



Seeking Environmental Justice

Who owns the air and water?

Consider the stream, the swamp, the river, the mountain, for the sake of future ages. A century hence they will not be here as I see them, Nature will have been robbed of many brilliant charms, the rivers will be tormented and turned astray from their primitive courses, the hills will be leveled with the swamps, and perhaps the swamps will have become surmounted by a mountain of waste. Scarce a Rhodora will Nova Scotia possess, the timid Deer will exist nowhere, fish will no longer abound in the rivers, the Eagle scarce ever alight, and these millions of lovely songsters be driven away or slain by man.

Adapted from John James Audubon

January 2022



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Prologue

We are farmers, fishers, craftspeople and professionals - ordinary folk who have built their homesteads in the pristine and idyllic community of St. Croix Cove and surrounding communities. The Bay of Fundy is our front yard; the North Mountain is our backyard. The mountain provides an abundant supply of clean, potable water. The water is collected and stored in a large wetland at the apex of three watersheds. It filters down the mountain through gravel seams and bedrock fissures. We tap dozens of bubbling springs and aquifers with our domestic wells. Some of these wells date to European settlement of the Cove, more than 325 years ago.

Imagine our horror, then, to wake to the sound of clanging truck tailgates and roaring excavators busily dumping Halifax asbestos waste into our watershed. Imagine our disbelief upon learning that Nova Scotia Environment fully supported this catastrophic devastation of our wetland drinking water supply. We think the department should be protecting our freshwater resources, not conspiring to destroy them.

If this land is to be protected, it will have to be the citizens that do it. This is how we became the Waterkeepers.

The material contained in this booklet has been generated by our ongoing research and interactions with authorities. Along the way we have encountered unfair treatment and exclusion from the development, implementation, and enforcement of environmental laws, regulations, and policies which directly affect us. **Along the way, we were astonished to discover the degree of untruthfulness which has characterized almost all activities relating to the Arlington Dump. Consultants, inspectors, directors, and experts have all lied to us in order to protect some very poor decisions. As a secondary defense, the department, government, and permit holder all cling to an unspoken policy of secrecy, silence and denial. In the pages that follow, we will reveal some of these lies.**

Everyone should enjoy the same degree of protection from environmental and health hazards. **We should all enjoy** equal access to the decision-making process in order to **ppreserve** a healthy environment in which to live, learn, and work. This should be the **mandate** of Nova Scotia Environment for all communities and persons across this province.

Goals

Our goals are twofold. First, to ensure the quality of the water we drink, the air we breathe and the health we depend on. Secondly NSECC needs to understand its role of administering Environmental Justice. We want them to understand that voters, taxpayers, and indeed employers expect them to protect our environment, not **conspire with business and industry to exploit our wild resources for corporate profit.**

Awakening

From: James McCurdy <mccurdyandreed@gmail.com>
 Sent: September 4, 2018 12:47 PM
 To: Minister, Env <Minister.Environment@novascotia.ca>
 Cc: stephenmcneil@ns.aliantzinc.ca
 Subject: Complaint: Clearcut at Arlington Heights Asbestos disposal Facility;
 erosion of disposal cells leaving exposed and open bags of asbestos

Yesterday during a hike in my woodlot I discovered that the wetland at the Arlington site had been completely clearcut. The wetland served not only as a greenbelt buffer between the dump and adjacent properties, but as a drinking water reservoir for all the residents of St. Croix Cove. The wetland is now barren of vegetation, badly rutted and subject to erosion. Worse, the site will not be able to revegetate and anchor the soil for at least a year. This exposure of bare soil will also deliver discolored water and silt to the wells and springs of the people of St. Croix Cove.

Beyond the devastation of the clearcut I saw yellow garbage bags poking out of the asbestos disposal cell. These bags contained asbestos. They had been exposed by the erosion of the cell cap. Some of the bags were broken and leaching asbestos directly into the wetland. This situation has to be fixed immediately.

I look forward to speedy confirmation from your office that the eroded cell cap has been repaired; but I wonder if the cap was correctly built and seeded. It is clearly apparent that the proponent has failed to inspect the cell to insure its integrity as per her obligation; the size and extent of the erosion gullies suggests that they have been there a long time.

Also, It seems to me that wetlands are protected areas? Is this not true?

Sincerely, Kip McCurdy

OCT 03 2018

Kip Mccurdy
mccurdyandreed@gmail.com

Dear Kip Mccurdy:

Thank you for bringing your concerns regarding the Arlington Heights Construction and Demolition (C&D) debris disposal facility, 1481 Arlington Road West, Hampton, to the attention of Nova Scotia Environment (NSE).

On September 6, 2018, NSE staff conducted an inspection at the facility. The site inspection revealed no evidence of wetland disturbance or runoff. The wetland on the property is engineered as a leachate collection system. At the time of the inspection, the asbestos waste disposal facility met the terms and conditions of the approval.

The facility was issued an Environmental Assessment approval on March 7, 2017. The facility intends on expanding the asbestos disposal facility. Logging and cutting of trees on this property relates to site development for the expansion and was contained within the approved boundaries.

Regulations for asbestos disposal facilities under the Environment Act can be found here: <https://www.novascotia.ca/just/regulations/regs/envasbestos.htm>
Specific information regarding the Arlington Heights Environmental Assessment (EA) can be found here:

<https://www.novascotia.ca/nse/ea/Asbestos Waste Disposal Facility Project.asp>

Should you have any further questions, please contact Lori Skaine, Regional Director, at 902-679- 6086.

Sincerely,

Margaret Miller, MLA
Minister of Environment
c: Lori Skaine

Wow! Two Whoppers in one short letter! Here is what really happened:

Logging and cutting was completely unrelated to the asbestos expansion proposal as you can see on the photos that follow below. The logging was almost all outside of the defined project area and the clearcut covered nearly 100% of all Arlington Heights properties.

Whistleblower gets just desserts

Ant this is apparently how they deal with people who complain too much:

Ms. Burneau showed up at My house to announce that the dump was fully compliant. (Whop, whop) When I quizzed her to discover why she did not see the obvious and extensive erosion damage to the asbestos cell caps, I discovered that she had dispatched her rookie trainee to inspect while she um, well, she didn't say what she was doing.

Then she announced that she was going to inspect MY property, and my neighbour's, and probably anybody else who had too much to say. This was the result of her

inspection; a directive about a legally grandfathered sink drain!



136 Exhibition Street
Kentville, N.S. B4N 4E5

Phone: (902) 679-6086
Fax: (902) 679-6186

Process RSN Number: 11712666

Environment Act **DIRECTIVE**

ISSUED TO: James and Anne McCurdy
DATE ISSUED: September 18, 2018
MAILING ADDRESS: RR#2, Hampton, Nova Scotia B0S 1L0
SITE NAME: 9195 St. Croix Cove Road
SITE ADDRESS: 9195 ST CROIX COVE RD. ST. CROIX COVE NS B0S 1L0

Pursuant to Environment Act 122A(1) the following action(s) must be completed by December 14, 2018

You are required to obtain the services of a Qualified Person or Professional Engineer to assess the onsite sewage disposal system at the above property and make application for the repair or replacement of the system.

The action(s) outlined in this Directive are the minimum required. Additional actions may be needed to address the non-compliance item(s) identified in this report. Where necessary, you may need to secure the services of a firm/person with sufficient knowledge, experience, and certification to address any item(s) of non-compliance.

Be advised that failing to undertake all action(s) within the time frame specified in this Directive is an offence and may result in further enforcement. An investigation involving the non-compliance item(s) identified in this report continues and is separate from the requirements of this Directive.

Signature of Issuing Inspector:

This Directive was issued by Jacquelyn Burneau, Inspector Specialist with Nova Scotia Environment, who may be contacted at:

Nova Scotia Environment
136 Exhibition Street
Kentville, N.S. B4N 4E5
Phone: (902) 679-6086
Fax: (902) 679-6186
<http://www.gov.ns.ca/nse>



It is unknown how inspectors failed to see unauthorized **wetland alteration and exposed asbestos waste in erosion gullies**, but can invent and enforce imaginary violations for citizens who complain.



A Flawed Process

The Environment Act lists access to information and public participation in evaluation of development proposals as essential goals; but these goals are largely overlooked in de-facto administration of the intent of the Act. Involving the public has become an undesirable inconvenience for both administrators and permit applicants. It slows the approval down; people ask too many inconvenient questions. The goal of public involvement is only respected when specifically required in law. That legal obligation only occurs when an environmental assessment is required. Most projects do not require such an assessment; and even when they do, the Minister sometimes blindly exercises a discretion he does not enjoy under the law, to ignore the assessment requirements. Not to mention, of course, the fact that

proponents may not be entirely truthful about their intentions because they know that no one at the Department will ever attempt to verify their claims.

When an Assessment Does Occur

In a democracy, everyone should participate; but the assessment process seems designed to favor the proponent rather than the community.

- Proponents pay a substantial application fee with which they buy the Department's careful and speedy attention.
- They then file an expensive report by third parties whose chief incentive is a successful application, if they want to get paid.
- The third parties often go on to lucrative monitoring contracts.
- Project notifications are obscure; abutters receive no notice.
- Public comment is restricted to 48 days. This is insufficient time to collect, examine, and assess information for informed comment.
- Approval usually occurs within 50 days which is also insufficient time for administrators to assess public comment. There is clearly not high priority placed on studying public comment.
- As is obvious from the chart below, created from NSECC's own statistics, as of 2019, Nova Scotia Environment and Climate Change has approved every project, good or bad, that filed an environmental assessment.

The process is clearly designed to produce speedy approvals for the proponent, while shutting the community out of the decision making process.

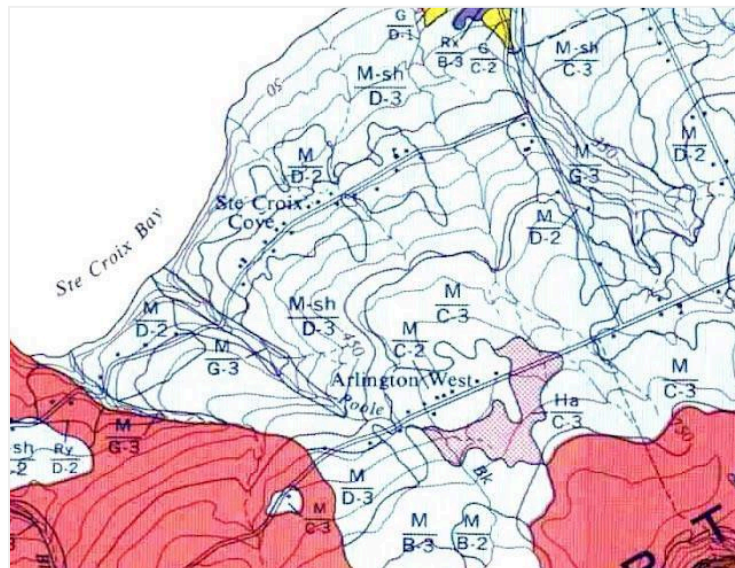
Arlington Heights

Arlington Heights was one of those projects where the Minister (Kerry Morash P.C.) unlawfully waived the requirement for an environmental assessment despite the fact that the Act specifically required assessment for: disposal of hazardous waste (asbestos), alteration of wetlands in excess of 2 Ha, (almost 10Ha of “perched watertable” wetlands per the 2004 MGI site survey were drained and bulldozed,) and for shunting drainage from one watershed to another.

Had an assessment occurred, it would have addressed the following concerns:

Soil Characteristics

This excerpt of the 1969 [Soil Map of Annapolis County](#), covering the AHC&D site, shows a small portion of Ha soil, surrounded by M.



Ha (Hantsport) is imperfectly drained:

Ha	Hentsport	581	Dark grayish brown loam over yellowish-brown or reddish-brown sandy clay loam, mottled	Reddish-brown loam to sandy clay loam till derived from a mixture of shale and sandstone	Imperfectly drained
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M (Middleton) is Moderately Well Drained

M	Middleton	28,240	Dark reddish brown sandy clay loam over reddish-brown sandy clay loam to clay loam	Dark reddish brown sandy clay loam to clay loam till; deep	Moderately well drained
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On the county map, there are 38 soil types:

Variable	Imperfectly Drained	Moderately Well Drained	Poorly Drained	Well Drained	Excessively Drained
1	13	2	8	9	5

More than 20% are "Poorly Drained", but not the AHC&D site, nor the soil downhill.

This map is never referenced in any Environmental assessment. Instead, we are told, many times, that "The location within flat topography at a height of land, away from active watercourses, and underlain by a deep clay subsoil with low hydraulic conductivity limits some of the potential effects...."

Families who have lived here for decades and centuries, own property on all sides of the dump, and farm the land know the clay present is interspersed with sandy strata. It is NOT "impermeable". Water easily filters through to wells and into gardens and post holes.

How did "Moderately Well Drained" become "low hydraulic conductivity"? That's the central question of fact. See immediately below for an explanation.

Chain of Custody

Whoops, here comes another Whopper which has been repeated so many times that the department has come to believe their own lies!

These images are from the 2004 Site Assessment Report PDF (Appendix D - Geological and Hydrogeological Report). It says on page 66:

The hydraulic conductivity (determined in falling head permeability tests) of the silty clays at the site was found to be low, ranging from 1.5×10^{-8} cm/sec (sample – Poole C&D 11') to 5.0×10^{-8} cm/sec (sample – Poole C&D 18') in soil samples collected in Shelby Tubes from test pits completed on the site by the proponent. Results of these tests are presented in Attachment 3.

And on page 71:

Measurements of hydraulic conductivity of the silty clay via falling head permeability tests performed on two soil samples from the site indicate very low hydraulic conductivities, in the range of 1.5×10^{-8} cm/sec to 5.0×10^{-8} cm/sec (approximately 0.47 to 1.58 cm/year).

These samples were taken by the proponent with no collection experience. These samples were the only two, subject to Falling Head Permeability Tests. These test results were hardly robust scientific evidence; how can two cherry-picked samples, taken by an inexperienced proponent, from the same location, guarantee similar soil conditions over a ten hectare area? Obvious evidence refutes the claim. The K value (permeability) quoted means that water moves through the soil at a rate of less than $\frac{1}{3}$ of a centimeter per YEAR! At that incredibly slow rate the many wells and springs on the North Mountain would recharge so slowly that they would have been abandoned as quickly as they were built. As Paul Hubley (Highly respected Hydrogeologist) has said “these permeability claims are just “not reliable.” Whop, whop.

In the entire Site Assessment Report, there is no conclusion as to the suitability of the site for hazardous waste disposal.

Location

The Arlington Dump could hardly have been sited in a worse location. Here is why:

- The dump is built on a mountain. This puts all lower elevation exposures at risk for contamination by underground or surface water runoff. If contaminated effluent gets into the faulted bedrock fracture zone it could go anywhere. It could even find its way to the South side of the mountain face, and potentially impact valley water supplies.

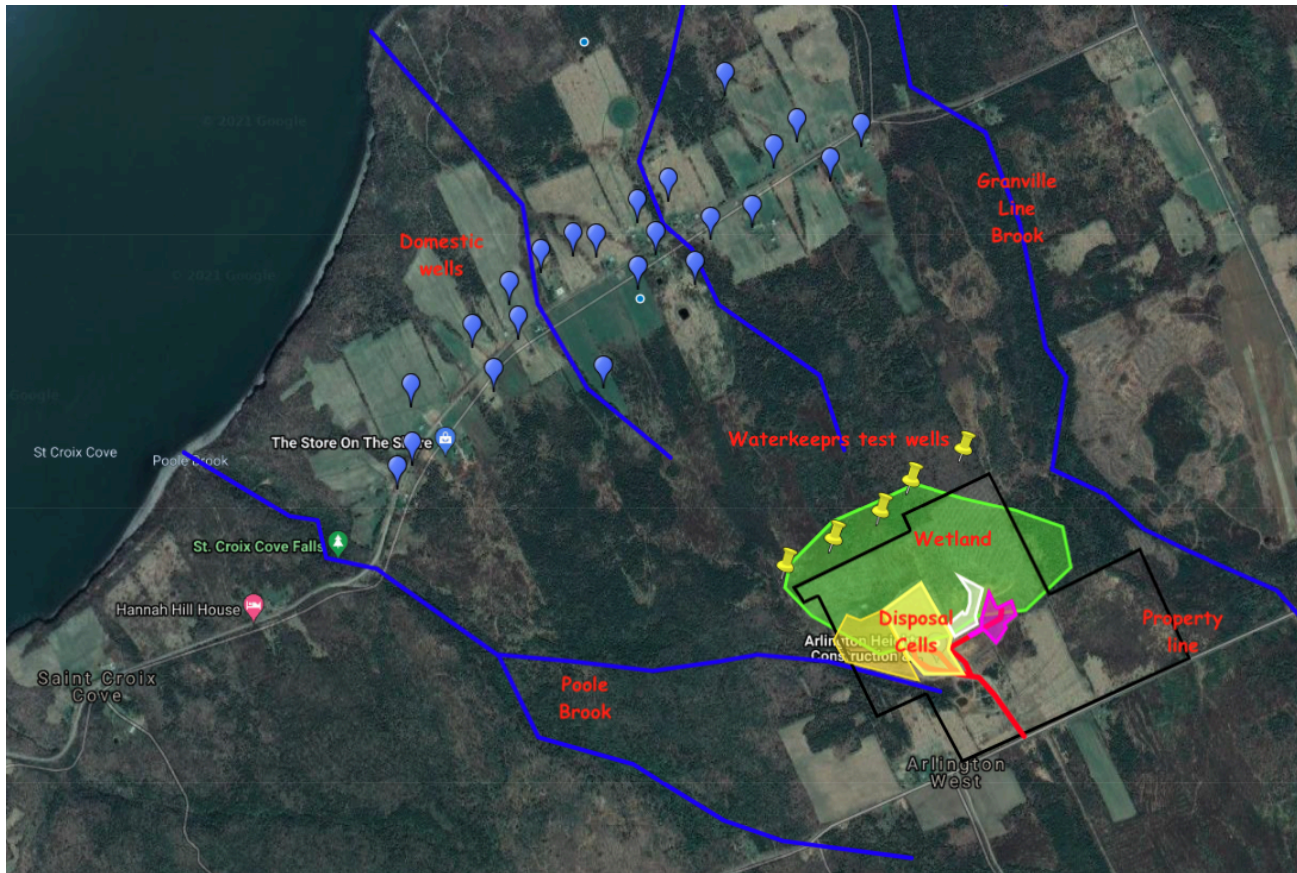


- The dump is built at the headwaters of three separate and adjoining subwatersheds. This location exposes a huge geographic area, all the way from

St. Croix Cove to Port Lorne and beyond, to the threat of contaminated surface water runoff.

- The location of the Arlington dump, near the apex of the North Mountain, may very well jeopardize the security of domestic wells and springs in the Valley. Effluent from the dump will follow fissures in the basalt bedrock wherever they lead. Wells on the south side of the Mountain that are powered by the broad and extensive Mountain aquifer may be at risk. Some valley wells are almost as close to the source of pollution as are the wells in shoreline communities.
- The dump is built wholly within the confines of a traditional wetland complex. Portions of the wetlands have been drained to accommodate creation of the Arlington Dump. We are supposed to be protecting wetlands, aren't we? Why do we continue making the same mistakes that our forefathers made a century ago? We are slow learners. NSE is even slower than the rest of us.
- The wetlands are the result of a "perched" water table where meteoric waters drain slowly through the subsoil. They constitute a broad, shallow, reservoir of moving water that powers the hydraulic regime of the North Mountain. This "lake" of moving water flows right through all the disposal excavations, and carries contaminated leachate beyond the dump and into the watersheds.
- The subsoils of the wetlands are netted with gravel and sand aquifers that filter and dispense what used to be a clean and dependable supply of drinking water to all the residents of St. Croix Cove. Citizens of the Cove now install commercial filters and drink bottled water.
- The site is located near major recreational facilities. Rumsey Lake is a popular angling and boating destination for thousands of visitors. Hampton lighthouse and beach attract lots of visitors. Now these visitors are serenaded by the sounds of roaring excavators and clanging tailgates or encountering tandem trucks on once-peaceful, too-narrow roads. Many will never return because of the potential exposure to toxic asbestos dust.
- Biking tourists will not be thrilled to discover the dump. It is unlikely that they will return to Annapolis County. No nature lover wants to camp near a toxic waste dump.
- Visitors to the popular Poole Brook/St. Croix Falls may not wish to swim in the mountain pools or fish the tasty brookies when they realize that Arlington waste water is deliberately shunted into the Poole Brook drainage system. There may not be any fish anyway; large amounts of runoff silt from the clearcut wetland at the dump may smother the brook trout eggs.

- There is no benefit for the citizens of Annapolis County in this dump project. There is only liability. The liability exists in the present and will extend far into the future. This dump could create a problem that future generations of Annapolis County residents will be unable to fix, no matter what the cost.



Engineered Wetland

There are many references in the FOIPOP to the ‘Engineered Wetland’. What is it? The cells are underlain by a very large and deep culvert which flows into a ditch that delivers runoff to a series of pools in the remains of the natural wetland. This “treatment” system is supposed to extract contaminants from the leachate before it flows into the watershed and Poole Brook. As Lanying Zhao of NSECC wrote to Jim Frazee of East Coast Aquatics Consulting on November 18, 2018 (FOIPOP p 12):

It is understandable that leachate contains elevated concentrations of the analyzed parameters and concentration exceedance of guidelines. We also understand that the wetland can improve the water (leachate) quality by removing the contaminants or lowering the concentrations of the parameters.

Here is the map (FOIPOP p 10) Mr. Frazee used to locate his sample collection. The Outfall and Infall are located way north (top of map) of the dump property. Alongside a photo of the engineering at the cell outlet: (FOIPOP p 1997)

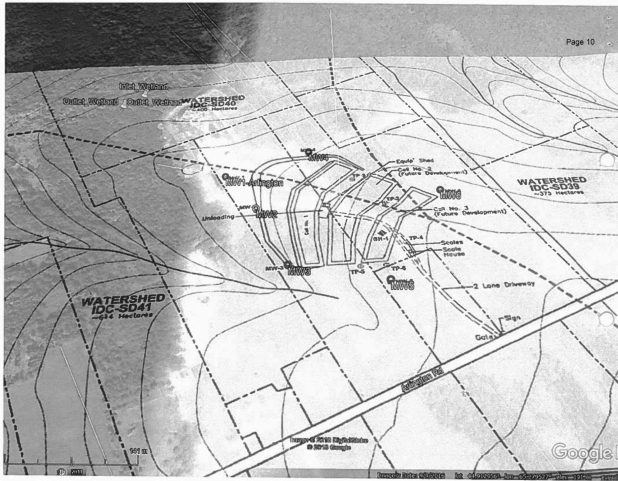


Figure 3: SW2 sample location at the outflow pipe from the C&D cell into a constructed basin.

Constructed wetlands are widely used, but controversial. They must be carefully designed and actively managed. Seasonal differences, plant communities and ecological processes need to be accounted for. Here is an example of a superfund site in Illinois:

Estech General Chemical Company

The Estech General Chemicals Company Superfund site is in a heavily industrialized area in Calumet City, Illinois. From 1952 to 1969, Estech General Chemicals Corporation made, stored and disposed of pesticides and fertilizers at the site. After the facility shut down, the site became a disposal location for demolition debris, construction debris and special wastes. The special waste included shredded automobile interiors and soft parts, referred to as “auto fluff”. The property borders the Grand Calumet River. The river has a fish consumption advisory due to the presence of polychlorinated biphenyls (PCBs)

A History of Expansion

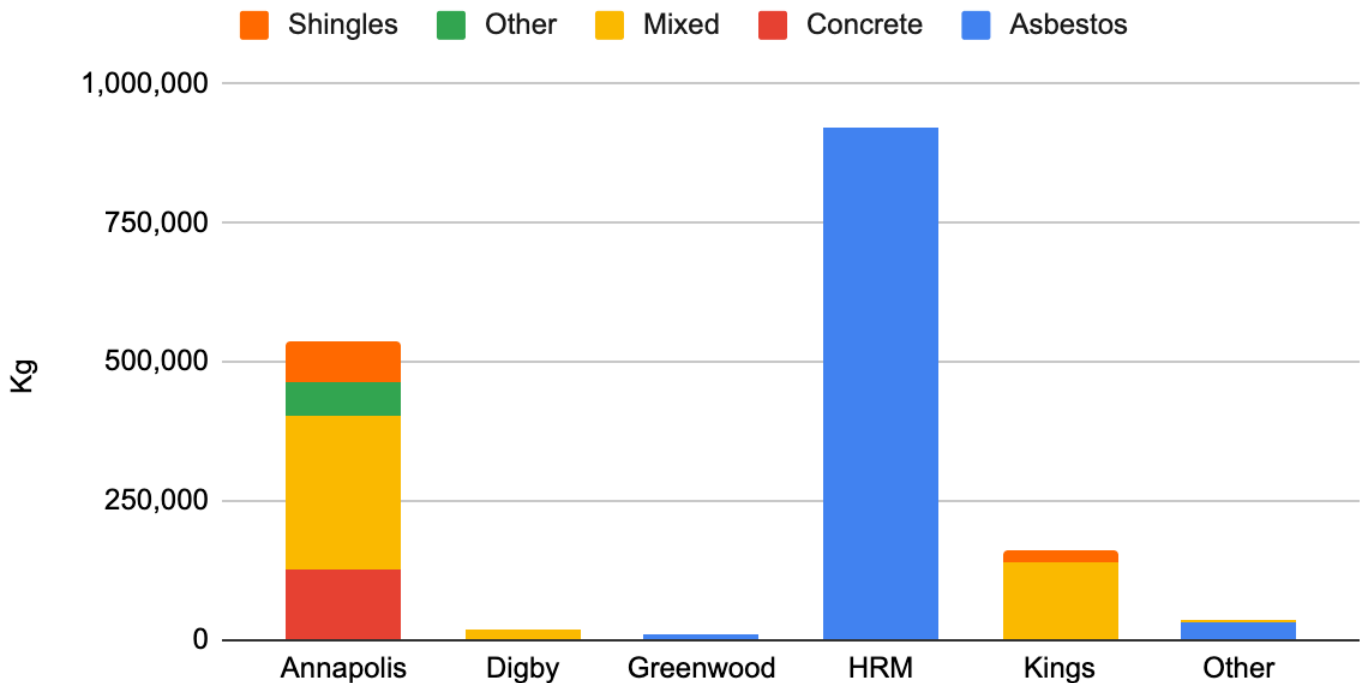
Timeline		
Year	Month	Event
2005	March	C & D site approved originally by Nova Scotia Environment (NSE). Expiry date for this approval was March 2015. Issued to M. R. Poole.
	October	Asbestos disposal facility approved originally by NSE. Expiry date for this approval was October 2015.
2007	February	C & D site transferred ownership to Arlington Heights C & D.
2015	February	C & D site approval is renewed by NSE.
	November	Asbestos facility approval is renewed by NSE. Expiry date set for August 2017.
2017	March	Application is made for an Environmental Assessment Approval for the asbestos disposal site. All application and supporting material is made available on NSE's website.
		7th - Public notice was posted in the Chronicle Herald seeking comments from the public.
		8th - Public notice was posted in the Valley Register seeking comments from the public.
	April	6th - Public consultation ended.
2018	January	24th - Environmental Assessment was approved by the Minister of Environment.
		29th - Asbestos Storage and/or Disposal Facility operational approval issued to Arlington Heights C & D Limited. Approval expires July 25, 2027. This is a separate approval from the Environmental Assessment Approval. Renewal of the approval issued in 2005 and again in 2015.

Most Debris is From out of County

(We only have one year of receipts in the 2,500 page FOIPOP)

Origin and Composition of Debris

December 4 to November 30 2009



Lax Inspection Regime

Water Testing Ignored

In the original “Proposed Construction & Demolition Debris Disposal Site” submission to Environment Nova Scotia prepared by C.T. Harris, P.Eng. and dated September 10, 2004 there is a section entitled:

6.1.13 Operation and Maintenance Manual. An Operation and Maintenance Manual will be prepared and a copy of this manual shall be kept at the site at all times. This manual will include the following;

1. Record drawings and specifications of the C & D Debris Disposal Site.
2. Complete description of the Operational Procedures
3. Monitoring well logs and surface water monitoring logs, including the location plan showing the monitoring points.

Yet the Aquatic Life Guidelines noted in the very first water chemistry table (FOIPOP P.8) were exceeded 101 times in the 58 water samples we have transcribed. No notice was taken by Nova Scotia Environment and Climate Change (NSECC) . Here is the water chemistry table from the original assessment done in 2004:

Accounting for Assessment				
Substance	Assessment of 8/4/04	Assessment of 10/8/04	Aquatic Guidelines	# of times exceeded 8/04 to 12/20
Alkalinity	42			
Ammonia	no data		2.2	6
Arsenic		0.002	0.005	16
Barium		0.007		
Boron		0.017		
Cadmium		no data	0.000017	15
Calcium				
Chloride	10			
Chromium		no data		
Conductivity	126			
Copper	0.18		0.002	16
Iron	0.04		0.3	18
Lead		no data	0.001	9
Magnesium				
Manganese				
Mercury		no data	0.0001	2
Nitrate		0.17		
Nitrite		no data	0.06	2
Total Kjeldahl Nitrogen		0.3		
pH	6.9			
Total		no data		

Accounting for Assessment

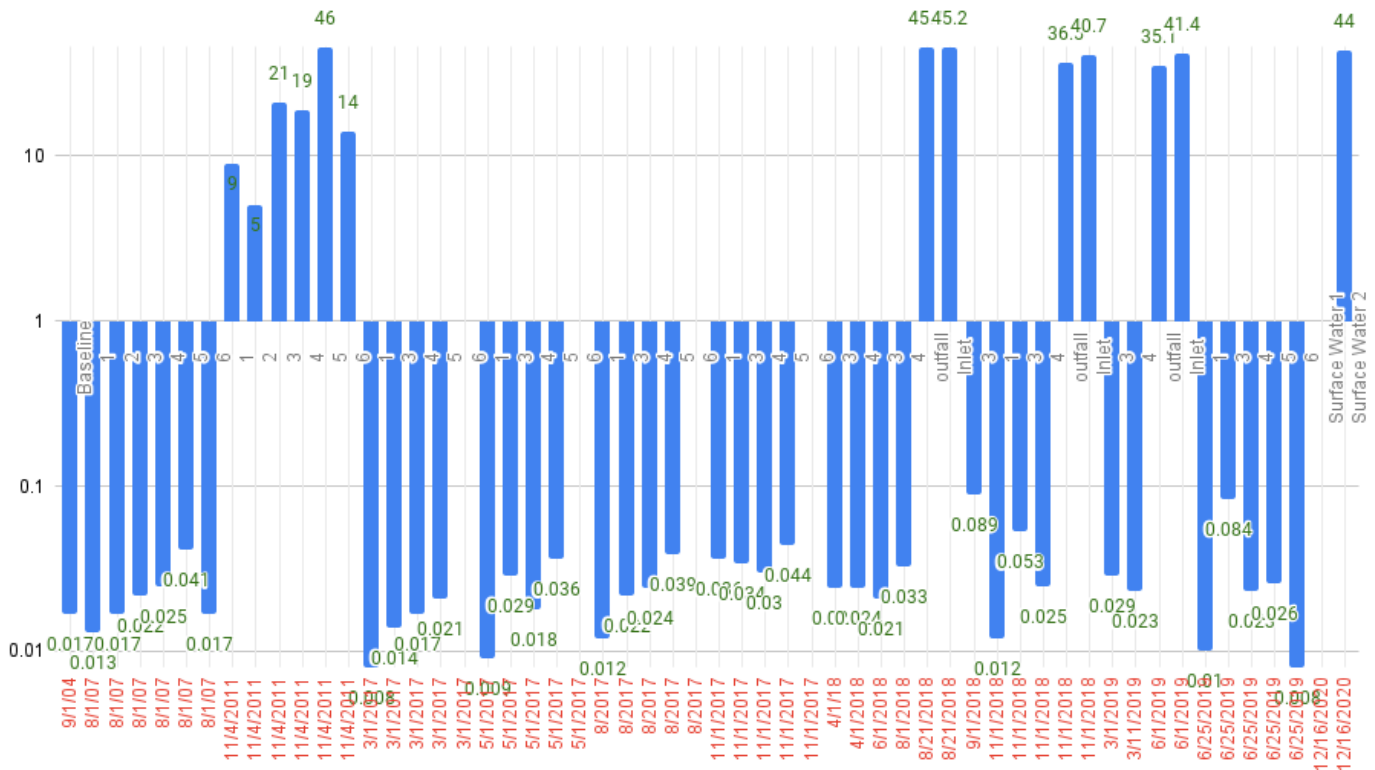
Phosphorus				
Potassium				
Sodium				
Suspended Solids		no data		
Total Dissolved Solids	85			
Sulfate	4			
Zinc	no data		0.03	7
Benzene •				
1,4 Dichlorobenzen e •			.	
Dichloromethan e			0.0981	0
Toluene •			0.002	4
Vinyl Chloride				
BOD5		<5		
COD		15		
Dissolved Organic Carbon				
Total Organic Carbon	7.1			
Phenol		no data	0.004	6
Tannins/Lignins				
Water level below Well Head				
Temperature				
pH				
Conductivity				

Accounting for Assessment				
Dissolved Oxygen				
Flow		2		
Source				
FOIPOP p.8	Proposal 10/04			Calculated
				Total
				101

Boron

Here is a complicated chart showing Boron levels for the 58 water samples we've transcribed. The y axis scale is logarithmic due to the enormous range of values. We would like an explanation of this, and particularly how NSECC did nothing to alert the community, as they are required to do under the Act.

Boron



With a single exception, the dozens of charts in the FOIPOP show the units for Boron as mg/l. It's tempting to ascribe the big differences to reporting error - one

microgram is a thousandth of a milligram. Tempting, that is, until you see page 2059, where the Boron values differ by a factor of more than 5000 - ON ONE PIECE OF PAPER. This escaped the attention of the consultant, the dump owner and NSECC, all of whom have a vested interest in not reporting this danger.

The single exception is on page 2004. 44,000 micrograms/liter.

What the Act Says

Section 69

(3) Any person who discovers or becomes aware of a release of a substance into the environment that is in excess of an amount, concentration, level or rate of release expressly authorized by an approval or the regulations shall forthwith, as soon as that person knows or ought to know of the release, report it in the manner prescribed in the approval or the regulations, as the case may be.

Fire



From CBC September 7, 2018

A major underground fire was burning Friday at a construction and demolition debris site in Nova Scotia's Annapolis County.

The Arlington Heights C&D Landfill near Bridgetown started burning around 7 a.m., but was considered under control by mid-afternoon.

Stephen Wade, chief of the Port Lorne and district fire department, said flames were no longer shooting above ground but the fire continued to burn 3½ meters underground.

Creosote lumber, vinyl siding and other buried construction debris were on fire, he said.

About 70 firefighters from eight fire halls were trying to put the fire out and expected to be on scene all day and possibly into the night.

This fire

- Was caused by a truck tipping over and spilling diesel oil into an already overheated ASR debris pile.
- It was initially extinguished with water from Rumsey lake, which lowered the water level in the lake dramatically. Then crews shifted to using salt water from the Bay.
- Recorded leachate temperatures indicate that the fire continued to burn underground for more than a year. The ongoing gut-wrenching stench of burned plastic that surrounds the dump and wafts through our communities, suggests that ASR may still be smoldering deep below ground.

ASR is full of combustible materials:

- Polyurethane foam from scrap cars.
- Plastic parts and casing.
- Rubber parts.
- Tires.
- Ignitable liquid vapour leaked from the scrap cars.

When these materials are piled and compressed, they can generate sufficient heat to cause spontaneous combustion. Fumes and smoke from ASR fires are toxic.

CBC News reported that an ASR fire in Saint John on Sept 14, 2023

“[burned for two days](#) and prompted a city-wide shelter-in-place order because of hazardous smoke.”

The Saint John Port Authority Task Force that investigated the fire wrote in its report:

"Explosions and fire have become a significant, recurring hazard since the operation of the industrial metal shredder began" in 2011. At least 181 explosions and 22 fires have been recorded, "with notable increases" to the frequency of occurrences."

CBC Reporter Jean Mackinnon also noted that:

“On Sept. 19, N.B. [Environment Minister Gary Crossman suspended AIM's approval](#) to operate because he was "of the opinion that there was an [unauthorized release of contaminants](#) in contravention of Section 17" of the Clean Air Act.”

Shelter in place and evacuation orders were also given during the Goodwood N.S. ASR fire of Nov. 26, 2022. However no public notifications, evacuation, or shelter-in-place orders were ever given for the large ASR fire at Arlington Heights that burned for over a year. Nor was the operating permit suspended. Are rural lives less important than urban ones?

Litter



Nova Scotia Progressive Conservative Platform, 2021:

Litter Bug Laws

One of the most enticing parts of attracting people to both live in and visit Nova Scotia is the beauty of our landscapes and coastlines. It is a shame to detract from that beauty with litter.

Auto-Fluff (Auto Shredder Residue)

Dear Minister Irving,

I am the owner of parcel # 05128103 in Annapolis County, a close neighbor of Arlington Heights C&D. My property is recreational, and is crossed by a brook that is sourced in the dump, which you investigated for illegally accepting "autofluff". "Autofluff" contains harmful substances such as Mercury and PCBs. My understanding is that you confirmed that allegation.

In an email to Andrew George, dated March 24, 2021, Jennifer Lonergan, District Manager of your Compliance and Enforcement Division, said "The department has conducted an inspection in regard to your complaint and compliance action has been taken."

Your predecessor, Gordon Wilson, wrote on October 1 2019:

"Per previous correspondence with the department, "autofluff" is not an acceptable material for a C&D facility and must be disposed of at a 2nd generation landfill. The autofluff material that had been previously received at Arlington Heights C & D has been tested for metals using Toxicity Characteristic Leaching Procedure and PCB. All concentrations of these materials were below the Canadian Standard. Although the department will not be allowing this practice to continue, the risk of environmental impact expected from previously accepted materials is considered low.

And His predecessor, Minister Margaret Miller, wrote a year earlier, offering a more benign view of ASR: Olfactory disgust,

"Autofluff" consists of non-hazardous waste materials. The "autofluff" material that has been received at Arlington Heights C&D is tested quarterly for twenty different metals using Toxicity Characteristic Leaching Procedure and PCB."

Since Minister Wilson permitted the disposal of "autofluff" for many months after his promise to curtail the practice, I see no reason to consider his reassurances about testing as anything but fantasy.

I am very concerned that my health is threatened by the presence of "autofluff" and do not understand why you have not notified me of the risk of personal exposure by, inhalation or ingestion, to toxins contained in this confirmed carcinogenic material. Please identify the illegally dumped contaminants that I (and others) may have been exposed to, which may adversely impact our health, so that we may include the information in our personal health records in order to inform our doctors decisions.

In addition, my doctors would need to know the details of the 'compliance action'

Thank you for seeing to this.

Warren Reed

July 28, 2021
Warren Reed
wcreedh@gmail.com

Dear Warren Reed:

Thank you for your emails dated June 16 and June 19, 2021 regarding access to information and the use of Autofluff at the Arlington C&D and Asbestos Disposal Facility. I am responding as the province is currently in an election period.

The Arlington C&D and Asbestos Disposal Facility has been under investigation, which limited and delayed information that the department could provide.

The investigation was completed and Arlington C&D and Asbestos Disposal Facility was issued a warning for accepting material that was not approved by the department. In November of 2018, the department issued an amendment to the C&D Approval allowing a specific type of shredded C&D material to be used as an intermediate cover material at the site. The department had found that the unacceptable material had been incorporated with the construction and demolition (C&D) material. After reviewing the analytical data on the Autofluff and the water sample results, it was determined that the Autofluff is not expected to cause an adverse affect and the material will stay in place. Surface and ground water monitoring will be increased and reviewed more frequently. The facility is cooperating with the department and has obtained a third-party consultant to evaluate groundwater and surface water for additional parameters not included

within their approval. The department is working with the facility to increase monitoring locations and expanding test parameters. Preliminary results have been provided and were reviewed by professional staff within the department. Additional monitoring and sampling are currently being conducted by the facility. A report with sampling results will also be reviewed by professional staff within the department. The department has the authority to extend or expand sampling requirements as necessary.

Nova Scotia Department of Environment and Climate Change (ECC) continues to ensure compliance with the Environment Act, associated regulations and approvals through the review of annual reports (which includes reviewing results of groundwater and surface water), scheduled site visits, and responding to complaints.

Thank you for sending information on the reporting system for hazardous waste facilities in North Carolina. It can be useful to see how other jurisdictions provide public access to information. All information under the control of the department is accessible to the public, subject only to the Freedom of Information and Protection of Privacy (FOIPOP) Act. The goal of the Act is to balance an individual's right to know and an individual's right to privacy. The Act provides a formal process to obtain access to records under the control of the provincial government. At the same time, it protects the privacy of individuals who do not want their personal information made public.

If you would like to access records regarding the Arlington C&D and Asbestos Disposal Facility, you can find more information on submitting a FOIPOP request at the site below:

- Apply to access information under the Freedom of Information and Protection of Privacy (FOIPOP) Act (Form 1) - Government of Nova Scotia
- FOIPOP: The Nova Scotia Freedom of Information and Protection of Privacy Review Office

Additional information based on previous FOIPOP searches may also be available through the

Province's Information Access website:

- Information Access | Nova Scotia

If you have further questions, please contact the Kentville office at 902-679-6086. Sincerely,

Julie Towers
Deputy Minister

Unhappily, many of these pronouncements contain misleading and untrue statements. Let's start with Ms. Miller. She calls ASR "non-hazardous" material. By any assessment ASR meets the definition of class 1, (explosive, as in the John Ross fire); Class 2, (off-gassing, as the people of the North Mountain have discovered, much to their discomfort); Class 3 and 4, Flammable liquids and solids, with a particular propensity for spontaneous combustion, and class 6, Toxic materials, (heavy metals, PCBs, dioxins, furans, PAHS, etc. All of these characteristics are acknowledged and described in the Recycling Industry's own publications.

Quarterly testing is a fairy tale. In fact, the "fluff" has only been tested only once; and that test, for reasons only a lawyer would understand, was carried out not only out-of-province, but out-of-country.

Minister Wilson's assurance that "all concentrations of these materials were below the Canadian Standard" requires willful tunnel vision, wishful thinking and creative definition. The TCLP tests done by Industrial Environmental Consultants LLC (IEC), Test America in Nashville, Tennessee on 4/17/2017 revealed concentrations of heavy metals, PCBs and other parameters that could not satisfy any domestic standard. They could not even satisfy the much less stringent "commercial" standards. And some of the values even exceeded extremely permissive industrial standards.

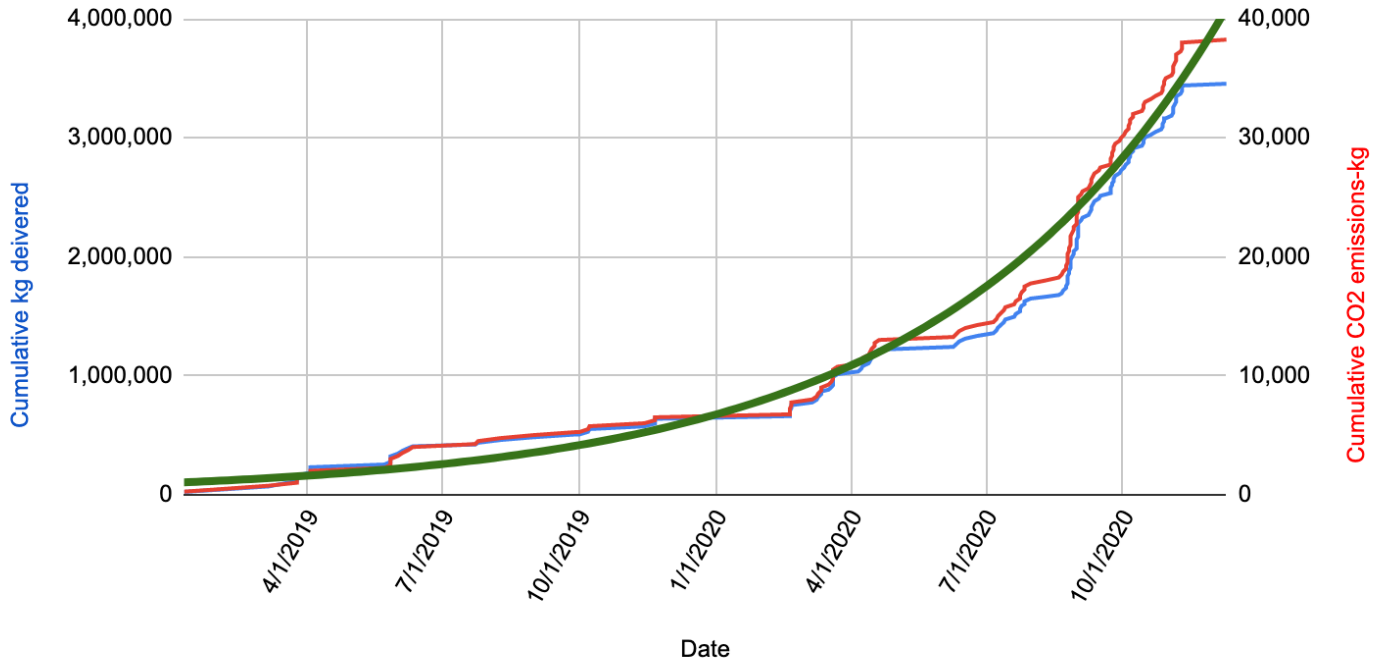
John Ross therefore asked IEC to rewrite their report and remove TCLP metals, PCBs, and moisture content data from the test results. The interesting question is why did they want to remove the moisture content data? Were the samples too wet?

The redacted report along with a creative re-classification of the dump as "Industrial" (In fact there is no industry or manufacture involved, the dump is a strictly commercial operation) allowed NSECC to approve dumping of the newly named "Approved Cover Material". Autofluff by any other name is still Autofluff.

Next is a graph from a spreadsheet of 154 John Ross trucks showing deliveries of autofluff from April 2019 to December, 2020. This was allowed because of "an amendment to the C&D Approval allowing a specific type of shredded C&D material to be used as an intermediate cover material at the site." : See letter immediately above.

The graph shows the amount of autofluff delivered (blue) AND the CO2 emissions it took for the round trip (red)

Autofluff in paradise



We believe there could be 4 X 23,000 kg truckloads of this “intermediate cover material” still coming from Halifax each day. It seems obvious that there is not enough debris to warrant this amount of cover, so it is used to cover itself. Unfortunately, we were denied access in our FOIPOP to current receipts.

Mercury

Early on in the FOIPOP there are tables showing Mercury levels above the aquatic life guidelines (page 8) of .0001 mg/l (.1 micrograms/l). Page 29 shows levels of 0.143 micrograms/l, sampled September 11, 2018. The samples were collected after a fire at the dump which started early on September 7.

September 11, 2018	Page	mg/l	µg/l
--------------------	------	------	------

Aquatic Life Freshwater Guide-lines	6	0.0001	0.1
Total Hg	29		0.143

That 0.143 figure is confirmed in a summary quarterly monitoring report by E&Q Environmental Consulting dated July 15, 2019 (page 2068). The figure for November 2018 is worse ($<0.00026 \text{ mg} = <0.26 \text{ }\mu\text{g}$), though the lab might have gotten careless with decimals.

Mercury is commonly found in autoluff **as an unrecovered component of automotive switches**. It is a neurotoxin, as Canadians learned from Grassy Narrows. It is found in freshwater fish. It accumulates in the human brain and kidneys. 0.143 micrograms is well over the Aquatic Life Guidelines - useful in places where fish and fish derivatives are part of the human diet. The [US EPA measured total Mercury](#) in 336 watersheds - documenting a mean of 8.22 ng/l or 0.00822 micrograms/l. The reading of 0.143 micrograms is 17 times higher. I have never seen a sign along Poole Brook cautioning fishermen.

NSECC says: "Arlington C&D and Asbestos Disposal Facility was issued a warning for accepting material that was not approved by this department." Assuming the tipping fees are not zero, we are curious: who has the money? Is it forfeit? Does AHC&D retain it? Did they pay tax? Were the ill-gotten gains distributed to those harmed?

Duck Unlimited

According to their Canada Revenue filings, Ducks Unlimited has \$454,902,395 in assets and \$104,574,797 in revenue for 2021-22.

Still they accepted a \$15,000 contribution from Dexter Construction as a condition of the province dropping a prosecution for illegally destroying a wetland.

Of course this is a secret. We learned about this accidentally through a note from the Minister of Environment and Climate Change to a third-party :

On February 23rd, 2022, after the conclusion of an investigation, charges were laid under section 50(2) of the Environment Act. As you mentioned, Arlington Heights C & D Limited (AHCD) was required to make a \$15,000 donation to Ducks Unlimited. In addition, the company was required to provide compensation for the altered wetland at a ratio of 2:1. A signed agreement is in place for the construction of the new wetland which is in accordance with the Nova Scotia Wetland Conservation Policy. The decision to withdraw the charge was made by the Public Prosecution Service in consideration of the negotiated items mentioned above.

The illegally altered wetland looks like this:

Now no duck has ever visited this piece of real estate. It is or was a **fresh water reservoir that dispensed** domestic water for 20 downslope homes.

Dexter gets immunity from prosecution, Ducks Unlimited proves to be just another big, greedy "charity", actual ducks get nothing, the people get nothing and NSECC gets to go back to sleep.

The "Approved" Cover Material Itself

On page 160 of the FOIPOP there suddenly appears an email, followed by pages of data about auto shredder residue:

Page 160

Jackson, Brent J

From: Jackson, Brent J
Sent: June 5, 2017 9:41 AM
To: d'Entremont, Adam N; MacLeod, Katherine M
Subject: FW: Test results requested from Inspection at Arlington CD Site
Attachments: Fluff sample test.pdf; ATT00001.htm

Hello,

Couldn't remember which one of you is dealing with Arlington Heights C and D. I requested she send me the analyses for the cover material being used on the cell. This material is being used to cover the cell and then final cover material is soil. If you could take a look at the results when you get a chance that would be great. Thanks

-Brent

The first part of the requested documents is a summary of results authored by Industrial Environmental Consultants Inc. of Nashville, TN. The summary lists Canadian standards which they got from an unspecified source. Turning to Boron on

page 165, they say the Canadian standard is 500 mg/l , when it is actually 5. Barium is listed as 100 mg/l, when it is actually 1. On pages 181 to 331 are exhaustive test results.

A few entries are in excess of standards:

March 2017	Page	Result	Reporting Limit or Requested Limit	In excess
Cadmium	225	0.179	0.1	179%
Lead	225	0.987	0.5	197%
Toluene	255	6.3	0.299	2107%
Trichlorobenzene	255	2.38	0.299	796%
Trichlorofluoromethane	255	22.3	0.299	7458%
Trimethylbenzene	255	8.51	0.299	2846%
Xylenes	255	15.5	0.90	1730%

Remember “this material is being used to cover the cell and then final cover material is soil”. What kind of government permits this kind of material anywhere near a water supply?

Trichlorofluoromethane, also called freon-11, CFC-11, or R-11, is a chlorofluorocarbon. It is a colorless, faintly ethereal, and sweetish-smelling liquid that boils around room temperature. CFC-11 is a Class 1 ozone-depleting substance which damages Earth's protective stratospheric ozone layer.

Annual Reports

In the FOIPOP there are only 2 brief annual reports			
Source	Date & Type	Metric Tons	
FOIPOP	3/2014 - 3/2015	General	Additional Local
p 2290	c&d	465	
	shingles	35	

	wood	45	
	asbestos	425	44
	scrap	26	
	TOTAL	996	44
p 2303	3/2014 - 3/2015		
	c&d	374	
	Shingles/wood	44	
	Asbestos	347	
	TOTAL	765	

To Summarize

Sept 30, 2021
The Honorable Carmen Kerr
MLA for Annapolis
349 Main Street
Middleton, NS
B0S 1P0
Phone: 902-309-3158
info@carmankerr.ca

Hi Carmen,

Annie and I have had a recent covid exposure. Instead of a meeting, please allow me to outline some of our community concerns and requests about the Arlington dump below. We also offer suggestions for updating the Environment Act to better address modern issues and to help prevent repeats of the Arlington debacle. Minister Halman has a mandate to update the act; can you advise and help us propose appropriate changes to the Act?

We are working our way through a 2500 page foipop request. There is certainly room for improvement in the administration of the Freedom of Information Act. The material we received was a jumble of unsearchable, disorganized files. Many documents (we paid for each one) were repeated several times. Pages are missing or removed to other locations in the files. Irrelevant and unrequested material

abounds. Overall, the presentation of the information matched the confused, careless, and disorganized picture the files painted of the department's work.

Our present concern is the substantial amount of material that was denied to us with little explanation. For most of it we could find no obvious reasons in the list of access prohibitions. We will, of course, appeal to the commissioner but that will take time. Meanwhile, may we ask your help in discovering two important information trails? We are certain that former minister Irving knows the details of these investigations; hopefully he will be willing to share them with us.

2018 Dump fire Investigation

The first is the vexing problem of the 2018 fire investigation. We are given no details in the foipop except reports that water tests triggered by the fire showed contamination that "exceeded Canadian guidelines for the protection of aquatic life." We also know that no one bothered to take air samples as the acrid smoke wafted through our communities. We are additionally aware that the fire continued to burn for at least a year after the fact, and may be smoldering yet. Sadly, the Department did not share even these small bits of information with the communities affected at the time of the incident. Can you help ferret out the details of the Department investigation?

Illegal Auto-fluff Dumping Investigation

A second denied request was access to documents relating to the department investigation of illegal dumping of auto-fluff. Our complaints date back to 2018; we have been repeatedly told that "an investigation is ongoing," but no information on that investigation has been forthcoming save a letter from Ms. Lonergan stating that "compliance action has been taken" and a later correspondence from Deputy Minister Towers that describes a promise of enhanced water testing. He also told us that the "compliance action" was nothing more than a warning. A warning for long-term, deliberate, illegal dumping in defiance of a direct order from the Minister? What? Will you please look into this? By our count, at least 106 loads of fluff were dumped after the Minister's order to cease and desist of Oct. 1, 2019. Under Part six of the Environment Act and penalty 169, Arlington Heights should be liable for a minimum \$100,000.00 fine. The maximum fine would exceed

\$100,000,000.00. That would finance a lot of site remediation. Where is the justice here?

Our experience with the Arlington Dump fiasco has revealed glaring deficiencies in both the Environment Act and the administration of that act. These deficiencies have allowed unscrupulous permit holders to bend, distort, and even ignore terms and conditions of their operating permits with no repercussions. **Unpunished violations are both unjust and unacceptable; illicit business practice and dysfunctional regulatory oversight continue to degrade environmental and human health. In the public view, these conditions are so prevalent and commonplace that NSE is widely perceived to be part of our environmental problems, not part of the solution.**

Suggested Environment Act amendments

I think we can work together to change that impression. We need to start with revisions to the Environment Act. I think that all parties agree that changes are necessary.

- The most important change is affirmation of community right to be informed, and to approve (or reject) development proposals: Community Primacy.

Note that there is only one small sideways reference to civic consultation in the introduction of the current version of the act: c.2, s. (h.). NSE is obligated to

(h)...”facilitate effective public participation in the formulation of decisions affecting the environment.”

This is too weak. There must be a mandated obligation to engage the public prior to issuing approvals. As it stands, “facilitate” is interpreted by the Department to mean that proponents must post notifications in newspapers and provide guidelines to establish Community Liaison Committees. Clearly NSE has the ability to notify individual property owners directly of project proposals--why do they not do so? Though liaison committees are required by conditions, their composition is determined solely by the permit holder. Communities are given no rights to influence the composition of these committees. The committees therefore function generally as PR exercises for the business in question rather than as vehicles for effective engagement of community opinion.

Would it surprise you to know that despite section (h), NSE has issued six project approvals and renewals for Arlington Heights over a period of fifteen years without considering a single word of public comment? There has been no comment because of the secrecy surrounding the registration, assessment, and approval process. Postings buried in the back pages of newspapers offer ineffective notice. Both the Department and the proponent seem to want to avoid any public participation in the assessment process. This “trust us, we know what we are doing” and “we are the experts here, not you” attitude must cease.

In Arlington, that paternalistic attitude, secretive approval process, and failure to engage the public has cost our communities dearly.

When Lanying Zhao (regional hydrologist) recommended approval of the original Arlington C&D facility she did so without ever visiting the site. She admitted this under questioning at a Waterkeeper meeting with NSE reps in 2018. Nor could she recall important information supplied by the proponent in the application registration. In follow-up email communications, her responses to our questions were confused, contradictory, and sometimes illogical. Worse than that, we discovered that in formulating her answers to our questions she almost definitely plagiarized material from the UNH website and framed it as her own. (We encountered the identical references in our own research). Clearly Ms. Zhao rubber stamped her approval without investing the required due diligence. She therefore never understood that the dump had been sited in the middle of the Arlington Wetland--a freshwater reservoir resource that has supplied the communities of Arlington and St. Croix Cove with abundant pure drinking water for over two hundred years, even in the worst droughts. We have since learned that rubber stamp approvals are common in NSE environmental assessments.

Ms. Zhao tried to reassure us, downplay her apparent incompetence, and cover her butt by insisting that the soil at Arlington was “impermeable,” and that groundwater quality at the dump had not changed since 2005. She insisted that even in the unlikely event of a small amount of fugitive pollutant, potential contaminated leachate would never migrate down the mountain into our wells and springs.

In 2011 Ms. Zhao was forced to recant, acknowledging that Arlington leachate contained ammonia, benzene, toluene, a variety of heavy metals, and other

analyzed parameters that **greatly** exceeded Canadian Water Quality Guidelines for the protection of aquatic life.

A similar test from 2018, taken hundreds of yards down slope from the dump, revealed similar results and a much larger extent of the water quality problems. Our wells are only a few hundred yards farther down the mountain slope.

Sorry for the long way round to make a simple point: if NSE had consulted with the public in the beginning, the importance of the Wetland reservoir would have been identified, the false claim of impermeable soil would have been rebuked, and all of our present problems would have been avoided.

So, lets us propose together the following amendment to the Environment Act:

- No development project shall proceed without fully informing the communities that will be affected, and obtaining their explicit agreement.

We also need to refocus the stated purpose of the Act. The current emphasis is on the use and development of environmental resources. Business is encouraged to do so with a variety of incentives, not the least of which is a promise to reduce regulatory hassles as in clause C2, s. (j):

“promoting this Act primarily through non-regulatory means such as co-operation, communication, education, incentives and partnerships.”

In other words, NSECC wants business to develop our environmental resources and pledges to assist business in that development by minimizing regulatory intervention. Is this why there has been no penalty for illegal dumping of Auto-fluff?

Experience has shown that business cannot be trusted to operate on the “Honor System.” If regulations are not enforced, they will not be respected. Lack of enforcement encourages businesses (as at Arlington) to ignore terms and conditions of approvals, often to the detriment of communities affected; indeed, causing harm to the health and welfare of all.

Citizens expect their Environment Department to do more than abet Environmental exploitation. Let us therefore delete section (j) and add the following amendments to our list:

- The primary focus of the act shall be to protect environmental and human health by preventing any further deterioration of our air, land, and water resources, and by committing to remediation of contaminated environments.
- NSE shall vigorously enforce regulatory compliance.

There are other areas that require amendment:

Inspections

What can one say about the honesty and competence of inspectors that do not seem to notice millions of tons of illegal auto-fluff fouling their boots? Do the inspectors need whistleblower protection or remedial ethics training?

Almost all inspections are regular and pre-arranged. From employee testimony and perusal of our foipop request it seems that five day's notice is not uncommon; even inspection visits resulting from citizen complaints are often arranged with the permit holder before the investigation. Needless to say, unannounced visits would be far more reliable indicators of compliance

Approvals

The Act sets time limits on the department's assessment process; project approvals are almost always issued within 50 days of receiving the application registration. I say project approvals because approval is guaranteed—NSE has not rejected a single application in the last ten years. Project registrations are often long and technically complex documents which cannot be adequately assessed in the time span allotted, even if the examiners have no other work to do. It is clear that assessments must rely on data provided by the proponent or the proponents paid agents, and judgment must be rendered without the benefit of independent confirmations. NSE must be given the time and the resources necessary to independently test claims and data supplied by proponents.

Private Dumps

Private dumps are an open invitation to environmental abuse. There is no independent oversight at these facilities. At Arlington the gates are locked after some deliveries and are not opened until the load is buried. Some loads arrive in the middle of the night.

Private dumps also deprive municipalities of a rightful and much needed revenue stream. Municipalities are expected to supply waste management facilities within their jurisdictions. How can they do that if companies can dump within municipal boundaries while by-passing the fees that support municipal services? If private dumps are allowed to exist, a portion of revenues should go to the County, and the Dump should be required to adhere to municipal as well as Provincial regulations. Private dumps should be required to employ full-time independent scrutineers appointed by the county.

For your convenience, I summarize some of the amendments to the Environment Act that we deem necessary below. We hope that you will work with us to help incorporate these changes into a revised Act.

- The primary goal of the act should be to protect and restore environmental health, and thereby protect and restore human health.
- The act must assert the principle of community primacy. Citizens have a right to be informed and a right to approve (or reject) projects which will affect their neighborhoods.
- The mission of the Environment Department must be clearly defined as a duty to prevent ANY further deterioration in the quality of our common Land, Water, and Air resources.
- The NSECC mission statement must include a directive to remediate contaminated environments
- Enforcement must be robust enough to serve as a deterrent.
- Inspections shall be unannounced
- NSECC shall be given the time and resources necessary for robust independent assessment of proponent claims and data.
- NSECC shall require all private dumps to pay municipal fees, honor municipal regulations, and employ independent oversight.

Even if we accomplish these amendments, there is still the problem of getting NSE to follow their own regulations. It is quite clear and provable that NSE has failed the due diligence test at Arlington; but that is a matter for later discussion.

Next please find our Community Statement of Environmental Rights and Responsibilities as drafted at a public meeting in 2018 in the St. Croix Cove Church. Our MLA declined to attend the meeting.

Sincerely,
Kip McCurdy
for the Annapolis Waterkeepers

Community Declaration of Universal Environmental Rights and Responsibilities

We Declare

That our North Mountain Communities are places of rare natural beauty and peace that presently suffer degradation of Air, Water, and Land, caused by social and environmental exploitation.

That the health and security of people and all other living things are threatened;

That there is urgent need to protect and restore the health of our environment, our community, and all our natural resources for the wise and thoughtful benefit of everyone;

And, understanding that we are only a few of many environmentally exploited neighborhoods,

We Pledge

To each other, our Communities, and our world, to nurture and care for our common living spaces.

We Therefore Agree

Article 1

We proclaim and assert the Universal Human Right to Environmental Security.

We make this claim on behalf of ourselves, our heirs, and all of Humankind now living or yet to be born.

In particular:

- A. The right to clean air
- B. The right to clean water
- C. The right to security of person and quiet enjoyment of property
- D. The right of community primacy - to be consulted and to approve of development proposals.

Article 2

We accept the responsibility, individually and together, to nurture, protect, and advocate for these rights by peaceful means.

Article 3

Citizen Science

Science is the belief in the ignorance of experts, said Nobelist Richard Feynman. Who can forget Richard's [demonstration](#) of the failure of an O ring in the space shuttle Challenger disaster?

We are looking for the O ring that is causing toxic leakage from a construction debris site directly uphill from our domestic wells. We have encountered the ignorance of experts many times.

We have commenced an organized sampling of water quality through the provincial health water testing service. You can see from this report that some substances are at concentrations up to 150 times the limits on aquatic life (Lead). We need to identify signature substances that tie the leakage to waste materials. We need evidence of soil makeup beyond the [paid-for](#) pseudo-science presented by experts.

When we have complained, we have received half truths and science jargon in

In 2024 the trucks roll on.

Working from the [original 2004 proposal](#) for the Arlington Heights C&D dump submitted to the Department of the Environment, we were able to establish some baseline data for water quality.

TABLE 5: WATER ANALYTICAL RESULTS--METALS

ANALYTE	MW-2 July 29, 2004	MW-3 July 29, 2004	MW-4 July 29, 2004	MW-5 July 29, 2004	MW-6 July 29, 2004	MW-6 (Dup) July 29, 2004	CCME FWAL (mg/L)	CDWQ (mg/L)	DL (mg/L)
Aluminum	nd	0.24	nd	nd	nd	nd	0.100	—	0.01
Antimony	nd	nd	nd	nd	nd	nd	—	0.006 (IMAC)	0.002
Arsenic	0.009	0.005	0.002	0.007	0.013	0.013	0.005	0.025 (IMAC)	0.002
Barium	0.066	0.044	0.067	0.13	0.075	0.077	—	1 (MAC)	0.005
Beryllium	nd	nd	nd	nd	nd	nd	—	—	0.002
Bismuth	nd	nd	nd	nd	nd	nd	—	—	0.002
Boron	0.025	0.026	0.058	0.047	0.048	0.048	—	—	—

Here's the original data, where the number in each cell represents the tested value as a percentage of the Canadian Drinking Water Standard

Date	7/29/04	7/29/04	7/29/04	7/29/04	7/29/04
Location	MW2	MW3	MW4	MW5	MW6
Arsenic	90.0%	50.0%	20.0%	70.0%	130.0%
Barium	3.3%	2.2%	3.4%	6.5%	3.8%
Boron	0.5%	0.5%	1.2%	0.9%	0.4%
Chromium	nd	4.0%	nd	nd	nd
Copper	nd	nd	nd	nd	0.1%
Iron	nd	66.7%	nd	nd	nd
Lead	nd	nd	nd	nd	16.0%
Manganese	15.8%	20.0%	42.5%	38.3%	27.5%
Zinc	0.1%	nd	nd	0.1%	0.2%

	Within Limit
	Over 100%
	Over 1000%

ND = Not Detected

You can see that only Arsenic at Monitor Well 6 exceeds any standard.

Nova Scotia Health will test your water for 33 metals and chemicals for \$120.67. We have tested 12 samples to date (we had #13 from 2018). Twelve tests cost \$1,448.04. Eighteen of these substances have a Maximum Standard for drinking water attached.

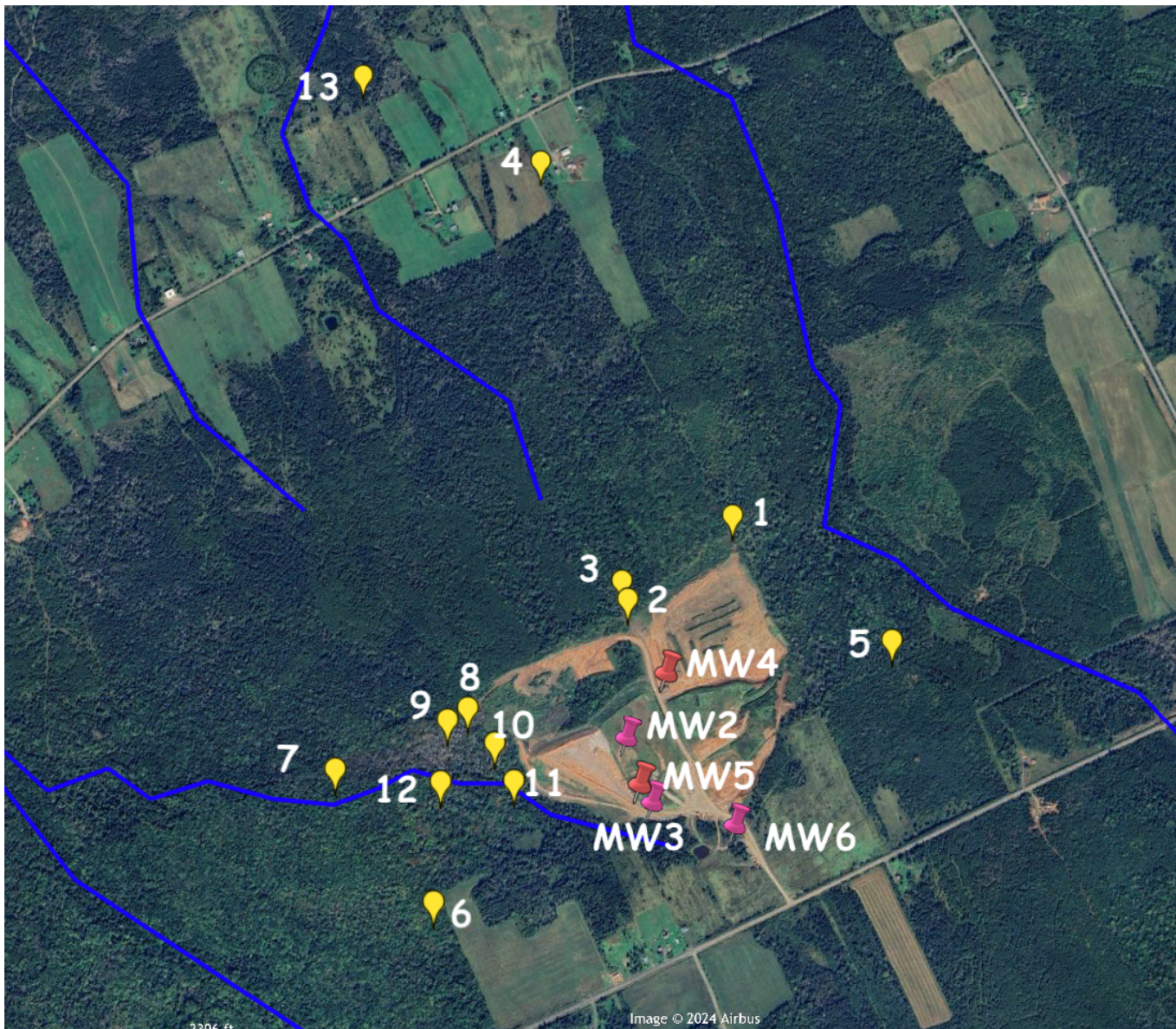
			EXCEEDANCE (figures are tested value/standard)												
Unit	Metal	Standard	1	2	3	4	5	6	7	8	9	10	11	12	13

[illegible]

L	E														
mg/ L	NITRATE + NITRATE (N)	10	ND	0.0	0.0	0.0	0.0	ND	0.8	1.5	3.6	ND	0.0	0.0	0.0

Even a casual observer can see alarming differences. Values as high as 156 times the Drinking Water Standard appear. Sixteen values over 5 times. This yields the irrefutable conclusion that the dump leaks toxic material onto neighbouring properties.

Here are all the locations on a map:



Results from the 2004 tests (labeled MW) are from the original C.T. Harris Proposal background water samples, before the expansion of the dump. You can see that the MW markers are well inside the present boundaries. Our samples are taken at locations marked with yellow balloons.

To look at just one example, why are our results for Arsenic at location #10 more than 100 times what it was 20 years ago at nearby MW 2?

In fact, many of the metals tested for in 2004 are now grossly in excess of the Drinking Water Standard.

Our sampling has followed rigorous and repeatable scientific protocols.

Having evidence matters, and we have it.

Written approval to share test results has been granted from the laboratory (Nova Scotia Health Environmental Services Halifax)