Town of Erin starts wastewater project—7.2M litres of sewage will be dumped upstream from Peel

"Experience the charm."

It's written on the Village of Erin sign every driver sees before heading into the quaint Wellington County township.

The tagline matches the feel of the village.

Turning onto 9th Line which slowly morphs into Main Street, tourists and passersby are transported. Brick two-storey businesses line the main strip. Around midday people pop in and out of local coffee shops and boutiques.

Drivers and pedestrians cheerfully greet each other. Erin's historic buildings date back to the founding of the village in 1820, and remain remarkably well preserved.



The Village of Erin was a milltown back in the day and saw great growth with workers who flooded in around the 1880s.

(Natasha O'Neill/The Pointer)

The outskirts of the village host larger properties with single detached homes, a nod to what is about to come as more and more people across the GTA sell-up and move to smaller municipalities... until they're not so small anymore.

Like many Ontario townships, Erin is at a pivotal point in its history. Residents and elected officials are deciding on how to accommodate the expected population growth while finding ways to attract businesses. According to town reports, the Erin Village <u>population by 2041</u> is predicted to reach 10,038 residents. The Nearby Village of Hillsburgh is expected to grow to 5,770.

Currently, the 2021 Census puts Erin's population at 2,725 and Hillsburgh's at 1,152.

The total population including both villages and private residents living on rural roads outside the lower-tier municipal line is 11,981 according to the 2021 census. Many of the residents living outside the villages will continue to use their own water and waste systems separate from the Township's infrastructure.

Erin represents the epitome of small town rural life, but the town council is hoping to transform it into a bigger settlement area. The councillors and town staff have concluded that a new wastewater treatment facility (WWTF) will not only benefit current residents but help attract future growth.

"It is suspected that the lack of full municipal services in the villages may be a contributing factor to the low rates of development and growth," a consultant from B.M. Ross wrote in the Town's Servicing and Settlement Master Plan in 2014.

In April, workers from North America Construction Ltd. broke ground on the site for the new WWTF.



Historical features like this bowstring bridge on 10th Line are part of Erin's charm.

(Natasha O'Neill/The Pointer)

The Town has <u>argued</u> the area is falling behind other Ontario municipalities, unable to keep population growth steady, in turn hurting employment opportunities and the local economy. It has also called out the "aging" septic tanks most residents use now, fearing the systems are too costly to repair and are harmful to the environment.

According to the Town, in some cases septic systems have started to fail causing natural degradation to the Greenbelt land. These systems are owned by the individual property owners and allow for waste to be collected in a holding tank, which can be used for 15 to 40 years. The waste is pumped out every three to five years (depending on household size) to a nearby WWTF.

Andrea Kirkwood is an associate professor of environmental biology at Ontario Tech University and has been studying the makeup of water for years. She is familiar with septic systems because of the potential impacts on the environment.

"Get your septic system tested to see it's working properly," Kirkwood told The Pointer. "Then if it's not working properly get it fixed because, if septic systems aren't properly working, that means that literally raw sewage ends up in rivers and creeks because it's not being properly treated."

Even though residents are not keen on adapting to the new WWTF system, with its costly underground infrastructure to connect homes to the same type of sewer lines used in larger communities, Kirkwood believes if large growth is anticipated its better to have a stringent system that monitors wastewater rather than septic tanks with the individual property owner maintaining them.

"Just from a management perspective, I say it's better to have sewage waste directed to a treatment system that is regulated, that is tested, that has been designed for the receiving water that it pumps into, because individual septic systems are not regulated well," she said.

Allto Construction has been implementing septic systems and waste lines for over 50 years in south-central Ontario. The Orangeville based business created a cheat sheet for those locals interested in a septic system. According to a recent article on the Allto <u>website</u> posted in March, the company expects a basic septic system to range between \$10,000 and \$25,000 with more "complex" industrial sized systems being upward of \$30,000 to \$85,000.

Before installing the tank a number of factors need to be determined including the soil type, ground water level, how large the home is, and complexities of the surrounding landscape.

The 2021 Census says the average number of occupants in the Town of Erin was 2.8 residents per dwelling. Allto's website estimates a two or three-bedroom septic system would cost between \$1,500 to \$2,500. Installation is the most expensive part, on average costing \$18,000.

A replacement or repair of the septic bed can range from \$500 to \$5,000 but if well maintained they can last up to 40 years.

Residents have been using septic systems for decades and have raised concerns about the costs being downloaded on them to switch over to the WWTF. Many are comfortable keeping septic tanks, especially those that still have years of use left.

A frequently asked question and answer section on the Town's <u>website</u> breaks down the costs residents will absorb to switch to a municipal sewer system. It clearly states the only people benefiting from the WWTF will be those living directly inside the Villages, about 3,877 residents as of 2021. They will likely shoulder much of the costs that future residents (and the developers who profit from the homes they build) will be spared, as much of the system will already be online by then.

It's a dilemma for the town: To attract more growth a new WWTF system is needed, but those who have to pay for it are already happy with their current septic tanks; meanwhile, those future residents the system is being built to attract, won't have to pay nearly as much to transform the Town's sewage infrastructure.



Protecting the natural beauty around the Credit River watershed area is a huge concern of residents in the Village of Erin.

(Natasha O'Neill/The Pointer)

Lavina Dixit, the Town of Erin's senior communications spokesperson, told The Pointer in an email that under the Municipal Act when a municipality provides services such as wastewater, properties are "required" to connect to it.

The existing property owners will pay much of the infrastructure costs for underground pipes that will run beneath local roadways and associated repairs to streets, which will cost them between \$15,000 and \$18,000 depending on the location of the property and the work needed. Two financing options have been offered to residents: either pay in one lump sum or spread out the cost between 10 to 15 years.

The cost to connect a home to the municipal line is between \$4,000 to \$8,000 depending on the distance from the home to the main pipe. Once the WWTF facility is complete and connections are finalized homeowners will pay annual user fees of \$500 to \$600.

This means homeowners will spend between \$19,500 and \$26,600 the first year.

Recently the <u>Town Council</u> passed a motion ensuring residents will not be required to connect to the WWTF until upper-tier government funding is secured, to lower the cost for property owners.

On top of the costs, residents want to know what exactly will happen to the waste that is collected at the WWTF. As more was revealed about the designs, residents became aware of potential damage to the West Credit River and its watershed which flows throughout the Villages of Belfountain, Inglewood and Cheltenham in the Region of Peel, and eventually all the way down to Lake Ontario.

The Coalition for the West Credit River (CWCR) made up of the Izaak Walton Fly Fishing Club, Ontario Rivers Alliance, Belfountain Community Organization, Trout Unlimited Canada and Ontario Streams, represents just some of the advocacy groups who started paying closer attention to the project and what its impact on the community and environment might be.

The West Credit River runs straight down through Mississauga and into Lake Ontario, where Peel residents get their drinking water.

The new WWTF will be located on Wellington Road 52 between 10th Line and 9th Line on a now vacant farming field in Erin. The Village of Hillsburgh is approximately 10 kilometres northwest of Erin along the route of the pipes that will lead to the WWTF. The preferred route identified by the Town was to construct a pipe along the Elora Cataract Trail to the WWTF instead of following a road option, despite consultants recommending an alternative design.



The Elora Cataract Trail is a beautiful rural walking and hiking route connecting the nearby villages through scenic forests and wetlands.

(WSP Global)

The environmental impacts to the area could be irreversible.

The environmental assessment (EA) conducted by Hutchinson Environmental Sciences Ltd. lists a number of sensitive areas, and significant species such as amphibians, birds and mammals along the pathway. The Town's own mapping shows the preferred route cuts over provincially significant wetland (PSW) areas further upstream along the West Credit River.

Experts working on the EA report indicated the second option which avoids the trail entirely was the preferred alignment but the Town decided to forgo this idea and chose the route that will see construction through a wilderness walking path that holds sensitive habitats and provincially/federally designated species in need of protection.

The report identified 15 different vegetation communities along the route between Hillsburgh and Erin. White Pine and White Spruce cover a large section of the forest canopy along with white ash and eastern white cedar that grow below the mature trees. The Manitoba maple, trembling aspen tower at 25-metres tall and provide shade to the chokecherry, tartarian honeysuckle and european buckthorn. These are mature trees that have been thriving along the rural Elora Cataract Trail for decades, if not centuries.

As the path continues toward Erin, the landscape changes from trees and wetlands to more dry ground and fields. Sugar maple and eastern hemlock are full grown with more trembling aspen or willow, balsam poplar and elm — the list of widely diverse and mature trees along the popular trail goes on. The EA says eight plants recorded in the study areas were listed as locally or regionally uncommon or rare in Peel Region, the Credit Valley Conservation (CVC) authority watershed and/or the specific Ecodistrict.

The wetland areas, including those that are provincially significant, are home to six amphibian species.



The environmental assessment by Hutchinson found a better route that did not damage sensitive habitats but the Town decided against it.

(Hutchinson Ltd.)

"Western Chorus Frogs were heard calling at station 4, which is a cattail mineral shallow marsh next to the Cataract-Elora Trail," the EA reads. "They are listed as a threatened species nationally under the federal Species at Risk Act... Compared with other frog species, Western Chorus Frog has relatively low mobility and high fidelity to natal ponds, making it particularly sensitive to degradation of habitat." It goes on to list the specific activities threatening amphibians and wetlands including "construction and maintenance of linear infrastructure (e.g., roads, trails, utility and energy pipelines)."

Construction of pipes will also impact birds. A total of 53 species were documented including five species at risk and 13 area-sensitive species.

"Species at risk and area sensitive species were found primarily along the proposed Forcemain Route Option 1 (Cataract-Elora Trail), along the proposed forcemain from SPS [Sewage Pumping Station] #3 to Dundas St. W., and at the three proposed locations for the WWTPs," the EA states.

Some birds are able to adapt to continuous disruption of their habitat but many have to flee urban areas. The EA says the "greatest diversity" of bird species was found along the Elora Cataract Trail. The document continues, listing birds that are threatened or of a special concern either provincially or federally, naming the habitats in which they frequent all along the Elora Cataract Trail.

In some instances investigators physically saw species along the trail including a baby snapping turtle which is designated as a species of special concern both provincially and nationally. A Western Chorus Frog was also seen close to the trail.

With the sensitive nature of the species, the EA lists multiple further studies, cautions and issues with the main route on the Elora Cataract Trail, the sewage pumping stations (SPS) that will be required and the location of the new WWTF. Like any development being constructed there will be direct loss to habitats within the footprint of the buildings, sites and underground-pipe route including along the highly sensitive trail.

"Direct loss of habitat will therefore occur within the footprint of all development (e.g., WWTP sites, SPS sites, forcemain routes), while habitat degradation could occur in surrounding habitat, if its ecological function deteriorates as a result of the development," the EA reads.

The lengthy report continues to warn of issues around the area of the WWTF, explaining how large vacant farming fields are important to several grassland bird species of concern. Any construction along the route or at the sites for a period of time will negatively impact species causing them to "avoid or abandon" nests or breeding in the area.

Even the narrative of how the Town obtained the farmland where the WWTF is now under construction is marred by the lack of transparency, and questions that have been raised.

According to previous media <u>reports</u> the site was owned by Solmar Development Inc. which sold it to the town for only \$2. According to the media it was valued at \$210,000. The Town's Mayor, Allan Alls, responded to Guelph Today saying the money was "symbolic" and is an agreement between the Town and Solmar to expedite the WWTF and create more growth.

Solmar's owner Benny Marotta is well known for his aggressive tactics to push development in areas where he has assembled land, previously taking the Town to the Ontario Land Tribunal over a huge subdivision he wanted to build in the northeast section of Erin Village off Dundas Street East.

Marotta won the appeal and is constructing approximately 1,300 units (all sprawling detached homes) on the now vacant farming field.

For years he was involved in an ugly dispute with former Caledon mayor Marolyn Morrison over developments Marotta pushed, while many resisted his growth plans. He has since been involved in similar controversies in Niagara On The Lake. The developer's approach follows a predictable strategy: assemble lands then lobby local officials to get what he wants.

A NEW MODERN VILLAGE



The first phase of the multi-step development by Solmar is not one the Town of Erin originally wanted.

(Solmar Ltd.)

The developer has started clearing the massive area for the first phase of the project. It will see rows of expensive, detached, two-car garage, (likely) multimillion dollar homes in the north end of Erin. Cachet Homes, Lakeview Homes and Solmar Homes are designing and constructing the modern builds with many of the properties already sold before construction even began.

On March 24, the Town announced which construction company won the bid competition for the new WWTF. The project will be constructed by North America Construction Ltd for \$114.4 million and see the Town and the residential home developers split the costs.

On May 24 and 25, the Town hosted what it called a Public Information session in both villages, providing residents answers to questions and explaining the timeline of the project. The brief presentation laid out the map of the pipes from Hillsburgh to Erin and what the subsurface sewage system will look like.



Method of Construction: Open-Cut

The presentation at the Public Information session showed how the trail will be impacted but residents said it was hard to understand.

(Town of Erin)

The Powerpoint presentation referenced some conservation efforts such as a tree protection plan, erosion/sediment control and limiting the work being done in water channels. The presence of pipes will still disturb animals and species in their natural environments. The EA says dust, vibrations and other aspects of the work could have long-term impacts and animals will likely abandon habitats.

The WWTF is scheduled to be completed October 2024. Simultaneously, the sewage lines from Hillsburgh to Erin along the Elora Cataract Trail will be constructed on a timeline of 20 months from October this year to June 2024.

The most controversial issue is where the wastewater will pour out into the West Credit River, on the western side of Winston Churchill Boulevard.



The Coalition of the West Credit River group members have delegated to Peel Regional Council to alert councillors of the facility and the effluent.

(Coalition of the West Credit River)

When wastewater is cleaned it is called effluent and is typically discharged into bodies of water. Peel Region's largest facility, the G.E. Booth wastewater plant in Mississauga, deposits its effluent into Lake Ontario.

Erin's new WWTF will discharge effluent directly upstream from Peel, in the Credit River, and it will harm the last of the Brook Trout population downstream unless careful measures are taken.

In November 2016, Jon Clayton, an aquatic biologist with Credit Valley Conservation (CVC) Authority assessed the Brook Trout spawning area along the West Credit River. This study took place about 500 metres downstream of Winston Churchill Boulevard and 10th Line. The species of fish best survives in cold water habitats. Noted extensively from organizations such as the CWCR and CVC this river is one of the last reproducing Brook Trout habitats in Ontario.

The EA by Hutchinson Ltd notes the watershed supports 60 different fish species, 15 of which were collected in the study area. The background given by CVC notes the fish community in this portion of the river were in "good health" and were able to adapt to any runoff from Erin Village between 1999 and 2009. Brook Trout are indicator species of coldwater habitats making them extremely valuable not only for identifying impacts humans (or climate change) have on river systems but are also an integral part of the fishing experience in southern Ontario.

The best area for Brook Trout to spawn is about 400 metres downstream of 10th Line, one of the original areas for the effluent to be discharged into the river. The decision to allow the effluent to run off at Winston Churchill Boulevard was because of the higher fish population just upstream that was noted during the EA. However, the study noted there is a smaller Brook Trout spawning area just past the area where the effluent will be deposited.



Hutchinson Ltd. experts noted a smaller fish spawning area downstream of Winston Churchill Boulevard in the Region of Peel.

(Hutchinson Ltd.)

Standing at the spot where 7.2 million litres of wastewater effluent will be discharged into the river, the area seems far too small. Around late April the water is just starting to flow faster with the snow runoff indicating it's springtime. This portion is not very wide, about 10 to 12 feet across and is very shallow (less than 0.3 metres). The water is extremely clear and at any given moment fishers can point out tiny Brook Trout beginning to grow.

Local resident Ken Cowling of Erin tells The Pointer when the fishing season starts, swarms of people are lined up along the river.



The West Credit River glistens in the sunlight and fishers can spot baby Brook Trout growing in early spring.

(Natasha O'Neill/The Pointer)

The effluent will introduce a mix of chemicals into the river. Although it is treated extensively, the treated water is stripped of oxygen, has added ammonia and is often much warmer than regular river water. Residents are extremely concerned about the currently thriving Brook Trout population and the future of fishing in the area.

The temperature of the effluent is one of the many concerns.

Kirkwood says rivers are complex bodies of water. The biological composition of water near the beginning of the West Credit River is much different than where it ends up in Lake Ontario.

The head of the stream, Kirkwood says, is generally considered clean, not having many pollutants, is high in nutrients but generally has more leaves and twigs.

"Then as you move down a stream, the stream gets bigger, it picks up more material from the landscape," Kirkwood says. "So that's where you start to get more algae, and fish and bugs and so forth."

The natural mix of nitrogen and phosphorus and many other minerals present must be a careful balance for the ecosystem to thrive.

When sewage effluent is treated the harsh chemicals to disinfect the water need to be removed. Dean Latham, a chemical engineer, reviewed the assimilative capacity study by B.M. Ross and Associates Ltd., a report that details how much effluent the river can hold to remain safe for aquatic life.

"So you can only pollute phosphorus to this level, you can only pollute ammonia to this level, you can only impact temperature to this level," he said.

When the effluent is mixed into the river, experts want to know if the pollutants are higher than what provincial

standards allow. Latham told The Pointer the pollutants in the effluent in the study are all below the provincial targets but what he and others are concerned about is the vague details on the temperature of the water.

The West Credit River is very unique as it is a cold water ecosystem allowing aquatic life to thrive. Water temperature monitoring from the water station directly downstream from Erin consistently shows this portion of the river is cooler than other parts, one of the reasons the Brook Trout thrive and spawn there.

"The question became, based on phosphorus, you can go one part effluent to three parts river, but what about temperature?" Latham cautioned, "and this is where I think that environmental assessment went wrong."



The area above is where the 7.2 million litres of wastewater effluent will be discharged.

(Natasha O'Neill/The Pointer)

Continuous advocacy from the CWCR forced the Town to commit to having a cooling device for the effluent, ensuring the water would not reach a certain temperature threshold, so the Brook Trout and other coldwater organisms can survive in the river and watershed area.

"Ecosystems have a natural ability to either be resilient or recover from, but unfortunately humans in our land use activities have a constant impact to surface waters like creeks and rivers," Kirkwood said.

Agricultural activities with polluting fertilizers, erosion to river/lake beds and human contaminants like household paints and chemicals, pharmaceuticals and microplastics are also difficult for water to bounce back from. Research in Ontario in the past few years has focused on particles of medications and plastics in water systems; many of the studies are in the early stages but could offer important insight into how humans affect water quality.

Kirkwood calls microplastics a "magnet" for other chemicals which can become concentrated and then delivered to unsuspecting residents if not removed from drinking water supplies. The health risks are what most studies are focusing on.

In late April The Pointer toured the G.E. Booth Wastewater facility in Mississauga where John Glass, manager of water & wastewater operations for the Region of Peel, touched on the subject of removing unwanted medications and substances from effluent.

The chemicals at Mississauga's largest wastewater facility do not remove pharmaceuticals because, as Glass says, they don't know what they are attempting to remove.



Many portions of the West Credit River in Erin are slow moving and beautifully clear.

(Natasha O'Neill/The Pointer)

"You can't regulate something you don't know how to regulate, I can't say that the maximum allowable concentration of this chemical is when you don't have a standard way of even detecting it," Glass told The Pointer. "Then once you detect it, you have to have a standard way of removing it. So then you have to go back and look at technology options on how to remove that."

Glass said the G.E Booth facility is an "active participant" in research with Ontario universities attempting to grasp the impacts both microplastics and pharmaceuticals are having on humans.

It is possible that by completion the Erin WWTF will be able to remove the harmful substances from waste, but until then research still has to be completed to learn more about downstream impacts.

Meanwhile, the issue of dumping warmer effluent into the Credit River where Brook Trout could be dangerously impacted, remains, just like the river bed, murky.

The residents of Erin and group members of the CWRC are not pleased with the WWTF project but understand it is far too late to pull the plug. What the public wants is a truthful process that puts the river and the environment at the forefront of all decisions.

Ann Seymour, one of the group's members, and an area resident, spoke to The Pointer about the CWRC's simple request around the planning for future growth.

"Please do it with integrity," she said, "for the ecosystem, and for the people of Ontario."

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