

REPORT

REPORT TO: Chair and Members of the Community Affairs Committee
REPORT FROM: Don Kudo, Director of Engineering
DATE: May 23, 2017
REPORT NO.: P&I-2017-0076
RE: Vision Georgetown Subwatershed Study

RECOMMENDATION:

THAT Report No. P&I-2017-0076, dated May 23, 2017, regarding Vision Georgetown Subwatershed Study, be received;

AND FURTHER THAT Council endorses the Vision Georgetown Subwatershed Study, prepared by AECOM, dated May 2017 in principle, and authorizes the use of the study in the preparation of the draft Secondary Plan and related amendments, subject to the completion of the addendum related to the Southwest Floodlands, as detailed in Appendix V of the Subwatershed Study.

PURPOSE:

The purpose of this report is to advise Council on the completion of the Subwatershed Study for Council's consideration for endorsement. The study will inform the development of a draft Secondary Plan for Vision Georgetown.

BACKGROUND:

The Vision Georgetown Integrated Planning Project was initiated in April 2013, and was designed to integrate the Secondary Planning and Subwatershed Planning processes, in order to ensure that the Subwatershed Plan provided technical support to the Secondary Plan land use planning process. The Consulting team retained is led by Meridian Planning Consultants, with AECOM the main sub-consultant responsible for the subwatershed component of the Vision Georgetown project.

The Terms of Reference for the Vision Georgetown project specified that a Subwatershed Study be completed prior to or in conjunction with the approval of the Secondary Plan for Vision Georgetown, in order that the Subwatershed Plan could outline the preferred storm water and environmental management strategy for the Secondary Plan Area, develop a Natural Heritage System, and facilitate the land use and infrastructure planning process. The Subwatershed Study process is part of Phase 2 of the five phases for the Vision Georgetown project. The study was to include a Natural Heritage System Plan and serve as a guide to other environmental policies of the Secondary Plan. While the final Secondary Plan adopted by Council is the document that requires Halton Region's approval, and can be appealed to the Ontario Municipal Board, the Subwatershed Plan is a required input to the preparation of the Secondary Plan, and has been subject to ongoing input from Halton Region, Conservation Halton and Credit Valley Conservation Authority.

Council has received previous reports on the Vision Georgetown project from May, 2012 (Report No. PDS-2012-0038), June, 2013 (Report No. PDS-2013-0050), February, 2014 (Report No. PDS-2014-002), April, 2015 (Report No. PDS-2015-0011), and May, 2015 (Report No. PDS-2015-0034) that included updates on the Subwatershed Study and its relation to the overall project. As a result of the additional work undertaken in Phase 2, specifically detailed work with respect to the significant floodplain area in the south west portion of the study area, and other technical matters, completion of the Subwatershed Study has taken longer than was anticipated in the original work plan.

COMMENTS:

Subwatershed management is intended to augment the land use planning process, as well as, provide for sound management of environmental conditions and natural resources. Subwatershed plans are based on natural drainage boundaries instead of jurisdictional boundaries.

A broad perspective is needed to ensure that a subwatershed study meets environmental and societal needs. It is important that watershed management recognizes environmental, social and economic conditions, to ensure that all three elements are included and provide an integrated approach.

The purpose of the Vision Georgetown Subwatershed Study is:

“To develop a subwatershed plan that allows sustainable development while ensuring maximum benefits to the natural and human environments on a watershed basis. The subwatershed areas in this study include the headwaters of Sixteen Mile Creek and a headwater tributary of Silver Creek (part of the Silver Creek Watershed).”

The Vision Georgetown Subwatershed Study is in support of the Secondary Plan, and provides a management strategy to assist in setting policy direction for future development in the watershed. Within the study area, there are a number of catchment areas that are part of the larger individual subwatersheds that drain to the south, discharging to Sixteen Mile Creek or to Silver Creek to the East.

The Vision Georgetown Subwatershed Study is a comprehensive report. The sections and information provided in the study report are as follows:

- Section 1.0 Outline of purpose of study and approach
- Section 2.0 Discussion on subwatershed planning in general and legislative framework
- Section 3.0 Outline of the public participation process followed and summary of discussions
- Section 4.0 Characterization of Southwest Georgetown Subwatershed
- Section 5.0 Watershed Analysis
- Section 6.0 Management Strategy
- Section 7.0 Implementation Plan

The initial sections of the study report provide the background characterization information in support of the development of environmental constraint lands for the Vision Georgetown study area. This involved the collection of detailed environmental information for the study area including the area's soils, geology, surface and ground water, plants, and wildlife. This information was compiled into the Subwatershed Characterization Report, which was completed in May, 2014.

The characterization work resulted in the delineation of a preliminary Natural Heritage System (NHS). This NHS continued to be revised based upon the results of the data analysis and input from key agency stakeholders. The environmental constraint lands will be used in the Secondary Planning process in developing land use scenarios. The study provides information intended to identify constraint lands and it is the first step in a continuing process to ensure that land use plans are developed in a manner that meets the goals and objectives of Vision Georgetown.

The Subwatershed Study process should be understood as an iterative one in which the preliminary NHS forms a building block for a land use concept, which in turn is the basis for impact assessment, and refinement of the NHS, which then informs the preferred Land Use Alternative and final Secondary Plan. The study's management strategy presents the approach to manage resources that will protect, rehabilitate, and enhance the environment within the Vision Georgetown study area.

The following is a summary of the report findings with respect to the main areas of the study including Natural Heritage System, Buffers, Management Strategy and Southwest Floodlands.

Natural Heritage System (NHS)

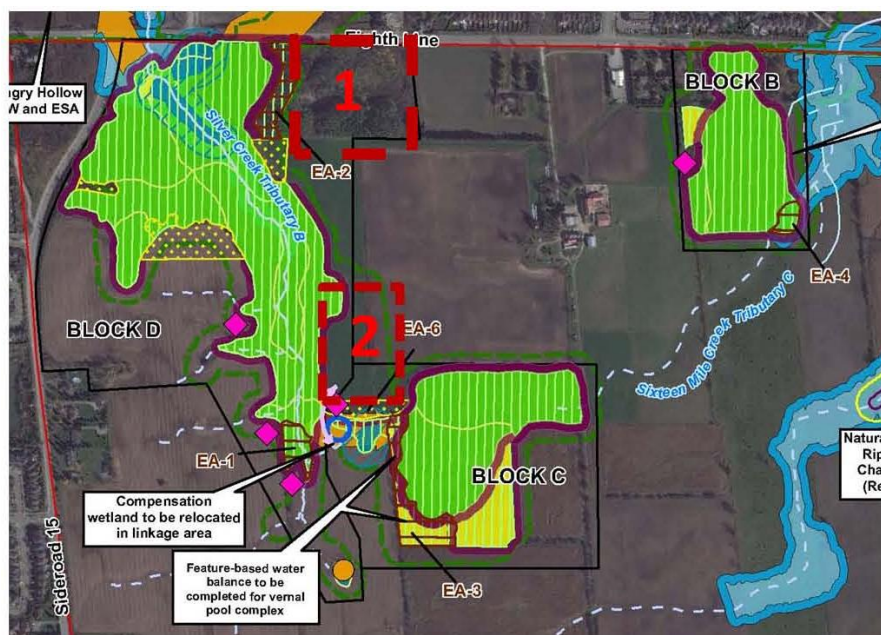
A review and assessment of the study area was undertaken to develop a proposed Natural Heritage System (NHS) for the Subwatershed Study. The steps followed in developing the NHS included the identification of natural heritage features within and adjacent to the study area, screening for core areas and opportunities for enhancing the NHS, and the identification of ecological linkages and buffers. This process includes the refinement of the Regional NHS to produce an area specific NHS, based on a detailed study, that is consistent with provincial and municipal environmental policies, including the Regional Official Plan.

The Halton Region's NHS mapping was overlaid on Figure 4.12.1 (Attachment 1) from the Subwatershed Study to provide for a comparison to the initial site specific NHS identified through the characterization stage of the Subwatershed Study. This NHS is further refined through the Management Strategy section and Implementation Plan section of the Subwatershed Study.

In comparing the proposed Natural Heritage System for Vision Georgetown compared to the Regional Natural Heritage System, there are two areas identified for Committee's reference which are identified on Figure 1 below.

The first is the Black Locust Woodlot (shown as #1 on Figure 1), and the second is the enhancement area in the vicinity of the Block C to D Linkage (shown as #2 on Figure 1).

Figure 1: Key Areas of Difference between the Natural Heritage System Proposed in the Vision Georgetown Subwatershed Study and the Regional Natural Heritage System



The Black Locust Woodland is made up primarily of invasive species (Black Locust). The Regional Official Plan did not designate the Black Locust Woodland as part of the Regional Natural Heritage System on their Regional Structure Map (Map 1). Although not designated on Map 1, implementation of the associated policies of the Regional Official Plan result in the Black Locust Woodlot being categorized as a significant woodland, because of its size and its proximity to a Regulated Watercourse.

The Subwatershed Study concludes that 2.47 ha of the Black Locust Woodland can be removed, while still meeting the Regional policy requirement that any removal will have no negative impact on the remaining Block D woodland. The Subwatershed Study clearly outlines how this approach complies with applicable Regional Official Plan policies and the appropriate course of action, as it relates to the entire Natural Heritage System in Vision Georgetown.

The Enhancement Area in the vicinity of Blocks C to D is the second significant area of difference. The Regional Natural Heritage System includes a large Enhancement Area, and the Subwatershed Study identifies Enhancement Areas in different locations that again consider a system based approach. The assessment provided in the Subwatershed Study has provided the detail necessary to identify the principles and framework applied in Vision Georgetown that meet the Region's objectives and is consistent with Regional guidelines and policies.

It is the opinion of Town staff and Consultant team that the assessment undertaken through the Subwatershed Study has provided the detail necessary to identify the principles and framework that meets the Halton Region's objectives and the proposed approach is, in our view, consistent with the guidelines of the Sustainable Halton report and policies of ROPA 38. The final proposed Natural Heritage System for Vision Georgetown is shown on Figure 7.3.1 (Attachment 2).

Buffers

The proposed development of the NHS buffers for the study area is based on a variable buffer approach. This approach takes into consideration the sensitivity of the natural heritage features and functions to be protected, buffer function, impact from the proposed adjacent land uses, as well as, enhancement and mitigation opportunities.

Within the study area a number of factors have been considered for determining appropriate buffer widths. These include: existing land uses, presence or absence of sensitive/significant wetland features, slope and contributing function of adjacent lands, soils, and the specific proposed new land uses. Figure 4.12.1 (Attachment 1) shows the proposed buffers for the study area, which range between 15 and 25 metres.

Through the Sustainable Halton background study (Sustainable Halton Report 3.02 – Natural Heritage System Definition and Implementation), Halton Region recommends that a minimum 30 metre buffer be applied to the NHS. The Subwatershed Study findings indicate that a prescribed 30 metre buffer for all features does not take into consideration feature areas with low sensitivity or adjacent land uses with low potential threats. However, the Halton Region's precautionary approach with greater buffer widths has been taken into account, where applicable.

In considering this, and as part of the variable buffer approach, the proposed buffer framework includes enhancing buffers to provide for comparable buffer function within a reduced buffer width. While enhancing buffers was not considered as part of the Sustainable Halton study, this approach provides for early establishment of vegetation and habitat opportunities for some species; an immediate physical barrier (fencing); planning and management of the vegetation community succession within the buffer; greater control and prevention of the establishment of invasive plant species; and, social and aesthetic value.

Building upon the work completed by the Town's environmental consultants with respect to buffers, in February 2017, Halton Region released a document entitled a "Framework for Regional Natural Heritage System Buffer Width Refinements for Area-Specific Planning". The purpose of this document was to guide the establishment of buffers for area-specific/secondary planning processes in urban expansion areas, such as Vision Georgetown. While this document was not completed in time to inform the Vision Georgetown work, it is the view of the Consultant and Town staff that the variable buffer approach proposed in the Subwatershed Study is consistent with Regional Official Plan policy, and is supportable from an environmental science perspective.

Management Strategy

The management strategy was developed to provide guidance for the future management of the Vision Georgetown (Southwest Georgetown Subwatershed) and specifically to meet the goals and objectives within the context of future land use and other activities within the watersheds. The guidance provided, reflects the goals and objectives set for the area and the characteristics of the watershed.

In developing the overall classification and requirements for management as shown on Figure 5.9.1 (Attachment 3), each stream reach was evaluated by the relevant disciplines including; aquatic conditions including water quality, terrestrial resources including linkages, stream morphology and flooding/conveyance including hydrogeology. The watercourses were ranked on an individual basis and then an overall rating was developed through an integration of the input by each discipline to determine if a stream corridor needs to remain in its exact location, be modified, or be removed.

To adhere to the overall approach that protects and enhances the natural environment in a sustainable fashion, the management strategy is comprehensive and addresses all of the key components and processes. These components include:

Natural Heritage System:

- Terrestrial and Wetland – The development of a management approach for terrestrial and wetland features that will protect and enhance overall biodiversity, including the flora and fauna associated with terrestrial and wetland features in an environmentally sustainable fashion. This includes the provision of a corridor system to provide for any necessary linkages for wildlife and plant movement;

- Streams – The provision of a corridor system for streams that have been identified as having environmental characteristics or watershed functions that require protection and/or enhancement to meet the watershed goals and objectives. A riparian corridor approach is to be applied, which will consider all of the stream functions including:
 - hydrologic;
 - hydrogeologic;
 - geomorphologic; and
 - environmental.

- Stormwater Management – The development of an approach that will protect and enhance environmental characteristics through managing related stormwater response and conveyance processes.

The study report outlines the implementation requirements for the recommended management strategy. The implementation requirements discuss the planning process, environmental reporting requirements, agency responsibilities, and the approval process with the Town of Halton Hills, Halton Region, Conservation Halton and Credit Valley Conservation Authority.

Southwest Floodlands

The southwest portion of the study area is low lying and flat and as a result has a large floodplain area. As illustrated on Figure 4.7.2 (Attachment 4), the floodplain in the southwest area is quite extensive. This is a result of the flat topography adjacent to the watercourses in the area. Given the extent of land constrained from urban development in this area, additional work has been carried out by the study team, in consultation with Conservation Halton, to modify the proposed floodplains. The completion of the additional work has taken a considerable amount of time, and since the results have the potential to significantly impact the amount of land available for development, the resolution of this matter is required prior to completing the Secondary Plan.

The Subwatershed Study recognizes the opportunity to refine the floodlines in this area; however, the revisions need to align with the management strategy provided in the study and comply with current Conservation Halton policies. The Subwatershed Study includes an appendix that provides performance criteria for a natural flow channel and floodplain to be followed in any approach to modifications to stream corridors and flood plains in the area. These performance criteria are intended as a guide to follow to ensure that any modifications comply with the recommended management strategy and Conservation Halton policies. A corresponding reduced floodplain area will likely be used in the Secondary Plan for the study area, but will be required to adhere to performance criteria outlined in the study appendix. If the floodplain (plus setbacks) forms the outside limit of the stream corridor, this will be reflected in the NHS boundary. A plan depicting the possible channel realignment and enhancements for the Southwest Floodlands is included in the study appendix and shown on Figure 1 (Attachment 5).

Next Steps

The management strategy outlined in Section 6.0 of the Vision Georgetown Subwatershed Study (Subwatershed Study) provides a recommended approach for the management of the Natural Heritage System and guidance for future land use changes in accordance with the Vision Georgetown Secondary Plan.

The Secondary Plan will include policies to implement the Subwatershed Study and in addition all development will need to be in accordance with the Subwatershed Study. Upon completion of the Secondary Plan and throughout development of the new community, monitoring will continue within the study area to ensure the findings and targets outlined in the Subwatershed Study are being achieved during and post development.

RELATIONSHIP TO STRATEGIC PLAN:

This report directly aligns with Priority #3 of Council's 2014-2018 Strategic Action Plan, which is **Planning for Growth**. Specifically this project advances the objective of 'preparing a Vision Georgetown Secondary Plan based on the approved Vision and Guiding Principles.'

The subject of this report also directly relates to **Strategic Direction B: Preserve, Protect and Enhance our Environment** and specifically the following Objectives:

- B.1 - To protect and conserve the quantity and quality of our ground and surface water resources, and ensure the integrity of our watersheds and aquatic ecosystems through integrated watershed planning and management.

- B.3 - To preserve, protect, enhance, and where possible, restore, a Natural Heritage System of significant natural heritage features and areas, and their related ecological functions.

FINANCIAL IMPACT:

There is no financial impact associated with this report.

COMMUNICATIONS IMPACT:

With the receipt and endorsement of the Vision Georgetown Subwatershed Study, the Town will advise stakeholders and agencies of the report completion and availability for review. Copies of the study will be made available at Town Hall and at the Halton Hills Library (Georgetown).

SUSTAINABILITY IMPLICATIONS:

The Town is committed to implementing our Community Sustainability Strategy, Imagine Halton Hills. Doing so will lead to a higher quality of life. The relationship between this report and the Strategy is summarized below:

Do the report's recommendations advance the Strategy's implementation?
Yes.

Which pillar(s) of sustainability does this report support?
Environmental Health and Economic Prosperity.

In Summary, the Sustainability Implications of this report are as follows:

Overall, the alignment of this report with the Community Sustainability Strategy is:
Very Good.

CONSULTATION:

Community participation is a key requirement in developing a subwatershed management strategy. Since the management strategy will guide the future environmental and aesthetic conditions in the subwatershed, it is important that the community has input in the decision making process and that the strategy reflects the goals of the overall community.

The Vision Georgetown Subwatershed Study included public participation for the purpose of identifying the key issues, developing a vision and objectives, discussing analysis findings for characterization and development of a management strategy. Consultation has been provided for through the study process, and has been included as part of the process, through a number of methods. The overriding process used to facilitate input by key stakeholders included the Subwatershed Steering Committee and Subwatershed Technical Advisory Committee (TAC) for the duration of the study.

The TAC was established to provide technical support and guide the development of a management strategy. Participants in the TAC were the lead technical team (AECOM), Town staff, outside agencies such as the Credit Valley and Halton Conservation Authorities and Halton Region, and environmental consultants retained by the Landowner's Group. The intent of the TAC meetings was to review the collection of field data, clarify questions from the agencies, and confirm the proposed Natural Heritage System.

Other activities and methods used to provide for community participation included:

- Public Meetings – Held at specific points throughout the Secondary Planning study;
- Steering Advisory Committee (SAC) – Formed by the Town to meet on a regular basis and provide input to the overall secondary planning process. Periodic discussions were held with this committee to provide updates on the Subwatershed Study, the process, and receive input;
- Subwatershed Steering Committee and Subwatershed TAC – Formed by the Town to meet throughout the Secondary Plan and Subwatershed Study process to provide input; and
- Council Meetings – Periodic presentations were made to Town Council to provide updates, and receive input, to the Subwatershed Study.

Copies of the study will be made available at Town Hall and at the Halton Hills Library (Georgetown).

CONCLUSION:

The purpose of this report is to advise Council on the completion of the Vision Georgetown Subwatershed Study, subject to the completion of the addendum related to the Southwest Floodlands, as detailed in Appendix V of the Subwatershed Study.

The subwatershed report will be used in preparation of the draft Secondary Plan and related amendments.

Respectfully submitted,

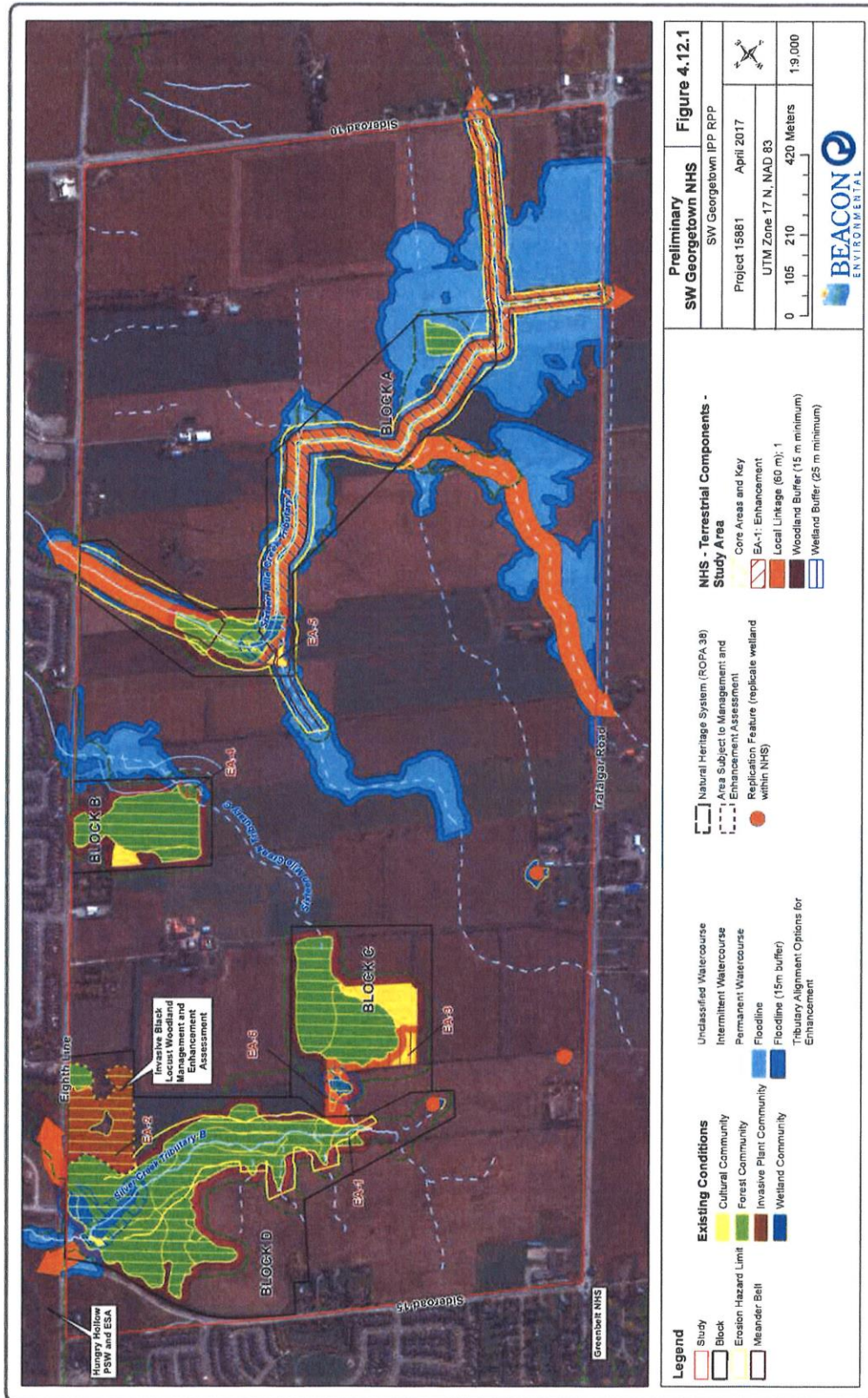
Don Kudo, P. Eng.
Director of Engineering

Reviewed and Approved by,

Chris Mills, P. Eng.
Commissioner of Transportation
& Public Works

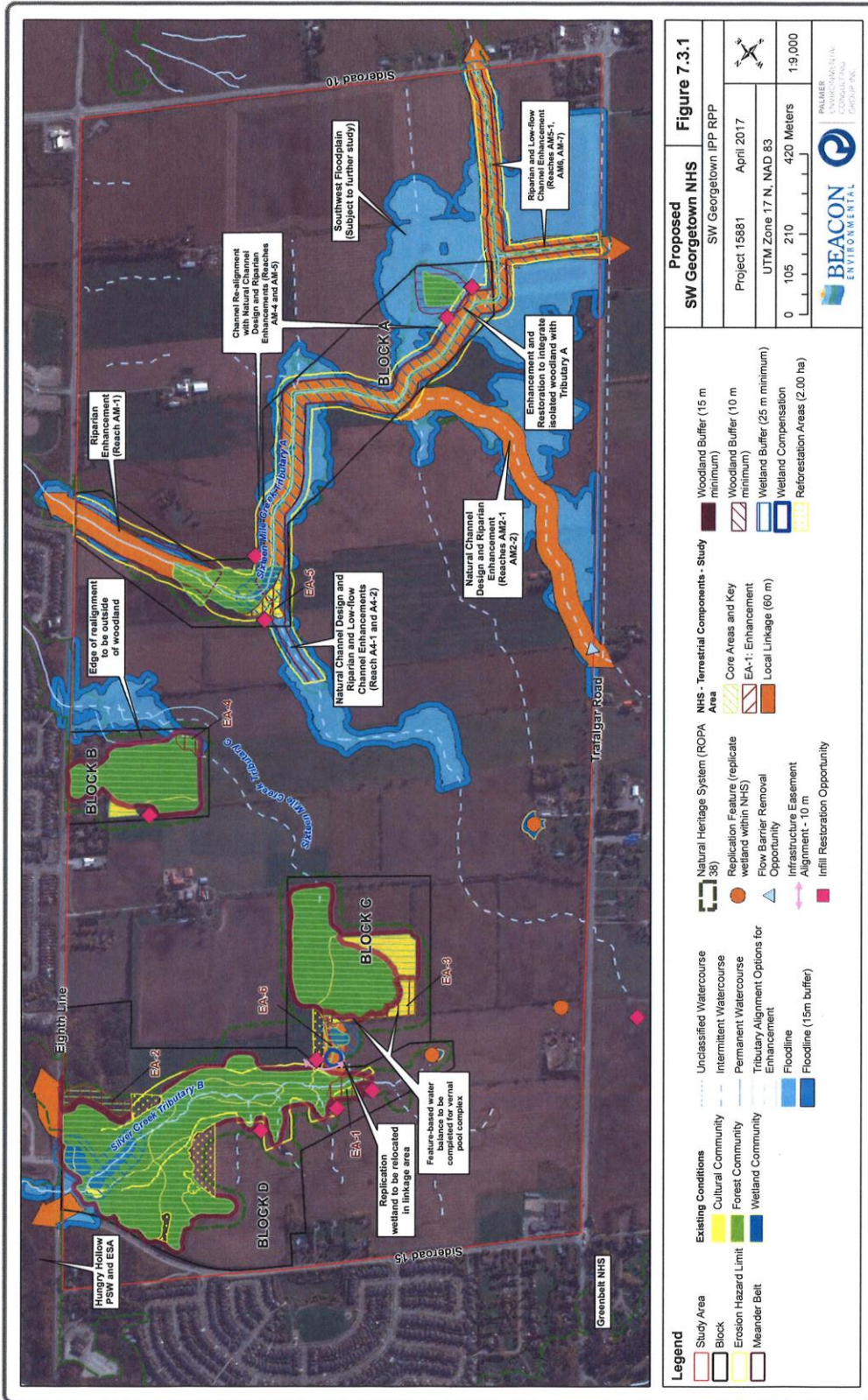
Brent Marshall
Chief Administrative Officer

Attachment 1 – Figure 4.12.1



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Attachment 2 – Figure 7.3.1



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Attachment 4 – Figure 4.7.2



Attachment 5 – Figure 1



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