PART B SITE SUMMARIES AND REFERENCES CITED

1. SITES SELECTED FOR THIS REPORT

One hundred site summaries are presented in this first NAI report volume (Fig. 10, Figs. 11a-d). Currently, NAI data exists for well over 100 sites, although this volume was limited for practical reasons. Generally, the natural areas described in these summaries were visited in the 2008 and/or 2009 NAI field seasons. However, where additional data collection occurred at these sites in 2010, it has been included here as well so that a more complete characterization of the natural area can be presented.

The 100 natural area sites selected for presentation in this report volume were mainly chosen to be representative for various physiographic, conservation and municipal areas. All of the sites had to have sufficient progress toward being data complete to be reportable (although not all are data complete). The data for a few of the summarized sites comes primarily from some of the major data sets that were compiled for the NAI (rather than from NAI field work).

The breakdown of the 100 Volume 1 reporting sites by physiographic region is as follows:

Iroquois Plain	7 sites
Peel Plain	15 sites
South Slope	25 sites
Niagara Escarpment	12 sites
Oak Ridges Moraine	17 sites
Guelph Drumlin Field	10 sites
Horseshoe Moraines	10 sites
Hillsburgh Sandhills	8 sites

* Note that a natural area may fall within more than one physiographic region.

The breakdown of the 100 Volume 1 reporting sites by Conservation Authority is as follows:

CVC	50 sites	1 site in each of subwatersheds 1, 2, 3, 5, 6	
		2 sites in each of subwatersheds 8, 14, 21	
		3 sites in subwatershed 20	
		4 sites in each of subwatersheds 10, 12, 13, 19	
		5 sites in each of subwatersheds 9, 11, 18	
		6 sites in each of subwatersheds 16, 17	
		10 sites in subwatershed 15	
TRCA	50 sites	Etobicoke Creek watershed	20 sites
		Humber River watershed	29 sites
		Mimico Creek watershed	1 site

* Note that a natural area may fall within more than one watershed or subwatershed.

The breakdown of the 100 Volume 1 reporting sites by Regional municipality is as follows:

Region of Peel	80 sites
Halton Region	9 sites
Wellington County	8 sites
Dufferin County	3 sites

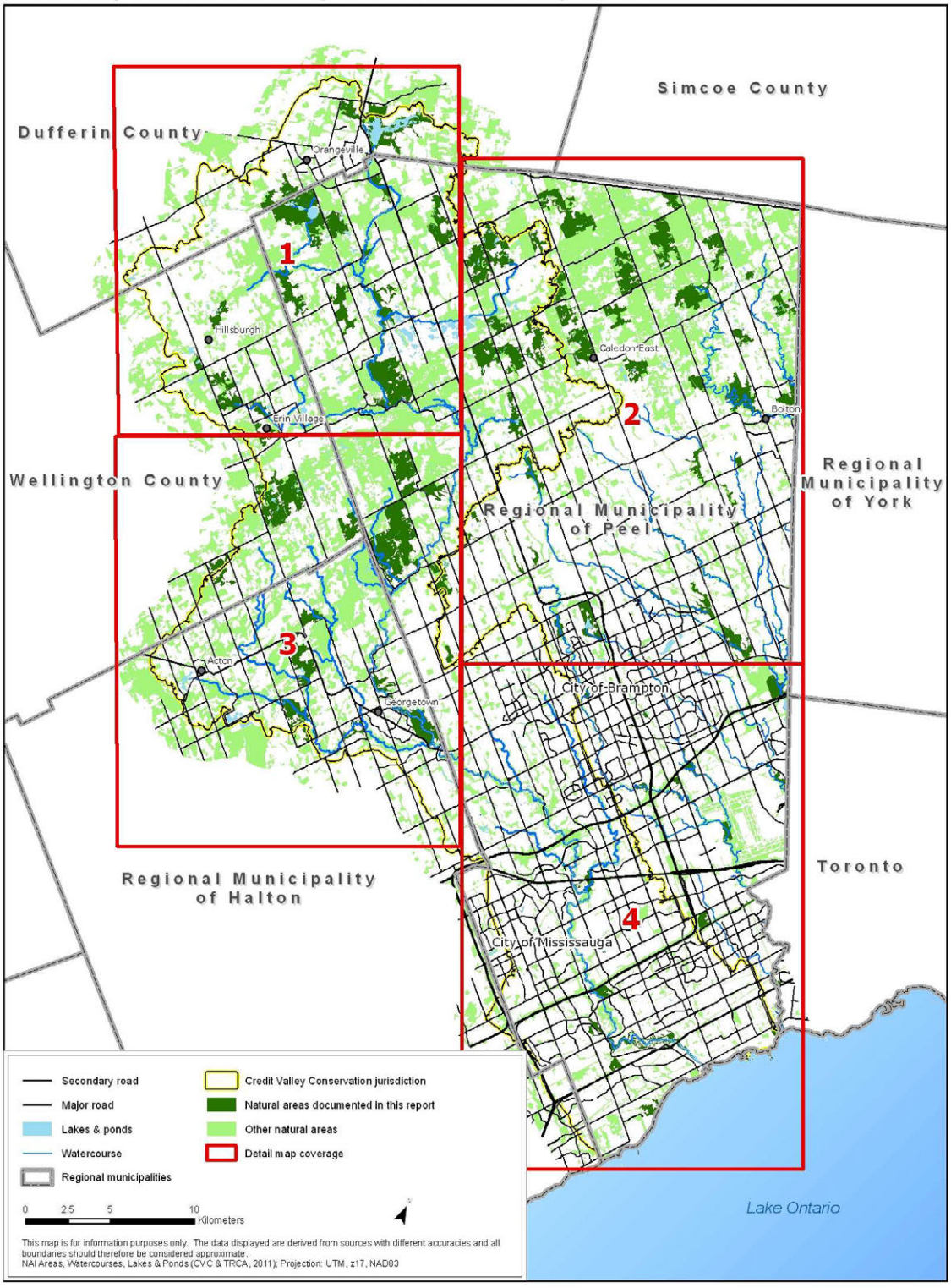
The breakdown of the 100 Volume 1 reporting sites by Municipality is as follows:

City of Brampton	15 sites
Town of Caledon	51 sites
City of Mississauga	14 sites
Town of Halton Hills	9 sites
Township of East Garafraxa	2 sites
Town of Mono	2 sites
Town of Orangeville	1 site
Town of Erin	8 sites

* Note that a natural area may fall into more than one municipality.

Figure 10

Overview Map of Natural Areas in Region of Peel and Credit Valley Conservation Jurisdiction



2. SITE LOCATOR MAPS

Figure 11a

Natural Areas in Map 1 Extent (North Credit River)

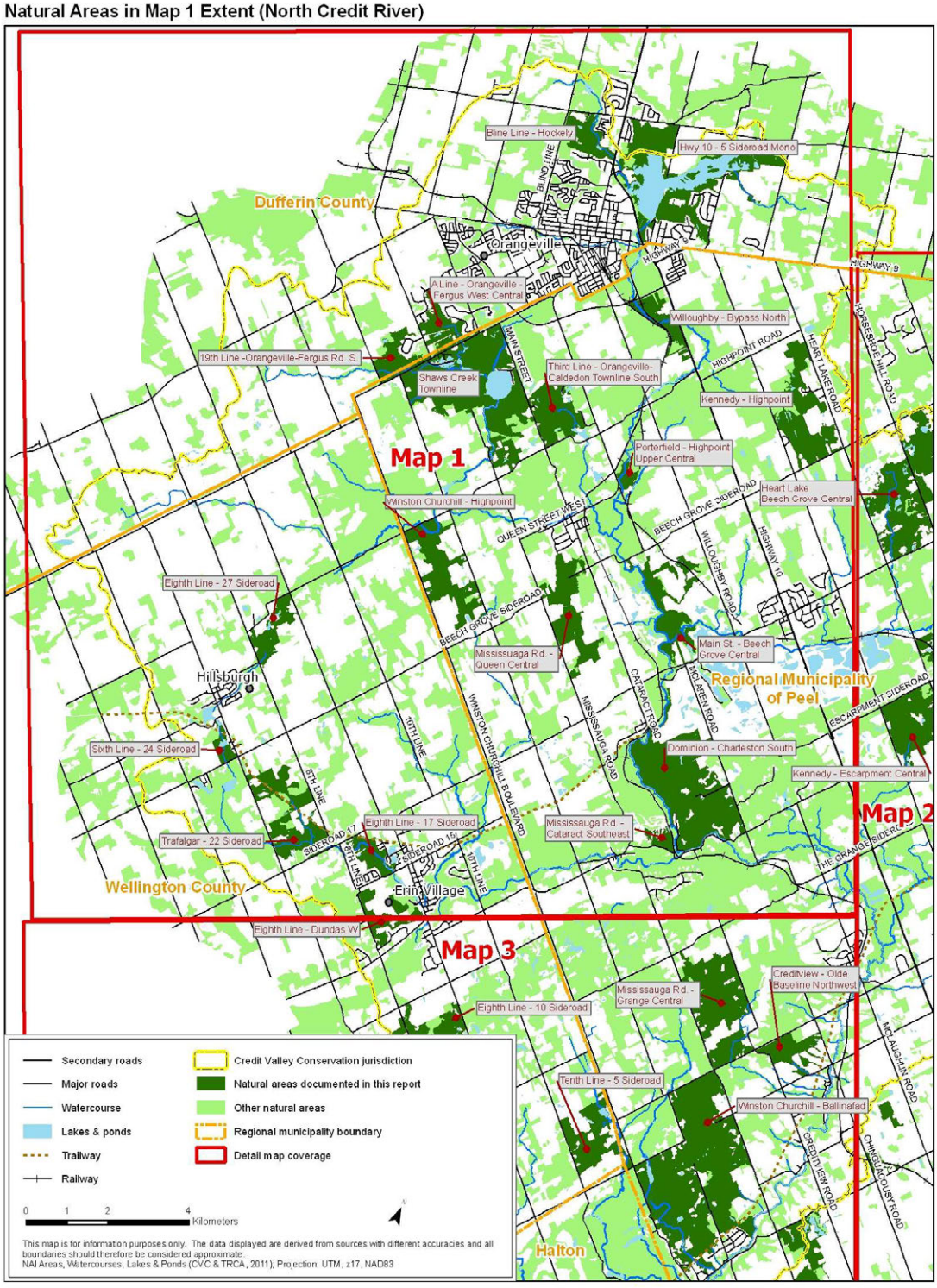


Figure 11b

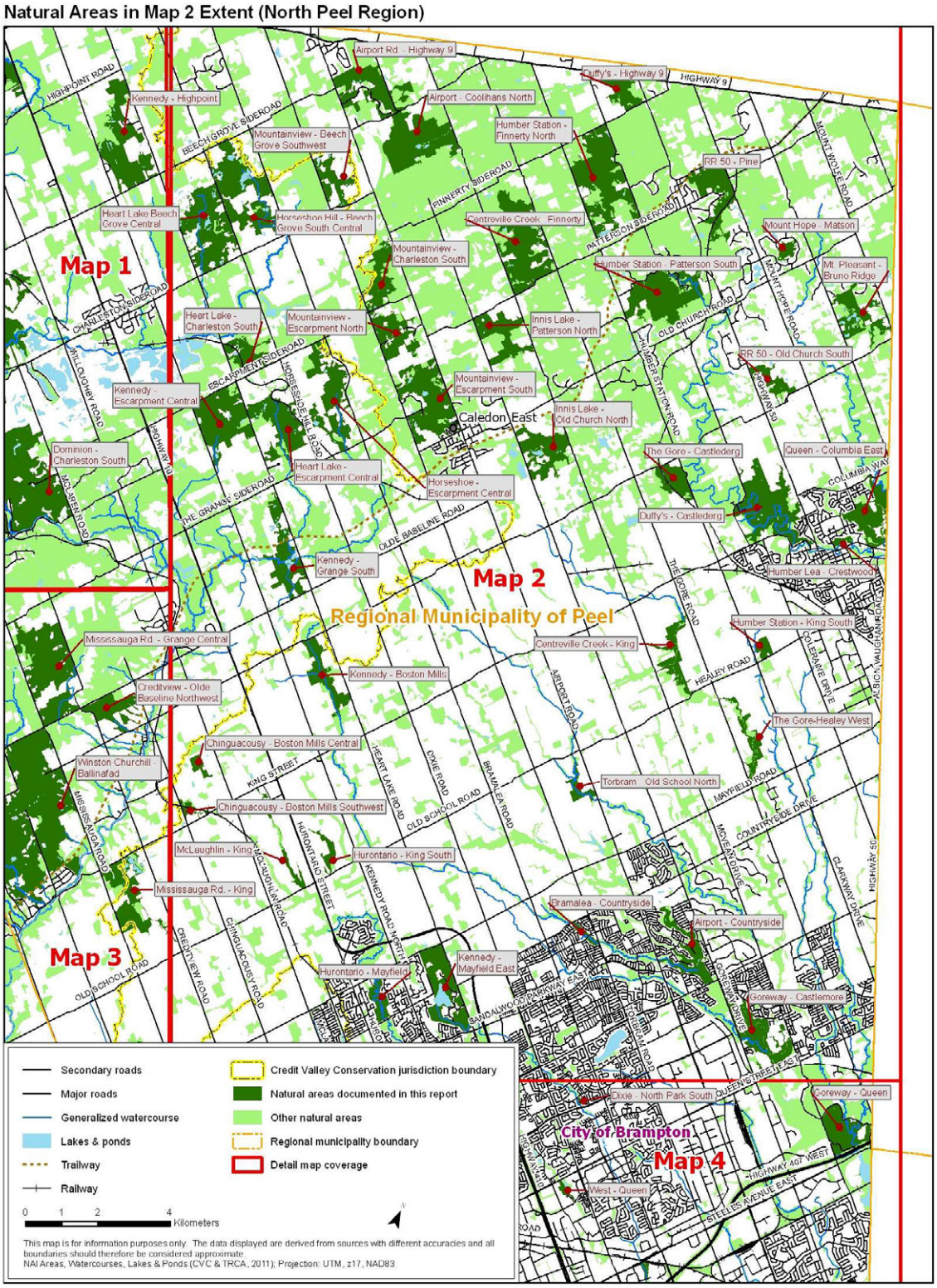

Natural Areas in Map 2 Extent (North Peel Region)
Map 1
Map 2
Map 3
Map 4
Regional Municipality of Peel
City of Brampton
Caledon East
Airport Rd. - Highway 9
Duffy's - Highway 9
Kennedy - Highpoint
Airport - Coolihans North
Humber Station - Finnerty North
Mountainview - Beech Grove Southwest
RR 50 - Pine
Heart Lake Beech Grove Central
Horseshoe Hill - Beech Grove South Central
Centreville Creek - Finnerty
Mount Hope - Matson
Mountainview - Charleston South
Humber Station - Patterson South
Mt. Pleasant - Bruno Ridge
Heart Lake - Charleston South
Mountainview - Escarpment North
Innis Lake - Patterson North
RR 50 - Old Church South
Kennedy - Escarpment Central
Mountainview - Escarpment South
Innis Lake - Old Church North
Dominion - Charleston South
The Gore - Castlederg
Queen - Columbia East
Heart Lake - Escarpment Central
Horseshoe - Escarpment Central
Duffy's - Castlederg
Kennedy - Grange South
Humber Lea - Crestwood
Mississauga Rd. - Grange Central
Centreville Creek - King
Humber Station - King South
Kennedy - Boston Mills
Creditview - Olde Baseline Northwest
The Gore-Healey West
Chinguacousy - Boston Mills Central
Winston Churchill - Ballinafad
Torbram - Old School North
Chinguacousy - Boston Mills Southwest
McLaughlin - King
Hurontario - King South
Mississauga Rd. - King
Bramalea - Countryside
Airport - Countryside
Hurontario - Mayfield
Kennedy - Mayfield East
Goreway - Castlemore
Dixie - North Park South
Goreway - Queen
West - Queen
Secondary roads
Major roads
Generalized watercourse
Lakes & ponds
Trailway
Railway
Credit Valley Conservation jurisdiction boundary
Natural areas documented in this report
Other natural areas
Regional municipality boundary
Detail map coverage
0 1 2 4
Kilometers
This map is for information purposes only. The data displayed are derived from sources with different accuracies and all boundaries should therefore be considered approximate.
NAI Areas, Watercourses, Lakes & Ponds (CVC & TRCA, 2011); Projection: UTM, z17, NAD83

Figure 11c

Natural Areas in Map 3 Extent (West Credit Valley Conservation Jurisdiction)

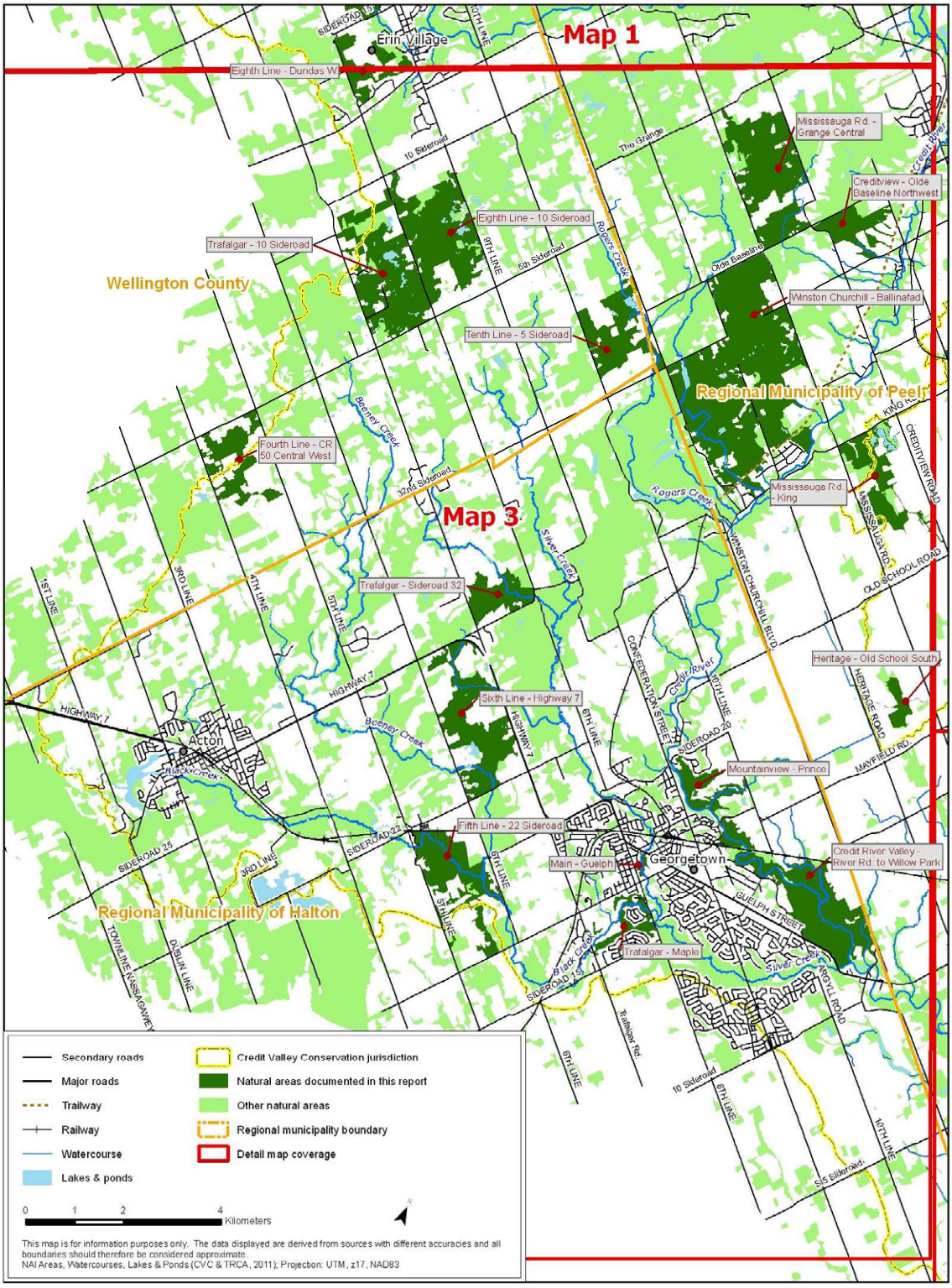
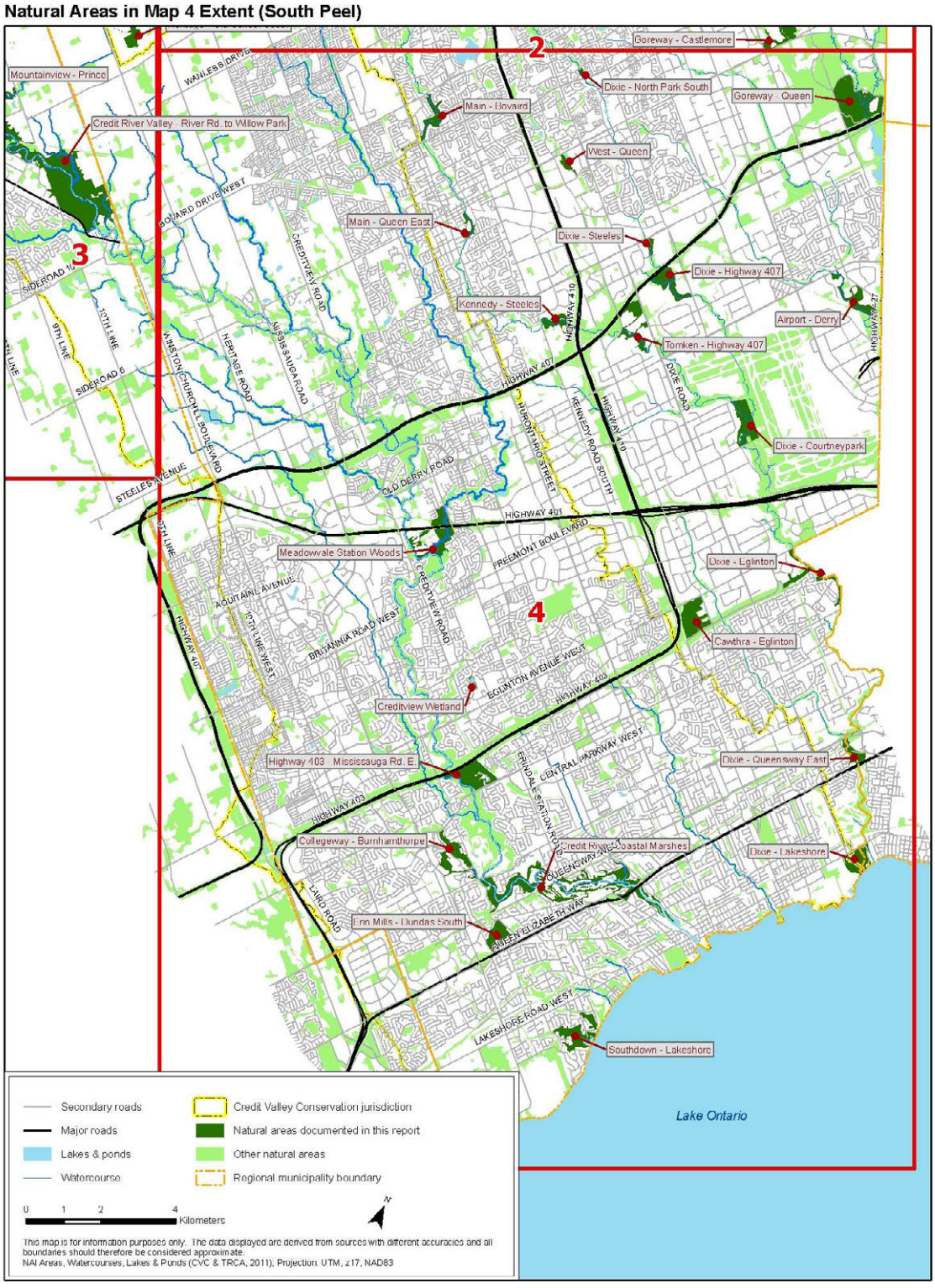


Figure 11d


Natural Areas in Map 4 Extent (South Peel)
2
3
4
Goreway - Castlemore
Dixie - North Park South
Goreway - Queen
Mountainview - Prince
Main - Howard
Credit River Valley - River Rd. to Willow Park
West - Queen
Main - Queen East
Dixie - Steeles
Dixie - Highway 407
Kennedy - Steeles
Airport - Derry
Tomken - Highway 407
Dixie - Courtneypark
Meadowvale Station Woods
Dixie - Eglinton
Cawthra - Eglinton
Creditview Wetland
Highway 403 - Mississauga Rd. E.
Dixie - Queensway East
Collegeway - Burnhamthorpe
Credit River - Coastal Marshes
Dixie - Lakeshore
Erin Mills - Dundas South
Southdown - Lakeshore
Lake Ontario
Secondary roads
Major roads
Lakes & ponds
Watercourse
Credit Valley Conservation jurisdiction
Natural areas documented in this report
Other natural areas
Regional municipality boundary
0 1 2 4
Kilometers
This map is for information purposes only. The data displayed are derived from sources with different accuracies and all boundaries should therefore be considered approximate.
NAI Areas, Watercourses, Lakes & Ponds (CVC & TRCA, 2011), Projection: UTM, z17, NAD83

3. LIST OF NAI SITE NAMES AND AREA NUMBERS

The following look-up lists for site name and NAI number apply to sites summarized in this report volume.

3.1. LOOK-UP NATURAL AREAS BY SITE NAME

Sitename	NAI Number(s)
19 Line - Orangeville-Fergus Rd South	123
A Line - Orangeville-Fergus Rd West-Central	143
Airport - Coolihans North	9646
Airport - Countryside	2274, 2557, 2647
Airport - Derry	3982, 4385, 4388
Airport Rd - Highway 9	9476
Blind Line - Hockley	264
Bramalea - Countryside	2233, 2240
Cawthra - Eglinton	3710, 3754, 4417
Centreville Creek - Finnerty	9643
Centreville Creek - King	8731
Chinguacousy - Boston Mills Central	8171
Chinguacousy - Boston Mills Southwest	8119, 8128
Collegeway - Burnhamthorpe	3267, 3293
Credit River Coastal Marshes	3255, 3274, 3276, 3291, 3296, 3297, 3301, 3304, 3317, 3327, 3329, 3330, 3341, 3342, 3344, 3345, 3346, 3348, 3364, 3375, 4128, 4129
Credit River Valley - River Road to Willow Park	7375, 7501
Creditview - Olde Base Line Northwest	8204
Creditview - Queen	1123
Creditview Wetland	3522
Dixie - Courtneypark	3890, 3910, 3918, 4025, 4316, 4320, 4342
Dixie - Eglinton	3812, 3838, 3854, 4022, 4421
Dixie - Highway 407	1304, 1320, 2449, 2625, 3961
Dixie - Lakeshore	3524, 3526, 4177
Dixie - North Park South	2082
Dixie - Queensway East	3672
Dixie - Steeles	1336, 2455
Dominion - Charleston South	8424,8437, 8447, 8453, 8463, 8466, 8468, 8474, 8485, 8494, 8503, 9585, 9673, 9871, 9872, 9873, 9881, 9885, 10389
Duffy's - Castlederg	9617
Duffy's - Highway 9	9539
Eighth Line - 10 Sideroad	6489
Eighth Line - 17 Sideroad	6497
Eighth Line - 27 Sideroad	6507
Eighth Line - Dundas W	6273
Eldorado Park and Area	1104, 2354
Erin Mills - Dundas South	3199, 4403
Fifth Line - 22 Sideroad	7497
Fourth Line - CR50 Central West	6476

Sitename	NAI Number(s)
Goreway - Castlemore	2161, 2209, 2212, 2215, 2221, 2222, 2223, 2224, 2226, 2229, 2231, 2232, 2234, 2357, 2533, 2536, 2542, 2640, 2645
Goreway - Queen	2121, 2136, 2142, 2145, 2147, 2148, 2154, 2165, 2170, 2175, 2179, 2369, 2521, 2637, 2639, 2641
Heart Lake - Beech Grove Central	9622
Heart Lake - Charleston South	9598, 10038, 10040
Heart Lake - Escarpment Central	9593
Heritage - Old School South	8005
Highway 10 - 5 Sideroad Mono	203, 210, 219, 227, 228, 239, 242, 256, 265, 267, 268, 276, 279, 308, 403, 419, 498, 503, 515
Highway 403 - Mississauga Rd East	3406, 4142
Horseshoe Hill - Beech Grove South Central	9128, 9631
Horseshoe Hill - Escarpment Central	9603
Humber Lea - Crestwood	9032
Humber Station - Finnerty North	9652
Humber Station - King South	8746
Humber Station - Patterson South	9645
Hurontario - King South	8152
Hurontario - Mayfield	2075, 2088, 2089, 2096, 2495, 2634
Innis Lake - Old Church North	8958
Innis Lake - Patterson North	9625
Kennedy - Boston Mills	8376
Kennedy - Escarpment Central	9592
Kennedy - Grange South	8515
Kennedy - Highpoint	9261
Kennedy - Mayfield East	2105, 2358, 2365
Kennedy - Steeles	1221, 1224, 2423, 2426, 2428, 2439
Main - Bovaird	1353, 1358, 1370, 1375, 1378, 2459, 2629
Main - Guelph	7339
Main - Queen East	1278
Main St - Beech Grove Central	8784
McLaughlin - King	8125
Meadowvale Station Woods	3709, 3728
Mississauga Rd - Cataract Southeast	8346
Mississauga Rd - Grange Central	9577
Mississauga Rd - King	9568
Mississauga Rd - Queen Central	8693
Mount Hope - Matson	9478
Mountainview - Beech Grove Southwest	9636
Mountainview - Charleston South	9627
Mountainview - Escarpment North	9615
Mountainview - Escarpment South	9610
Mountainview - Prince	7505
Mt. Pleasant - Bruno Ridge	9648
Porterfield - Highpoint Upper Central	8915, 8919
Queen - Columbia East	9619
RR50 - Old Church South	9282
RR50 - Pine	9506
Shaws Creek - Townline	9045, 9606, 9702, 9704

Sitename	NAI Number(s)
Sixth Line - 24 Sideroad	6336, 6523
Sixth Line - Highway 7	7409
Southdown - Lakeshore	4007, 4013
Tenth Line - 5 Sideroad South	6488
The Gore - Castlederg	9607, 9612
The Gore - Healey West	8529, 8557
Third Line - Orangeville/Caledon Townline South	9609
Tomken - Highway 407	1238, 1247, 1254, 1258, 2433, 2620, 2622, 3934
Torbram - Old School North	8363
Trafalgar - 10 Sideroad	6487
Trafalgar - 22 Sideroad	6498
Trafalgar - Maple	7302
Trafalgar - Sideroad 32	7449
West - Queen	1384
Willoughby - Bypass North	9228, 9628
Winston Churchill - Ballinafad	8050
Winston Churchill - Highpoint	9590

3.2 LOOK-UP NATURAL AREAS BY AREA NUMBER

NAI Number	Sitename
123	19 Line - Orangeville-Fergus Rd South
143	A Line - Orangeville-Fergus Rd West-Central
203	Highway 10 - 5 Sideroad Mono
210	Highway 10 - 5 Sideroad Mono
219	Highway 10 - 5 Sideroad Mono
227	Highway 10 - 5 Sideroad Mono
228	Highway 10 - 5 Sideroad Mono
239	Highway 10 - 5 Sideroad Mono
242	Highway 10 - 5 Sideroad Mono
256	Highway 10 - 5 Sideroad Mono
264	Blind Line - Hockley
265	Highway 10 - 5 Sideroad Mono
267	Highway 10 - 5 Sideroad Mono
268	Highway 10 - 5 Sideroad Mono
276	Highway 10 - 5 Sideroad Mono
279	Highway 10 - 5 Sideroad Mono
308	Highway 10 - 5 Sideroad Mono
403	Highway 10 - 5 Sideroad Mono
419	Highway 10 - 5 Sideroad Mono
498	Highway 10 - 5 Sideroad Mono
503	Highway 10 - 5 Sideroad Mono
515	Highway 10 - 5 Sideroad Mono
1104	Eldorado Park and Area
1123	Creditview - Queen
1221	Kennedy - Steeles
1224	Kennedy - Steeles

NAI Number	Sitename
1238	Tomken - Highway 407
1247	Tomken - Highway 407
1254	Tomken - Highway 407
1258	Tomken - Highway 407
1278	Main - Queen East
1304	Dixie - Highway 407
1320	Dixie - Highway 407
1336	Dixie - Steeles
1353	Main - Bovaird
1358	Main - Bovaird
1370	Main - Bovaird
1375	Main - Bovaird
1378	Main - Bovaird
1384	West - Queen
1455	Dixie - Steeles
2075	Hurontario - Mayfield
2082	Dixie - North Park South
2088	Hurontario - Mayfield
2089	Hurontario - Mayfield
2096	Hurontario - Mayfield
2105	Kennedy - Mayfield East
2121	Goreway - Queen
2136	Goreway - Queen
2142	Goreway - Queen
2145	Goreway - Queen
2147	Goreway - Queen
2148	Goreway - Queen
2154	Goreway - Queen
2161	Goreway - Castlemore
2165	Goreway - Queen
2170	Goreway - Queen
2175	Goreway - Queen
2179	Goreway - Queen
2209	Goreway - Castlemore
2212	Goreway - Castlemore
2215	Goreway - Castlemore
2221	Goreway - Castlemore
2222	Goreway - Castlemore
2223	Goreway - Castlemore
2224	Goreway - Castlemore
2226	Goreway - Castlemore
2231	Goreway - Castlemore
2232	Goreway - Castlemore
2233	Bramalea - Countryside
2234	Goreway - Castlemore
2240	Bramalea - Countryside
2274	Airport - Countryside
2354	Eldorado Park and Area
2357	Goreway - Castlemore
2358	Kennedy - Mayfield East
2365	Kennedy - Mayfield East

NAI Number	Sitename
2369	Goreway - Queen
2423	Kennedy - Steeles
2426	Kennedy - Steeles
2428	Kennedy - Steeles
2433	Tomken - Highway 407
2439	Kennedy - Steeles
2449	Dixie - Highway 407
2459	Main - Bovaird
2495	Hurontario - Mayfield
2521	Goreway - Queen
2533	Goreway - Castlemore
2536	Goreway - Castlemore
2542	Goreway - Castlemore
2557	Airport - Countryside
2620	Tomken - Highway 407
2622	Tomken - Highway 407
2625	Dixie - Highway 407
2629	Main - Bovaird
2634	Hurontario - Mayfield
2637	Goreway - Queen
2639	Goreway - Queen
2640	Goreway - Castlemore
2641	Goreway - Queen
2645	Goreway - Castlemore
2647	Airport - Countryside
3199	Erin Mills - Dundas South
3255	Credit River Coastal Marshes
3267	Collegeway - Burnhamthorpe
3274	Credit River Coastal Marshes
3276	Credit River Coastal Marshes
3291	Credit River Coastal Marshes
3293	Collegeway - Burnhamthorpe
3296	Credit River Coastal Marshes
3297	Credit River Coastal Marshes
3301	Credit River Coastal Marshes
3304	Credit River Coastal Marshes
3317	Credit River Coastal Marshes
3327	Credit River Coastal Marshes
3329	Credit River Coastal Marshes
3330	Credit River Coastal Marshes
3341	Credit River Coastal Marshes
3342	Credit River Coastal Marshes
3344	Credit River Coastal Marshes
3345	Credit River Coastal Marshes
3346	Credit River Coastal Marshes
3348	Credit River Coastal Marshes
3364	Credit River Coastal Marshes
3375	Credit River Coastal Marshes
3406	Highway 403 - Mississauga Rd East
3522	Creditview Wetland
3524	Dixie - Lakeshore

NAI Number	Sitename
3526	Dixie - Lakeshore
3672	Dixie - Queensway East
3709	Meadowvale Station Woods
3710	Cawthra - Eglinton
3728	Meadowvale Station Woods
3754	Cawthra - Eglinton
3812	Dixie - Eglinton
3838	Dixie - Eglinton
3854	Dixie - Eglinton
3890	Dixie - Courtneypark
3910	Dixie - Courtneypark
3918	Dixie - Courtneypark
3934	Tomken - Highway 407
3961	Dixie - Highway 407
3982	Airport - Derry
4007	Southdown - Lakeshore
4013	Southdown - Lakeshore
4022	Dixie - Eglinton
4025	Dixie - Courtneypark
4128	Credit River Coastal Marshes
4129	Credit River Coastal Marshes
4142	Highway 403 - Mississauga Rd East
4177	Dixie - Lakeshore
4316	Dixie - Courtneypark
4320	Dixie - Courtneypark
4342	Dixie - Courtneypark
4385	Airport - Derry
4388	Airport - Derry
4403	Erin Mills - Dundas South
4417	Cawthra - Eglinton
4421	Dixie - Eglinton
6273	Eighth Line - Dundas W
6336	Sixth Line - 24 Sideroad
6476	Fourth Line - CR50 Central West
6487	Trafalgar - 10 Sideroad
6488	Tenth Line - 5 Sideroad South
6489	Eighth Line - 10 Sideroad
6497	Eighth Line - 17 Sideroad
6498	Trafalgar - 22 Sideroad
6507	Eighth Line - 27 Sideroad
6523	Sixth Line - 24 Sideroad
7302	Trafalgar - Maple
7339	Main - Guelph
7375	Credit River Valley - River Road to Willow Park
7409	Sixth Line - Highway 7
7449	Trafalgar - Sideroad 32
7497	Fifth Line - 22 Sideroad
7501	Credit River Valley - River Road to Willow Park
7505	Mountainview - Prince
8005	Heritage - Old School South
8050	Winston Churchill - Ballinafad

NAI Number	Sitename
8119	Chinguacousy - Boston Mills Southwest
8125	McLaughlin - King
8128	Chinguacousy - Boston Mills Southwest
8152	Hurontario - King South
8171	Chinguacousy - Boston Mills Central
8204	Creditview - Olde Base Line Northwest
8346	Mississauga Rd - Cataract Southeast
8363	Torbram - Old School North
8376	Kennedy - Boston Mills
8424	Dominion - Charleston South
8437	Dominion - Charleston South
8447	Dominion - Charleston South
8453	Dominion - Charleston South
8463	Dominion - Charleston South
8466	Dominion - Charleston South
8468	Dominion - Charleston South
8474	Dominion - Charleston South
8485	Dominion - Charleston South
8494	Dominion - Charleston South
8503	Dominion - Charleston South
8515	Kennedy - Grange South
8529	The Gore - Healey West
8557	The Gore - Healey West
8693	Mississauga Rd - Queen Central
8731	Centreville Creek - King
8746	Humber Station - King South
8784	Main St - Beech Grove Central
8915	Porterfield - Highpoint Upper Central
8919	Porterfield - Highpoint Upper Central
8958	Innis Lake - Old Church North
9032	Humber Lea - Crestwood
9045	Shaws Creek - Townline
9128	Horseshoe Hill - Beech Grove South Central
9228	Willoughby - Bypass North
9261	Kennedy - Highpoint
9282	RR50 - Old Church South
9476	Airport Rd - Highway 9
9478	Mount Hope - Matson
9506	RR50 - Pine
9539	Duffy's - Highway 9
9568	Mississauga Rd - King
9577	Mississauga Rd - Grange Central
9585	Dominion - Charleston South
9590	Winston Churchill - Highpoint
9592	Kennedy - Escarpment Central
9593	Heart Lake - Escarpment Central
9598	Heart Lake - Charleston South
9603	Horseshoe Hill - Escarpment Central
9606	Shaws Creek - Townline
9607	The Gore - Castlederg
9609	Third Line - Orangeville/Caledon Townline South

NAI Number	Sitename
9610	Mountainview - Escarpment South
9612	The Gore - Castlederg
9615	Mountainview - Escarpment North
9617	Duffy's - Castlederg
9619	Queen - Columbia East
9622	Heart Lake - Beech Grove Central
9625	Innis Lake - Patterson North
9627	Mountainview - Charleston South
9628	Willoughby - Bypass North
9631	Horseshoe Hill - Beech Grove South Central
9636	Mountainview - Beech Grove Southwest
9643	Centreville Creek - Finnerty
9645	Humber Station - Patterson South
9646	Airport - Coolihans North
9648	Mt. Pleasant - Bruno Ridge
9652	Humber Station - Finnerty North
9673	Dominion - Charleston South
9702	Shaws Creek - Townline
9704	Shaws Creek - Townline
9871	Dominion - Charleston South
9872	Dominion - Charleston South
9873	Dominion - Charleston South
9881	Dominion - Charleston South
9885	Dominion - Charleston South
10038	Heart Lake - Charleston South
10040	Heart Lake - Charleston South
10389	Dominion - Charleston South

4. DATA ON NATURAL AREAS NOT SUMMARIZED IN THIS REPORT VOLUME

Inventory data exists for additional natural areas that are not covered in this report volume. Summaries for these other natural areas will be included in future NAI report volumes but in the meantime, the data is available by contacting Credit Valley Conservation or Toronto and Region Conservation Authority, depending on the location of the area. Figures 12, 13 and 14 show natural areas respectively, where vegetation community inventory data, botanical inventory data and breeding bird inventory data exists in the NAI study area.

Figure 12

Existing NAI Vegetation Community Inventory Data Coverage

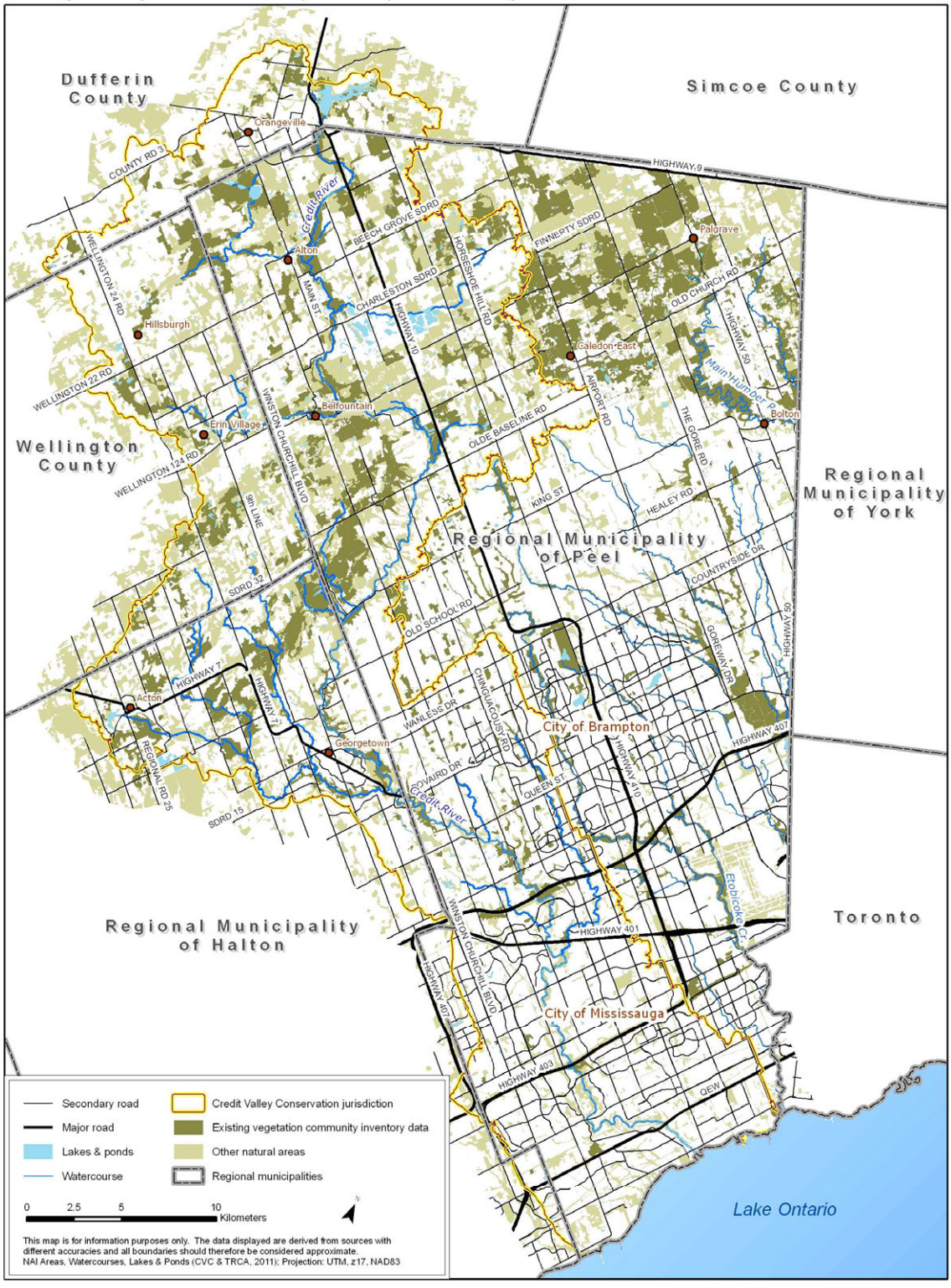


Figure 13

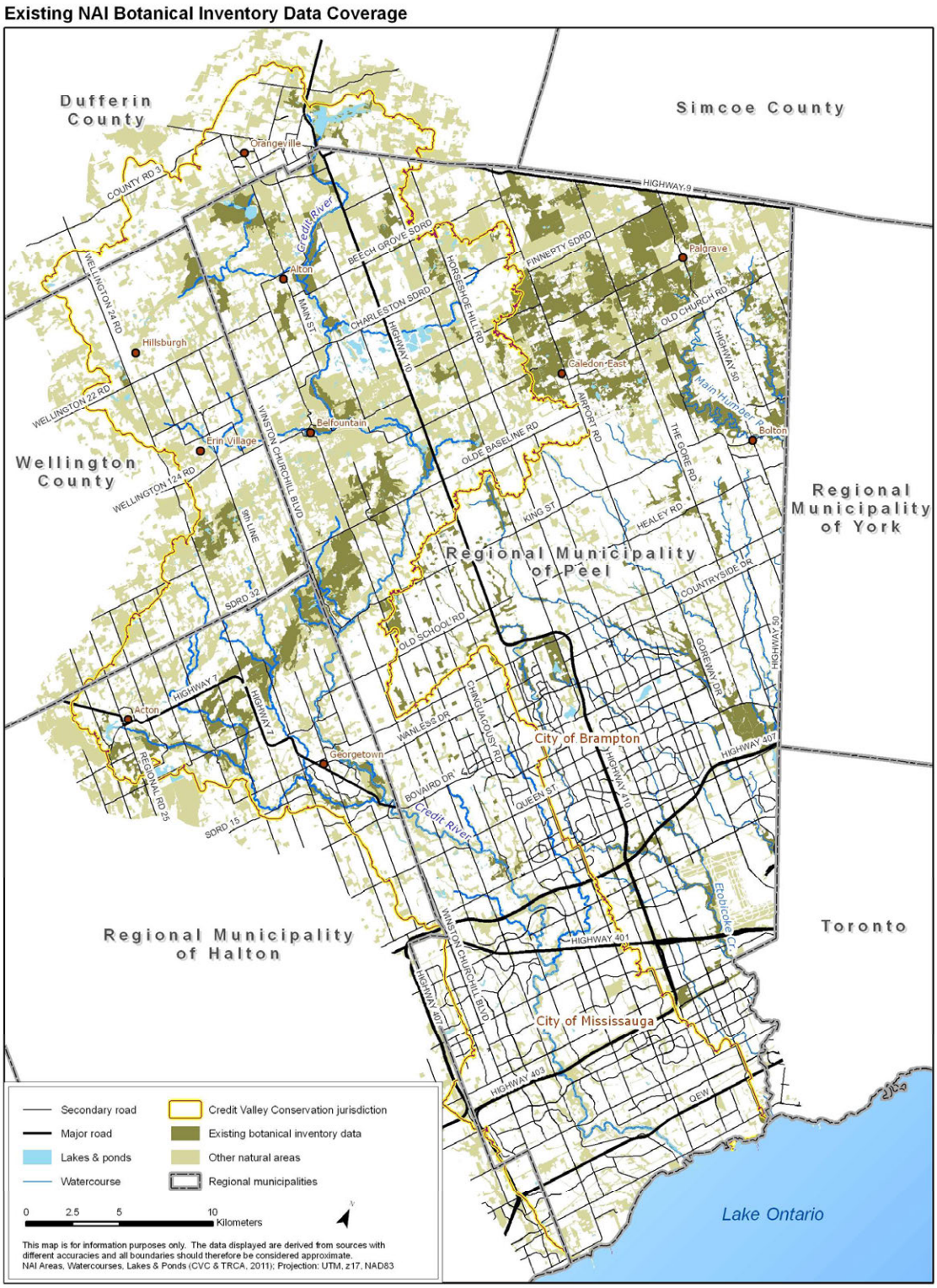
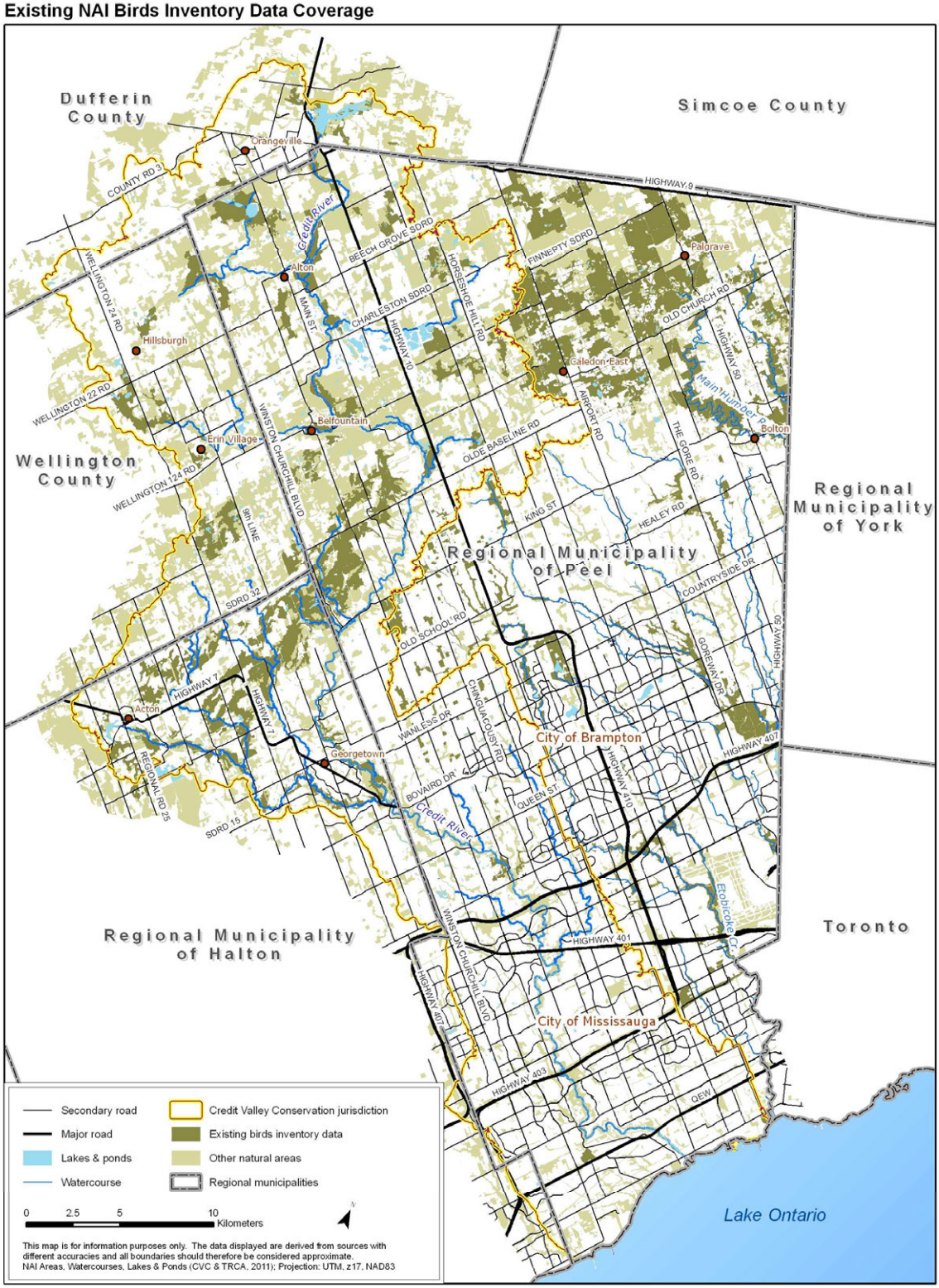

Existing NAI Botanical Inventory Data Coverage
Dufferin County
Simcoe County
Wellington County
Regional Municipality of York
Regional Municipality of Peel
Regional Municipality of Halton
Toronto
Orangeville
Alton
Hillsburgh
Belfountain
Erin Village
Caledon East
Palgrave
Bolton
Acton
Georgetown
City of Brampton
City of Mississauga
Lake Ontario
Credit River
HIGHWAY 9
HIGHWAY 10
HIGHWAY 50
HIGHWAY 7
HIGHWAY 401
HIGHWAY 407
HIGHWAY 403
Secondary road
Major road
Lakes & ponds
Watercourse
Credit Valley Conservation jurisdiction
Existing botanical inventory data
Other natural areas
Regional municipalities
0 2.5 5 10 Kilometers
This map is for information purposes only. The data displayed are derived from sources with different accuracies and all boundaries should therefore be considered approximate.
NAI Areas, Watercourses, Lakes & Ponds (CVC & TRCA, 2011); Projection: UTM, z17, NAD83

Figure 14

Existing NAI Birds Inventory Data Coverage



5. NOTES ON THE SITE SUMMARIES

The site summaries contain site-specific information to capture the individual character of each natural area.

5.1. SITE NAME

The NAI project uses a compound location-naming convention based on the roads adjacent to the NAI site. The first part of the site name indicates the concession road that runs along the southwest margin of the block that contains the natural area and the second part of the site name indicates the sideroad that runs along the northwest side of the concession block that contains the natural area. (It should be noted that in the study area, concession roads generally run northwest-southeast and sideroads generally run northeast-southwest.) Thus the natural area lies in the concession block immediately east of the identified corner. The NAI site name may also have a third part that refines the location in the concession block where the natural area occurs, such as “north”, “central”, “west-central” dependent on the number and distribution of other natural areas that may be located in the same concession block. A locator map for the natural area can be found at the end of each site summary. In urban areas, major northwest-southeast and northeast-southwest roads are used to name sites instead of concession roads and sideroads.

5.2. NATURAL AREA NUMBER

Each site has one or more unique natural area numbers assigned. A site with multiple numbers represents a cluster of adjacent field, forest and/or aquatic natural areas. The natural area number is an internal reference system within the natural heritage database and can be used for data requests.

5.3. NATURAL AREA SIZE

Natural Area size is expressed in hectares, rounded off to a whole number.

5.4. HUMAN HISTORY

A brief overview is provided of historical land uses in the vicinity of the natural area. This is not intended to relate the full human history of the site but provides insight into historical natural communities that may have been present and/or the disturbance history of the area.

5.5. VEGETATION COMMUNITIES

The first part of this section describes the general community types that make up the natural area. Broad community types are grouped together, for example all deciduous forests are grouped together, all types of coniferous swamps are grouped together. For areas with 100% ELC coverage, the percent composition of all communities of each broad community type (community series) are summed. For areas that have only partial ELC coverage, field generated community data is used where it is known and the remainder is calculated from the interpreted (from air photos) community series mapping. In this way a general picture of community composition of the whole natural area is provided, although there is the potential for some inaccuracy due to the difficulty of interpreting air photos for some community types.

The second part of this section provides the results of the ELC field data that has been collected for the portion of the natural area where access permission was obtained. All of the known vegetation types for the natural area are listed, including their area and percent contribution to the whole natural

area. Note that these vegetation communities may not total to 100% of the natural area if complete ELC coverage was not obtained. The ELC mapping for each natural area can be found at the end of each site summary.

Natural areas may sometimes contain distinct vegetation communities that are too small to map individually, and are treated as "inclusions" within the surrounding vegetation type. Inclusions are classified using the ELC system (according to their dominant species and soils) but are listed instead of being mapped. If rare inclusions have been found they are listed in this section.

There are examples where a vegetation community may actually be a mosaic of two distinct vegetation types that are recognizable but are intermixed in too complex a manner to map. These are recorded as "complexes" and the vegetation type of each component is classified according to the ELC system and the dominant vegetation type is noted. When a rare vegetation type is part of a complex it is listed in this section.

5.6. SPECIES PRESENCE

This section summarizes the species observations by general taxonomic group (plants, breeding birds, fish, etc.) where at least one record for a group exists. The inventory work was more exhaustive in detecting some groups (e.g. plant species, breeding birds) than others due to the methodology employed. Some groups are only represented by incidental records. Species At Risk that were encountered are listed in a table with their ranks. The column with the MNR heading shows the species designation under SARO. A second table lists regionally rare species (note that regional rarity ranks are currently only available for vascular plant species). For sites within CVC's jurisdiction (i.e. Credit River watershed) all of the species listed in this table are regionally rare. For sites within TRCA's jurisdiction (i.e. Etobicoke Creek, Mimico Creek and Humber River watersheds), the second table also lists TRCA regional Species of Conservation Concern (see Species Rarity section below for explanation of TRCA L-ranks). When regional rarity and TRCA L-ranked species are both listed in the same table, bold type is used to indicate the species that are regionally rare and regular type with an indication in the column for L-rank indicates species that are of conservation concern as per TRCA. When a species is both regionally rare and of TRCA conservation concern, it is written in bold type with an L-ranking.

5.7. DATA-SENSITIVE SPECIES

Species deemed "data-sensitive" by the NAI project are not specifically named in this report. Instead, the site summary indicates that a data-sensitive species is present. Additional information will be released on a "need to know" basis. The Data Management Technician at CVC or TRCA can be contacted for more information (depending on Conservation Authority jurisdiction of the site). Data-sensitive species are species for which the publication of their locations would pose a high threat to the viability of the populations. Often these species are targeted for harvesting.

5.8. SPECIES AT RISK

Species described as national Species At Risk are those designated Endangered, Threatened or Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC; Committee on the Status of Endangered Wildlife in Canada, 2010). COSEWIC is an independent body of experts responsible for identifying and assessing species considered to be at risk on a national basis, and which recommends species for protection under the federal Species At Risk Act (SARA; Government of Canada, 2011b). Species are not legally protected by COSEWIC, but COSEWIC's recommendation is the first step in the process of legal protection under SARA.

Species described in this report as provincial Species At Risk are those classified as Endangered, Threatened or Special Concern by the Committee on the Status of Species at Risk in Ontario (COSSARO). COSSARO analyses the best available information, classifies species status in Ontario and reports their assessments to the Ministry of Natural Resources. Species identified as being at risk are placed on the Species at Risk in Ontario (SARO; Ontario Ministry of Natural Resources, 2010b) list and receive protection under the provincial Endangered Species Act.

5.9. SPECIES RARITY AND RANKING

Global rank (G-rank) for species have been assigned by a consensus of the network of Conservation Data Centres, scientific experts and The Nature Conservancy to designate rarity based on the status of a species, subspecies or variety throughout its range (Natural Heritage Information Centre, 2009). G-ranks range from G1 (Critically Imperiled - at very high risk of extinction due to extreme rarity; often with 5 or fewer populations, very steep declines, or other factors) to G5 (Secure - common, widespread, abundant).

Provincial (Sub-national) ranks, S-ranks, have been assigned by the Natural Heritage Information Centre for species and vegetation communities in Ontario. These S-ranks range from S1 (Critically Imperiled - 5 or fewer locations or because of factors which make it especially vulnerable to extirpation in Ontario) to S5 (Secure - common, abundant and widespread in Ontario). Ranks of S1, S2 and S3 are considered to be provincially rare. In some cases, a species is given a range rank (e.g. S2S3) to indicate a range of uncertainty about the status of the species. In other cases, a species is given a rank followed by a question mark (e.g. S3?) indicating the rank is uncertain. S-ranks do not carry any legal protection status although they are used to set protection and conservation priorities for rare species and natural communities.

Regional rarity information is only available for flora species. For the purposes of the NAI project, regional rarity information follows Kaiser (2001). A plant species noted as regionally rare by Kaiser is one that is rare in the Region of Peel and the Credit River Watershed.

Toronto and Region Conservation Authority has developed a system for assigning a local “L”-rank to species and communities, indicating the degree of conservation concern warranted by each species within the TRCA jurisdiction (Toronto and Region Conservation Authority, 2007b; Toronto and Region Conservation Authority, 2007c). TRCA L-ranks are calculated based on a variety of criteria and hence do not solely reflect rarity. Vegetation community scores and ranks are based on two criteria: local occurrence and the number of geophysical requirements or factors on which they depend. Flora species are scored using four criteria: local occurrence, population trends, habitat dependence and sensitivity to development. Fauna species are scored based on seven criteria: local occurrence, local population trends, continent-wide population trend, habitat dependence, sensitivity to development, area-sensitivity and patch isolation sensitivity. L-ranks range from L1 (species/communities of maximum conservation concern) to L5 (species/communities considered secure within the TRCA jurisdiction). Species/communities with L-ranks of L1 to L3 are considered regional Species/Communities of Conservation Concern whereas a rank of L4 is considered to be of conservation concern in urban areas but are not of conservation concern where they occur in rural areas (Toronto and Region Conservation Authority, 2007b; Toronto and Region Conservation Authority, 2007c) and are referred to as TRCA regional Species/Communities of Urban Conservation Concern. Rarity (local occurrence) is still considered but is now one of many criteria that make up the L-ranks, making it possible to recognize communities or species of regional concern before they become rare. In the context of TRCA L-ranks, “regional” refers to the region of TRCA’s jurisdiction. Note that in this report, L-ranks are only indicated for areas within the TRCA jurisdiction.

5.10. DISTURBANCES

Both human and natural disturbances to the natural area are included in this section. Disturbances are factors that would not be present in a "pristine" community and may play a role in the alteration of the nature of a community. For example, beaver damming of a stream through a swamp (treed wetland) and the subsequent flooding is considered a disturbance because the flooding may cause the death of the trees and the change of the community to a marsh or pond. Fire is another form of disturbance regardless of whether it is natural (lightening strike) or caused by humans. Communities with certain types of disturbance or significant amounts (extent or intensity) of disturbance could change in the future to some other community type.

Observations on disturbance in natural areas are based on the qualitative assessments of the field workers that conducted the vegetation community descriptions and classifications (ELC crews). Disturbance may range in extent from localized to widespread through the whole natural area. Disturbance intensity may also vary from low to severe. The potential impact or importance of disturbance is case-specific as it is a combination of disturbance extent and intensity. For example, a community that contains a widespread occurrence of a non-native, but not invasive, plant species may be less of a concern than a community that contains localized patches of a highly aggressive invasive species, even if the invasive species population is small at the time.

5.11. ECOLOGICAL FEATURES AND FUNCTIONS

The ecological features and functions of the site are highlighted in this section, starting with at the landscape scale, and progressing to a more site-specific scale.

Recognition of ecological functions comes from the background research and analysis done by CVC's Terrestrial Ecosystem Enhancement Model (TEEM) program which devised a set of metrics that assess how a natural area functions in a landscape context. The TEEM program was initiated in 2006 to develop a natural heritage system for the Credit River Watershed. Landscape scale analysis is a tool to help inform decision-making on natural heritage systems planning. It involves identifying existing natural and semi-natural features on the landscape, then analyzing their relative importance for ecosystem function and providing ecosystem services such as clean air, climate regulation, a pure and abundant supply of water, and flood control. Further information regarding the landscape scale analysis and the CVC natural heritage system can be acquired from *Towards a Natural Heritage System for the Credit River Watershed Phases 1 & 2: Watershed Characterization and Landscape Scale Analysis,* Final Technical Report (Credit Valley Conservation, 2011).)

Through TEEM, CVC has proposed that rural natural areas that contain forest communities over 4 ha in size and urban natural areas that contain any forest communities over 2 ha in size, or wetlands over 0.5 ha in size, or cultural meadows/cultural thicket/cultural savannah totalling over 10 ha in size, have the potential to support and sustain biodiversity and provide for healthy ecosystem functions. The presence of riparian areas contributes to maintaining habitat quality in streams. Areas that contain more than 4 general community types (e.g. deciduous forests, coniferous forests, mixed forests, meadow marshes, shallow marshes, deciduous swamps etc. but excluding cultural meadows) are high-functioning in supporting biodiversity especially for species that require more than one habitat type for their life needs. Areas that support rare vegetation communities have extra potential to support biodiversity by providing special habitat for species that are uncommon. Natural areas that have connectivity or close proximity with other natural areas contribute to ecosystem stability and resilience by allowing for wildlife movement, gene flow and recovery from disturbance. Natural areas through which a major river (TEEM focussed on the Credit River but other major rivers such as the Humber River and Etobicoke Creek would be similar) passes or is within 300 m of, or areas through which a major tributary of the major river pass, support these major watercourses as cross-regional wildlife movement corridors and contribute to ecosystem stability. When any of the above ecological features occur in the area being described, they are highlighted in this section as potentially contributing to the area's landscape scale ecological function.

Within each natural area, the presence of any features covered in the significant wildlife habitat criteria identified in the *Peel-Caledon Significant Woodlands and Wildlife Habitat Study* (North-South Environmental Inc. et al., 2009) are highlighted so that the area can be evaluated to determine if significant wildlife habitat is present in accordance with the Provincial Policy Statement, Region of Peel Official Plan, and area municipal Official Plan. Note that this report does not designate areas as significant wildlife habitat but instead notes when certain wildlife habitat features exist. Evaluation of the natural area with respect to the significant wildlife habitat guideline documents and/or the PPS will determine whether the natural area contains wildlife habitat that is deemed significant.

5.12. OPPORTUNITIES

This section identifies site-specific actions that could be taken to improve or enhance the ecological integrity or knowledge of the natural area. These opportunities usually stem from three sources. 1. They address some of the disturbances identified above. 2. They identify where the natural area might be improved at a landscape level (e.g. improving connectivity with nearby natural areas) or at a site-specific level (e.g. increasing the size of the natural area or managing the communities more naturally). 3. They address data gaps and identify where other inventories might be productive or important. General stewardship opportunities follow this section.

5.13. MAPS

Two maps are included with each site summary. The first shows the site location in context of nearby roads, watercourses and waterbodies and the shape of the natural area. The first map also shows how nearby or included natural features such as ANSIs, ESAs and PSWs relate to the summarized natural area.

The scale of the second map shows greater detail, including the vegetation communities of the natural area that have been identified. Communities are labelled with a code for their vegetation type – this code is found in the Map Reference column of the ELC Vegetation Communities table in the site summary, linking the types of communities listed with their distribution in the natural area. For large natural areas, the second map may be multi-part due to the level of detail.

6. GENERAL STEWARDSHIP OPPORTUNITIES FOR LANDOWNERS

6.1. OVERVIEW

Landowners are stewards of their land and they have a special opportunity to protect, restore or enhance natural areas on their property. While the following site summaries identify site-specific stewardship opportunities, there are also some that are common to many or most natural areas in the study area. These general stewardship opportunities are outlined below.

6.1.1. Use Native Species in Landscaping: Whenever possible, use native species rather than non-native species, especially adjacent to natural areas. Native species are adapted to local growing conditions, often require less maintenance, and support native pollinators. Non-native species, on the other hand, have not evolved with local climate and soil conditions and are often less suitable food sources. Some non-native species are also invasive, and can establish themselves in natural communities and disrupt the natural ecosystem, eliminating native plants (Credit Valley Conservation, 2010b). To assist landowners with choosing non-invasive garden species, CVC and TRCA have produced a number of resources including from CVC: "*Alternative Plants for Invasive Species*," and "*Native Plant Nurseries and Seed Sources*" which are available on the CVC website, and from TRCA: "*Naturescaping*" and "*A Selection of Native Plants for your Garden*" plus many others available on the TRCA website.

6.1.2. Remove Invasive Species: Landowners may wish to remove invasive plant species that have taken root on their properties. Removing invasive species helps to preserve the native ecosystem. Localized, small-scale infestations offer the best chances for quick elimination as invasive species can be tenacious and hard to eradicate. To assist landowners in identifying and removing invasive plants, CVC has produced a number of resources including "*A Quick Reference Guide to Invasive Plants*" and "*Methods to Control Invasive Species*" (available on the CVC website) and the TRCA website includes an invasive species list as well as links to other invasive species resources. To curtail the spread of exotic or invasive species, do not dispose of yard waste in natural areas and stay on trails when hiking through natural areas to avoid transferring invasive plants and their seeds into new areas (Credit Valley Conservation, 2010b). Yard waste should be disposed of through municipal composting and yard waste disposal programs that are designed to ensure that seeds of waste plants are killed. TRCA and CVC can assist landowners who want to remove invasive species from their natural area properties.

6.1.3. Leave Forest Undergrowth and Standing Dead Trees: Many landowners have forests on their property that they wish to manage in an ecological manner. Toward this goal, landowners are encouraged to minimize the disturbance to undergrowth, fallen logs and standing dead trees within their forests as these are important components of forest ecosystems. Resist the urge to "tidy up" forests by removing underbrush, dead sticks etc. on the ground. Avoid removing low-growing plants such as saplings which are needed to replace older trees as the forest ages, and shrubs and ground cover which provide food and shelter to wildlife. Rotting logs provide micro-habitat for a variety of lichens, fungi, invertebrates and salamanders. Standing dead trees provide nesting habitat and foraging habitat for wildlife. Allowing them to decay promotes nutrient recycling in the ecosystem.

6.1.4. Naturalize Stream Banks and Pond Edges: Water features are a valued component of many properties and have aesthetic value to landowners. Water features are also wildlife "hotspots", used for feeding and shelter. Naturalizing the edges of watercourses and waterbodies by planting trees, shrubs or herbaceous plants along the banks helps preserve water quality and quantity. As vegetation grows, it will stabilize the banks and reduce erosion, shade the water to keep temperatures cool and serve as a barrier to runoff which might contain pollutants such as fertilizer (Credit Valley Conservation and Centre for Land and Water Stewardship, Undated a, b). Vegetated banks will provide additional habitat for wildlife and may attract additional species to use the natural area.

6.1.5. Create or Enhance Species Movement Corridors: Habitat fragmentation occurs when natural communities become separated due to other uses. Fragmentation makes it harder for species to safely move between natural areas (Ontario Ministry of Natural Resources, 1994). By referring to an aerial view of their property (such as Google Earth), landowners can identify natural habitats that are fragmented. New connections or narrow remaining connections between separated natural areas can be created or strengthened by planting trees, shrubs and herbaceous plants, or by allowing natural regeneration to occur.

6.1.6. Maintain Meadows: Grassland birds, such as the Bobolink and Eastern Meadowlark, once used native prairie habitat and now rely on agricultural grassland habitat including pasture and hay fields, as well as meadows (McCracken, 2005). In regions with many abandoned farm fields, such as the NAI study area, the meadows that in the past served as nesting habitat for grassland birds are now undergoing succession as shrubs and trees become established in these fields. These meadows will eventually become treed communities, unsuitable for supporting grassland birds. Rural property owners may wish to maintain some or all of the old farm field as meadow by mowing once every three to five years in late summer or fall (after the young of grassland birds have fledged) to keep woody species from persisting (Credit Valley Conservation and Centre for Land and Water Stewardship., Undated c). Rural owners of hayfields can support grassland breeding birds by cutting hay after the middle of July when the young have left their nests (McCracken, 2005).

6.1.7. Consider Tax-incentive and Other Financial Aid Programs to Help Rural Landowners: The Government of Ontario and the Government of Canada offer tax incentive programs that may be of interest to land owners with natural areas on their properties. The Managed Forest Tax Incentive Program (MFTIP) is available to landowners with at least 10 acres of managed forest on their property. Landowners who apply and qualify for the program, have the managed forest taxed at 25% of the residential land tax rate (Ontario Ministry of Natural Resources, 2006). The Conservation Land Tax Incentive Program (CLTIP) is available to landowners who have a significant ecosystem or other significant natural features on their property and agree to protect it (Ontario Ministry of Natural Resources, 2011b). Landowners receive a 100% tax exemption on the eligible portion of their property. The Ecological Gifts Program provides a tax incentive for property owners with ecologically sensitive land who donate their land or a partial interest in their land to a qualified recipient (Environment Canada, 2006). There are a variety of other programs that provide forms of financial assistance to help landowners protect natural features on their agricultural properties. Conservation authority staff can help landowners access and carry out these programs.

6.1.8. Partner With Environmental Organizations: A number of environmental organizations are eager to partner with landowners on conservation projects. Conservation authorities can offer advice or assistance with tree-planting and stream/pond restoration. Landowners with Butternut (*Juglans cinerea*) and/or very large American Elms (*Ulmus americana*) can assist groups working on recovery activities for these two tree species whose numbers have been decimated by disease.

6.1.9. Submit Species Observations: Conservation authorities collect data on species presence and distributions in their jurisdictions and are interested in receiving reports on species observed especially if the species is believed to be uncommon in the area. Other notable species or natural features worthy of reporting include nesting turtles, bat or snake winter hibernating areas (hibernacula), winter deer yards, areas of frequent road-kill, and locations where colonial-nesting birds such as herons and swallows breed.

7. DEFINITIONS AND ABBREVIATIONS USED IN THIS REPORT

ANSI – Area of Natural & Scientific Interest. An area designated by the OMNR within the province of Ontario that represents significant geological (earth science) and/or biological (life science) features. (Ontario Ministry of Natural Resources, 2011a)

BNAI – Brampton Natural Areas Inventory

COSEWIC – Committee on the Status of Endangered Wildlife in Canada. A committee of experts that assesses and designates Species At Risk in Canada (Committee on the Status of Endangered Wildlife in Canada, 2010).

COSSARO – Committee on the Status of Species at Risk in Ontario. A committee of experts that assesses and classifies Species at Risk in Ontario (Ontario Ministry of Natural Resources, 2011c).

CLTIP – Conservation Land Tax Incentive Program

CVC – Credit Valley Conservation

EAC – Environmental Advisory Committee

ELC - Ecological Land Classification. A system for classifying vegetation communities in Southern Ontario, according to the dominant plant species present, vegetation structure and soil characteristics (Lee *et a*l, 1998).

ESA – Environmentally Significant Area (sometimes referred to as an Environmentally Sensitive Area). An area designated by CVC or TRCA within their jurisdiction. (Credit Valley Conservation, 2007b, Credit Valley Conservation, 2007c)

Extirpated Species– A species that no longer exists in the wild within the jurisdiction (e.g. provincial, national), but exists elsewhere in the wild.

FOIBIS – Flora Ontario Integrated Botanical Information System

GPS – Global Positioning System

G-RANK – Global rank designating rarity based on the global status of a species, subspecies or variety (Natural Heritage Information Centre 2009).

GTA – Greater Toronto Area

HNPNC – Halton/North Peel Naturalist Club

IT IS – Integrated Taxonomic Information System

L-RANK – In this report, this rank only applies to the TRCA jurisdiction. L-rank is the regional rank given to species and communities designating the degree of conservation concern across all of TRCA's jurisdiction (Toronto and Region Conservation Authority, 2007b; Toronto and Region Conservation Authority, 2007c).

MFTIP – Managed Forest Tax Incentive Program

MNR - Ontario Ministry of Natural Resources

NAC – Natural Areas and Corridors

NAI – Natural Areas Inventory

NAS – (Mississauga) Natural Areas Survey

NEP – Niagara Escarpment Plan

NHIC – Natural Heritage Information Centre

OMNR – Ontario Ministry of Natural Resources

ORMCP – Oak Ridges Moraine Conservation Plan

OTF – Ontario Trillium Foundation

PNAC – Potential Natural Areas and Corridors

PPS – Provincial Policy Statement

PSW – Provincially Significant Wetland. A wetland that has been assessed and classified as provincially significant under the Wetland Evaluation System for Ontario (Credit Valley Conservation, 2007b; Credit Valley Conservation 2007c).

SARA – Species at Risk Act. A Canadian Act with the purpose to prevent Canadian indigenous species, subspecies and distinct populations of wildlife from becoming Extirpated or Extinct, to provide for the recovery of Endangered or Threatened species, and to encourage the management of other species to prevent them from becoming at risk (Government of Canada, 2011b; MNR, 2010).

SARO – Species At Risk in Ontario

Special Concern – A designation under COSEWIC or COSSARO that indicates a species that may become a Threatened or an Endangered, because of a combination of biological characteristics and identified threats.

Species At Risk – A species that is Extirpated, Endangered, Threatened or of Special Concern under COSEWIC or COSSARO.

SPNC – South Peel Naturalists' Club

S-RANK – Provincial (sub-national) rank used by the Natural Heritage Information Centre to set protection priorities for rare species and natural communities. These ranks are not legal designations (Natural Heritage Information Centre, 2009).

TEEM – Terrestrial Ecosystem Enhancement Model (CVC)

TRCA – Toronto and Region Conservation Authority

UNESCO – United Nations Educational, Scientific and Cultural Organization.

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