

Click on Bookmarks Tab
at Left and Peruse the
Document

From: Tina Z

To: City Manager of Vancouver Penny Ballem <penny.ballem@vancouver.ca>

Cc: City of Vancouver CLC Susan Anton <clranton@vancouver.ca>; City of Vancouver CLC Andrea Reimer <clrreimer@vancouver.ca>; City of Vancouver CLC Geoff Meggs <clrmeggs@vancouver.ca>; City of Vancouver CLC Heather Deal <clrdeal@vancouver.ca>; City of Vancouver CLC Raymond Louie <clrlouie@vancouver.ca>; City of Vancouver CLC Tim Stevenson <clrstevenson@vancouver.ca>; City of Vancouver Mayor Roberston <gregor.robertson@vancouver.ca>; City of Vancouver Wendy Au <wendy.au@vancouver.ca>; City of Vancouver CLC David Cadman <clrcadman@vancouver.ca>; City of Vancouver CLC Ellen Woodsworth <clrwoodsworth@vancouver.ca>; City of Vancouver CLC George Chow <clrchow@vancouver.ca>; City of Vancouver CLC Kerry Jang <clrjang@vancouver.ca>; City Vancouver James Ridge <james.ridge@vancouver.ca>

Sent: Thursday, April 23, 2009 4:46:47 PM

Subject: Fw: Electrical Upgrade at 1395 Beach Avenue from 200,000 Watts to 400,000 Watts

Ms. Ballum,

Further to my previous email below.

I am forwarding you a story which was reported in 2008 wherein CTV claimed that "some residents who live near wind farms complain the turbines cause a number of adverse health effects, such as crippling headaches, nose bleeds and a constant ringing in the ears".

Today on the CBC News, it stated that "a former dean of medicine at the University of Western Ontario wants the province to conduct more studies into the health effects of wind turbines before launching additional projects".

Do you not believe Doctor Ballum that prior at fund raising for Gordon Campbell you ought to seriously think what you are doing as a medical professional?

If wind turbines are in fact causing sickness, there is even more evidence that microwave radiation, especially when it is as high as 400,000 Watts, will cause bodily death, especially when it is in a residential area where other building are no further than 60 meters away from the cell phone tower.

I await your immediate response Doctor Ballum without any further delays regarding the issue I brought to your attention.

Tina Zanetti

----- Forwarded Message -----

From: Tina Z

4/30/2009

To: City Manager of Vancouver Penny Ballem <penny.ballem@vancouver.ca>

Cc: bob.elton@bchydro.com; City of Vancouver CLC Susan Anton <clranton@vancouver.ca>; City of Vancouver CLC Andrea Reimer <clrreimer@vancouver.ca>; City of Vancouver CLC Geoff Meggs <clrmeggs@vancouver.ca>; City of Vancouver CLC Heather Deal <clrdeal@vancouver.ca>; City of Vancouver CLC Raymond Louie <clrlouie@vancouver.ca>; City of Vancouver CLC Tim Stevenson <clrstevenson@vancouver.ca>; City of Vancouver Mayor Roberston <gregor.robertson@vancouver.ca>; City of Vancouver Wendy Au <wendy.au@vancouver.ca>; City of Vancouver CLC David Cadman <clrcadman@vancouver.ca>; City of Vancouver CLC Ellen Woodsworth <clrwoodsworth@vancouver.ca>; City of Vancouver CLC George Chow <clrchow@vancouver.ca>; City of Vancouver CLC Kerry Jang <clrjang@vancouver.ca>; City Vancouver James Ridge <james.ridge@vancouver.ca>

Sent: Thursday, April 23, 2009 3:52:10 PM

Subject: Electrical Upgrade at 1395 Beach Avenue from 200,000 Watts to 200,000 Watts

Thursday, April 23, 2009

Hello Ms. Ballem;

and copies to Mayor and Council;

1. I have not received a response from you since my last email but I see you have been hard at work with fund raising for Gordon Campbell, since BCH was in my back alley and in the underground garage again today getting the wires and cables ready to upgrade the electrical service for the cell phone antennas from **200,000 electrical Watts** to **400,000 electrical Watts**.
2. Subsequently, Ms Ballem are you "*in over your head*" with Bonniehon Enterprises Inc. more precisely Paul H. Cody a.k.a. Susan Wong?
3. How long will the city of Vancouver believe it can keep this electrical upgrade a secret from the public in the West End?
4. Attached are some of the pictures taken today while BCH was doing the work to double up the electrical service at 1395 Beach Avenue and some pictures of the underground equipment for the cell antennas.
5. I have also attached a Proposed Resolution of the European Parliament on preoccupations concerning the effect on Human Health of EMR.
6. BCH and the city of Vancouver together may want to try and deceive the public and fabricate evidence contrary to what I and others have in our possession however based on the work done at 1395 Beach Avenue the evidence shows Ms. Ballum you are *in over your head*.
7. I would reasonably expect you to answer to me rather than ignoring this important email and the previous ones that I have delivered to you and to Mayor Robertson.

Sincerely,

Tina Zanetti

Looking for the perfect gift? [Give the gift of Flickr!](#)



Latest News: Zuma supporters celebrate as ANC _



Wind turbines cause health problems, residents say

Updated Sun. Oct. 5 2008 10:23 PM ET

CTV.ca News Staff

Windmills may be an environmentally friendly alternative energy source but they also cause debilitating health problems, say people who live near them.

Wind turbines are popping up in rural communities around the world, including Canada, in the hope that they will reduce reliance on coal and other sources for power. Currently, there are about 1,500 turbines across Canada and there are plans to build another 1,000 to 1,500 in the next year.

But some residents who live near wind farms complain the turbines cause a number of adverse health effects, such as crippling headaches, nose bleeds and a constant ringing in the ears.

Helen and Bill Fraser initially supported the nearby wind farm in Melancthon, Ont. One turbine sat close to the Fraser's kitchen window.

"We thought, more green energy, this is great," Helen told CTV News.

However, Helen says she developed headaches, body aches and she had trouble sleeping. The dog began wetting the floor at night.

"There were nights I was lying in bed and my

[View larger image](#)



A wind turbine looms over Helen and Bill Fraser's house in Melancthon, Ont.

SUBSCRIBE!

CTV MedNews Express



Sign up for our weekly medical newsletter, delivered directly to your inbox.

CTV.CA BLOGS

Health Blog



New and improved: Check our medical experts and add your comments.

VIDEO

CTV News: Avis Favaro on the windmill problems 2:14

RELATED STORIES

- ▶ OPA asked to review green electricity's role
- ▶ U of C researchers make interesting discovery
- ▶ Rural residents want wind turbines

WEB LINKS

- National Wind Watch
- University of Salford: Research into Aerodynamic Modulation of Wind Turbine

heart would beat to the pulse of the turbine. It was an uneasy feeling," Helen said.

Ernie Marshall at first supported the wind farm that was placed near his home near Goderich, Ont. However, he also says that once the turbines got rolling, his health began to suffer.

"I had problems with my heart, with my eyes, my digestive system," Marshall told CTV News. "It traumatizes your whole body."

Dr. Nina Pierpont, a pediatrician in upstate New York, has interviewed dozens of people who live near windmills in Canada, the United States and Europe.

Her soon-to-be released book, "Wind Turbine Syndrome," documents the litany of health problems experienced by some people who have wind farms near their homes.

Pierpont believes that with the growth of wind farms near residential areas, Wind Turbine Syndrome "likely will become an industrial plague," she states on her website.

Scientists have only begun studying the phenomenon. Some early findings suggest that wind turbines create a high intensity, low frequency sound that may have an effect on the body. Not only can the sound potentially cause debilitating illness, some researchers believe the vibrations the sound causes in the inner ear may lead to vibro-acoustic disease. That can cause dizziness, nausea and sleep disturbances.

However, officials with the Canadian Wind Energy Association point to a handful of studies they say prove that windmills lead to few, if any, adverse health effects.

"We know there have been complaints about health impacts of wind turbines," Sean Whittaker of the Canadian Wind Energy Association told CTV News.

"On the other hand, we know there are some 10,000 turbines installed across North America and complaints have been relatively few. There's been research done on this and to date, that research has come to a fairly solid conclusion that wind turbines do not have an adverse impact on human health."

Whittaker says the windmill industry follows all regulations for where and how a wind farm can be established.

"It's important to point out that in order to install a wind farm, there is a very lengthy procedure to go through of environmental assessments, approvals, permits, regulatory approval," Whittaker said. "And those are skewed around making sure the turbines don't have an effect on people, on plants, animals, birds."

The issue has not just put experts at odds. Communities across North America are divided between residents who say local windmills have made them sick and their neighbours who don't believe them.

"Everyone was calling me a liar," Ernie Marshall said. "It don't matter who you talk to. You bring 'em out here and they'll say that noise don't bother us. Sit there for a week under that and listen to it and see what it does to your body."

The inconsistencies in the early research, coupled with the fact that some residents who live near wind turbines complain of such a wide array of symptoms, are evidence that further study is needed to determine if Wind Turbine Syndrome is a problem, how big of one and what should be done, experts say.

"Depending on your distance you'll have 30, 40, 50 per cent of people who

[View larger image](#)



Ernie Marshall and his wife look at the windmills near their former home near Goderich, Ont. The Marshalls moved several kilometres away after they began developing health problems.

Noise: Final Report

[Effects of Wind Farms on Health & Safety](#)

USER TOOLS

[del.icio.us](#)

[DIGG](#)

[Share on Twitter](#)

[Facebook](#)

[Print This Page](#)

[E-Mail Story](#)

[Feedback](#)

Fonts: **Bigger** **Smaller**

are troubled, but not 100 per cent," Dr. Robert McMurtry of the University of Western Ontario told CTV News.

"That's why it's important to do these studies to see just how many are troubled and how real it is."

More research will also help governments determine a standard distance that windmills should be located from homes and schools.

For now, provincial governments are setting their own guidelines, which call for windmills to sit about 400 metres from buildings.

Some groups, including the National Academy of Medicine in France, suggest larger setbacks between 1.5 and two kilometres away from homes and schools.

Some affected residents can only sell their homes and move away. The Frasers left their home of 32 years and moved to nearby Shelburne, Ont. They say their symptoms have, for the most part, vanished.

Ernie Marshall moved to the town of Seaforth, Ont., which is several kilometres away from the turbines near his former home.

"I had to get out or I wouldn't be standing here talking to you," Marshall said.

With a report from CTV medical specialist Avis Favaro and producer Elizabeth St. Philip

USER TOOLS

-  del.icio.us
-  DIGG
-  Share on Twitter
-  Facebook
-  Print This Page
-  E-Mail Story
-  Feedback

HEALTH STORIES

- ▶ Study links morning sickness to brighter kids
- ▶ Revise listeriosis report, feds tell Ontario official
- ▶ Canadians told to be on alert for Mexico illness
- ▶ Report warns smoking raises risk of breast cancer
- ▶ Top court rejects bid to sue Health Canada over implants
- ▶ Reports of wind farm health problems growing
- ▶ Scientist not surprised by human swine flu cases
- ▶ NYC takes on excess salt in restaurant food
- ▶ Charred meat may increase pancreatic cancer risk
- ▶ Ad campaign asks youth to 'recycle' their organs
- ▶ Organ donor consent affected by hospital approach
- ▶ Walnuts might prevent breast cancer, study suggests
- ▶ U.S. giving more teens access to 'morning after' pill

[About CTV](#) | [Contests](#) | [Careers](#) | [CTV Announcements](#) | [Advertise on TV](#) | [CTV Media](#) | [Advertise on Web](#)

[Archive Sales](#) | [Tapes and Transcripts](#) | [Privacy Policy](#) | [Terms and Conditions](#) | [Contact Us](#) | [Site Map](#)







Latest News: Sri Lanka seeks_

Top Stories

[View larger image](#)



Researchers are trying to figure out what's killing bats at Southern Alberta wind farms.

U of C researchers make interesting discovery

Updated Mon. Aug. 25 2008 7:31 PM ET

ctvcalgary.ca

University of Calgary researchers think they've discovered what's killing bats at wind farms in southern Alberta.

Researchers were finding up to 18 dead bats under each wind turbine, but the majority didn't show signs of physical trauma.

Team leader, Erin Baerwald, brought in the skills of Brandon Klug, who performed necropsies on the dead bats.

He found massive internal bleeding.

The researchers say the 40 metre blades create a low pressure zone that can spin upwards of 250 kilometres an hour.

Researchers believe the zone is concentrated to a small area around the blades.

Klug says it's a small change, but it's enough to kill the bats.

"So when you get in a situation where there's rapid changes of pressure on the outside the air inside the lung can expand so quickly, like it can't escape so it just expands the lung so quickly it just ruptures the capillaries around the lung and then you get a whole bunch of blood loss, and blood in the lungs and that's basically what drowns the bat."

Researchers say this could have an ecological effect as far south as Mexico because the bats are migratory.

Right now no one knows the full impact of the bat deaths.

VIDEO

Kevin Fleming with details 1:47

USER TOOLS

- del.icio.us
- DIGG
- Share on Twitter
- Facebook
- Print This Page
- E-Mail Story
- Feedback
- Fonts: **Bigger** **Smaller**

TOP STORIES




- ▶ Bank of Canada open to less conventional measures
- ▶ PM may appeal ruling that he must repatriate Khadr
- ▶ CAW fights for pensions, Chrysler talks continue
- ▶ Tori Stafford's mom denies sketch looks like her
- ▶ Canadians told to be on alert for Mexico illness
- ▶ Pot-worshipping clerics turned down by SCC

USER TOOLS

- del.icio.us
- DIGG
- Share on Twitter
- Facebook

TOP STORIES

- ▶ Bank of Canada open to less conventional measures
- ▶ PM may appeal ruling that he must repatriate Khadr
- ▶ CAW fights for pensions, Chrysler talks

-  Print This Page
-  E-Mail Story
-  Feedback

- continue
- ▶ [Tori Stafford's mom denies sketch looks like her](#)
- ▶ [Canadians told to be on alert for Mexico illness](#)
- ▶ [Pot-worshipping clerics turned down by SCC](#)

[About CTV](#) | [Contests](#) | [Careers](#) | [CTV Announcements](#) | [Advertise on TV](#) | [CTV Media](#) | [Advertise on Web](#)

[Archive Sales](#) | [Tapes and Transcripts](#) | [Privacy Policy](#) | [Terms and Conditions](#) | [Contact Us](#) | [Site Map](#)



© 2009 **CTVglobemedia** All Rights Reserved.

To: penny.ballem@vancouver.ca; gregor.robertson@vancouver.ca
Cc: clranton@vancouver.ca; clrcadman@vancouver.ca; clrchow@vancouver.ca; clrdeal@vancouver.ca; clrjang@vancouver.ca; clrlouie@vancouver.ca; clrmeggs@vancouver.ca; clrreimer@vancouver.ca; clrstevenson@vancouver.ca; clrwoodsworth@vancouver.ca; gordon.cam <pbell.mla@leg.bc.ca>
Sent: Thursday, April 9, 2009 11:28:55 AM
Subject: Wi-Fi in Civic Buildings and BCH's intention

Thursday, April 9, 2009

Hello to City Manager Ms. Penny Ballem;
Hello to Mayor Gregor Robertson; and
Copies to all City Councillors;

1. On April 7, 2009, I happened to open my TV on channel 4 and came upon a regular city council meeting, on Administrative Reports, wherein one of the subjects on the agenda was, ***Exploration of Options for Wi-Fi in Civic Buildings.***
2. I listened to Councillor *Andrea Reimer* who appeared concerned in having Wi-Fi's in Civic Buildings because of the EMR effect it may have on people.
3. I listened to Councillor *Raymond Louie* who said that the city should be more concerned about homelessness and about health care since the people visiting Vancouver in 2010 won't comment on our lack of technology but rather on the serious problem this city is facing with the rate of homelessness.
4. I also listened to Councillor *David Cadman* regarding BCH's intention with having the province wide connections to Wi-Fi.
5. And I also heard Councillor *Ellen Woodsworth's* sounding in a real hurry in having Wi-Fi connected at City Hall and other civic buildings.
6. The city council meeting will meet again on the same subject and vote on it.
7. On March 24, 2009, I came to City Hall to serve a letter on Mayor Robertson. After informing you that I was not serving court documents to Mayor Robertson, you, Ms. Ballem, accepted service on his behalf, which was greatly appreciated.
8. The letter, attached herein, is regarding cell phone towers and the radiation of the West End, which I can only presume Mayor Robertson took the time to read.
9. It is my contention that turning apartments into cell phone radiation antennas of 200,000 watts probably has more long term damaging effects than what was happening at Libby, Montana,

4/30/2009

wherein a criminal trial is taking place against **W.R. Grace and Co.** and five of its executives, regarding the company vermiculite mine, which the US prosecutors claim was responsible for causing asbestos-related diseases in over 2,000 people living in and around the town of Libby, Montana, a town of 2,600. --- Besides those sickened, another 225 have perished from being poisoned by the vermiculite asbestos from the W.R. Grace mine.

10. Now you are the new on-site foreman put there by Premier of B.C. Gordon Campbell, and the new mayor of Vancouver. Thus, Penny for your thoughts, and reflection on those reading this email.

11. As an expert gynecologist — now practicing, with no transferable skills, in the field of large scale financial management and high power antenna permitting in residential apartment blocks — unbiased by prior knowledge, it could be said, *'You are in over your head.'*

12. You shouldn't expect to learn about the hazards of high power antennas by examining your cohort, Mr. Gregor Robertson, who appears to have hired you immediately on becoming mayor of City of Vancouver, because of your conduiting skills to Premier Gordon Campbell, who seems to be guided by the strongly held belief that a City can't become insolvent anymore than man can have a baby, to paraphrase the words of the late Mayor Jean Drapeau of Olympics 1976 --- in a similar financial fiasco.

13. Your view is troubling, Ms. Ballem, in that if you mess up, you can always go back to practicing medicine.

14. I would ask you and your colleagues to review the biography and CV of **Dr. Magda Havas** on the matter of high power antennas.

15. The evidence suggests that permitting a 200 Kilowatts antenna system for 1395 Beach Ave is an order of magnitude more severe than Dr. Havas has experienced as apparent from her bio and CV.

16. A case could be made Dr. Ballem that you are bringing the medical profession into disrepute by going along with BCH and others, who knows the dangers of high power radiation has on people, just like **W.R. Grace and Co.** and five of its executives knew of the danger of asbestos released in the air, and yet just like W.R. Grace and Co., BCH and the city of Vancouver together are concealing the dangers and the amount of radiation being released, and therefore putting local residents at risk while the executives of the corporations, including and not limited to, the city of Vancouver, is enriching themselves.

17. The city of Vancouver should stop and think, during this Holy Week, as to whether having high powered radiation is worth it. In effect, the city of Vancouver ought to consider going the way of Europe by reducing Wi-Fi due to its health and security concerns. Anything less, can lead to criminal charges under the Criminal Code against those profiting from W-Fi.

Please advise as to whether you intend to go ahead with the over radiation of the West End.

I would ask that you acknowledge this communication and ask you to please advise as to when city Councillors will reconvene for the meeting on Wi-Fi's.

I await your immediate response.

Sincerely,

Tina Zanetti

Tuesday, March 24, 2009

MAYOR GREGOR ROBERTSON
of the Corporation of the City of Vancouver,
Third Floor, City Hall

CONFIDENTIAL & URGENT

DELIVERED IN PERSON

May I please your Worship;

Re: Electrical Upgrade at 1395 Beach Avenue, West end, Vancouver, BC & Fund Raising

1. On April 24, 2008, I communicated with the then Mayor Sam Sullivan, regarding a cell phone tower construction at the apartment where I have been living for 23 years and I copied that letter to you, see attached. An article was published in the *Georgia Straight* by Charlie Smith, of which I attach a copy, based on my letter to Mr. Sullivan.
2. I can see now that you saw my letter as an opportunity for you, in the run up to the election to pose as a committed tree-hugger, and after election suddenly turn into a totally committed antenna hugger.
3. I asked Mayor Sullivan to stop the cell phone tower project at 1395 Beach Avenue, but he never responded. However by the time the word of the seriousness of the matter of the safety and health concerns got through to the executives of BCHydro and to the then chairman of BCTC, the work stopped and the electrical upgrade from **200 Kilowatts to 400 Kilowatts** did not take place. A similarly high powered antenna system proposed by Bell Mobility, mounted on a tower, in a residential area at Edgemont Blvd in North Vancouver, was stopped due to strong public opposition – citing health concerns.
4. I stopped worrying about 1395 Beach --- until you were elected Mayor of Vancouver on November 15, 2008, and only became aware after you were elected, your real moves on *Olympic Village*. Albeit I voted for you, it soon appeared you were telling one story to the public and another to special interest groups in your run up to the election.
5. It is apparent that you are now openly and covertly fund raising in the back lane where I live at 1395 Beach Ave.
6. It is apparent now the same was true for your own special projects -- such as the *Olympic Village* where you have ducked putting the matter before an accounting firm like KPMG for example, to see whether your grand financial plan would pass a **solvent test** --- as evidenced by the proposed \$52 billion BCE self-off of itself failed when it was not financially realizable --- now they say, '*the best laid plans by mice and men often go awry.*' You say now the project could cost the City of Vancouver \$875Million -- *how sweet that sounds when it rolls off your tongue.*

7. The public can put a dollar value on costs to them of every move you make, like for example paying the city manager Judy Rogers a severance of about \$572,000 to get a well known accountant out of the way – still standing after VPD Chief Graham shot her silhouette full of holes. Blaming Judy Rodgers then, by giving her severance pay of more than half a million dollar, was counter to the public interest, and in your special interest only. Ms. Rodgers was a problem for police chief James Graham when she audited his overtime accounts and reported he had run off the rails. To paraphrase the words of Peggy Lee, '*Hey Big Spender*', that was nothing like the City of Vancouver cheque you cut for funds to **Fortress and Millennium Group**. At the same time you are blowing smoke to keep the media at bay, by cleaning up the city.

8. You ought to be concerned with the City of Vancouver giving permits to landlords in the West End that allows them to operate their residential buildings like a industrial facility, pumping up levels of radiation harmful to the people within their apartments and to those in other apartments around them.

9. Any reasonably informed person can conclude the **City of Vancouver, Bell Mobility** and my landlord **Bonniehon Enterprises Ltd.** are all acting together in an organization hiding the truth about electrical upgrade given to landlords in the West End to turn their apartments into major tower sites. BCH informed me in an email of the capacity of the electrical upgrade that the city is trying to hide from the residents of the West End.

10. In my view Mayor Robertson the electrical upgrade from **200 Kilowatts to 400 Kilowatts** is akin to standing in front of 200 microwave ovens with the doors wide open, that will blast radiation into the apartments of residents on three sides, those directly in front less than 60 meters away. And that is not counting the extra burst of radiation from two blocks away, directed towards 1395 Beach Avenue, from what appears is an even larger upgrade at 1600 Beach Ave, (Beach Towers), and similarly from major antennas on two other apartment buildings on Burnaby Street.

11. The covert operation, being led by the new mayor of city of Vancouver and the new Chairman and CEO of BCTC involved in the project at 1395 Beach Avenue, is plain and simple fund-raising gone mad, which is criminal given that the city knowingly is putting residents in the West End at risk of bodily harm. The law that is broken is, inter alia, the *Westray Act*, under the criminal code section 219, s. 221 and section 22.1. As permit grantor, you have become the leader in an organization as defined under the criminal code.

12. A recent Vancouver Sun story on fund raising by mayors in the last election and you coming out the winner, elevates covert fund raising to a public concern. Since it is obvious you are good at fund raising, residents need to know whether they must put a higher bid so that you, as our elected mayor of the City of Vancouver will do what is right in stopping the pumping up of radiation in the West End of Vancouver. Without a doubt, and I am sure you would agree, some questions are in order., since it appears that the public always comes last to special interest groups.

13. Please advise how much money you have raised so far, specifically from those whose interests are the promotion of high power antennas in Vancouver. How much of that money is attributable to my landlord Bonniehon Enterprises Ltd, and how much from other property owners in the West End, who also want to conduct a lucrative business of cell phone towers, besides their day job as landlords?

14. I must have an answer immediately as fund raising must be ramping up for the provincial election in May of 2009. Those with special interests in antennas who will be funding potential MLAs and who would naturally recognize that they have to send as much money to your coffers as they donate to their wannabee MLAs --- because it is important to keep you on side

15. This is a matter of considerably urgency and I would suggest you apprise yourself of the *Westray Act* -- that you read it over with your new city manager. It is possible Dr. Penny Ballem may support you in your view that high powered cellphone antenna systems are good for the public. She is hardly going to say that your financial plan does not pass the solvency test.

16. Also in closing, keep in mind that rather than curtailing to the owner of 1395 Beach Avenue, the City of Vancouver should report him to the US Justice Department, the SEC and the IRS because not only is he living in British Columbia without a Visa, **Paul H. Cody** is conducting business under an assumed name, **Susan Wong** and operates a multi million dollar business under his assumed name, while failing to report to the US and mainly to the IRS. The perfect case of identity theft, with full faith and comfort that the laws in Canada, including solicitor client privilege which breeds frauds like Paul H. Cody, will protect him from the US Justice Department and the IRS. Suffice to say, any fund raising done in the back alley of 1395 Beach Ave. is also counter to *The Foreign Corrupt Practices Act*. I would suggest you google **Paul H. Cody** and find out who the city is doing business with.

In the meantime, I would ask you to please govern yourself accordingly,

Yours truly,

Tina Zanetti

c.c. Gina Zanetti

Thursday, April 24, 2008

MAYOR SAM SULLIVAN
of the Corporation of the City of Vancouver,
Third Floor, City Hall
453 West 12th Avenue
Vancouver, BC V5Y 1V4

DELIVERED BY FAX & IN PERSON

May I please your Worship;

**Re: WORK PERMIT TO INSTALL SEVEN (7) ROOF ANTENNAS,
IN THE WESTEND
AT 1395 BEACH AVENUE, CITY OF VANCOUVER, B.C.**

I live in the Westend, at 1395 Beach Avenue, at Sunset Beach, near our beautiful Stanley Park. I have been living at the same address for 22 years.

1. On March 10th, 2008, the property owner posted a notice in the elevators and in the lobby that the "**building will be undergoing a utility upgrade project**" but gave no specifics in its notice as to what the work consisted of. Attached is the Memo from the Property Management Company.
2. A retired lawyer friend directed me to Vancouver City Hall. I found two separate permits were issued in February 2008 to Bonniehon Enterprises Ltd., the owner of the property, with its new mailing address located in Montreal, Québec at Le Complex Desjardins.
3. An electrical permit #516821 was issued to Mott Electric for **7 roof antennas**, for cell phones and the second permit # DV427579 was issued on Feb. 21, 2008 for wireless internet and cell phones.
4. I learned later that with the project involving "**Bell Mobility**", the electric power service is 200 kilowatts. It appears there is provision for a standby diesel generator for power when BC Hydro fails. **Carbon monoxide** monitors are a requirement on the permit, presumably for tenants to be forewarned of being overcome by diesel fumes, as the standby generator will be tightly nested by surrounding apartments.
5. Now, those permits issued by the City of Vancouver to Mott Electric, was issued without giving consideration and without giving notice to the tenants and to the residents of the Westend living near 1395 Beach Avenue.
6. I am very upset and so are the neighbours with condominiums who have not been notified of the project.

7. I am aware that the mandate for cell towers are regulated by the Minister of Industry, being a Federal government corporation, however the City of Vancouver did provide a work permit to Mott Electric to install seven (7) roof antennas at 1395 Beach Avenue and as a result the City of Vancouver is complicit in that it did not even require the Applicant to give public notice to surrounding tenants and residents of the Westend.

8. Albeit Federal, Provincial and City elections are all less than 12 months away, Your Worship ought to know better than violate the right to notice and right to be heard which are principles enshrined in common law and in our ***Canadian Bill of Rights***.

9. Myself and the neighbours in the Westend are also very concerned because the City of Vancouver, on one hand is claiming that cell towers are federally regulated yet on the other hand, the City of Vancouver, did provide an electrical permit to Mott Electric for 1395 Beach Avenue, to install the seven (7) roof antennas, and as such the City of Vancouver is responsible for the work being done at 1395 Beach Avenue.

10. Canada has no regulations in place to protect the environment which in this case includes humans of all ages including nursing mothers, from the effects of electro magnetic radiation, and this project will be equal or higher capacity than the maximum 150 kilowatts broadcast that FCC allows on remote mountain tops. (The permit, I am told by an electrical engineer, is for 200 amps 600 volts three phase which computes to 200 kilowatts). Surrounding apartments are as much as 10 floors higher. This means that the safety and security of the Westend is threatened.

11. What is disconcerting is Your Worship catering to the owner of the Surfside Apartments. For profit, the owner of the property, has put everyone at risk, knowing that the heavy equipment in the indoor garage of the property is hazardous, as the outside parking lot above, when it rains, leaks into the inside parking lot, where the heavy equipment is being installed.

12. Your Worship has issued a permit to a slum landlord and Your Worship has issued an electrical permit to Mott Electric who use unmarked vehicles to do their dirty work against the residents of the Westend.

13. In effect, the City of Vancouver is being completely reckless with the project at 1395 Beach Avenue.

14. The property owner, and others involved are keeping the project a secret from the tenants and the Westend community because they know that the Surfside Apartments is not suitable for installing seven (7) roof antennas given that the building envelope is in need of serious repair due to serious water leaks coming from the roof.

15. To refresh your memory, a couple of years ago, I had laid four (4) private informations before Judge Kitchen of the Vancouver Provincial court against four (4) different roofers working without a licence and without TQ's, as was required in the municipality of the city of Vancouver. The Judge had issued process on all four (4) defendants, however due to the city prosecutor's unwillingness to prosecute the separate individuals, I found myself in a position of a private prosecutor. One accused

pleaded guilty and paid a small fine and the other three accused, who had the money to hire lawyers, managed to get the AG to stay the charges during the day of the trial. My concern then was the government unwillingness to regulate its laws and as a result, residents of this province are not protected against slum landlords who hire workers without qualifications. Now, the City and the Government is exercising undemocratic practice one more time at the expense of the residents of this province by failing to notify the residents of the Westend community that a cell phone site is being installed on a roof of my building.

16. What I want is the principles of natural justice to be followed and not ignored. My neighbours and myself and my sister Gina Zanetti, would like to see the project stop forthwith by having Mott Electric's electrical permit issued by the City of Vancouver revoked until the tenants and neighbours are given the right to notice and right to be heard.

17. On behalf of the tenants of the Surfside Apartments and on behalf of the near by neighbours, I am requesting from Your Worship to put a stop to the work order on the installation of seven (7) roof antennas being installed on the building where I have been living for over 20 years, on the basis that the tenants of the building and the immediate community were not notified about the project and we were not informed of any health hazards associated with electromagnetic radiation, which I understand at the present time, Environment Canada has no regulations in place to protect the environment from the effects of electro magnetic radiation

18. Last but not least, I reasonably expect that the tenants at the Surfside Apartments and residents of the Westend community, whom many are condominium owners, be notified immediately in writing of the project being stopped and that a public notice be published in the newspaper, for the purpose of a public a forum.

I ask that you please acknowledge receipt of this correspondence forthwith.

Thank you in advance for your attention in this serious matter.

Yours truly,

Tina Zanetti

c.c. Gregor Robertson
Sierra Club BC
Charlie Smith Editor of the Georgia Straight

Curriculum Vitae

Magda Havas, B.Sc., Ph.D.

1 BIOGRAPHICAL INFORMATION

1.1 Personal

University Address: Environmental and Resource Studies,
Trent University,
Peterborough, Ontario, Canada, K9J 7B8

Phone: (705) 748-1011 ext 1232

FAX: (705) 748-1569

email: mhavas@trentu.ca

1.2 Degrees

B.Sc. Honors Biology, University of Toronto, 1971-1975
Ph.D. Department of Botany, University of Toronto, 1975-1980

1.3 Awards, Scholarships, Fellowships

Academic

NSERC University Research Fellowship, 1983-1988
NSERC NATO Postdoctoral Fellowship, 1981-1983
Ann Wintercorbyn Prize, 1981, Department of Botany, University of Toronto
NRC Graduate Scholarship, 1975-1977, 1978-1979
Gulf Oil Scholarship, 1975
Bell Canada Scholarship, 1975

Non-Academic

Certificate of Appreciation, Uxbridge Community Care, May, 1989.

2**ACADEMIC HISTORY****Employment and Positions**

- 2002-present Member, Centre for Health Studies [originally Institute for Health Studies], Trent University, Peterborough, ON
- 1995-7 & 1992-4 Board of Governors, Trent University, Peterborough, Ontario.
- July 1993-1994 Senate, Trent University, Peterborough, Ontario.
- Nov 1990-pres Cross Appointed to Biology Department, Trent University, Peterborough, Ontario.
- Aug 1989-pres Associate Professor, Science Education and Environmental and Resource Studies, Trent University, Peterborough, Ontario.
- June 1985-1989 Cross Appointed to Faculty of Forestry, University of Toronto, Toronto, Ontario, Canada.
- Sept 1983-1988 NSERC University Research Follow/Assistant Professor, Institute for Environmental Studies, University of Toronto, Toronto, Canada.
- Feb 1981-1983 NSERC NATO Postdoctoral Fellow, Section of Ecology and Systematics, Cornell University, Ithaca, New York, USA, in laboratory of Professor G.E. Likens.

3**SCHOLARLY AND PROFESSIONAL WORK**

[100 publications since 1978, co-edited 3 books, edited environmental newsletter, was executive editor Trent Times and coordinator of the View from Trent for the Peterborough Examiner]

Refereed Journals and Conference Proceedings	R	30
Non-Refereed Conference Proceedings	NR	14
Chapters in Books	C	10
Expert Testimony	ET	10
Government/Technical Reports	G/T	10
Letters	L	6
Abstracts	A	5
Popular Press	P	18

Note: *My publications on electromagnetic pollution began in 2000. Prior to that the majority of my research was on chemical pollutants (acid rain, metals, air pollution, water pollution). Also note that part of my responsibility at Trent University is to promote Science Communication hence the articles in newspapers.*

- 2006 100 **Havas, M.** 2006. *Dirty Electricity: An Invisible Pollutant in Schools.* P
Feature Article for Forum Magazine, OSSTF, Fall, 2006.
- [7] 99 **Havas, M.** 2006. *Response to: Evaluation of the Stetzer Filters.* Open L
Letter to Health Canada. October 2006. 5 pp.
- 98 **Anon.** 2006. *Ground Current Pollution Act, 2006.* Mpp2006.080.e5-CW, G
Private Member's Bill, First Reading October 3, 2006. *Helped draft
Private Member's Bill on Ground Current Pollution.*
- 97 **Havas, M.** and D. Stetzer. 2006. *Electromagnetic Pollution and your* NR
Health. Centre for Health Studies, Trent University, Peterborough, ON
September 2006.
- 96 **Havas, M.** and M. Bowling. 2006. *Electromagnetic Measurements at* T
Richmond Fire Hall #7, March 8, 2006. Final Report to Richmond Fire
Fighters. 8 pages.
- 95 **Havas, M.** 2006. Open letter to Mayor and Aldermen, Milwaukee L
Wisconsin. Health Concerns of WiFi.
- 94 **Havas, M.** 2006. *Response to Linda Erdreich, Ph.D., Exponent Inc.,* ET
Tsawwassen Residents Against Higher Voltage Overhead Lines
(TRAHVOL), British Columbia Transmission Corporation ("BCTC")
Certificate of Public Convenience and Necessity Application for the
Vancouver Island Transmission Reinforcement Project.
- 2005 93 **Havas, M.** 2005. *Response to BCTC (British Columbia Transmission* ET
Corporation) information request to TRAHVOL, British Columbia
Transmission Corporation ("BCTC") Certificate of Public Convenience
and Necessity Application for the Vancouver Island Transmission
Reinforcement Project, 20 pages, November 10, 2005.
- [8] 92 **Havas, M.** 2005. *Response to BCUC (British Columbia Utilities* ET
Commission) information request to TRAHVOL, British Columbia
Transmission Corporation ("BCTC") Certificate of Public Convenience
and Necessity Application for the Vancouver Island Transmission
Reinforcement Project, 5 pages, November 7, 2005.
- 91 **Havas, M.** 2005. *Studies point to concerns about radiation from towers.* P
Salisbury Post, Salisbury, NC, October 20, 2005.

- 90 **Havas, M.** *Tsawwassen Residents Against Higher Voltage Overhead Lines (TRAHVOL)*, British Columbia Transmission Corporation (“BCTC”) Certificate of Public Convenience and Necessity Application for the Vancouver Island Transmission Reinforcement Project, Expert Testimony, October 17, 2005. ET
- 89 **Havas, M.** *Health Effects Associated with Radio Frequency Radiation.* Quasi-Judicial Hearing for Z-01-05, Mt. Ulla FM Transmitter. Salisbury, North Carolina, October 13, 2005. ET
- 88 Stetzer, D. and **M. Havas.** High frequency electrical pollution in the homes of residents in South Bend, Mishawaka and Roseland Indiana, Mary 2005. 5 pages plus waveforms. T
- 87 IAFF, Position on the Health Effects from Radio Frequency/Microwave (RF/MW) Radiation in Fire Department Facilities from Base Stations for Antennas and Towers for the Conduction of Cell Phone Transmissions. International Association of Fire Fighters, Division of Occupational Health, Safety and Medicine. 29 pp, March 2005. [**M Havas** contributed to this report] T
- 86 **Havas, M.** Letter: Office of the Secretary, Federal Communication Commission, Washington DC, Proceeding WT Docket No. 04-356 and 02-353. 3 pages, January 24, 2005. L
- 2004 85 **Havas, M.** 2004. *Putting Cell Phone Antennas near schools is too risky.* Washington Post, Fairfax, December 30, 2004, page VA10. P
- [9] 84 **Havas, M.** 2004. *Don't put cell towers on school property.* Northern Virginia Journal, November 16, 2004, page 12. P
- 83 **Havas, M.** and D. Stetzer. *Dirty electricity and electrical hypersensitivity: Five case studies.* World Health Organization Workshop on Electricity Hypersensitivity, Prague, Czech Republic, 25-26 October, 2004. NR
- 82 **Havas, M.,** S. Shum, and R. Dhalla. *Passenger exposure to magnetic fields on go-trains and on buses, streetcars, and subways run by the Toronto Transit Commission, Toronto, Canada.* Biological Effects of EMFs, 3rd International Workshop, Kos, Greece, 4-8 October, 2004, pp.1065-1071. NR
- 81 **Havas, M** and J. Mackay. *Street level magnetic fields within the City of Kingston, Ontario, Canada.* Biological Effects of EMFs, 3rd International Workshop, Kos, Greece, 4-8 October, 2004, pp. 318-325. NR
- 80 **Havas, M.,** M. Illiatovitch, and C. Proctor. *Teacher and student response to the removal of dirty electricity by the Graham/Stetzer filter at Willow Wood School in Toronto, Canada.* Biological Effects of EMFs, 3rd International Workshop, Kos, Greece, 4-8 October, 2004, pp. 311-317. NR

- 79 **Havas, M.** and D. Stetzer. *Graham/Stetzer filters improve power quality in homes and schools, reduce blood sugar levels in diabetics, multiple sclerosis symptoms, and headaches.* International Scientific Conference on Childhood Leukaemia, London, 6th-10th September, 2004. NR
- 78 **Havas, M.** *Biological Effects of Low Frequency Electric and Magnetic Fields.* Derek Clements-Croome (Ed.). 2002. Electromagnetism and Health, Taylor & Francis Books, Ltd., London, England. 25 pp. C
- 77 **Havas, M.** *Cleaner power keeps schools healthy.* View from Trent, Peterborough Examiner, Peterborough, ON, February 12, 2004 P
- 2003 76 **Havas, M.** *Health Effects Associated with Power Lines.* Expert Testimony presented at Sumas 2 Hearing in Abbotsford B.C. July 2003. ET
- 2002 75 Woodfine, D.G., **M. Havas,** and J. Acreman. 2002. *Nickel and copper tolerance of phytoplankton isolated from a recovering lake near Sudbury, Canada.* Geochemistry, Exploration, Environment, Analysis, Vol. 2 203-207 R
- [6] 74 **Havas, M.** *Intensity of Electric and Magnetic Fields from Power Lines within the Business District of Sixty Ontario Communities.* Science of the Total Environment 298:183-206. R
- 73 **Havas, M.** *Cell phone headaches, cell tower blues.* View from Trent, Peterborough Examiner, August 9, 2002. P
- 72 **Havas, M.** *Wired and Wireless Energy. An overview of health concerns and a call for action.* Presented to the Environmental Committee on Sustainable Development. House of Commons, Ottawa, ON. May 21, 2002 ET
- 71 **Havas, M.** *Corporate support can weaken foundation.* View from Trent, Peterborough Examiner, April 12, 2002. P
- 70 **Havas, M.** *Children at risk in hospital from transformer magnetic fields.* The Act, Australia. P
- 2001 69 **Havas, M.** Review of Expert Document *The Workshop Report: Review of Electric and Magnetic Fields (EMFs)*, produced by the Manitoba Clean Environment Commission, March 2001., Winnipeg, Manitoba, letter September 2001. ET
- [5] 68 **Havas, M.** *Electricity's role in cancer an eye opener.* View from Trent, Peterborough Examiner, October 12, 2001 P
- 67 **Havas, M.** *Electromagnetic fields linked to childhood cancer according to two new studies.* View from Trent, Peterborough Examiner, March 9, 2001 P
- 66 **Havas, M.** *Rebuttle, Peter Valberg,* Mendota Heights, Public Hearing on Transmission Lines, April 2001. ET

- 65 **Havas, M.** *Expert Testimony, Xcel Energy*, Mendota Heights, Public Hearing on Transmission Lines, April 2001. ET
- 2000 64 **Havas, M.** and D. Hanna. *Magnetic Fields in Peterborough Schools: the findings and strategies to reduce exposure*. Presented to the Peterborough-Kawartha-Pine Ridge School Board, Health and Safety Committee, October 2000. T
- [4] 63 **Havas, M.** Biological effects of non-ionizing electromagnetic energy: A critical review of the reports by the US National Research Council and the US National Institute of Environmental Health Sciences as they relate to the broad realm of EMF bioeffects. *Environmental Reviews* 8:173-253. R
- 62 **Havas, M.** Valley of Desolation, no vacation paradise. View from Trent, Peterborough Examiner, July 28, 2000. P
- 61 Woodfine, D.G., R. Seth, D. Mackay, and **M. Havas**. Simulating the response of metal contaminated lakes to reductions in atmospheric loading using a modified QWASI model. *Chemosphere* 41:1377-1388. R
- 1999 60 **Havas, M.** People learn in different ways. How do you learn? Answer in simple test. View from Trent, Peterborough Examiner, August 27 1999 P
- 1998 59 **Havas, M.** Prof takes aim at academic stereotype. View from Trent, Peterborough Examiner, November 27, 1998. P
- 1997 58 **Havas, M.** 1997 Survey on Great Lakes Emerging Issues. Great Lakes Science Advisory Board Workgroup on Emerging Issues. International Joint Commission, May 29, 1997. T
- 1996 57 **Havas, M.** Environmental Education: Changing Role of Canadian Universities. P.K. Jha (editor). *Environment and Biodiversity in the Context of South Asia: Proceedings of the Regional Conference on Environment and Biodiversity*, March 7-9, 1994. C
- [2] 56 **Havas, M.** University Accountability. View from Trent, Peterborough Examiner, April 1996 P
- 1995 55 **Havas, M.,** D.G. Woodfine, P. Lutz, K. Yung, H.J. MacIsaac, and T.C. Hutchinson. Biological Recovery of Two Previously Acidified, Metal-Contaminated Lakes near Sudbury Ontario, Canada. *Water, Air and Soil Pollut.* 85(2): 791-796 R
- [7] 54 **Havas, M.** and B. Rosseland. Response of Zooplankton, Benthos, and Fishes to Acidification: An Overview. [Invited Paper] *Water, Air and Soil Pollut.* 85(1): 51-62. R
- 53 **Havas, M.** and E. Advokaat. Can Sodium Regulation be used to Predict the Relative Acid-Sensitivity of Various Life-stages and Different Species of Aquatic Fauna? *Water, Air and Soil Pollut.* 85(2): 865-870. R

- 52 Woodfine, D.G. and **M. Havas**. Pathways of Chemical Recovery in Acidified, Metal-Contaminated Lakes near Sudbury, Ontario, Canada. *Water, Air and Soil Pollut.* 8 797-803. R
- 51 Regoczei, S. and **M. Havas**. Group Problem Solving: If we could save the earth, how would that be done? *Proc. 4th Can. Conf. on Foundations and Applications of General Science Theory. Knowledge Tools for a Sustainable Civilization.* Ryerson Polytechnical University, Toronto, June 8-10, 1995, 9 pp NR
- 50 Loney, R.K., P. Northrop, and **M. Havas**. *Enviro Mystery Revisited.* Eighth Instructional Show & Tell for Ontario Universities and Colleges, May 29, 1995, University of Guelph, Guelph, Ontario. NR
- 49 **Havas, M.** Aluminum. In: Paehlke, R. (Ed.) *Environmental Review* NR
- 1994 48 **Havas, M.** Recovery and Rehabilitation of Large-Scale Ecosystems: Rapporteurs Report. In: Rapport, D. and P. Calow. *Evaluating and Monitoring the Health of Large-Scale Ecosystems, NATO Advanced Research Workshop, Chateau Montebello, Quebec, Canada, October 10-15, 1993, 10 pages.* R
- [3] 47 Brakke, D., J.P. Baker, J. Bohmer, A Hartmann, **M Havas**, A. Jenkins, C. Kelly, S.J. Ormerod, T. Paces, R Putz, B.O. Rosseland, D. Schindler, and H. Segner. How does Acidification affect Biota and What are the influences of Biota on the Process of Acidification? In: *Dahlem Workshop on Acidification of Freshwater Ecosystems, Berlin, September 27 to October 2, 1992.* R
- 46 Hutchinson, T.C. and **M. Havas**. Chapter 22. Ecological Impacts of Acid Deposition on Natural Ecosystems. In: Calvert, J. (Ed.) *The Chemistry of the Atmosphere: Its Impact on Global Change, American Chemical Society, pp. 297-315.* C
- 1993 45 Woodfine, D.G., D. Mackay, and **M. Havas**. Using QWASI Model to Predict Fate of Copper and Nickel in Two Metal Contaminated Lakes near Coniston, Ontario. In: Nriagu, J.O. and R.J. Allan (eds.), *International Conference, Heavy Metals in the Environment (Vol.2), Toronto, September 1993, pp 379-382.* NR
- [3] 44 **Havas, M.** OMB Hearing regarding Eutrophication of the Indian River, Township of Dummer, Warsaw, Ontario, December 6, 1993. L
- 43 **Havas, M.** Environmental Education: Changing Role of the University. *Seminario Internacional Sobre El Ambiente, Toluca de Lerdo, Estado de Mexico, February 22-25, 1993, 16 pp.* NR
- 1992 42 **Havas, M.** (Ed.) *Packaging, KEYnotes 2(2): 16 pp* [these newsletters are distributed to every school in Canada, approximately 15,000 copies]. R

- [2] 41 **Havas, M.** (Ed.), Feeding the World's Population, Part 1: Distribution of Food, *KEYnotes* 2(1): 16 pp. R
- 1991 40 **Havas, M.** (Ed.), Environmental Report Card, *KEYnotes* 1(2): 12 pp. R
- 1990 39 **Havas, M.** Recovery of Acidified and Metal-Contaminated Lakes in Canada. In: Norton, S.A., S.E. Lindberg, and A.L. Page (Eds.), *Advances in Environmental Science, Acid Precipitation Series, Volume 4, Soils, Aquatic Processes and Lake Acidification*, Springer-Verlag, N.Y., pp. 187-205 C
- [5] 38 **Havas, M.** 1990. Chemical Indicators. *Environmental Monitoring and Assessment* 15:287. R
- 37 Stokes, P., **M Havas**, and T. Brydges. 1990. Public participation and volunteer help in monitoring programs: An assessment. *Environmental Monitoring and Assessment* 15:225-229. R
- 36 Creed, I.F., **M. Havas**, and C.G. Trick. 1990. Effects of arsenate on the growth of nitrogen- and phosphorus-limited *Chlorella vulgaris* (Chlorophyceae) isolates. *J. Phycology* 26(6): R
- 35 Loney, R.K. and **M. Havas**. *Enviro Mystery: An Educational Computer Game*, Third Instructional Show & Tell for Ontario Universities and Colleges, May 29-29, 1990, University of Guelph, Guelph, Ontario. NR
- 1989 34 **Havas, M.** The State of Our Forests. Harrowsmith, December. P
- [4] 33 **Havas, M.** Teeside and Uttersville, *Uxbridge Times Journal*, Uxbridge, Ontario. P
- 33 Creed, I.F., **M. Havas**, and C.G. Trick. 1989. The influence of nutrient status on the metabolism of arsenic by *Chlorella vulgaris* isolates. *Annu. Meet. of the Phycological Soc. of America*, Toronto, Ont. (Canada), 6-10 Aug 1989, *Journal of Phychology*. A
- 32 **Havas, M.** A Tale of Two Towns, Back Forty, Lindsay, Ontario. P
- 1988 31 **Havas, M.** and T.C. Hutchinson. *Tree Watch: Questionnaire on Tree Decline in Canada*. Harrowsmith, August. P
- [4] 30 **Havas, M.**, T. Pajos, R. Loney, and V. Timmer. Effect of Aluminum, Drought and Low pH on Sugar Maple Seedlings, Ontario Ministry of the Environment, Final Report. G
- 29 **Havas, M.**, R. Loney, M.G. Scott, and T.C. Hutchinson. Needle Chemistry as an Early Warning Indicator of Decline in Balsam Fir, Red Spruce, and Norway Spruce. *Forest Decline Symposium*, October 20-21, 1988, Rochester, N.Y. A
- 28 Loney, R. and **M. Havas**. Influence of Climate and Air Pollution on Decline of Sugar Maple in Eastern North America. *Forest Decline Symposium*, October 20-21, 1988, Rochester, N.Y. A

- 1987 27 **Havas, M.** and T.C. Hutchinson. Aquatic Macrophytes as Bioindicators of Metal Pollution, Smoking Hills, N.W.T., Intern. Conf. Heavy Metals. September, 1987, New Orleans. NR
- [3] 26 **Havas, M.** Does hemoglobin enhance the acid-tolerance of *Daphnia*? Anns. Soc. R. Zool. Belg. 117, 151-164. NR
- 25 Creed, I.F., **M. Havas**, and C.G. Trick. 1987. Mechanisms of arsenate tolerance in the green alga, *Chlorella vulgaris*. Abstract. American Society for Limnology and Oceanography, University of Wisconsin-Madison, Madison, Wisconsin, June 14-18, 1987 A
- 1986 24 **Havas, M.** A hematoxylin staining technique to locate sites of aluminum binding in aquatic plants and animals. Water, Air, and Soil Pollution 30:735-741. R
- [7] 23 Hutchinson, T.C. and **M. Havas**. Recovery of previously acidified lakes near Coniston, Canada following reductions in atmospheric sulphur and metal emissions. Water, Air, and Soil Pollution 28:319-333. R
- 22 **Havas, M.** Effects of acid deposition on aquatic ecosystems. In: Stern, A. (Ed.), Air Pollution, Volume VI, Academic Press, pp 351-389. C
- 21 **Havas, M.** Aluminum chemistry of inland waters. In: **Havas, M.** and J.F. Jaworski (Eds.), Aluminum in the Canadian Environment, National Research Council of Canada, Associate Committee on Scientific Criteria for Environmental Quality, pp 51-77. C
- 20 **Havas, M.** Effects of aluminum on aquatic biota. In: **Havas, M.** and J. F. Jaworski (Eds.), Aluminum in the Canadian Environment, National Research Council of Canada, Associate Committee on Scientific Criteria for Environmental Quality, pp 79-127. C
- 19 **Havas, M.** Groundwater quality and acid-sensitivity in south-central Ontario. Contract No. 1325, Health and Welfare Canada, 176 pp. G
- 18 **Havas, M.** and G.E. Likens. Aluminum uptake and toxicity to *Daphnia magna* in soft water at low pH. In: Geen, G.H. and K.L. Woodward (Eds.), Proceedings of the Eleventh Annual Aquatic Toxicity Workshop, November 13-15, 1984, Vancouver, B.C., pp 71. A
- 1985 17 **Havas, M.** and G.E. Likens. Toxicity of aluminum and hydrogen ions to *Daphnia catawba*, *Holopedium gibberum*, *Chaoborus punctipennis*, and *Chironomus anthrocinus* from Mirror Lake, New Hampshire. Can. J. Zool. 63:1114-1119. R
- [6] 16 **Havas, M.** Aluminum bioaccumulation and toxicity to *Daphnia magna* (Straus) in soft water at low pH. Can. J. Fish. Aquat. Sci. Can. J. Fish. Aquat. Sci. 42:1741-1748. R

- 15 **Havas, M.** and G.E. Likens. Effects of aluminum on sodium regulation by *Daphnia magna* at low pH in soft water. Proc. Nat. Acad. Sci. 82:7345-7349. R
- 14 **Havas, M.** and D.W.H. Walton. Fate and transport of radionuclides in freshwater ecosystems. In: Harwell, M.A. and T.C. Hutchinson, *The Environmental Consequences of Nuclear War*. Volume II, J. Wiley & Sons Ltd., Chichester, pp 3-50 to 3-56. C
- 13 **Havas, M.,** T.C. Hutchinson, and G.E. Likens. 1985. Acid rain research. Environmental Science and Technology 19:4-26. L
- 12 **Havas, M.,** T.C. Hutchinson, and G.E. Likens. 1985. Comment on “Red Herrings in Acid Rain Research” Environmental Science and Technology 19:646-648. L
- 1984 11 **Havas, M.,** T.C. Hutchinson, and G.E. Likens. Red herrings in acid rain research. feature article Environmental Science and Technology 18:176A-186A. R
- [3] 10 **Havas, M.,** T.C. Hutchinson, and G.E. Likens. Effect of low pH on sodium regulation in two species of *Daphnia*. Can. J. Zool. 62:1965-1970. R
- 9 Contributed to: New Perspectives in Ecotoxicology, Levin, S.A. and K.D. Kimball (Eds.), Environmental Management 8:375-442. R
- 1983 8 **Havas, M.** and T.C. Hutchinson. The Smoking Hills: Natural acidification of an aquatic ecosystem. cover article Nature 301:23-27. R
- [2] 7 **Havas, M.** and T.C. Hutchinson. Effect of low pH on the chemical composition of aquatic invertebrates from tundra ponds at the Smoking Hills, N.W.T., Canada. Can. J. Zool. 61:241-249. R
- 1982 6 **Havas, M.** and T.C. Hutchinson. Aquatic invertebrates from the Smoking Hills, N.W.T.: Effect of pH and metals on mortality. Can. J. Fish. Aquatic Sci. 39:890-903. R
- [4] 5 Sheath, R.G., **M. Havas,** J.A. Hellebust, and T.C. Hutchinson. Effects of long-term natural acidification on algal communities of tundra ponds at the Smoking Hills, N.W.T., Canada. Can. J. Bot. 60:58-72. R
- 4 **Havas, M.** and T.C. Hutchinson. Long-term consequences of acidification: The Smoking Hills Study. In: Johnson, R.E. (Ed.), *Acid Rain/Fisheries*, Proc. Intern. Symp. on Acidic Precipitation and Fishery Impacts in Northeastern North America, Cornell University, Ithaca, N.Y., August 2-5, 1981, pp 352-353. A
- 3 Munn, R.E., D. Mackay, and **M. Havas.** Impacts of coal on natural environmental systems. In: Chadwich, M.J. and N. Lindman (Eds.), *Environmental Implications of Expanded Coal Utilization*, Pergamon Press, Oxford, pp 230-272. C

- 1981 2 **Havas, M.** Physiological response of aquatic animals to low pH. In: Singer, R. Ed.), Effects of Acidic Precipitation on Benthos, Proc. Symp. Acidic Precipitation on Benthos, 1980, North American Benthological Society, Hamilton, N.Y., pp 49-65. C
- 1978 1 Hutchinson, T.C.. W. Gizyn, **M. Havas**, and V. Zobens. Effects of long-term lignite burns on arctic ecosystems at the Smoking Hills, N.W.T. In: Hemphill, D.D. (Ed.), Trace Substances in Environmental Health XII:317-332. R
- BOOKS**
- 1989 3 Adriano, D.C. and **M. Havas** (Eds.), Advances in Environmental Sciences, Acid Precipitation Series, Volume 1: Case Studies. Springer-Verlag, N.Y. 330 pp. B
- 1986 2 **Havas, M.** and J. F. Jaworski (Eds.), Aluminum in the Canadian Environment, National Research Council of Canada, Associate Committee on Scientific Criteria for Environmental Quality, 331 pp. B
- 1980 1 Hutchinson, T.C. and **M. Havas** (Eds.), Effects of Acid Precipitation on Terrestrial Ecosystems. NATO Conference Series, Series 1, Ecology Vol 4, Plenum Press, N.Y. 654 pp. B

4. CONFERENCES/WORKSHOPS/LECTURES/INVITED TALKS

- 2006 131 Havas, M. 2006. *Electromagnetic Pollution and Your Health*. Bermuda, October 14, 2006.
- [18] 130 Havas, M. 2006. *Ground Current on Farms*. Guest Lecture: Ecological Agriculture, Trent University, Peterborough, ON, October 5, 2006.
- 129 Havas, M. 2006. Health Effects of Dirty Electricity. Dane County Chapter, Save Our Unique lands Coalition Against Electromagnetic Pollution, Pitchburg, Wisconsin, July 27, 2006.
- 128 Havas, M. 2006. Electromagnetic Pollution and Your health. Trent/Shad Valley Program, Trent University, Peterborough, ON July 6, 2006.
- 127 Havas, M. 2006. Electromagnetic Pollution and Electrical Hypersensitivity. American Society of Dowsers, Vermont, June 22, 2006.
- 126 Havas, M. 2006. Electromagnetic pollution: What can you do to have a cleaner environment and protect your health? Aurora, ON, June 14, 2006.
- 125 Havas, M. 2006. Health Effects of Dirty Electricity. Nassau, Bahamas, June 8, 2006.
- 124 Havas, M. 2006. Radio Frequency Antennas. Simcoe, Ontario, June 6, 2006.
- 123 Havas, M. 2006. Simcoe Cell Tower Rogers, Simcoe, ON. Public Meeting, Town Hall, April 19, 2006.

- 122 Havas, M. 2006. Part 2: No Place to Hide: Wireless Technology. Total Health Show, Toronto, ON, April 1, 2006.
- 121 Havas, M. 2006. Panel Discussion: Energy Medicine. Total Health Show, Toronto, ON, April 1, 2006.
- 120 Havas, M. 2006. Part 1: Electromagnetic Hygiene: Dirty Electricity in homes and schools. Total Health Show, Toronto, ON, April 1, 2006.
- 119 Havas, M. 2006. Biological Effects of Dirty Electricity with Emphasis on Diabetes and Multiple Sclerosis. Precautionary EMF Approach: Rationale, Legislation and Implementation, 5th ICEMS Internation Workshop, Benevento Italy, 22-25, 2006.
- 118 Havas, M. 2006. Biological Effects of Dirty Electricity. Peterborough Public Library, Peterborough, ON, February 16, 2006.
- 117 Havas, M. 2006. Electromagnetic Pollution: No place to hide! Markham ON, February 15, 2006.
- 116 Havas, M. 2006. Dirty Electricity, Electrical Hypersensitivity and your Health. Toronto, ON, February 13, 2006
- 115 Havas, M. 2006. Electromagnetic Pollution and Your Health. Sir Sanford Fleming College, Peterborough, ON, February 6, 2006.
- 114 Havas, M. 2006. Dirty Electricity, Diabetes and Multiple Sclerosis. Centre for Health Studies Research, Trent University, Peterborough, ON, January 25, 2006
- 2005 113 Havas, M. 2005. Electrical Pollution & the Need for Better Health Guidelines. Meeting with Belinda Stronach, **Aurora, Ontario**, December 14, 2005.
- [29] 112 Havas, M. 2005. Electromagnetic Sensitivity and Electromagnetic Pollution, Faculty of Medicine, University of Toronto, **Toronto, Ontario**, December 9, 2005.
- 111 Havas, M. 2005. *Dirty Electricity, what it is, what it does, and what we can do to protect ourselves*. Nutritionists Network Group Meeting, **Richmond Hill, Ontario**, November 15, 2005.
- 110 Havas, M. 2005. *Cell Tower Radiation and Fire Fighter Exposures*. Health and Safety for the Professional Fire Fighter, The IAFF John P. Redmond Foundation Symposium on the Occupational Health and Hazards of the Fire Service. **Honolulu Hawaii**, October 23-27, 2005.
- 109 Havas, M. 2005. Health and Safety Round Table Question Period, Health and Safety for the Professional Fire Fighter, The IAFF John P. Redmond Foundation Symposium on the Occupational Health and Hazards of the Fire Service. **Honolulu Hawaii**, October 23-27, 2005.
- 108 Havas, M. 2005. *Dirty Electricity, Diabetes, Multiple Sclerosis, Electrical Hypersensitivity and Sick Building Syndrome . . . Is there a connection?* Occupational Hygiene Association of Ontario, **Toronto**, October 20, 2005

- 107 Havas, M. 2005. *Electrical Pollution: No Place to Hide*. SWEEP, Safe Wireless Electromagnetic and Electrical Policy, Breast Cancer Research and Education Fund and the Niagara Healthy Environment Initiative, **St. Catharines, Ontario**, October 15, 2005.
- 106 Havas, M. 2005. *Radio Frequency Radiation and Adverse Biological Effects*. **Salisbury, North Carolina**, October 13, 2005.
- 105 Havas, M. 2005. *Earth Energy, Life Energy, and Techno Energy Interactions. How is electromagnetic Technology affecting Life on our Planet? It's a Shocker!* Toronto Dowers, Latvian Centre, Credit Union Drive, **Toronto**, October 11, 2005.
- 104 Havas, M. 2005. *Electromagnetic Pollution*. Ontario Ministry of Health, **Toronto**, September 20, 2005
- 103 Havas, M. 2005. *Health Effects of Dirty Electricity*. **Bermuda**, September 3, 2005.
- 102 Havas, M. 2005. *Radio Frequency Radiation: Cell Phone and Cell Towers*. **Bermuda**, September 3, 2005.
- 101 Havas, M. 2005. Cell Phones, Electricity and your Home. Trent-Shad Valley Program, Trent University, **Peterborough, Ontario**, July 18, 2005.
- 100 Havas, M. 2005. *Effects of Electrical Pollution and Radio Frequency Radiation*. STOP (Stop Transmission lines Over People), Parent Information Session, St. Justin Martyr Parish Hall, **Markham, Ontario**, June 20, 2005.
- 99 Havas, M. 2005. *Health Effects of Dirty Electricity*, Public Lecture, St. Johns Church, **Peterborough, Ontario**, June 16, 2005.
- 98 Havas, M. and A. Olstad. 2005. *Dirty Electricity Study at Fillmore-Central Elementary, Middle & High School*. **Minnesota**, June 2, 2005.
- 97 Havas, M. 2005. My research with Dirty Electricity. Dr. Tel-Ore, **Minneapolis Minnesota**, May 31, 2005.
- 96 Havas, M. 2005. *Electrical Pollution: A Serious Environmental Problem*. Breast Cancer Research and Education Fund and the Niagara Healthy Environment Initiative, **Port Dalhousie, Ontario**, April 30, 2005.
- 95 Havas, M. 2005. *Electrical Pollution in the Home*, Sir Sanford Fleming College, **Haliburton, Ontario**, April 29, 2005.
- 94 Havas, M. 2005. Dirty Electricity. United Church, **Peterborough, Ontario**, April 26, 2005.
- 93 Havas, M. 2005. *Electrical Pollution in the Home*. Healthy Buildings Conference, **Cambridge, Ontario**, April 6-7, 2005.
- 92 Havas, M. 2005. *Electrical Pollution: Part 1. Electromagnetic Fields*. Medical Officer of Health, **Newmarket, Ontario**, April 1, 2005

- 91 Havas, M. 2005. *Dirty Electricity and Graham/Stetzer Filters*. Naturopathic Doctors, **Peterborough, Ontario**. March 10, 2005.
- 90 Havas, M. 2005. *Electrical Pollution*. Deputy Minister of Rural Affairs, **Toronto, Ontario**, February 24, 2005.
- 89 Havas, M. 2005. *Electrical Pollution*. Task Force, **Markham, Ontario**, February 23, 2005.
- 88 Havas, M. 2005. *Environmental Contaminants and Health: Dirty Electricity and Electrical Hypersensitivity*. Sir Sanford Fleming College, **Peterborough, Ontario**, February 14, 2005.
- 87 Havas, M. 2005. *Health Effects of Dirty Electricity*. Bio Ag. Conference, **Wellesley, Ontario**, January 27, 2005.
- 86 Havas, M. 2005. *Health Effects of Dirty Electricity*. Barbados Radiation Conference, Sherbourne 2005. Conference Centre, **Barbados**, January 18, 2005.
- 85 Havas, M. 2005. *Radio Frequency Radiation: Cell Phone Antennas*, Barbados Radiation Conference, Sherbourne Conference Centre, **Barbados**, January 18, 2005.
- 2004 84 Havas, M. 2004. *Health Concerns Associated with Part 1. Radio Frequency Radiation, Part 2. Magnetic Fields (ELF), Part 3. Dirty Electricity*. Public Seminar, **Tobago**, November 20, 2004.
- [10] 83 Havas, M. and D. Stetzer. 2004. *Health Concerns Associated with Dirty Electricity and Power Frequency Fields*. Public Seminar, Port-of-Spain, **Trinidad**, November 17, 2004
- 82 Havas, M. 2004. *Health Concerns Associated with Radio Frequency Radiation*. Public Seminar, Port-of-Spain, **Trinidad**, November 17, 2004
- 81 Havas, M. 2004. *Dirty Electricity and Electrical Hypersensitivity (EHS): Five Case Studies*, Bio-Ag Conference, **Wellesley, Ontario**, November 10, 2004.
- 80 Havas, M. 2004. *Dirty Electricity and Multiple Sclerosis*, MS Society **Pickering, Ontario**, November 2, 2004.
- 79 Havas, M. 2004. *Dirty Electricity and Multiple Sclerosis*, MS Society **Oshawa, Ontario**, November 2, 2004.
- 78 Havas, M and J. Mackay. *Street level magnetic fields within the City of Kingston, Ontario, Canada*. Biological Effects of EMFs, 3rd International Workshop, Kos, **Greece**, 4-8 October, 2004.
- 77 Havas, M., M. Illiatovitch, and C. Proctor. *Teacher and student response to the removal of dirty electricity by the Graham/Stetzer filter at Willow Wood School in Toronto, Canada*. Biological Effects of EMFs, 3rd International Workshop, Kos, **Greece**, 4-8 October, 2004.

- 76 Havas, M. and D. Stetzer. 2004. *Graham/Stetzer Filters Improve Power Quality in Homes and Schools, Reduce Blood Sugar Levels in Diabetics, Multiple Sclerosis Symptoms, and Headaches*. Children with Leukemia International Conference in **Westminster, London**, September 6-10, 2004.
- 75 Havas, M. 2004. *Wireless Communication Antennas on Fire Halls: Dumb and Dangerous!* International Association of Fire Fighters Conference, **Boston**, August 2004.
- 2003 74 Havas, M. *Health Effects Associated with Power Lines*. Expert Testimony. National Energy Board Hearing regarding Sumas Energy, **Abbotsford, BC**, July 2003
- 2002 73 Havas, M. National Research Policy Conference, Ottawa, ON., October 22-25, 2002
- [15] 72 Havas, M. *Cell Phone Towers and their Biological Effects*. Behind the Scenes, Trent University, **Peterborough, Ontario**, October 19, 2002
- 71 Havas, M. *Electromagnetic Fields in Schools: What can be done to reduce exposure*. Health and Safety Conference, **Toronto, Ontario**, August 15, 2002.
- 70 Havas, M. *How to reduce your exposure to wired and wireless electromagnetic energy*. Invited Speaker, Presented at People and the Planet Conference, Sierra Club of Canada, Queen's University, **Kingston, Ontario**, June 3-9, 2002
- 69 Havas, M. Health Concerns Associated with Wireless Telecommunication.. Invited Speaker, Public Lecture, Caledonia, PEI, May 29, 2002.
- 68 Havas, M. *Mapping Magnetic Fields in the School Environment*. **Guelph Ontario**, May 24, 2002
- 67 *Electromagnetic fields (EMF) and Electromagnetic Radiation (EMR): An overview of Health Concerns and a Call for Action*. Presented to the Standing Committee on Environment and Sustainability, **Parliament Hill, Ottawa, Ontario**, May 21, 2002
- 66 Havas, M. *Biological Effects of Low Frequency Electromagnetic Fields*, **London, England**, May 16-17, 2002
- 65 Lund-Lucas, E., R. Silvestri, M. Havas, D.J. Cunningham, and L. Thomas. 2002. Everything students should know about Thinking and Learning. Destination Success 2002: Building Accessible Learning Communities, Sponsored by Learning Opportunities Task Force, Ministry of Training, Colleges & Universities, Government of Ontario & Georgian College; **Barrie, Ontario**, May 6 & 7, 2002.
- 64 Havas, M. *Electromagnetic Fields in a School Environment, the Need for Mapping*. Presented to School Health and Safety Officers, **Mississauga, Ontario**, May 3, 2002.
- 63 Havas, M. *Sources of electromagnetic fields in the home*. Presented to Environmental Homes, **Grand Valley, Ontario**, April 27, 2002.

- 62 Havas, M. *Corporatization of the University*, Smith Conference Room, Trent University, **Peterborough, Ontario**, April 6th.
- 61 Havas, M. *Electromagnetic fields in the home and childhood cancers: An overview from Wertheimer to Wartenberg*. Presented at the International Centre for Electromagnetic Biocompatibility (ICEB) Conference, **Montreal, Canada**, March 6-8, 2002
- 60 Havas, M. Rapporteur, Simply Water? Workshop, Trent University, **Peterborough, Ontario**, February 18-20, 2002
- 59 Havas, M. Expert Testimony on the health effects of power line electromagnetic fields. Mendota Heights, Public Meeting, Planning Commission, **Minnesota**, January 2002.
- 2001 58 Havas, M. *Electromagnetic fields and breast cancer*. Eyes Wide Open, Conference on Breast Cancer, **Peterborough, Ontario**. October 2001.
- 2000 57 Havas, M. Toronto Round Table on Cell Phone Towers, RFR, Public Meeting with Panel Discussion, City of Toronto Department of Health, **Toronto, Ontario**, February 7, 2000
- 56 Havas, M. Expert Testimony of the Biological Effects of Power Line electromagnetic fields, **Mendota Heights, Minnesota**, Public Meeting, January 15?, 2000.
- 1999 55 Havas, M. Power lines on London Street Peterborough and the Literature on Health Effects. Presented to the PUC, **Peterborough, Ontario**, June 22, 1999.
- 1995 54 POSTER: Acid Reign '95 Conference, **Gothenburg, Sweden**, June 1995. 1) Can Sodium Regulation be used to Predict Relative Acid Sensitivity of Aquatic Fauna?; 2) Biological Recovery in Two Previously Acidified, Metal-Contaminated Lakes, near Sudbury, Ontario, Canada; 3) Chemical Response of Two Previously Acidified, Metal-Contaminated Lakes, near Sudbury, Ontario, Canada.
- [3] 53 PLENARY SPEAKER: Acid Reign '95 Conference, **Gothenburg, Sweden**, June 1995.
- 52 LECTURE: at the KEY Workshop on Biodiversity in Ontario, August 1995. Solving Environmental Problems: A framework.
- 1994 51 INVITED SPEAKER: conference in **Kathmandu, Nepal**, March 1994. Environmental Education in Developing Countries.
- [4] 50 LECTURE: at the KEY Workshop on Chemicals in the Environment, **Regina**, July 1994. Environmental Science and Decision Making
- 49 LECTURE: at the KEY Workshop on Biodiversity, **Ontario**, August 1994. Solving Environmental Problems: A framework.
- 48 PARTICIPANT: First International Symposium on Ecosystem Health and Medicine: Integrating Science, Policy and Management. **Ottawa, Ontario**, June 19-23, 1994.

- 1993 47 PARTICIPANT: Evaluating and Monitoring the Health of Large-Scale Ecosystems, NATO Advanced Research Workshop, **Montebello, Quebec**, October 10-15, 1993.
- [4] 46 POSTER: International Conference on Heavy Metals in the Environment, in **Toronto**, September 1993.
- 45 LECTURES: at the KEY Workshop on Chemicals in the Environment, Regina June 1993, **Sarnia** August 1993; 1) DDD: A Case Study; 2) Environmental Decision Making; 3) Solving Environmental Problems: A framework.
- 44 INVITED SPEAKER: conference in **Toluca, Mexico**, February, 1993.
- 1992 43 LECTURES: at the KEY Workshop on Chemicals in the Environment, **Regina** July 1992, **Sarnia** August 1992.
- 42 LECTURES: at the KEY Workshop on Chemicals in the Environment, **Regina** July 1992, **Sarnia** August 1992; 1) DDD: A Case Study; 2) Environmental Decision Making; 3) Solving Environmental Problems: A framework.
- 1991 41 LECTURES: at the KEY Workshop on Chemicals in the Environment, August 16-25, 1991. 1) View of Environmental Issues from a Scientist's Perspective; 2) DDD: A Case Study
- 1990 40 SEMINAR: "Science Reporting and Journalism", Campbellford District High School, Your Science Future, **Cambellford, Ontario**, November 14, 1990.
- [4] 39 LECTURES/DISCUSSIONS: at the KEY (formerly SEEDS) Workshop on Chemicals in the Environment, August 18-25, **Mississauga, Ontario**, 1) Environmental Problems: An Overview; 2) Acid Rain: An Historical Perspective; 3) DDD: A Case Study; 4) Agricultural Practices: synthetic vs organic chemicals
- 38 CONFERENCE PRESENTATION: Enviro Mystery: An Educational Computer Game, Third International Show & Tell for Ontario Universities and Colleges, May 28-29, 1990, oral presentation and computer demonstration, with Robert Loney; **Guelph Ontario**.
- 37 SEMINAR: Scientific Research in the Canadian Arctic, Science Day, Trent University, **Peterborough, Ontario**, April 10, 1990.
- 1989 36 LECTURE: Science in the Canadian Artic. Environmental and Resource Studies, Trent University, **Peterborough, Ontario**, July 1989.
- [3] 35 LECTURES: at the SEEDS Workshop on Chemicals in the Environment, August 5-12, **Kingston, Ontario**, 1) Acid Rain: An Overview; 2) DDD: A Case Study
- 34 TELEVISION INTERVIEW (TVO): Panel Discussion on Sustainable Development, **Toronto, Ontario**. May 1989.
- 1988 33 POSTER PRESENTATION: Needle Chemistry as an Early Warning Indicator of Decline in Balsam Fir, Red Spruce, and Norway Spruce. Forest Decline Symposium, October 20-21, 1988, **Rochester, N.Y.** (with R. Loney, M. Scott, and T.C. Hutchinson)
- [4] 32 POSTER PRESENTATION: Influence of Climate and Air Pollution on Decline of Sugar Maple in Eastern North America. Forest Decline Symposium, October 20-21, 1988, **Rochester, N.Y.** (with R. Loney)

- 31 THREE LECTURES: at the SEEDS Workshop on Chemicals in the Environment, August 12-21, 1988, **Sarnia, Ontario**. 1) Chlorinated Hydrocarbons-Friend or Foe? A Case Study; 2) Principles of Chemistry as they Pertain to the Environment; 3) Principles of Ecology as they Pertain to Chemicals in the Environment
- 30 INVITED LECTURE: Later Life Learning: "Scientific Developments and Inventions at the University of Toronto, Topic was "Acid Rain in the Canadian Artic", March 10, 1988, Innis College, U of T, **Toronto, Ontario**.
- 1987 29 ORAL PRESENTATION: Can Aquatic Mosses and Macrophytes be used as Bioindicators of Metal Pollution? Intern. Conf. Heavy Metals. September, 1987, **New Orleans**.
- [5] 28 LECTURE: Use of DDD in Clear Lake-a Case Study. SEEDS Workshop on Chemicals in the Environment, August, 1988, **Sarnia, Ontario**
- 27 LECTURE: Science Careers for Women. Open Doors for Tomorrow, Peel's Career Conference for young women, Glenforest Secondary School, **Peel County, Ontario** May 9.
- 26 ORAL PRESENTATION: Does hemoglobin enhance the acid tolerance of aquatic invertebrates? International Symposium on Ecophysiology of Acid Stress in Aquatic Organisms, Jan 13-16, 1987, **Antwerp, Belgium**.
- 25 ORAL PRESENTATION: Effects of calcium and pH on aluminum toxicity and bioaccumulation by *Daphnia magna*. International Symposium on Ecophysiology of Acid Stress in Aquatic Organisms, Jan 13-16, 1987, **Antwerp, Belgium**.
- 1986 24 ORAL PRESENTATION: Chemical recovery of 2 lakes near Coniston, Ontario. SLANT/TRESLA meeting, April 11-13, 1986, **Peterborough, Ontario**.
- [3] 23 SEMINAR: Aluminum toxicity in aquatic invertebrates, Department of Biology, Trent University, **Peterborough, Ontario**, February 28, 1986.
- 22 ORAL PRESENTATION: Aluminum toxicity and salt regulation in aquatic invertebrates, Society of Canadian Limnologists (SCL), Conference held in **Ottawa, Ontario**, January 7 & 8, 1986.
- 1985 21 POSTER PRESENTATION: "Aluminum localization in aquatic plants and animals", **Muskoka** Acid Rain Conference, Sept 15-20, 1985.
- [5] 20 POSTER PRESENTATION: "Recovery of acidic metal-contaminated lakes near Coniston Ontario", with T.C. Hutchinson, **Muskoka** Acid Rain Conference, Sept 15-20, 1985.
- 19 SEMINAR: "Aluminum toxicity, uptake and localization in aquatic invertebrates", Department of Biology, McMaster University, **Hamilton, Ontario**, August 29, 1985
- 18 PARTICIPANT: Impact of Nuclear Winter on Natural Ecosystems, Workshop, SCOPE, **Toronto**, March 1985.
- 17 ORAL PRESENTATION: "Does hemoglobin enhance acid tolerance of aquatic invertebrates?", SLANT/TRESLA Conference, **Quebec**, April 12-15, 1985.
- 1984 16 ORAL PRESENTATION: "Aluminum uptake and toxicity to Daphnia magna at low pH in soft water." 11th Annual Aquatic Toxicity Workshop, **Vancouver, B.C.**, November 13-15.

- [3] 15 INVITED SPEAKER: Physiological effects of acidity and associated water chemistry (aluminum) on freshwater invertebrates Department of Biology, Dalhousie University, **Halifax, Nova Scotia**, October 18.
- 14 INVITED SPEAKER: Acid rain and the future of Ontario Lakes Dallington Public School, **Toronto**, Ontario, April.
- 1983 13 INVITED SPEAKER: Natural and Manmade Acid Rain Audubon Society, Darien, **Connecticut**, U.S.A., February 3.
- [2] 12 INVITED SPEAKER: Aluminum toxicity to aquatic invertebrates Norwegian Institute for Water Research, **Oslo, Norway**, May.
- 1982 11 INVITED SPEAKER: Causes of Acid Rain and Acid Deposition Conference on Acid Rain, Pennsylvania Environmental Council, 14th Annual Meeting, Lock Haven State College, , **Pennsylvania**, October 21.
- [4] 10 INVITED SPEAKER: Effects of acid rain on aquatic animals Acid Rain Effects Workshop, JASON MITRE Corporation, Cornell University, **Ithaca, N.Y.**, Sept 30 to Oct. 1.
- 9 LECTURES: Neutron Activation Analysis as an Analytical Tool. Section of Ecology and Systematics, Cornell University, **Ithaca, N.Y.**
- 8 LECTURE: Response of aquatic invertebrates to acidification Aquatic Entomology Course, Cornell University, **Ithaca, N.Y.**
- 1981 7 PARTICIPANT: Ecotoxicology Workshop, Ecosystem Research Center, Cornell University, **Ithaca, N.Y.**, November 2-5.
- [5] 6 POSTER PRESENTATION: Acid/Rain Fisheries Symposium, Northeastern Division of the American Fisheries Society, Cornell University, **Ithaca, N.Y.**, August 2-5.
- 5 SEMINAR: The Smoking Hills and Sudbury: Two case studies Department of Biology, State University of New York College, **Cortland, N.Y.**, April
- 4 SEMINAR: Does hemoglobin reduce acid-stress of *Daphnia magna*? Entomology Seminar, Cornell University, **Ithaca, N.Y.**, March.
- 3 SEMINAR: Extreme acidification at the Smoking Hills: Chemical and Biological Consequences Section of Ecology and Systematics, Cornell University, **Ithaca, N.Y.**, February.
- 1980 2 PARTICIPANT: Effects of sulphur and nitrogen oxides on plants International Workshop on Environmental Implications and Strategies for Expanded Coal Utilization, UNEP/Beijer Institute, **Moscow, USSR**, October 20-24.
- [2] 1 SEMINAR: Toxicity of metals at low pH to aquatic invertebrates Department of Botany, University of Toronto, **Toronto**.

5. INTERVIEWS: TV, RADIO, NEWSPAPER (*incomplete*)

- 2006 **Ode Magazine** with Kim Ridley, Dirty electricity and Diabetes. phone interview August 21, 2006.
- Reuters News Paper**, phone interview, July 10, 2006.

Chatelaine Magazine, Interview, with Maureen, May 4, 2006.

Magzine Interview, Greek Magazine with Christina, April 18, 2006.

Book Interview with Jeffrey Fawcett, phone interview, California, June 28, 2006.

World Tonight, CHQR, Radio Interview, 20 minutes. April 3, 2006.

Radio Interview 95.7 FM, Halifax, 1 hour interview with Bill Carr. April 3, 2006.

Radio News 940, Radio Interview, Montreal, April 5, 2006.

CBC Radio with Roman in Montreal, phone interview, March 30, 2006.

Canada AM, CTV, Toronto, ON, March 29, 2006.

Globe and Mail, Martin Middlestat, Does Power Corrupt. interview February 14 for article March 28, 2006.

Global News, Cell Antennas and Electrical Hypersensitivity, Neil McCartney, Toronto, Ontario, January 29th, 2006.

Wisconsin Public Radio, WiFi in the City of Milwaukee and possible health implications. January 26, 2006.

2005 Newspaper interview, **The Barbados Advocate**, *Radiation Risks*, Renee Taylor, January 19, 2005

TV interview, *Dirty Electricity*, Barbados, January 17, 2005.

Newspaper Interview, *Dirty Electricity*, Barbados, January 14, 2005.

Insight with Pam Macdonald, *Transmission Lines*, Rogers Cable, Newmarket, April 6 2005

CBC NFL Radio interview, Transformers and cancer. April 15, 2005.

Vancouver Sun, Newspaper interview, Karen Gram, *Dirty Electricity*, March 8, 2005,

Vancouver Sun, Newspaper interview, Karen Gram, *Health Effects of EMFs*, May 1, 2005,

The Power Hour Radio interview, *Electromagnetic Pollution*, May 4, 2005.

Insight with Pam Macdonald, *Ground Current*, Rogers Cable, Newmarket, April 11 2005

Insight with Pam Macdonald, *Dirty Electricity*, Rogers Cable, Newmarket, June 15 2005.

CKVR TV News, *Transmission Lines*, Markham, Ontario, June 20. 2005.

Toronto Star Interview with Tyler Hamilton, *Cell Phones*, July 12, 2005.

Alive Magazine interview, August 1, 2005.

Insight with Pam Macdonald, Rogers Cable, Newmarket, October 2005.

Toronto Star, Interview with Tyler Hamilton, *Distress Signals*, November 11, 2005.

Wisconsin Public Radio, Ben Merens, Interview on *Electronic Pollution* with Dave Stetzer and Magda Havas, December 12, 2005, 5-6 pm.

Fitchburg Star, Newspaper Interview with Kurt Gutknecht, *Is "dirty electricity" making you sick?* December 29, 2005, Vol. 30, No. 21.

2004 **Patrick Timpone Show**, Radio interview with Patrick Timpone, *Electrical Pollution*, Austin, Texas, August 7, 2004.

Newspaper interview, *Dirty Electricity*, Bangor Wisconsin, September 1, 2004,

Radio interview, phone-in show, 3 hours, *Electromagnetic Pollution you're your Health*, Trinidad, November 17, 2004.

Newspaper Interview, Trinidad, November 18, 2004.

Jackson County Chronicle, Ken Luchterhand, Newspaper Interview, *Testing the Current: Researchers look into the affects of electrical pollution on human health*. Wisconsin, November 23, 2004.

2001 **Toronto Star** Interview with Cameron Smith, *Electromagnetic Fields in 60 Communities*, September 1, 2001.

6. COURSES

First Year Courses:

- INTRODUCTION TO ENVIRONMENTAL ISSUES, science course for 1st year undergraduate students, 1989-2004. Team taught. (Course coordinator 1991-1994.)
- THINKING AND LEARNING first year course, 2001-2003, course coordinator, co-taught with instructors from Psychology, Education, English, Anthropology, Native Studies, Special Needs, and Academic Skills.

Second Year Courses:

- SCIENCE AND POLICY, course for 2nd year students, co-taught with Professor Stephen Bocking, 1999-2000.
- METHODS IN ENVIRONMENTAL SCIENCE, science course for 2nd year students majoring in ERS, 1998-9, co-taught with Professor Doug Evans.

- DISCOVERING SCIENCE, science course for 2nd year arts students, 1992-93.

Third Year Courses:

- BIOLOGICAL EFFECTS OF ELECTROMAGNETIC FIELDS science course for 3rd and 4th year students, 1995 to present, offered alternate starting in 2003 (odd-numbered years).
- POLLUTION ECOLOGY, environmental science course for third and 4th year students, 1994-present, co-taught with Professor Tom Hutchinson. Offered alternate years (even-numbered years).
- COMMUNICATING SCIENCE, for 3rd and 4th year undergraduate science students, Science Education, 1989-present. Offered alternate years (odd-numbered years).
- ENVIRONMENTAL COMMUNICATION, (*replaced Communicating Science 2003/4*) for 3rd and 4th year undergraduate science students, Science Education, 1989-present. Offered alternate years (odd-numbered years).
- AQUATIC TOXICOLOGY, for 3rd and 4th year undergraduate students, Environmental and Resource Studies, Trent University, 1990-1991, co-taught with Professor Doug Evans.
- WATER POLLUTION, for 4th year undergraduate students, co-taught with Professor Jim Buttle, 1989/90.

Forth Year Courses:

- GROUP PROBLEM SOLVING, arts course for senior undergraduates, co-taught with Professor Stephen Regoczei, 1995 to 2003. Offered alternate years.
- HONOURS THESIS, thesis management and communication skills for 4th year undergraduate students, 1989-present. Coordinator 2000-2004.
- READING COURSE, various topics dealing with the environment or with education, 1989-present

Graduate Courses:

- WATERSHED ECOSYSTEM GRADUATE PROGRAM, science communication for graduate students, Trent University, 1990-2003.
- TECHNICAL SCIENCE WRITING, for senior graduate students, WEGP, half credit course running full year, offered alternate years starting in 2003/4.

Non-Trent Courses:

- SHAD VALLEY SUMMER PROGRAM for exception high school students, Co-Director; Trent-Bark Lake-Shad Valley, June 1997; lectured in course 2005.

7. GRADUATE STUDENTS (3)

David Woodfine	•Recovery of Algae in Acidic, Metal-Contaminated Lakes. M.Sc., Watershed Ecosystem Graduate Program Trent University	1992-98.
Irena Creed	•Metal tolerance mechanisms in the algae, <i>Chlorella saccharophila</i> . (co-supervised by T.C. Hutchinson) M.Sc., University of Toronto.	1985-89
Tiina Pajos	•Impact of drought, pH, and aluminum on sugar maple seedlings. (co-supervised by V. Timmer) M.F., University of Toronto.	1985-89

8. UNDERGRADUATE THESIS STUDENTS and RESEARCH PROJECTS: more than 23 students since 1989.

TRENT UNIVERSITY

Martin Novy	Computer Application of Contact Current/Internal Currents	2005/6
James MacKay	Street Level Magnetic Fields within the City of Kingston, Ontario	2003/4
Holly Seaboyer	Estimates of buildings and their exposure to electromagnetic fields within 50, 100 and 300 meters of high voltage transmission lines in Peterborough County using GIS.	2003/4
Simon Shum & Raheman Dhalla	Magnetic field levels in various forms of public transit (buses, streetcars, subways, and Go-trains) in Toronto.	2003/4
Marc Roberts	Analysis of Radio Frequency Antenna Licenses: 14 Communities in Ontario	2000/1
Deborah Hanna	Electromagnetic Fields in Elementary Schools in Kawartha-Pine-Ridge District School Board	1999/2000
Loriann Bueckert	Climate Change, Weather Extremes, and the Popular Press	2002/3
Catherine Warren	“Uncertainly in science” How do you teach this in the high school science curriculum?	2000/1

Marc Roberts	Analysis of Radio Frequency Antenna Licenses: 14 Communities in Ontario	2000/1
Joanne Cherian	Computer Programming to Teach Chemistry	2000
Deborah Hanna	Electromagnetic Fields in Elementary Schools in Kawartha-Pine-Ridge District School Board	1999/2000
Jonathan Lake	Time Series Analysis of Extreme Climatic Events Related to the Earth	1995/6
Tracie Edward	•Teaching Evolution: Controversies and Innovations (co-supervised with Michael Berrill)	1991/2
Ayal Leszcz	•Is Animation an Effective Environmental Device? (co-supervised with Deborah Berrill)	1991/2
Eric Sager	•Macrophytes as Indicators of Metal Pollution	1991/2
Brenda McClelland	•Evaluation of the Conservation Education Program at the Ganaraska Forest Centre	1990/1
Oonagh O'Connor	•Investigating & Reporting on Environmental Issues	1989/90
Sabine Dietz	•Teaching Outdoor Education	1989/90
Peter Gwyn	•Waste Management in Northern Communities	1989/90

UNIVERSITY OF TORONTO

Robert Loney	•Nutrient status and metal content of dying sugar maple leaves in the city of Toronto.	1985/86
Irena Creed	•Chemical composition of <i>Daphnia</i> and <i>Holopedium</i> collected from softwater lakes in south-central Ontario.	1984/85
Tiina Pajos	•Metal content of aquatic macrophytes collected from softwater lakes in south-central Ontario.	1984/85

9. PROJECTS

2002-2004 EXECUTIVE EDITOR: Trent Times, Newspaper of the Trent University Faculty Association.

- 2000-2004 COORDINATOR: SPARK, NSERC funded program for student writing about research.
- 1999-2004 COORDINATOR: View from Trent articles, Peterborough Examiner
- 1997 CLIENT: Trent University Research Map, with Peter Northrop
- 1996 CO-DESIGNER: DDAMES, Design Development and Marketing of Educational Software, with Robert Loney.

10. MEMBERSHIP, SOCIETIES, GRANT AND MANUSCRIPT REVIEWING

INTERNATIONAL

- 2006-pres. MEMBER: International Commission on Electromagnetic Safety (ICEMS)
- 2004-pres. ADVISOR: EMR Policy Institute, Marshfield Vermont.
- 1996-7 ADVISOR: Great Lakes Science Advisory Board Workgroup on Emerging Issues. International Joint Commission, Canada/US.
- 1995 ADVISOR: Environmental Science Program for Tribhuvan University, Nepal.
- 1981 MEMBER: Forest Sub-Committee, US/Canada Scientific Committee on Acid Rain, Huntington Forest, N.Y., September 1-3, 1981.
- 1980 ADVISOR: Acid Rain Coalition, Joint US/Canadian Committee on Acid Rain, Michigan 1980.
- 1978 CO-ORGANIZER (with T.C. Hutchinson): NATO Advanced Institute Workshop on Effects of Acidic Deposition on the Terrestrial Ecosystem, Toronto, May 21-25, 1978.

NATIONAL

- 2002 REVIEWER: National Policy Research Awards.
- 1993-1998 ASSOCIATE DIRECTOR: KEY Foundation (Knowledge of the Environment for Youth).
- 1991-1993 EDITOR: *KEYnotes*, Environmental Newsletter sent to 17,000 educators across Canada.
- 1985-1993 DIRECTOR: KEY Foundation (Knowledge of the Environment for Youth).
- 1988-1990 MEMBER: Science and Technology Advisory Committee, CBC.
- 1987 COORDINATOR: Twenty-Second Canadian Symposium on Water Pollution Research, University of Toronto, February 19, 1987.

PROVINCIAL

1988-1990 MEMBER: Environmental Appeal Board.

LOCAL

1998, 2000 JUDGE: Science Fair, Trent University, Peterborough, ON.

1996 MEMBER: Co-ordinating Committee, Conference on Environmental Health and Alternative Medicine.

1992 EVALUATOR: Science Fair Competition, Peterborough.

1989-1991 MEMBER: Peterborough Committee on Sustainable Development, Mayor's Committee.

TRENT UNIVERSITY

2002-pres MEMBER: Institute for Health Studies

2002 CO-ORDINATING TEAM: Simply Water? Workshop, Trent University, Peterborough, On, February 18-20, 2002

2000-04 MEMBER: Interactive Learning Centre (ILC)

2000-01 MEMBER: Search Committee for Chair of ERS Program
MEMBER: COTTL

1994-2002 MEMBER: Health Working Group, Trent University

1994-1997 CO-ORDINATOR: Energy Fields Working Group, Trent University

1995-present CO-FOUNDER and MEMBER: TAcTIC, Trent Academic Technological Innovation Centre.

1994 MEMBER: PEAC, President's Environmental Advisory Committee
MEMBER: Tenure Committee for Raul Ponce, ERS Program
MEMBER: Search Committee for Director of WEGS Program
MEMBER: Search Committee for Chair of ERS
MEMBER: PPP_CMT, Computer and Technology for Teaching Committee

1993-1994 MEMBER: Senate, Trent University.

1992-1994 MEMBER: Board of Governors, Trent University.
MEMBER: President's Advisory Environmental Committee.

1991-1993 MEMBER: Chemistry, First Year Courses Committee.
COORDINATOR: Library Acquisitions for Environmental & Resources Studies.
COORDINATOR: Environmental Resource Centre

1990-1993 MEMBER: Committee on Educational Development, (originally known as the Teaching Effectiveness Committee), Trent University Committee.

MEMBER: Visitors Committee, Lady Eaton College.

1990-1992 COORDINATOR: BEGIN newsletter
1990 COORDINATOR: Science in Developing Countries, Trent International Program, Trent University, Peterborough, Ontario, March 2 to 30.

1989-pres MEMBER: Watershed Ecosystem Graduate Program.

1989-1994 COORDINATOR: Library Acquisitions for Science Education.

1989-1993 MEMBER: Personnel Committee, Environmental and Resource Studies.

1989-1990 MEMBER: Admissions and Scholarships

UNIVERSITY OF TORONTO

1985-87 COORDINATOR: Drinking Water Working Group (DWWG), Institute for Environmental Studies, University of Toronto.

1986-89 COORDINATOR: Ecology Seminar Series, Institute for Environmental Studies, University of Toronto.

1983-89 MEMBER: Acid Rain Working Group, Institute for Environmental Studies, University of Toronto.

1983-89 MEMBER: Metals Working Group, Institute for Environmental Studies, University of Toronto.

1983-89 MEMBER: Forest Decline Working Group, Institute for Environmental Studies, University of Toronto.

1987-89 MEMBER: Research Advisory Committee, Faculty of Forestry, University of Toronto.

1987 MEMBER: Graduate Studies Advisory Committee, Faculty of Forestry, University of Toronto.

MEMBER OF FOLLOWING SOCIETIES:

Arctic Institute of North America
Amnesty International
Federation of Ontario Naturalists
Yukon Conservation Society

GRANT REVIEWER:

National Science Foundation, 1981

REVIEWER FOR FOLLOWING JOURNALS:

Canadian Journal of Fisheries and Aquatic Sciences, since 1984

Canadian Journal of Zoology, since 1985
Environmental Reviews, since 1992
Environmental Science and Technology, since 1984
Hydrobiologia, since 1985
International Association on Water Pollution Research and Control, since 1986
Science, 1982
Water, Air and Soil Pollution, since 1985

11. SCIENCE ADVISOR TO ENGOS:

Chemical Pollution

Public Focus, 1988, on their BARK (Backyard Acid Rain Kit) Program which is to be used in school across Canada and the United States.
Lakes 2000, 1988, on their Great Lakes Public Awareness Program.
Trees for Today and Tomorrow, 1988-89, on their Tree-Decline School Program
Boy Scouts of Canada, 1988-present, on their Tree-Decline Program.

Electromagnetic Pollution

TRAHVOL, Tsawwassen Residents Against Higher Voltage Overhead Lines, Vancouver, BC. October 2005
Adviser, SWEEP (Safe Wireless Electrical and Electromagnetic Policy), July 2005
Adviser, STOP (Stop Power lines Over People), Markham, Ontario, June 2004
Letter, Edmonton, Alberta, occupational exposure to RFR, TV station, October 2002
Transmission Lines and Schools, Edmonton Alberta, September 2002
Electromagnetic Hypersensitivity, Boston Massachusetts, September 2002
Magnetic Field Mapping of Schools, Guelph, ON., August 2002
Neighbourhood Magnetic Fields, Kitchener, ON, July 2002
School EMFs, Health & Safety Officers, Mississauga, May 2002
PEI, Cell Phone Towers, May 2002
Magnetic Field Mapping of Schools. Albert College, Bellville, ON., April 16, 2002
Letter, Winnipeg, Manitoba, regarding Power lines. June 2001
Electromagnetic Hypersensitivity, RFR, California, 2001
Magnetic fields in cars, California, 2001

12. VOLUNTEER WORK

I taught a Creative Writing course called *Writing Your Memoirs* to Senior Citizens through **Community Care** in Uxbridge (1988-92). In 1990 we wrote a “book” called *Capturing Memories*, and in 1991 we wrote a children’s book. The Seniors have continued and have written several more books . They regularly contribute articles to the

local newspaper (Uxbridge Times)

I also worked with chronically ill patients in the **Uxbridge Cottage Hospital** (1988-1991).

13. MISCELLANEOUS

I am Co-founder and Past President of the **Uxbridge Conservation Association**, which is a local non-profit organization aimed to promote a deeper understanding of and a greater appreciation for the natural environment and agricultural land. This group act as a liaison between government and local citizens, they organize lectures and field trips, they also co-ordinate projects within our community that contribute to a cleaner, safer, healthier environment for people and wildlife (1988-1991).

I was a member of the Board of Directors of the **KEY** (Knowledge of the Environment for Youth), which is a non-profit organization dedicated to educational excellence in Canada (1985-1994). One of our projects is the *Chemical Literacy Series* which is aimed at promoting a better understanding of chemicals in the environment and is intended for teachers (kindergarten to high school) and their students across Canada. We organize workshops for teachers and co-ordinate the production of classroom material. In 1992 I became editor of *KEYnotes*, an environmental newsletter that is sent to every school in Canada (13,000) 3 times during the academic year.

For 18 years I lived on a farm and raised heritage breeds (rare in Canada of sheep (Cotswolds), pigs (British Large Black); and chickens (several breeds) along with non-heritage breeds of ducks, geese, and donkeys. We were members of the Rare Breeds Conservancy of Canada and helped maintain important and dwindling pools of genetic diversity of farm animals.