



JBNA

James Bay Neighbourhood Association

who we are, what we do

Mandate: ... to enable the community to be actively involved in ... planned development of James Bay, so as to preserve and enhance the quality of the environment and life therein.

JBNA has several interests in Victoria's planning framework, including the James Bay Neighbourhood Plan, the Harbour Plan, the Downtown Core Area Plan, and the Official Community Plan.

who we are

The JBNA is a not-for-profit organization created almost twenty years ago as a community voice in land use matters. JBNA Board members are committed volunteers, elected to 1 or 2-year terms. Current board members qualifications include education in the sciences, arts, and applied science and labour relations. Directors have experience in the technology transportation, education, academic administration, research administration, health and public safety regulation, and labour arenas.

In 2006, in response to resident objections to the negative impacts created by the cruise-industry, JBNA took steps to bring attention to, and to have assessed, air quality. In 2009, JBNA formed a Quality of Life (QoL) Committee to assess cruise related impacts focusing on air and noise pollution, and transportation.

The 2009 resident survey (573 respondents) provides direction for priorities. At the 95% confidence level, survey results are accurate within 4 percentage points.

what we do

Land Use: Development, Variance and Licensing Proposals

As the community body with civic responsibilities under the City of Victoria development and zoning review processes, JBNA facilitates the CALUC public consultation process for the James Bay community. Recent and current projects include 3 masterplans, 14 rezonings, and several variance and licensing applications. Development proposals vary in time from 1-4 years.

Land Use: Parks and Pathway

JBNA is involved in several City Parks initiatives including Urban Forest, Park MasterPlans, Beacon Hill Park (various plans and consultation), park development (Fisherman's Wharf), boulevards/gardens, and the Harbour Pathway. During the development of the Harbour Pathway plan, JBNA forwarded the position that the pathway should begin at Ogden Point rather than the City requested start at Fisherman's Wharf Park.

Of joint interest with GVHA is the Coast Guard segment of the Harbour Pathway. JBNA invited GVHA to partner in this initiative and develop an approach to Victoria Parks Department, and later to the Coast Guard. The approach to the Coast Guard was fruitful and City staff are recommending limited funding towards the project for 2013.

Land Use: Transportation and Streets

JBNA has served to facilitate community consultation for City Engineering (transportation and streets). Neighbourhood problems regarding X-walks, sidewalk deterioration, road resurfacing, bus stops are brought forward for resolution.

Quality of Life and the Environment

Although JBNA had been actively involved in quality of life matters, social housing, parks, and the environment, the focus changed in the past decade. Any resident of James Bay is invited to participate in open monthly meetings. By 2003, resident complaints about tour bus activity, mainly related to cruise-tourism, dominated meetings. As the cruise-industry grew, and the ships became larger, more frequent, noisier and emitted more black plumes, residents objected to the negative impacts created by the industry, focusing on air and noise pollution, and transportation.

Guided by the principle “*what is measured, is managed*”, the JBNA QoL committee planned a 5-pillar approach to studying the impact of cruise-tourism on the community:

- Air Quality (VIHA)
- Traffic Volume
- Cost-Benefit Analysis
- Resident Survey
- http://www.jbna.org/james_bay_survey2009summery.pdf
- Traffic Noise

Since these studies were undertaken, speeding traffic has also become an area of study.

Quality of Life and the Environment: Traffic Volume Studies

As part of the James Bay Air Quality Study (see VIHA below) traffic volume and speed data were collected at several locations in James Bay in 2007.

At the request of GVHA, the City undertook data collection in 2011 at specific locations in James Bay. In addition to the standard spreadsheet data analysis which accompanies the data, JBNA did extensive analysis which included graphics. This analysis was shared with GVHA and formed part of a presentation to senior City staff, the GVHA Board and the JBNA membership. The City gathered similar data in 2012 and, with the request of JBNA, used more uniform time-periods to permit more robust analysis. JBNA analysis includes:

Volume increase/ship	<i>Total additional</i>	<i>Total additional</i>	
<i>Year</i>	<i>Vehicles</i>	<i>Buses</i>	
2007	317		Dallas Rd (North of Ogden)
2012	346	46	1038 vehicles on 3-ship evening
2011	384	42	Dallas Rd (East of Ogden)
2012	348	41	1044 vehicles on 3-ship evening

Quality of Life and the Environment: Traffic Speeding Studies

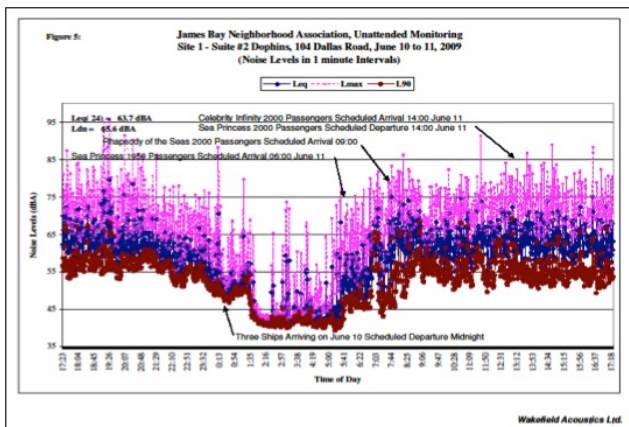
With the volume of traffic, speed became a major item of complaints. The City traffic data from 2011 and 2012 was analysed to determine the level of speeding and whether the GVHA 2012 speed reduction program was successful. Residents had seen the positive effect of having commissionaires and police monitoring speeding. Aside from the lowering of speed on Oswego, near the school zone, in the daytime hours, no positive effect was found. The Oswego speed improvement may also have been due to the fact that 2 ships were not in port during daytime hours. Given the August speed data collected by the City, it is evident that **the GVHA program did not have any lasting effect.**

Oswego 2011 <ul style="list-style-type: none"> • 4% north > 50 kph (2% > 55 kph) • 11% south > 50 kph (4% > 55 kph) 		2012 July <ul style="list-style-type: none"> • 2% > 50 kph (1% > 55) • 3% > 50 kph (1.4% > 55) 	
Montreal 2011 <ul style="list-style-type: none"> • 1.4% north > 50 kph (49% > 30 kph) • 2.3% south > 50 kph (51% > 30 kph) 		2012 August <ul style="list-style-type: none"> • 1.7% > 50 (53% > 30 kph) • 1.9% > 50 (46% > 30 kph) 	
<p><i>Note: Montreal volumes low, hence analysis not robust</i></p>			
Douglas 2011 <ul style="list-style-type: none"> • 16% north > 50 kph (7% > 55 kph) • 9% south > 50 kph (4% > 55 kph) 		2012 July & August <ul style="list-style-type: none"> • J 12% A 16% > 50 (5% 8% > 55) • J 6% A 7% > 50 (3% 4% > 55) 	

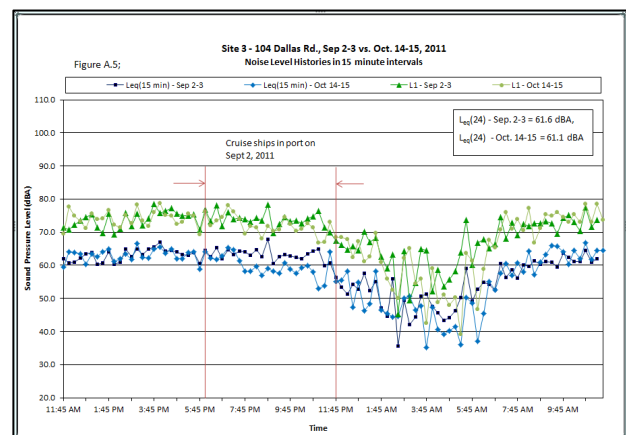
Quality of Life and the Environment: Traffic Noise Studies (Wakefield Acoustics Ltd)

JBNA, supported by VIHA and residents, raised funds for a traffic noise study in 2009. GVHA commissioned a similar study in 2011 which JBNA supported through coordination of sites and interpretation of results.

The schematics illustrate the ability to identify specific noise sources (2009 noise history) and to observe middle of the night noise disturbances originating at Ogden Point (2011).



2009 Wakefield Study



2011 Wakefield Study

From the studies it was determined:

- Daily average 24-hr noise exposures already equal or exceed recognized thresholds (without cruise ships). They are highest at Site 3 (near Ogden Point).
- Cruise-related traffic increased daily average noise levels by up to 3.0 dBA.
- 1-hr evening noise level increased by up to **8.8 dBA** during a cruise ship weekend.
- At Site 2 (Erie/Dallas), cruise-related bus movements created maximum noise levels of about 74 dBA, on average, capable of interfering with sleep and relaxation indoors.

Community noise impacts would be moderated if the cruise ships arrived at a time that did not result in their peak noise generation hours running into the late evening or if alternative technology was used to lower noise impact.

GVHA was able to isolate one source of middle of the night (3 a.m.) noise disturbances.

Quality of Life and the Environment: Air Quality Studies

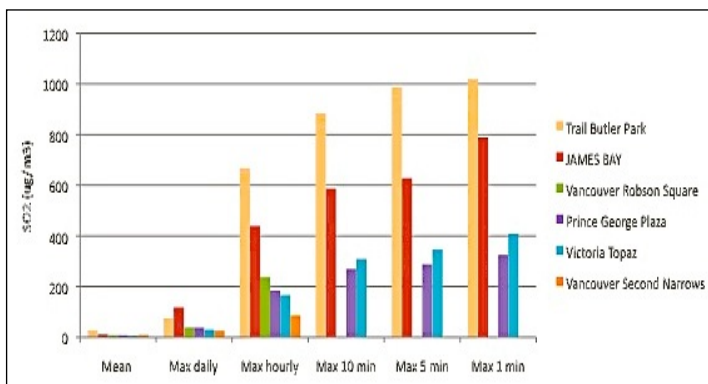
Dr Stanwick, VIHA, initiated air quality studies at the request of JBNA in 2006. Research was undertaken by the University of Victoria Spatial Sciences Research Laboratory, for the BC Environmental Protection Division, MoE. Initially, the federal Ministry of the Environment also participated. GVHA and JBNA have been active participants at meetings from 2007 onwards.

2006-2012 saw seven BC Ministry of the Environment (MoE), Vancouver Health Authority (VIHA), and Capital Regional District reports focused on pollution related to cruise-ships.

Peak of Dirty Air: 2008-2010

In 2009, a mobile laboratory installed by MoE at Ladysmith/Montreal, revealed sulphur dioxide (SO₂) levels **triple those predicted** in VIHA's James Bay Air Quality Study (2006-2008) which modeled the distribution and pollutant levels of emissions. This suggested, strongly, that the industry used significantly higher sulphur fuel than asserted.

On a maximum daily basis over the summer, SO₂ levels were worse than anywhere else chosen by MoE for comparison, except near a Trail, BC smelter.



SO₂ Results (June-Aug, 2009) MAML, MoE

In 2010, Dr Stanwick, Chief Medical Health Officer, released the VIHA Health Assessment and made recommendations. Persons with asthma and other respiratory diseases were identified as those sensitive to elevated levels of SO₂. Epidemiological research suggested 0.4 - 1.6 premature deaths each season.

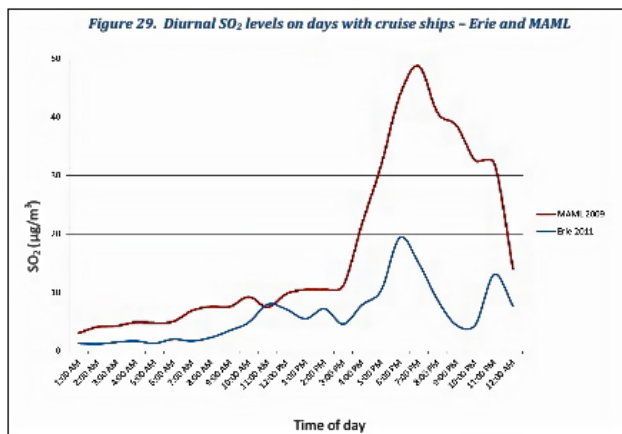
SO₂ 24-hour values exceeded the World Health Organization guideline **24% of days when cruise-ships were in port**. Recent analysis indicates that winds are from the **west-south-west (WSW) 25% of the time**, suggesting that somewhere in James Bay, WHO levels were exceeded almost every day ships were in port and winds blew the plume over James Bay in 2009. Dr Stanwick recommended that GVHA use contractual power to ensure that the cruise-ships were burning lower sulphur fuels as they were doing in US ports.

Although monitoring proved that resident ‘anecdotal’ reports were founded in fact, and VIHA recommended monitoring and mitigative action, no action was taken during the 2010 season.

What is measured, is managed: 2011-2012

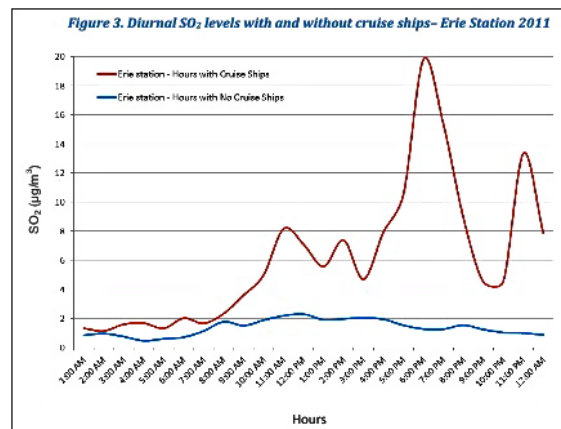
Three factors contributed to lower SO₂ levels for 2011 and early 2012:

- The sulphur content in the worldwide supply of fuel dropped.
- One SO₂ monitoring site was established on Erie Street.
- The industry altered its behaviour in response to monitoring.



Top line 2009, bottom line 2011

BC Ministry of Environment: August 2012 report E.Setton, UVic., SSRL



Top line with ships, bottom line no ships 2011

The 1-hour maximum recorded in 2012 was 100ppb, 40% lower than the 2009 maximum. Average 1-hour SO₂ levels in 2011, and for the first part of 2012, were about 60% lower than 2009 averages.

In 2011, most ships switched to auxiliary engines once docked at Ogden Point, a procedure used elsewhere years earlier.

Wind analysis suggests recorded emissions are most representative when winds are over 10 knots. For 2011, with southwest winds over 10 knots, **1-hour SO₂ levels of over 35ppb were recorded 18% of the hours ships were in port**. (35ppb is the level at which asthmatics and others sensitive to SO₂ may feel adverse effects, while 75ppb is considered an unhealthy level for this group.)

After August 1st, 2012, the implementation of the North America Emissions Control Area (ECA), mandating the use of lower sulphur fuel, further decreased SO₂. ECA levels are currently 1% sulphur fuel or equivalent, reducing to 0.1% sulphur fuel in 2015.

Generally, SO₂ levels were lower; the **maximum 1-hour SO₂ level of 51ppb** was recorded on September 8th. This level, by VIHA guidelines, remains in the moderate level for those with asthma or other respiratory conditions.

However, interim analysis of 2012 raw data suggests that residents in the path of WSW winds from Ogden Point may have experienced **higher SO₂ levels after August 1 than before**. Supplementary analysis may bring clarity.

Approach to the environment - The industry often counters or evades environmental initiatives that eat into profits. In February of this year, we learned that the industry did not order low-sulphur fuel; ships could evade new regulations with the excuse of fuel unavailability.

After JBNA provided Transport Canada Ottawa officials - who were unaware of the situation in Victoria - with information, it was confirmed no low-sulphur fuel had been ordered. Ottawa committed to resolving the lack of fuel.

During an environmental tour on June 3rd 2010, a North West & Canada Cruise Association (industry lobbyist) executive was asked why ships burning cleaner fuel elsewhere were burning higher sulphur level fuel in Victoria. The response was "because we can".

Years ahead:

If ECA 2015 targets for SO₂, and later plans to limit oxides of nitrogen levels proceed, our air will become cleaner. However, cruise-ships will continue to be the major source of particulate matter, SO₂ and other air borne pollutants for the James Bay area.

GVHA intends to "grow the business". More ships bring more pollution. Three ships produce three times the pollution as one. If growth targets are achieved, the accompanying transportation impacts may be substantial.

In August, the cruise-industry consultant to GVHA forecast almost a doubling of cruise-activity within 25 years. He also expressed a need for "*the cruise-ship industry to have a sense of ownership of Ogden Point*".

Air Quality Today:

Has air quality improved over the last year? YES

Is air quality at a satisfactory level for all? NO

Air pollution in James Bay, due to cruise-ship emissions, continues to pose health concerns for residents, particularly asthmatics, others with respiratory or chronic conditions, and those who may develop such conditions. (VIHA/CRD reports: environment page at www.jbna.org)

Quality of Life and the Environment: Costs and Benefits of Cruise-Ships in Victoria

Studies on traffic volumes and noise complemented air quality studies. These studies, along with the residents survey, provided the "measurement" needed to complete the impact assessment in 2011 with a cost-benefit study. This study found that while the estimates of economic benefits provided by cruise-industry consultants are grossly overstated, particularly when cruise-ship port of call visits are short duration and are

concentrated in the evening. It also is wrong to assume that all passengers, and especially crew members, disembark the ship during short port-of-call visits.

While the economic benefits are overstated and relatively constant across average cruise-ship calls, the social, environmental and health-related costs associated with each additional cruise-ship call escalates as the number of calls increases. In consequence, the optimum number of cruise-ship calls is much smaller than the current number. Further growth in the number of calls will continue to escalate the costs way beyond the benefits.

Other JBNA Studies concerning GVHA

GVHA Reputational Survey

JBNA analyzed data from the GVHA Reputational survey to identify areas where responses from James Bay residents differed significantly from other regional residents. James Bay residents are more familiar with GVHA activities than other CRD residents and have a more negative view of these activities. http://www.jbna.org/rep_survey_summary_july2011.pdf

Topline

GVHA commissioned Topline to do passenger counts to determine the choice of mode of transportation and to estimate the number of passengers disembarking. This data was analysed through a joint GVHA/JBNA working group.

Clean Ships, Dirty Ships Report

To provide balance to the 2011 GVHA "clean-air recognition program", the JBNA announced the *Victoria 2011 - Dirty Air Cruise-Ship of the Year* recognition program. The following table provides a summary of the ships, and/or ship groupings, associated with the highest levels, as found at the James Bay monitoring site. Subsequent to this report, the MoE/UVic report was published with Topaz monitoring site data. The most significant change to the table below, would be that of the highest 40 10-minute SO₂ measures, 14 were attributable to the JBNA Dirty Ships and 23 attributable to the GVHA Clean ships.

Clean Ships, Dirty Ships: 2011 SO₂ Measures – Erie St site		
# times cruise-ship in port when the highest 20 one hour, and highest 40 ten minute, sulphur dioxide (SO ₂) measurements occurred at the Erie St monitoring site		
	20 highest 1-hr	40 highest 10-min
JBNA Dirty		
Crystal Symphony	6 (1 with <i>Carnival Spirit</i>)	12 (2 with <i>Carnival Spirit</i>)
Rhapsody of Seas, Celebrity Infinity + Amsterdam	3	7 (1 without <i>Amsterdam</i>)
	9/20	19/40
GVHA Clean		
Norwegian Pearl + Sapphire Princess (<i>with Oosterdam</i>)	3	3
Golden Princess (<i>with Westerdam</i>)	3	5
Sea Princess	2	5
	8/20	13/40