Pilon, Janet

Subject: message for the next meeting of Council

From: Joseph Minor
Sent: September 21, 2023 4:49 PM
To: clerk@hamilton.ca
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To: The Mayor and all Members of Council c/o the Clerk

I am writing to thank City Council for taking decisive action to preserve local farmland and local wildlife habitat by making the decision to direct the City's future growth to remain within the City's existing Urban Boundary (the No Urban Boundary Expansion option). This protects both irreplaceable Prime Agricultural Land and irreplaceable wildlife habitat from the destruction caused by sprawled ground based detached unit development. These irreplaceable lands both in the Greenbelt and in the City's White Belt lands need to be protected from sprawled development.

The Province's decision to overrule Council's decision needs to be resisted by any means necessary in order to protect our children's future. Our children need the food security provided by Prime Agricultural Land and the fresh air and clean water provided by ecosystems whose stability depends on the biodiversity of the plants and animals that live there.

While there is no rational explanation for Ford's persistent attacks on the environment, for the details of the bungled government actions taken by Ford please see both: the 93-page "Special Report on Changes to the Greenbelt" and the 165-page report "REPORT OF J. DAVID WAKE, K.C. INTEGRITY COMMISSIONER Re: The Honourable Steve Clark, Minister of Municipal Affairs and Housing and Member of Provincial Parliament for Leeds– Grenville– Thousand Islands and Rideau Lakes Toronto, Ontario August 30, 2023".

What is striking about these 258 pages of detailed analysis is that not only were many mistakes made when these lands were removed from the Greenbelt, but also that the Ford government knew that the statements it was making about the "need" to remove these lands from the Greenbelt were false.

While both the Minister's Chief of Staff and the Minister have resigned in the wake of these reports (and as I write this a second Minister has also resigned and has been removed from caucus), the Premier has appointed a new Minister of Housing and has directed him to consider even more Greenbelt lands for removal from protection. Again, I am asking Council to stand firm against these unprecedented and sustained attacks on both our farmland and our natural environment.

The reason why this is such a difficult planning environment is that three things are all concentrated in the same small area in southern Ontario:

1) Most of Ontario's human population (increasing),
2) All of Ontario's Prime Agricultural Land (diminishing fast),
3) The most diverse wildlife habitat in Canada (rapidly disappearing).

I want to again thank Council for recognizing these simple facts and taking decisive action to attempt to slow the bleeding caused by #2 and #3. Please do whatever you can to staunch the blood loss from the unwise actions of the Provinicial government.

1) Food security (aka Protecting Prime Agricultural Lands from Greenfield Sprawl)

Prime Agricultural Land in Canada is rare and precious – only 5% of the land area qualifies as "Prime Agricultural Land". Class 1 soil Prime Agricultural Land is the top 10% of Prime farmland (only 0.5% of land in Canada has Class 1 soil).

According to the City's own study:

CITY OF HAMILTON GRIDS 2 / MCR – PLANNING FOR GROWTH TO 2051: HOW SHOULD HAMILTON GROW? EVALUATION OF GROWTH OPTIONS.

"In addition, the extensive encroachment of future urban land uses would potentially lead to the fragmentation of farm parcels and heavy urban traffic would make operations difficult for future farm operators."

"As Growth Option 1 requires the conversion of up to 1,310 ha, which is mainly comprised of Prime Agricultural Lands (depending on the location of lands selected in the Whitebelt), it is anticipated that healthy, local and affordable food options would be impacted by the anticipated growth."

The City's staff report:

"Based on Rural Hamilton Official Plan designations, all phasing options under the Ambitious Density scenario would require the inclusion of whitebelt lands that are designated prime agricultural being added to the urban boundary. The City's draft Land Needs Assessment has identified that 1,340 ha of land is required under the Ambitious Density scenario, so there is no phasing option that avoids prime agricultural lands."

One of the key points that seems to be ignored by planners and politicians (both municipal and provincial) is the damage that is done beyond the Urban Boundary if the Urban Boundary is extended. The lost farmland is not just the footprint of the sprawled ground-based detached units, but the lost farmland extends out past the new boundary. This increased loss of Prime Agricultural Land was noted by the Agricultural Expert (see quote about "extensive encroachment" above). These "creep losses" extend beyond any Urban Boundary expansion, but are not even considered in the loss numbers. As a result, the harmful effects of Urban Boundary expansion are underestimated (even by me in this letter) – and this needs to be kept in mind.

The numbers with respect to farmland:

There are 8.06 billion people on the planet. There is 48.9 million square kilometers of farmland to feed them. This means that on a world average basis there is 1.50 acre of farmland per person.

There are 15.5 million people in Ontario. There is less than 11.8 million acres of farmland to feed them. This means that there is less than 0.76 acre of farmland per person in Ontario.

One of the things that is shocking to me is just how rapidly the figure of farmland per person is dropping in Ontario. While the world average figure is holding pretty steady, the amount of farmland per person in Ontario has dropped at least 4.3% in the last year. I wish I could give you the real figure (i.e. how much higher it is than 4.3%) , but what I need to do this is how much farmland was lost in Ontario in the last year – a figure that the Ford government is unwilling to provide.

WHAT IS ABUNDANTLY CLEAR IS JUST HOW INCREDIBLY STUPID IT IS FOR THE FORD GOVERNMENT TO BE DICTATING THAT OUR POPULATION GROWTH OCCUR ON OUR RAPIDLY DIMINSHING PRIME AGRICULTURAL LAND.

This goes beyond "unsustainable". I used to think that destroying our scarce Prime Agricultural Land would be "filicidal" but now that Ford is destroying farmland with a maniacal vengeance we may soon find out that his actions are more accurately described as "suicidal". But since Ford would be taking us with him, suicidal is not the right word either. We need a more accurate word…..

Ontariocidal?

Used in a sentence:

The actions of the Premier of Ontario are best described as Ontariocidal.

According to the City's Agricultural Expert: "healthy, local and affordable food options would be impacted by the anticipated growth".

One could take the rather shortsided view that Hamilton should not worry about the Prime Agricultural Land within its boundaries, because it is a City and farmland should be protected somewhere else in Ontario. But from my personal agricultural lands inventory (taken by driving around southern Ontario for 30+ years) it is abundantly clear that the Provincial government is failing to protect Prime Agricultural Land across the region.

This is significant because due to the recent geologic history of Ontario, Prime Agricultural Land is concentrated in the very same area where the Provincial government is directing rapid growth.

Please consider that on a world average basis there is 1.50 acre of farmland per person. In Ontario there is only 0.76 acre of farmland per person. ONTARIO IS SHORT ON FARMLAND COMPARED TO THE WORLD AVERAGE.

The reasons that Ontario is so short on farmland are due to the last Ice Age and the Canadian Shield. The last Ice Age scoured most of the soil off of the rocks across most of Ontario north of Hamilton. The rocks that were left exposed are Canadian Shield rocks, some of the oldest rocks on the planet. Much of the useful nutrients for plant growth were weathered out of these rocks long ago. So not only is soil largely absent, the underlying exposed rocks are not a good source for producing quality soil.

Ontario is already a net food importer (we import twice as much as we export). We need to include in our planning considerations about the global food "supply chain". Climate change exacerbated drought and flooding means that our increasing dependence on imported food may become a major problem. The war in Ukraine is another example of disruption to a food producing area. It would be worse than unwise to assume that we can continue to rely on other jurisdictions to protect enough of their farmland to feed us while we continue to pave ours.

Ontario currently sits at less than 0.76 acre of farmland per person, but due to poor Provincial planning this figure is falling at a current rate of more than 4.3% per year.

It is estimated that in order to provide the North American "baseline diet" (pretty much the average of what we currently eat) it takes about 2 acres of farmland per person. In order to keep us fed, we currently import food because of the shortage of farmland. Before the Government of Ontario stomps around insisting municipalities comply with its demands that Prime Agricultural Land be paved for sprawled ground based detached units, it needs to consider that food is a more important (and immediate) planning objective than ground based detached units.

I urge Council to continue to do whatever it can to resist the lunacy being imposed on Hamilton by the current Provincial government.

2) Stable ecosystems (that all life, including human, depends on)

We are four pages into this discussion about what the Ford government is doing wrong, and the discussion has been almost entirely focused on the wants of a single species.

These planning processes are singularly focused on predicting and providing (30 years into the future) for the anticipated "wants" of a single species whose numbers are increasing. Meanwhile the "needs" (for survival) of all of the other (99%+) species that live here are ignored. Many of these species are suffering population

declines due in no small part to past bad decision making. As a result, unless balance is restored in the planning process the numbers of many species will continue to dwindle until they are extirpated (made "locally extinct").

Hamilton is in Ecoregion 7E (Lake Erie Lowland Ontario)

According to: Biodiversity and Conservation (2020) 29:3573–3590

"Lake Erie Lowland Ontario (Ecoregion 7E)

Only 14% of this ecoregion remains in natural cover and only 1% is within conserved/protected areas. The Lake Erie Lowlands ecoregion has experienced historic rates of habitat loss to agriculture and urban areas that are among the highest in Canada. Remaining habitat patches are generally small, highly fragmented and degraded. The total (human) population is 8,324,391 (2016), with a growth of just over 29% in the last 20 years."

According to the OMNRF, "The flora and fauna in Ecoregion 7E are the most diverse in Canada".

Environment Canada used to have on the web an interactive map that showed that Ecoregion 7E had the most Species At Risk of any Ecoregion in Canada (that map has since disappeared due to lack of funding).

The area proposed for Urban "Boundary" Expansion falls within the smaller subregion of 7E known as Ecodistrict 7E5. According to the OMNRF, "Less than 1% of the ecodistrict comprises protected areas."

Page 68 of the September/October 2020 issue of Canadian Geographic shows a map of "Canadian Biodiversity Protection Hotspots". On the map, protecting the green areas has "the greatest potential to stem biodiversity loss while protecting it for the future". The area that the MCR/GRIDS/"market" process proposed for Urban "Boundary" expansion is one of the green areas.

I again wish to thank Council for the forward thinking decision to restore some balance to local planning by abandoning the proposal to expand the Urban Boundary. The land that is used for farming has greater biodiversity value than sprawled ground based detached units. If there is land that is suboptimal for farming, that land is urgently needed as living space for all of the other species that live in Ecodistrict 7E5. Please grant some conservation easements in order to increase the amount of land we protect for wildlife above the currently dismal level of 1%. The other species that live in Hamilton need a little help if they are going to survive.

We need to protect farmland for people, and we need to protect biodiversity for the sake of the other living species. (Some of this is selfish: we may find some of these species useful to us in the future.)

But beyond that, there is another reason we need to protect intact ecosystems. This has to do with something known as ecosystem services – things that ecosystems do that help stabilize the conditions on planet Earth (and keep it habitable for everybody).

There are easy obvious examples, and probably other things that ecosystems do for us that we don't even know about (but we might get a nasty surprise if they were gone).

The most obvious one is air purification. Plants that are photosynthesizing do many vital things for us. The most immediate need they provide is oxygen. They also remove carbon dioxide from the air, and they also purify the air by removing many other pollutants. Part of the problem we are having with global warming is that we have not preserved enough plants to absorb all of the carbon dioxide we are producing by burning too much fossil fuels. In order to return the planet to a more healthy balance, we need both more area covered by plants and to burn less fossil fuels. (Expanding the Urban Boundary to pave farmland for detached units hurts us all on both sides of this equation.)

Another easy one is water purification (both surface and ground water), and flood protection. Having intact vegetated areas (including wetlands) both decreases the severity of flooding and helps purify water. (Expanding

the Urban Boundary will result in increased pavement and other hard surfaces that will increase water pollution and flooding.)

One of the less predictable ecosystem services has to do with stability. Larger ecosystems tend to be more stable due to the fact that there are enough members of all of the species present so that none are lost due to chance fluctuations in numbers. If a lost species was a "keystone" species (e.g. a species that kept other species in check by eating them) then the remaining ecosystem might suffer plagues of overpopulations that a healthy ecosystem would have kept under control.

As far as we currently know, there is only one example of life existing anywhere in the universe. All life on Earth appears to have arisen from a shared common ancestor. It has continued to thrive for more than 3 billion years. Even though we know a lot about what keeps the system running, we cannot be certain that our understanding is complete. Until our understanding of the ecosystem that supports life on earth improves, it would be prudent to curtail killing parts of the surface of the planet with pavement based on the patently misguided guess that in thirty years that our "want" for ground based detached units will be more important than our "need" for food, water, and oxygen.

Hamilton and Ontario are in a difficult box with respect to planning in this area. Land is already in short supply. Compounding the short supply, this land is of the highest quality in all of Ontario with respect to climate and soils. It can support either farming or wildlife better than most other land in Ontario. While the soil and the wildlife cannot easily be transplanted, housing can easily be built elsewhere.

If we insist on killing the goose that killed the golden egg by paving this farmland, then our future may be people sitting in detached units without enough to eat.

Book Road proposed removal lands from the Ancaster Greenbelt

I have personally observed at least 7, and possibly 8, Endangered Species At Risk in this area in the last month.

In 2021, I started a new hobby.

I purchased a "Echo Meter Touch 2 Pro" ultrasonic microphone from Wildlife Acoustics (USA). I use it attached to a tablet running "Echo Meter" software that slows the playback of the ultrasonic calls made by bats to make them audible by human ears. And with a delay of just a few seconds it analyzes the calls and gives a preliminary identification of the species making the calls.

In order to get a better indication of the bat species making the calls, I download the recordings from my tablet to a computer running "Kaleidoscope Pro" software (licensed for use from Wildlife Acoustics).

Over the past two years, I have made over 500 nights of recordings of bat calls from 12 locations in Ontario as well as from locations in the USA, Switzerland, and Sweden.

On the nights of August 26, August 28, August 29, August 30, September 5, and September 6 I attended 7 properties in the Ancaster Greenbelt area. Some of these properties were in the "Book Road removal area" while the rest were either adjacent or nearby.

The recording period ran from about 8PM to 10PM at these properties.

There are eight species of bat in Ontario, and I recorded all eight during these seven nights of recording.

Species of bat in Ontario:

1) EPTFUS. Big brown bat. *Eptesicus fuscus*. The only species of bat that is NOT an Endangered Species of Risk bat in Ontario.

2) LASBOR. Eastern red bat. *Lasiurus borealis*. Declared an Endangered Species At Risk by COSEWIC – May 2023.
3) LASCIN. Hoary bat. *Lasiurus cinereus*. Declared an Endangered Species At Risk by COSEWIC – May 2023.
4) LASNOC. Silver-haired bat. *Lasionycteris noctivagans*. Declared an Endangered Species At Risk by COSEWIC – May 2023.
5) MYOLEI. Eastern small-footed Myotis. *Myotis leibii*. Declared an Endangered Species by Ontario Endangered Species Act.
6) MYOLUC. Little brown Myotis. *Myotis lucifugus*. Declared an Endangered Species by Ontario Endangered Species Act, Canada Species At Risk Act, COSEWIC.
7) MYOSEP. Northern Long-eared Myotis. *Myotis septentrionalis*. Declared an Endangered Species by Ontario Endangered Species Act, Canada Species At Risk Act, COSEWIC.
8) PERSUB. Tricolored bat. *Perimyotis subflavus*. Declared an Endangered Species by Ontario Endangered Species Act, Canada Species At Risk Act, COSEWIC.

COSEWIC = The Committee on the Status of Endangered Wildlife in Canada. COSEWIC is an independent committee of wildlife experts and scientists whose "raison d'être" is to identify species at risk in Canada. It designates the conservation status of wild species.

When I asked the Kaleidoscope Pro program to look at all seven nights of recordings and identify which species of bat may have made the calls, the results were:

Species	Number of recordings
EPTFUS	421
LASBOR	8
LASCIN	69
LASNOC	213
MYOLEI	293
MYOLUC	364
MYOSEP	183
PERSUB	32

But since the identification program sometimes makes mistakes, I asked the Kaleidoscope Pro program to use a more conservative approach to tell me which bat species probably made the calls. Results:

Species	Number of recordings
EPTFUS	356
LASBOR	4
LASCIN	35
LASNOC	41
MYOLEI	133
MYOLUC	274
MYOSEP	32
PERSUB	1

But even this isn't the best approach to knowing if a particular species of bat is present. The next look at the data involves a complicated process that involves Maximum Likelihood Estimators (MLE) and P-values. Although it is an over simplification, the P-values can be thought of as an estimate of the probability that all of the recordings of a given species "A" during a recording session are due to those recordings actually being of another species (B,C, etc.) that is being misidentified as species A.

For seven of the eight species of bat, there was at least one location where the P-value in a recording session was less than 0.02. In many cases the program reported P-values of 0, but this is due to rounding for display purposes and those P-values are more accurately thought of as less than 0.000000001. So for those seven species of bat it is very likely that they were present in the Book/Ancaster Greenbelt lands.

While I had 32 "possible" recordings and one "probable" recording of the last species of bat (PERSUB), the P-value for that species was 0.63. While it is possible that PERSUB was present, its presence is questionable and more research is needed.

Overall, of the seven Endangered Species of bat known to exist in Ontario, I observed at least 6 (and possibly all 7) in the Book/Ancaster Greenbelt lands.

At the first property (8/26) I observed the Endangered Species Hoary Bat, Eastern Small-footed Myotis, and Northern Long-eared Myotis.

At the second property (8/28) I observed the Endangered Species Eastern Red Bat and Eastern Small-footed Myotis. I may also have observed the Endangered Species the Tricolored Bat.

At the third property (8/29) I observed the Endangered Species Eastern Small-footed Myotis, Little Brown Myotis, and Northern Long-eared Myotis.

At the fourth property (8/30) I observed the Endangered Species Hoary Bat, and Northern Long-eared Myotis.

At the fifth property (8/31) I observed the Endangered Species the Little Brown Myotis (in huge numbers).

At the sixth property (9/05) I observed the Endangered Species Silver-haired Bat, Eastern Small-footed Myotis, and Little Brown Myotis.

At the seventh property (9/06) I observed the Endangered Species Eastern Small-footed Myotis, Little Brown Myotis, and Northern Long-eared Myotis.

Overall, I can say that the Book/Ancaster Greenbelt area is a rich and varied habitat that supports 6 Endangered Species of bats.

In comparison to the hundreds of nights of recordings I have made at a dozen other locations in Ontario, the Book/Ancaster Greenbelt area compares favorably with the best bat habitats I have observed anywhere in Ontario.

By far, the most recordings I have ever made of the Endangered Eastern Small-footed Myotis were in the Book/Ancaster Greenbelt area.

The only place I have made more recordings of the Endangered Northern Long-eared Myotis than the Book/Ancaster Greenbelt area was at the French River.

While I have found concentrations of the Endangered Little Brown Myotis at a few locations around Ontario, the numbers of the Endangered Little Brown Myotis at one location in the Book/Ancaster Greenbelt area was equally as high.

What will happen to all of this prime habitat for multiple Endangered Species if this rich habitat of Prime Agricultural Land (think flying insects), woodlots, wetlands, and ponds is converted into sprawled detached units?

The location I have the most nights of recordings from (over 440 nights) is a detached unit in Hamilton. In comparing a date matched set of 11 nights of recordings at the detached unit to the 7 nights of recordings in the Book/Ancaster Greenbelt area, the habitat destruction that might result from the loss of Greenbelt protection could result in a major reduction (90%) in the numbers of Endangered bats, and the possible loss of 2 or 3 Endangered species from the area.

The Eighth Endangered Species I observed in the Book/Ancaster Greenbelt area

Because of my upbringing in Texas, I have a fear of approaching the property of someone I have not met for the first time in the dark. Lots could go wrong. Because my recordings were at night, I tried to go visit the property owners in the daylight and meet them (and their dogs) when we could see each other clearly.

On a few of these daytime visits I observed the Endangered Species Monarch butterfly in the Book/Ancaster Greenbelt area. On one visit on September 18th, I saw two Monarchs heading South to Mexico. In an interesting display of international scientific cooperation, many years ago Monarch butterflies were tagged by scientists (with a small sticker) in southern Ontario in the fall and those very same butterflies were found later by scientists in central Mexico overwintering in trees. That tiny butterfly has to fly all the way from southern Ontario, across the entire USA, and way down into Mexico before it can sleep for the winter. In the spring it has to wake up and fly back into the southern USA and lay eggs on milkweed there before it dies. It is a truly incredible story and I am constantly amazed that it happens. The number of cars that the butterfly has to avoid are huge. Even though the vast majority of the Monarchs die before completing their journey, enough survive to keep the species going. For now. When I was working on a report for the Eramosa Karst Conservation Area just a few years ago, Monarchs were listed as a Species At Risk Special Concern. This meant that there were foreseeable problems in store for the Monarchs, but not enough to warrant them any legal protections. Apparently things have gotten a lot worse for the Monarchs, and now they are Endangered Species. We now need to get serious and make some efforts to make life easier for Monarch butterflies or we will loose one of the great wonders of the natural world.

Destroying all of the valuable wildlife habitat in the Book/Ancaster Greenbelt area is the opposite of helpful.

I am asking (once again) for Council to do whatever it can to protect the valuable wildlife habitat of the eight Endangered Species I have recently observed in the Book/Ancaster Greenbelt Area, as well as all of the wildlife habitat that remains in the White Belt areas outside of the Urban Boundary.

Joe Minor, PhD (Biology)