

Appendix A – Public Consultation

December 2018 Public Open House materials

- Display Boards
- As We Heard It

January 2021 Online Public Consultation materials

- Display Boards
- As We Heard It

Introduction

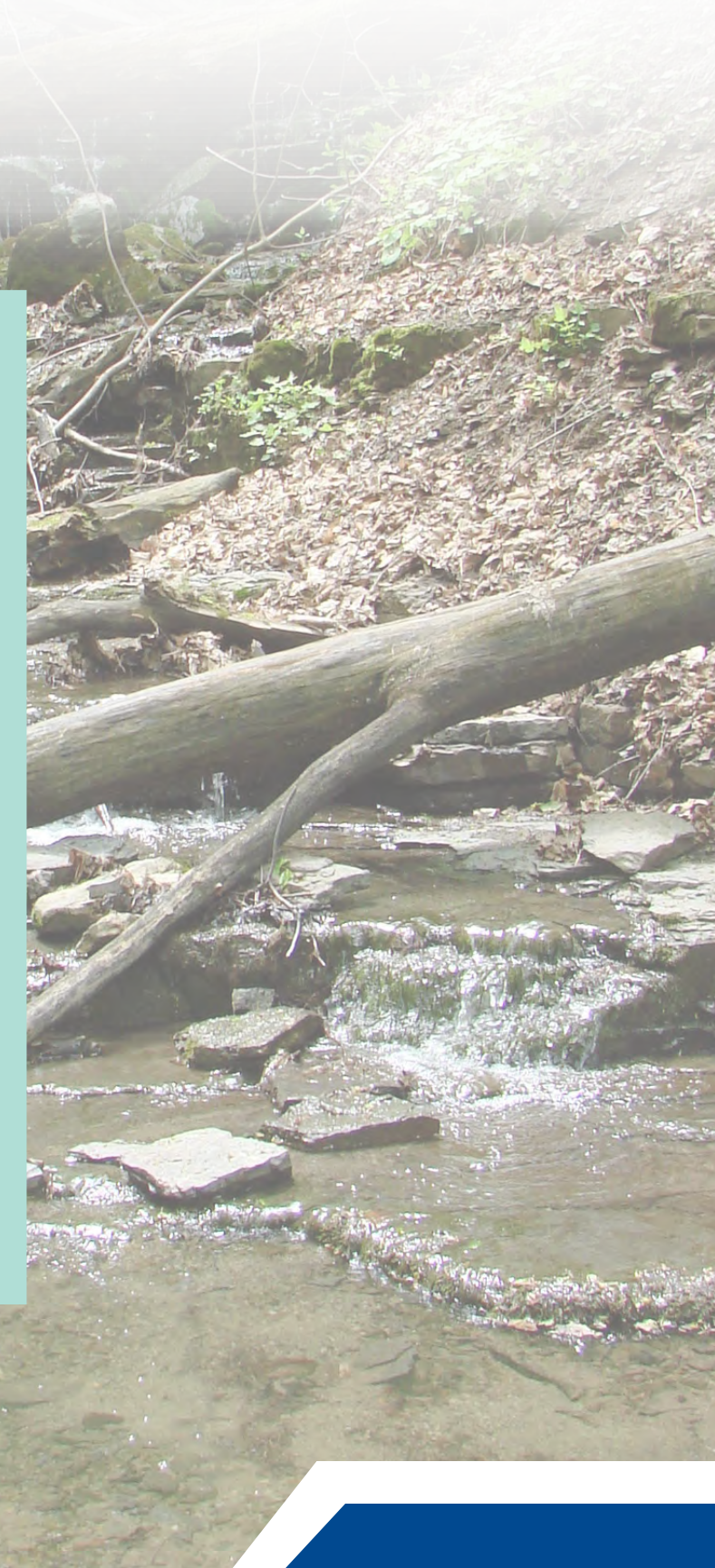
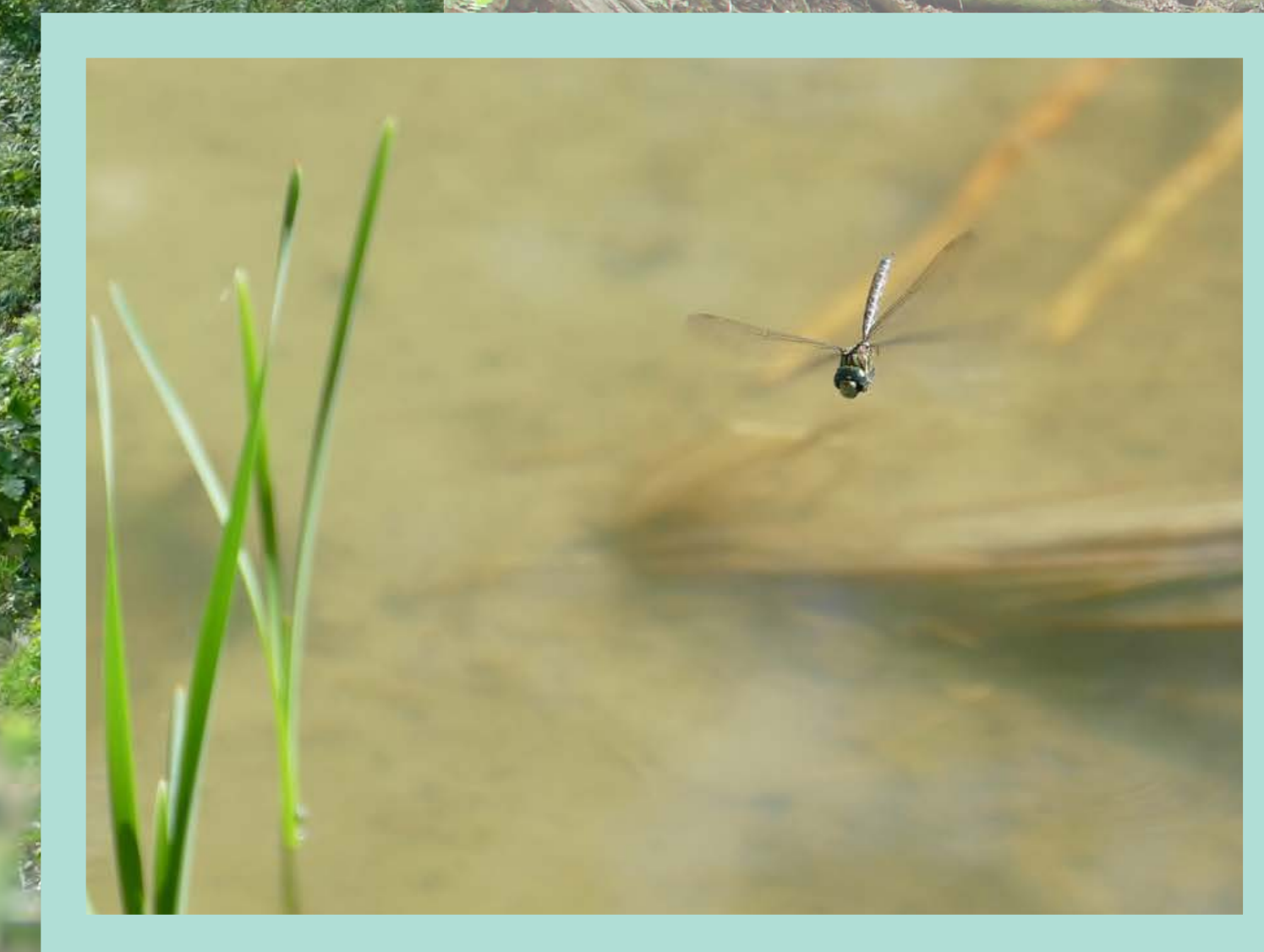
The City of Ottawa initiated the Beckett's Creek Subwatershed Study to examine the existing conditions of the area, and to identify any needed actions to improve its environmental health and condition over the long term. Background information has been obtained from various reports and studies undertaken by the City and the Rideau Valley Conservation Authority, along with other sources. Please share your knowledge of this area with us.

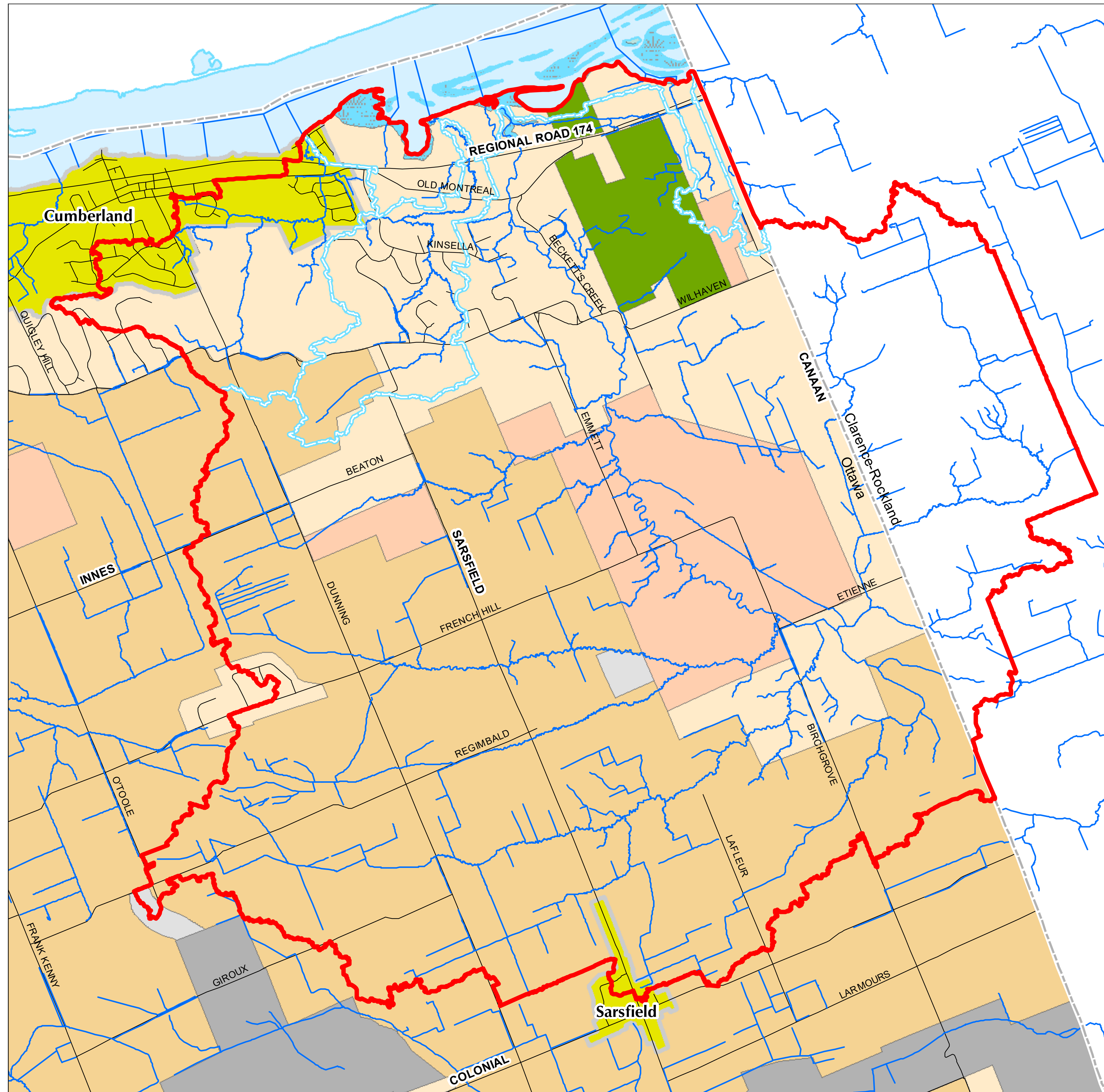
Beckett's Creek drains to the Ottawa River just east of the Village of Cumberland. The study area also includes some smaller unnamed creeks that drain to the Ottawa River adjacent to Beckett's Creek. Farming is the predominant land use in the study area, followed closely by rural residential and natural areas (woodlands and valleylands).

Introduction












La Ville d'Ottawa a amorcé une étude du sous-bassin hydrographique du ruisseau Beckett afin d'examiner les conditions actuelles de la zone et de déterminer les mesures qui s'imposent pour améliorer la santé et l'état de son environnement à long terme. Les renseignements utilisés proviennent de divers rapports et études de la Ville, de l'Office de protection de la nature de la vallée Rideau et d'autres sources. Nous vous remercions de bien vouloir partager vos connaissances de ce secteur avec nous.

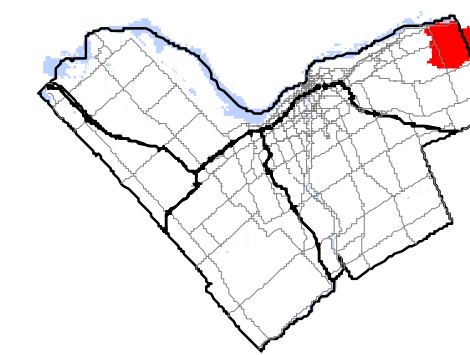
Le sous-bassin hydrographique du ruisseau Beckett déverse ses eaux dans la rivière des Outaouais juste à l'est du village de Cumberland. La zone à l'étude comprend également quelques petits ruisseaux sans nom adjacents au ruisseau Beckett qui se jettent dans la rivière des Outaouais. L'utilisation prédominante des sols est l'agriculture, laquelle est suivie de près par l'utilisation à titre de zones naturelles et résidentielles en milieu rural (terrains boisés et vallées).



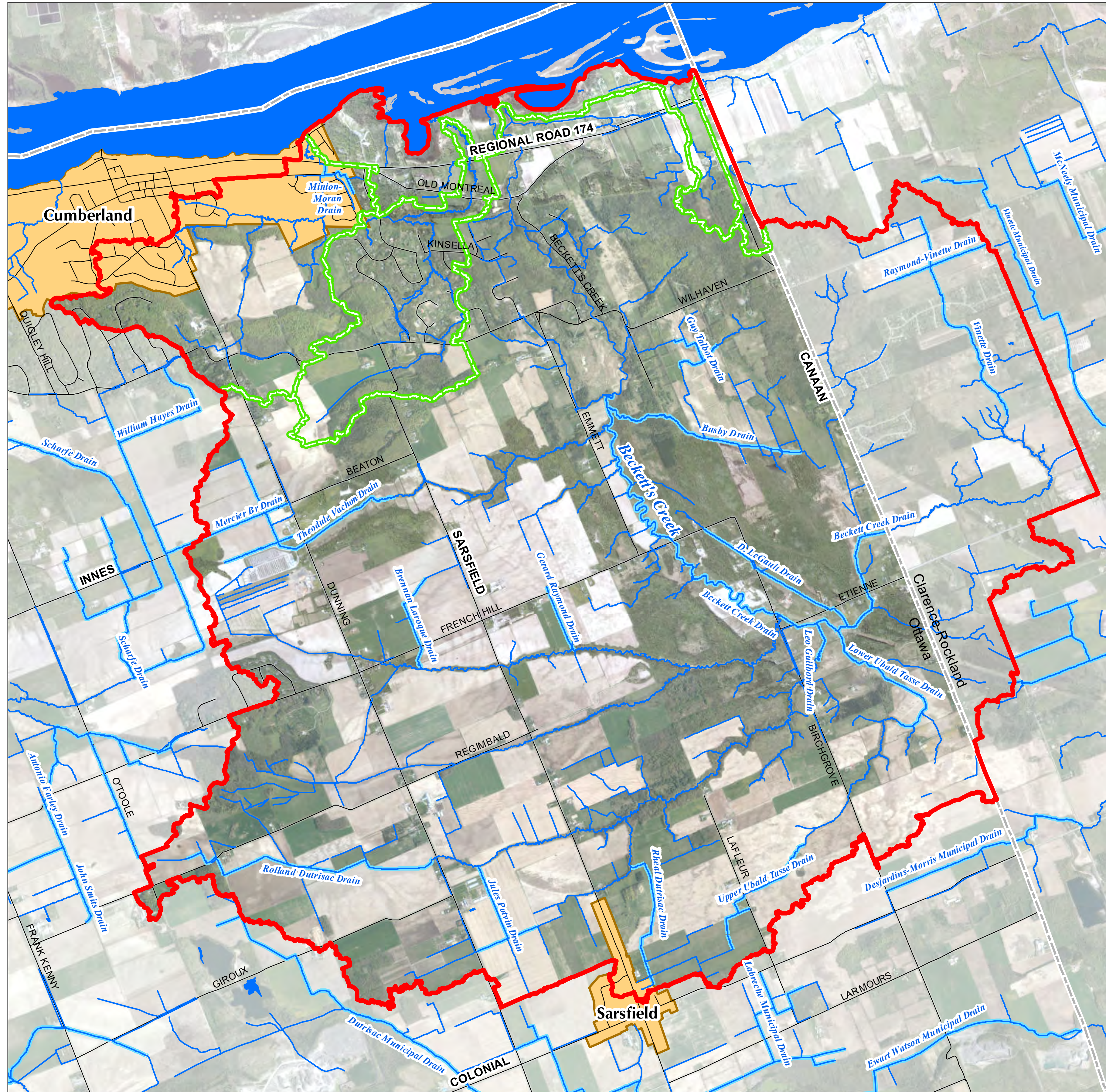








OFFICIAL PLAN - RURAL POLICY PLAN / PLAN OFFICIEL - PLAN DES POLITIQUES EN MILIEU RURAL LAND DESIGNATION / DÉSIGNATION DE SOL

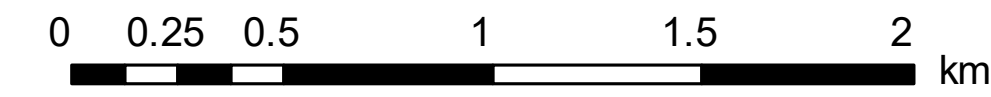
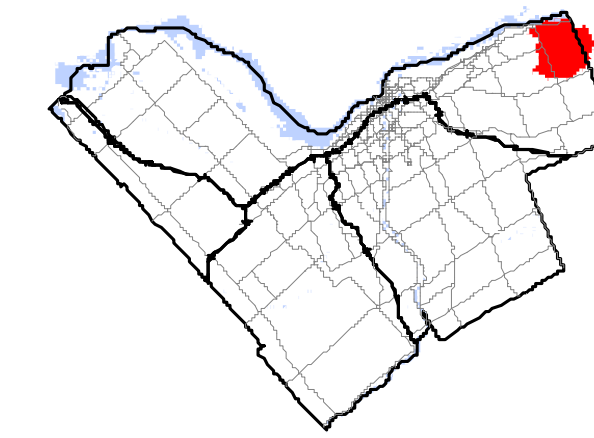
- | | | | |
|---|---|---|---|
|  | Agricultural Resource Area / Zone de ressources agricoles |  | Significant Wetlands / Terres humides d'importance |
|  | General Rural Area / Zone rurale générale |  | Village / Village |
|  | Bedrock Resource Area / Zone de ressources en substrat rocheux |  | Beckett's Creek Subwatershed Study Area / Zone d'étude de sous-bassin hydrographiques Beckett's Creek |
|  | Major Open Space / Grand espace vert |  | Catchment Area Boundary / Limite du aire de captage |
|  | Rural Natural Features Area / Zone rurale à caractéristiques naturelles |  | Watercourse / Cours d'eau |
|  | Sand and Gravel Resource Area / Zone de ressources de sable et de gravier | | |



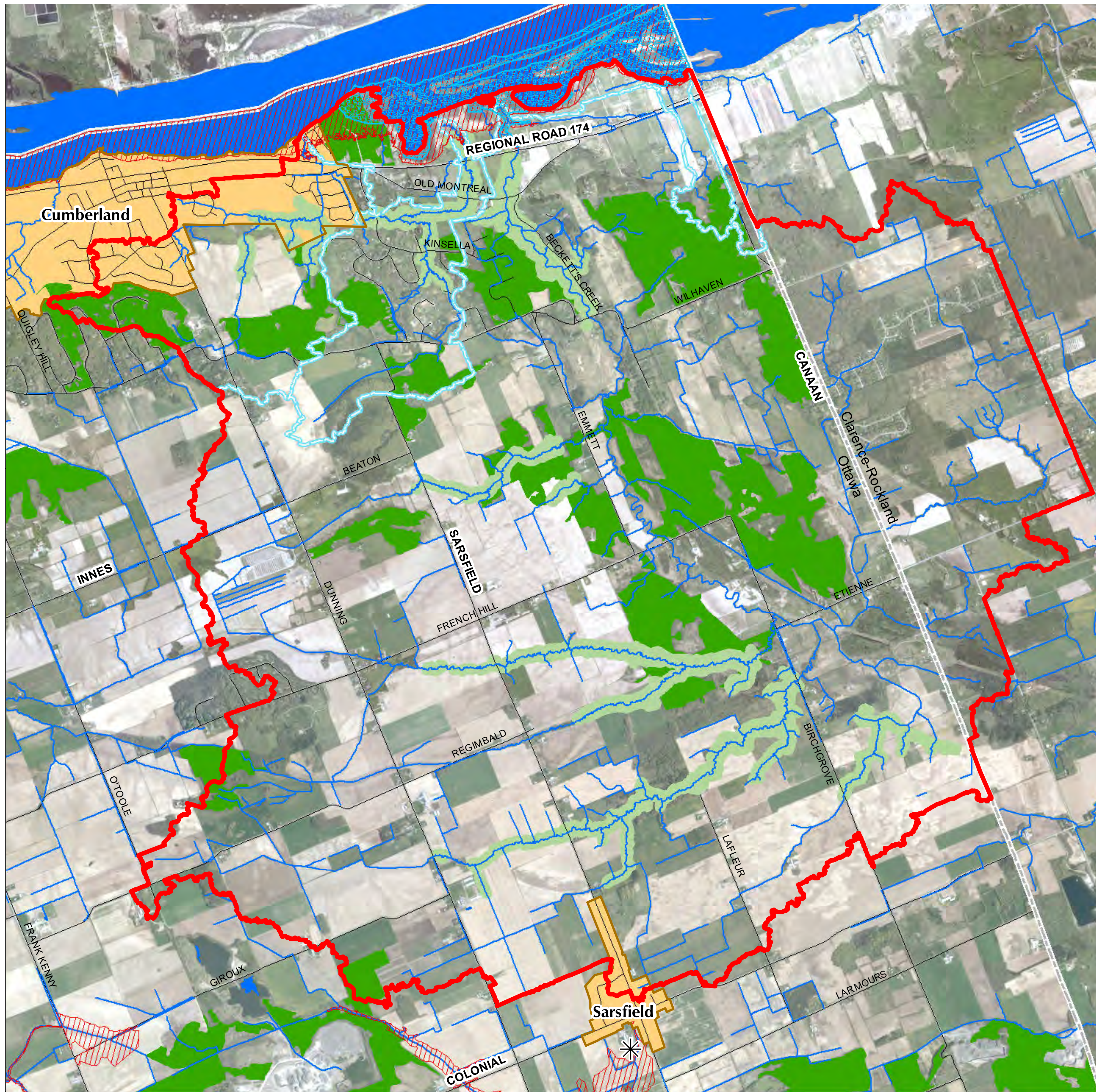
Prepared by: Planning, Infrastructure and Economic Development Department,
GIS and Data Management
Préparé par: Services de la planification, de l'infrastructure et du développement économique,
SIG et Gestion des données









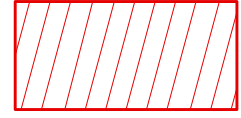



-  Beckett's Creek Subwatershed Study Area /
Zone d'étude de sous-bassin hydrographiques Beckett's Creek
-  Catchment Area Boundary /
Limite du laire de captage
-  Watercourse /
Cours d'eau
-  Municipal Drain /
Drain municipal
-  City Boundary /
Limite de la Ville
-  Village /
Village

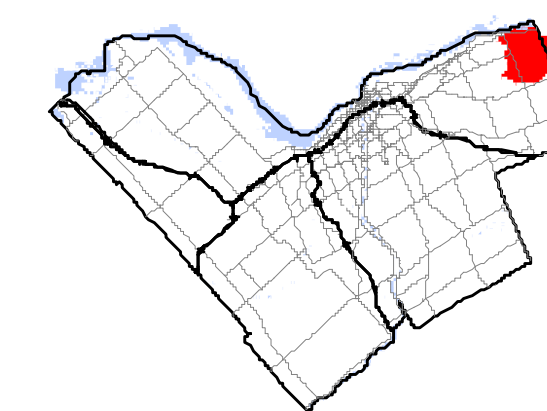


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NATURAL HERITAGE FEATURES / SYSTÈME DU PATRIMOINE NATUREL

- | | | | |
|---|--|---|--|
|  | Significant Woodlands /
Terrain boisé d'importance |  | Beckett's Creek Subwatershed Study Area /
Zone d'étude de sous-bassin hydrographiques Beckett's Creek |
|  | Provincially Significant Wetlands MNR /
Terres humides d'importance provinciale |  | Catchment Area Boundary /
Limite du l'aire de captage |
|  | Significant Valleylands /
Vallées d'importance |  | Watercourse /
Cours d'eau |
|  | Floodplain /
Plaine inondable |  | City Boundary /
Limite de la Ville |
|  | ANSI Landform Features /
Caractéristiques topographiques ZINS |  | Village /
Village |



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Issues & Opportunities

- Many of the creeks in this area flow through valleys with steep, unstable slopes. Rideau Valley Conservation Authority has identified regulation limits along Beckett's Creek and its tributaries.
- Several creeks have high levels of E. coli, which could indicate contamination from manure or septic systems. Landowners can apply to the Rural Clean Water Program for funding to help correct this issue.
- Several woodlands and valleylands have been identified as significant features or linkages in the City's natural heritage system. Stewardship of these features should be encouraged.
- The local Source Protection Plan has identified several significant groundwater recharge areas and highly vulnerable aquifers that need to be protected (including the Sarsfield-Bearbrook Esker).

Enjeux et possibilités

- Bon nombre des ruisseaux de ce secteur s'écoulent dans des vallées aux pentes abruptes et instables. L'Office de protection de la nature de la vallée Rideau a établi des limites réglementaires le long du ruisseau Beckett et de ses affluents.
- Plusieurs ruisseaux présentent des concentrations élevées d'E. coli, ce qui pourrait résulter d'une contamination par les déjections animales ou les rejets de fosses septiques. Les propriétaires fonciers peuvent présenter une demande auprès du Programme d'assainissement de l'eau en milieu rural pour obtenir le financement nécessaire pour contribuer à corriger cette situation.
- Plusieurs terrains boisés et vallées ont été désignés comme étant des caractéristiques ou des liens écologiques d'importance au sein du réseau patrimonial naturel de la Ville. Il faudrait encourager l'intendance de ces caractéristiques.
- Le plan de protection des sources local a cerné plusieurs zones de recharge des eaux souterraines d'importance ainsi que des aquifères très vulnérables qui doivent être protégés (y compris l'esker de Sarsfield-Bearbrook).



City staff will complete their review of existing conditions and develop a plan to address identified issues within the subwatershed. The draft recommendations will be presented to the public at the next open house in spring 2019, before being finalized for approval by City Council.

For more information, or to provide your comments contact:

Amy MacPherson, Planner
613-580-2424 ext. 14783
amy.macpherson@ottawa.ca

Le personnel de la Ville achèvera son examen des conditions actuelles et élaborera un plan d'action axé sur les enjeux cernés dans le sous-bassin hydrographique. Un projet de recommandations sera présenté au public au cours de la prochaine séance portes ouvertes, laquelle aura lieu au printemps 2019. Les recommandations définitives sont ensuite présentées au Conseil municipal pour approbation.

Pour obtenir plus de renseignements ou pour présenter vos commentaires, communiquez avec :

Amy MacPherson, Urbaniste
613-580-2424 poste 14783
amy.macpherson@ottawa.ca

Report from December 4, 2018 Drop-In Session at R.J. Kennedy Arena

Approximately 45 people attended the Beckett's Creek drop-in session on Tuesday, December 4, 2018 from 4:30 pm to 8:00 pm at the R.J. Kennedy Arena at 1115 Dunning Road in Cumberland, Ontario.

The purpose of the open house was to review and discuss the existing environmental conditions of the Beckett's Creek Subwatershed study area. The meeting was hosted by the City in cooperation with the Rideau Valley Conservation Authority, who were presenting the results from the new hazard mapping study and regulation limits for Beckett's Creek, from Sarsfield Road to the Ottawa River.

Display boards for the Beckett's Creek Subwatershed Study were set up in Hall A. City and Rideau Valley Conservation Authority Staff were on hand to explain the boards, answer questions and to solicit feedback.

As We Heard It – December 4, 2018

Several issues were identified by local residents for staff's consideration. These included road and ditch maintenance, areas of poor drainage, unstable slopes and erosion along the creek valleys, well water quality and quantity, and forest dieback due to Emerald Ash Borer. Many residents provided local knowledge and feedback on the City's maps of natural features and watercourses. Some requested more information about the geology and topography of the study area.

Background

The City of Ottawa initiated the Beckett's Creek Subwatershed Study to examine the existing conditions of the area and to identify any needed actions to improve its environmental health and condition over the long term. Background information has been obtained from various reports and studies undertaken by the City and the Rideau Valley Conservation Authority, along with other sources.

Beckett's Creek drains to the Ottawa River just east of the village of Cumberland. The study area also includes four smaller unnamed creeks that drain to the Ottawa River adjacent to Beckett's Creek. Farming is the predominant land use in the study area, followed closely by residential uses and natural areas (woodlands and valleylands).

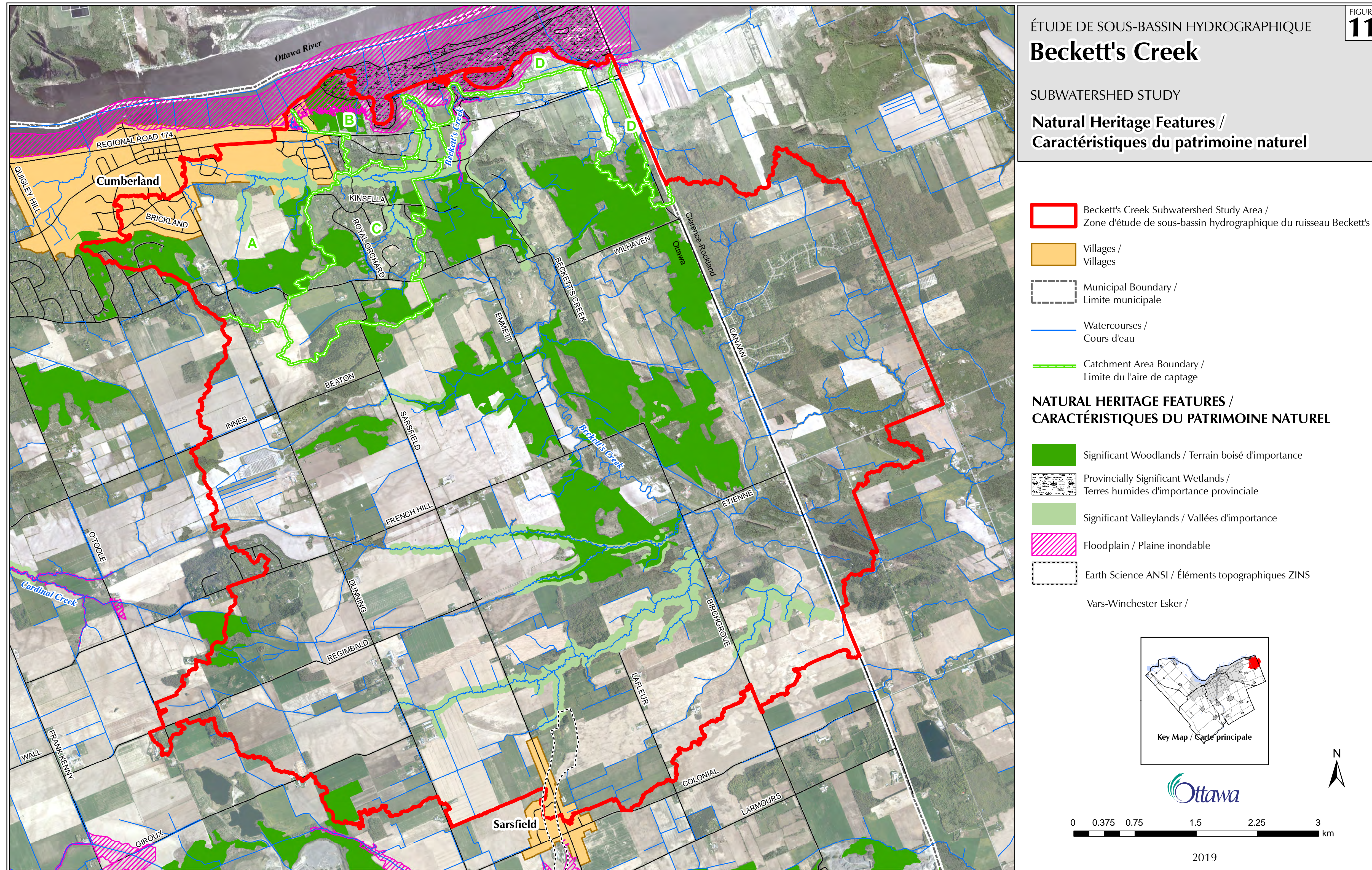
Contexte

La Ville d'Ottawa a lancé l'Étude du sous bassin hydrographique du ruisseau Beckett afin de se pencher sur les conditions existantes dans ce secteur et de recenser les mesures à prendre pour en améliorer, à long terme, la salubrité environnementale et l'état. L'information sur le contexte provient de différents rapports et de diverses études de la Ville et de l'Office de protection de la nature de la vallée Rideau, ainsi que d'autres organismes.

Le ruisseau Beckett se déverse dans la rivière des Outaouais, un peu à l'est du village de Cumberland. L'aire de l'étude comprend également quatre petits ruisseaux sans nom qui se déversent dans la rivière des Outaouais, non loin du ruisseau Beckett. Le territoire de l'aire de l'étude est consacré d'abord à l'agriculture, puis à des zones résidentielles et à des zones naturelles (boisés et vallées).



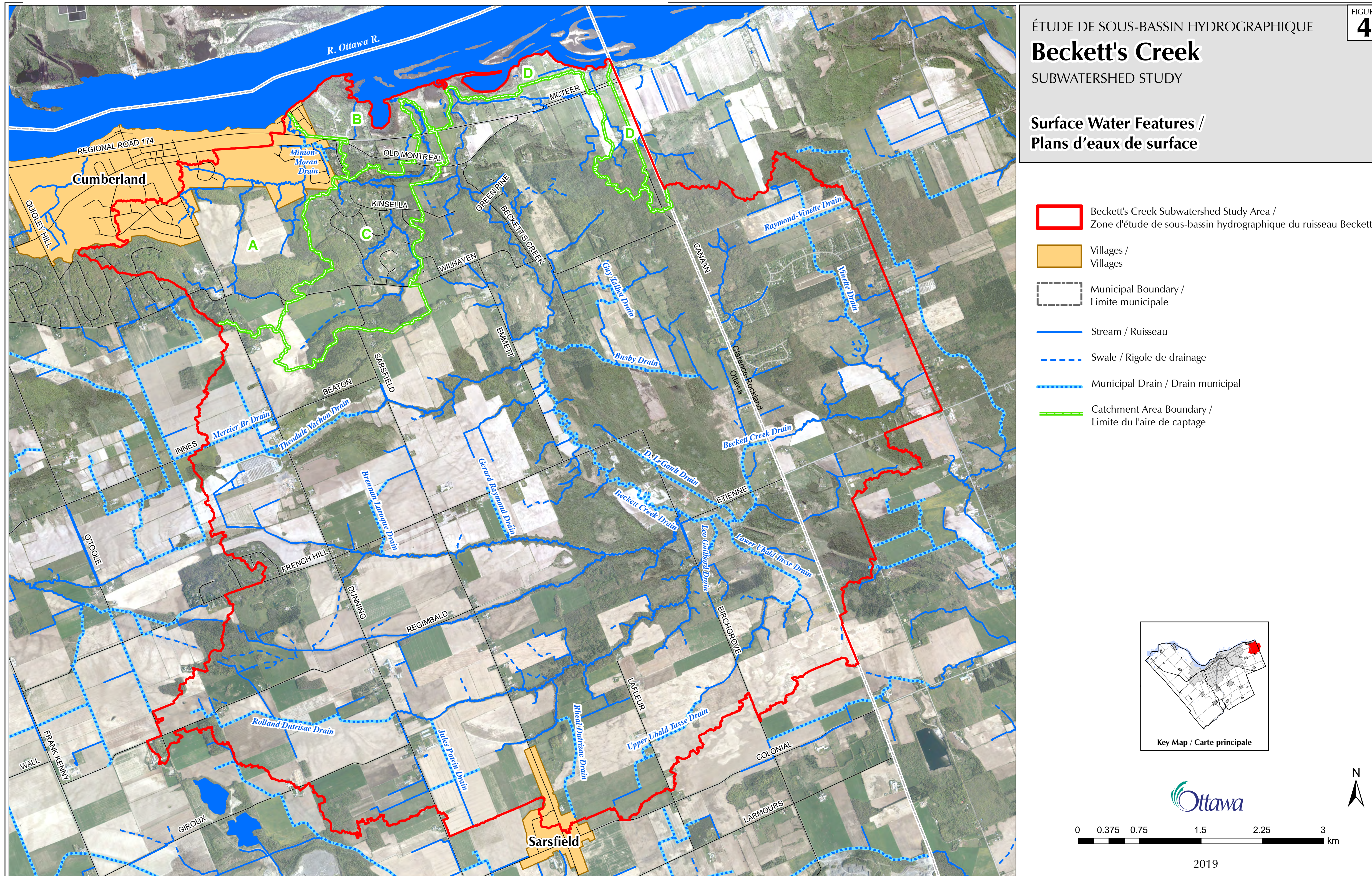
ÉTUDE DU SOUS-BASSIN HYDROGRAPHIQUE DU RUISSEAU BECKETT'S CREEK SUBWATERSHED STUDY



- The Baie Lafontaine Provincially Significant Wetland is located along the shoreline of the Ottawa River within an island complex.
- The study area contains many other wetlands, often in association with significant woodlands, that have not been evaluated.
- Updates to the significant woodland mapping are underway as a result of 2016 policy changes.

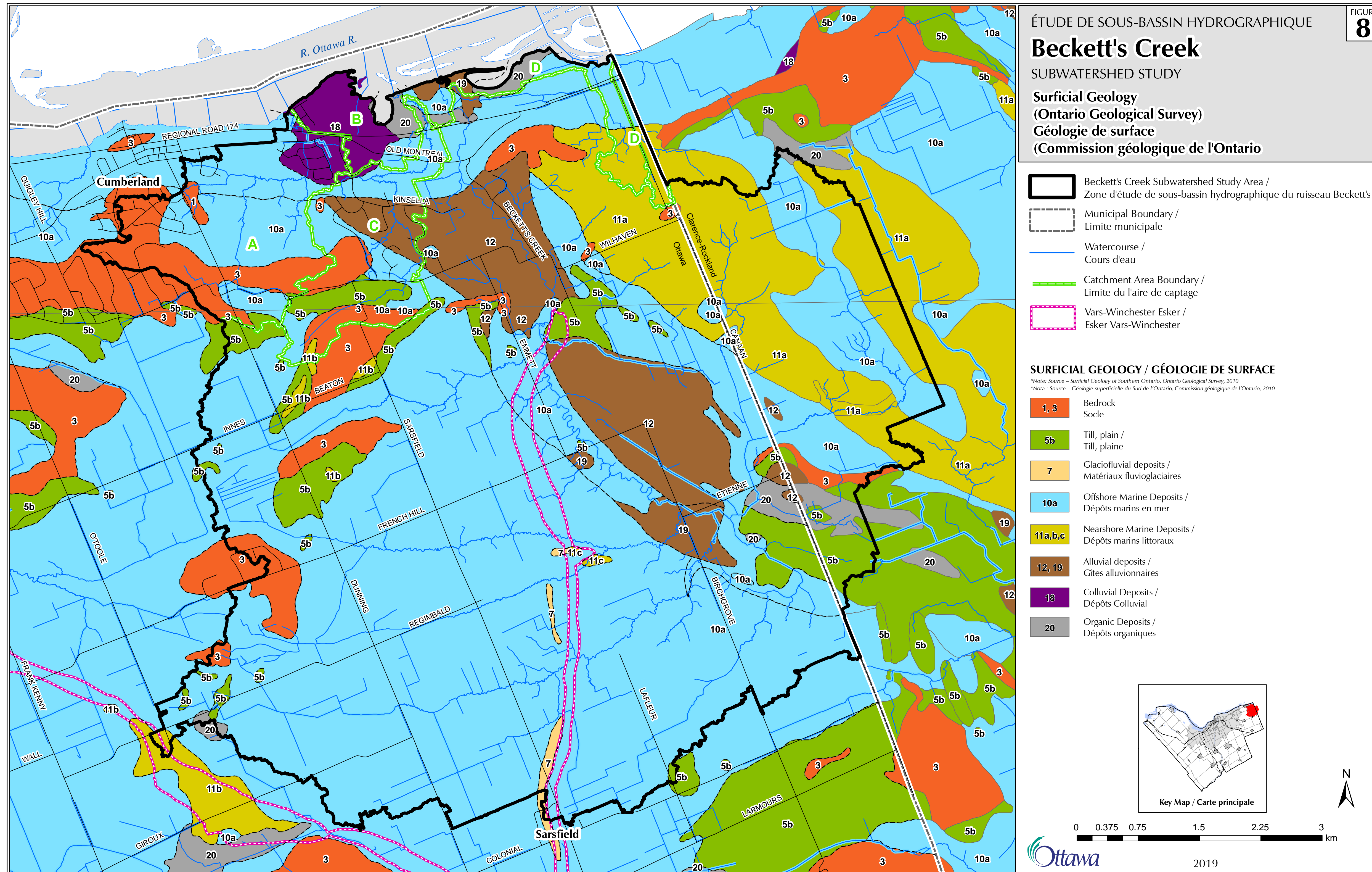
- Les terres humides d'importance provinciale de la baie Lafontaine sont situées dans un complexe insulaire sur le rivage de la rivière des Outaouais.
- Le secteur à l'étude regroupe beaucoup d'autres terres humides, souvent combinées à des boisés d'importance, qui n'ont pas été évalués.
- Une révision de la cartographie des boisés d'importance est en cours à la suite des changements aux politiques de 2016.

ÉTUDE DU SOUS-BASSIN HYDROGRAPHIQUE DU RUISSEAU BECKETT'S CREEK SUBWATERSHED STUDY



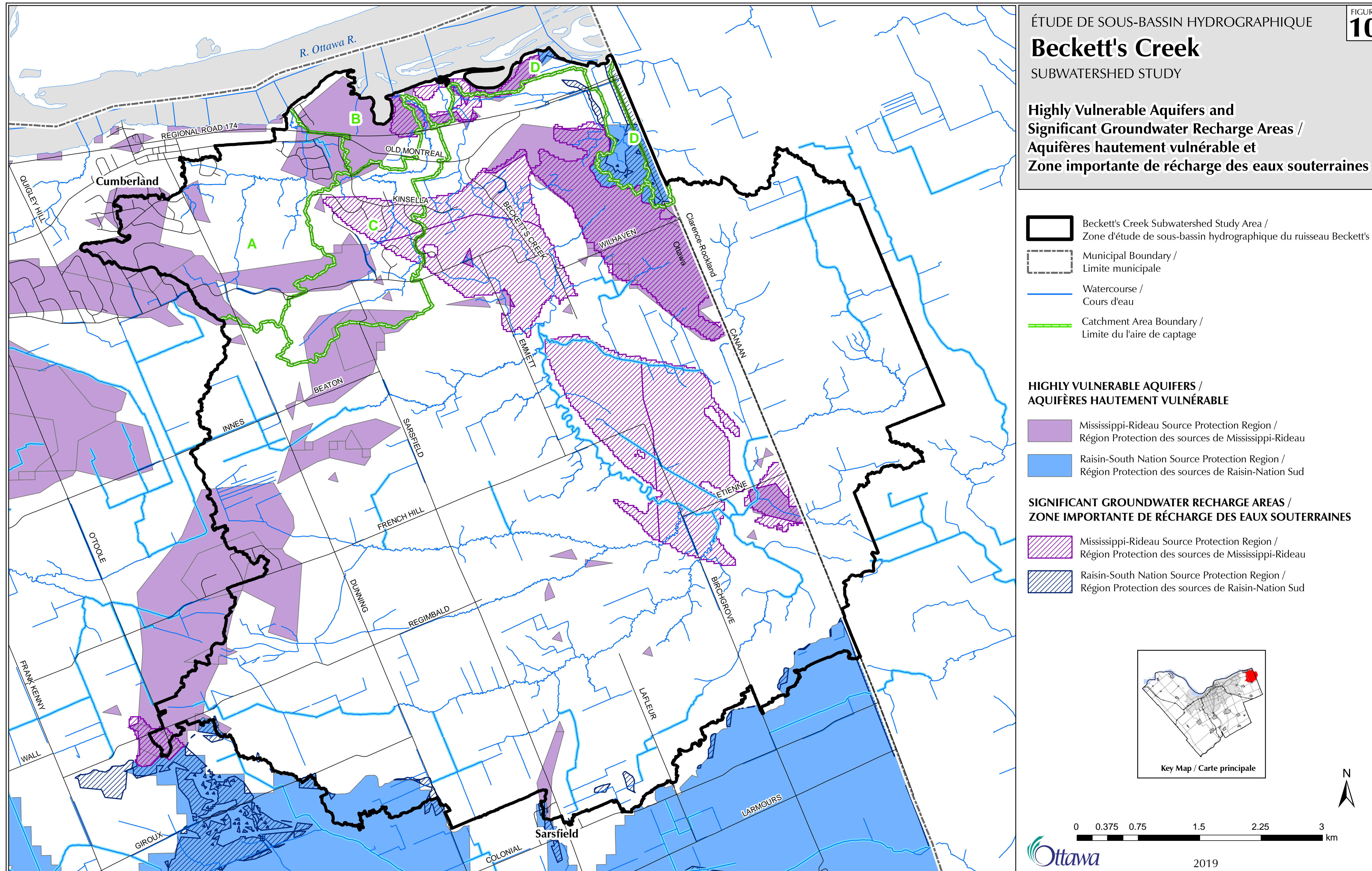
- Riparian buffers are areas along watercourses that are left in a natural vegetated state to protect water quality and aquatic habitat.
 - Regulatory setbacks are established along watercourses and valleys to protect against hazards from flooding and unstable slopes and to promote natural wildlife corridors.
 - Municipal drains are watercourses that have been engineered to remove water from fields under the authority of the *Ontario Drainage Act*.
-
- Les bandes de protection riveraines sont des zones, le long des cours d'eau, laissées dans un état végétalisé naturel afin de préserver la qualité de l'eau et les habitats aquatiques.
 - Des retraits réglementaires sont établis le long des cours d'eau et des vallées afin de les protéger contre les risques que posent les inondations et les pentes instables et de favoriser les corridors fauniques naturels.
 - Les drains municipaux sont des cours d'eau artificiels conçus pour retirer l'eau des champs en vertu de la *Loi sur le drainage de l'Ontario*.

ÉTUDE DU SOUS-BASSIN HYDROGRAPHIQUE DU RUISSEAU BECKETT'S CREEK SUBWATERSHED STUDY



- Areas with sensitive marine clays (identified as Offshore Marine Deposits) are known to be susceptible to retrogressive landslides and failure along slopes.
- When triggered, sensitive marine clay slopes can occasionally change from being stiff into flowing mud.
- The Vars-Winchester Esker is a valuable source of groundwater and is recognized as a Highly Vulnerable Aquifer (HVA).

- Les zones composées d'argiles marines sensibles (appelées « dépôts marins en mer ») sont susceptibles aux glissements rétrogressifs et aux ruptures de versants.
- Une fois perturbées, les pentes d'argile marine sensible peuvent parfois passer d'un état durci à de la boue fluide.
- L'esker de Vars-Winchester, une précieuse source d'eau souterraine, est reconnu comme un aquifère très vulnérable.



- Highly Vulnerable Aquifers (HVAs) and Significant Groundwater Recharge Areas (SGRAs) are vulnerable areas that are addressed under provincial drinking water Source Protection Plans.
 - HVAs are shallow aquifers that can be easily impacted by contamination from the surface and/or land use.
 - SGRAs are areas of higher recharge that help replenish local shallow aquifers to maintain water levels for drinking water sources.
-
- Les aquifères très vulnérables et les zones importantes de recharge des eaux souterraines sont des zones vulnérables faisant l'objet de plans provinciaux de protection des sources d'eau potable.
 - Les aquifères très vulnérables sont des aquifères peu profonds qui sont facilement contaminés par la surface et l'utilisation du sol.
 - Les zones importantes de recharge des eaux souterraines sont des zones de recharge accrue qui réalimentent les aquifères peu profonds locaux afin de maintenir le niveau d'eau des sources d'eau potable.

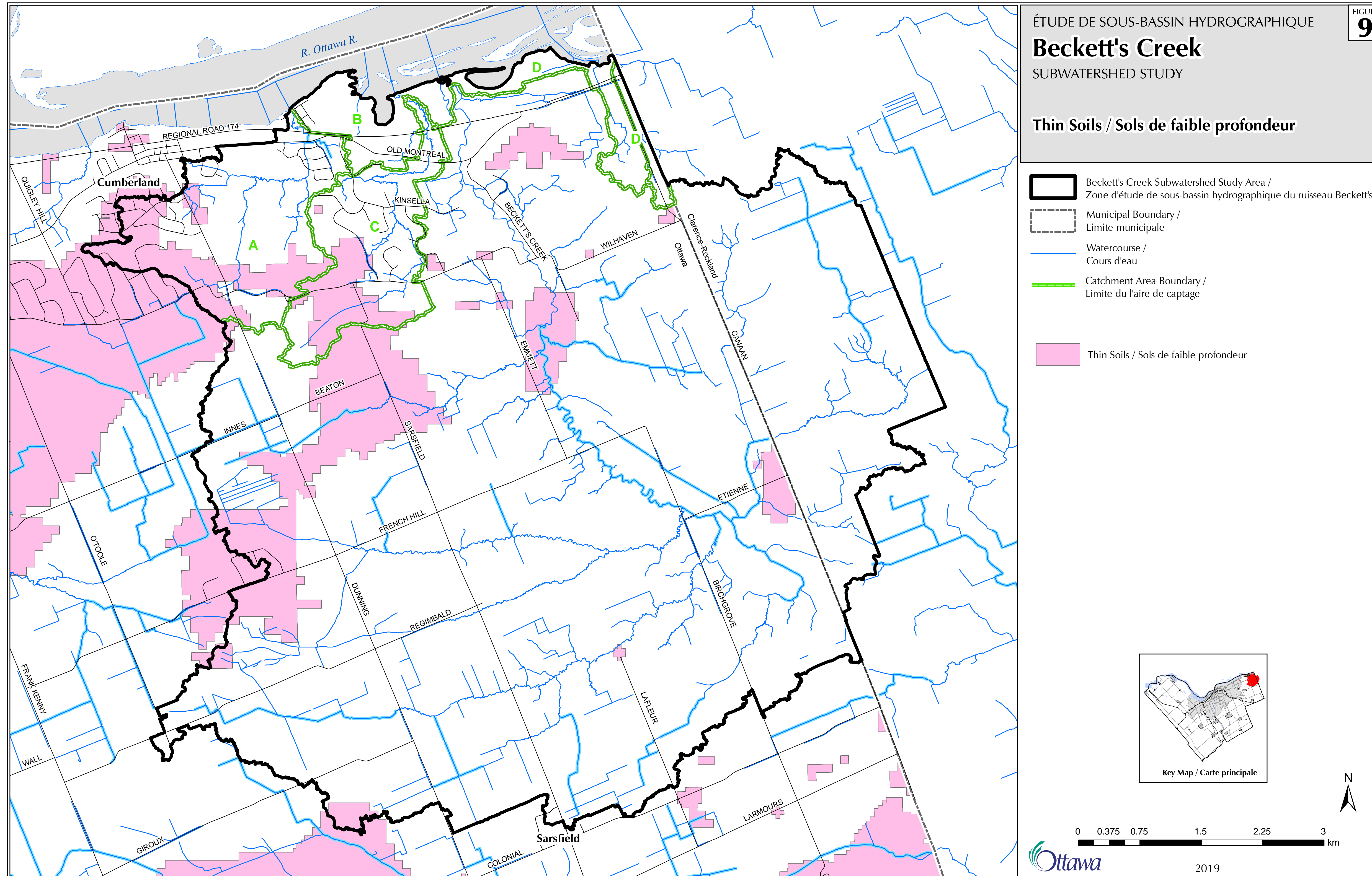
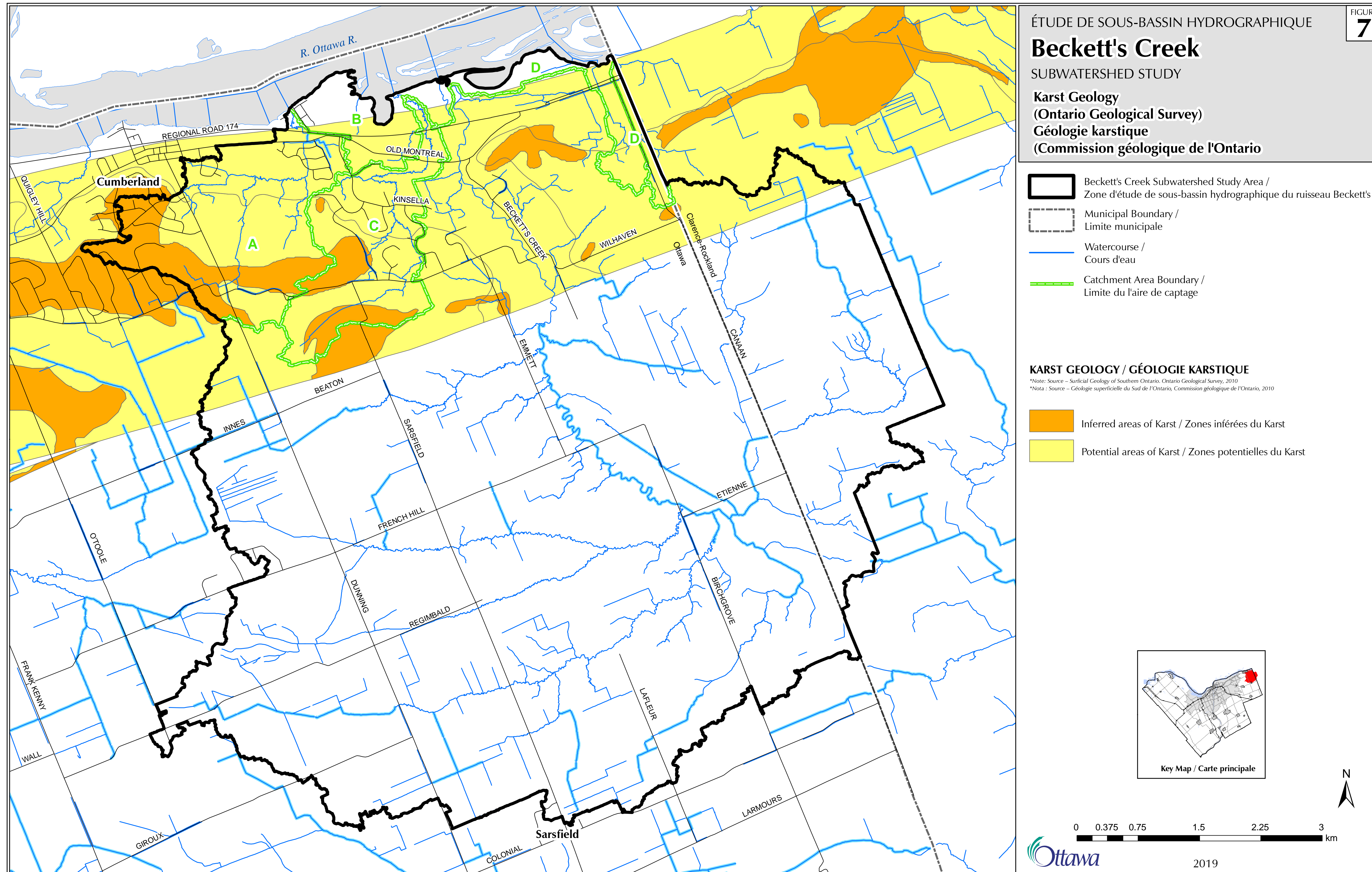


FIGURE 9

- Thin soils are areas where the soil thickness is less than 2 metres.
 - The groundwater beneath areas with thin soils may become contaminated more easily because of a lack of protective soil layers.
-
- Les sols de faible profondeur sont des zones où l'épaisseur du sol fait moins de 2 mètres.
 - L'eau souterraine sous les sols de faible profondeur est plus facilement contaminée en raison de l'absence de couches de sol protectrices.

ÉTUDE DU SOUS-BASSIN HYDROGRAPHIQUE DU RUISSEAU BECKETT'S CREEK SUBWATERSHED STUDY



- Areas of karst form when rock, such as limestone, dissolves and creates enhanced underground drainage systems.
- Karstic areas can range from larger fractures in the rock to sinkholes, caves and sinking streams.
- Karstic areas in this region are not generally considered to be geotechnical hazards.
- Karstic features can act as a direct pathway between surface water and groundwater resources, and these areas are more vulnerable to contamination.

- Les karsts se forment lorsque la roche, par exemple le calcaire, se dissout et crée un système de drainage souterrain accru.
- Les zones karstiques peuvent être constituées de grandes fractures dans la roche comme d'effondrements, de cavernes et de cours d'eau engloutis.
- Les zones karstiques dans cette région ne sont pas généralement considérées comme des dangers géotechniques.
- Les karsts peuvent servir de voie directe entre les sources d'eau de surface et d'eau souterraine; ces zones sont plus vulnérables à la contamination.

The Beckett's Creek Subwatershed Study will be putting forward recommendations to protect the natural environment and to ensure that any future development considers local environmental constraints. A sample of these recommendations is available below. To learn more about the draft recommendations, and to provide your feedback, please fill out the online survey available on ottawa.ca/beckettscreek.

- Reforestation and habitat restoration, including the creation or enhancement of riparian buffers, should be encouraged along the creeks and tributaries to increase the connectivity of the natural heritage system.
- Regulatory setbacks along the creeks and valleys must be respected to reduce risks of property damage and environmental impacts.
- The significant groundwater recharge areas and highly vulnerable aquifers (including the Vars-Winchester Esker) should be appropriately protected.
- Agricultural Best Management Practices (e.g. controlled tile drainage, grass buffers, manure storage) and funding available through the Ottawa Rural Clean Water Program should be promoted to landowners.
- The City should consider opportunities to improve existing stormwater management, including low impact development, within the villages of Cumberland and Sarsfield as part of maintenance or renewal projects involving roads and other public facilities.

L'étude du sous-bassin hydrographique du ruisseau Beckett présentera des recommandations pour protéger le milieu naturel et veiller à ce que tout aménagement futur tienne compte des contraintes environnementales locales. Des exemples des recommandations se trouvent ci-dessous. Pour en savoir plus sur les recommandations provisoires ou pour donner votre avis, veuillez remplir le sondage en ligne à l'adresse ottawa.ca/ruisseaubeckett.

- Il faudrait encourager, le long des ruisseaux et des tributaires, le reboisement et le réaménagement de l'habitat, ainsi que la création ou la valorisation de zones tampons riveraines, afin d'accroître la connectivité du patrimoine naturel.
- Il faudrait respecter les marges de recule le long des ruisseaux et des vallées afin de réduire les risques de dégâts matériels et de répercussions environnementales.
- Il faudrait protéger comme il se doit les zones de recharge des eaux souterraines importantes et les aquifères très vulnérables (dont l'esker de Vars-Winchester).
- Il faudrait promouvoir, auprès des propriétaires fonciers, les pratiques exemplaires de la gestion agricole (par exemple le drainage régulé au moyen de tuyaux, les zones tampons végétalisées et l'entreposage du fumier) et le financement offert dans le cadre du Programme d'assainissement de l'eau en milieu rural.
- La Ville devrait se pencher sur les occasions d'améliorer la gestion existante des eaux pluviales, notamment les aménagements de moindre impact, dans les villages de Cumberland et de Sarsfield dans le cadre des projets d'entretien ou de réfection de routes et d'autres infrastructures publiques.

ÉTUDE DU SOUS-BASSIN HYDROGRAPHIQUE DU **RUISSEAU BECKETT'S CREEK** SUBWATERSHED STUDY

- City staff will consider all feedback received from members of the public when finalizing the study's recommendations.
- City staff will complete the subwatershed study report for approval by City Council in 2021.
- Updates to the Natural Heritage System mapping will be made as part of City-wide Official Plan amendments.

For more information, or to provide your comments contact:

Tara Redpath, Planner
 613-580-2424 ext. 16822
Tara.Redpath@ottawa.ca

- Le personnel de la Ville se penchera sur tous les commentaires que lui adressera le public pour finaliser les recommandations de l'Étude.
- Le personnel de la Ville rédigera le rapport de l'Étude des sous bassins hydrographiques pour le faire approuver par le Conseil municipal à la fin de 2021.
- Des mises à jour seront apportées à la cartographie du patrimoine naturel dans le cadre des modifications du Plan officiel pour l'ensemble de la Ville.

Pour en savoir plus ou pour faire des commentaires, veuillez communiquer avec :

Tara Redpath, Urbaniste
 613-580-2424 poste 16822
Tara.Redpath@ottawa.ca



“As We Heard It” Report:

Beckett’s Creek Subwatershed Study

Introduction

This “As We Heard It Report” includes the results from the consultation held from January 25 to March 15, 2021 for the *Beckett’s Creek Subwatershed Study*. The consultation consisted of informative Display Boards, that were available online, and an online survey led by the City of Ottawa. An option to have hardcopies of the Display Boards and survey questions mailed out to individual residents was available upon request. Residents also provided their input by phone and by email to the City’s contact in the Natural Systems and Rural Affairs branch.

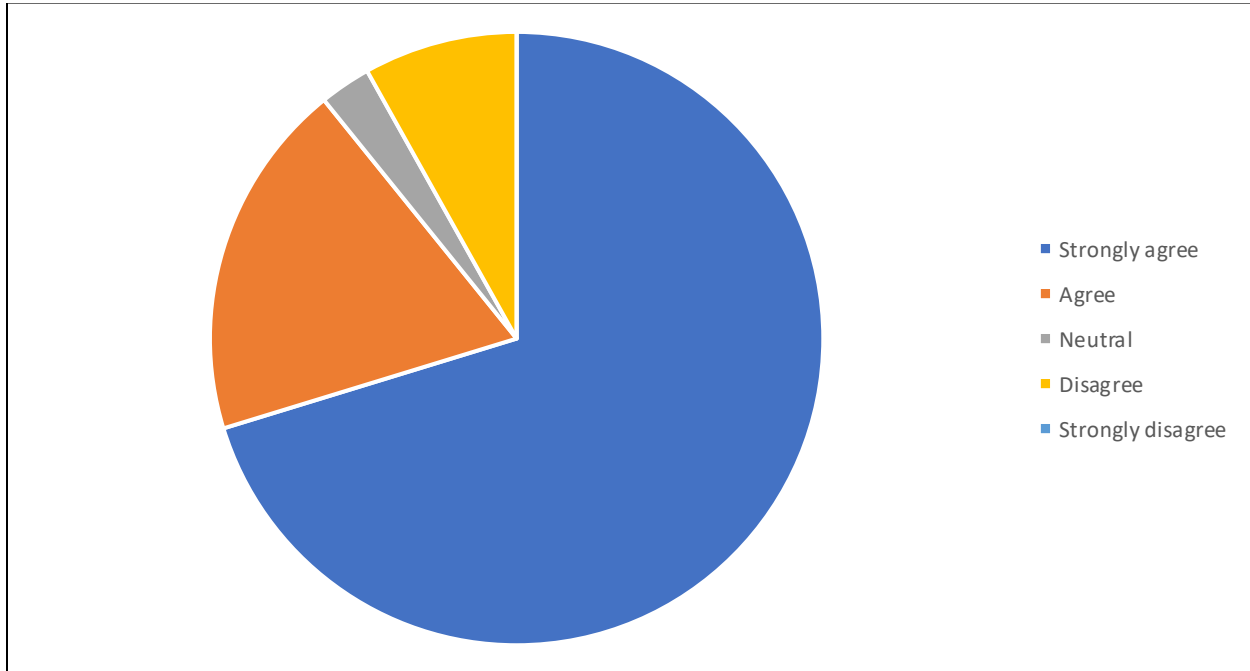
The report is broken down into the following two sections:

- A) Online public survey results
- B) Individual public comments received by phone and by email

A) Online Public Survey Results

The online public survey was available from January 25 to March 15, 2021 and was completed by 37 people. This section includes the results of the online survey.

1. Reforestation and habitat restoration, including the creation or enhancement of riparian buffers, should be encouraged along the creeks and tributaries to increase the connectivity of the natural heritage system.



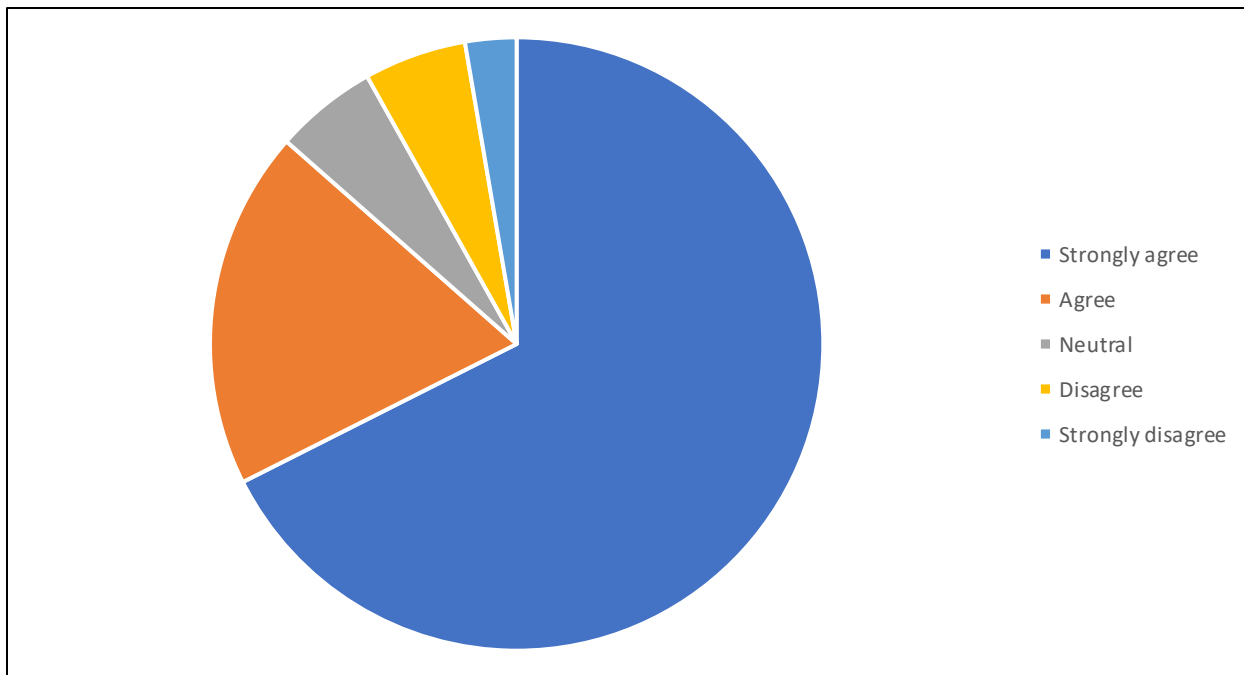
Response	Total # of responses	Total % of responses
Strongly agree	26	70%
Agree	7	19%
Neutral	1	3%
Disagree	3	8%
Strongly disagree	0	0%

*37 respondents

Comments are summarized in the table below along with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating.	Total # of responses
Ravines are important natural corridors for a variety of wildlife species traveling between forests and Beckett's Creek. Important to maintain healthy natural habitats, and forests in the ravines support biodiversity by providing shelter, food, and shade.	9
Important to protect water quality, stabilize stream banks to reduce soil erosion, and create a buffer for water flowing into the stream.	7
Clear-cutting for residential lots in rural estate subdivisions is resulting in habitat loss and removal of natural corridors. For example, sightings of moose have become rare.	5
Natural drainage systems and ravines are critical for managing runoff, preventing flooding, and mitigating risks from climate change during extreme weather events. Their function should be maintained and enhanced in consultation with affected residents.	5
Healthy natural habitats and forests are beneficial to humans and will improve our quality of life and that of future generations.	3
Water levels have recently been very low except in spring and after rainy days. The creek should be opened up more to the Ottawa River, and summer flows should be increased.	2
Clauses for current land use should be grandfathered in.	1
Not unless specific areas of concern can be identified.	1
Benefits of increasing connectivity of natural heritage system are theoretical, and animals will adapt where needed.	1
Needs to be regulated and funded by the City to ensure this is a priority.	1
Include a policy in the Official Plan for a 30 metre naturally vegetated buffer zone between shorelines and new rural development.	1

2. The City should update the mapping in the Official Plan to ensure that the policies to protect the Natural Heritage System are appropriately applied.



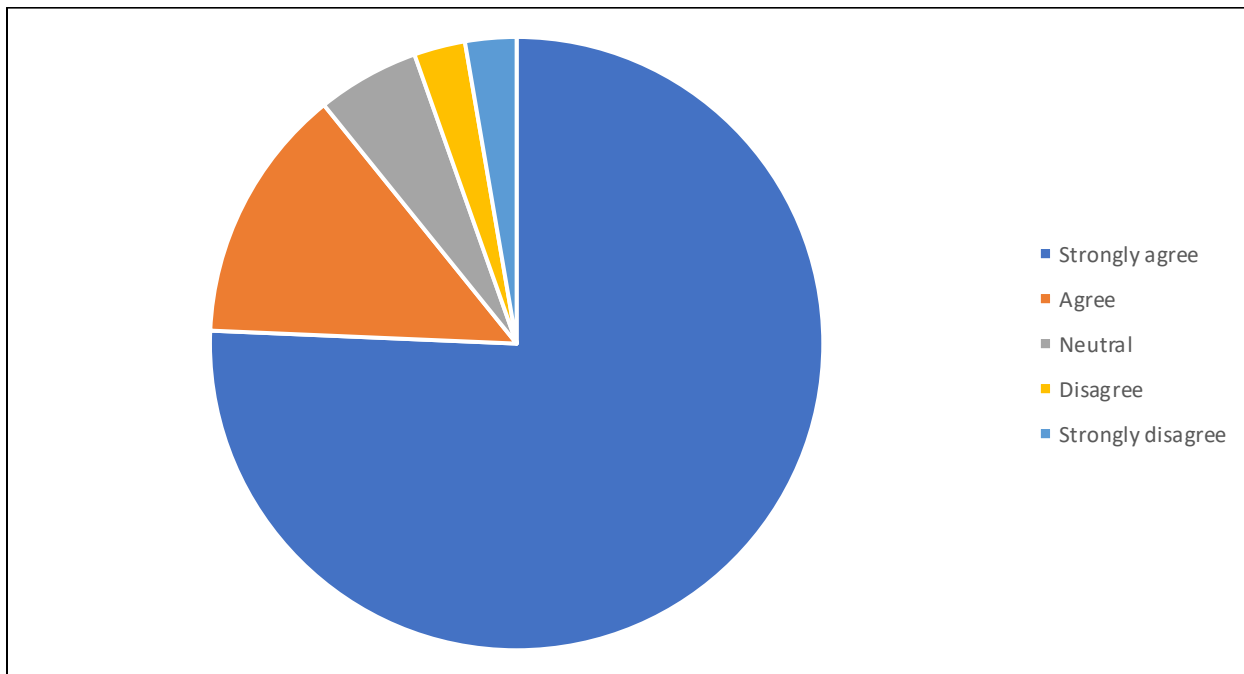
Response	Total # of responses	Total % of responses
Strongly agree	25	68%
Agree	7	19%
Neutral	2	5%
Disagree	2	5%
Strongly disagree	1	3%

*37 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
Mapping is important for protecting natural heritage when there are development applications, and updates will help ensure that policies are adhered to and enforced.	6
The Official Plan should be all-encompassing and include policies for residential and commercial development and the protection and enhancement of our natural resources/heritage to maintain Ottawa's size and diversity.	3
Water should be kept safe by ensuring that septic tanks and runoff from commercial businesses do not drain into the creek.	3
Property owners need to understand any limitations upfront before making plans for development/farming/building to reduce administrative burden.	2
Not familiar with Official Plan policies or what the Natural Heritage System includes.	2
Appreciate the City's help when maintenance on tributaries is required (e.g. removing beaver dams), but otherwise let it change naturally.	1
Concerned that construction of new homes in rural estate subdivisions will deplete the aquifer and reduce groundwater recharge due to increased runoff from paved surfaces.	1
Protecting the watershed is not a high priority when compared with other important issues (e.g. housing shortages, mental health training for police).	1
Does not support including Natural Heritage system mapping and policies in the City's Official Plan under the existing framework.	1

3. Unevaluated wetlands should be assessed for significance prior to development.



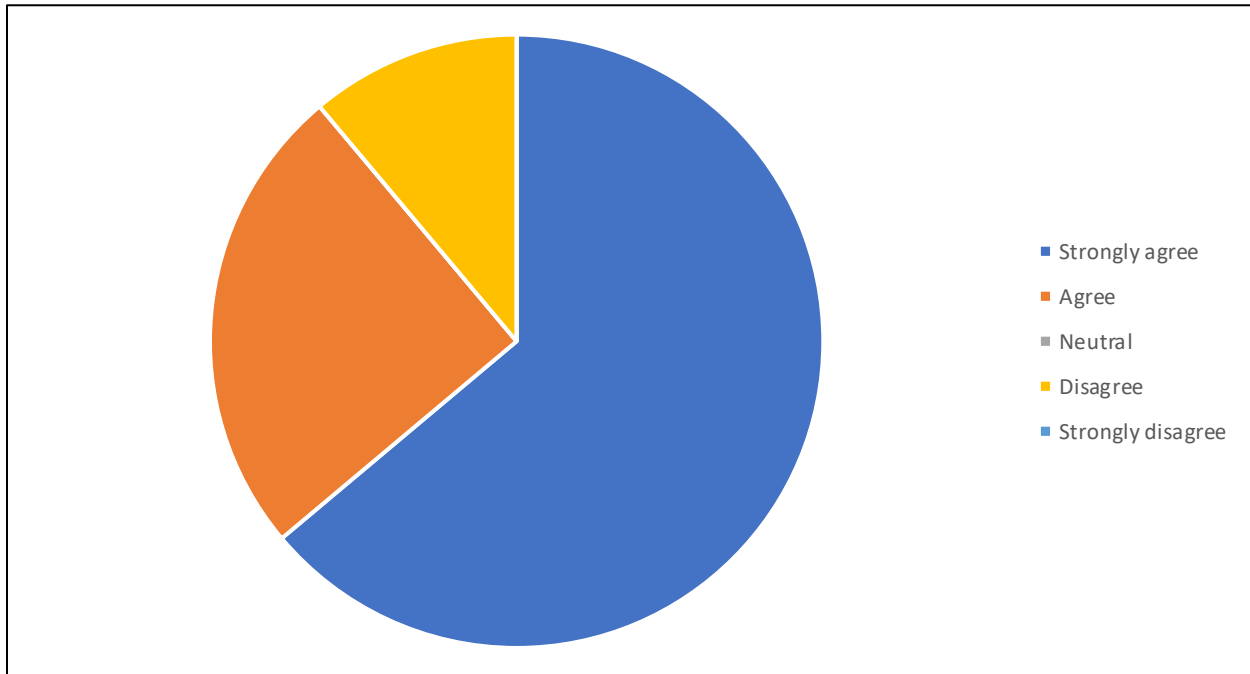
Response	Total # of responses	Total % of responses
Strongly agree	28	76%
Agree	5	13%
Neutral	2	5%
Disagree	1	3%
Strongly disagree	1	3%

*37 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
Wetlands should be carefully assessed and evaluated before any development is approved or there may be impacts and serious consequences.	6
It is crucial to protect wetlands, and they should not be developed or destroyed under any circumstances.	5
This is a priority, as wetlands can protect us from climate change by reducing greenhouse gases. Wetlands also protect against flooding, filter groundwater, and contribute to biodiversity and other ecosystem services.	5
It saves so much time, effort, and money, and it is helpful for the landowner to know upfront to prevent future problems.	3
Wetland studies and flood mapping are intertwined and should be studied through a site-specific lens to avoid establishing 100-year flood patterns that are overly cautious.	2
There is enough water, and there are already so many birds around.	1
Development must be balanced across all community needs e.g. housing, business, social, and natural environment.	1
Land developers find ways to work around wetland development restrictions, and wetlands would only be protected when landowners can't afford to hire lawyers.	1

4. Regulatory setbacks along the creeks and valleys must be respected to reduce risks of property damage and environmental impacts.



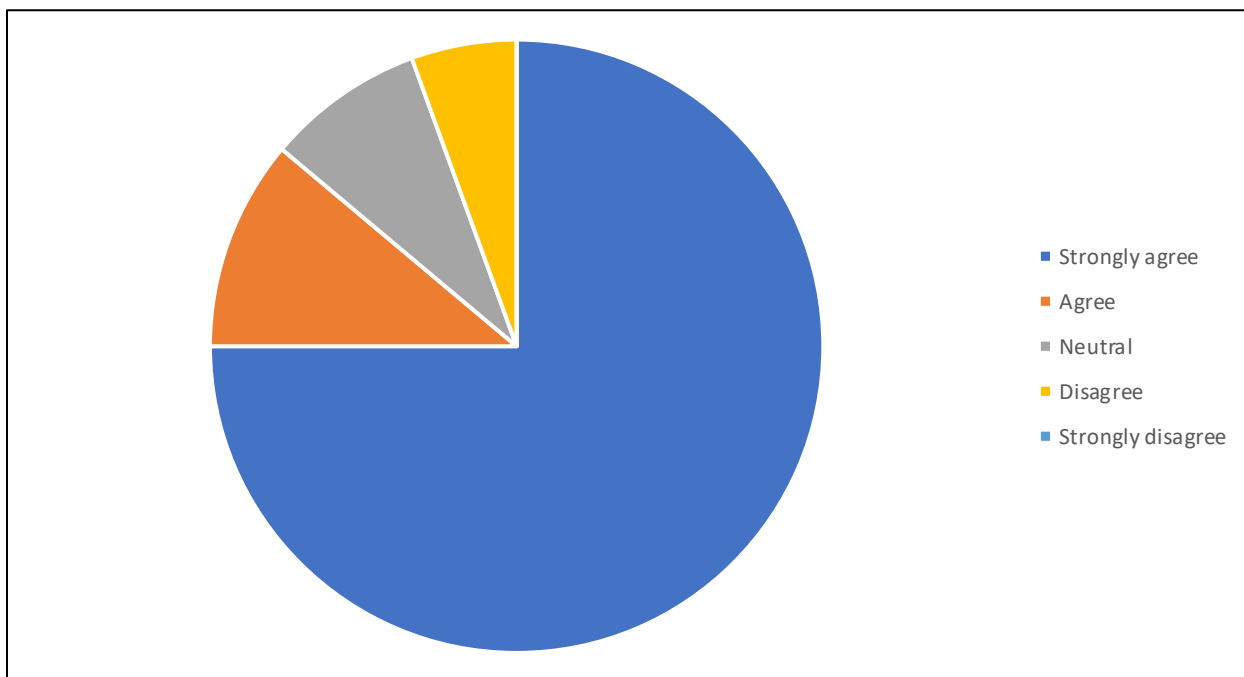
Response	Total # of responses	Total % of responses
Strongly agree	23	64%
Agree	9	25%
Neutral	0	0%
Disagree	4	11%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
The City must not authorize building in floodplains or on unstable creek banks, as we've all seen the impact of past spring flooding. Humans encroach on nature enough and building too close to a valley or waterway will result in damage to property.	7
Setbacks exist for a reason and are often the minimum requirement to ensure that the natural environment and constructed assets (housing, roads, buildings) are protected.	4
This information needs to be clear, easily accessible, and available at the time a property is purchased to avoid surprises when applying for a permit.	3
Some setbacks don't make sense due to inadequate/inaccurate modeling, and the setback along Beckett's Creek for slide hazards is too wide.	2
Homeowners should have private flood insurance coverage, and taxpayers should not have to foot the bill for flood damage.	1
Climate change is here, and the City must respond with policies to mitigate climate risk, such as setbacks along creeks/valleys, and enforce them consistently.	1
If you have enough money, you can find ways to get around these regulations, while individuals will be the only ones forced to comply.	1
The City is too rigid in applying guidelines and regulations, and landowners should be given the opportunity to propose and implement strategies to permit the reduction of setbacks (e.g. land filling low areas where feasible).	1
There should be legislation to ensure that watercourses are protected against phosphorus, nitrogen, and silt contamination.	1

5. Vegetated buffers should be encouraged along the creeks and tributaries to reduce erosion and the impacts of run-off and to improve fish habitat.



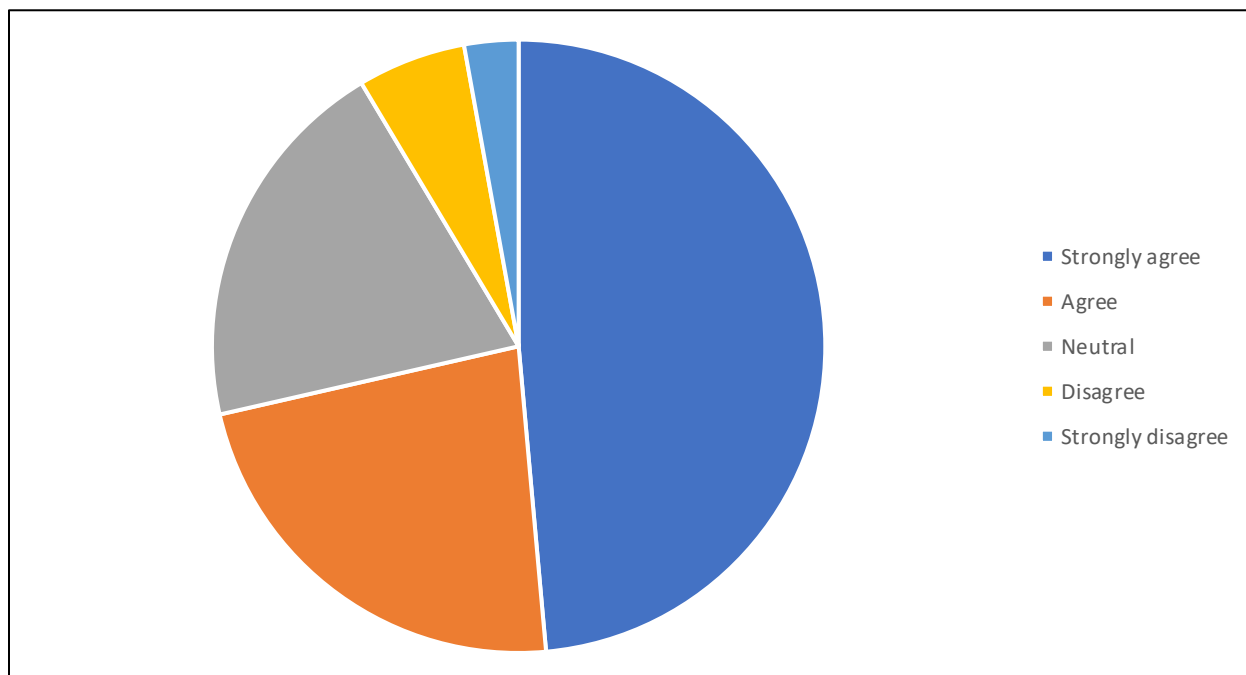
Response	Total # of responses	Total % of responses
Strongly agree	27	75%
Agree	4	11%
Neutral	3	8%
Disagree	2	6%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
Runoff from agricultural land, including fertilizers and pesticides, are harmful for the environment, wildlife, and humans. Data suggest that a natural vegetated buffer is very effective at reducing total phosphorus, nitrogen, erosion, and silt in watercourses.	8
Buffer zones should be mandatory, not just encouraged, and should be at least 30 meters wide. Also need to follow through on complaints, as many properties along the Ottawa River in Cumberland have lawns right up to the river and permanent boat docks.	4
The City and Conservation Authority need to be responsible for maintaining the buffer for it to be done correctly, and there needs to be programs to support homeowners financially to develop buffers.	2
This is part of the natural heritage I believe we should promote and protect.	1
Some areas need buffers to reduce erosion and run-off but certainly not everywhere, as nature has left enough open areas for animals to find water.	1
Erosion is a broader issue that requires more than mitigation through vegetation buffers. I would like to see a more comprehensive set of recommendations on this issue.	1

6. The City and Conservation Authority should look for opportunities to develop a vegetated buffer demonstration site along a municipal drain or other watercourse as an educational tool.



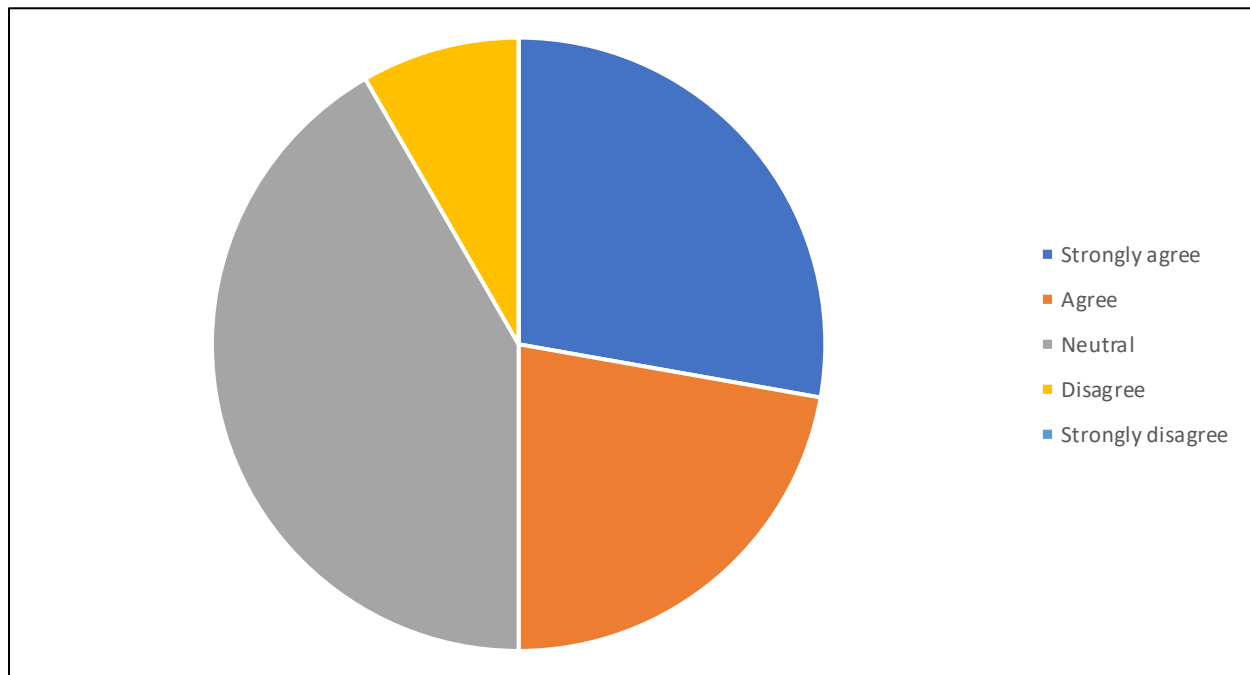
Response	Total # of responses	Total % of responses
Strongly agree	17	48%
Agree	8	23%
Neutral	8	20%
Disagree	2	6%
Strongly disagree	1	3%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
This would be a great educational and informative tool. It would demonstrate how best to build these features for private developments and increase awareness for residents.	7
Not convinced that it would really mobilize the community or give landowners an incentive to maintain their designated vegetated buffer area.	3
Modelling the use of buffers should help but retaining buffers along natural waterways is even more important.	2
Sounds expensive, and this project would take money from other more pertinent taxpayer issues. The education message could be demonstrated in other ways (e.g. Ottawa Riverkeeper programs).	2
Enough data shows that buffer zones are effective - now is the time to legislate.	1
No idea what you're talking about.	1
Education tool needs a fully developed and resourced engagement strategy. Residents and community members need to be educated on the benefits of such natural sites.	1
Municipal drains should not be promoted as being watercourses, as they have a specific purpose much like a ditch.	1
A demonstration site on private land is not ideal, as this could easily be seen as a public invitation to trespass.	1

7. A local organization(s) should pursue the provincial naming process for the unnamed watercourses in the study area.



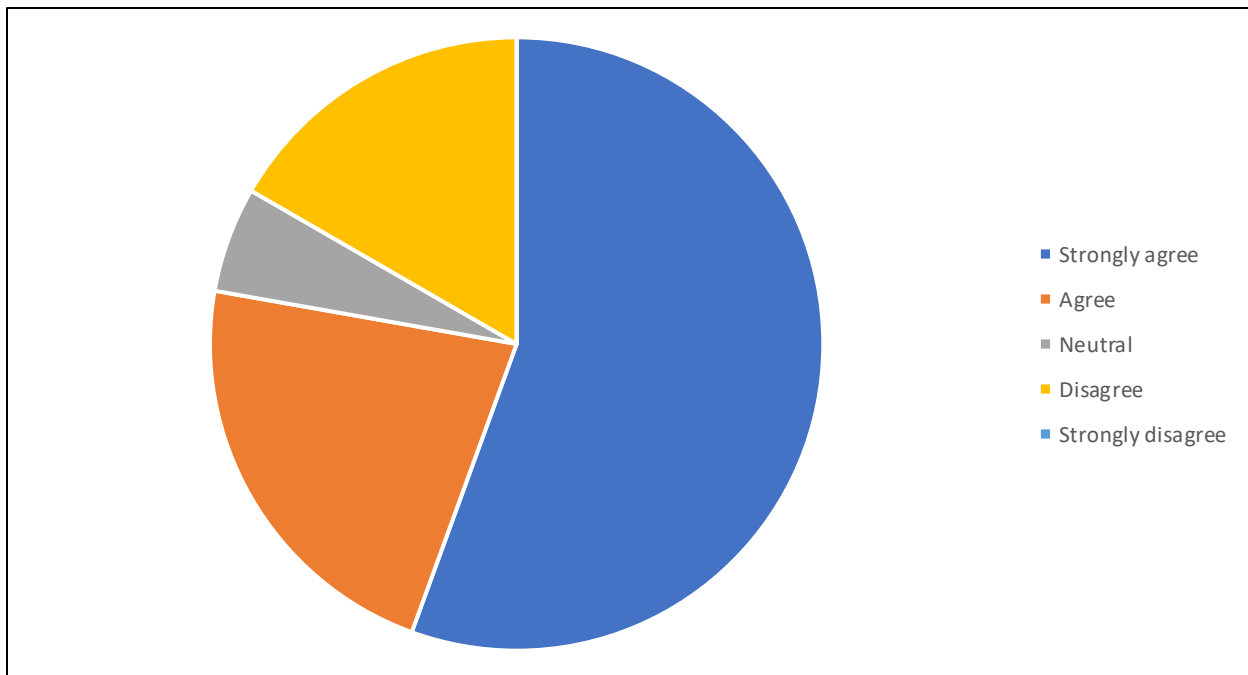
Response	Total # of responses	Total % of responses
Strongly agree	10	28%
Agree	8	22%
Neutral	15	42%
Disagree	3	8%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
Good idea to enhance awareness, instill more value, and encourage people to protect the area's watercourses.	3
Not sure this is necessary or would have any benefits.	3
Should be done by the government or the City of Ottawa not a local organization.	3
Do not want to see taxpayer dollars being spent on this unnecessarily.	2
Extremely helpful in allowing the local population to identify these watercourses and where action is being taken.	2
Naming should remain local to promote historically local commemorations.	1
Naming is not as important as protecting.	1
Entrusting the project to an outside organization increases its chances of success.	1

8. Proper geotechnical studies should be completed prior to development to evaluate the hazards associated with karst, sensitive marine clay and seismic zones.



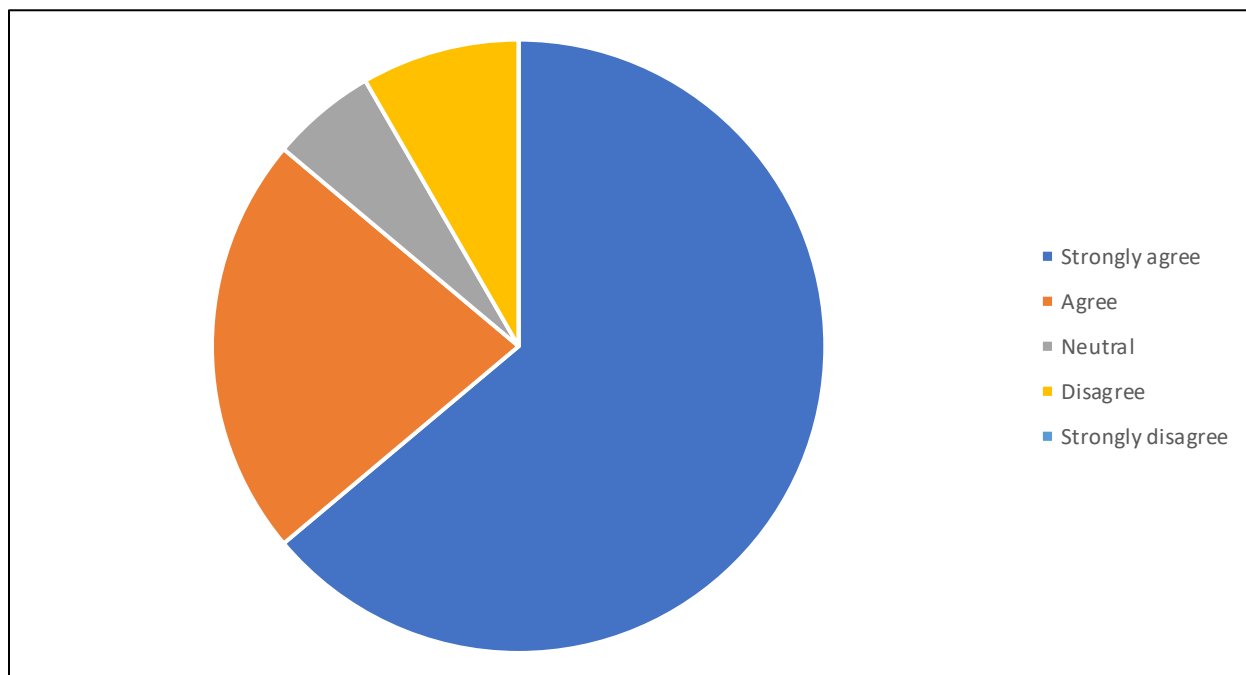
Response	Total # of responses	Total % of responses
Strongly agree	20	56%
Agree	8	22%
Neutral	2	5%
Disagree	6	17%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
These types of features can be dangerous and need to be assessed, and homeowners need to understand the potential risks and how they can be mitigated.	9
Unaware of historical damage due to these conditions in the watershed; these studies were never required before, so not sure they would add any value.	4
Studies are very expensive and cannot easily be funded by private landowners.	3
The City should not be responsible and taxpayers liable for any private property damage to homes or businesses built on geologically unstable land.	2
The City is building the LRT to Trim through a seismic fault line and not following these recommendations.	1
Already a practice for residential properties and should be applied to all developments.	1
If these studies will be publicly funded for general reference purposes over larger land areas, then it does make sense. Should be an option for landowners to decide if a specific study is appropriate for their needs.	1
We still don't have a very good understanding of the causes of earthquakes in eastern Canada. Further studies would be useful.	1

9. The City should address erosion issues present at the Old Montréal Road crossing over Beckett’s Creek and should consider opportunities for improvements during infrastructure renewal projects.



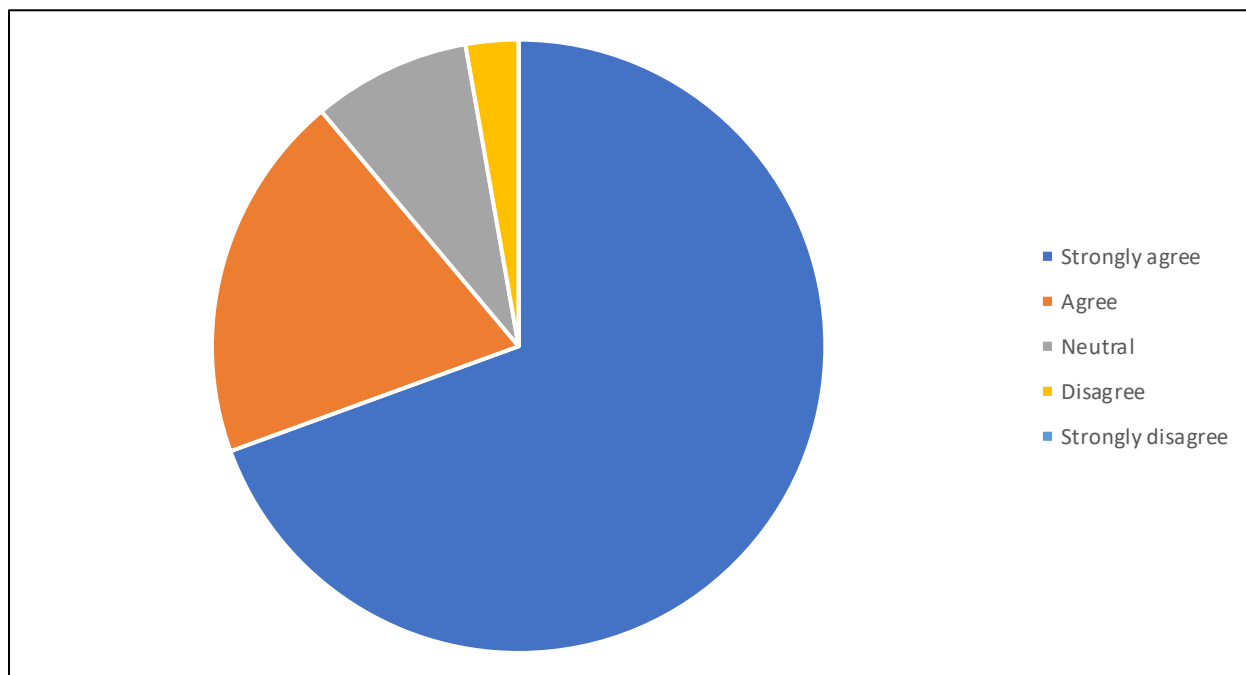
Response	Total # of responses	Total % of responses
Strongly agree	23	64%
Agree	8	22%
Neutral	2	6%
Disagree	3	8%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
The erosion should always be fixed during infrastructure renewal projects; this will correct the errors of the past and save money in the long run.	6
If a new infrastructure project can contribute to improving environmental conditions, it just furthers the notion that the project is in the public interest.	4
Beckett's Creek Road and Old Montreal Road are part of the Emergency Detour Route for Regional Road 174. Allowing the erosion to continue unchecked would present risk to infrastructure and safety.	3
The City rebuilt the original concrete bridge on Old Montreal Road over Beckett’s Creek and replaced it with a steel culvert. It’s not logical to replace a perfectly sound structure with something that has a forty-year safe life expectancy.	2
During the culvert replacement project a few years ago, considerable work was done to mitigate erosion at this site.	2
The City has a finite budget, and this is not a priority.	1
Erosion issues at the Wilhaven and Beckett’s Creek one-lane bridge crossing are more serious and in greater need of attention.	1

10. The significant groundwater recharge areas and highly vulnerable aquifers (including the Vars-Winchester Esker) should be appropriately protected.



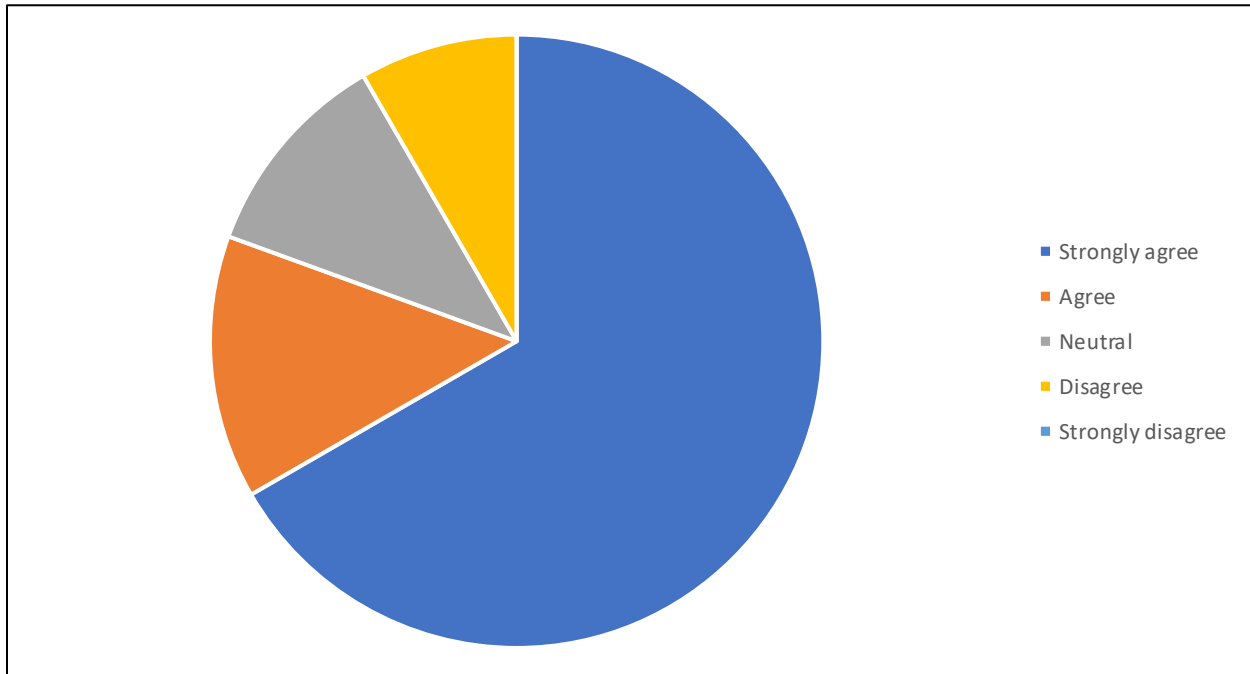
Response	Total # of responses	Total % of responses
Strongly agree	25	70%
Agree	7	19%
Neutral	3	8%
Disagree	1	3%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
We live along this Esker and would like to be assured that the water source to our well is protected. Important to prevent the contamination of very vulnerable groundwater and aquifers and protect water quality.	10
Would like to know what this means for agriculture and local residents; don't know enough about this issue.	3
Over the past twenty years, the quality of the well water around the Cumberland Village area has noticeably decreased.	2
Concerned about potential drinking water shortages due to new construction and paved surfaces in the Recharge Area.	1
This is mostly outside the boundaries of Ottawa and not our concern. City of Ottawa has approved a dump next to this sensitive area at the village of Vars, and this demonstrates the City's attitude towards aquifers.	1
There have been misguided ideas for protecting of the environment in the past with really bad outcomes, although they were done with the best intentions.	1
Source water protection is a provincial responsibility, and any initiative by the City of Ottawa should be coordinated with the Government of Ontario.	1

11. Detailed hydrogeological studies should be completed prior to development, particularly in areas with thin soils or karst.



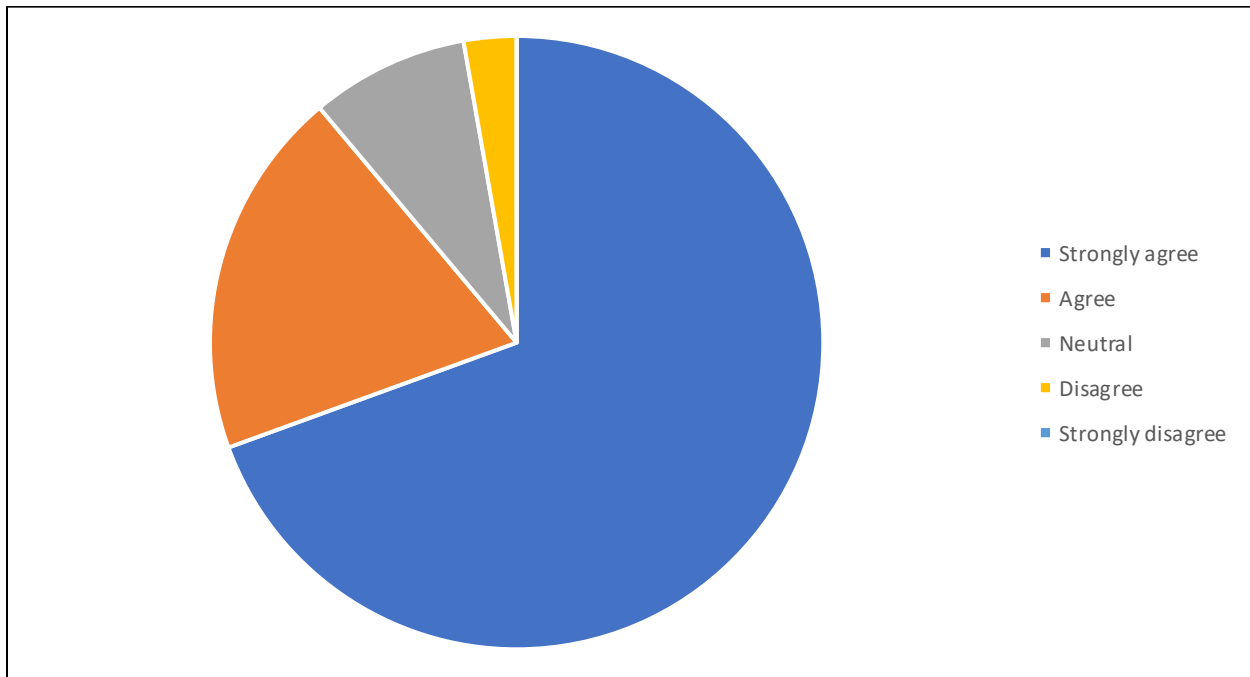
Response	Total # of responses	Total % of responses
Strongly agree	24	67%
Agree	5	14%
Neutral	4	11%
Disagree	3	8%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
It's important to identify the affected areas and inform the local population of potential consequences. E.g. avoid development in areas likely to be affected by sinkholes.	4
All development projects should undergo appropriate environmental/impact assessments to tailor our interventions rather than taking a "one size fits all" approach.	3
Development in these areas must be controlled to avoid heavy polluting businesses and industries and high-density housing developments not connected to City sewer systems.	2
Potential to impact drinking water sources if contaminants pass through.	1
These areas were targeted for development in the 1970's when soil classifications were undertaken. Soil types 1, 2 and 3 were designated as agricultural resource area and protected. Soil types 4, 5, 6 and 7 were determined to qualify as development capable.	1
Not sure this is necessary, seems to be more red tape and bureaucracy to deal with.	1
Studies are very expensive and cannot easily be funded by private landowners.	1
If these studies will be publicly funded for general reference purposes over larger land areas, then it does make sense. Should be an option for landowners to decide if a specific study is appropriate for their needs.	1

12. Abandoned wells should be properly decommissioned to prevent future groundwater contamination.



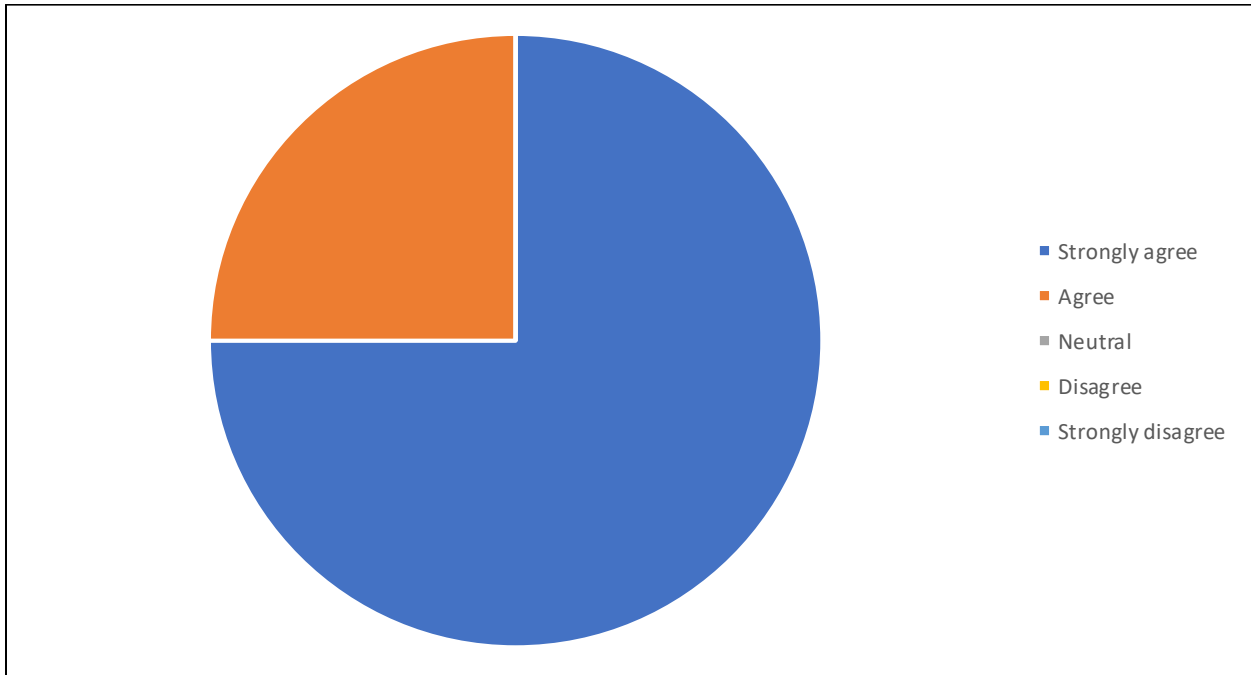
Response	Total # of responses	Total % of responses
Strongly agree	25	70%
Agree	7	19%
Neutral	3	8%
Disagree	1	3%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
We have wells for our drinking water; proactive contamination prevention is a good idea.	7
Contaminated groundwater can spread to a vast area, and preventative action is not as expensive as addressing issues.	2
Guidelines already exist and are generally respected. If evidence shows that certain wells are not properly decommissioned, the City should apply rules and penalties accordingly.	2
Unclear about risks presented by unused wells; not sure this an issue.	2
In the 1940's and early 1950's test wells in the area were dug to determine natural gas viability and water quality assessments; the City does not have a record of these sites.	1

13. Private septic systems should be properly constructed and maintained to protect groundwater and surface water quality.



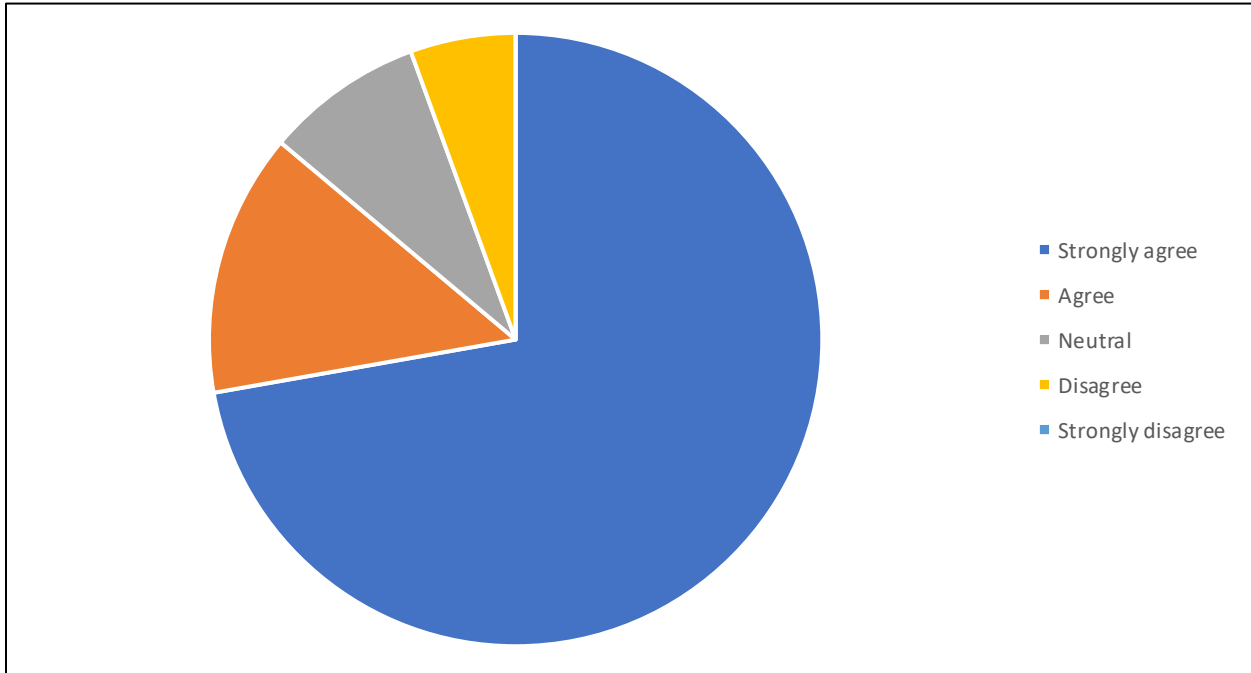
Response	Total # of responses	Total % of responses
Strongly agree	27	75%
Agree	9	25%
Neutral	0	0%
Disagree	0	0%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
As someone who is on well and septic, I believe this is imperative; proactive contamination prevention is always helpful to protect drinking water sources.	6
Contractors that install septic systems are well aware of proper techniques to protect groundwater; Conservation Authorities have an adequate program to review applications and to conduct inspections.	3
When a septic system is over a certain age, the City should have a program in place for checks every few years.	2
Programs should be available to offset cost of upgrades to existing systems.	1
Concerned with how criteria for 'proper' construction and maintenance are selected, as some criteria are excessive and serve those with a vested interest.	1
Peer reviewed papers available that provide information about septic system plumes.	1

14. Agricultural Best Management Practices (e.g. controlled tile drainage, grass buffers, manure storage) and funding available through the Ottawa Rural Clean Water Program should be promoted to landowners.



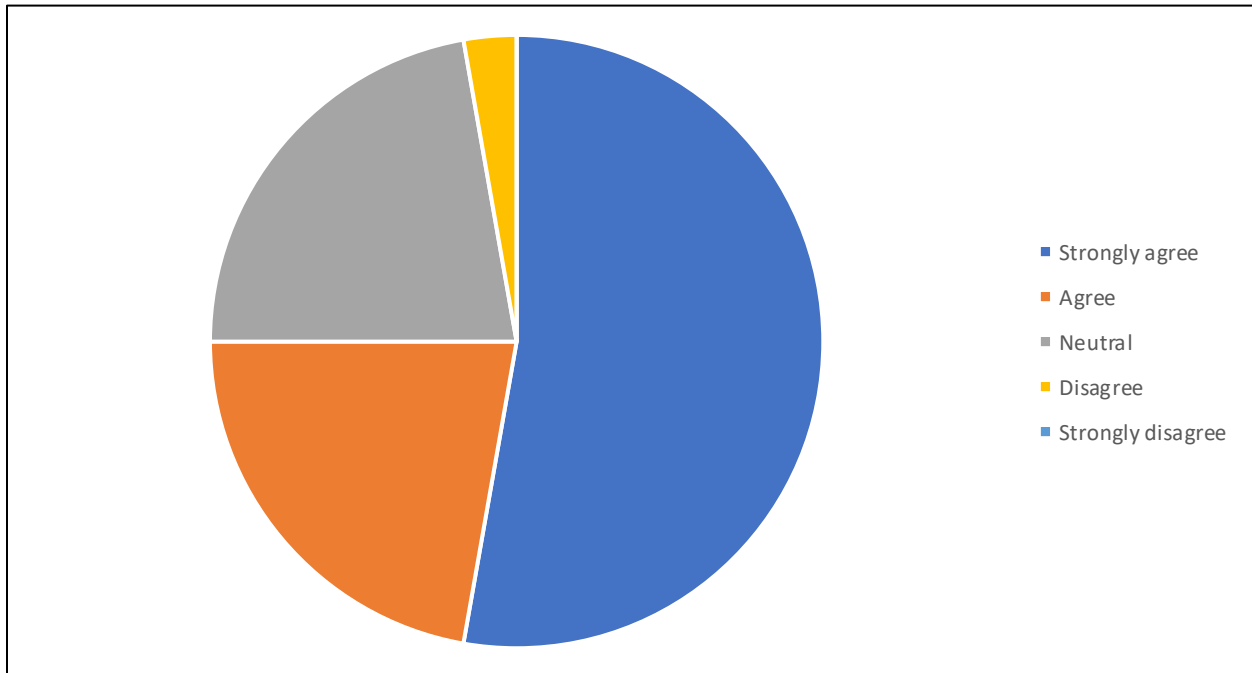
Response	Total # of responses	Total % of responses
Strongly agree	26	72%
Agree	5	14%
Neutral	3	8%
Disagree	2	6%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total# of responses
Promotion is a low-cost, efficient way of getting things done. Connect specific opportunities to individual properties; awareness is key to success.	6
Agriculture runoff is harmful and should be reduced as much as possible; farmers would benefit greatly from this program and need assistance.	5
If protective measures are required, access to funding is important.	3
Unsure if voluntary measures are effective and would like best practices to be legislated or regulated; there is existing legislation in Ontario about manure storage.	3
Farmers are very knowledgeable about all programs and funding available to them and can decide for themselves.	2
The City should make funds available to small, non-farming landowners for reforestation.	1
This is not a priority for government funding when there more important issues.	1
Some differences of opinions as to the effectiveness of controlled tile drainage.	1
Grass buffer zones are as effective as natural vegetated buffer zones at phosphorus retention.	1

15. Controlled tile drainage should be used to retain water and nutrients on fields during the growing season.



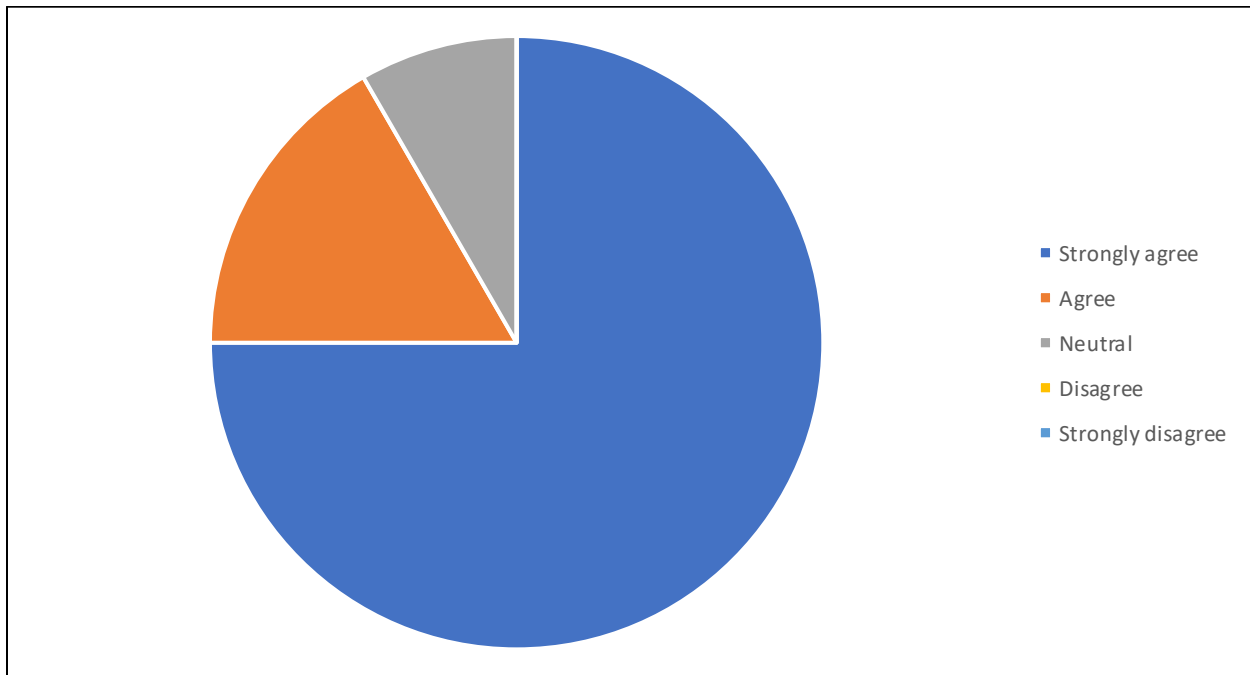
Response	Total # of responses	Total % of responses
Strongly agree	19	53%
Agree	8	22%
Neutral	8	22%
Disagree	1	3%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total# of responses
This is a best practice, and avoidance of unwanted runoff is important to protect waterways and natural habitats.	8
Don't know enough about this to have an opinion; refer to farming experts to advise.	5
Let the farmers decide if this technology is beneficial, as it is their financial investment and their viability at stake.	3
Agricultural runoff is a major source of water pollution. Any measures to reduce and eliminate this problem are vital to environmental, human and economic health.	2
All farmland should be tile-drained if used for crops.	1
Limited distance setbacks are already in place. Buffers between protected agricultural resource areas and development land could be entertained.	1
There was a study about Controlled Tile Drainage in the South Nation watershed area, and it seems it is only effective in level fields.	1

16. Better management of runoff contaminated with E. coli and phosphorus should be promoted.



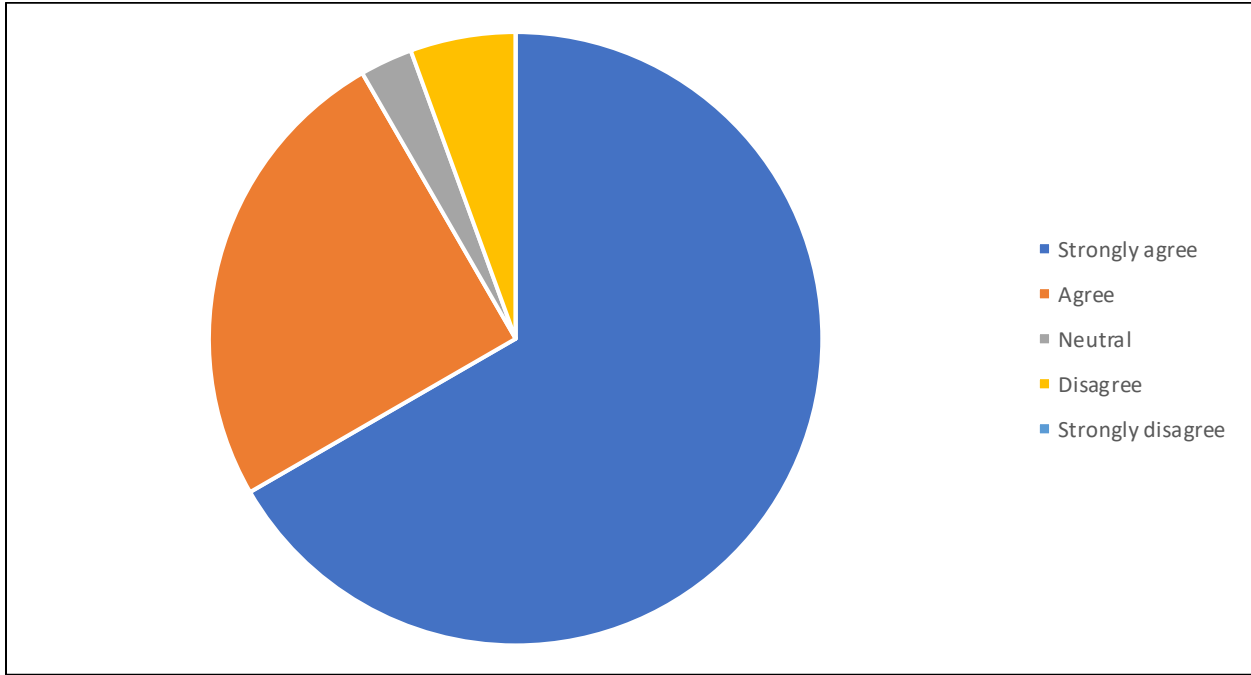
Response	Total # of responses	Total % of responses
Strongly agree	27	75%
Agree	6	17%
Neutral	3	8%
Disagree	0	0%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
E. coli and phosphorus are major threats for water pollution. Avoidance of unwanted runoff is important to protect waterways.	8
There are major contamination issues in Cumberland. We've had problems with our well and finally installed a UV filter.	3
This is already managed by provincial conservation authorities.	1
Should be done everywhere, not just along the Beckett's Creek watershed.	1
There are more pressing matters for the City to be prioritizing.	1
Help landowners by distributing flyers to inform of the harmful effects of E. coli bacteria and phosphorus in runoff water.	1
Studies show that agriculture is the leading contributor of total phosphorus runoff in the Great Lakes; there needs to be legislation to reduce agricultural runoff.	1

17. Stream restoration projects related to invasive species control, riparian plantings and fish habitat enhancement should be encouraged through existing programs at the City and Conservation Authority (e.g. CityStream Watch, Shoreline Naturalization Program).



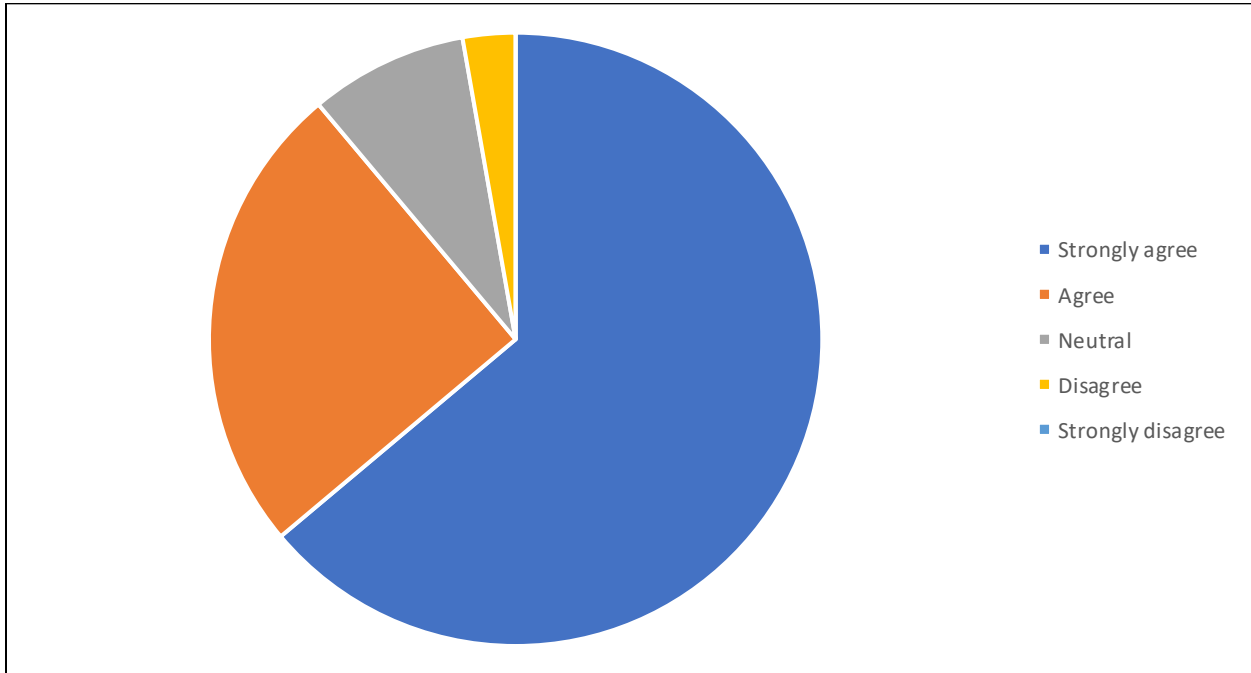
Response	Total # of responses	Total % of responses
Strongly agree	24	67%
Agree	9	25%
Neutral	1	3%
Disagree	2	5%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total# of responses
These programs should be sustained or enhanced if the need is there. With all the challenges our environment faces, it stands to reason that we need to help with this.	5
There is a growing appetite for citizen science projects; more could be done to generate public engagement and inform the public (e.g. build on success of Ottawa Riverkeeper).	5
Purple loosestrife, phragmites, blue-green algae, and wild parsnip were highlighted as issues in the subwatershed.	3
Invasive species are the result of international trade encouraged by government. The genie is out of the jar and it is too late.	1
Province relinquished consideration for this when they cancelled forest and fish hatcheries. The provincial and federal governments allowed Hydro dam construction.	1
Funding for these projects should not be a priority.	1
Support the principles of permaculture and hope these will be applied in this project.	1

18. The City and Conservation Authority should continue long-term water quality and aquatic habitat monitoring programs on Beckett’s Creek.



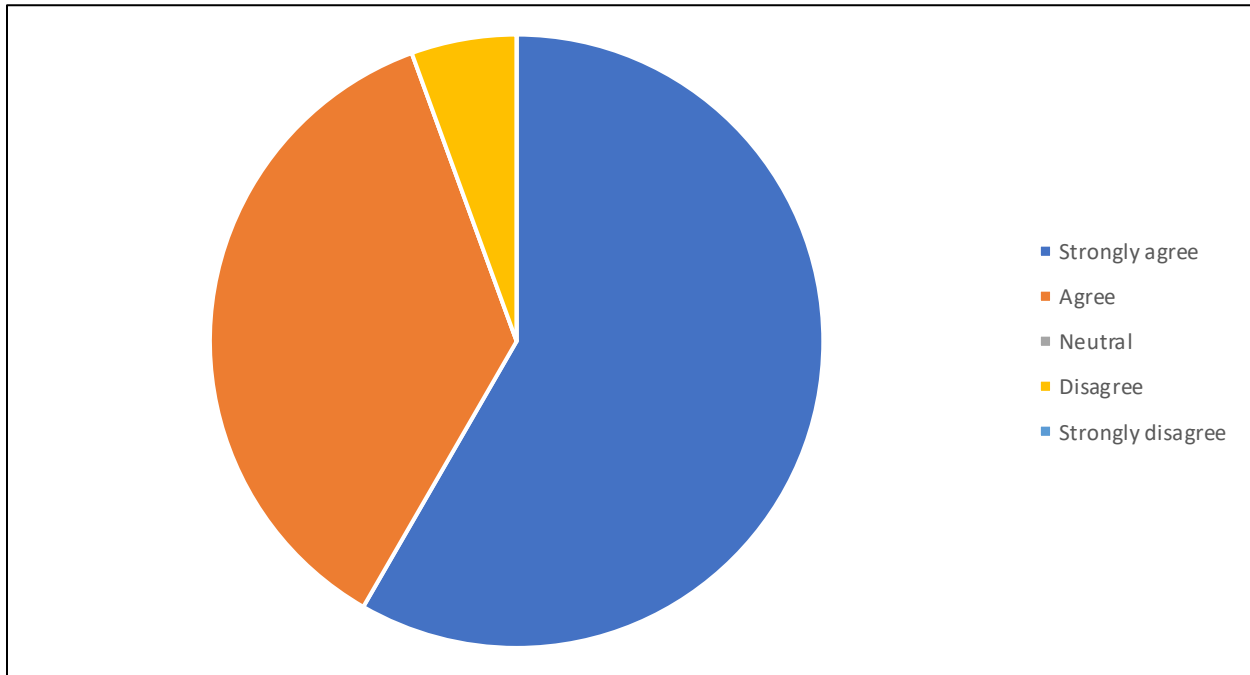
Response	Total # of responses	Total % of responses
Strongly agree	23	64%
Agree	9	25%
Neutral	3	8%
Disagree	1	3%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total# of responses
Monitoring is an essential part of understanding the impacts of development on this watershed. It's good to have data to show if there's any improvement or worsening of the situation and keep an eye on the water quality and aquatic habitat.	9
The City of Ottawa needs to monitor water quality as they are responsible for drinking water. The main waterways should be monitored for carcinogenic contaminants.	1
It's not a priority for funding.	1
This recommendation is somewhat void of a broader purpose or outcome; it would be more interesting and purposeful to word a recommendation to aim at the “why” and the greater goal of informing water policies and programs at various geo-political levels.	1
There has been a drastic and continuing increase in estate homes being built in the Study area. All have their own well and septic systems.	1
I would need to see the results to make up my mind more clearly.	1

19. The City should consider opportunities to improve existing stormwater management, including low impact development, within the villages of Cumberland and Sarsfield as part of maintenance or renewal projects involving roads and other public facilities.



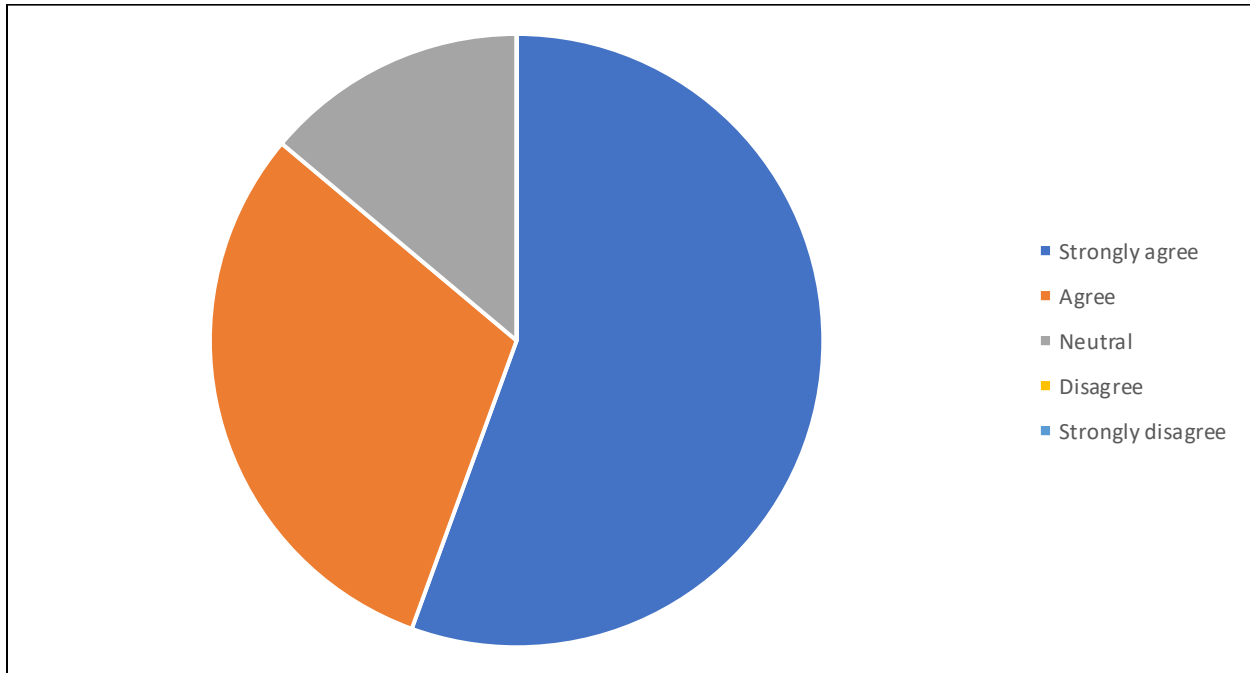
Response	Total # of responses	Total % of responses
Strongly agree	21	58%
Agree	13	36%
Neutral	0	0%
Disagree	2	6%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
It makes sense to think ahead and make improvements to stormwater infrastructure in tandem with unfolding renewal projects such as roads and public facilities. Comprehensive planning helps to greatly increase efficiency and reduce costs overall.	5
Managing stormwater is important to avoid damage to infrastructure and private property, is key to flood mitigation, and helps improve water quality.	4
The City of Ottawa is lagging behind.	2
Rural properties rely on sump pump and roadside ditching for drainage. When you pass out a building permit, the City accepts responsibility for low impact development.	1
Stormwater management is not a priority when there are more pressing issues.	1
Proper maintenance of blocked ditches and culverts allows stormwater to flow freely.	1

20. Private property owners should be encouraged to implement lot level measures for managing rainfall runoff (e.g. direct downspouts to lawns, install rain barrels, plant trees, establish rain gardens).



Response	Total # of responses	Total % of responses
Strongly agree	20	55%
Agree	11	31%
Neutral	5	14%
Disagree	0	0%
Strongly disagree	0	0%

*36 respondents

Comments are summarized in the table below with the number of responses that correspond to each theme or idea.

Please tell us why you provided that rating	Total # of responses
The City should have a program to offer financial support and incentives for these measures. For example, free or discounted rain barrels, free trees, and other incentives for landowners to reforest part of their property.	6
Homeowners need more awareness around this issue and guidance on how to implement simple solutions. For example, City staff could visit properties to assess and promote specific ideas for each property.	6
Private landowners should be encouraged to implement these measures, which are low cost, engaging and will help protect the environment.	4
I'm sure we all do anyways. We don't apply pesticides or herbicides to our lawn, so micromanaging is not necessary.	2
A homeowner should accept some responsibility to protect their home; grading or raising their own property at the expense of a neighbor should not be allowed.	1
As long as it's not regulated, and taxpayers don't have to fund these programs.	1

B) Individual public comments received by phone and by email

A total of 9 people submitted comments by phone or by email to the City's contact in the Natural Systems and Rural Affairs branch. This number includes additional people mentioned in a given email. The following is a summary of the comments that were received:

Comments
<p><u>Flooding:</u></p> <ul style="list-style-type: none">• Entire southern half of the watershed is piped through a culvert on French Hill Road near Birchgrove, and the main culvert is at capacity each spring. The stationary accumulation (bottleneck) of water on the north side of the road impacts the culvert's capacity, and with nowhere for the water to go, it backs up.• Concerned that this culvert won't have the capacity to accommodate the 1 in 100-year flood event. Action needs to be take to assess the root cause of the bottleneck and enlarge, or add additional culverts, to prepare for the 1 in 100-year flood.• Concerned about Birchgrove Road being called a flood zone; not realistic as likely related to the unusual flooding that resulted after tail end of a hurricane in 2007.
<p><u>Consultation Process:</u></p> <ul style="list-style-type: none">• What level of input is expected from the general public, as it appears from the website that the study has already been completed?• Unimpressed with leaflets sent in the mail that weren't addressed to individual landowners.• Request to delay the comment submission deadline until after the COVID-19 pandemic.
<p><u>Drinking Water:</u></p> <ul style="list-style-type: none">• Have noticed issues with how well water smells for the past two months.• Would like to understand more about highly vulnerable aquifers and what this means for homeowners.
<p><u>Watercourses:</u></p> <ul style="list-style-type: none">• Streams shown along ditches in the area of Birchgrove and Etienne are generally dry and shouldn't be marked as streams.• Confirm that Leo Guilbord Drain has been correctly identified.• Tile drainage has implications for local drainage, as pipes can really change the drainage and alter the direction of water flow in an area.• Estimates that 50% of fields in this area are now tile drained (up from 10-20% 20 years ago).• Should include a map showing the location of all tile drainage.
<p><u>Woodlands:</u></p> <ul style="list-style-type: none">• Tamarack forest to the north-west of Lafleur Road has been clear cut in recent years.
<p><u>Surficial Geology:</u></p> <ul style="list-style-type: none">• Portion of esker north-west of Lafleur Road has recently been dug up, and esker should be protected due to its importance as a groundwater feature.• Concerned that sand and gravel pit between forked portion of the stream (east of Regimbald) is being dug too deep and may result in excess ponding of water.

- Esker and other important groundwater features and geological features in the area (e.g. ancient canyon feature where French Hill Road crosses the esker) are discussed in report by Don Cummings.

Land Use:

- What is planned land use for the area; are any proposed infrastructure projects coming after the study?
- What are the additional requirements to obtain a building permit when a property includes valleylands, woodlands, and/or unevaluated wetlands?
- What are the requirements for development approval when a property is located within the conservation authority's regulation area?