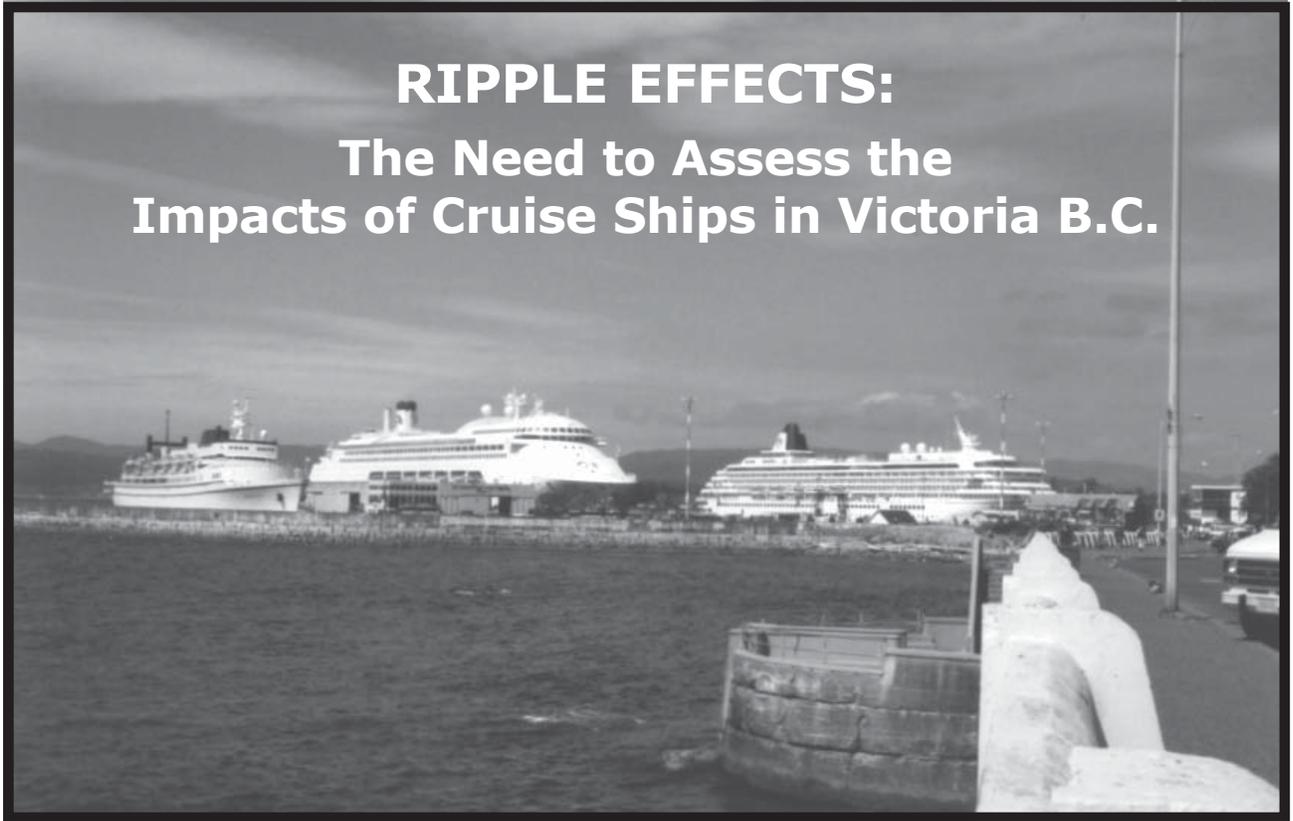


**RIPPLE EFFECTS:
The Need to Assess the
Impacts of Cruise Ships in Victoria B.C.**



By Karen Gorecki and Bruce Wallace

2003



Vancouver Island Public Interest Research Group
PO Box 3035 Stn CSC, Victoria, BC V8W 3P3
Physical address: Student Union Bldg, SUB B120-122, UVIC
Phone: 250-472-4386 fax: 250-721-7285
research@vipirg.ca www.vipirg.ca

Acknowledgements

This project was made possible through the support from the Youth Action Effecting Change and the Vancouver Island Public Interest Research Group (VIPIRG).

Endless thanks to Ross Klein, Howard Breen and Amy Crook for their continuous and selfless support in strategizing, providing insights, and editing. It is inspiring to see such dedicated individuals committed to protecting our environment and communities.

Many thanks also go to Andrea Mears, Tuval Dinner, Ena Wallace, Stacy Chappel, Tim Richards and Nicole Lindsay for additional research and assistance.

The Vancouver Island Public Interest Research Group is a student-based, non-profit organization at the University of Victoria dedicated to research, advocacy and action on social and environmental issues.

Just as this report was being completed, the media was reporting that the Norwegian Sun had dumped raw sewage into Juan de Fuca Strait. En route to Victoria's Ogden Point, the Norwegian Sun dumped 62,000 litres of raw sewage into waters just southeast of Victoria, near Port Townsend. The ship had intended to discharge all of its "grey water" into the Strait but instead accidentally flushed untreated human wastes for a half hour. Norwegian Cruise Line says the dumping, although accidental, is still totally legal. There have been no reports from local or Canadian officials expressing concern or planned action regarding the ship that spent that day at Ogden Point and is scheduled to continue to travel to Victoria every week this season.

Ripple Effects: The Need to Assess the Impacts of Cruise Ships in Victoria B.C.

Executive Summary

Over the last three years there has been an incredible 300 percent increase in cruise ship traffic in Victoria. The cumulative impact of this year's 320,000 passengers and crew members from 122 visits has not been studied or planned for in Victoria despite the fact that the cruise port resides in a residential neighbourhood, with massive ships less than 300 metres away from the front-steps of people's homes. The city's policy appears to be – The More The Better – the only impacts examined are positive economic growth with little integration within existing plans, or limits on growth.

This report, **Ripple Effects: The Need to Assess the Impacts of Cruise Ships in Victoria B.C.**, raises questions that need to be addressed, such as:

- “How many cruise ships and passengers can Victoria accommodate?”
- “What is our threshold?”
- “What are the full impacts of cruise tourism on Victoria, not just economic but also environmental and community impacts?”

These questions are put in context by providing a glimpse of the history of cruise ship environmental fines, the levels of pollution produced by these ships, and the federal regulatory environment.

Pollution levels from cruise ships should be a red flag to Victoria, indicating that there is need for concern. Cruise ships burn bunker fuel that has a 90% higher sulphur content than that used by cars. Each day during the

Seattle and Alaska cruise season, ships are producing over 158 million litres of wastewater, and 158 tons of garbage and solid waste.

The city of Victoria is welcoming ships that have records of environmental violations and some that have even been banned from other cities. For example, the Crystal Harmony has been banned by the City of Monterey for having dumped thousands of gallons of waste water into the bay. This same ship was charged in Alaska for air violations in 2000 and 2001. This ship is not one isolated case. Cruise ships have accrued over 60 million dollars in environmental fines over the last five years in the United States. In Canada, because of inadequate monitoring, there have been no fines despite the fact that these same ships visit our waters.

These are simply a few examples of why Victoria needs to assess the impact of cruise ships before further promoting them.

Victoria needs to:

- 1) Monitor what is being dumped into our waters.
- 2) Monitor what is being emitted into our air.
- 3) Assess the impact on James Bay, the neighbourhood where thousands of cruise passengers and crew travel through in hundreds of taxis and tour buses.
- 4) Assess how cruise tourism impacts Victoria's overall plans for environmental sustainability, neighbourhood plans and how it

impacts other forms of tourism, such as the 150,000 cold water SCUBA dives that also take place at Ogden Point each year.

- 5) Determine if the economic impacts are inflated and if cruise ships and passengers are paying their fair share, or whether resident tax-payers are subsidizing a highly profitable industry.

The city of Victoria has no assessment of impacts, local standards or taxation on cruise ships. However, many other cities such as Juneau, Alaska and Key West, Florida have a \$5 and \$8 passenger tax. Juneau has also imposed a 4% sales tax on shore excursions and on-shore purchases. The Port of Seattle requires cruise ships to burn low sulphur diesel while at port, while Tenakee Springs has rejected cruise ships and Sitka, Alaska has put a cap on infrastructure.

While the industry and every level of government are eager to promote cruise

tourism in Victoria, no one has taken on the role of planning for its growth. Continuing to promote growth without assessing impacts and enforcing local standards is irresponsible. While the City may argue they cannot regulate the industry, they can take a leadership role in protecting the city's residents, neighbourhoods, environment and economy.

Recommendations:

- 1) A moratorium on cruise ship growth in Victoria.
- 2) The City of Victoria immediately initiate a process to assess the full impacts of cruise ships in Victoria.
- 3) The implementation of a municipal cruise passenger tax.
- 4) The development and enforcement of local environmental and social standards on cruise tourism.
- 5) Ensure that federal regulation is followed through monitoring and is strengthened beyond voluntary standards.

Contents

- Why are cruise ships an issue?**..... 4
 - The Booming Industry.....6
 - The Environmental Violations.....7

- What are the impacts?**..... 10
 - Air Quality..... 10
 - Polluting our Oceans..... 12
 - Community Impacts..... 14
 - Economic Impacts.....17

- What can be done?**..... 21
 - Thinking Federally..... 21
 - Acting Locally..... 23

- Why we need to act**.....25
 - Recommendation 1 28
 - Recommendation 2 28
 - Recommendation 3 29
 - Recommendation 4..... 30
 - Recommendation 5 31

- Appendices**..... 33

- References**.....39

Why Are Cruise Ships An Issue?

THE VANCOUVER ISLAND PUBLIC INTEREST RESEARCH GROUP

(VIPIRG) is calling on the City of Victoria to begin to assess cruise ship impacts on the local environment, and our community. With the recent divestment of Victoria's harbour to the Greater Victoria Harbour Authority, this is an opportune time to examine the full impacts of cruise ships. Based on the information gathered, they should, in partnership with all stakeholders in the community, enact a plan that will avert and mitigate negative impacts on Victoria and British Columbia. This document is meant to be the initial catalyst to a systematic questioning and analysis of the impacts that these ships have on British Columbia's environment and communities. It provides a global context for Victoria's decision-making by discussing international problems created as a result of the cruise ship industry and the implications for Victoria and the rest of the West Coast. In addition it provides an overview of potential solutions and recommendations on actions for the City of Victoria.

Cruise ship impacts on the environment and our communities have become a major concern for citizens in North America. Cities and towns like Juneau, Haines, Sitka, Honolulu, Key West, Monterey, and Halifax are just a handful of those speaking out against cruise ship impacts on their local ecosystems and communities. Many now closely monitor cruise ship actions and have been putting in place regulations more

stringent than federal standards to reduce the impacts of these "floating cities".

Unfortunately, Victoria B.C., despite their huge increase in visits, has taken little initiative in the monitoring, regulating, and local taxation of the industry that has been seen elsewhere.

Due to changes in the industry, and recent international events, the City of Victoria has become an attractive port to the cruise ship industry. The number of visits has been growing at an uncontrolled rate without adequate impact assessment, planning, monitoring or legislation. Victoria has welcomed and encouraged increased numbers of visits, limiting impact assessment to passenger expenditure based on unempirical figures.ⁱ The main concern of Tourism Victoria has been how to attract and host more ships.

The City of Victoria has repeatedly declared its support for the cruise industry but has not shown evidence of planning to mitigate the environmental, health, and community impacts these ships are having. The City seems to be pursuing economic growth at any cost without pausing to ask important questions such as, "Is there a threshold number of passengers that a community can absorb?" or "Have these ships been violating federal air standards in our community?" It seems that Victoria has opened its arms to an industry without examining the full costs and impacts that it brings.

ⁱ Tourism Victoria, City Council, and the Victoria-Esquamalt Working Harbour Association

“We need to stand back and evaluate where we are at and make sure we are controlling the cruise ships and they aren’t controlling us.”

- A Key West, Florida city commissioner.

Who’s At the Helm in Victoria?

VIPIRG CONDUCTED SEVERAL INTERVIEWS with key stakeholders to determine how the cruise ship industry is being locally managed. Through the course of these discussions it became apparent that the only local policy regarding cruise ships is “the more the better”. The only impact that seems to be considered is the increase in tourist spending. No studies of environmental or social impacts of cruise ships in Victoria have been conducted; in addition, there are no local standards to protect the community from negative impacts.

There seemed to be ample support for the industry with each level of government “passing the buck” when it came to taking responsibility for protecting citizens and the environment. For example, more than one local contact reiterated the industry’s claim that the wastewater from cruise ships was so clean that you could drink it. Yet, none of them recognized the history of illegal, accidental and unregulated dumping from cruise ships in Canada and the United States.

The Federal government contacts pointed out that the Harbour is now divested and under local control, arguing that the Harbour Authority is now the landlord of Ogden Point and it can dictate the rules, set standards and decide which ships could or could not dock. The municipal government has played a role in promoting the industry through Tourism Victoria, but argues that the environmental standards for marine vessels are the responsibility of the Federal government. Tourism Victoria has dedicated a staff person to bringing in more ships, stating that “bringing additional cruise ship arrivals right into Victoria is a priority.”

Provincially, local MLA Jeff Bray stood in the Provincial Legislature to applaud the industry and its growth. His vision for the future appears to be to increase growth. He asked in the Legislature, “imagine what a 64 percent increase in cruise ships to our Ogden Point will mean for the local economy for retailers, for restaurateurs, for service providers?” When it comes to imagining any management of the industry, Bray defers to the Victoria Harbour Authority which he is confident “will ensure local management and local control over our harbour. It will ensure a vibrant working harbour that will improve the economics and aesthetics of the harbour and the environment around the harbour, benefiting everybody in the community.” Yet the Harbour Authority itself depends on cruise ships for income, and is made up of companies such as WestCan and King Brothers who profit from cruise ship visits. These companies argue that cruise ships are essentially ultra-modern and self-contained and take care of themselves.

To summarize, it appears that industry and all levels of government are playing an active role in promoting unlimited growth in cruise tourism in Victoria. But when it comes to management, regulations or monitoring, the Federal and Provincial governments point to the newly formed Harbour Authority; the municipal government points to Federal legislation and those working in the Harbour claim the ships take care of themselves.

In other words, there is no one at the helm.

The Booming Industry

AS A RESULT OF NEWER, faster ships and an increase in ships using Seattle as a home port,¹ Victoria has increasingly been used as a port by the cruise ship industry. The growth rate has been phenomenal. In 2002, Ogden Point was used 113 times by the cruise ship industry, bringing 160,000 passengers to Victoria.² This was a huge jump from the 77 visits Victoria received in 2001, and the 34 visits in 1999.³ The 2003 season will include three ships carrying 6,000 passengers every Friday from May to September. This translates to 129 large ships stopping at Ogden Point, with an additional 40 visits from pocket cruise ships,⁴ carrying approximately 230,000 passengers.⁵

The cruise ship industry in B.C., with the financial support of government, is now increasing its marketing of B.C. ports to cruise lines and passengers. There are plans for increased large vessel berths as well as expanding pocket cruises between Canadian ports such as Victoria, Vancouver, Nanaimo, Campbell River, and Prince Rupert. Already, Royal Caribbean Cruise Lines has some test calls planned for Campbell River in 2003.⁶

The jump in the number of visits to Victoria has been part of the intensification of trips to Alaska. Events on September 11th 2001 helped spur this growth. Companies have redeployed ships from the Mediterranean to the Alaska route as a result of a downturn in overseas travel.⁷ The global cruise market is made up of 61% North Americans, many of whom now want to avoid flying, and stay within their own country for a vacation.⁸ The 20th straight year in growth will bring

408 BC/Alaska tripsⁱⁱ in 2003 carrying over 750,000 passengers, aboard 25 ships.⁹

*Since 1999 there has been a 300% increase in the number of vessels using Victoria as a port. Vancouver's Port Authority Captain Gordon Houston predicts a potential 80% growth rate for the cruise industry in B.C. over the next few decades.*¹⁰

The increased numbers on the west coast of North America have been part of a much larger trend, as cruise shipping is one of the two fastest growing sectors in the tourism industry and tourism itself is one of the fastest growing sectors of the world's economy.¹¹ Since the 1970's the cruise ship industry has grown fivefold; by 2001 there were 372 ships in the global fleet carrying approximately 12 million passengers,¹² **almost half of the population of Canada.** An additional 50 percent growth is anticipated by 2005¹³ bringing 49 more ships into service and contributing approximately another 95, 000 berths and 30 more ships in their planning stages.¹⁴ By 2010 the total number of cruise ship passengers is predicted to be 20.7 million.¹⁵

In addition to ship numbers, ship size has also been increasing. During the late 1980's and the early 1990's the cruise ship industry began to introduce the megaliners that carry between 2000 and 3800 passengers. These are now being used as the prototype for ships that are presently being built; the average cruise ship today carries 2000 passengers and crew.¹⁶ The largest cruise ship to date is over 300 meters long, and carries more than 5,000 passengers. It is

ⁱⁱ Ships that are not foreign-flagged are not included in this number.

literally a floating city with restaurants, bars, swimming pools, a conference centre, shops, a theatre, a skating rink, a rock climbing wall, and other entertainment facilities. The *World of Residencea* has recently introduced a new concept to the cruise ship industry: the potential to live aboard a cruise ship in the equivalent of a floating condominium complex.

“I can’t quite understand the degree of interest that they have in our industry and where it stems from.”

- John Hansen, Northwest Cruise Ships Association president

Perhaps the interest comes from fines the cruise ship industry received for environmental violations totalling more than U.S. \$60 million in the past five years and U.S. \$90 million in the past decade.^{17 18}

The Environmental Violations

IF ANYONE DOUBTS the extent of the cruise ship industry’s environmental violations they can visit the website www.cruisejunkie.com. Ross Klein, of Memorial University, has documented a long list of many known cruise ship environmental fines. The most disturbing among these violations are those of cruise companies **purposely polluting**. For example, passengers videotaped more than 20 plastic garbage bags being thrown off the Regal Princess by the crew. As a result, Princess Cruises Inc.ⁱⁱⁱ was fined \$500,000.¹⁹

ⁱⁱⁱ Note Princess Cruises Inc. is now P&O Princess. Names of companies used throughout this report are the names used during the time of the event. Use the

This same boat visited Victoria eleven times in 2002²⁰.

Even more disturbing are companies that are illegally systematically polluting **throughout their fleet**. The Royal Caribbean Cruises Incorporated (RCCI) is one example of corporate misconduct. In 1994 RCCI had built their ships’ bilge lines to bypass the oil/water separator used to clean their bilge water. The same lines were removed during US coast guard inspection to avoid detection.

In 1998 RCCI pleaded guilty to seven felony counts for conspiracy to discharge hazardous waste and obstruct justice. They were fined a mere \$8 million.²¹ In 1999, RCCI was fined a further \$18 million on a 21 count indictment for the **fleetwide** practice of discharging oil contaminated bilge water and dumping waste water or grey water contaminated with hazardous waste (including dry cleaning fluids, photographic chemicals, and solvents from the print shop).

Investigators found the company’s actions were so unscrupulous they stated the case was a “fleet-wide conspiracy” by Royal Caribbean Cruises Ltd. to “use our nation’s waterways as its dumping ground.”²² However, \$3 million was suspended by the Federal judge in return for prompt payment.²³ In 2000, RCCI was fined \$3.5 million by the State of Alaska for dumping toxic chemicals and oil contaminated water. Another plea agreement included a stipulation that RCCI would not dump waste water within 3 miles of the coast line.²⁴

Though RCCI’s fines were related to the fleet operating in the United States, RCCI’s

table in appendix A to track which companies own which cruise lines.

global fleet includes 26 ships. The average amount of oily sludge (from the oil/water separator for the bilge water) produced per ship/per week is 5.6 metric tons; in other words 145.6 metric tons per week globally. One can only wonder how much is still going into the oceans outside of the United States and how much was dumped world wide prior to their conviction.

The combined civil and criminal assessments of the US Coast Guard and US Department of Justice between 1993 and 1998 resulted in 104 prosecutions and \$30.5 million in fines. This total is equivalent to less than four percent of Carnival Corporations 1998 net income. The deterrent effect of such fines is clearly negligible.²⁵

RCCI is not the only company which has been caught systematically polluting our oceans. Holland America's parent corporation, Carnival Cruise Line (CCL), pleaded guilty in 1998 to illegally discharging oily water in Alaska and was fined \$1 million plus \$1 million in restitution.²⁶ This was due to a crew member who reported the incident after refusing to illegally pump oily bilge water overboard.²⁷

In 2002, Norwegian Cruise Lines was fined \$1.5 million for routinely circumventing the oil/water separator, and illegally dumping waste water and hazardous waste. These violations occurred between 1997 and 2000. Authorities were lenient because the company admitted to the violations. However, this confession occurred only because they knew a former employee had reported them.²⁸

CCL had to pay \$18 million for dumping oily waste from 5 ships, and making false entries into the log book. The company will have to return to court for their alleged actions related to this case. Captain James Walsh, former Vice President, Environmental, Health, and Safety has filed a lawsuit against CCL under the Whistleblowers Act. He claims that the company ignored his reports of the environmental and safety violations for years, and then fired him on the same day that the U.S. attorney's office announced that CCL pleaded guilty to the environmental charges. Captain Walsh has alleged that the president of CCL ordered him to cease documentation of continued oil leaks on six ships and that CCL legal counsel instructed him to tell investigators that he didn't recall any conversations with senior management concerning illegal discharges or environmental and safety allegations.^{iv 29}

A freedom of information request conducted by the Ocean Conservancy revealed that between 1993 and 1998 cruise ships were charged with 490 safety or environmental violations. The Coast Guard recommended penalties totalling over \$1.8 million. This total was reduced to \$525, 825 through negotiations and plea bargaining. These fines for the entire industry in the United States were equal to 0.0006 percent of Carnival Corporation's net income for only on year.³⁰

^{iv}Environmental allegations include by-passing oil-water separators, falsifying oil records, illegal discharges of hazardous waste, improper disposal of hazardous waste and oil residue on land.

CCL avoided expenditures and the commitment of resources that come with the proper disposal of oily waste. Through 1996-2001 CCL avoided spending millions of dollars to properly dispose oily waste.³¹

Prior to 1993, there were few convictions for cruise ships on environmental offences in the United States. There was little enforcement since it was considered to be the responsibility of the countries where the ships were flagged. In 1992, the US government revealed that nations with foreign flagged vessels did not take action or respond to violations referred to them.³² Of the 111 cases of environmental violations by cruise ships reported by the U.S. government to the countries where they were registered, only 10% of the cases even

received responses.³³

The Canadian Oceans Blue Foundation defines the “whistle-blower” lawsuit by Captain Walsh as “a ringing alarm bell.” In their 2002 report, “Blowing the Whistle and the Case for Cruise Certification,” they highlight this unprecedented case of a corporate executive speaking out as an indication of how we should all be concerned. The report seeks a “transparent stakeholder based vessel certification process” for an industry that “resist(s) allocating sufficient resources to protect passenger health, crew health, safety and working environment, as well as the integrity of our public resources and our coastal ecosystems.”³⁴



What Are The Impacts?

Cruise Ship Air Pollution

BECAUSE OF the serious impacts experienced in similar ports, citizens of Victoria have a right to know about the significant levels of emissions being released from the same cruise ships that visit Ogden Point. Newspapers reported in 2002 "Ships now rival automobiles as the chief sources of some types air pollution in Greater Vancouver and the Fraser Valley."³⁵

According to the Greater Vancouver Regional District (GVRD)^v during the 2000 season, cruise ships emitted 288,362 tons of green house gases in British Columbia alone.^{36 37} Although this figure is three years old, the industry has since grown significantly. To put this figure into perspective, in one year motor vehicles within the entire Capital Regional District emitted 755,000 tons of CO2 into the atmosphere.³⁸

Cruise ship emissions are also high in nitrogen oxide, sulphur dioxide, carbon monoxide, and hydrocarbons.³⁹ Air pollution from the incineration of garbage on board cruise ships is also cause for concern as incinerated plastics release dioxins, furans, and heavy metals into the air.⁴⁰ Specifically, in 2000,^{vi} cruise ships in British Columbia

^vThese figures came from a combination of the two reports *Marine Vessel Air Emissions in the Lower Fraser Valley* and *Marine Vessel Air Emissions in BC Outside the GVRD and FVRD and Washington State for the Year 2000*.

^{vi}These figures came from a combination of the two reports *Marine Vessel Air Emissions in the Lower Fraser Valley* and *Marine Vessel Air Emissions in*

dumped 8770 tons of NO_x, responsible for smog, 3570 tons of SO_x, 540 tons of CO, 170 tons of VOC, and 520 tons of particulate matter.^{vii 41} Each of these emissions has been linked to acid rain, global warming and respiratory diseases. Cruise ships have an even greater impact globally, as these statistics refer to pollution released only in B.C., representing at most one seventh of the cruise time through the North Pacific.

"A single large ship visiting port could pump out as much sulphur dioxide as 2000 cars and trucks driving all year round." - Beverley Ware. "How Badly do Ships Pollute Halifax" Halifax Daily News, December 15, 2002.

Why are cruise ships so polluting? Because most of them use the dirtiest type of fuel available. Most cruise ships are powered by diesel bunker fuel which can have 90% higher sulphur content than fuel that powers cars.⁴² Bunker oil is the leftover residue after crude oil has been processed to a higher grade product. Although it has extremely high concentrations of toxic substances and has been banned from use in most other industrial and consumer applications, bunker fuel is used by the cruise industry because it is the least expensive fuel available.⁴³

According to the Bluewater Network, cruise ships burn fuel that is 500 times dirtier than

BC Outside the GVRD and FVRD and Washington State for the Year 2000.

^{vii} These figures are three years old and do not include pollutants from incineration.

diesel trucks,⁴⁴ and consequently produce diesel exhaust equivalent to thousands of automobiles each day.⁴⁵ Bunker fuel contains 1000 times more sulphur than diesel fuel used in buses, trucks, and cars.⁴⁶ The Times Colonist reported that large ships are responsible for 95% of the sulphur compounds over Vancouver.⁴⁷ Based on figures in the GVRD report, cruise ships would be responsible for 25% of this pollution.^{viii}

Why does such a sharp contrast between the quality of fuel allowed for land and air based transportation and marine engines exist? There is no Canadian legislation that regulates fuel content for cruise ships and the air regulations they do face are minimal. Canadian legislation pertaining to air pollution from ships regulates the density of the emissions (opacity) rather than the content of air emissions or of the fuel used. There is allowance for a maximum 20%^{ix} black space.⁴⁸

Air emissions from local industry face relatively stringent provincial regulations while cruise ships are covered by lax federal regulation that has never been enforced. The B.C. Waste Management Act limits pulp mills to using fuel with a sulphur content of maximum 1.1%.⁴⁹ B.C. municipal waste incinerator legislation controls 14 different

pollutants and limits opacity to 5%^x 50 but there is no provincial legislation that limits the toxic emissions produced by cruise ships when incinerating garbage. Even coal-fired power boilers have to face regulations limiting their Total Particulates, Nitrogen Oxides, and Sulphur Dioxide,^{xi} none of which are controlled for cruise ships.

A floating city, a cruise ship discharges approximately 1.3 million litres of waste water per day, more than the port city of Haines, Alaska which produces over 1.1 million litres per day. And like Victoria, Haines can expect several ships per day, creating a floating mega-city in the harbour.

These offshore corporations face no fuel regulations while citizens and Canadian industries that use diesel and gasoline must pay higher fuel prices to keep our air clean. Sulphur in diesel is regulated to allow only a maximum of 15 parts per million^{xii}. Federal regulations also cover gasoline allowing 30 ppm^{xiii} of sulphur and 1% of benzene (by volume).⁵¹ Cruise ship fuel is not regulated, however, on average it has a sulphur content of 2.7%, or 27,000 ppm. Although Canadian citizens and industries have to pay for higher

^{viii} This figure is based on calculations made from a combination of figures from two reports *Marine Vessel Air Emissions in the Lower Fraser Valley* and *Marine Vessel Air Emissions in BC Outside the GVRD and FVRD and Washington State for the Year 2000*. Both reports indicate that of all the commercial ocean-going vessels cruise ships contribute 26% of SOx emissions.

^{ix} 40% black space is allowed for up to four minutes in a thirty-minute period.

^x This applies to incinerators that process over 400 kg/h but the legislation covers 5 different pollutants and limits opacity to 10%.

^{xi} However, their opacity standard of 20% is less stringent than that which cruise ships face.

^{xii} The Sulphur in Diesel Fuel Regulations revoke and replace the present Diesel Fuel Regulations and set a maximum limit of 15 ppm for sulphur in on-road diesel fuel (starting June 1, 2006). The present maximum is 500 ppm.

^{xiii} The federal Sulphur in Gasoline Regulations took effect July 2002 and require an average gasoline sulphur concentration of 150 ppm as of July 2002 and 30 ppm as of January 2005.

quality gasoline that adheres to fuel regulations, cruise ship corporations face no fuel regulations while continuing to reap large profits.

In addition to the lack of Canadian legislation, there has been no enforcement of the weak air emission legislation that does exist despite the fact that the same ships that visit British Columbian waters have been fined heavily in the United States. Between 2000 and 2001, a total of \$577,500 in fines were given to cruise ships visiting Alaska for violating air quality standards - standards which are almost identical to Canadian regulations.^{xiv} Holland America received \$165,000⁵² in fines and Celebrity Cruise Lines received \$55,000 US.⁵³ During the same period of time these ships visited British Columbia harbours but received no fines. The Regal Princess, Norwegian Sky, Crystal Harmony, and Mercury were among 11 other ships charged for air emission violations in 2000 and 2001^{xv} Likewise, these same ships visited Ogden Point but were not fined.

Cruise ships are not minor contributors to waste coming from the global ship fleet. The Blue Water Network estimates that 77% of all ship waste comes from cruise ships. About two billion pounds of trash is dumped into the world's oceans each year and 24% of that waste comes from cruise ships. Approximately 14 million kilograms of waste was produced in 2000 on the Alaska-Canada route.⁵⁴ With the exception of plastics, most of this waste can be ground up and legally dumped.

^{xiv} Alaska prohibits air emissions that reduce visibility by 20% within three miles of the shore line.

^{xv} Crystal Harmony and the Mercury were charged twice this season for air violations in Alaska.

Polluting the Ocean

EACH DAY during the 2002 Alaska cruise season, approximately 45,000 passengers⁵⁵ are cruising aboard an average of 20 ships.⁵⁶ Each ship produces waste equivalent to a small Alaskan city: over 158 million litres of wastewater,^{xvi} and 158 tons of garbage and solid waste.^{xvii} As the industry grows, so do the quantities of pollution it produces. If the predicted 80% expansion happens over the next decade imagine the increase in pollution. See Appendix D for disturbing information on the impacts of all cruise ship waste streams including grey and black water, hazardous waste, bilge water, garbage and ballast water.

Although Canadian regulations address the most harmful pollutants (such as plastics, oil, and hazardous waste), most of the remaining waste streams have inadequate or no legislation, resulting in serious implications for our oceans. For example, when RCCI was convicted in 1998, they pleaded guilty to multiple charges on a fleet-wide practice of dumping hazardous waste into its grey water system. Although RCCI claims to no longer engage in this practice,⁵⁷ the Canadian government cannot verify this since there is currently no regulation, monitoring or specific standards for grey water.^{xviii}

^{xvi} Based on numbers taken from the RCCI 2000 environmental report that state that on average their ships produce 208,000 gallons of waste water (black and grey water) per day which is multiplied by the average of 20 ships cruising per day.

^{xvii} Based on the IMO figure of each passenger producing 3.5 kilograms of garbage and solid waste per day, multiplied by the approximate number of passengers (45,000) between Seattle and Alaska on a day during the cruise season.

^{xviii} Alaska requires grey water to be treated to similar standards as sewage if it is to be released within 1 nautical mile of shore^{xviii}.

Lax Canadian legislation paralleled with stronger American legislation may be creating a pollution haven for the cruise industry, disproportionately increasing the pollution in our waters. For example, US legislation requires certain fecal coliform count and suspended solids^{xix} levels for treated sewage and requires the use of Marine Sanitation Devices (MSDs).^{xx} Since Canada does not have legislation that requires specific effluent standards for sewage,⁵⁸ cruise ships could simply wait until they cross into Canadian waters to discharge their sewage sludge.^{xxi 59} In addition, the new Canadian guidelines on effluents are voluntary which will make it difficult to detect offences and implement repercussions for ships that dump sewage sludge and blackwater into Canadian waters.

The presence of MSDs on ships does not mean adequate sewage treatment. A study conducted by the state of Alaska found treated black water and grey water samples to have registered fecal coliform levels as high as 9 to 24 million colonies per 100 millilitre sample, a number which exceeds the United States limit by 10,000 to 100,000 times. Of the 22 ships involved in the study, none were in full compliance with black water standards and 75% exceeded the American coliform standard.

There is also a lack of concern when it comes to tracking cruise ship pollution. For

example, in 2002, Ben Parfitt of the *Georgia Straight* uncovered that as a result of provincial government cutbacks Aqua Clean had discrepancies of more than eight million litres of oily waste generated from bunker fuel on cruise ships that went unreported.⁶⁰ Unclear federal regulations concerning hazardous waste compound the problem.⁶¹

The most serious concern related to cruise ship ocean pollution is the need for Canadian monitoring and enforcement to be strengthened.⁶² For example, of the 87 U.S. cases of illegal discharge from cruise ships, during 1993-1998, 93% involved petroleum products. Problematically, there were no Canadian^{xxii} cases during the same period despite similar legislation in each country. In addition, Canadian coast guard only monitors for oil in the bilge water but there are many other harmful chemicals such as engine and air conditioning coolants, hydraulic fluid, and solvents that are often pumped into the ocean. The issue of inadequate monitoring is further discussed in the section called *Thinking Federally*.

“ ... Cruise ships that serve B.C. tourism have a far greater impact on marine pollution than offshore oil and gas rigs would.”

- David Strong, former President of the University of Victoria, current professor at UVic's School of Earth and Ocean Sciences in the Vancouver Province (December 10, 2002)

^{xix} FC: <200/100ml, SS: <150 mg/l.

^{xx} Ships cannot dump untreated sewage within three nautical miles from shore and there are even more stringent regulations for Alaska 1 nautical mile for treated sewage at boat speed of at least 6 knots and 3 nautical miles from farthest coastal point.

^{xxi} A by-product of using MSDs and other water treatment systems such as the Zenon water treatment system.

^{xxii} Canada has legislation that allows less than 15 parts per million of oil to be emitted in the bilge water.

Community Impacts

AN OBVIOUS, and yet often overlooked impact of cruise ships in Victoria is how they affect the community. Victoria is unique in the fact that our cruise port is in a residential neighbourhood, with massive 12-story high ships less than 300 metres away from the front steps of peoples' homes. The cruise ships that dock this short distance away are not accountable to the community but are driven to minimize costs and maximize profits. The responsibility for environmental monitoring and addressing the local impacts is obviously not the cruise lines' primary interest or responsibility, which is why the City of Victoria should have a mandate to protect its citizens from the potentially damaging impacts of this industry. Has the city adequately taken on this responsibility?

Cruise Ships: Not in the Plans

THE CITY OF VICTORIA'S current policy on cruise tourism is to support the industry's continued growth with little evidence of any assessment of impacts, integration within existing plans, or limits on growth. The cumulative impact of 320,000 passengers and crew members from 122 vessels has not been studied or planned for in Victoria. The expected growth will see more people from more ships, increasing the convoy of tour buses, cabs and horse carriages, again with impacts that have not been assessed.

The *Victoria Economic Development Strategy Action Plan* supports Tourism Victoria to "work in partnership with local industry to ensure the retention and expansion of cruise visits to the city." However, the City's ongoing encouragement

of the cruise ship industry's growth in residential James Bay is in stark contradiction of the *James Bay Neighbourhood Plan*, the *Victoria Harbour Plan* and similar critical planning strategies.

"A ship that sails from Seattle to Alaska can't dump sewage in Washington's waters and it can't dump in Alaskan waters. But it can dump raw sewage for most of the thousand kilometres it travels in BC."
- Linda Nowlan, *West Coast Environmental Law*

While the *James Bay Neighbourhood Plan* recommends the City assist the Federal Government with cooperative and mutually beneficial redevelopment of the Ogden Point area, including cruise ship operation, the Plan also outlines limits on this development. The Neighbourhood Plan clearly demands the development of "enforceable performance standards (eg. noise, odour etc.) to ensure compatibility of the Ogden Point industrial uses with the residential area of James Bay."⁶³ In fact, the recommended policy is to "support new light industrial activity that is relevant to the community ... [and] is clean, environmentally sound, small scale and not traffic intensive."⁶⁴ Tourism is supported, as long as the City recognizes "the impact that tourism has on the residential areas of James Bay and develop policies to ensure that tourist development will compliment the City and the neighbourhood and minimize disruption to residents."⁶⁵ This planning has clearly been absent in the uncontrolled promotion of cruise ships in the neighbourhood.

The *Victoria Harbour Plan* assures the public that redevelopment of Ogden Point

will be compatible with the residential neighbourhood, particularly in terms of urban design, traffic access points and street relationship. The earlier *Land Use Assessment and Redevelopment Study of Ogden Point* by Public Works Canada recognized that cruise ship traffic would increase at Ogden Point (although it predicted growth of only 5% a year) and warned that “increased traffic could impact negatively on the adjacent James Bay residential neighbourhood, through congestion and increased noise.”

Traffic

The *James Bay Neighbourhood Plan* agrees to “maintain residential street character by controlling non-residential traffic from taxis and tour buses.”⁶⁶ Meanwhile, tourism consultant Frank Bourree’s primary concern is if there are enough cab companies and tour buses in Victoria to drive all of the cruise passengers in and out of James Bay each Friday night, when over 6,000 passengers travel through this community of 11,000 residents.⁶⁷ This illustrates Victoria’s “the more ships the better” planning policy that has little regard for impacts on community. There is more concern that Victoria won’t have enough taxis and buses to meet the needs of cruise passengers, rather than the impacts of having every available taxi and tour bus streaming in and out of James Bay several times week after week.

Currently taxis speed down every possible street towards Ogden Point at times out numbering local traffic on residential streets such as Oswego Street. Convoys of tour buses add diesel fumes to those emitted from the ships’ stacks to further add to the toxic chemical mix. Unplanned growth of cruise ships docking in James Bay may be resulting in too many people in one place at

one time, which in turn results in too much traffic in one neighbourhood at one time.

Noise

James Bay residents living adjacent to Ogden Point live with harbour related noise generators such as float planes, helicopters, marine vessels and the use of Ogden Point for non-marine related activities, such as large vehicle parking, horse stables and special events. Again, what may be unique in Victoria and requiring special planning is the fact that cruise ships are docking and unloading only a few hundred yards from a residentially zoned neighbourhood.

The City of Victoria is currently creating a new Noise Bylaw that will clearly define the allowable noise levels for “active” areas such as Ogden Point, and “quiet” areas such as residential James Bay. This bylaw is just one of many roles the City needs to play in balancing quality of life in James Bay with economic activity in the Harbour. The important question to be asked is “how many ships, passengers and related traffic can be accommodated?”

Residential Air Quality

SMOG has grave health implications. It is estimated that air pollution causes over 5,000 premature deaths each year in our country.⁶⁸ UBC medical researcher, Dr. Sverre Vedal, estimates that particulate matter is responsible for 82 deaths, 146 hospitalizations for lung and heart disorders and asthma, 283 emergency room visits for asthma, and over 165,000 absences from school each year.⁶⁹

The fact that cruise ships have loosely regulated air emissions is especially disturbing when located so close to a

residential community. While emissions such as sulphur have been reduced in our local cars and trucks, the same regulations are not being applied to the 122 ships that dock in James Bay. Though it is also not acceptable to have unregulated ship emissions on the open seas, special consideration must be taken of emissions generated less than 300 meters from playgrounds and homes.

It seems reasonable to expect that a 300 percent increase in cruise ship traffic in Victoria would result in increased air pollutants in James Bay. It seems prudent to stop and determine impacts rather than continue to promote an increase in cruise ships. In conversations with local stakeholders we were assured that air pollution is not an issue when it comes to “super-clean” cruise ships. Our port has no

policies or guidelines regulating air emissions for ships when docked at Ogden Point. Our local representatives are content in their assumptions that ships are burning clean fuels, emissions are not dangerous and that incineration is not occurring while docked. Our local policy of “no policies”, assumes the cruise companies are acting responsibly and in our best interests.

Over the last year, our local *Times Colonist* newspaper has run stories detailing the concerns about ships polluting the air in Vancouver harbour and Halifax harbour, with never a mention of the air emissions within Victoria’s harbour. Emissions from cruise ships are being studied and discussed in the many harbours that they visit in Canada and the U.S. and progressive actions are being discussed and implemented – why not in Victoria?



Economic Impacts

HAVING LOOKED at the many negative impacts from cruise ships it is also important to acknowledge that cruise ships bring significant dollars to Victoria's economy. Cruise ship visits result in an increase in tourism spending, other spin-offs to related industries such as refits at the Victoria Shipyard and are the largest revenue generator for the Greater Victoria Harbour Authority.

Though there are economic benefits those figures should be put into perspective. Tourism Victoria claims that the 2002 cruise ship season generated \$30 million a year in economic activity for Victoria and surrounding region.⁷⁰ The tourism industry in Victoria is said to be worth \$1 billion/year therefore, assuming cruise figures are accurate, cruise ships worth only 3% of tourism dollars in Victoria.

Economic figures should also not be inflated and be based on fact. Tourism Victoria estimates that passengers spend approximately \$150 Canadian each, and crew approximately \$50 each.⁷¹ Gerry Lutz, of WestCan terminals admits, "There has been no survey done to prove that number one way or another."⁷² The base figure of \$150/passenger is not based on an empirical survey of passengers in Vancouver and Victoria. Halifax uses \$85, a much lower figure, to estimate passenger spending.⁷³ Nor are these figures adjusted for the number of passengers and crew that do not disembark from the ship or for trips of only a few hours duration. For example, of the 110 cruise ships visits in Victoria this summer 38 of them or 35% stayed less than 5 hours between 7:00pm and 12 o'clock at night when spending for older passengers would stay at a minimum. Of the 122 cruises

planned for 2003, 60% dock for 6 hours or less, 30% dock for less than 5 hours, and 16% stay for less than 4 hours, hardly enough time for passengers to clear customs and each spend \$150.

With little interest from the City, it remains unknown if cruise companies and ship passengers are being subsidized by local taxpayers. City officials that were interviewed did not know how much cruise lines currently contribute to city or regional coffers regarding city services for Ogden Point, transportation infrastructure, policy and emergency services, environmental degradation and port infrastructure. Ships do pay port fees, but how much of these fees does the city get and does this amount cover the costs of attracting, planning and continually hosting this industry? More importantly – do these fees pay for mitigation of long-term environmental impacts of the cruise industry in Victoria?

Though there is considerable economic impact, social and environmental considerations deserve equal attention. Dollars should not dominate decision-making when community and the environment are at stake. The City of Victoria has not assessed the community or environmental impacts of cruise ships but continues to welcome ships unquestioningly. Why isn't Victoria talking about these costs when other cities and towns are? The City of Victoria needs to begin to answer questions such as "What costs are we paying for cruise ships to operate in our area?" "What are the real versus the perceived benefits of the industry?"

In addition, economic, social, and environmental well-being is often interconnected. Air pollution is an excellent example of the linkages between our

economic well-being and environmental health. For example, based on a study conducted in the lower mainland, Environment Canada concluded that increased pollution would negatively impact tourism in the region. British Columbia also has an economy dependent on many land-based activities such as agriculture, forestry, fisheries and tourism which are sensitive to climate change.⁷⁴

As well as, the serious environmental consequences from air pollution, such as climate change, acid rain and marine eutrophication,^{xxiii} there are also significant economic impacts stemming from health care costs,^{xxiv} impacts on agriculture, and threats to tourism dollars.⁷⁵

Without fully assessing the impacts of cruise ships it is impossible to determine whether the industry has a negative impact on other industries. Comparing the economic benefits of other industries such as ecotourism and how cruise ship pollution is impacting them may provide valuable insight on how the cruise ship industry should be managed.

For example, Ogden Point not only hosts cruise ships but it is promoted as “Canada’s most popular dive site.” In 2002, there were 150,000 dives off of Ogden Point, while ships unloaded 160,000 cruise ship passengers directly beside what is referred to as the “world’s best cold water scuba diving site”. According to Lloyd Haskell, Ogden

Point’s Training Co-ordinator, “People dive here because of the safe marine environment, excellent visibility, and stunning underwater scenery.”⁷⁶ Does the City of Victoria know how cruise ship traffic and pollution will impact the visibility that attracts so many people here? It would foster good planning and management to know the economic benefits of the Ogden Point Dive Centre and how it is being impacted by cruise ship noise and emissions.

A Tourism Victoria exit survey found that 51.6% of visitors cite scenery/natural environment as very important to their reasons for visiting. The city is being seen by “more and more visitors as an eco-tourism destination”. *City Business*, a publication put out by the Economic Development Office of Victoria, stated, that visitors “comment on how beautiful Victoria is and they always value the natural ambience. A lot of tourists alter their plans to include more outdoor activities and adventure after they arrive here and see how beautiful the environment is – especially people from parts of the world where they don’t have wide open spaces.”⁷⁷ The City of Victoria needs to consider how the cruise industry is impacting on the ambience of the community and the beauty of the natural environment because this will impact other sectors of tourism.

The City of Victoria should examine the impact cruise ships are having by depleting local natural resources, leaving waste behind, wearing infrastructure through the use of services, and whether they are paying a fair price for the afore mentioned. Because cruise ships are not tax paying members of the Victoria community they should have to pay a significant price for leaving behind their waste and consuming our natural

^{xxiii} Eutrophication is the increase in water nutrient levels which leads to a lack of oxygen thereby eliminating many organisms.

^{xxiv} The Ontario Medical Association claims that air pollution costs the provincial government over \$1 billion in hospital admissions, emergency room visits, and absenteeism. When pain suffering and loss of life are incorporated into the figure it reaches a total estimate of \$10 billion. These figures can be found in the Pollution Probe Smog Primer.

resources. According to a 2001 article in Monday Magazine, 400 million gallons of fresh water from the Sooke Reservoir leaves the Capital Region with every cruise ship season, and these figures seem to be based on a 1999 figure when there were only 34 cruise ship visits to Victoria. Though the City should be commended for asking the ships to fill up at other ports when there are water shortages.⁷⁸ It needs to take into account other costs from hosting the ships: such as increased policing, clean-up and other civic services, and the cost of wear and tear of infrastructure. Basically Victoria needs to ensure that we are not subsidizing the foreign-based cruise ship industry.

Economic benefits can also be put into perspective when considering that cruise companies pay almost no federal, provincial or municipal taxes. Carnival Corporation and Royal Caribbean Cruises Limited pay no Canadian income tax on the cruise lines they own, as they are foreign corporations with ships flagged in other countries.^{xxv} P&O Princess is registered in the U.K. and pays 5% tax rate on its worldwide income but this does not go to the Canadian government.⁷⁹

Meanwhile, our provincial government is now actually subsidizing cruise companies. The recent provincial budget included a number of tax breaks targeted for specific industries to supposedly promote economic development. One of those tax breaks benefits the cruise ship industry.⁸⁰ As a result of a tax exemption on bunker fuel, the

most polluting of all fuels, the provincial government is therefore effectively subsidizing cruise ships. Because this gas tax is meant for road improvements if all marine fuels were not taxed it would be understandable but that is not the case.

Ports in B.C. are also beginning to make serious infrastructure investments that need to be taken into account when examining how economically beneficial cruise ships are to communities. The Campbell River First Nations band has a \$4 million upgrade planned so it can host large cruise ships.⁸¹

Also alarming is additional taxpayers dollars being dedicated towards attracting the cruise ship industry. The British Columbia Ports and Destinations Group^{xxvi} recently launched the Cruise British Columbia Initiative collaboration among ports with the goal of attracting cruise traffic. It is also supported by Western Economic Diversification Canada and the Province of British Columbia to the tune of \$200,000 or two thirds of the \$300,000 project.⁸² The group has already been somewhat misleading in the press stating that, “With increased competition from U.S. ports, B.C.'s cruise industry will experience its first decline in 2003.” While it is true Vancouver has experienced a decline in ships using it as a home port cabotage laws require that ships travelling to Alaska make a stop in Canada, therefore any decline in Vancouver’s cruise traffic simply means other Canadian ports will host ships.

^{xxv} The Corporate Offices Of Star Cruises Is In Malaysia And Its Tax Payments Are Not Clear.

^{xxvi} The BC Ports and Destinations Group is composed of the Vancouver Port Authority, the Prince Rupert Port Authority, the Campbell River Port of Call Partnership, the Greater Victoria Harbour Authority and the Nanaimo Port Authority.

Avoiding Responsibility: Flags of Convenience (FOC)

Ships are considered to be flying a “flag of convenience” when a company registers its vessels in a country that charges little or no tax and is notorious for turning a blind eye to international marine safety and labour standards. There are several environmental international laws regulating cruise ships, most importantly the *International Convention for the Prevention of Pollution from Ships* (MARPOL) administered by the International Maritime Organization (IMO). Yet because of the current nature of international environmental treaties, the rules cannot usually be enforced directly against violators internationally.⁸³ It must be the country, where the ship is flagged or where the violations occur, who enforces environmental and labour treaties. Some nations that offer flags of convenience include Panama, Burma, Cambodia, Lebanon, the Bahamas and Liberia.⁸⁴

“In order to keep international costs competitive we do in fact on occasion move from country to country. International shipping will always seek a hospitable economic and political climate from which to operate,”

*- John Estes, ICCL president, in 1993, threatening that the cruise ship industry will leave American ports if an American law were to be imposed on them.*⁸⁵

Flags of convenience can also stagnate the international treaty process, as 50% of the world’s tonnage is required to ratify them before they come into effect. If there is a lack of political will in the “popular” flag countries (plausibly as a result of pressure from the cruise ship industry) there will not be a substantial amount of tonnage for the treaties to come into effect. This is currently the case as the process to expand and strengthen MARPOL has come to a stand still.

Corporations have also tried to use the flags of convenience to evade prosecution as a result of breaking environmental standards in the United States. In 1998, Royal Caribbean tried to argue in court that it was outside American jurisdiction to prosecute them since they are flagged in Liberia. Liberia even produced a diplomatic note asserting that it had primary jurisdiction and there was insufficient evidence for prosecution.

What can be done?

Thinking Federally

THOUGH CRUISE COMPANIES have paid over U.S. \$60 million in fines in the last five years and \$90 million over ten years there have been **no Canadian fines or convictions** during the same period. In their report, *Cruise Control-Regulating Cruise Ship Pollution*, West Coast Environmental Law points out, “there are no records of prosecutions, reported court cases, or penalties against cruise ships for pollution in Canadian marine waters. When ships are convicted of illegal discharges in the US, Canadian authorities undertake no extra measures to monitor or ensure compliance with Canadian legislation.”⁸⁶ Royal Caribbean was charged \$26.5 million for fleetwide practice of dumping oil and hazardous waste in Alaska. These same boats travel through B.C. on their voyage to Alaska therefore we have every reason to believe they were also dumping in our Canadian waters but were not caught by the Canadian Coast Guard. This case is a major indicator that Canada needs more stringent legislated monitoring and enforcement.

“It is hard to believe that the ships would dump sewage and other waste in Alaska’s waters and not in British Columbia’s Inside Passage where regulations are less stringent and enforcement less vigilant,”
- Ross Klein (CCPA report)

It is these major gaps in Canadian monitoring that prevent us from using existing regulations against the cruise

companies. Daily aerial surveillance of ships is currently the principal inspection method. This method is primarily used for oil and garbage and is limited to shipping lanes around the Vancouver Harbour area. The Coast Guard also detects illegal discharges through public complaints, passing ships’ complaints, inspections, and by monitoring cruise ship discharge logs.⁸⁷ Approximately 25% of foreign vessels that ply through Canadian waters are inspected, but it is primarily a safety inspection that targets older vessels.⁸⁸ The lack of Canadian monitoring coupled with the fact the United States is becoming more stringent on monitoring and enforcement creates a much greater chance of using Canada as a dumping ground.

The Canadian government’s recently released “Environmental Guidelines for the Operation of Cruise Ships in Canadian Coastal Areas” has received major criticism from those working to keep cruise ship pollution in check.⁸⁹ The main criticisms are one that the government opted for guidelines that are voluntary rather than legislation that could be enforced and guide the industry towards cleaning up their act and two the guidelines were made in consultation with the industry but did not have adequate public input.^{xxvii}

There are many arguments against choosing voluntary standards over enforceable legislation. An obvious argument is that

^{xxvii} For more details on specific criticisms of these guidelines please contact the Oceans Blue Foundation or see MacBride, Laurie. *Submission to Tom Morris on the Environmental Guidelines for the Operation of Cruise Ships in Canadian*

Industry Efforts to Reduce Environmental Impacts

The different lines and corporations within the cruise ship industry have explored various options to mitigate their negative environmental impacts. Such initiatives include: treating black and/or grey water through the Zenon water system, testing the use of tributyltin-free hull paint, better ways to recycle, digital printing to reduce solvent use, and hooking up to shoreline power when in port. Though some of these actions are commendable, they are most often used to fight the negative public image many cruise lines have received from huge environmental fines. Such initiatives do not seem to go beyond regions of public pressure and stringent Alaska state legislation. For example Holland America ships have installed the Zenon water system only onto ships that travel the Inside Passage (where there has been huge public outcry resulting in more stringent fines, taxation, and regulation in Alaska). The company continues to dump the 30-50 tonnes of sludge produced per week outside the 20 kilometre MARPOL limit.⁹⁰

Three full time and two auxiliary (which means these engines are used to run in port) gas turbine engines, or termed by industry as “smokeless” engines have recently been introduced to the Alaska fleet to quell the local opposition to cruise ships. These engines reduce the SO_x and NO_x emissions but have a much higher production of CO₂ and consume larger volumes of fuel.⁹¹ Though the North West Cruise Ship Association (NWCA) claims CO₂ emissions remain the same. NWCA also maintain that the fuel used by member lines here is the lowest sulphur fuel available, typically 1.9-2.1 %, whereas commercial ships have a sulphur content of 4% or more.

industry does not have to participate if they see it as costing them money or time.

Between 1993 and 1998 in the United States, there were reports of 69 illegal discharges of wastewater from cruise ships some involving falsifying records or failing to maintain records⁹². When a joint cruise ship initiative in Alaska developed a scheme for sampling wastewater and monitoring air emissions over half of the 24 ships that visited Alaska at the time refused to participate and instead chose the option of dumping outside the 20 kilometre legal boundary.⁹³

Ross Klein, author of *Cruise Ship Blues*, points out that few ships participated in the voluntary monitoring but now with mandatory monitoring and enforcement of environmental standards, in comparison to the global fleet, Alaska has much cleaner ships (though there are still loopholes and need for further improvement). Canada should learn from Alaska; companies that

have been convicted for environmental felonies cannot be trusted to adhere to guidelines when there are no repercussions for violating them.

“One needs to keep in mind that three of the four major cruise companies are convicted environmental felons, with those convictions occurring since 1998,”
- Ross Klein (CCPA report)

NOTE: Because these guidelines are non-enforceable they are not referred to as Canadian legislation in this document. The focus of this document has been on enforceable legislation such as the Canadian Shipping Act. There is support for new comprehensive regulations that focus solely on cruise ships but only if they are enforceable with adequate resources for monitoring.

Acting Locally

Other cities have researched the environmental and social impacts of cruise ships and are taking local action. An examination of actions lessening the impact air emissions have on communities demonstrates the solutions-based approach many cities are taking. The Port of Seattle requires cruise ships to burn low sulphur diesel while at port. The Los Angeles Port Authority provides the infrastructure for vessels to run on shore power. In Long Beach, California, the City Council directed the city manager to contract a study to determine ways to provide electrical power to ships at their docks so that their engines could be shut down. This action follows a study that found a higher risk of cancer for people living around Long Beach port than for people living next to oil refineries in the same district. In Hawaii, cruise companies signed an agreement in 2002 to not use incinerators in Hawaii's ports for combustion of waste, to limit visible emissions, to monitor visible stack emissions and not to discharge soot within 1,000 yards of the coastline.

In 2003, when locals discovered that cruise ship traffic in San Francisco's port would double to 100 ships a year, the local government listened to neighbourhood groups and environmentalists and took action. The City's Supervisor began work on a "Clean Bay Ordinance" to prohibit all cruise ship discharges in the Bay and to require use of cleaner fuels and shoreside power to reduce the significant

environmental impacts" of the increased cruise traffic.⁹⁴

The Mayor of Charleston, South Carolina is looking at the increase in cruise ship visits critically. Mayor Joseph P. Riley stated, "We want to make sure that we get the right amount...we don't want to overdo anything." The city's response has been to establish a study committee made up of representatives from the State Ports Authority, the Convention and Visitors Bureau, the tourism industry and city groups to look at the impacts and how to manage them.⁹⁵

Other local measures include: Six Caribbean countries which introduced a \$1.50 tax per passenger to pay for expanded garbage disposal facilities needed for cruise ship refuse. Citizens from Sitka, Alaska voted down a proposal to construct a wharf to enable easier cruise ship access to their downtown. The town of Tenakee Springs "proclaimed that cruise ship tourism is incompatible with the community's lifestyle, facilities and services."⁹⁶

In a 2002 article in the *Vancouver Sun*, "Canada lags in acting on port health hazards", a spokesperson for the Los Angeles port predicts "in time, all of these other ports will have the same pressures on them that we have on ourselves. That is, you have local communities who become aware of the potential health risk associated with diesel, and want the levels reduced."

Case Study: Key West Florida

In Key West people are asking “Why has the city not studied the social and environmental impacts of cruise ships on Key West?” Controversy is pushing city officials to hold a summit of stakeholders to discuss the impacts of cruise ships and expect a diversity of presenters from the expected environmental groups to Army Corps of Engineers and even the U.S. Navy and Coast Guard. City Manager Julio Avel discussed the purpose of the summit, “I believe that at some point in time the city will not allow any more cruise ships to dock here. At this summit I hope the participants will reach a consensus on the number of cruise ships in Key West. What is a good cap?”⁹⁷

While cruise ships have become big business for the city and local businesses, they are also described as “if another city block has moved into Key West.” One local group argues “If the city does not set limits on the number of cruise ships that dock and anchor in our harbour, we are concerned that the growing industry will seriously endanger our marine environment, our community character, our economy and the quality of life of our residents.”⁹⁸

Key West already has in place an \$8.00 tariff on cruise ship passengers. Following the summit, the City Manager recommended increasing the current tariff by \$2 in 2004 and another then implement another increase of \$2 increase the following year. They are also calling for further studies.



Why We Need To Act

THE CULMINATION of this report is a list of recommendations for the City of Victoria intended to begin a process to fully assess the impacts of the cruise ship industry, minimize their negative impacts, and ensure they pay for their fair share to mitigate the impacts. Because of various jurisdictional boundaries, taking action will require cooperation between different levels of government.

The municipality has control over whether or not to host cruise ships as the Harbour Authority was recently divested authority over 25 acres of federal wharves and harbour front buildings surrounding Victoria's Harbour.⁹⁹ While, the federal government monitors, enforces and has power to change legislation that controls cruise ship pollution,¹⁰⁰ there are many ways for the City of Victoria and the Harbour Authority to take action as outlined in the list of recommendations. Both can ultimately make the decision on whether or not to allow a ship in port.

“Cruise ships must stop profiting at the expense of our air and water and we know that the cruise lines can stop polluting if they just stop dumping and use cleaner engines and fuel,” Randy Zurcher, Bluewater Network.¹⁰¹

The City of Victoria and the Harbour Authority need to act on these recommendations, not only out of responsibility to its citizens, but to play its part in the future stability of the

industry. If Victoria wants to continue to receive economic benefits from this industry it would be in our best interest to ensure the industry retains its vitality. This means helping to hold the industry accountable so that community and consumer backlash is avoided.

Local decision-makers should be conscious that public awareness of the social and environment impacts of cruise ships has been increasing. There are a large number of environmental groups, networks, and unions who are building campaigns against cruise ships in the United States, these include the Bluewater Network, Oceana, Ocean Conservancy, Earth Island Institute, and Earthjustice which fight cruise ship water and air pollution. The International Transport Workers Federation educates consumers on cruise ship labour practices. This awareness and momentum is coming to Canada. Vancouver based Oceans Blue Foundation is advocating an international cruise ship stakeholder-based certification program, West Coast Environmental Law produced a report pointing to the gaps in current Canadian legislation and recommendations for the future, and the Canadian Centre for Policy Alternatives recently released a report on the impacts of the cruise ship industry in the Maritimes.

Government and citizen's groups throughout Alaska, especially, have been regulating, monitoring, and enforcing legislation on cruise ships. Former Governor Knowles called a special session, after the legislature had adjourned for the summer in 2002, and had a bill passed that strengthened monitoring and enforceable standards on

Should We Be Taxing Cruise Passengers?

In Victoria we have created special taxes on tourists without a comparable tax on cruise passengers. Tourists, and locals, coming to Victoria through the airport pay an \$8.00 per passenger Airport Improvement Fee, to be increased to \$10 per traveller in 2004. In addition, since 2001, airplane passengers pay a further \$26 security tax to cover our Federal government's increased security costs. Then when tourists arrive at their hotel they pay the City a hotel tax of 2 percent.

The City does not collect similar taxes from cruise passengers, although this is common practice up and down the coasts. Cruise industry spokesperson John Hansen, who was the keynote speaker at the Harbour Authority's Visioning Session, has argued against coastal communities passing taxes on cruise ships, calling it unfair though the industry makes incredible profits. He asks, "What would be next? Are they going to start taxing airplanes passing by just because they could make emergency landings?" A cruise visit to Victoria can hardly be considered an emergency landing as the industry also makes a profit from shore-side excursions. In addition as previously noted, every airline passenger does pay taxes so why aren't cruise passengers?

The cruise ship industry needs to take responsibility for security by paying a security tax just as the airline industry has. Currently it is taxpayers, not the industry or its passengers that are footing the bill for the \$60 million (over six years) federal commitment to marine security.

Cruises that pass through Victoria are marketed primarily on the scenery and beauty. It is therefore logical that the cruise industry pay their fair share to protect what is bringing them profits. A tax would have the cruise industry paying their fair share in protecting and maintaining the precious environment that they enjoy. The current BC government's "user pay" philosophy that applies to all British Columbians must also apply to visiting cruise companies. When we park at a provincial park we are taxed \$3 to \$5 dollars, when we camp we can be charged \$22. Locally, each resident of the Capital Region has agreed to pay a \$10 Parks tax, a fund that visitors who benefit from our natural areas should also contribute to.

cruise ships and had the industry paying for the program through a fee of \$1 per passenger. Juneau voters have approved a \$5 head tax per cruise passenger with a 70% majority. Haines imposed a 4% sales tax on shore excursions and on-shore purchases.¹⁰² Residents of Sitka in an overwhelming majority voted down a proposal to build a wharf that would allow cruise ships to

offload passengers directly downtown.¹⁰³ This represents only a snapshot of the activity in Alaska assessing the impacts of cruise ships, fining them, and finally taxing them so their local citizens do not have to pay for the impacts. No vote has been given to the citizens of Victoria as the Harbour Authority continues with improvements that will enable Ogden Point to host more cruise

ships. Local government action in Victoria is non-existent in comparison to Alaska.

Local opposition also translated into leafleting and protests that met cruise ship passengers when arriving at Alaskan towns such as Sitka, Juneau, and Haines. In the Town of Tenakee Springs cruise passengers were handed leaflets as they disembarked saying they were not welcomed if they were part of an organized tour but they were welcome to return on their own.¹⁰⁴ If concerns are not addressed Victoria may also gain a reputation for the leaflets and protests. Tourism Victoria has acknowledged, “The welcome that people receive makes a big difference.”¹⁰⁵ It also appears that cruise passengers may make their own demands on the industry when they receive information on the harmful impacts of cruise ships. It has been found that 78% of Americans would be less likely to take a cruise vacation that polluted coral reefs, and 51% indicated they would be less likely to take that cruise vacation.¹⁰⁶

Some aboriginal and First Nations communities are also speaking out against the cruise ship industry. The Yakutat in Alaska are pointing to their territorial right to protect their subsistence resources and levy taxes on the cruise ship industry.¹⁰⁷ The Central Council of the Tlingit and Haida Indian Tribes of Alaska filed an objection to cruise ship dumping of pollutants in Southeast Alaska waters.¹⁰⁸

“Ports too often perceive that they need the cruise ships more than the cruise lines need them,”

- Ross Klein (CCPA report)

By allowing the economic health of the harbour to become dependent on the cruise ship industry it leaves Victoria susceptible to

markets campaigns. Markets campaigns have often resulted in a decline in support from consumers. Markets campaigns against companies like Nike and Shell or whole industries like the fur industry have been extremely successful and have shaped consumer spending patterns. Cruises to Alaska are marketed almost solely on the beauty of the natural environment. By placing themselves in this market they leave themselves extremely susceptible to boycott campaigns and bad press¹⁰⁹ especially considering they would be gaining a reputation for polluting the very environment that passengers have paid to see.

Finally, if the Harbour Authority does not begin to take environmental issues into account they may face future liability issues. Other ports are being forced to take notice. According to the Californian Sur Coast Air Quality Management District, communities close to the Port of Los Angeles have some of the highest cancer risks in the region as a result of toxic emissions from diesel-powered ships, along with trucks and other equipment.¹¹⁰ In the United States, environmental groups are suing the Port of Oakland for failing to address environmental impacts from increased ship traffic.¹¹¹

The City of Victoria must play a strong role in addressing the social and environmental impacts of cruise ships. They must of course work with the Greater Victoria Harbour Authority (GVHA) but realize that there is a potential conflict of interest since the cruise ship industry is their largest revenue generator. It also should be noted that a representative from the cruise ship industry, John Hansen from the North West Cruise Ship Association (NWCA), was the only guest speaker at their initial visioning session.¹¹²

Recommendations

1. **A moratorium on cruise ship growth in Victoria.**
2. **The City of Victoria immediately initiate a process to assess the full impacts of cruise ships in Victoria (economic, environmental, community impacts).**
3. **The implementation of a municipal cruise passenger tax.**
4. **The development and enforcement of local environmental and social standards on cruise tourism.**
5. **Ensure that federal regulation is followed through monitoring and is strengthened beyond voluntary standards.**

These five general recommendations require the City of Victoria to fulfil its responsibility in taking a leadership role in planning for the massive increase of cruise tourism in Victoria. The best place to start this process is consultation and the best way to implement a plan is through cooperation that includes residents of Victoria, other levels of government and other B.C. ports.

1. A Moratorium on Cruise Ship Growth in Victoria.

There can no longer be unlimited growth in the number of cruise ships and passengers visiting Victoria. Until we know what our threshold is, we cannot continue our policy of promoting growth. “The More The Better” policy on cruise ships must stop. The industry is being promoted by the City, the Harbour Authority, the Province and local industry, with little or no consideration of the consequences on the host city. Until these impacts are assessed and a plan for the future adopted there needs to be a moratorium on growth. This moratorium needs to include further cruise ship infrastructure plans at Ogden Point. In the Harbour Authority’s October 2002 Visioning Session it was stated that they intended to “facilitate the growth of the cruise ship industry” yet there was no apparent discussion on the negative environmental and community impacts. In addition, so far this year, the Harbour Authority has spent over \$3 million dollars to improve Ogden Point’s capacity to handle the increased number of ships and passengers. The Harbour Authority is planning the next stage of development in 2004.

This moratorium should remain in effect until impacts are fully assessed and these impacts are taken into consideration in the city’s plans. As a result of such planning the City of Victoria should establish a limit to the number of cruise ships it will receive.

2. The City Of Victoria Immediately Initiate A Process To Assess The Full Impacts Of Cruise Ships In Victoria.

A full environmental, economic and social impacts assessment needs to be commissioned by the City of Victoria. The City of Victoria cannot continue to promote within its official community plan and economic development strategies the growth of the cruise ship industry without also playing a role in assessing the impacts of this growth. An impacts assessment should also include the examination of concession and allowances used to attract the industry, impact cruise ships are having on the depletion of local natural resources, the quantity of waste they leave behind, the wear they have on other services (notably healthcare, marine security, roads and emergency services), and whether they are paying a fair price for the afore mentioned. In addition, negative impacts on other sectors of the economy or specific industries should be examined.

3. The Implementation of a Municipal Cruise Passenger Tax.

The City of Victoria, in coordination with the Vancouver City Council, should come together to discuss implementing a minimum \$10 passenger tax on cruise ship passengers on Canada's West Coast. In Victoria alone this would mean \$3.2 million from the 2003 cruise season alone. There should also be coordination with Campbell River, Nanaimo, Prince Rupert and other future potential ports for the cruise ship industry, to avoid any efforts from the cruise industry to pit one port against another. Because there are federal departments (Transport Canada, and Environmental Canada) that are mandated to monitor cruise ships there could also be coordination with them to see if a tax could bring increased resources to all parties responsible for monitoring cruise ships. The passenger tax is the first step towards holding the cruise companies accountable for the services and infrastructure they require and the environmental degradation they cause. Unpaid debts include:

Environmental Degradation: British Columbians rely on healthy ecosystems for tourism, fisheries, forestry, agriculture, and ultimately our health through the food we eat, the air we breathe, the water we drink, and the land we live on. Environmental impacts of cruise ships have been outlined extensively in this report. Corporations making a profit that involves degradation of our local environment should be held accountable to the communities that are impacted. A passenger tax can be one part of this accountability. At least 25% of the passenger tax should go to environmental programs that reduce consumption that impacts our oceans, decrease impacts and protects our environment or research that studies impacts and mitigates solutions.

Monitoring : The need for further monitoring and enforcement is clearly outlined in this report. A minimum 25% of this passenger tax should go toward the sole purpose of monitoring cruise ship pollution including unintentional and intentional sewage, oil, garbage, and air pollution illegal discharge at Ogden Point and throughout Canadian waters. This monitoring could occur

with or without coordination with the federal government and like Juneau use the passenger tax to pay for their own monitoring program.

Waterfront projects and maintenance built to accommodate cruise ships, passengers, and services catering to the cruise ship industry.

IMPORTANT NOTE: This portion of the passenger tax should not be used to expand facilities so that a larger number of ships can use Victoria as a port.

This portion of the tax could be used to ensure infrastructure and services provided by the Harbour Authority and the City are adequately covered. This will ensure that tax paying citizens of Victoria are not left with debts as a result of the cruise industry. These costs could be outlined by the full impacts assessment that should be completed.

There is precedence for this tax in other cities including those on the Alaska/B.C. route. Juneau, Alaska began a U.S. \$5 head tax per passenger in 1999. Alaska also currently has a state-wide tax of U.S.\$1 per passenger¹¹³ though the bill originally included a U.S.\$75 state head tax, a 33% tax on on-board gambling, and a corporate income tax.¹¹⁴ A currently proposed Alaska bill is seeking a \$100 head tax. Key West also charges a U.S. \$8.00 fee¹¹⁵ per passenger.

Port cities in the United States feel it is important to have this tax to pay for services and infrastructure and so should Canadians. Canadians need to stop subsidizing the cruise ship industry. When exchange is taken into account a \$10 Canadian head tax is comparable to the precedence set in Alaska and Key West.

If coordinated with the City of Vancouver and other potential ports, this tax will not act as a deterrent for ships to make Victoria a stop in their itinerary. Through requirements in the *US Passenger Services Act*, ships that originate from the United States and are travelling to Alaska must make a stop in Canada.¹¹⁶ Victoria is the most convenient stop for cruise ships departing from Seattle. Previously, the older vessels could not go on the outside passage, but the new ships are not just faster they are more powerful to handle the outside passage. Ships can now go up the inside passage and down the outside passage, which makes for a great trip with unique scenery each way¹¹⁷.

There are other hidden costs from the cruise ship industry that would require further study to adequately measure but provide further support to increasing the financial compensation the cruise ship industry makes to citizens of Victoria, British Columbia and ultimately Canadians. These include:

- ◆ Introduction of invasive species whose impacts potentially include all types of fisheries, and ultimately ecosystem stability,
- ◆ Air pollution increasing healthcare costs and lost productivity, negatively impacting tourism and agriculture and finally other negative economic impacts as a result of climate change (such as forestry, agriculture, fisheries, coastal infrastructure),
- ◆ Impacts from oil, sewage and garbage discharge on our marine ecosystems which ultimately impact BC tourism and fisheries.

All research, programs, and monitoring that result from the head tax should not be influenced by the cruise ship industry. This will ensure that monitoring stay impartial, and environmental initiatives do not act as green-washing propaganda for the industry.

4. The development and enforcement of local environmental and social standards on cruise tourism.

Based on the impact assessment of cruise ships in Victoria, the City can develop local environmental and social operational standards on cruise tourism to ensure that visiting cruise ships follow Best Practices, meet local standards and that any growth is smart growth. Input from the James Bay community and the rest of Victoria, should be incorporated in these standards through a meaningful process. The City demands planning and compliance to local standards to on-shore tourism and the same policies and practices are required for cruise tourism. The City plays a critical role in the development and enforcement of standards on tourism related industries such as B&Bs, festivals, tour bus traffic, horse carriages, pedi-cabs - even bagpipers. There is no reason for cruise companies to be exempt from the same type of local standards.

Local standards would include not allowing a ship to moor at Ogden Point if that ship does not meet environmental standards established by the City or if it has shown to violate environmental standards in any country. There is precedence for taking these measures. For example, city officials banned the Crystal Harmony from Monterey after dumping over 135,000 litres of wastewater in a refuge, host to 27 species of marine mammals. The incident was reported five months after it occurred in a quarterly report requested by state regulators and when asked why it was not reported earlier said there was “no requirement to report it.” The company spokesperson still insisted that they have a “wonderful, wonderful track record.”¹¹⁸ This same ship **visited Victoria 8 times** last year and despite its “wonderful, wonderful track record” was fined for air pollution violations in Alaska in 2000 and 2001. Though Victoria cannot deny a ship access to coastal waters, it can withhold city services.

Other examples of local standards would include the requirement of the use of low sulphur fuel, reducing energy consumption to a minimum when in port or exploring alternative energy sources. By taking these actions port side emissions will be reduced, thereby reducing the local air emissions. In Alaska, Juneau invested \$4.5 million for the infrastructure to allow hook-up to onshore power sources.¹¹⁹ Action mitigating impacts, such as onshore power hook-up and advanced sewage treatment, came from the cruise industry in the wake of strong public and political pressure. Residents concerned about water and air pollution being dumped into their communities worked with local decision-makers to pressure companies to take responsibility for the pollution they leave behind. This example should demonstrate to the Harbour Authority that if significant local pressure is exerted, the industry will make significant investments in the community.

It is important that 1) any alternative energy source not provide the cruise ship industry with energy subsidized by B.C. tax payers, and 2) that there is a reduction of pollution. It is not just to displace pollution to another community that will not reap the economic benefits from the cruise industry.

In an effort to control sewage being dumped into the harbour by float homes the Greater Victoria Harbour Authority has made it illegal to dump untreated sewage in the Harbour. Though this is a first step in setting local standards that will control cruise ship pollution, unfortunately its

jurisdiction ends at Ogden Point so, “once outside the breakwater [cruise ships] can dump anything they want.”²⁰ This case demonstrates that local action needs to be coupled with federal legislation.

5. Ensure that federal regulation is followed through monitoring and is strengthened beyond voluntary standards.

While the jurisdiction for standards and any related monitoring and enforcement may belong to differing levels of government, the City should play the lead role in coordinating this plan of action.

The first step for achieving this recommendation is for the cities of Victoria and Vancouver city council, to pass a joint motion calling on the federal government to have existing voluntary guidelines become stronger, enforceable regulations. Appendix D includes some specific recommendations to be incorporated in the regulations. The City of Victoria should request that Victoria’s local Member of Parliament, David Anderson, Minister of the Environment, introduce a bill into parliament that regulates cruise ship pollution.

Appendix A

Who's Who In The Industry

Four corporations dominate the cruise ship industry. They include: Carnival Corporation; Royal Caribbean Cruises Incorporated (RCCI); P&O Princess; and Star Cruises. Collectively they own half of the global fleet of large cruise vessels, serve almost half of the total number of cruise passengers¹²¹, and control 90% of the North American market¹²². These companies own several brand lines, some are also branching out and investing in onshore facilities and operations such as tour operations, ports, resorts, and 'tourism villages'. Further consolidation is expected through the merger of Carnival and P&O Princess creating a combined company that controls 90% of the North American market.¹²³

Corporation	Brand or Cruise Line (* indicates land tour operations)	Base	Incorporation	# of Ships	Revenue 2002 (in US \$)	Interesting Facts
Carnival Corporation (CCL)	Holland America	Miami, USA	Panama	45	<ul style="list-style-type: none"> • Revenue: \$4.37 billion • Profit: \$1.02 billion • Assets: \$14.9 billion 	<ul style="list-style-type: none"> • World's largest cruise company • 37% share of the North American market
	Cunard					
	Seabourn					
	Costa					
	Windstar					
Royal Caribbean (RCCI)	Celebrity Cruises	Oslo, Norway		26	<ul style="list-style-type: none"> • Revenue: \$3.15 billion • Profit: \$254 million • Assets: \$3.7 billion 	<ul style="list-style-type: none"> • A large portion of the parent company is owned by Pritzker who are also owners of the Hyatt hotel chain
	Royal Celebrity Tours*					
P&O Princess	Princess	London, England		18	<ul style="list-style-type: none"> • Revenue: \$2.45 billion • Profit: \$3.01 million • Assets: \$5 billion 	<ul style="list-style-type: none"> • Owned by a Malaysian company involved in oil, power, gas, plantations, paper, property, ecommerce, hotels, and restaurants.
	P&O					
	Swan Hellenic					
	Ocean Village					
	Aida					
	Seetours					
	A'rosa					
Star Cruises	Orient Lines	Pulau Indah, Malaysia		19	<ul style="list-style-type: none"> • Revenue: \$1.57 billion • Profit: \$82.6 million 	
	Star					
	Norwegian Cruise Line					

Source: Information for this table came from the following sources: Sweatships, War on Want and the International Transport Workers' Federation (ITF), London, Tracy. "Blowing the Whistle" and the Case for Cruise Certification. Oceans Blue Foundation, 2002, and Klein, Ross, *Cruising –Out of Control: The Cruise Industry, the Environment, Workers, and the Maritimes*. Canadian Centre for Policy Alternatives, March 2003.

Appendix B

Timeline of major cruise ship violations

Note: All incidents occurred in the United States except for those marked with a *.

1992

Passengers videotaped more than 20 plastic garbage bags being thrown off the Regal Princess by the crew. Princess Cruises Inc.^{xxviii} were fined \$500,000.¹²⁴ **This boat visited Victoria 11 times in 2002.**¹²⁵

1994

Palm beach cruises fined \$1 million for intentionally dumping oil, leaving a slick over 4 kilometers long. Regency Cruises fined \$250,000 for two ships having dumped plastic bags, Ulysses cruises: \$500,000 for two incidences of dumping plastic wrapped garbage and two cases of dumping oily bilge.¹²⁶

1996

Cunard line: \$23.5 million for damage to a coral reef^{127*}.

1997

Norwegian cruise line for damage to a coral reef^{128*}.

1998

Holland America's parent corporation pled guilty to illegally discharging oily water in Alaska and was fined \$1 million and \$1 million in restitution.¹²⁹ It was a crew member who reported the incident after refusing to illegally pump oily bilge water overboard.¹³⁰

It was discovered in 1994 that Royal Caribbean Cruises Incorporated were using lines to bypass the oil/water separator used for the bilge water. The lines were removed during US coast guard inspection to avoid detection. Therefore in 1998 RCCI plead guilty to seven felony counts for conspiracy to discharge hazardous waste and obstruct justice. They were fined a mere \$8 million.¹³¹

1999

RCCI was fined another \$18 million in 1999 for a 21 count indictment for the **fleetwide** practice of discharging oil contaminated bilge water, and dumping waste water or grey water purposely contaminated with hazardous waste (including dry cleaning fluids, photographic chemicals, and solvents from the print shop). Investigators found the companies actions were so unscrupulous that they stated the case was a "fleet-wide conspiracy" by Royal Caribbean Cruises Ltd. to "use

^{xxviii} Note Princess Cruises Inc. is now P&O Princess. Names of companies used through out this report are the names used during the time of the event. Use the table in appendix A to track which companies own which cruise lines.

our nations waterways as its dumping ground.”¹³² Yet \$3 million was suspended by the Federal judge in return for prompt payment.¹³³

2000

RCCI was fined \$3.5 million by the State of Alaska for dumping toxic chemicals and oil contaminated water. The plea agreement included a stipulation that RCCI not dump waste water within 3 miles of the coast line.¹³⁴

2002

Norwegian Cruise lines \$1.5 million for routinely circumventing the oil/water separator, illegally dumping waste water, and hazardous waste between 1997 and 2000. Authorities were lenient because the company admitted to the violations yet they only confessed because they knew a former employee had reported them.¹³⁵

Carnival Corp. had to pay \$18 million for dumping oily waste from 5 ships, and making false entries into the log book. Captain James Walsh, former Vice President, Environmental, Health, and Safety has alleged that CCL president ordered to cease documentation of continued oil leaks on six ships, CCL legal counsel instructed him to tell investigators that he didn't recall any conversations with senior management concerning illegal discharges, and a number of environmental and safety allegations.^{xxix}

It is important to put these fines into perspective by realizing that Carnival Corp. avoided expenditures and the commitment of resources that come with the proper disposal of the oily waste. Through 1996-2001 they avoided spending millions of dollars it would have cost to properly dispose of their oily waste.¹³⁶

^{xxix} Environmental allegations include by-passing oil-water separators, falsifying oil records, illegal discharges of hazardous waste, improper disposal of hazardous waste and oil residue on land.

Appendix C

Water Pollution

Bilge water:

This waste stream collects in the bottom of the ship and includes seawater, condensation as well as contaminants coming primarily from the ship's engine room. The Royal Caribbean 2000 environmental report states that each ship^{xxx} produces 85,000 litres of bilge water producing almost 30,000 litres of oily water, and over 9,000 litres of oily sludge per week.

Oil impacts living things in numerous ways including: destroyed thermal protection and water resistance of feathers and fur, intestinal problems, liver failure, clogged gills, gastrointestinal tract haemorrhaging, renal failure, blood disorders, inflammation of mucous membranes, lung congestion, pneumonia, and nervous system disturbances. Research has shown even small amounts of oil negatively impact eggs and larvae of many species, and birds and fur bearing marine mammals. Long term exposure to low concentrations can be just as harmful as high concentrations over a short term.¹³⁷ Scientists have shown that diesel bunker fuel can persist in the environment for years after an oil spill.¹³⁸

Sewage: Black and Grey water:

Black water is the term for vessel sewage as it is more concentrated than land based sewage (ships use less water in their sewage system than land based systems). Black water contains bacteria, pathogens, disease-causing micro organisms, viruses, the eggs of internal parasites, and excessive nutrients all of which can cause harm to human and ecosystem health. As an example of the level of discharges Royal Caribbean Cruises Incorporated ships each produce over 556,000 litres of black water every week.¹³⁹

Grey water is the least regulated and the largest cruise ship waste stream. For example, Royal Caribbean ships produce 7.5 million litres of grey water per week. Studies have shown grey water contains detergents, cleaners, oil and grease, pesticides, medical and dental waste, oxygen demand, coliform bacteria, and significant concentrations of priority pollutants.¹⁴⁰ Grey water samples taken in Alaska were also found to contain fecal coliform, heavy metals (such as lead, copper, silver, and other trace metals), and dissolved plastics. Of 80 samples taken in Alaska in 2000, only one met the federal guidelines for fecal coliform count, and total suspended solids.

Human sewage can contaminate shell fish beds, coral reefs, and cause eutrophication which can kill organisms by depleting the oxygen level in the water. Consuming contaminated fish and shell fish and direct contact with sewage pose serious health risks for humans. If a ship is using a chemical Marine Sanitation Device (MSD) there are additional impacts to larvae and eggs in the ocean as a result of the chlorine, quaternary ammonia, or formaldehyde used.

Hazardous or Toxic Waste:

^{xxx} These were the maximum amounts produced by ships not averages.

The list of hazardous chemicals that cruise ships produce include: dry-cleaning wastes contain perchlorethylene (PERC), print shop wastes contain hydrocarbons, chlorinated hydrocarbons, and heavy metals, photo processing chemicals contain silver, paint wastes, solvents such as turpentine, benzene, xylene, methyl ethyl ketone, and toluene, fluorescent light bulbs containing mercury, and lead-acid, nickel-cadmium, lithium, and alkaline batteries. Tributyltin, a hull paint, is a persistent organic pollutant. The thousands of litres of oily sludge produced from burning bunker fuel are also considered hazardous waste and must be disposed of properly.¹⁴¹

Royal Caribbean per week fleetwide figures of hazardous waste production includes: 75 pounds of batteries; 1,735 pounds of discarded and expired chemicals; 45 pounds of medical waste; 78 gallons of rags, debris and fuel filters; 153 pounds of fluorescent lights; 6 pounds of explosives; 117 gallons of dry cleaning waste; 2,262 gallons of photo wastes; and 213 gallons of spent paints and thinners.

Impacts of hazardous wastes vary widely but all are extremely damaging in even small quantities. Both dioxins and PERC are carcinogenic, can cause birth defects in humans and is toxic to animals even in small amounts as it accumulates in fatty tissues (this is particularly harmful to marine mammals as they have a thick layer of fatty tissue). Benzene is also a human carcinogen. Chlorinated hydrocarbons bioaccumulate up the food chain and are again harmful at even low levels. Heavy metals bioaccumulate in fatty tissues are transported in sedimentation, and cause harmful effects ranging from nervous disorders, to reproductive failure.¹⁴²

Solid waste (Garbage):

Garbage causes entanglement of animals leading to cuts, amputation, and drowning. Plastics, styrofoam, and other materials can be ingested leading to a damaged digestive tract, blockage causing starvation, and inhibiting buoyancy. Ingested plastics can reduce steroid hormone levels thereby inhibiting growth, molting, and reproductive success. It is estimated that ingestion and entanglement in plastic are responsible for the deaths of more than 1 million birds and 100,000 marine mammals each year.¹⁴³ Incineration is also cause for concern. The ash deposited at sea may contain dioxins and furans from burning plastic and paper. If hazardous waste is also carelessly (or purposefully) included in the incineration the ash will contain toxic compounds.

Ballast water:

Though ballast water may seem harmless it has potentially huge economic, ecological, and human health implications. Ballast water is ocean water taken into and discharged from a ship, to stabilize a ship when carrying different weights. It is estimated that ballast water carries at least 7,000 different marine species a day around the world, often introducing them to new and sometimes vulnerable ecosystems.

Invasive species are the second leading cause of loss of biological diversity and cost Canadians millions of dollars every year. The EPA estimates that the economic cost of aquatic invasive species is \$5 billion US per year. Ballast water may contain dinoflagellates that may cause massive fish die offs and shell fish poisoning from red tide. Harmful bacteria can also be transported in ballast water, for example an epidemic strain of Cholera from South America was found in fish and shell fish on the Gulf coast of the United States. A study by the Smithsonian Institute found cholera in 14 out of 15 ships sampled.¹⁴⁴

San Francisco is potentially the worst case scenario but demonstrates inattentiveness to ballast water emissions. Due to its high level of shipping traffic it is estimated that there are more than 230 invasive species in San Francisco Bay. It is estimated that up to 97 % of all organisms and 99% of all biomass in the San Francisco Bay are foreign species.

Appendix D

- **Ship air emission standards similar to other industrialized countries.**

It should be at least as strong as the recent strategy put in place by the European Commission including a 1.5% sulphur requirement for all marine fuels, a 0.2% for fuel used by ships while they are at berth, and legislation covering NO_x, greenhouse gases, ozone depleting substances.¹⁴⁵ This legislation would have a significant impact on cruise ship air emissions as more than 98% of the fuel purchased by cruise ships is in North America and most of this fuel is purchased in Vancouver.

- **An 80% reduction from MARPOL's Annex VI NO_x emissions.**

This level of reduction has been suggested by the EPA as a voluntary standard¹⁴⁶ which indicates it is achievable and therefore should be Canada's legal standard. There are economically feasible technologies that can reduce ship's NO_x emissions by 30-90%

- **Comprehensive controls for grey water.**

It was discovered through Alaskan monitoring that grey water can have fecal coliform levels as high as black water and grey water should be regulated as it has been used in the past to dump hazardous wastes.

- **Harmonization of Canadian black water regulations with Alaskan standards.**

Alaska has a similar environment to our coast, in terms of level of biodiversity and resources, therefore Canada should maintain similar high standard of regulation.

- **Additional no discharge areas.**

Legislation should also designate areas (in addition to the 14 already identified) where no cruise ship discharges are allowed including areas near shellfish aquaculture, communities, and other ecologically sensitive areas.

- **Legislation and resources to strengthen monitoring and enforcement.**

This could be done by increasing the cruise ship monitoring budget of the Coast Guard so they can broaden the scope of their monitoring. New initiatives such as surprise inspections need to be instituted. Though an industry funded inspection and monitoring program has resulted in millions of dollars in fines in the United States, there have been no prosecutions or fines in Canada.¹⁴⁷ Canada needs to begin to take equal responsibility in monitoring the industry.

- **A transparent stakeholder based vessel certification process.**

This would ensure that cruise ships are meet rigorous environmental and social standards. See Oceans Blue Foundations report "Blowing the Whistle and the Case for Cruise Certification".

References

- ¹ Bannerman, Josie. 'Ogden on the Move'. *James Bay Beacon*. March 2003.
- ² Personal correspondence: North West Cruise Ship Association.
- ³ Ligata, Maureen, 'Victoria's biggest cruise ship season draws to a close', *Business Examiner*, Nov 2002.
- ⁴ Gidney, Norman. 'Record Cruise Season Forecast.' *Times Colonist*, March 11, 2003.
- ⁵ Duffy, Andrew, A., 'Tourism record in sight', *Times Colonist*, November 3rd, 2002.
- ⁶ Seatrade.com, 'Vancouver explores cabotage issue', www.seatrade.com, July 17, 2002.
- ⁷ Bannerman, Josie, 'Ogden Points to Opportunity: What's in it for us?', *James Bay Beacon*, July 2002.
- ⁸ Sweatships, War on Want and the International Transport Workers' Federation (ITF).
- ⁹ Personal Communication with the North West Cruise Association.
- ¹⁰ Matthews, Kelly, 'Cruise ship business ends another banner year', *Weekend Edition*, October 18th, 2002.
- ¹¹ Sweatships, War on Want and the International Transport Workers' Federation (ITF).
- ¹² Ibid.
- ¹³ Ross A. Klein, www.cruisejunkie.com
- ¹⁴ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ¹⁵ London, Tracy. "*Blowing the Whistle" and the Case for Cruise Certification*. Oceans Blue Foundation, 2002.
- ¹⁶ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ¹⁷ Constantineau, Bruce. 'Cruise Ships Need Independent Certification'. *Vancouver Sun*, October 23, 2003.
- ¹⁸ Klein, Ross, *Cruising - Out of Control: The Cruise Industry, the Environment, Workers, and the Maritimes*. Canadian Centre for Policy Alternatives, March 2003.
- ¹⁹ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ²⁰ Figure came from King Bros. Limited 2002 Cruise Ship Schedule.
- ²¹ Schmidt, Kira. *Cruising for Trouble: Stemming the Tide of Cruise Ship Pollution*. March 2000.
<http://www.earthisland.org/bw/cruisereport.shtml> pg.2
- ²² Ibid.
- ²³ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ²⁴ Ibid.
- ²⁵ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002, pg 40.
- ²⁶ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ²⁷ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ²⁸ Herald Tribune, 'Norwegian paying \$1.5 million for cruise pollution', July 31, 2002, www.heraldtribune.com
- ²⁹ Paiva Cordle, Ina, 'Former officer sues Carnival', *Miami Herald*, Sept 26, 2002.
- ³⁰ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002, pg 40.
- ³¹ 'Untitled Document re: Carnival Cruise Line Plea Agreement', *Department of Justice*, April 20, 2002,
<http://www.usdoj.gov/usao/fls/Carnival.html>
- ³² Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ³³ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ³⁴ London, Tracy. "*Blowing the Whistle" and the Case for Cruise Certification*. Oceans Blue Foundation, 2002.
- ³⁵ Boei, William. 'Ships Rival Cars as Source of Air Pollution, Study Says.' *Times Colonist*, Nov 30, 2002.
- ³⁶ Greater Vancouver Regional District and Environment Canada, *Marine Vessel Air Emissions in the Lower Fraser Valley*, April 30, 2002.
- ³⁷ Greater Vancouver Regional District and Environment Canada, *Marine Vessel Air Emissions in BC Outside the GVRD and FVRD and Washington State for the Year 2000*, July 16, 2002.
- ³⁸ Based on a study done in 1995.
- ³⁹ Blue Water Network, *Ship Emissions Campaign*.
- ⁴⁰ Klein, Ross, *Cruising - Out of Control: The Cruise Industry, the Environment, Workers, and the Maritimes*. Canadian Centre for Policy Alternatives, March 2003.
- ⁴¹ Greater Vancouver Regional District and Environment Canada, *Marine Vessel Air Emissions in the Lower Fraser Valley*, April 30, 2002 and Greater Vancouver Regional District and Environment Canada, *Marine Vessel Air Emissions in BC Outside the GVRD and FVRD and Washington State for the Year 2000*, July 16, 2002.

-
- ⁴² Parfitt, Ben, 'Where does it all go? A Georgia Strait investigation finds that the B.C. government is unable to account for huge amounts of toxic waste.' *Georgia Strait*, June 27-July 24, 2002.
- ⁴³ Long, Russell, *Stacked Deck: Trading Air Quality for Global Trade*, Earth Island Institute.
- ⁴⁴ Long, Russell, *Letter to the EPA*, Blue Water Network.
- ⁴⁵ Oceana, http://www.oceana.org/uploads/Chapter_8.pdf
- ⁴⁶ Long, Russell, *Letter to the EPA*, Blue Water Network.
- ⁴⁷ 'Halifax Studies Ship Pollution', *Times Colonist*, December 15, 2002.
- ⁴⁸ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ⁴⁹ Government of British Columbia, Waste Management Act Sulphur Content Of Fuel Regulation.
- ⁵⁰ Government of British Columbia, Emission Criteria for Municipal Solid Waste Incinerators.
- ⁵¹ See Environment Canada's website for all Canadian regulations on fuel.
- ⁵² Klein, Ross, *Cruise Ship Blues: the underside of the cruise industry*, New Society Publishers, 2002.
- ⁵³ Moscato, Derek. 'Shipping News', *Your Health: and the air you breathe*. Spring 2002, British Columbia Lung Association.
- ⁵⁴ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ⁵⁵ Dobbyn, Paula, 'State to investigate cruise line', *Anchorage Daily News*, August 1, 2002.
- ⁵⁶ Alaska Cruise Ship Initiative website:
<http://www.state.ak.us/local/akpages/ENV.CONSERV/press/cruise/cruise.htm>
- ⁵⁷ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ⁵⁸ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ⁵⁹ Cruger, Roberta, 'News Clips – Cruise Dumps', *Seattle Weekly*, May 17th, 2001.
- ⁶⁰ Parfitt, Ben, 'Where does it all go? A Georgia Strait investigation finds that the B.C. government is unable to account for huge amounts of toxic waste.' *Georgia Strait*, June 27-July 24, 2002.
- ⁶¹ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ⁶² Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001, pg: 25.
- ⁶³ *James Bay neighbourhood Plan*. December, 1993, pg 8.
- ⁶⁴ Ibid.
- ⁶⁵ Ibid, pg 10.
- ⁶⁶ Ibid, pg 23
- ⁶⁷ Gidney, Norman. 'Record cruise season forecast'. *Times Colonist*, March 11, 2003.
- ⁶⁸ Government of Canada statistic found in: Pollution Probe, *Smog Primer*, June 2002, www.pollutionprobe.org
- ⁶⁹ Ministry of Water, Land, and Air Protection, *Air Quality Report for British Columbia: Fine Particulate (PM₁₀) Levels (1990-1995)*, March 1997.
- ⁷⁰ Paterson, Jody, 'This Harbor is Victoria's Harbor', *Times Colonist*, Aug 25 2002.
- ⁷¹ Bannerman, Josie, 'Ogden Points to Opportunity: What's in it for us?', *James Bay Beacon*, July 2002.
- ⁷² Lutz, Gerry, Westcan Terminals. *Personal Communications*. March 26, 2003.
- ⁷³ Wells, Lynne. 'Cruise Ship Traffic Sets Record'. *The Daily News*, Monday, April 28th, 2003.
- ⁷⁴ David Suzuki Foundation, *Economic and Social Dimensions of Climate Change*, February 8th 2003,
<http://www.climatechangesolutions.com/english/science/economic.htm>
- ⁷⁵ For specific statistics see Pollution Probe, *Smog Primer*, June 2002, www.pollutionprobe.org
- ⁷⁶ City of Victoria Economic Development Office, *CityBusiness*, Spring 2001, Victoria, British Columbia Issue 6.
- ⁷⁷ Ibid.
- ⁷⁸ Hoang, Anh. 'Sailing the Dirty Seas', *Monday Magazine*, March 7-13, 2001.
- ⁷⁹ Klein, Ross, *Cruising – Out of Control: The Cruise Industry, the Environment, Workers, and the Maritimes*. Canadian Centre for Policy Alternatives, March 2003.
- ⁸⁰ 'What the Provincial Budget Means to you: More Money for Health-care, Regional Development Among the Highlights' *The Province*, February 19, 2003.
- ⁸¹ Rud, Jeff. 'Campbell River Dock Gets Upgrade to Attract Cruise Ships'. *Times Colonist*, Monday, April 28th, 2003.
- ⁸² British Columbia Ports And Destinations Group, 'Cruise British Columbia Initiative to Build an Enhanced B.C. Cruise Industry', *Canada Newswire*, April 25th, 2003 <http://www.newswire.ca>
- ⁸³ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.

-
- ⁸⁴ Sweatships, War on Want and the International Transport Workers' Federation (ITF).
- ⁸⁵ Klein, Ross, *Cruise Ship Blues: the underside of the cruise industry*, New Society Publishers, 2002.
- ⁸⁶ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ⁸⁷ Ibid.
- ⁸⁸ Ibid.
- ⁸⁹ Breen, Howard. *Personal Communication*. Oceans Blue Foundation, February 12, 2003.
- MacBride, Laurie. *Submission to Tom Morris on the Environmental Guidelines for the Operation of Cruise Ships in Canadian Coastal Areas*, Georgia Strait Alliance, March 13, 2003.
- ⁹⁰ Klein, Ross, *Personal Communication*, February 10th, 2003.
- ⁹¹ Klein, Ross. 'Left in its Wake', *Alternatives*, Fall 2002 28:4.
- ⁹² Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ⁹³ Klein, Ross, *Cruise Ship Blues: the underside of the cruise industry*, New Society Publishers, 2002.
- ⁹⁴ Zurcher, Randy. *San Franciscans Call on Cruise Ships to Stop Polluting the Air and Water*. Bluewater Network, press release, March 29, 2003.
- ⁹⁵ Associated Press. *Charleston Officials Worry About Cruise Ship Glut*. Feb 26, 2003.
- ⁹⁶ Klein, Ross, 'Cruise Ship Blues: A Cruise Junkie Exposes the Industry's Dark Side', Shared Vision, November 2002.
- ⁹⁷ Haller, Ginny. 'Seeking a Balance—Key West hold Cruise Ship Summit', *Florida Key News*, March 12, 2003.
- ⁹⁸ "Environmental groups push for cruise ship studies". *Florida Key News*, February 3, 2003.
- ⁹⁹ Paterson, Jody, 'This Harbor is Victoria's Harbor', *Times Colonist*, Aug 25 2002.
- ¹⁰⁰ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ¹⁰¹ Zurcher, Randy. *San Franciscans Call on Cruise Ships to Stop Polluting the Air and Water*. Bluewater Network, press release, March 29, 2003.
- ¹⁰² Klein, Ross, *Cruise Ship Blues: the underside of the cruise industry*, New Society Publishers, 2002.
- ¹⁰³ Klein, Ross, 'Cruise Ship Blues: A Cruise Junkie Exposes the Industry's Dark Side', Shared Vision, November 2002.
- ¹⁰⁴ Ibid.
- ¹⁰⁵ Licata, Maureen. 'Victoria's biggest cruise ship season draws to a close', *Business Examiner*, Nov 2002.
- ¹⁰⁶ Edge Research on behalf of CRF, Munson, and Seaweb. *Public Knowledge and Attitudes about Coral Reefs*, June 2002.
- ¹⁰⁷ London, Tracy. "*Blowing the Whistle*" and the Case for Cruise Certification. Oceans Blue Foundation, 2002.
- ¹⁰⁸ Thomas, Edward, *Letter to Commissioner Michelle Brown Department of Environmental Conservation*, March 2000.
- ¹⁰⁹ Adamson, Robert, Report on the International and Domestic Legal Regimes Regulating Waste Streams and Other Marine and Terrestrial environmental impacts of cruise ship operations along the Pacific North American coast from Baja Mexico to the Bering Sea, Alaska, Oceans Blue Foundation, April 11, 2001.
- ¹¹⁰ Uranga, Rachel, 'Council hopes to cut pollution from ships by offering electricity.', *Daily Breeze*, Copley News Service, October 7th, 2002, <http://www.dialybreeze.com/content/bln/nmpollution2.html>
- ¹¹¹ Long, Russell, *Letter to the EPA*, Bluewater Network.
- ¹¹² Greater Victoria Harbour Authority, *Visioning Session 17-18 October 2002 Report*.
- ¹¹³ Hoang, Anh. 'Sailing the Dirty Seas', *Monday Magazine*, March 7-13, 2001.
- ¹¹⁴ McAllister, Bill. 'No Cruise Ship Initiative for Now'. *The Juneau Empire*. October 4, 2001, http://www.juneauempire.com/stories/100401/sta_cruiseinitiative.shtml
- ¹¹⁵ Haller, Ginny. 'Seeking a Balance—Key West hold Cruise Ship Summit', *Florida Key News*, March 12, 2003.
- ¹¹⁶ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ¹¹⁷ Lutz, Gery, Westcan Terminals. *Personal Communications*. March 26, 2003.
- ¹¹⁸ Madigan, Nick. 'Montrey Bans a Cruise Ship Over Dumping'. *The New York Times*. March 6, 2003.
- ¹¹⁹ P&O Princess, *Princess Ships Connect to Shore Power in Alaska*.
- ¹²⁰ Featherby, David M., Transport Canada's Harbour Master for Victoria & Esquimalt Public Harbours, *Personal Communication*, March 25, 2003.
- ¹²¹ Sweatships, War on Want and the International Transport Workers' Federation (ITF).
- ¹²² Klein, Ross, *Cruise Ship Blues: the underside of the cruise industry*, New Society Publishers, 2002.
- ¹²³ Klein, Ross, *Cruising—Out of Control: The Cruise Industry, the Environment, Workers, and the Maritimes*. Canadian Centre for Policy Alternatives, March 2003.
- ¹²⁴ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ¹²⁵ Figure came from King Bros. Limited 2002 Cruise Ship Schedule.

-
- ¹²⁶ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ¹²⁷ Ibid.
- ¹²⁸ Ibid.
- ¹²⁹ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ¹³⁰ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ¹³¹ Schmidt, Kira. *Cruising for Trouble: Stemming the Tide of Cruise Ship Pollution*. March 2000.
<http://www.earthisland.org/bw/cruisereport.shtml> pg.2
- ¹³² Ibid.
- ¹³³ Klein, Ross, *Cruise Junkie*, website: <http://www.cruisejunkie.com>
- ¹³⁴ Ibid.
- ¹³⁵ Herald Tribune, 'Norwegian paying \$1.5 million for cruise pollution', July 31, 2002, www.heraldtribune.com
- ¹³⁶ 'Untitled Document re: Carnival Cruise Line Plea Agreement', *Department of Justice*, April 20, 2002,
<http://www.usdoj.gov/usao/fls/Carnival.html>
- ¹³⁷ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ¹³⁸ Parfitt, Ben, 'Where does it all go? A Georgia Straight investigation finds that the B.C. government is unable to account for huge amounts of toxic waste.' *Georgia Straight*, June 27-July 24, 2002.
- ¹³⁹ This is the maximum discharge figure taken from the Royal Caribbean Cruises Incorporated, 2000 environmental report.
- ¹⁴⁰ Schmidt, Kira. *Cruising for Trouble: Stemming the Tide of Cruise Ship Pollution*. March 2000.
<http://www.earthisland.org/bw/cruisereport.shtml>
- ¹⁴¹ Parfitt, Ben, 'Where does it all go? A Georgia Straight investigation finds that the B.C. government is unable to account for huge amounts of toxic waste.' *Georgia Straight*, June 27-July 24, 2002.
- ¹⁴² Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.
- ¹⁴³ Davis, Joseph, and Herz, Michael. *Cruise Control*. The Ocean Conservancy. May 2002.
- ¹⁴⁴ Ibid.
- ¹⁴⁵ Boei, William, and Simpson, Scott. 'Ship emissions will be dealt with: Anderson', *Vancouver Sun*, Dec 3rd, 2002,
<http://www.canada.com/vancouver/news/story.asp?id={B1E453C3-1CEB-4038-B2B3-C6542646679A>
- ¹⁴⁶ Long, Russell, *Letter to the EPA*, Bluewater Network.
- ¹⁴⁷ Nowlan, Linda, and Kwan, Ines, *Cruise Control- Regulating Cruise Ship Pollution on the Pacific Coast of Canada*, West Coast Environmental Law, September 2001.