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From:
BurlingtonGreen Environmental Association,
The Trumpeter Swan Restoration Group
Oakvillegreen Conservation Association,
Miltongreen Environmental Association

Comments on the LaSalle Park Marina Breakwater Class Environmental Assessment Environmental Study Report — July 2013 City of Burlington & LaSalle Park Marina Association

Dear Mr. Doug Pladsen and Ms. Karla Kolli:

Having reviewed all documents relating to the LaSalle Park Marina and Breakwater Class Environmental Assessment we have many concerns that we would like to share with you and which we would like you to address.

Overall, we don't believe this report gives due consideration to the needs of the Trumpeter Swan population that over-winters in LaSalle Park, and in fact, if this marina expansion goes ahead as currently envisioned, we believe it jeopardizes the survival of 150 to 200 Trumpeter Swans, one fourth to one fifth of Ontario's entire population (from Ontario Birds, Volume 30 Number 2, August 2012, pg 118 from a 2010 count of Trumpeter Swans).

To give due weight to the Trumpeter Swans in an environmental assessment, it's important to understand the history of this significant species.

History

Historically, the range of Trumpeter Swans extended through most of Canada, from Ontario to British Columbia, from the shores of the Great Lakes and St. Lawrence to the Yukon and Northwest Territories and through 15 states in the United States from

Missouri to Alaska. (Northern Rocky Mountain Science Centre
<http://www.nrm-sc.usgs.gov/science/swans/range-map>)

Like all migrating species the Trumpeter Swan played an important role in the ecological health of its territories by transferring nutrients, in the swans' case, from water to land.

With the arrival of Europeans, Trumpeter swans became a commodity sought for their feathers, meat and skins. The unregulated hunting nearly wiped out this unique North American species, the world's largest swan. By 1935, only 69 individuals were known to exist in the area of Red Rock Lakes National Wildlife Refuge, Yellowstone National Park, and the surrounding area of Montana, Idaho, and Wyoming. (Northern Rocky Mountain Science Centre <http://www.nrm-sc.usgs.gov/science/swans/range-map>) In Ontario, the last recorded Trumpeter Swan was shot by a hunter in Long Point on Lake Erie in 1886.

For 96 years, no Trumpeter Swans existed in Ontario. They were extirpated here and almost made extinct throughout their previous range.

In the U.S., some states, including Minnesota, tried to restore Trumpeter Swan populations by protecting nesting habitat in the 1930's with limited success. (State of Minnesota Department of Natural Resources
<http://www.dnr.state.mn.us/eco/nongame/projects/trumpeterswan/index.html>)

Fortunately, in the 1950s previously unknown flocks were found in parts of Alaska and Canada. (USDA Forest Service, Eastern Region
http://www.fs.fed.us/r9/wildlife/tes/ca-overview/docs/animal_cygnus_buccinator-TrumpeterSwan.pdf) Using eggs from these flocks, several restoration efforts in various locations around North America were instituted. Other efforts to restore the species comprised of protection and restoration of nesting sites and wintering grounds, capture and relocation of birds and feeding programs
(<http://www.stuorg.iastate.edu/swan/About%20Us.html>)

As noted in your report, a Trumpeter Swan restoration began in Ontario in 1982 when former Ministry of Natural Resources biologist Harry Lumsden brought eggs from Alaska to be hatched here. A dedicated group of volunteers has been continuing the effort ever since and has been rewarded, after more than 30 years of effort, with a self-sustaining population of about 873 birds (from Ontario Birds, Volume 30 Number 2, August 2012, pg 118 from a 2010 count of Trumpeter Swans).

Similar restoration programs have achieved similar results. The Minnesota program that began with habitat protection in 1930 and went on to include the capture and release of Trumpeters into new areas, went from 0 swans to 2,000 by 2004. (State of Minnesota Department of Natural Resources
<http://www.dnr.state.mn.us/eco/nongame/projects/trumpeterswan/index.html>)

There are many reasons why these programs haven't been more successful but they include: number of young swans killed by lead poisoning from lead shot, loss of habitat both nesting and wintering sites (more on this under "Wintering Grounds") and collisions with power lines.

So, while there are now Trumpeter Swans in areas where they were previously extirpated, those flocks remain small and fragile, and nowhere near the large robust populations that existed at the time of European settlement.

LaSalle Park Flock Important Research Subjects

It's important to note that the volunteers first recruited by Harry Lumsden are a part of a team that collects important scientific research on this species, banding the birds, cataloguing genealogical history, taking blood samples and recording behavioural observations. This research, carried out in LaSalle Park by the Trumpeter Swan Restoration Group, has resulted in an invaluable treasure trove of data stored by the University of Guelph and studied by innumerable scientists.

The LaSalle Park Swans are of key importance to Trumpeter Swan research because the flock that overwinters there is the largest collection of overwintering swans in Ontario. In fact, in 2009, 116 birds were banded in Ontario with 70 being caught by hand by Bev and Ray Kingdon's team of volunteers at LaSalle Park. (Trumpeter Swan Society — <http://trumpeterswansociety.wordpress.com/2009/06/26/trumpeter-swan-society-ontario-trumpeter-population-tops-1000/>)

The scientific data collected by Bev Kingdon's team is stored as more than 30,000 entries in the University of Guelph database. Blood samples collected from both Trumpeter and Mute Swans at LaSalle Park were vital to research on Avian Bornavirus conducted by Dr. Dale Smith.

Dr. Scott Petrie of Long Point Waterfowl Research brings his biology students for a hands-on educational visit with the trumpeters at LaSalle every winter, and currently, one of his students is writing their Master's thesis on Trumpeter Swans. As well innumerable Naturalists' Clubs, Horticultural Clubs, Service Clubs, Photography Clubs and school groups make field trips to see the swans or request presentations about them.

Overall, there is significant public and scientific interest in the flock of Trumpeter Swans that over-winter in LaSalle Harbour.

Trumpeter Swans Chose LaSalle Park

It is important to note that Trumpeter Swans were not lured to LaSalle Park. The first group came on their own accord led by a bird, nicknamed Pig Pen for her messy eating habits, in 1993.

LaSalle Park provides the kind of ideal over-wintering habitat for the swans that's in short supply — shallow, protected water with an abundance of plant life that does not freeze over in winter for extended periods of time.

Report's Statement On Feeding Inaccurate

Your report errs when it claims, "the wintering population of swans is heavily dependent on feeding from volunteers, which provide approximately 50 kgs of corn to the swans per day (Toronto Star, 2009) or 9,000 lbs during the winter months (Lumsden 2009)."

The 9,000 lbs of corn mentioned by Lumsden included all the corn used in the Baiting and Banding program (see below) in his Aurora location, at Wye Marsh and at LaSalle Park. Please note that winter was also particularly bad and more corn was used than usual. Since then about 7,000 lbs of corn has been used annually.

It's also important to know that The Trumpeter Swan Restoration Group uses corn as a lure so birds can be banded, have blood drawn etc. This is known as "Baiting and Banding", it is not "feeding".

Other individuals may be feeding the swans and other birds at LaSalle Park and Burlington is encouraged to use a bylaw to discourage this activity.

Mr. Hughes also made a comment that “corn is not an ideal substitute for natural food sources”. It must be noted that there is an abundance of natural aquatic vegetation in LaSalle Harbour that the Trumpeter Swans can, and do, feed on.

It must also be noted that Trumpeter Swans naturally seek out wintering grounds adjacent to agricultural areas, when they can find these “ideal conditions”, so that they can feed on grain and corn left over in farmer’s fields. “Some Trumpeter Swans in the RMP depend heavily on feeding in agricultural fields to survive the winter” (Page 101 Appendix E. Species Assessment For The Trumpeter Swan In Wyoming). And on Page 106 of the same document: “On staging areas and wintering grounds in the lower U.S. trumpeter swans have learned to feed in agricultural fields on vegetables, winter wheat and unharvested grain. Although swans benefit from these rich foods, they occasionally cause significant damage to crops.” So from your own sources you can see that corn and grains have “benefits” for swans and are something they seek out on their own.

There Must Be No Construction From November 15 to March 15

The Trumpeter Swan Restoration Group has made it clear that construction during the winter period when Trumpeter Swans are in the LaSalle Harbour, from mid-November to mid-March, will be extremely harmful to the swans. The loud noise generated by 300+ truckloads of 120,000 to 130,000 tons of “core material plus 5800 tonnes of armour and 120 truckloads of rip-rap (3900 tonnes), the movement of a barge to take it to and from the construction site and the sound and movement of the excavator (Page 48 of your report) is not likely to be tolerated by the swans who take fright and flight at the sight of a canoe crossing the harbour.

The LaSalle Park wintering ground is critical habitat for mature swans and their young who need to rest, feed and breed over the winter in preparation for the nesting season ahead. We have heard time and time again that “no one wants to harm the swans”, however, we have no doubt that disrupting them at this crucial time will harm them potentially affecting survival and breeding ability.

On Page 33 the report says the construction period is expected to last 3 to 4 months. The report further states that it’s “preferable to schedule construction outside of the boating season” that would be from April to end of October. You also state: “To protect fish no work to take place between April 1 to July 10, 2013 (Page 54)” At the second Open House Page 135 of Appendix E) it was stated that construction would occur between September and December. *As several different scenarios for timing of construction have been put forth, please clarify when you expect construction to begin and end.* Trumpeter Swans start arriving at the beginning of November with the bulk in place beginning from November 15 and stay until the end of February. Construction during this time frame is not acceptable.

We note the report suggests: “LPMA and the City of Burlington are considering staging the construction, if possible, to avoid critical periods for the wintering swans. Staging could include placement of the core material prior to the wintering period (i.e., prior to November 1) and remobilization of construction crews in the spring (i.e., after March 15) to shape the structure and add the armour stone and rip-rap support. Phasing of construction in this manner is expected to incur an additional cost of between \$25,000

and \$50,000.” Given the previously stated 3 to 4 month period required for construction and the restraints stated in the report (no construction during fish breeding or boating season), even with “staging”, construction will still take place during the time Trumpeter Swans are in the harbour. *Please explain to us why you think “staging” will protect the swans.* As well the report notes it would cost another \$25,000 to \$50,000 more and our experience teaches as that more costly options are rarely agreed to.

On Page 33 the report suggest impacts of construction “would be mitigated by delivering the majority of construction materials using a self-unloader (barge) to the breakwater site.” *Please provide the evidence on which you have based this assessment. It is both sound and movement in their flight path that disturbs the Trumpeter swans and we would like you to demonstrate how you intend to manage 300+ truckloads carrying 9700 tonnes of rock and other material being offloaded onto barges with both barges and excavators in noisy motion at the end of their take-off zone without disturbing the swans.*

On Page 51 of the report, it says: “The breakwater construction would be well removed from shore and will only occur during the day when the swans are typically in shallower water which will help to minimize construction disturbance.” *Please provide the evidence that this will “minimize disturbance”.* Like all wild animals, to feel secure, Trumpeter Swans need to know they have an escape route from danger. Trumpeter Swans require a radius of 100 m to take off. Their escape route in LaSalle Park is over the harbour out to the open lake. Your construction will be at the end of their take-off area.

In the 30 years of experience the TSRG has been studying and collecting data on the swans, we believe construction during any period of their over-wintering time will have a significant, detrimental effect on the LaSalle Park Trumpeters. Our experience is supported by this statement from the Conservation Assessment For Trumpeter Swan (Cygnus buccinator) USDA Forest Service, Eastern Region December 18, 2002 (http://www.fs.fed.us/r9/wildlife/tes/ca-overview/docs/animal_cygnus_buccinator-TrumpeterSwan.pdf): “Disturbance on the wintering grounds can result in less foraging by the birds and therefore reduced reproductive potential for the following breeding season (USFS Species Data 1999).”

To ensure there is no harm to the swans there must be no construction from November 15 to March 15.

The LaSalle Marina Project Meets The Definition Of “Most Serious Threat To Trumpeter Swans” As Cited By Your Own Selected Research

On Page 105 of Appendix E in Species Assessment For The Trumpeter Swans In Wyoming, it states: “The most serious threat to Trumpeter Swans is the loss of undisturbed breeding and (especially) wintering habitat to expanding human populations. Urban expansion, rural residential development, and recreation often preferentially occur in and adjacent to environment preferred by swans; namely, large, clean, calm, and productive water bodies. The long-term viability of all three populations likely depends primarily on enhancement of existing, restoration of former, and creation of new wintering grounds (Pacific Flyway Council 1992, 2002). Protection and enhancement of breeding habitat is also important, but probably not as important as focusing on winter habitat. Suitable breeding sites are relatively abundant and well distributed. In contrast, suitable wintering grounds are rather scarce and concentrated to just a few areas, especially during extreme cold periods when open water is rare and undisturbed open

water, with adequate food and flat and open surroundings, is even rarer.”

On Page 110 of Appendix E in Species Assessment For The Trumpeter Swans In Wyoming, it states: “A variety of factors contribute to a species being intrinsically vulnerable to decline and extinction, including low or variable population density, large area requirements, low fecundity, habitat specificity and site fidelity, susceptibility to hybridization, and sensitivity to disturbance and habitat alteration. Trumpeter swans exhibit all of these characters. High specificity for rather rare environments, and sensitivity to disturbances within those environments, are probably the most important characters in this context. As mentioned previously, suitable wintering habitat is rather rare and restricted in distribution, especially during very cold winters, and further loss and degradation of winter habitat is likely the main threat to trumpeter swans across their range.”

For the reasons the above makes clear, we believe any change to LaSalle harbour is a threat to the Trumpeter Swans. We believe the ESR does not present sufficient evidence that altering the current conditions in LaSalle Harbour will not negatively affect the Trumpeter Swans. In fact we believe the ESR provides evidence that the marina expansion and the building of a permanent break wall will harm the Trumpeter Swans.

Why LaSalle Park Is Critical Over-Wintering Habitat

One of the most important reasons for knowing the history of Trumpeter Swans in Ontario is so it can be understood why Trumpeter Swans are over-wintering in LaSalle Park.

Because of their near extinction and 96 year-extirpation from Ontario, traditional migration routes no longer exist. The re-established swans have had to find their own paths to nesting sites and overwintering sites. As the population has slowly built over the past 30 years, Trumpeter Swans have been venturing further afield but they have not begun moving in any numbers from Ontario nesting sites to over-wintering sites in the U.S. where they might find the “ideal wintering habitat” described by Jack Hughes of the Canadian Wildlife Service as “large, open water (ie. wouldn’t freeze in winter) marsh.”

Currently, such habitat is unavailable in Ontario as shallow marshes freeze in winter so Trumpeter Swans make use of sheltered bays, like LaSalle Park, and areas of open water caused by swift moving currents, such as areas like Washago at the north end of Lake Couchiching, Atherley Narrows at the south end of Lake Couchiching, the Green River, the Trent Severn waterway and Port Severn.

On Page 101 of Appendix E in Species Assessment For The Trumpeter Swans In Wyoming, preferred winter habitat is described as: “open water at least 100m in major dimension, stream channels at least 15 m wide, water velocity less than 45cm per second, banks with little or no shrub cover, water depth 0.6 -1.3m for foraging, and shallower water and sand and gravel bars for loafing and roosting (Lockman et al. 1987). Other characteristics include: slopes with ratios <1:2; soft substrates at least 5 cm deep; abundant, diverse aquatic vegetation; greater than 75% open water; water freezing only intermittently and for no longer than 2 consecutive days; no wire fences or powerlines crossing habitat or flight paths; pollutant free, especially from lead; and little or no human disturbance.” So, by your own cited research, in most respects, the current LaSalle Park harbour area meets this ideal habitat criterion very well.

The evidence of LaSalle Park being an ideal location for over-wintering waterbirds

— sheltered, doesn't freeze for long periods, with naturally occurring food sources — is also clearly evidenced by the number of other waterfowl species who make it their winter home.

Also, Trumpeter Swans are creatures of habit. If they settle into their overwintering grounds they cannot easily pick up part way through the season and find another site.

“Populations do not appear to establish themselves easily in new wintering habitat.

Therefore, as long as wintering habitat is limited . . . the breeding population continues to be dependent on current management practices and habitat protection”:

(<http://srd.alberta.ca/FishWildlife/WildlifeLandUseGuidelines/documents/RecommendedLandUseGuidelines-TrumpeterSwanHabitat-Sep27-2012.pdf>)

The second line above is significant — “as long as wintering habitat is limited”.

Even if the Trumpeter Swans tried to find another suitable over-wintering location it would be pretty much impossible – especially mid-season as one of the main difficulties in trying to reestablish Trumpeter Swan populations across North America has been habitat loss.

From the U.S. Environmental Protection Agency: “Habitat Loss: In the 1600s, over 220 million acres of wetlands are thought to have existed in the lower 48 states. Since then, extensive losses have occurred, and over half of our original wetlands in the lower 48 have been drained and converted to other uses. The years from the mid-1950s to the mid- 1970s were a time of major wetland loss, but since then the rate of loss has decreased. In addition to these losses, many other wetlands have suffered degradation of functions, although calculating the magnitude of the degradation is difficult”:

http://water.epa.gov/type/wetlands/vital_status.cfm)

The situation is even worse in Southern Ontario. From the Ministry of Natural Resources: “It is estimated that prior to European settlement, there were about two million hectares of wetlands in southern Ontario. By the early 1980s, about 68% of these southern wetlands had been destroyed. In parts of southwestern Ontario, over 90% of the area's original wetlands are gone. These rates of loss are among the highest recorded anywhere on Earth.”:

(http://www.web2.mnr.gov.on.ca/mnr/Biodiversity/wetlands/Wetland_restoration.pdf)

From the Conservation Assessment For Trumpeter Swan (*Cygnus buccinator*)
USDA Forest Service, Eastern Region December 18, 2002

(http://www.fs.fed.us/r9/wildlife/tes/ca-overview/docs/animal_cygnus_buccinator-TrumpeterSwan.pdf): “The greatest threat facing this species is that of winter habitat quality and availability. Development of shoreline, increased recreation uses, and draining or filling of wetlands have decreased the amount of winter habitat available.”

Much of Ontario's Great Lakes and St. Lawrence shorelines have been developed or altered. Trumpeter Swans are over-wintering in LaSalle Park because there is nowhere else for them to go. With marshes drained, just about every inch of shoreline altered for human use, they have virtually no wintering habitat left. Expanding the marina at LaSalle Park may just be one more death of a thousand cuts to this species but it might be a fatal one.

To summarize, the reasons there must be no construction from November 15 to March 15 are:

- Numbering less than 1000 individuals, the Trumpeter Swans population in Ontario is still fragile.

- The swans over-wintering at LaSalle Park form a significant percentage of the Trumpeter Swan population in Ontario.
- The construction of the wave break wall will disturb them.
- This disturbance can negatively affect their health and ability to breed.
- They can't find new "ideal" over-wintering areas due to habitat loss/disturbance.
- Winter habitat is even more important than nesting habitat for this species.
- To protect Trumpeter Swans, you must protect habitat.

Danger Of Habitat Alteration

Currently, the marina at its present size and without a permanent break wall has been able to co-exist with the swans. The great danger of constructing a permanent wave break is altering the currently hospitable environment in some way.

We would do well to learn from the past. For instance, about 30 years ago, extensive landscaping was done at the park including the planting of non-native species and the construction of a path at the edge of the cliffs. This halted naturally occurring wave erosion that carved out the bottom of the cliffs. Prior to this alteration hundreds of Rough-winged and Bank Swallows made their nests in the cliffs that were protected from invading predators by the erosion at the base. Following the landscape alterations the sides of the hill sloped making it easy for predators to reach the nest and so the cliff habitat was eliminated along with all the Rough-winged and Bank Swallows that had riddled the sandy cliffs with tunnels for nest sites.

These birds, once were so numerous that swarms of them could be seen at LaSalle from as far away as the Burlington Canal, were no more. All other similar habitat for miles around has also been eliminated, except for a very small site at Burloak. When you destroy habitat, you destroy the wildlife that lived there.

We are very concerned that construction of a permanent wave break at LaSalle Park will alter the habitat in such a way as to make it unusable by Trumpeter Swans. This could happen in one way or in combination of any of these ways as listed below.

1. Potential For Sedimentation Into Burlington Bay

Sedimentation was noted as a potential negative effect during construction. Page 29 of the ESR states: "The construction of this breakwater has potential for minimal and temporary negative impact on water quality through sedimentation; however, it is noted that the extent of sediment is very limited and mitigation measures such as silt fencing could be used, if required." On page 48 the report states: "If material is pre-washed it can be placed with minimal concerns regarding sedimentation; otherwise it may be necessary to enclose the area with a silt curtain to minimize temporary water quality impacts." *How will it be decided if unwashed or pre-washed material is to be used? Is there a difference in cost? If so, was the estimated cost of construction based on unwashed or prewashed material? Has the effect of sedimentation on the aquatic life in the Bay been studied and if aquatic life is affected, what impact would that have on Trumpeter Swans and other waterfowl that overwinter in LaSalle Park and depend on water plants as a food source?* Further, the report mentions that a "silt curtain" might be employed to mitigate the effects of sedimentation. *Please explain what a silt curtain is, how it would be deployed, what it is made of and what the possibilities are that Trumpeter Swans or other wildlife could get caught in it.*

2. Take-off Area Requirements

Page 52 of the ESR refers to the swans needing approximately 100 meters of uninterrupted space to take-off and land. They need a RADIUS of 100 meters of uninterrupted space to take-off and land as they must fly and land with the wind. As far as we can tell in all correspondence between TSRG and the Wye Marsh staff and the Town and Dillon, TSRG and Wye Marsh mention the need for a RADIUS of 100 m, but all notes back from the City and Dillon mention only providing a linear 100m for take off and landings. (See Sara Street, executive director of Wye Marsh on Page 219 of Appendix E.) *The current preferred alternative does not provide a radius of a minimum of 100m for take-offs and landings. A radius of 100m is required.*

3. Potential For Reduced Water Circulation

On Page 135 of Appendix E it's noted that construction of the wave break will reduce water circulation in the near shore area. With the number of waterfowl using the near shore area over winter we are concerned that this will concentrate fecal matter and are concerned about the impact of this both on plant/algae growth and health of waterfowl. Our concern was echoed by Conservation Halton (Page 205 Appendix E) and by the RAP coordinator (Page 215 Appendix E) *Have you studied these impacts and if so, could you provide us with any expert advice you've received? If you have not studied these impacts, could you please seek expert advice on them and share the results?*

4. Water Quality

On Page 29 the ESR report claims: "To the extent the breakwater would impede water flow into and out of the semi-enclosed area, the load of nutrients and silt would be reduced in the Marina. Therefore, somewhat better water quality in the marina basin compared to outside of the marina basin may be expected." Given this, there is no reason to expect water quality inside the proposed breakwater would be worse than outside (Murray Charlton, personal communication, June 2013)." *Please provide the evidence for "somewhat better water quality". Have you considered the nutrient load deposited by swans, geese and other waterfowl that will now be trapped by "impeded water flow"? What impact will this have on plant and algae growth? In Orillia the building of a break wall contributed to an explosion in plant growth that impeded boat traffic and required the City to hire a cutter to come in every year. What impact might the cutting of vegetation have on the harbour's service as fish and bird habitat?*

5. Less Wave Action More Freezing?

On Page 29 of the ESR it notes: "The permanent nature of a fixed breakwater also has potential to influence circulation patterns in the harbour. Concern has been raised that this may result in early onset of freezing during the winter, which could interfere with the Trumpeter Swan wintering population."

According to your Wave Transmission diagrams on Page 51 the permanent wave break offers significant protection from wave action inside the harbour area, which we understand is the marina's goal. However, it elevates our concerns about the potential of the harbour freezing for long periods that the swans will not be able to tolerate. The ESR lightly dismisses these concerns by saying: "It is noted that the timing and extent of

freezing in the bay is largely affected by temperature and this area has been known to freeze under present conditions.” Under current conditions, the harbour does occasionally freeze for relatively short periods. Swans are able to withstand short periods of these conditions by going into a sort of stasis, however, the concern is that with less wave movement, longer periods of freeze-over will occur. *Have you done any modeling to indicate what impact the permanent wave break may have on length of time the harbour may freeze over and if so could you please share it?*

Jack Hughes of the Canadian Wildlife Service indicated to you that his greatest concern was maintenance of open water between the wave break and shore. Ms. Petruniak indicated to Doug Plascen and Karla Kolli in a letter dated October 23, 2012 that: “if premature freezing was observed behind the windbreak, mechanical breaking of the ice or a bubbler could be used to maintain open water.” *Please describe how mechanical breaking of the ice would occur and with what equipment. What is the expected impact of this activity with its accompanying noise and movement expected to have on the swans? What would the cost of this equipment be? Who would pay for it?*

On Page 218 of Appendix E Sara Street, executive director of the Wye Marsh Ecology Centre, tells you that four swans require a minimum of 600 sq ft of space or 150sq ft or 14.2 m per swan. She also tells you they employ 3 aerators to keep a space of 600 sq ft open or enough room for 4 swans. She also warns about the noise of air compressors associated with bubblers and their negative impact on the swans. Furthermore she notes that the aerators have broken down and so back up equipment is needed as well as a lot of labour to break ice physically to keep water open and to access mal-functioning equipment.

How many aerators would be needed to keep the water between the marina and shore open? What would their cost be? How much backup equipment would you need in case of equipment failure? Who would be responsible for keeping the ice open — the marina? The City? What impact would their placement have on the ecology of the harbour? How much habitat would they displace?

It’s important to note that Wye Marsh is not an overwintering ground for Trumpeter Swans like LaSalle Harbour is. Wye Marsh, as Street makes clear, is a stopping/resting area that never has more than a few dozen swans whereas LaSalle Park over winters up to 200 Trumpeters plus numerous other waterfowl.

The report suggests: “A bubbling system could be comprised of either an air pump that releases air through perforations in lines laid on the lake bottom, or a water circulation system that pumps warmer water from deeper areas to areas where ice is to be controlled. The lines could be anchored using small weights or pins.” *Please provide examples of where these systems have been employed and their effectiveness and reliability. Please provide a business case that includes the costs of installation and ongoing maintenance.*

On Page 179 of Appendix E, in answer to a question about ongoing maintenance costs, your reply was: “Maintenance costs for marine structures, such as fixed wave break, are typically stated to vary between 0.5% to 1% of the capital cost on an average annual basis. We would expect the cost to maintain a fixed wave break at LaSalle Marina to be at the lower end of this range given the simplicity of the structure and relatively mild wave activity.” However, you have also stated that aerators or the mechanical breaking up of ice between the wave break and the shore may have to occur.

The report says: “LPMA would be responsible for the capital and maintenance costs of the bubbling system, if installed.” *Please provide us with the financial statements to show that LPMA has the wherewithal to do so.*

Finally, your report states that: “LPMA will observe ice formation in the area over the winter up until the time of construction to better understand current conditions.” Having lay people evaluate ice formation at the harbour for an extremely limited time period when there is no permanent wave break in place will tell you nothing about the need for an aeration system over a multi-year time frame once a permanent wave break has been built. *This is not acceptable to us. This requires a proper scientific, independent study and evaluation by qualified individuals with modeling done to forecast freeze conditions over a multi-year timeframe.*

6. Less Wave Action Affect On Plant Growth

During your consultation Conservation Halton expressed concerns about the potential for increased plant growth in the harbour if wave action were reduced by a permanent wave break (Page 155 Appendix E) Your response states: “DFO has previously classified this area as “dense” for macrophyte growth. Despite this classification, it should be noted that over more than 30 years of operation, the LPMA has never reported conditions of nuisance vegetation communities and we do not anticipate the need for their removal. Should this be required, a plan will be developed to address this issue.” *We do not find this response satisfactory.*

Your considerations about the possibility of nuisance plant growth cannot be based on history but must be based on the potential impact of a permanent wave break to be relevant. During your consultation CH noted that chemical solutions for plant growth needed to be avoided and the General RAP Fisheries expressed concerns about the potential for algae blooms near shore (Page 215 Appendix E). In Correspondence with you on Page 228 of Appendix E Conservation Halton says: “The potential to create conditions where a nuisance population of aquatic vegetation growth could occur has not been evaluated. The effects of the measures to remove such a growth should also be included as an evaluation criteria in the Table.”

On Page 233 of Appendix E, the response to CH’s concerns about “anoxia and hypoxia conditions” are dismissed by saying these issues in the Hamilton Harbour Area are linked to “waste water treatment plants in Hamilton and Burlington which are not specific to this site.” However, the EA does not evaluate what impact reduced wave action might have on accumulation of waterfowl fecal matter near shore and its impact on water conditions and plant growth. *Please undertake this evaluation.*

CH further objects to ranking Alternative 1 (Permanent Break Wall) as the preferred alternative under the Objective “Improvement To Habitat” “because long term sedimentation, water quality and vegetation growth patterns have not been modeled for this alternative.” *We agree and would like to see such modeling.*

In the summer, with wave action impeded, will the harbour’s water temperature increase and what impact might that have on aquatic plant and algae growth and other water ecology factors?

7. Space Requirements For Trumpeter Swans

Page 218 Appendix E you have assumed Trumpeter Swans need the same or less

space during the winter than during the nesting season. In fact, wintering Trumpeter Swans may need more space. “A much higher percentage of their time is spent foraging during the winter and spring staging than during the breeding season.” (Conservation Assessment For Trumpeter Swan (*Cygnus buccinator*) USDA Forest Service, Eastern Region December 18, 2002 http://www.fs.fed.us/r9/wildlife/tes/ca-overview/docs/animal_cygnus_buccinator-TrumpeterSwan.pdf (Mitchell 1994). Page 191)

It’s important to point out that you can’t use Wye Marsh’s estimate of space per swan (14.2 m²) as an accurate indication of how much space is required for swans to over-winter as Wye Marsh is a rest-stop whereas LaSalle Park is an overwintering ground where Swans rest and feed for months at a time. The docks as shown will encroach into the critical swan habitat. Your estimate of swans having 115m² space per swan is inaccurate because of the large number of other waterfowl that are also vying for space and feeding grounds at LaSalle Harbour. The Trumpeter Swans do not have the harbour space to themselves.

As well, winter is the time young and/or unattached Trumpeter Swans engage in mate selection — a process that involves a lot of activity including feather pulling, chasing, fighting and breeding — at the same time family groups are trying to protect their personal space. This activity certainly requires more space than nesting, or the resting and feeding that occurs at rest-stop areas like Wye Marsh.

There can be no encroachment of docks into the Area of the harbour currently utilized by the swans. Accurate research about the space requirements for over-wintering Trumpeter Swans needs to be undertaken and reported back to us and other concerned agencies.

Other Concerns

Project Appears To Be In Conflict With The Hamilton Harbour Remedial Action Plan

The intent of the Fish and Wildlife Restoration Plan under the RAP is intended to give priority to restoring fish and wildlife habitat. Human activities such as recreational boating are considered a beneficial use of the harbour providing they do not impinge on the natural environment.

Having a private boating club fill in 1.7 hectares of harbour water to a depth of three storeys is the kind of action that would be typically discouraged by the plan. Rick Kirliuk of the Department of Fisheries and Oceans, pointed this out at your stakeholder meeting on June 11 2011 (Appendix E Page 201). He also noted that “infill is clear destruction”.

John Hall, representing the RAP at the same meeting noted the RAP says there should be no further infilling of the harbour unless it accomplishes remediation. *We contend the potential benefits of this project are outweighed by the known risks.*

Given that the RAP gives priority to restoring fish and wildlife habitat please explain why destroying aquatic habitat and negatively impacting Trumpeter Swans is deemed acceptable?

Attraction Of Unwanted Species

On Page 34 you state: “The crest of the breakwater has potential to provide nesting

surface for unwanted birds, however this is unlikely since cormorants do not favour nesting on the rocky, un-vegetated substrate. Should nuisance species be attracted to the area, environmental controls may be installed on the structure to discourage use, as necessary.” *Aside from cormorants, what are considered “undesirable species”?* Please define “environmental controls”.

The experience from Orillia should provide a cautionary tale both in terms of the unintended effect of constructing a permanent break wall and in terms of trying to control nuisance birds.

No sooner was the permanent break wall in Orillia built than it attracted hordes of gulls. To stop them from using the break wall and leaving their droppings all over the boats at the marina, the City installed a string/wire barrier. This didn’t deter most gulls and many of them got caught up in it and were left hanging and screaming until they died and had to be removed — not a pleasant sight or sound for boaters and others using the park.

The next solution was for the local Conservation group to plant shrubs and brush to discourage the gulls but now that they were used to the area, they simply moved onto the rooftops of local businesses. Next they tried noisemakers and owl statues, to which the gulls rapidly became adapted. Now they are hiring a falconer to scare the gulls away.

If gulls become a problem on the break wall or harbour area, how will they be dealt with?

Socio-Cultural Environment Information Lacking

On Page 16 of the EA the report talks about the harbour-area of LaSalle Park solely in terms of what the marina provides. On Page 33 the report claims: “During the operational phase, it is expected that the community will enjoy improved aesthetics as the docks may no longer be stored on the pier, and could remain in place during the winter.” *Please provide us with the evidence for this assertion.*

It’s true that many people find the storage of docks on the pier a nuisance and have wondered why a private marina has been allowed to usurp public space, however, the ESR Report goes on to say: “The breakwater itself will change the visual landscape.” *Why do you assume this change will be welcome?*

We believe it will not be. This is supported by correspondence from a citizen (Page 179 Appendix E). Outside of boating season, the dock and water’s edge is currently used by thousands of other people who come to see the swans, waterfowl and other bird life and to enjoy unobstructed views of Lake Ontario. Hundreds of photographers from around the GTA enjoy the area for wildlife and nature photography (dozens of photographers had gathered to photograph an owl when we were there in January of this year).

We agree with Conservation Halton (Page 232 Appendix E) that the ESR does not adequately assess “how the proposed work will affect public access and enjoyment of the waterfront and waterfront activities.” Your report does not do justice to the thousands of people, who are not boaters, who are drawn to the area and enjoy it as it is, who use the area for passive recreation or who visit as tourists.

What impact will the building of a permanent wave break and docks have on these people, not only during the construction period but afterward?

We note that currently the west side of the pier is also used for boat storage over the

winter. *Will the public pier continue to be used for boat storage over the winter? With an increased number of slips being proposed for the marina, will there be an increase of boats being stored on the pier? If so, how much public space is this expected to take up?*

Extended Boating Season

In the materials for the Second Open House on the Project (Page 132 of Appendix E) you talk about an extended boating season. *Please clarify what is the current boating season and what is expected to be an extended boating season.*

There was some discussion of allowing Personal Water Craft to use the marina. *Will the marina welcome PWC? As well there was discussion of allowing storage of PWC and kayaks. Is this still being considered, where would this take place and how much public space would be forfeited?*

Water Contamination

Page 243 of Appendix E the report notes that Douglas Bryant of LMPA states “there is no contaminant input into the harbour as a result of the marina.” While we acknowledge the marina’s effort to prevent pollution in the harbour as a result of their operations, the assertion that there is “no contamination” beggars belief.

Humans make mistakes. Humans do stupid things.

“The U.S. Environmental Protection Agency has identified the following potential environmental impacts from boating and marinas: high toxicity in the water; increased pollutant concentrations in aquatic organisms and sediments; increased erosion rates; increased nutrients, leading to an increase in algae and a decrease in oxygen (eutrophication); and high levels of pathogens. In addition, construction at marinas can lead to the physical destruction of sensitive ecosystems and bottom-dwelling aquatic communities. Water pollution from boating and marinas is linked to several sources. They include poorly flushed waterways, boat maintenance, discharge of sewage from boats, storm water runoff from marina parking lots, and the physical alteration of shoreline, wetlands, and aquatic habitat during the construction and operation of marinas.”: <http://water.epa.gov/polwaste/nps/outreach/point9.cfm>

So, there is bound to be some pollution from the marina operation. *If another 121 slips are added, what is the expected input of pollution expected to have on the ecology of the Harbour at LaSalle Park?*

Marina Boat Slip Expansion

On Page 87 of Appendix E, in answer to a question, the response states: “The work currently underway does not include changes to design of the docks or expansion of the docks. This will be carried out as a separate exercise.” However on Page 12 of the EA the report states: “Vision 2012 also provides rationale for an expanded Marina layout of 320 permanent slips and an additional 20 transient slips. The addition of these slips would create the economy of scale to pay for protection of the marina (i.e., the breakwater)”. *Is the marina planning to expand to 320 permanent and 20 floating boat slips or not?*

On Page iii of the ESR it states: “The installation of the breakwater is anticipated to have a net positive effect on the socio-economic environment since it would protect the marina and boats, reduce the annual maintenance activities and costs associated with moving the breakwater and docks each year, and improve the view and use of the pier for

local residents.” On Page 33 of the EA it says: “Once construction is complete, it is anticipated that the docks will need to continue to be removed in the winter as they are now. Storage of some of the docks may continue to be on the pier.” *So, will docks remain in place over the winter or not? And if they do not, will some continue to be stored on the pier and if so, how many? We believe the analysis of net socio-economic benefits is inadequate and requires additional study that takes into account the current draw of LaSalle Park for photographers, tourists and nature lovers.*

Please explain in plain language what this statement from Page 12 of the EA means: “It is noted that while LPMA is interested in adding additional slips to expand the existing marina, other related changes are limited to a reconfiguration of the existing parking facilities.”

Noting what the EPA says in the section Water Contamination above (and similar information can be found at the Environment Canada website here: <http://www.on.ec.gc.ca/epb/fpd/prevention/6600-e.html>) if permanent docks are installed, how will they be installed and how much harbour habitat will be destroyed by their installation?

Will any boats/watercraft remain in the water at the marina over the winter? If not, what is the date when all boats will be removed from the marina.

Consultation

Why was the Trumpeter Swan Restoration Group never included in the Agency Consultation meetings for Vision 2012 or in Wave Break Stakeholder meetings? Given that Trumpeter Swans were extirpated from Ontario for so long and there are still so few of them in Ontario, and given that there are virtually no experts on this species in this Province, with the exception of the volunteers that have been working with them since their re-introduction 30 years ago, and since Trumpeter Swans are a key species in the LaSalle Marina and the largest over-wintering group of Trumpeter Swans in the Province as well as the main focus of Trumpeter Swan research in Ontario, why was TSRG not included? Will the TSRG be considered a “Key Stakeholder” and included in consultations if this project moves forward into the “detailed design phase”?

We are deeply disappointed that the TSRG did not hear back from either the City or the consultants after they brought their concerns about the project to their attention. We are also very concerned that no draft ESR report was released which would have provided the opportunity for a more thorough, open and engaging process for resolving concerns about this project. Furthermore, we were told to expect the release of the ESR in April. Instead it was released in July with a deadline of August 26 for comments. Releasing an ESR about a controversial project such as this, with such potential high impact for the community, for the environment and for a species of special concern, over the summer when many people are away, seems timed to limit the opportunity for community consultation rather than facilitate it.

The public consultation process has been flawed, ill-timed and key stakeholders have been left out or not adequately consulted. This must be remediated.

Costs

On Page 50 it states: “Alternative 1 has a high capital cost of approximately \$20,000 per metre, with an expected total length of 400 metres. It should be noted that

construction costs associated with aquatic habitat features are not included.” *Since this marina expansion project is being sold as an opportunity to improve fish habitat, why are you not including the cost of “aquatic habitat features”?* *If the costs of aquatic habitat features are not included, they will not be built. Please explain.*

On Page 47 you state the aquatic shelf is expected to cost an additional \$3,000 per metre. If the shelf runs the entire length of the break wall that adds another \$1.2 million to the \$8 million cost of the marina. *Please confirm that the actual cost of building the breakwater is a minimum of \$9.2 million if it is built to include fish habitat.*

In notes from a meeting with HCA and CH to discuss the draft ESR on Friday, April 12 2013 (Page 242 of Appendix E) Lorn Newton from LPMA said the marina “is looking for funding from Marina users, the City, the province and the Canada Build program. LPMA can’t get revenue for their portion of the cost without more slips. The City would make the application for the Canada Build portion of funding.” We have also heard that the City, meaning the taxpayers of Burlington, would not have to fund the marina expansion and permanent wave break. *Please clarify whether the City of Burlington will be contributing funds for this project. Also please note that there is only one taxpayer so no matter where the marina gets the money taxpayers will be subsidizing this enterprise.*

Ultimately, the LaSalle Marina expansion will benefit an exclusive group of 340 sailboat and motorboat owners. The money to build the expanded marina and break wall, however, is expected to be picked up by the taxpayer through Provincial and Federal funding. The project is currently estimated to cost somewhere between \$8 million and \$9.2 million dollars excluding the cost of aerators and other mitigation measures to protect the nearshore as habitat for overwintering waterfowl. That amounts to a taxpayer-funded subsidy of between \$23,530 to \$27,059 per boating slip.

There are many instances where government grants can and should be employed to build civic infrastructure but a marina is not a bridge or a community centre that has wide public benefits. An improved marina has the potential to benefit only a small number of members of an exclusive club while it has the potential to disadvantage many citizens who enjoy the area as it is. As well, it has the potential to harm an essential over-wintering ground for a fragile population of Trumpeter Swans and other wildlife. Looked at objectively, the cost of this marina project cannot be justified.

Conclusion

The plan for expanding the marina at LaSalle Park and the building of a permanent break wall as outlined in this ESR will jeopardize the survival of the Trumpeter Swans that over-winter in LaSalle Park. The ESR doesn’t mitigate our concerns; in fact, it provides evidence for them. The consultation undertaken for this project was inadequate. The ESR does not provide enough information on the impacts of this proposal during construction or after in a number of vital areas. The ESR fails to take into account the how critical over-wintering areas are to this species. The criterion for the evaluation of this proposal was inadequate, especially in regard to Socio-Cultural Environment. Overall, we find the ESR inadequate in addressing the serious potential impacts of the proposed project on the Trumpeter Swans, the broader harbour environment and on the people of the community.

We look forward to hearing from you no later than Friday, August 16 to address the serious issues we have raised. We would be most interested in meeting with you to explore resolving these issues.

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