to the plant?
18) Who do you consider to be some of the most prominent figures in the plant's development?

Conclusion:

1) Is there anyone else you think I should speak to as part of my research? ***make sure they have my contact info to pass along***
2) Is there anything that we haven't already touched on that you would like to add?
3) Do you have any more questions for me?