



SUNSHINE COAST CLEAN AIR SOCIETY

www.cleanairsociety.ca



@cleanairsociety



Facebook.com/CleanAirSociety

Summer Newsletter 2017



President's Report

Ryan Logtenberg

I hope everyone has been hanging in there with the reduced air quality from the forest fires this summer. Climate scientists predicted that an [increase in forest fires](#) would be one of the products of a warming planet. Unfortunately, this type of summer is expected to soon be the new norm. Thankfully, there are a couple things that you can do right now (if you haven't already) to address this and help prevent it from becoming our future. 1) Quit consuming fossil fuels in your transportation needs and drive an electric car. So many of us have done this already and a record number of people on the coast are installing solar on their roof as well! Not only will this help reduce your contribution to climate change that is causing these fires, but it is also a very wise investment decision. A BC driver will save on average [\\$18,336 over 8 years](#) in fuel and maintenance savings by switching their gas vehicle over to an electric one. Used electric cars can be found for under \$15,000 on [Craigslist](#) (i.e.: 2013 Nissan Leaf) and an additional \$3,000 [scrapit.ca](#) rebate can be awarded if you have an old car to trade in. Driving

electric helps stop global warming and improves air quality on our roads right here on the coast! 2) Purchasing an air purifier for your home will turn your home into a clean air sanctuary for yourself and your family. Air purifiers with HEPA-filters can trap particles smaller than 2.5 microns like wood smoke. I've been using the Asept-Air purifier that I purchased at [Costco.ca](#) for \$300 and by using an air quality monitor to test it, I can verify that it does remove the wood smoke in our house.




Our website www.2degreesinstitute.org offers a blueprint for how to seriously reduce one's carbon footprint and be part of the solution. Please check it out. To learn more about the benefits of driving an electric car, visit our website: www.electricpledge.org. Please contact us if you have questions about electric cars and would like to get advice without the pressure of a sales person.



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More Air Quality Monitors for the Coast!

In other news, the Clean Air Society has been moving forward on installing more real time monitors on the coast. Aside from our 6 indoor monitors, we have purchased an additional 10 outdoor monitors and will be installing them outside our local schools. This is the first step for tracking the quality of air our kids breathe and help us identify sources of pollution. With this data, we should be able to make informed decisions for cleaning up our air - especially the air pollution we can control, like open burns and diesel vehicles.

We now have a Portable Info Booth!



This past spring we purchased a booth (tent, table, infographics) to give our group a presence at local festivals and events. The booth promotes the 2 Degrees Institute's objectives of empowering people to keep global warming below 2 Degrees

Celsius. We were at the Earth Day festival in Roberts Creek, May Day Festival in Pender Harbour and even the Electrafest (Electric Car Festival) in Vancouver. The booth has been very well received by visitors and has convinced many people to pledge that their next vehicle would be electric. We are looking for volunteers to help run the booth at upcoming community events, please contact us! Our booth, in-house literature, and even our website (electricpledge.org) has been built to be branded by other organizations to help promote low carbon living. The Vancouver Electric Vehicle Association may be our first "partner" in using some of our materials.

2 Degrees Institute Report

We created a report [comparing the life cycle emissions of Electric Car and gas powered vehicles](#). You'll find that here in BC we are very blessed to have such a green energy grid and so driving electric here makes a lot of sense in reducing your total greenhouse gas emissions. Check out our [EV emissions maps for North America](#).

More Help from Experts

I had a pleasant talk with Dr. Christie Manning, author of the [Psychology of Sustainable Behaviour handbook](#). She has agreed to help advise the 2



Degrees Institute on ways we can best foster sustainable, environmentally beneficial changes in human behaviour in our mission to save our planet.

Everybody talks about it, but ...

Joe Harrison

From Port Mellon and Langdale to Egmont and Jervis Inlet, three things must be done **as a public health priority to improve air quality**: Essentially we need equipment, volunteers, and legislation.

1) Expansion of **monitoring equipment and sites** for all types of smoke, ranging from outside burning and vehicle exhaust (especially diesel heavy trucks, and tobacco) as well as recording poor visibility caused by smog and forestry, traffic and gravel dust, sulphur emissions, summer ozone levels, and noxious smells.

2) Mapping the sources of contamination on the Sunshine Coast at a **Regional Research Online Data and AQ Action Centre**.

3) Moving government to create **enhanced SCRD air quality bylaws, AQ alerts and improved BC and Canada Environment oversight**. For example, highway route planning to minimize population exposure to pollutants or outlawing smoking in residential buildings with shared walls.

We can start by raising the profile of the SCCAS for the local elections in November 2018 and seeking commitments from local, provincial, and federal candidates in public forums.

Also we can expand our media presence by creating a cadre of citizen scientists willing to

monitor and create personal codes of responsibility for decisions on health and life style, transportation choices, and local bylaw enforcement.

We also need to explore all options for financial research support from all levels of government **to fund an Executive Research Director** to receive and map regional pollution.

The SCCAS may be able to tap into the BC Habitat Conservation Fund by joining Nature BC as an associate member for a nominal annual fee.

Treasurer's Report

Valerie Thorsteinson

The BC Lung Ass. continues to help improve the air quality on the Sunshine Coast by providing vouchers of \$250 to purchasers of better burning wood stoves. The District of Sechelt also helped with a Grant (in 2015) which provided additional vouchers of \$250 for purchasers of gas or electric fire places.

The Sechelt Coast Regional District Grant (2016) helped to provide 'Laser Eggs' and chargers - Air Quality Monitors that have been placed in several classrooms on the Sunshine Coast this year. The Ministry of Finance has also helped finance the Air Quality Monitors and the collecting of data from them.


The Ministry of Finance Funds have also helped finance the SCCAS Web Site, Face Book postings, data from the 'Laser Eggs', climate information, and Electric Car details.

Donations from the General Public help with the general expenses of the SCCAS - adverts for the AGM, the Post Office Box, BC Registration, the Annual Report for the BC Registry, and payment for change of the Council Members when necessary.



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2017 Grant application updates

Louis Legal

Rural GIA SCRD Grant

The SCCAS requested \$4000.

\$2000 has been granted.

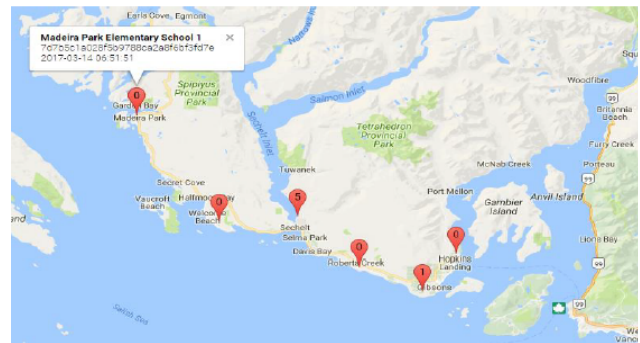
Grant Proposal Outline

Developing an Air Quality Strategy for the Sunshine Coast & Howe Sound has been a long term goal of our society. A part of this strategy is to establish baseline air quality data as well as a real time AQ monitoring and reporting network on the Sunshine Coast. This data is crucial to inform governments and institutions when actions or proposals threaten to degrade the air quality of the SCRD. AQ monitors located at volunteer locations will be displayed using a "citizen science" web site. The site will also accommodate citizen reporting of visual smoke pollution incidents throughout the Regional District.

The grant money will be used to recruit & educate volunteers for locating & help maintain our low-cost AQ monitors which will be deployed at strategic locations throughout the Regional District. Other volunteers will also be trained to observe and report Smoke pollution incidents on a new "citizen science" website. The money will also be used to design and build the new website. A rudimentary site has already been built as a partial demonstration to collect, store, manipulate & display AQ data. The SCRD Rural GIA contributions as well as other contributions will be acknowledged on our Society's websites.

Rudimentary Display of our Laser Egg Indoor Monitors

SC Coast Rural Elementary Schools Laser Egg Indoor Monitors Map Display



Sunshine Coast Credit Union

The SCCAS requested \$3000.

\$1000 has been granted.

Grant Proposal Outline


Developing an Air Quality Strategy for the Sunshine Coast & Howe Sound is a long term goal of our Society. It will be designed to inform citizens, governments & institutions when actions or proposals threaten to degraded our air quality (AQ). Building an AQ monitoring and reporting network is a crucial part of this strategy. The Society has already purchased four low cost but effective AQ monitors for four of our elementary schools. The grant money will be used to purchase five more monitors for more SC schools. The money will also be used to design and build a new "citizen science" website. The website will accommodate the display of real time

AQ data as well as local air pollution episodes such as brush fires reported to us by trained citizen volunteers.



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Report on SCCAS and SSCAS Joint Meeting – March 14, 2017, Horseshoe Bay

Louis Legal

The planned joint meeting between the SC Clean Air Society and the Sea to Sky Clean Air Society (S2SCAS) morphed into an AQ seminar during the morning and a very short joint meeting in the afternoon. Both the seminar and the joint meeting were organized by Peter Frinton, Chair of the S2SCAS. The group met at the beautiful Gleneagles Golf Course in Horseshoe Bay. The following agenda was distributed to the members a few days before the meeting.

AGENDA- AIR QUALITY SYMPOSIUM

March 14, 2017-10:00am

Venue: Fairview Room - Gleneagles Golf Course ClubHouse 6190 Marine Drive West Vancouver.

10:30-10:40am – Peter Frinton, Chair, SSCAS- Opening remarks and introductions

10:40-11:00am - Dr. Mark Lysyshyn- Medical Health Officer- Vancouver Coastal Health: Elements of human health and air quality

11:00-11:20 - Graham Veale - Air Quality Meteorologist - Ministry of Environment: Provincial perspectives and updates on air quality

11:20-11:40am - Derek Jennejohn- Senior Engineer- Metro Vancouver: Regional air quality initiatives

11:40-Noon - Dr. James Pawley- Emeritus Professor, University of Wisconsin- presenting the work of Ryan Logtenberg on electric vehicles.

Noon-12:30pm- Questions and Panel Discussion

12:30pm-1:15pm- lunch and wrap up

1:15-2:30pm-SCCAS/SSCAS Joint Meeting

Valerie Thorsteinson - SCCAS Financials - 15 minutes

Nara Brenchley - Wood Stove Exchange Program Update - 15 minutes

Louis Legal - SCCAS Project Updates - 15 minutes

Shannon Didier - SSCAS Air Quality Mgm't Plan - 30 minutes

Valerie Thorsteinson was unable to attend, but James Pawley, Nara Brenchley and Louis Legal from the SCCAS carpooled to the ferry terminal and participated in the symposium/joint meeting.

The seminar was excellent. The presenters were knowledgeable and informative.

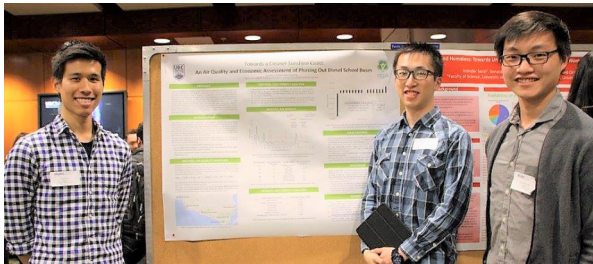
Due to the amount of interesting discussion in the symposium component, the joint meeting was delayed and therefore too short and rushed. More time should have been allocated to this portion of the get together. SCCAS will likely organize the next joint meeting in Gibsons in the spring of 2018.



UBC Community Partnership Project

Louis Legal

Three 4th year UBC Environmental Science students recently completed a Community Project on the Sunshine Coast which they began last fall. The project was organized in collaboration with the SC Clean Air Society, our local School District 46 (SD46) and UBC. The students' primary goal was to examine the feasibility of replacing SD46's diesel powered school buses with electric buses.



The three students (L to R) are: Sylvester Fu, Wenhua (Stephen) Chen and Stuart Tannason

The work consisted of an economic cost-benefit analysis of such an undertaking, as well as air quality testing on the diesel buses for three different conditions: while driving, and picking up and dropping off school children. Greenhouse gas (GHG) savings were also modelled based on current bus fuel consumption records.

The students presented their findings at both UBC and at the SD46 administrative offices in Gibsons. They found that it would be economical to replace the diesel school buses with electric but only if the buses could sell the power stored in their batteries back to BC Hydro during high consumption periods. This concept is known as a vehicle-to-grid (V2G) system and is still experimental. It has been studied and tested in California, in some European

countries, and in Japan. Until V2G becomes a reality in Canada, it would not be cost effective to replace SD46 diesel school buses with electric buses.

The GHG savings were quantified using \$30 per ton of carbon emitted.

Air Quality on the diesel buses during driving and while picking up and dropping off students peaked occasionally well above ambient levels. However, these peak levels were still below WHO standards and below BC and Canadian particulate matter (PM2.5) pollution air quality objectives.

Update of Enhanced Smoking Control Bylaws in Gibsons & Sechelt

Nara Brenchley

The Town of Gibsons' Smoking Control Bylaw, 1230 came into effect in late February.

Although the buffer zone was initially proposed to be increased to 9.5m, smoking is now prohibited within 7.5m of any openings in public buildings (doors, windows, air intakes). A person must also not smoke in or within 7.5m of parks, beaches trails, or grounds of Town recreation buildings. The onus of enforcement is on a Responsible Person "who owns, controls, manages, supervises, operates or holds" the business, area or vehicle. While there have been a couple follow ups with a particular cafe, Town Bylaw Enforcement Officer Sue Booth has not had to issue any tickets yet.

In October, Sechelt Council requested some changes to the proposed signage requirements, etc. The draft bylaw was revised and it is currently awaiting further review by the Corporate Officer before it will be presented again to council.



Consider your neighbours

Jeff Hoag

Our home is our castle and we should be able to do whatever we want inside our kingdom...right?

There are certain exceptions to this rule. You can't do things illegal without getting prosecuted if caught and you shouldn't do things that negatively affect the environment and your neighbours.

Many people love to sit in front of a cozy fire and enjoy its warmth and relaxing visage. What happens as the smoke travels up the chimney and out into the world outside? Some say that there is no negative environmental impact as wood smoke is carbon neutral. There aren't too many who could successfully argue that there are no negative health impacts.

Perhaps the neighbour has asthma and has to keep their windows closed to keep your smoke out. Perhaps they just don't like to be exposed to the health hazards of smoke.

It is difficult to know exactly where to turn for the best solution.

Options:

Good

Only use clean, dry seasoned wood.
Have a newer EPA approved fireplace
Burn smaller pieces of wood.

Better

Convert to an electric or gas fireplace.

Best

Use an alternate heat source i.e. geothermal or heat pump (make sure it is a quiet one).

Putting a match to yard waste is the easy route to its disposal; however, this practice is banned in most populated area, including the Sunshine Coast for most of the year because of the health hazards. There are options available for the responsible disposal of yard waste including onsite composting and offsite composting at Salish Soils.

Ultimately, we share the air. We need to consider our children and our neighbours when we take actions that affect them, whether it be fireplace smoke or back yard burning.

Everyone's health matters!

[Government of Canada: Avoid Wood Smoke](#)

[SCRD Good Neighbour Guidelines -See p 15](#)

[Sechelt Backyard-Burning / Open-Burning FAQ](#)

[Town of Gibsons Backyard Burning Bylaw No. 971](#)



Provincial Wood Stove Exchange Program Update

Nara Branchley

This year's wood stove exchange began with great momentum. We had been approved for 26 exchanges at \$250 each to replace an old, inefficient wood burning heat source and still had 3 held over from the previous year's funding. There were also still 6 "top up vouchers" for District of Sechelt residents converting from wood to natural gas or electric. Being new to the program, I initially relied on the partner vendors to carry on as they had in the past and the only major change I made was to request the make and model numbers of the replacement appliances.

By early February I had issued 12 vouchers for \$250 and the first of the Sechelt Top ups for a conversion.

There are still 3 available \$250 Sechelt resident top ups available. Conversions seem to be far less popular and there is a full waiting list for regular exchanges that have already occurred if these are not redeemed before September.

I have been very disappointed to learn that the most popular replacement stove is only 77% efficient under test conditions. Unfortunately, in practice, particularly here on the coast in the damp winters, these new stoves are likely emitting more than their stated 3.9g/h of particulates that are so small they enter neighbours' homes and lungs despite having doors and windows closed.

The hazy, smoky, low air quality that we've been experiencing here on the Coast in early August due to outflow winds and the forest fires of the Interior are sadly localized everyday realities for neighbours of wood burners.

The EPA emissions limits that are being phased in will require new stoves to produce no more than 2.0g/h of particulate matter in 2020. The above

mentioned stove is legal today but cannot be sold in 2.5 years.

For next year's Exchange Program we will only rebate new wood stoves that will meet the 2020 allowances and potentially set a minimum distance from neighbouring homes as well.

The more I've been learning in this role, the more inconsiderate and inappropriate I realize wood burning is in denser neighbourhoods. However, we live in a mixed and largely rural forested landscape which ultimately means there's an abundance of wood fuel around. Not everyone has access to natural gas, which is still a fossil fuel, and electric heating is so expensive many people can't afford to use it.

It is still preferable to harness the energy of dead and dying trees and logging waste than to let it rot and potentially become fodder for wild fires.

Wood fuel must be properly dried and seasoned, which is admittedly more difficult in our usually damp environment. Our education campaign and seminars will return in the autumn.

Our Team:

Sunshine Coast Clean Air Society & 2 Degrees Institute

Ryan Logtenberg – President

Louis Legal – Vice President

Valerie Thorsteinson – Treasurer

Jeff Hoag - Director

James Pawley – Director

Joe Harrison - Director

Nara Branchley – Wood Stove Exchange Coordinator