

From: Joseph Minor
Sent: Monday, May 16, 2022 11:12 AM
To: clerk@hamilton.ca
Subject: GRIDS2/MCR plan, May 17th Statutory Public Meeting

To: The Mayor and all Members of Council c/o the Clerk

My letter is in reference to the GRIDS2/MCR plan and is meant for the May 17th Statutory Public Meeting.

I am writing in support of the current proposal to freeze the urban boundary in order to protect farmland and promote climate resilient, inclusive urban neighborhoods. (I.e., the position called “Option 2” earlier in the GRIDS2/MCR process.)

This is because freezing the urban boundary is the best option with respect to three issues crucial to the future of Hamilton:

- 1) Climate change,
- 2) Food security (protection of Prime Agricultural Land), and
- 3) Stable ecosystems (that all life, including human, depends on).

- 1) Planning an intelligent response to the growing threat of Climate Change

The mounting problems caused by the ongoing failure of all levels of government to deal with the effects of burning too much fossil fuels are here and now:

The June 2021 heat wave on the Pacific Coast.

“Records were shattered in a very large area, including setting a new all-time Canadian temperature record in the village of Lytton, at which a temperature of 49.6 °C was measured on June 29, and where wildfires spread on the following day. The excess deaths numbers will only be available in 3–6 months (Canada) or a year (US), but preliminary indications from Canada are that it has already caused at least several hundreds of extra deaths. Based on observations and modeling, the occurrence of a heatwave with maximum daily temperatures (TXx) as observed in the area 45–52 °N, 119–123 °W, was virtually impossible without human-caused climate change. The observed temperatures were so extreme that they lie far outside the range of historically observed temperatures.”

<https://www.worldweatherattribution.org/wp-content/uploads/NW-US-extreme-heat-2021-scientific-report-WWA.pdf>

<https://www.nature.com/articles/d41586-021-01869-0>

Widespread extreme drought and wildfires in the USA (right NOW.....)

Please see:

<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx>

the official U.S. Drought Monitor site.

The most recent data (May 12, 2022) show that 88,218,903 people in the USA are living in drought. That is 26% of the population (more than 1 in 4 Americans are living in drought). In the nine westernmost states, more than 90% of the population is living in drought. That is 55,487,951 people. Think about that. Those nine states are some of the big ones, so in the western 1/3ish of the USA, for every 10 people, nine of them are living in drought.

The spatial extent of the drought is spreading east, and right now much of the “Exceptional Drought” is in Texas. “Exceptional Drought” is one level up (drier) than “Extreme Drought”. In “Exceptional Drought”, soil moisture and stream flow are less than 2% of normal. Exceptional Drought is characterized by: “Exceptional and widespread crop/pasture losses” and “Shortages of water in reservoirs, streams, and wells creating water emergencies”.

Some areas in Texas and throughout the West are at an even higher level of drought: Historic Drought. Drought levels never seen during the period that weather data has been collected.

For example, consider the situation in the largest water reservoir in the USA, Lake Mead. Please see:

<http://mead.uslakes.info/level.asp>

Lake Mead was formed by the completion of the Hoover Dam across the Colorado River in 1936. The levels in Lake Mead today (May 16, 2022) are the lowest they have ever been (since the lake started to fill in 1937). Lake Mead was last full in 1999/2000. The water levels in Lake Mead have been falling since then, but the pace of the decline has increased over the last two years. The current water level in Lake Mead is down 178 FEET!!! To get some idea of the scale, go outside and look at the top of City Hall. Then try to picture a spot 66 feet above the top. That is how far down the water level is in Lake Mead.

And the water levels continue to fall. Lake Mead is currently 25 FEET lower than it was just a year ago. (Falling at a rate of more than 1 storey/year.) Every day since March 13th, 2022 the levels in Lake Mead have continued to fall, so every day for the last two months the largest water reservoir in the USA sets a new record low.

The cause of all this climate chaos has been known to scientists for many decades now. Much of the research was funded by the fossil fuel industry in the late 1970s and 1980s (but was largely kept secret). Widespread public knowledge of the problem can be marked by 1992 publication of the book “Earth in the Balance”. In that book the cause of the current chaos was unambiguously shown to be due to increased greenhouse gases in the atmosphere due to the burning of fossil fuels. The dominant greenhouse gas is CO₂. For the past 60+ years, CO₂ levels have been measured at a reference location at Mauna Loa, Hawaii. Due to our failure to plan properly, levels of CO₂ continue to increase in the atmosphere at about 2.5 ppm per year. In 2021 they were measured at 419 ppm, which exceeds a new milestone – they are now 50% higher than they were in 1800 (280ppm). We crossed the “safe” threshold of 350 ppm in 1986

and we are being warned that unless we take significant actions NOW to curb our use of fossil fuels we will soon pass the threshold of 450 ppm at which time the harm will become intolerable. (I.e., even worse than the 1000 year droughts, fires, floods, and storms that we are currently “enjoying” due to poor government planning.)

At the current 2.5 ppm per year CO2 increase, we will hit that 450 ppm threshold in just 12 years (2033). Rather than “planning” for an uncertain forecast “desire” for more “ground based detached units” in the year 2051, I am begging the planners to focus their efforts on the more immediate 2033 problem of keeping our existing home habitable.

With respect to the current “GRIDS2/MCR/GEF” process, the very first thing to be done is adopting: No Urban Boundary Expansion.

The reasons why this is relevant are obvious. We need to focus on producing less greenhouse gases NOW. Canadians, on a per capita basis, are near the very top of the list with respect to greenhouse gas emissions. (Only a few small countries are worse: Qatar, Kuwait, UAE, Bahrain, Brunei, and Palau.) Part of the reason we are at the top of the list is our continued subsidization of the tar sands. But another part of the reason is that we have very high home energy use in Canada. Our per capita home energy use is about three times higher than the UK and about 10 times higher than China.

Ground based detached units are the worst offenders. If the plan is to increase the local population, then the worst thing to do would be to plan for 30 years of increases in the worst offenders by expanding the Urban Boundary.

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.

The current proposal to freeze the urban boundary does a much better job at addressing climate change than the originally proposed option of greenfield development on Prime Agricultural Land. The climate change mitigating benefit extends into the future permanently. Perhaps more importantly, the benefits are the greatest NOW at the beginning of the study period.

And make no mistake, we need to be dealing with climate change NOW, and not waiting for things to get even worse.

2) 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.

For this letter I will be using the numbers provided in the report with the caveat that they underestimate the problem.

The numbers with respect to farmland:

There are 7.9 billion people on the planet. There is about 49 million square kilometers of farmland to support them. This means that on a world average basis there are 160 people for every square kilometer of farmland. (1.6 people/hectare)

ONTARIO 2021

There are 14.9 million people in Ontario. There is about 50 thousand square kilometers of farmland to support them. This means that there are 298 people for every square kilometer of farmland in Ontario. (2.98 people/hectare)

HAMILTON 2021

There are 584,000 people in Hamilton. There is about 520 square kilometers of farmland to support them. This means that there are 1,123 people for every square kilometer of farmland in Hamilton. (11 people/hectare)

HAMILTON 2051 (if the Urban Boundary were to be expanded as originally proposed)

The Province demands there be 820,000 people in Hamilton. The Province dictates that we destroy 13 square kilometers of farmland, leaving us with just 507 square kilometers of farmland. This means that there will be 1,617 people for every square kilometer of farmland in Hamilton. (16 people/hectare)

I want to thank Council for not caving to Provincial pressure and expanding the urban boundary to allow for ground based detached units to be built on Prime Agricultural Land. If the original proposal for Urban Boundary Expansion had been approved, the 30 year Food Security Plan for Hamilton would be to increase the number of people dependent on a hectare of farmland by 44% !!!

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 are 1.6 people per hectare of farmland. In Ontario there are 2.98 people per hectare of farmland. **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 in the USA (see section (1) above) means the reliability of food from our much larger trading partner needs consideration. The war in Ukraine is another example to disruption to a food producing area. It would be more 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 2.98 people per hectare of farmland. 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 a hectare of farmland per person. In order to keep us currently 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.

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

My main concern with the GRIDS/MCR process is that it is 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 proposes for Urban “Boundary” expansion is one of the green areas.

In order to restore some balance to local planning, abandon expanding the Urban Boundary. The land that is used for farming has greater biodiversity value than sprawled detached units. If there is land that is suboptimal for farming, that land is badly 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. (And even less certain is what conditions are best for the long term survival of Homo sapiens.) 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.

Look, I understand that 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 we may find that the population guesses were wrong. Or worse still, people might arrive and sit in detached units and find they don't have anything to eat.

This is the problem with the MCR/GRIDS/”market” process. By myopically focusing on the single issue of dwelling type, it entirely misses the big picture. Ground based detached units are a “want”; food, water, and clean air are “needs”. Planning for “needs” must take precedence over planning for “wants”.

Until the planning process can be fixed to reflect this reality, we all must act to protect our future. Right now that means:

No Urban Boundary Expansion

Joe Minor