

RESPONSE TO WIND TURBINE NOISE COMPLAINTS

By Ontario's environment ministry

Third Report: 2017

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INTRODUCTION

This report on the handling of noise complaints is a follow-up to two previous reports published by Wind Concerns Ontario (WCO)¹, based on government records of complaints of excessive noise and other effects from Ontario's wind turbines. The previous reports were for complaint records received from requests to the Information and Privacy Commissioner's office via Freedom of Information legislation, for the periods 2006–2014 and 2015–2016.

The current report is based on records received after a request² for wind turbine noise complaints during the calendar year 2017. This was the last full year that the pro-wind-power Liberal government was in place in Ontario. The specific request was for:

All summaries, reports and memoranda pertaining to complaints made to the Ministry of the Environment regarding noise/vibration connected to wind turbines/windmills/wind farms received by district regional offices and the Ministry of the Environment, from January 1, 2017 to December 31, 2017.

The Ministry of Environment and Climate Change, now Environment, Conservation and Parks, took about a year and a half to fulfill the request; WCO had to file two appeals in order to get the information from the Ministry.^{3 4}

THE FULFILLMENT

The ministry sent five files containing about 6,000 pages of documents which included individual Incident Reports prepared by the Spills Action call centre staff and Environmental Officers in the ministry's District Offices. Just over 1,000 pages of the fulfillment were related to citizen complaints about water, presumably as a result of the request for documents related to "vibration."

The records received contained 674 individual incidents or Incident Reports associated with wind turbine noise logged across 23 wind power facilities in Ontario. A detailed listing of the number of complaints by project is provided in Appendix A.

To compare to the response to previous document requests, WCO received information on 3,180 complaints for 2006–2014 and 1,382 for 2015–2016. So, the records compiled for 2017 are in line with the number received for 2015–2016 (697 per year average).

In total, WCO has been given documentation for more than 5,200 complaints received by the Ministry about the operation of wind projects between 2006 and 2017.

¹ WCO, a non-profit coalition of community groups, individuals and families which subsists on small membership fees and donations, paid more than \$1,200 for these documents

² Freedom of Information and Protection of Privacy Act request A-2018-05726

³ Information and Privacy Commission Appeal #PA19-0040

⁴ In this report, the ministry involved will be referred to the Ministry of Environment and Climate Change or MOECC, as that was the name used in 2017.

The majority of complaints received were from residents living inside or beside three main power projects: K2 Wind in Huron County; the single turbine owned by Unifor (formerly the CAW) also in Huron County; and Grey Highlands in Grey County. Other reports of effects came from small to medium-sized facilities including Snowy Ridge, Grand Bend, and Settlers Landing.

Was the information complete?

As noted in the two previous reports, WCO's work with community groups indicates that the complaints provided in 2017 do not fully reflect the complaints that have been formally logged with the Ministry.

To verify the information provided for 2017, WCO requested the members of our coalition to check their records of Incident Report numbers given to them that year. Wind Concerns Ontario routinely encourages people filing complaints to keep records of the date and reason for their call, as well as the Incident Report numbers given to them by either the Spills Line or the local environment ministry office.

An immediate response was received from four families. The finding in these cases was that the majority of records—in some cases, a *significant* majority—had not been provided to us.

- One family in the Ridgetown area filed 13 reports for which they received formal Incident Report numbers; *one* was included in response to the FOI request.
- An Essex County family made nine complaints to the Windsor office of the MOECC; *one* record was received. In this case, the office did not assign individual Incident Reports but simply logged all complaints into one Incident Report.⁵
- A family living inside the K2 Wind power facility recorded 78 Incident Reports with tracking numbers themselves, while the Freedom of Information fulfillment included 64. In this case, single Incident Report numbers were sometimes issued for multiple days, as many as 11. The additional number of complaints then by their recall was 54 for a total of at least 132—that is almost twice as many as provided by the ministry in response to our request.⁶
- Last, a family living inside the Enbridge Underwood wind power project (who say they have mostly given up filing complaints, and now call the Spills Action Centre only, due to a lack of response from the Owen Sound office) reported excessive noise 31 times in 2017 according to their records, for which they received formal Incident Report numbers. WCO, however, received only 11 records of complaints, or about one-third of the actual number filed. Despite the volume of complaints from this family, it also appears no Master Incident Report was created.

⁵ Incident Report 1130-AQJGR

⁶ Master Report number 0807-9XKRVI

If the number of records compiled for these four families is any indication of what happened in the process province-wide, the number of reports received by WCO in response to our request for 2017 records is a fraction of the real number. On this basis, WCO has filed a request to reopen its appeal with the Information and Privacy Commissioner, based on apparent non-response.

The review of the forms provided also indicated that no records were provided from the Guelph District Office. This gap is noteworthy as the Guelph office is responsible for supervising a number of projects, including Melancthon Wind which was the largest source of operating complaints in previous releases. The staff in the Guelph District used to provide training based on their experiences to other Districts; their history and experience raises questions about the lack of any complaint records in 2017.

While the number of complaints provided to WCO understates the real total of complaints about wind turbines filed with the MOECC, the forms provided contain valuable information on the nature of the complaints and the Ministry's handling of wind turbine complaints in 2017. For this reason, WCO proceeded with this summary report, assuming that the complaint records provided in this response would identify common themes.

ROLE OF COMPLAINTS

Renewable energy approval (REA) requirements

A note is necessary here on the approvals granted to the wind power operators as it provides context to the complaint documents, the status of the complaints, responses documented, and comments made by both residents and Environmental Officers.

The REAs that provide the authority for the operation of the wind turbine projects have very specific requirements for project operators to address complaints received about these power generation facilities.

The REAs require that the project operator identify and address the causes of **each** complaint.⁷ This requirement applies to **all** situations where the operation of the project creates an **“adverse effect”** as defined by the *Environmental Protection Act*.⁸ The REA also requires that the project operators report to the MECP on actions taken in response to complaints within eight business days of receipt of the complaint.

The complaint handling requirements give the Ontario environment ministry broad enforcement powers to manage the impact of these projects on the people who live among the wind turbines.

⁷ Phrasing is common across all REAs – For Amherst Island Wind approval http://amherstislandwindproject.com/site_main/wp-content/uploads/2016/12/NUMBER-7123-9W9NH2.pdf; Sections U & V.

⁸ Environmental Protection Act, Section 1 (1), see <https://www.ontario.ca/laws/statute/90e19#BK0>

The Incident Reports should document the actions that have been taken by both the project operator and the MOECC staff in response to these complaints.

Legal status of complaint documents

It is also important to clarify the importance of the reports provided by the government. The complaint documents released in response to our request under the Freedom of Information Act include notes prepared by the MOECC Environmental Officers while carrying out their enforcement duties for the Government of Ontario. Each Incident Report contains the name of the Officer preparing it, and/or the name of the person taking the information from callers to the Spills Action Centre.

The Ontario Environmental Officers are considered “Public Officers” under the *Criminal Code of Canada* Regulation of Public Officers 1 (1) (e), because they are charged with enforcing laws and regulations, along with other public employees such as police. Their notes and decisions on compliance or non-compliance can be used in decisions by the Investigations and Enforcement Branch to conduct further investigation and/or begin prosecution.

In fact, the information provided to the public by the Ministry of Environment, Conservation and Parks on the inspection process by Environmental Officers states that these officers take notes and that their decisions on compliance or non-compliance can be used in decisions by the Investigations and Enforcement Branch to conduct further investigation and/or begin prosecution.⁹

According to the Government of Ontario job description for this position, Environmental Officers are required to conduct interviews and make site visits to “determine the validity and significance of complaints”. It may be assumed then that when Environmental Officers write notes on adverse health effects in their reports, the officers have made a determination about the significance and validity of the complaints.

Background: Ontario’s complaint tracking process

Organizations operating in a corporate environment typically use customer complaints as an important tool to measure service delivery and improve corporate practices. Similarly, government agencies charged with protection of citizens, particularly in the area of public health, regard complaints or reports of adverse effects as a means of tracking the effectiveness of programs and as a way to monitor protection. In a recent academic paper based on earlier Wind Concerns Ontario reports, is this statement: “[C]omplaints may be seen as part of an effective public health surveillance system. According to the Centers for Disease Control “The purpose of evaluating public health

⁹ Ontario Ministry of Environment, Conservation and Parks. “If the EO believes there is serious non-compliance, the matter may be referred to the ministry’s Investigations and Enforcement Branch (IEB) for investigation and potential prosecution” <https://www.ontario.ca/page/what-expect-when-environmental-officer-inspects-your-facility#section-0> Accessed February 7, 2020.

surveillance systems is to ensure that problems of public health importance are being monitored efficiently and effectively.”¹⁰

Despite the value of the information that they contain, there seems to be **no organized program for monitoring reports of noise and adverse effect** to the Spills Action Centre or District offices of the environment ministry; reports may be received and Incidents Report numbers issued, which signals the fact they may be entered into the “internal system” but what happens to them after that is not known.

The available evidence does not indicate that citizen complaints about wind turbine project operations or even reports of health effects carried much weight with the government in 2017 or indeed since the passing of the *Green Energy and Green Economy Act*.

All complaints were handled at the District level and there was no evidence of consolidated central reporting on the type of complaints being received or the responses by the project operators to complaints received. There is significant inconsistency in response to the complaints about noise and other adverse effects connected to the operation of wind power facility, from the type of form used, how well they are filled out, and what is done with them.

WCO was advised that the response to the request for information on complaints about wind turbine operations was very slow as there was no central repository of the information requested. Apparently, each District Office had to be approached individually to obtain the complaint records related the projects operating in its area of jurisdiction. Differences were also noted in the forms being used, which also raises concern about consistency in the process and in the information obtained. In addition, certain fields in the forms were not routinely filled out, as for example the “status” section or the field for whether there was any health or environmental consequence noted in the complaint.

Previous requests for these complaint records indicated that the handling of complaints is not consistent between District Offices. District offices like Owen Sound and Guelph¹¹, which had been dealing with wind turbine complaints for over a decade, have a structured process with incoming complaints generally being issued Incident Numbers and being logged in the tracking system. There is a wide variation, however, between the Districts where wind turbine projects were just being developed.

An email from the Manager of the Hamilton District Office to staff requesting all complaints from 2015 to mid-2017 indicated that his review of complaint documents confirms the problems in the process:

“I have been working through these but it's a disaster as consistency of the clients, sites etc. is all over the place. ... I know it seems like a lot and... [you are]... likely cursing me right

¹⁰ U.S. Centers for Disease Control 2001, Updated guidelines for evaluating public health surveillance systems. Cited in Krogh C, Wilson EJ, Harrington E. 2019. Wind Turbine Incident/Complaint Reports in Ontario, Canada: A Review—why are they important? <https://doi.org/10.4236/oalib.1105200>

¹¹ No Incident Reports from Guelph District Office were provided in response to this FOI request.

now!! Unfortunately these wind FOI's are getting a lot of attention since the release of the FOI materials it's ramping up."¹²

The manager requested that certain fields be completed in his request, specifically the complaint status, and the status of any response such as abatement or monitoring. As noted, this was not routinely done across all offices. The manager appeared to support his argument for consistency however, not by expressing a need to be accountable to the people of Ontario or with the existing regulatory framework but instead, the fact that, “unfortunately,” the noise reports seemed to be the subject of repeated FOI requests and also that they were attracting media attention. He added a link to a 2017 Blackburn News story (which was based on the WCO new release on 2015–2016 complaint information and the related Global News two-part series on these complaints which aired in 2017).

Whereas in the tranches of complaint records provided previously to WCO, it seemed like ministry staff were trying to respond to and even resolve complaints, by 2017 the complaint process seems to be a rubber stamp process, with little action taken by the Environmental Officers. It is true that records showed in 2006–2014 in particular, staff requests for action including noise abatement were met with directives not to take action, and with administrative actions such as denying off-hours site visits or appropriate equipment. In several cases, as WCO has documented, staff noted that they were directed “not to treat wind turbine noise as tonal” which normally triggered tighter enforcement standards.¹³

Although there are indications that staff may want to take action on citizen complaints, the overarching ministry response seems to be that Ontario's setbacks are safe, that audible noise is the only problem, etc., and that predictive noise modeling works, regardless of people's experiences. Not everyone agrees: in a paper published in *Renewable Energy Law and Policy* is this comment:

“These arguments are convincing at one level, but **they disregard the lived experiences** of people who are vehemently opposed to siting wind turbines near their home and farms. We argue that instead of dismissing negative health claims as baseless, a better approach would be to identify the source of the annoyance and stress, and attempt to accommodate it with effective remedies.”¹⁴

The records and information given to WCO after filing requests show environment ministry staff are not routinely gathering this data and, more important, while there are references to an “internal system” in place that features tracking references, the question remains as to what happens to the

¹² Email from Stephen Burt to MOECC Hamilton office staff, sent June 2, 2017. Obtained via separate Freedom of Information request, by Ontario resident

¹³ WCO has requested the source of that directive which has not been fulfilled at of the time of writing. Further, WCO was advised the request could take six months as the “program area” was having to search through years of emails for a Director who has left the ministry.

¹⁴ McRobert D Tennent-Riddell J & Walker C. 2016. “Ontario's Green Energy and Green Economy Act: why a well-intentioned law is mired in controversy and opposed by rural communities. *Renewable Energy Law and Policy: RELP*, 7 (2), page 100.

information. In other words, the complaints may reside in the District Office¹⁵ and be logged in the internal system, but there is no indication that they proceed even to Regional Offices or, ministry staff at headquarters in Toronto. So, in 2017 when then Minister of the Environment Glen Murray told Global News for a TV news special on wind turbine noise complaints that he had very few such complaints on his desk, his comments may well have been a reflection of the Ministry's process for managing these complaints.¹⁶

Wind Concerns Ontario also continues to take issue with the fact that the forms used for Incident Reports in 2017 show that the MOECC again defined its "Client" as the company or companies that own and operate the wind power facility. The individual reporting the problem was designated as the "Caller."

This suggests that in 2017, the government's ongoing focus was primarily on the corporate project owner/operator of the project, rather than responding to the concerns of the citizens of Ontario affected by the project. That, combined with the poor levels of response and resolution could suggest that the focus within the Ministry under the government of the time was on facilitating the operation of the wind power facility, rather than enforcing the legislation fundamental to the ministry's mandate.

Direction from the Government

The complaint documents released to WCO are prepared by the public service staff working in the environment ministry. One would think the actions and response described within would reflect the direction provided to them by the Minister and policy of the government of the day. Cabinet ministers in the government made two critical statements. First was the then Minister of the Environment and Climate Change, the Honourable Glen Murray, who told the Legislature on April 12, 2017:

"The challenge here is that the law works. There are standards. When people call, I'm very proud of the officials. They respond quickly and they enforce the law. The law is being enforced here. If wind turbines or any other type of technology exceeds sound levels, we enforce the law. ... **No one should have to suffer noise or noise pollution from any source, and certainly not wind turbines in their community.**"¹⁷

Glenn Thibeault became Ontario's energy minister in mid-2016 and late in that year before an audience at the Empire Club admitted that the "technology-specific" approach to

¹⁵ Confirmed in an email to Wind Concerns Ontario by Hamilton District Office Manager Stephen Burt, August 30, 2019: "I can advise that district staff collect and log all complaints received at the district level into the internal reporting system. District staff will assess each complaint received to make an informed decision regarding the appropriate abatement response required."

¹⁶ See interview with Minister Murray here: <https://globalnews.ca/video/3498012/community-fed-up-with-ministrys-response-to-wind-turbine-complaints>

¹⁷Hansard, Ontario Legislature, Oral Questions, Session: 41:2 Date: Wednesday, April 12, 2017

generation procurement, specifically wind power, led to “sub-optimal siting” and community discontent.¹⁸

The direction suggested by the public comments from these two ministers is not reflected in the actual information contained in 2017 complaint records provided by the government. Instead of “enforcing the law” as suggested by Minister Murray in his statement to the Legislature, one might wonder whether the public service was acting on a completely different set of directions.

The actions documented in these complaint records suggest that direction has been provided to the public service not to enforce the law and rather placate people who complain with plans to undertake testing, and then more testing, while the wind turbine projects are allowed to continue operation without change. The strategy appears to be built on the idea that eventually, people who have been affected by the wind turbines will give up complaining and their files can be closed without resolution. Or, government inaction would cause people most affected to leave their homes entirely and therefore not file any further complaints.

WHAT HAPPENS TO COMPLAINTS?

The 2017 complaint records provide important insight into then current process used by the Ministry staff to deal with complaints about wind turbine problems. The following sections provide a summary of the key elements of the response:

Field Response Rate

The Incident Reports include a separate field to record type of “MOE Field Response” related to the complaints. The 2017 reports provided to WCO indicate that there was *no* field response for 54% of the complaints while the field was blank for another 45% of the complaint records.

Only nine of the 674 complaints, or 1.3% of total records, indicated that there was a field response.

This 2017 response rate is substantially below the response rate report on the 2006–2014 documents which showed at least some response for over 40% of complaints. By 2015–2016, the complaint records indicate that the response rate had fallen to 6.9%.

Actions Taken

In the main, the records indicate that staff either did nothing, or referred the complaints to the wind power facility operators with mixed or unknown results. In several cases, Environmental Officers emphasized the REA requirements to the wind power operators, but it is unclear what action resulted on the part of the operator.

Examples of the types of approaches taken to the complaints received follow.

¹⁸ Glenn Thibeault address to the Empire Club of Canada, November 28, 2016.

Enforcement of Complaint Handling Requirements – In the Peterborough office, the Senior Environmental Officer forwarded noise complaints to Capstone Power which responded with the promise that:

“...a written response, along with operation data, will be submitted to the MOECC within 8 business days”. Source: Settler’s Landing Project, IR 7868-AT4Q35

Capstone responded further to the Ministry, but the response did not satisfy the District Officer who responded as follows:

“I received your response. The REA Condition S2(3) requires that the company submit a description of the measures taken to address the cause of each incident. This was not included in your response.” Source: Settler’s Landing Project, IR 7868-AT4Q35

This one example demonstrates that the Environmental Officers from the Peterborough office did act on the enforcement steps set out in the REAs, but it seems to be a relatively uncommon occurrence. While none of the incident reports provided for the Settler’s Landing project indicate Capstone’s response to this specific request, this is noteworthy as it does show an attempt at enforcing the REA’s complaint handling requirements that is not seen in other District Offices (or at least, not documented).

Government action proposed but not taken seriously by the operators – As above, staff in the Peterborough District Office did take steps to remind the operator of its responsibilities, an action which was also taken by a few other offices, such as Sault Ste Marie. Although there are many citizen comments about the inaction of the Owen Sound District Office as regards the K2 Wind power facility, the documents revealed an interchange between District Office staff and the project operator, in which staff appear to have tried hard to get the operator to do what it was supposed to. In a letter from the District Manager to the manager at Pattern Energy responsible for K2 Wind, dated May 26, 2017, the MOECC noted that an Immission Audit was to have been completed by April but was not. “As a result of this unforeseen delay,” the Owen Sound District Manager said, the MOECC had presented four options for Pattern “to complete the required work,” and then stated which option the MOECC preferred which was to have the operator implement a mitigation plan immediately until the noise assessment could be done. Then, he gave Pattern a date of June 9—just days away—and said if the mitigation plan was not presented by that date, “the ministry will determine the appropriate compliance approach which may include a Provincial Officer Order requiring Pattern Energy to undertaken [sic] the required work.” (Source: FOI document pages 003198-003199)

In the Master Incident file (8742-AMQLDM), however, is a note prepared by the Environmental Officer assigned to the case, which states that the MOECC Owen Sound office then received a letter from Pattern on June 2: “It is the Company’s view that the current circumstances do not objectively establish reasonable and probable grounds to

require interim mitigation measures until the assessments are conducted in the fall, since the Ministry's screening reports only identify possible non-compliance and the K2 Wind's REA audits suggest that the facility noise modeling is accurate." Eventually, it appears that some sort of "spot check" monitoring was proposed but the MOECC noted it "continues to receive ongoing complaints from residents... relating to noise generated from the Facility causing adverse impacts."

In other words, it appears the operator actively resisted direction from the Ministry.

Maintenance Confirmation – In many cases, the response from the project operator's response when complaints are forwarded to them is largely along the lines of the following:

"Staff have operational data for the turbine and confirmed that it is operating as per turbine specifications. Staff visited the turbine in the afternoon of Nov 30 to check on any possible issues. Staff did not indicate any issues with the turbine operating and did not indicate any abnormal sounds." Source: East Durham Project, IR 6024-ATSR9Y.

This type of response seems to have been accepted without further action in a number of Incident Reports as an appropriate response for the Complaint Handling requirements of the REAs, even though it only eliminates some possible causes of the complaint.

"Document and File" – In mature projects, ongoing complaints about turbine noise often received a bureaucratic treatment. In the case of the Enbridge Underwood project, complaints were referred to the project operator who provided metrics on the operation of the turbine closest to the individual. The operator responded to the MOECC by stating that:

"There were no abnormal operating issues with the turbine that Enbridge is aware of. This is not an exceedance for the ECR. Ongoing complaint – document and file." Source – Enbridge Underwood Project, IR 0554-AS6SX2.

This Incident Report does not provide any evidence that the MOECC under the government of the day was enforcing the complaint handling requirement of the REA which is simple: the operator is required to find a solution to the problems causing the complaint so that it does not reoccur.

Modeling vs. Actual Noise – The complaint records confirm that the flawed process used to predict noise levels in the approval process is still being used to screen complaints for follow-up.

"It is our informed determination that upon detailed review of the situation, the noise complaint are [sic] not attributable to operation of the GHCEP or GHZEP facilities. The distance between the noise complaint [sic] and the closest turbine at either of the 2 facilities is in excess of 1,500 m and the receptor does not have

predicted sound immissions greater than 30 dBA from any individual turbine.”
Source: Grey Highlands, IR 5666-ATNSSH.

The caller in this case reported several health symptoms that would be indicative of exposure to low frequency noise. The fact is, the operator is required by the Renewable Energy Approval (REA) to deal with complaints and resolve them: if complaints are being received there must be something going on, regardless of the predictive modeling.

Single vs. Multiple Turbines – Many of the people complaining to the Ministry are affected by noise emissions in situations where there are multiple turbines, but the responses focus on the “closest turbine” without any assessment that it is indeed the cause of the problem. For example:

“Called in regards to an 8/10 ‘loud pulsing’ turbine noise complaint. There are four turbines adjacent to their property. There is a light SW wind”. The response focused on the nearest turbine (not identified to hide identity of individual who made complaint). Source: Enbridge Underwood Wind, IR 1405-ANR5D3.

All the Ministry guidelines seem focused on the single closest turbine, irrespective of wind direction. There is no provision for the impact of multiple wind turbines (such as wake turbulence and other phenomena).

Focus on Audible Noise – the Ministry’s response to complaints suggests that it is focused solely on enforcing the audible noise standards.

“...we have been exposed to the full range of noise emissions from wind turbines. These turbines have affected our health. That the vibrations and sensations reported in our complaints are not linked to audible noise but rather to low frequency noise and infrasound.” MOECC: no response noted, minor environment consequence.
Source: HAF Project (Niagara), IR 5318-AMUHDL

Despite these comments and references to vibrations and pulsing sensations in other complaints, the Ministry response always falls back on audible noise testing and enforcement. Reference is made to a study commissioned by the Ministry that confirmed existing testing procedures that:

“A-weighting follows the frequency sensitivity of the human ear at low levels”.
Source: Grey Highlands, IR 2750-ASGGM9

Essentially the Ministry’s position is, if you cannot hear it, it cannot hurt you. This assessment ignores the evidence of alternate pathways indicated in many of the complaint records provided to WCO. Many people note that they cannot hear the noise but feel the vibrations and/or pulsing sensations that are being created by the sound pressure wave

created by the wind turbines. Several agencies around the world¹⁹ have commented that A-weighted measurement of wind turbine noise emissions may not capture the full range of noise, and may not be appropriate.

Even when the audible noise is shown to be within Ministry standards, staff do not pursue low frequency noise and infrasound as potential causes of the problems reported. There is no pursuit of the real cause of the complaint as required by the REA but rather only enforcement of audible noise standards.

Action Deferred when Noise Audit Underway – After the new Compliance Protocol for Wind Turbine Noise was implemented in April, 2017, deferring action on complaints about projects where the noise audit was underway became common:

“... Informed caller that a meeting took place with Northland Power and their consultants over the inadequacies of their audits and the requirements that they have to fulfill in order to meet their REA requirements. This is to occur over the next 12 months. Caller was not happy about hearing this ... ‘another 12-18 months for the client to continue to impact us’.” Source: McLean’s Mountain Project, IR 8074-AQPK5E

Further remarks refer to other complainants; no MOECC response is noted but minor health consequence was noted on the Incident Report form.

Many of the complaint records for the Unifor Turbine in Port Elgin indicate:

“Acoustic audit scheduled for spring 2017 with report to be submitted by end of June 2017” and “no mechanical issues” were noted. Source: Unifor Family Education Centre turbine, IR 8618-ASGMX5, (example).

“It is obvious Unifor doesn’t concern itself with the intrusions on its neighbours – the anguish from the wind turbine is unbearable.” Source: Ibid.

Despite the use of terms like “anguish” and “unbearable,” the operator and the Environmental Officer simply appended meteorological data taken from Environment Canada for the time of the report.

Or the following observation about the Suncor Adelaide projects, which appears to cast doubt on veracity of the complaints because the turbines were curtailed:

“Company actively worked with residents, met with London District Office staff, did the immission audit...some complaints occurred while turbines under a curtailment direction from IESO ... The turbine blades continue to rotate but at a slower rate ...” Source: Suncor Adelaide Project, IR 0614-AJDRH9.

¹⁹ Including the Council of Canadian Academies, *Understanding the Evidence: Wind Turbine Noise*, April 2015.

General comments on response

Our review of these complaint records provides little evidence that the Ministry is enforcing the complaint handling requirements of the REAs that govern the operations of the wind turbine projects in Ontario.

Instead, the Ministry is relying on the various responses to complaints that have been outlined above which has allowed operators were able to avoid any effective response to individual complaints simply by citing meteorological conditions at the time, or by claiming to have checked mechanical status and, on finding nothing wrong, took no further action. Flawed assumptions documented above allowed the companies to ignore their responsibilities to address complaints as projections showed that the problem could not exist, yet the evidence presented in the complaint clearly showed there were persistent problems.

Citizen reaction to MOECC inaction on complaints

Although the number of complaint records provided by the environment ministry is significant at almost 700 for 2017, a look at the pattern of the sources of the complaints reveals that several people or families complaining filed multiple reports with either the Spills Action Line or their District Office, while in some other wind power projects (which had been the subject of complaints in previous years) there were no complaints reported at all.

One factor however could be that, given apparent government inaction over the years, people forced to live near wind turbines simply gave up complaining as using the reporting process seemed to be pointless. This belief is reflected in the comments included in the reports.

A K2 Wind resident commented on the inaction on November 16, 2017:

“I am exhausted from this. It is an effort to write these letters on days like this ... I get very tired complaining as apparently no one cares and they seem not willing to stop this noise.”

“There have been more times that I did not document.” Source: K2 Wind, IR 0278-ATBLVV.

In yet another report, the resident’s comments were recorded as, “I had given up complaining for a while ... thankless exercise.” (IR 3636-ASJLTW, Master 0807-9XKRVJ)

The fact that Environmental Officers did not make an effort to witness or experience and document the noise emissions themselves also seemed to be a factor in whether people continued to report problems.

Many of the reports included notes about adverse health effects, an issue residents also felt was not getting any response. Here, a person complained to the Sudbury office staff in August, 2017:

“Caller is asking what is being done to protect their health” Source: McLean’s Mountain, IR 8074-AQPKSE

Staff note, same IR: “He has not logged any new complaints but they are still being affected by the wind farm”. Source: McLean’s Mountain project, IR 1564-9GJJPA4

Despite personal communications between MOECC staff and residents experiencing problems, people still felt they were not getting an appropriate response or action.

“It has been over 6 weeks!!! I would like an update. I asked you and your staff questions without response other than ‘A letter was sent to Pattern Energy ...’ The MOECC acknowledges they do not possess the equipment necessary to monitor wind turbine noise, per their mandate....” Source: K2 Wind, IR 8452-AJANRZ

If the government ministry charged with responsibility for monitoring compliance with regulations admits to the public that they don’t even have the equipment or other resources required to do their job, it’s not hard to see why people would think it was pointless to continue participating in the complaint process.

So, with both the apparent lack of any response, and the absence of any meaningful action, it may be that a significant number of people have given up on participating in the complaint reporting process.

One person pinpointed a possible reason for MOECC’s apparent inaction: staff were following the process, which was simply to refer complaints to the wind power operators who were supposed to do what was required of them by their Renewable Energy Approvals. “According to your records, my complaint has been dealt with,” said one person living inside the Grand Bend wind power facility. “However you took the easy way out, believing that the wind company would actually do something. The fact is that nothing has been done ... I can see now you may think complaints are being investigated when in fact, they are not.” Source: IR 0803-AM2Q2L

ADVERSE HEALTH IMPACTS

Analysis of the content of the 2017 complaint records provide an indication of the scope of the health issues being reported to the Ministry:

- 42% included specific mention of health impacts.
- 23% of the records contained notes written by Environmental Officers/Spills Action staff on health-related complaints.
- 16% of the complaints mentioned or described symptoms that could be suggestive of exposure to infrasound/low-frequency noise. This includes any mention of “pressure” in the chest, head, or ears; feelings of anxiety; debilitating headaches; and feeling of exhaustion/fatigue or “brain fog.”²⁰

²⁰ We based our review of the comments on the symptoms listed in McMurtry R, Krogh C. 2014. Diagnostic criteria for adverse health effects in the environs of wind turbines. Journal of the Royal Society of Medicine. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4221978/>

- At least 150 Incident Reports or more than 22% contain mentions of sleep disturbance or other effects that might reasonably be thought to have an effect on health

Despite a mandate from the government to manage health effects related to wind turbine project, the complaint records indicate that the Ministry is largely ignoring the health issues reported. There is almost no evidence that people reporting health issues and symptoms of ill effects are encouraged to see a local physician, the local health unit or the Ministry of Health.

In the 6,000 pages provided in response to the WCO request, there is only one example found of an Officer suggesting the caller seek medical attention:

“...phone conversation with complainant. While wind turbines sound like a plane at height constantly flying over her house, noise is not a concern XXX experiencing more ... I encouraged complainant to seek medical advice and if she got something in writing it would be passed onto the Niagara Region Health Unit. ... I also encouraged her to contact the Wind Farm operators directly...” No MOECC response noted, no health/environmental consequences noted. Source: Vineland Power, IR 3438-AJCRS2

In fact, the public health units in Ontario are powerless to do anything with regard to wind turbines, as prescribed in the Green Energy Act — the environment ministry has all jurisdiction where wind power is concerned.²¹

This lack of action on health problems is not because the callers are not providing detailed descriptions of how the noise emissions from the wind turbines are affecting their health. The following is a selection of specific, verbatim health-related notes from the complaint records. It is a **litany of suffering**, as illustrated by the following excerpts.

“...we find no peace. The assault is the same and at times greater at low wind speeds.” And same MIR: “...thumping noise going through our heads all day, long and steady and all day” In an email is a note that the family has been forced to leave the house for day. And, another report, “ongoing whooshing cyclic roar from the UNIFOR illegal wind turbine again today. It is no wonder we are experiencing headaches and tinnitus and angst. Even the dog does not want to stay outside on this perfectly beautiful day... **please help us.**” Source: Unifor, IR 2808-AL3KFB

“...ground tamping noises have been going on all week. The vibrations in the house are unbelievable---our stomachs are turning and heads aching terribly”. Officer notes no health

²¹ Erica Clark, PhD, Epidemiologist with Huron County Health Unit, 2019. Final Report Huron County Wind Turbine Study about Noise, Vibration and Light. “Ontario public health units will continue to be asked to examine potential health hazards [associated with wind turbines] which the Ontario Ministry of Health does not have the legislative authority to regulate.” Page 17.

consequence in report despite this comment: “Complainant reports headache and nausea.”
Company response: no mechanical issues. Source: Unifor, IR 2436-AHNQRU

“turbine...continues to cause us health issues. AGAIN today and this evening we’re
suffering...have had the day ruined trying to catch up on sleep” Source: Unifor, IR 5323-
ATKRHP

“the turbine is slamming loud thumping noises at our home and property and causing
stress, nausea and headaches.” No MOECC response, health consequence response: NO.
Source: Unifor, IR2503-AKENXL

“... noise from the turbine constant since Monday, like a jet and a tonal hum, Caller reports
XX is experiencing head aches and a lack of sleep due to the noise. No MOE response,
noted minor environment consequence.” Source: Niagara Region Wind Farm, IR 0035-
AJ2SYT

“Caller described the noise as humming and once outside ‘it’s like a jet engine’ Noise is also
inside the house” MOE: No response, no health consequence. Source: IR 3041-AJE5CW

“Caller woke up at 6:45 to an audible but low ‘whoom whoom’ noise”. Source: IR 0308-
ALQGXC

“...noise bad for 24 hours. I am exhausted from not sleeping...It was awful being outside
in the noise ... noise bad throughout the night and until this afternoon...**I am physically
exhausted.**” No MOE response noted, no health/environmental consequence. Source: K2
Wind, IR 2855-ASFFUC

“...**drives a person insane** when it goes on for hours ... “We are being impacted health-
wise and are extremely agitated with the noise...light-headed, says eyes popping and feeling
dizzy”. MOE response noted: NO, Health/environmental consequence noted as “minor”.
Source: K2 Wind, IR 7583-AU7NRB

“...wakened through the night. I had a fitful night trying to sleep with all the pounding that I
could feel in my bedroom...this morning I feel terrible. I have tension in my face and neck,
my heart is racing. I feel extreme agitation and stress.” Multiple reports describing pressure,
tonal noise as “coming through the walls” vibration in the walls. No response noted
occasional notes to confirm “minor” environment consequence. Source: K2 Wind, IR 3625-
AU7RA7

“...**unbearable ... torture**...It gave me a splitting headache like I do not think I have ever
had before. I was nauseous. I was shaky. My ear was popping. It puts the fear into me as to
what this is doing to us. I could not even function to call the Spills Line earlier. ...Not safe
inside or outside. ... many more times I did not document...” No MOE response, no note
on health/environmental consequence. Source: K2 Wind, IR 0278-ATBLVV.

“I had a friend visiting our home in the afternoon and sometime possibly after 1600 hours, this person called out in pain-just the same as family members have done in the past. She poked at her ear and complained about the very sharp knife like pain that just hit her in the ear.” No MOECC response, no health/environment consequence noted. Source: K2 Wind, IR 2855-ASFFUC

“...away for the early evening and we come home and are hit with headaches and ear popping.” Source: K2 Wind, IR 6368-AR4RLD

The ministry's powers

The inaction on reported health issues is deeply worrying. The Environmental Protection Act gives the Ministry the power to issue stop orders to address situations where activities create noise emissions that threaten health. The complaint records provided to WCO confirm that residents living among wind turbines documented health issues linked to the wind turbines for Ministry staff and in some cases the Ministry staff added comments confirming receipt of the reports.

The Environmental Protection Act gives specific powers to the Ministry to issue stop orders to address noise emissions from wind turbines as a “contaminant” of the environment when they are linked to health concerns:

“...when the Director is of the opinion, based upon reasonable and probable ground ... that it is necessary or advisable for the protection or conservation of the natural environment, the prevention or control of an immediate danger to human life, **the health of any persons** or to property, the Director may issue a stop order or a control order directed to the person responsible.”²²

The issuance of a REA for a project does not prevent the Ministry from issuing a stop order if there is a related activity presents a danger to health:

“Despite the issue of a program approval or order, when the Director is of the opinion, based upon reasonable and probable grounds, that it is necessary or advisable for the protection or conservation of the natural environment, the prevention or control of an immediate danger to human life, the health of any persons or to property, the Director may issue a stop order or a control order directed to the person responsible.”²³

MISUSE OF HEALTH CANADA STUDY

In some cases, usually when the caller has mentioned “infrasound” in reporting excessive noise and adverse effect, the Health Canada study was mentioned as a reason not to take action on any mention of health impacts. For example:

²² Ontario, Environmental Protection Act, Section 8 (1), <https://www.ontario.ca/laws/statute/90e19#BK10>

²³ Ibid, Section 12.

“Health Canada studied the impacts of wind turbine noise on health and in 2014, published a summary of the results from their study. None of the results from the work suggested any health impact from wind turbines, including low frequency noise and infrasound. The authors stated the levels of low frequency noise and infrasound were found to be below levels that would be expected to result in harm to human health. These findings were further supported by the results of the self-reported questionnaire”. Source: Grey Highlands, IR 2750-ASGGM9.

The comment cited in response to a Grey Highlands complaint as a rationale for inaction is troubling for several reasons. First, the Health Canada study focused on **audible noise only** and used highly questionable estimates of average, annual noise to assess the impact of wind turbines on individuals responding to the questionnaire. It was not based on actual noise measurements.

Second, the Health Canada authors **did find health problems** as a result of exposure to wind turbine noise emissions, specifically “annoyance” which in this context is used as an accepted medical term to describe stress or distress. Health Canada found cases of elevated blood pressure and blood cortisol levels, all physical indicators of stress. The research team also discovered that 16.5% of people living within one km of wind turbines were experiencing distress; that figure jumped to 25% at 550 metres—the Ontario setback.

Moreover, Health Canada itself cautioned against such use of the study report by saying the study does “not provide definitive answers” and further, the results were **not to “be generalized** to areas beyond the sample as the wind turbine locations in this study were not randomly selected from all possible sites” and finally, **the study does “not support any conclusions”** about causality between wind turbine noise and health.²⁴

Nevertheless, this boilerplate response appears as a statement of Ministry policy in many complaint records related to this project. Even more concerning is that senior managers continue in 2020 to use this same flawed logic as government policy in response to resident complaints about wind turbine noise

RECOMMENDATIONS FOR ACTION

²⁴ Health Canada, 2014. Health Canada Wind Turbine Noise and Health Study Results Overview, page 19. Copy provided to Wind Concerns Ontario as a stakeholder; can be provided on request.

In a paper published in *Renewable Energy Law and Policy*, the Ontario experience with wind power was described as a “failure” and that the entire process, beginning with the Green Energy and Green Economy Act has led to “perpetuating environmental, social and procedural injustices.”²⁵

Clearly, based on the content of the 2017 noise complaint records, there are serious problems for people who were forced to live inside industrial-scale wind power generation facilities and, just as clearly, there is a need for action.

Institute Central Complaint Tracking

In the corporate world, complaints are rigorously tracked, analyzed and used to identify issues that need to be addressed. While there is a process to accept complaints about wind turbines and any adverse effect, it doesn’t go very far. Complaints are maintained at the District level; it may well be that in Ontario, the only agency requesting annual reporting of complaint records is Wind Concerns Ontario! Nevertheless, the information provided to WCO is almost certainly incomplete and shows that the processes used to log complaints are not consistent between Districts. This should not be acceptable: when the pollution reporting information was publicly available, the last figures for wind turbine noise complaints represented 10% of total pollution complaints received by the Ministry.²⁶

Communications with and from Ministry staff suggest that the direction of the former government as regards noise complaints continues. The current government ran on a platform of addressing community concerns about wind turbines and the current Minister’s office now has an opportunity to demonstrate that government policy toward turbines has changed. Asking for a full review of the complaint records held by the Ministry with regular ongoing updates on actions taken could help to ensure that project operators are complying with the complaint handling requirements of the Renewable Energy Approvals for the projects.

Eliminate the Compliance Protocol

The current focus of the MECP enforcement activities is the Compliance Protocol for Wind Turbine Noise. The current protocol was implemented in April 2017 replacing an earlier version proved unworkable. (The protocol was developed with the input of acoustics firms working for the wind power industry while ignoring the input from residents living among wind turbine projects.) The protocol remains a complex and flawed test procedure which ignores many of the issues reported in the complaint records; at the same time it is expensive to implement both for the wind industry and the environment ministry due to the complex assessments required to validate the submissions of project operators. What Ontario has is an endless “hamster wheel” of testing, testing

²⁵ McRobert D, Tennent-Riddell J & Walker C. Ontario’s Green Economy and Green Energy Act: Why a Well-Intentioned Law is Mire in Controversy and Opposed by Rural Communities. 2016. *Renewable Energy Law and Policy*, 7 (2), 91-116

²⁶ 2010 data – the last time the MOECC released summaries of complaint records. See Wind Concerns Ontario, Response to Wind Turbine Noise Complaints, May 2017, pg. 5. Note the Wynne government pledged to make this process public again by 2017; that has still not occurred.

and more testing, and an audit requirement that was—as of 2017—not taken seriously by the wind power operators and therefore, not effective.²⁷

Enforcement activities should be returned to the local staff in the Ministry’s District Offices (see recommendation, below).

Revise Regulations

The problems documented in the complaint records provide important evidence that the current regulation governing the siting of wind turbine projects, Regulation 359-09, does not provide adequate protection for residents living among the wind turbines in these projects. While the current means of project evaluation focuses solely on the audible noises emitted by wind turbines, the reports of vibrations and pulsing sensations in the complaint records confirm that infrasound and low frequency noise also need to be considered.

Other jurisdictions around the world have revised the setbacks to reflect learning from the initial wind turbine installations and the increasing height and power of the equipment used by increasing the setbacks from residences. Rather than the 550 metres used in Ontario since the Green Energy Program was launched in 2009, setbacks of up to 2,000 metres are now being used to provide protection from the full range of noise emissions from wind turbines. Some jurisdictions have employed setbacks of 10 times the turbine tower plus the rotor height.

While the MOECC stated several times in the 2017 documents that it follows the “best available science,” that is hardly true, relying as it did on a very select list of studies, including the Health Canada study which was not intended to be definitive, or used for policy decisions. The World Health Organization published a revised environmental noise guideline document which for the first time included recommendations for wind turbine noise. Ontario’s regulations fall short of the noise limits and other considerations outlined in the document.²⁸

It is time for Ontario to launch a review of Regulation 359/09 and to leverage the evidence contained in the complaint records to provide direction for the new policy.

Re-engage and support staff

The staff of the environment ministry were put in an untenable position as the rules for compliance with noise regulations make proving non-compliance difficult if not impossible, even when there are hundreds of citizen complaints and adverse effects continue to be reported. Environmental Officers or Provincial Officers demonstrated capabilities in the early stages of the roll-out of wind turbines across rural Ontario to assess problems and to recommend solutions. The technology of sound measurement equipment has improved considerably over the past ten years, and if the District staff

²⁷ Wind Concerns Ontario maintains a list of compliance audits, available on request.

²⁸ <http://www.euro.who.int/en/health-topics/environment-and-health/noise/environmental-noise-guidelines-for-the-european-region>

were properly equipped and given a political mandate to enforce solutions to wind turbine noise complaints, they could provide a much less costly solution to managing these noise issues.

In documents provided to us earlier, we saw that Environmental Officers were told not to make after hours site visits, that there were no resources for noise monitoring equipment, that wind turbine noise was not to be treated as tonal or cyclic (and therefore the important 5 dBA penalty was not to be applied) and on occasions where staff recommended an order be issued, their advice was not heeded. Yet day by day, they must listen powerlessly to the heart-rending stories of people living with noise, vibration, strobe effect and other adverse effects.

The environment ministry today should consider re-investing in its trained field staff, supporting them with new technology and empowering them to do the job they were intended to do.

Coordinate response to Health Issues

The current process for handling issues created by wind turbine projects in rural communities places the sole responsibility on the environment ministry staff. In the early phases of the program, this staff demonstrated the necessary capabilities to monitor noise emissions and recommend solutions for addressing excess noise situations. These people are not trained to deal with the health issues being reported in the complaints and despite this lack of training, the current process focuses all of the response to wind turbine issues on the MECP, excluding health professionals more qualified to address the problems.

As a result, the health issues being created by wind turbines are excluded from the systems that Ontario uses to track health issues; Medical Officers of Health were discouraged under the previous government from reporting clusters of health issues in turbine projects. There also have been no steps to educate the front-line doctors and healthcare professionals who are being approached by patients with symptoms related to wind turbine noise. As a result, many tests and drug treatments have been prescribed imposing a significant burden on the health system while still not addressing or resolving the source of the problem.

Moving forward, the Ministry of Health needs to be given an active role in the process of managing wind turbine projects as well as input into the revision of Regulation 359-09.

Another important step would be for the Health Ministry to stop relying on the 2010 statement from the Ontario Chief Medical Officer of Health, and remove it from the Ontario website. Based on studies available more than 10 years ago, that statement erroneously indicated that the setback regulations enacted as part of the Green Energy Program were sufficient to protect residents from the harmful effect of wind turbine noise emissions.

Change the focus to “the people”

We note again that the “Client” is listed in ministry correspondence in 2017 as the wind power operators. If that practice is still in use today, it needs to be corrected immediately.

The “Client” of the environment ministry is the people of Ontario, and the ministry’s mandate is to protect them, and the environment in which we all live.

WIND CONCERNS ONTARIO

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Appendix A: Complaints by Project

Site Name	Start Year	2006 - 2014	2015 - 2016	2017	Total
Melancthon Wind Project - All Phases	2008	873	62		935
K2 Wind Power Project	2015	1	413	178	592
Enbridge Ontario Wind Power	2009	442	73	14	529
Unifor (formerly CAW) Family Ed Centre	2013	236	92	174	502
Talbot Wind Farm	2010	388	7	2	397
East Durham	2015		293	6	299
Thames Valley Ph 1&2	2010	239	16		255
Frogmore-Cultus-Clear Creek Wind Farm	2008	131	4		135
HAF Wind Energy Project, Wainfleet	2014	71	57	2	130
Gosfield Comber Wind Farm	2010	127		2	129
Capstone - Grey Highlands	2014		3	121	124
Harrow Wind Farm	2010	117	6		123
Plateau Wind Farm	2012	119	1		120
Ripley Wind Power Project	2007	99			99
Conestogo Wind Energy Centre, Drayton	2010	69	10		79
Grand Valley Wind Farm	2012	24	38		62
Kent Breeze Wind Farms	2011	55	2		57
Dufferin Wind Power Project	2014	3	50		53
Snowy Ridge	2016		7	46	53
Grand Bend Wind Farm	2016		13	37	50
Niagara Wind	2016	0	24	20	44
St. Columban Wind Project	2017	1	30	11	42
South Kent Wind Farm	2014	35	5		40
Adelaide Wind Project	2014		34	2	36
McLean's Mountain Wind Farm	2010	27	6	3	36
Settler's Landing	2017			35	35
Ernestown Wind Park	2014	1	33		34
Summerhaven Wind Energy Centre	2010	19	8	3	30
Wolfe Island Wind Project	2009	22		1	23
Proof Line Wind Farm	2009	20			20
Grand Renewable	2014		19		19
Bluewater Wind Energy Centre	2011	8	8	2	18
Jericho Wind Energy Centre	2014	3	15		18

Armow	2011		15		15
Cedar Point	2011		10	4	14
Goshen Wind Centre	2015		8	2	10
Port Alma Wind Farm	2008	9			9
Erieau-Blenheim Wind Farm Raleigh	2013	8			8
Raleigh Wind Energy Centre	2011	6			6
Erie Shores Wind Farm (Port Burwell)	2006	5			5
Kruger - Chatham Wind Farm	2011	5			5
Port Ryerse Wind	2016		5		5
Bornish Wind Energy Centre	2011	1	3		4
Marsh Line	2010			4	4
Zep Wind Ganaraska	2016		4		4
Zephyr Wind Farm	2012	4			4
North Kent Wind	2018		3	1	4
Port Dover and Nanticoke Wind Project	2013	3			3
South Branch Wind Farm	2014	3			3
Springwood Wind Project	2014		3		3
Sumac Ridge	2013			3	3
Gesner Wind Energy Project	2013	2			2
Oxley Wind Farm	2014	2			2
Prince I & II Wind Power Generation Facility	2006	2			2
Bow Lake	2010			1	1
Napier Wind	2015		1		1
Wainfleet Wind Energy	2014		1		1
Total			3,180	1,382	674
					5,236