



Legislative & Planning Services Department
Planning Services
Memorandum

Date: March 27, 2020

Re.: **Quality Assurance/Quality Control (QA/QC) process of the draft 2019 Regional Natural Heritage System (RNHS)**

Introduction:

The purpose of this memo is to provide an overview of the approach taken in the Quality Assurance/Quality Control (QA/QC) process for the draft 2019 Regional Natural Heritage System (RNHS), which is part of the Regional Official Plan Review (ROPR). The Quality Assurance/Quality Control (QA/QC) evaluation is an important step in completing in the Regional Natural Heritage System (RNHS) Mapping Technical Process outlined in *Attachment 1: Technical Process for Draft 2019 Natural Heritage System Mapping*.

Background:

The last time the RNHS mapping was updated was in 2009. Since then, the landscape has changed over the last 10 years and it is appropriate to recognize those changes in the RNHS mapping as part of this Regional Official Plan Review (ROPR). Halton Region has initiated its review of Halton Natural Heritage System ("Halton NHS") policies and mapping as part of the ROPR. The 2009 mapping (Maps 1 and 1G) that was generated and approved as part of the Sustainable Halton process contains some inconsistencies that need to be addressed. For example, there is an opportunity to refine the mapping to better reflect the policies that define the components of Halton's NHS. There are some minor inconsistencies in the extent of the Region's NHS between Maps 1 and 1G that need to be resolved.

The current Halton NHS mapping is comprised of both the Greenbelt Natural Heritage System (GBNHS) overlay and the RNHS land use designation and is mapped on Map 1 and 1G of the Regional Official Plan (ROP). The proposed Halton NHS mapping has now incorporated the Natural Heritage System for the Growth Plan (NHSGP) outside of settlement areas as a data source layer. Consulting services had been retained to assist Regional staff with the review of NHSGP for refinements in accordance with provincial criteria as well as the review of data sources and linkage and enhancements. The *Mapping Audit Technical Memo* and the *Natural Heritage Discussion Paper* contains information pertaining to the review of the draft 2019 RNHS, discussions on refinements and options to incorporate the NHSGP into the ROP and the best approach to clearly identify Halton NHS (i.e. overlay or designation).

Mapping Refinement Process:

The technical refinement process for the draft 2019 RNHS is outlined in *Attachment 1: Technical Process for Draft 2019 Natural Heritage System Mapping*. To summarize the process, proposed refinements have been completed on Maps 1 and 1G of the ROP to better reflect the policies that

define the NHS and to recognize some minor inconsistencies in the extent of the RNHS between Maps 1 and 1G. The draft 2019 RNHS also incorporates updates to base data information used to assemble the RNHS. Undertaking this update to the base layer ensures that the NHS mapping in the ROP reflects the most current data available and thus the maps are as accurate as possible. A review of the RNHS mapping has been undertaken to recognize planning decisions and updated information since ROPA 38 came into force and effect. These include OMB or LPAT decisions, approved planning applications, approved subwatershed studies, special Council Permits and staff refinements based on in-field observations and digital base data sources from the Province and local conservation authorities. For the above list, June 2018 was used as a benchmark to recognize these refinements (i.e. a *Planning Act* application or subwatershed study had to be approved by that date). As part of policy development phase of the ROPR (Phase 3), Regional staff will need to set a new benchmark to recognize all approvals and information from June 2018 and onwards.

Work has also been undertaken to review and refine Buffers, Enhancement Areas and Linkages based on the updated boundaries of Key Features and other feature components of the NHS (watercourses, wetlands, Escarpment Protection Areas and Escarpment Natural Areas). Enhancements and linkages were evaluated in accordance with *Natural Heritage System Definition and Implementation – Sustainable Halton Report 3.02* to ensure they were still valid in the context of the draft 2019 RNHS, to identify the need for any required refinement and to identify any new linkages or enhancements. Finally, as requested by the local municipalities, Regional staff have incorporated Local Official Plan Natural Heritage Mapping within settlement areas for the Town of Oakville, Town of Milton and Town of Halton Hills, which was then evaluated through the QA/QC process.

The QA/QC process is part of the work plan for preparing the draft 2019 RNHS mapping and pertains only to settlement areas and agricultural and rural lands outside of the GBNHS and NHSGP. This process was undertaken to ensure a consistent approach to the mapping in accordance with the Regional Official Plan, identify mapping errors, and apply specific mapping rules as discussed below (i.e. stormwater management ponds). It is also important to ensure an open and transparent process as requested by our local municipalities, conservation authorities, and the general public.

The QA/QC evaluation of the draft 2019 RNHS was undertaken as a desktop exercise using GIS (ArcMap) by the Region's Environmental Planner and Ecological Consultant. The exercise included the use of GIS data sources listed in *Attachment 2: Data Sources for NHS Components* and the 2019 aerial imagery. The current 2009 RNHS mapping was also used to assist the reviewer in identifying areas that should be evaluated. Typically, the RNHS was reviewed at a scale of 1:3000 to 1:5:000 in order to identify potential changes to the RNHS. Particular focus was given to areas/features of the draft 2019 RNHS that were recommended for removal or refinement by the local municipality. Maps were then created by Regional staff identifying specific areas/features where it appeared a review of the draft 2019 RNHS was needed. These areas and features were evaluated on whether to retain, refine, remove, or take no action based on the principles for QA/QC refinements listed below. Maps were marked up with instructions on how to proceed with identified features and these changes were then digitized in GIS datasets.

Section 116.1 of the ROP does allow for refinements to the boundaries RNHS in accordance with the methods listed above. Furthermore, if these features remain unmapped key features as part

of this exercise, for any development or site alteration, ROP policies do allow unmapped key features be identified through the completion of an EIA in accordance with Section 118(3). These key features would then be included in the RNHS.

PRINCIPLES FOR QA/QC REFINEMENTS

1. REGIONAL OFFICIAL PLAN DEFINITIONS

As outlined in Section 52(3) of the ROP,

The interpretation of other boundaries that are not so well-defined, will be the responsibility of the Region, in consultation with appropriate agencies and their agents, based on the general intent of this Plan and utilizing the most detailed and up-to-date information available and/or site inspection.

A policy-informed approach, which is informed by science, was used for the QA/QC in evaluating whether to retain, refine, remove, or take no action. Regional staff used a consistent application of natural heritage policies and definitions in the current ROP when evaluating the draft 2019 RNHS. If the feature met a natural heritage definition in the current ROP, it was added to the draft 2019 RNHS. If the feature did not meet a natural heritage definition, it was removed. However, within settlement areas, buffers are not applied to these newly identified key features if it was to recognize existing built-up areas that are directly adjacent to these key features (refer to Figure 3 as an example below).

An example of the practice is demonstrated below with the application of the definition of *Significant Woodlands* in Section 277 of the ROP.

SIGNIFICANT WOODLAND means a Woodland 0.5ha or larger determined through a Watershed Plan, a Sub-watershed Study or a site-specific Environmental Impact Assessment to meet one or more of the four following criteria:

- (1) the Woodland contains forest patches over 99 years old,*
- (2) the patch size of the Woodland is 2 ha or larger if it is located in the Urban Area, or 4 ha or larger if it is located outside the Urban Area but below the Escarpment Brow, or 10 ha or larger if it is located outside the Urban Area but above the Escarpment Brow,*
- (3) the Woodland has an interior core area of 4 ha or larger, measured 100m from the edge, or*
- (4) the Woodland is wholly or partially within 50 m of a major creek or certain headwater creek or within 150m of the Escarpment Brow.*

The expertise of the Environmental Planner was used in this exercise. Based on 2019 aerial imagery, the Environmental Planner would identify a wooded area that has the potential to meet the size threshold of 0.5ha or larger. Using the ArcGIS measurement tool, the wooded area was measured to confirm its size. The boundary of a woodland is considered the edge of the trees on the aerial imagery. If the woodland did meet the size threshold, the woodland would be assessed against the four criteria outlined in Section 277 and if the woodland met one of those criteria, it was included in the draft 2019 RNHS. The 2019 aerial imagery and data sources found in *Attachment 2: Data Sources for NHS Components* were used to complete this assessment. The

Environmental Planner also assessed the existing woodlands to determine if the woodlands still met the criteria of Section 277 or if the boundaries of a woodland had changed since 2009. If the boundaries of the woodland had changed (addition or removal), the woodland feature was updated in the draft 2019 RNHS.

2. REMOVAL OF STORM WATER MANAGEMENT PONDS

At the request of the local municipalities, Regional staff reviewed storm water management (SWM) ponds located within the RNHS. Criteria were developed to determine whether a SWM pond should be included or excluded in the draft 2019 RNHS. If a SWM pond was online where a regulated watercourse flowed through it, the entire pond was to be left in the RNHS. If it was offline facility where the pond was located away from any regulated stream, the entire SWM pond (which may be the entire parcel) was to be removed from the RNHS. The QA/QC evaluation identified multiple SWM ponds for removal from the draft 2019 RNHS. Figures 1 and 2 below identify examples of SWM ponds that do not meet the criteria above. Some examples are provided below.

Figure 1. Town of Oakville SWM pond/Parks



Figure 2. Town of Oakville SWM pond



3. “FIXING” ERRORS (MODIFICATIONS)

The QA/QC process was also intended to identify and then refine the geographic boundaries of existing features or remove features that did not meet the policy test of the ROP as discussed under point 2. This exercise should result in a more accurate representation of the draft RNHS. Examples of refinements to the RNHS include adding or modifying the geographic boundary of existing watercourses, significant woodlands, wetlands, which would recognize recently developed lands approved through a *Planning Act* application. In addition, parks and parkettes identified as part of the natural system in local official plans were removed from the draft 2019 RNHS but the key features identified on those properties are proposed to remain.

Figure 3. Modification of significant woodland boundary.



Figure 4. Modification of watercourse boundaries.



4. PARKWAY BELT OAKVILLE

There are circumstances where the local official plan has multiple designations, within the settlement area, that are used to identify and protect the natural heritage features and areas. This is different than the ROP, where the natural heritage system is contained within one designation. In this case, Halton Region used the local data source that identifies the Natural Area designation from the Town of Oakville's current Official Plan as a proxy for the RNHS in the urban area of Oakville. The Town of Oakville also has a Parkway Belt designation which reflects the mapping in the Parkway Belt plan. The ROP does identify the Parkway Belt as a constraint, not a designation and identifies it with a red dashed line on Map 1. However, within the Town of Oakville's Official Plan, there are natural heritage features and areas that were designated Parkway Belt that have not been included in the Natural Area designation. Therefore, when the Town of Oakville's Natural Area data source was incorporated into the draft 2019 RNHS, this resulted in few large omissions of significant environmental lands from the RNHS map. Due to these omissions, six large areas were added back into the RNHS, to rectify this and are shown below in Figures 5-9. These areas were identified by comparing the previous 2009 RNHS and the draft 2019 RNHS and then the most recent available data sources for these areas were incorporated into the draft 2019 RNHS.

Figure 5



Figure 6

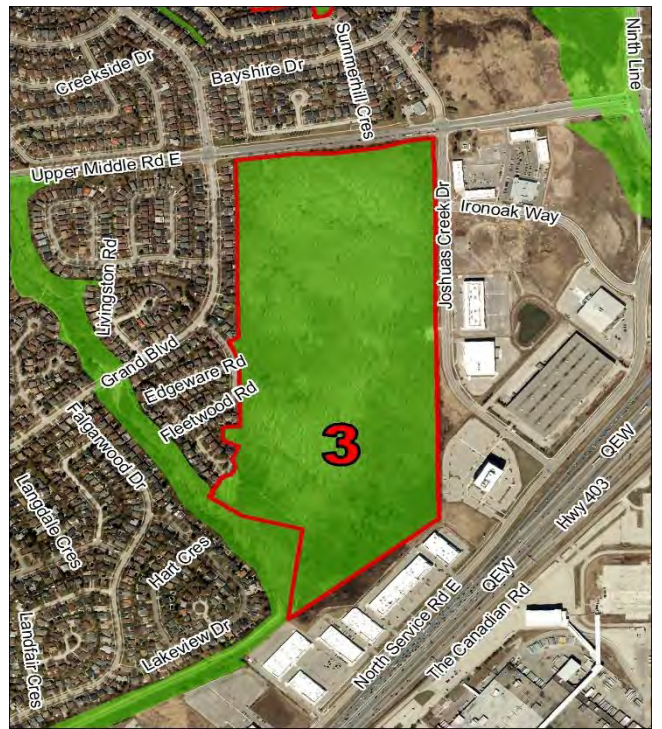


Figure 7



Figure 8



Figure 9



5. NORTH ALDERSHOT MAPPING OUTSIDE OF PROVINCIAL PLANS

The draft 2019 RNHS in North Aldershot, outside of the Provincial plans in North Aldershot were reviewed in accordance with principles 1 - 3 for QA/QC refinements outlined above.

QA/QC Changes to the Draft 2019 RNHS, by the Numbers:

To provide context to the number of refinements to the draft 2019 RNHS based on the QA/QC process, calculations were completed per municipality that show the amount of area removed or added to the RNHS as well as the number of refinements (additions, removals and modifications) to recognize any alterations to the feature (i.e. channelized watercourse). These calculations are provided in Table 1 below.

Table 1: QA/QC changes to the NHS

Municipality	Addition Area	Removal Area	Number of Additions	Number of Removals	Number of Modifications
Burlington	103.01 ha	22.08 ha	27	7	28
Oakville	219.73 ha	43.89 ha	12*	29	24
Milton	24.89 ha	29.32 ha	4	16	82
Halton Hills	9.94 ha	49.49 ha	3	12	10

*Includes 6 large missing PWBWP areas and these areas combined equals 191.46ha

Of note, Table 1 does not capture all the changes to Halton's NHS as the QA/QC exercise does not include the review of Provincial plan areas as outlined under the Mapping Refinement Process above. For information on the percentage of change Region-wide and to view figures which identify the additions and deletions in the NHS, please refer to *Section 4.4 Comparison Mapping* in the Natural Heritage Discussion Paper.

Consultation:

Through Phase 2 of the ROPR, Regional staff have and will continue to work closely with our local municipal and conservation authority partners on the RNHS mapping. Regional staff will also continue to work closely with our partners throughout Phase 3 of the ROPR process.

In August 2019, version 2 of the draft 2019 RNHS mapping was circulated for review. Following the mapping release, Regional staff hosted meetings with each municipality and relevant agencies to discuss the process that has been used to update the RNHS mapping (summarized in Attachment 1). Comments were received from the local municipalities and conservation authorities in October 2019 and these comments, as long as the comments were consistent with ROP policies, were incorporated into the draft 2019 RNHS mapping.

In January 2020, version 3 of the draft 2019 RNHS mapping was produced and was the base mapping used for undertaking the QA/QC process. Once completed, Regional staff met with the local municipalities to discuss any areas that were identified for large additions or removals to the RNHS. If these changes were to be made, the municipalities requested that the landowner(s) were to be notified prior to the change as part of the ROPR. Regional staff can confirm that those landowners where there are additions or modifications of the RNHS on their property, will be notified in Phase 3 of the ROPR.

Conclusion

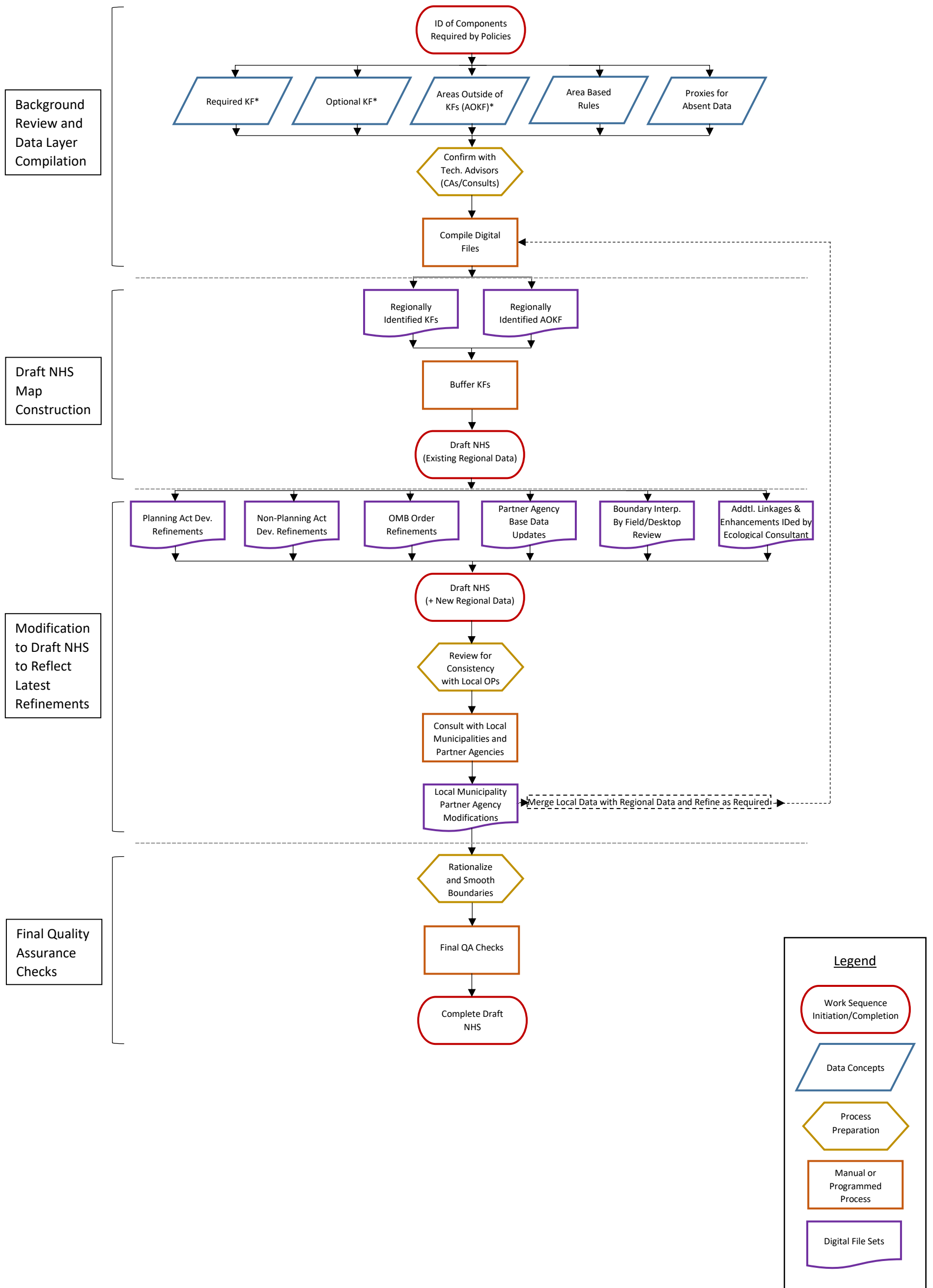
Version 3 of the draft 2019 RNHS mapping has been completed and has been included in the *Natural Heritage Discussion Paper* for consultation on Phase 2 of the ROPR. The mapping refinement process of the draft 2019 RNHS mapping is a "living" map and will continue to evolve through the ROPR process based on the best available information such as updated data sources and as environmental studies are completed. This memo will serve as the standard approach for Regional staff to complete QA/QC exercises on updated versions of the draft 2019 RNHS mapping throughout the ROPR process.

Encl: //

Attachment 1: Technical Process for Draft 2019 Natural Heritage System Mapping.

Attachment 2: Data Sources for NHS Components

Appendix 2: Technical Process for Draft 2019 Natural Heritage System Mapping



* Note: Key Hydrological Features, Key Hydrologic Areas, and other components of the Water Resource System were not included in this technical process, except where they overlap with Key Natural Heritage Features such as wetlands, watercourses, etc.

Data Sources for NHS Components

Table 1 – Proposed Refined NHS Components – Simplified

Component Reference #	Proposed Refined Halton NHS Components	Use Y/N	Key K	System S	Unmapped Y/N	Data Status	Mapping Rules/Notes/etc.
01	Key Features and Areas						
01-01	Key Natural Heritage Features						
01-01-01	Provincial Life ANSI	Y	K			COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
	Regional Life ANSI	Y	K			COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
	Candidate Life ANSI	Y		S		COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
01-01-02	Provincial Earth ANSI	Y		S		COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
	Regional Earth ANSI	Y		S		COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
	Candidate Earth ANSI	Y		S		COMPLETE - LIO Download (All ANSI's and Candidates are part of one file both Life and Earth) File: ANSI	- Subset of ANSI
01-01-03	Significant Wildlife Habitats (including habitat of special concern species)	N	K		Y		- Chose not to map CVC's as part of the NHS, it can be used as a screening tool only. Reasons given: Does not cover all of Halton and it is only the first step in locating SWHs, further on site review would need to be done. - CH is working on a similar layer as CVC's but it is not ready. - GRCA does not have an SWH layer.
01-01-04	Significant Coastal Wetlands and Significant Wetlands ¹	Y	K			COMPLETE – All MNR Wetlands have been added. Coastal Wetlands are identified File: Wetland (All) Provincial	- Chose to use all CA's wetlands and include Provincial wetlands where evaluated. Merge together into one wetland file. - CH/CVC/GRCA said their wetland layer is generally more accurate than MNR. - Contact CVC/CH/GRCA for most up to date wetland file when creating final version, both are working on their files now.
	MNR Provincial Significant Wetlands	Y	K			COMPLETE – All MNR Wetlands have been added. Coastal Wetlands are identified File: Wetland (All) Provincial	- Subset of above - Separate out Provincial Significant wetlands in case of future need to identify.
01-01-05	Coastal Wetlands	Y	K			COMPLETE – All MNR Wetlands have been added. Coastal Wetlands are identified File: Wetland (All) Provincial	- All agreed, use MNR Coastal Wetlands
01-01-06	Candidate Significant Woodlands	Y	K			COMPLETE – Age Criteria did not change anything (based on the age data from previous study). Previous Sig Woods modified based on Special Council Permits and Staff identified changes. Also Geometries updated based on new LIO data. File: Sig_Wood_March2019	- GIS has incorporated new woodlands layer changes from MNR and Special Council Permits, including all criteria used previously to distinguish significant woods.
01-01-07	Significant Valleylands	Y	K		Y		- Use Greenbelt Plan 2017 Urban River Valley designation boundaries. - CA's did not agree that any proxy, we had to use was valid. (crest of slope / Stable Top of Bank). - Agreed to make it an unmapped feature.
	Urban River Valleys	Y	K			COMPLETE MNR – Urban River Valley (Greenbelt) Files: Greenbelt_UrbanRiverValley	- Subset of above. - Use Greenbelt Plan 2017 Urban River Valley designation boundaries.
01-01-08	Habitat of Threatened or Endangered Species	Y	K		Y		- Concern due to data sensitivity for this being mapped.

¹ Wetlands significance varies geographically across the Region. Current ROP definitions tie the significance threshold for wetlands to the specific threshold identified in each Provincial Plan area (eg. Section 276.5 of the 2009 ROP). Where the term significant wetland is used here, it is assumed that this includes (a) for lands within the Niagara Escarpment Plan Area, provincially significant wetlands and wetlands as defined in the Niagara Escarpment Plan; (b) within the Growth Plan Area and Greenbelt Plan Area, but outside the area describe in (a), provincially significant wetlands and wetlands as defined in the Growth Plan, 2017, and Greenbelt Plan, 2017; (c) for lands within the Halton NHS outside the areas describe in (a) and (c), provincially significant wetlands and wetlands that make an important ecological contribution to the Halton Natural Heritage System; and (d), for all lands outside the areas described in (a), (b), and (c), provincially significant wetlands.

Component Reference #	Proposed Refined Halton NHS Components	Use Y/N	Key K	System S	Unmapped Y/N	Data Status	Mapping Rules/Notes/etc.
01-01-09	Fish Habitat	Y	K			Complete CH_Streams_ClippedToRegulationLimit GRCA_Streams_ClippedToRegulationLimit CVC_Streams_ClippedToRegulationLimit CVC_Ponds_ClippedToRegulationLimit GRCA_Ponds_ClippedToRegulationLimit Ponds_Allowance_CH	<ul style="list-style-type: none"> - CA's agree to a 30m buffer of all water linear and polygon features that fall into the Regulation Limit boundaries. <ul style="list-style-type: none"> o For CH, use all component allowances, except wetland and ponds. As directed by Richard Clark. - Use CA's features only.
01-01-10	Sand barrens, savannahs, and tallgrass prairies,	Y	K			Complete ELC codes used (from North South) Field used: "Series Code" or "ELC Code" Codes used: "SBO", "TPS", "TPW", "TPO"	<ul style="list-style-type: none"> - Use ELC data, North South (Sarah) will provide a list of codes that can be used. - CA's agree to this. - Use CH and CVC ELC, compare both in the CVC areas CH's ELC includes the CVC area, use most recent if identified. - CH ELC data covers all of Halton Region - CVC ELC not same as CH ELC
01-01-11	Alvars,	N				Not Available	<ul style="list-style-type: none"> - According to MNR, SOLRIS data, no Alvars exist in Halton.
01-02	Key Hydrologic Features						
01-02-01	Significant Wetlands ²	Y	K			SAME as "01-01-04"	<ul style="list-style-type: none"> - SAME as "01-01-04"
01-02-02	Seepages and springs	Y	K		Y		<ul style="list-style-type: none"> - CA's do not have this data.
01-02-03	Permanent and Intermittent Streams	Y	K			Complete CH_Streams_ClippedToRegulationLimit GRCA_Streams_ClippedToRegulationLimit CVC_Streams_ClippedToRegulationLimit	<ul style="list-style-type: none"> - After discussion with CA's, it was decided to use the water courses from the CA's and not the MNR data. - Use only water courses that fall into the Regulation Limit boundaries. (Clip to regulation limits) - In CH Regulation limit (not an issue for CVC or Grand), do not use the wetland or Pond Regulation buffer to clip streams, this creates numerous little unregulated stream lines. As directed by Richard Clark, those were removed.
01-02-04	Lakes (and their littoral zones)	Y	K			Complete CVC_Ponds_ClippedToRegulationLimit GRCA_Ponds_ClippedToRegulationLimit Ponds_Allowance_CH	<ul style="list-style-type: none"> - After discussion with CA's, it was decided to use the water polygons from the CA's and not the MNR data. - Use only water polygons that fall into the Regulation Limit boundaries. (Clip to regulation limits) - Littoral zones were discussed and determined that they could not be mapped.
01-03	Other Natural Heritage Features and Areas important for their environmental and social values as a legacy of the natural landscape of Halton						
01-03-01	Environmentally Significant Areas	Y		S		Complete File: sde.GISOWNER.OP_2006_ESA ESA_ExpansionAreas	<ul style="list-style-type: none"> - Region and CA identified ESA and ESA Expansion Area mapping should be included in the NHS as they may be considered other Natural Heritage Features and Areas important for their environmental and social values as a legacy of the natural landscape of Halton. - Keep both the expansion areas and the original ESA areas.
01-03-02	Great Lake Dunes	Y	K			Complete – Use only ESA #46 File: sde.GISOWNER.OP_2006_ESA	<ul style="list-style-type: none"> - Region identified Burlington Beach ESA (ESA #46) may contain Great Lake Dunes habitat, which is a Rare Vegetation Community.
01-03-03	Carolinian Canada Sites	N					<ul style="list-style-type: none"> - Removed from list as already included in potentially significant woodlands.
01-03-04	Certain headwater drainage features	Y	K		Y		<ul style="list-style-type: none"> - Unmapped feature as CA's cannot define using data. - Proxies discussed, were not sufficient.
01-03-05	Rehabilitated Mineral Aggregate Resource Extraction Sites	Y		S		None Identified	<ul style="list-style-type: none"> - Consider including any operations with newly surrendered licenses in the Natural Heritage System where appropriate, in consideration of final rehabilitation target. - Review information on http://www.toarc.com/ssrt/index.html - Talk to Anna DeMarchi-Meyers in regards to surrendered / revoked site plans.
02	Areas Outside of Key Features						
02-01	Natural Hazards						
02-01-01	Dynamic beach hazard areas	Y		S	Y		<ul style="list-style-type: none"> - CA's want text to reflect it in OP, but do not want it mapped.
02-01-02	Flooding Hazards	Y		S		Complete CH - Shoreline_100yr_Flood_Elev_Hazard_Component_CH Floodplain_Hazard_Component_CH	<ul style="list-style-type: none"> - Use CA data. They want this included.

² Wetlands significance varies geographically across the Region. Current ROP definitions tie the significance threshold for wetlands to the specific threshold identified in each Provincial Plan area (eg. Section 276.5 of the 2009 ROP). Where the term significant wetland is used here, it is assumed that this includes (a) for lands within the Niagara Escarpment Plan Area, provincially significant wetlands and wetlands as defined in the Niagara Escarpment Plan; (b) within the Growth Plan Area and Greenbelt Plan Area, but outside the area describe in (a), provincially significant wetlands and wetlands as defined in the Growth Plan, 2017, and Greenbelt Plan, 2017; (c) for lands within the Halton NHS outside the areas describe in (a) and (c), provincially significant wetlands and wetlands that make an important ecological contribution to the Halton Natural Heritage System; and (d), for all lands outside the areas described in (a), (b), and (c), provincially significant wetlands.

Component Reference #	Proposed Refined Halton NHS Components	Use Y/N	Key K	System S	Unmapped Y/N	Data Status	Mapping Rules/Notes/etc.
						GRCA - GRCA_FloodPlain_Clippped CVC - cvc_regulatory_floodlines_polygons_20180910_Halton	
02-01-03	Erosion Hazards	Y		S	Y		- CA's want text to reflect it in OP, but do not want it mapped.
02-01-04	Hazardous forest types for wild land fires	N					- Include if suitable mapping exists. (Reviewed MNR layer, deemed not useable, therefore do not use.) - CA's have no opinion on this feature
02-02	Buffer and/or Vegetation Protection Zones						
02-02-01	Buffer (30m)	Y		S		Complete – Needs to be broken down	- Apply 30m buffer to all above Key Features outside Greenbelt Plan NHS and Growth Plan NHS except for Earth Science ANSIs, Key Hydrologic Features outside Settlement Areas and NEP (as a MVPZ applies to these areas).
02-02-02	Vegetation Protection Zone	Y		S		Complete – Needs to be broken down	- Apply 30m VPZ to all above Key Natural Heritage Features within Greenbelt Plan NHS and Growth Plan NHS except for Earth Science ANSIs, Fish Habitat and Significant Woodlands (as a MVPZ applies to these areas).
02-02-03	Minimum Vegetation Protection Zone	Y		S		Complete – Needs to be broken down	- Apply 30m MVPZ to all Fish Habitat and Significant Woodlands within Greenbelt NHS and Growth Plan NHS and all Key Hydrologic Features outside Settlement Areas and the NEP.
02-03	Linkages	Y		S		Complete – based on review by North South Environmental	- previously identified linkages may require modification to address modifications to Key Features and buffers/VPZ. - Modification should occur in a manner similar to the process described in Sustainable Halton Report 3.02
02-04	Key Feature Enhancement Areas	Y		S		Complete – based on review by North South Environmental "NHS Enhancements from Previous NHS" Carried over and modified.	- previously identified enhancements may require modification to address modifications to Key Features and buffers/VPZ. - Modification should occur in a manner similar to the process described in Sustainable Halton Report 3.02
02-05	Other Suitable NHS Enhancement Areas						
02-05-01	CA Regulated watercourses that provide linkage to a wetland and/or significant woodland	Y		S*		Complete – based on review by North South Environmental	- Used previously. - Update to incorporate Latest CA Regulated watercourses providing described linkages. - *This is only to be used in areas as needed and locations defined by ecological consultants.
02-05-02	Lands designated and/or zoned for environmental protection within Settlement Areas in Local OP/Zoning By-laws as of 2009	Y	K			Complete Milton NHS (opa31) was included in Urban Area only. (Urban area defined elsewhere).	- Used previously – consult Fig. 5 of Sustainable Halton Phase 3.02 report for extent of Local OP mapping used. This figure clearly shows we did not use OP designations in Oakville or Burlington (except for North Oakville). - Update extent to reflect updated Built Boundary and any approved Secondary Plan NHS mapping in previously identified Designated Greenfield Areas. Use lands designated for environmental protection from this updated extent. - Be aware that due to different timelines on OP conformity between locals and Halton Region, we may be ignoring correct alignments of NHS in some settlement areas. Example Milton's - OP has not been approved by Halton Region, but its realignment of NHS reflects the actual boundaries of features much better than the previous OP. - Note, the secondary plans have been modified when built and may not reflect actual NHS anymore. These areas will require manual visual inspections, to remove or add pieces that do not reflect the reality. - These areas will be designated as Key as we do not have the breakdown of the other OP data.
02-05-03	Growth Plan 2019 Natural Heritage System	Y		S		Complete Provincial Growth Plan Natural Heritage System	- Use March 2018 NHS for the Growth Plan boundary. - Note, this may need to be revised based on our suggested changes to the province.
02-05-04	Greenbelt Plan 2017 Natural Heritage System	Y		S		Complete sde.GISOWNER.ON_GREENBELT_NHS	- Use Greenbelt Plan 2017 NHS boundary.
02-05-05	Credit River Watershed Natural Heritage System	N					- Consulted with CA's and they do not want it used as part of the NHS. They say this could use further discussion. - Since it only exist in CVC area and not in the others is deemed not complete. - Merrick is hesitant to use as CVC used different criteria.
02-05-06	Lands designated open space in the Parkway Belt West Plan	Y		S		Complete	- Update to use latest PBWP Open Space designated area mapping - Use current in affect version, not Draft version.
02-05-07	Lands designated Escarpment Natural Area in the NEP 2017	Y		S		Complete sde.GISOWNER.NEC_PLANDESIGNATION selection - Escarpment Natural	- Update to use latest NEP 2017 ENA mapping.
02-05-08	Lands designated Escarpment Protection Area in the NEP 2017	Y		S		Complete sde.GISOWNER.NEC_PLANDESIGNATION selection - Escarpment Protection	- Update to use latest NEP 2017 EPA mapping.
02-05-09	Bronte Creek Provincial Park	N					- Not a feature due to it not having any ecological reason for it. (Mirek) - Checked to see if the park would add any lands to the NHS that were not already part other features.
02-05-10	Conservation Reserves and similar						
02-05-10-01	Regional Forest Tracts	N					- Mostly all contained within areas identified as significant woodlands. Therefore no need to include.
02-05-10-02	Regional Waterfront Parks	N					- Regional Waterfront parks to be a land use designation separate from NHS.

July 30, 2019

Final list of components after reviewing with North South, Halton's Policy and Environmental Planning and Conservation Authorities

Component Reference #	Proposed Refined Halton NHS Components	Use Y/N	Key K	System S	Unmapped Y/N	Data Status	Mapping Rules/Notes/etc.
02-05-10-03	Cootes to Escarpment EcoPark System Partner Lands – only where nominated for inclusion by Partners	Y		S		Partner_Lands_2017 to be used only	- Need to still consult with Cootes to Escarpment EcoPark System partners and request each to nominate lands for inclusion within NHS.
02-05-10-04	CA-owned Conservation Areas – only where nominated for inclusion by CA	N		S		Complete *Needs review with CA's to determine inclusion. No Inclusions provided.	- Consulted with CAs and requested each to nominate lands or portions of lands in Conservation Areas for inclusion within CAs - CH – No lands at this time. - Most areas will already be contained within NHS based on other components.
02-05-10-05	Local Municipal-owned Parks and Open Space - where nominated for inclusion by local municipality (eg. Glenorchy Park)	?		S		*Needs review with Locals to determine inclusion.	- Consult Local Municipalities and request each to nominate lands or portions of lands in Parks and Open Space for inclusion in NHS. - Most areas will already be contained within NHS based on other components. - Glenorchy Park was the only Park included previously.
02-05-10-06	Greenland Securement Program Partner Lands	Y		S		Richard Clark to provide.	- Include all parcels purchased by Greenlands Securement Program Partners using funding provided through the Halton Green Fund.
02-05-11	Restored lands – only where nominated for inclusion by landowner	Y		S		Complete *Needs review with CA's to determine inclusion. No Inclusions provided.	- Consulted with CAs and requested each to nominate lands or portions of lands. - CH – No lands at this time.
02-05-12	Working landscapes that enable ecological functions to continue - where nominated for inclusion by local municipality and landowner	Y			Y	*Needs review with Locals to determine inclusion.	- Consult Local Municipalities and request each to identify any lands considered to be Working Landscape areas for inclusion in NHS, providing landowner consent granted. - Most areas will already be contained within NHS based on other components. - Further discussion needed. There may not be any standalone working landscapes to consider. How are these defined.
02-05-13	Lake Iroquois Shoreline	Y		S	Y	No data exists.	- Per Section 3.2.6.3 of the Greenbelt Plan 2017, portions of the Lake Iroquois shoreline traverse existing approved urban areas. - Within these areas, municipalities are encouraged to consider planning, design, and construction practices that maintain or, where possible, enhance the size, diversity, connectivity and functions of key natural heritage features, key hydrologic features, and key hydrologic area of those portions of the Lake Iroquois shoreline within their approved urban boundaries.