Appendix C

VERNAL POOL DATA AND MAPPING

Appendix C-1

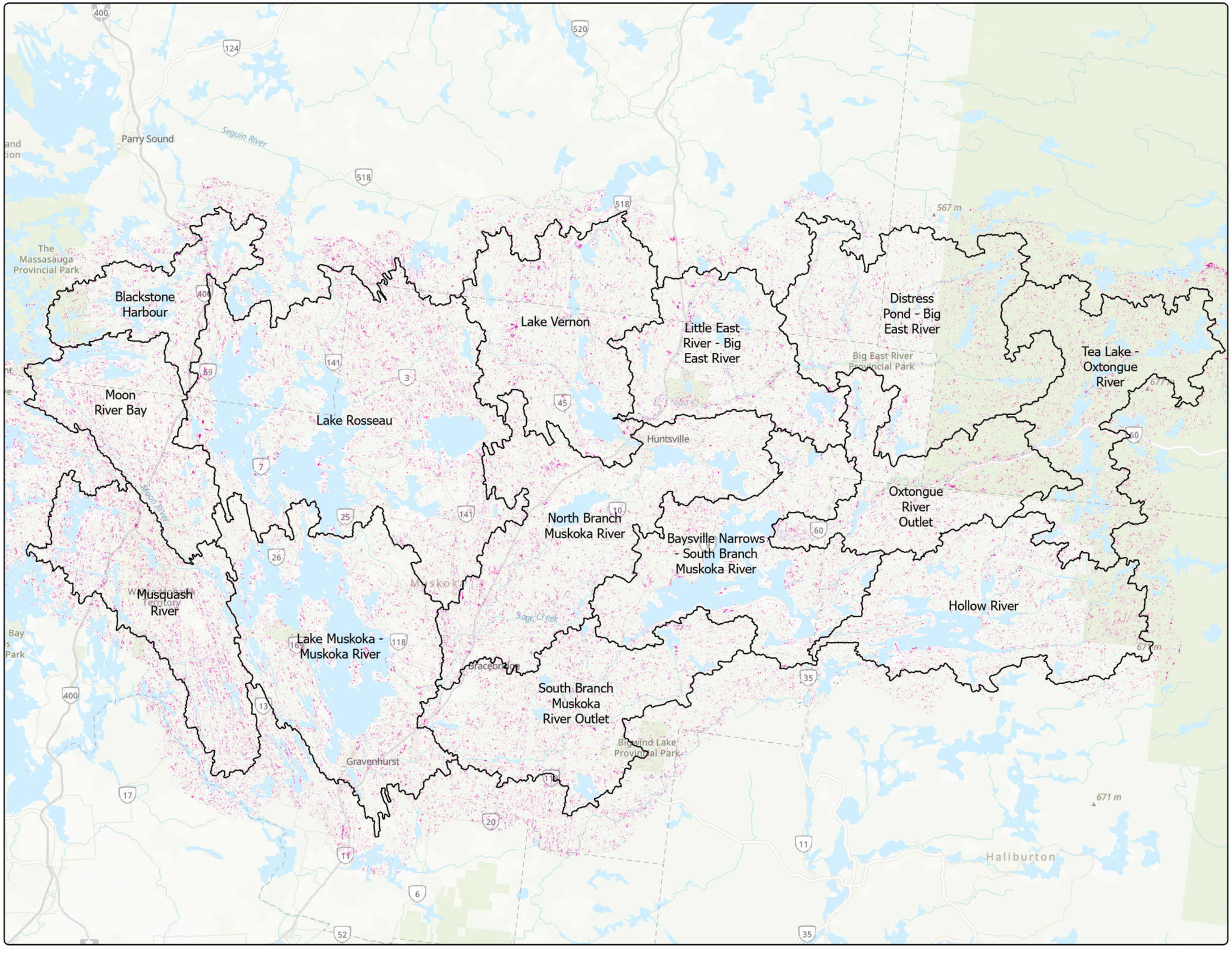
Vernal Pool Mapping

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder



Map 3-1: Vernal Pools

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 3,500 7,000 14,000

Metres

1:380,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-1: Vernal Pools Baysville Narrows - South Branch Muskoka River

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

Lake Vernon

North Branch Muskoka River

Little East River - Big East River

Distress Pond - Big East River

Baysville Narrows - South Branch Muskoka River

South Branch Muskoka River Outlet

Oxtongue River Outlet

Hollow River

Huntsville

Hidden Valley

Fairy Lake

Peninsula Lake

Canal

Hillside

Millar Hill

South Portage

Oxbow Lake

Sixteen Mile Creek

Oxtongue Lake

Britannia Rd

Muskoka Lodge

Lake of Bays

S Portage Rd

New Holm

Bona Vista

Lumina

Birkendale

Fairview Island

Fox Point

Langmaids Island

Brunel Rd

Grove Park

Wahawin

Grandview

Otter Lake

Hollow River

Paint Lake

Dorset

Maple Ridge

Russell Landing

Ril Lake

609 m

607 m

495 m

0 500 1,000 2,000

Metres

1:99,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-2: Vernal Pools Blackstone Harbour

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 500 1,000 2,000

Metres

1:77,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-3: Vernal Pools
Distress Pond - Big East River

Muskoka River Watershed IWM -
Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

Distress Pond - Big East River

Little East River - Big East River

North Branch Muskoka River

Baysville Narrows - South Branch Muskoka River

Oxtongue River Outlet

Tea Lake - Oxtongue River

0 1,000 2,000 4,000
Metres

1:105,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

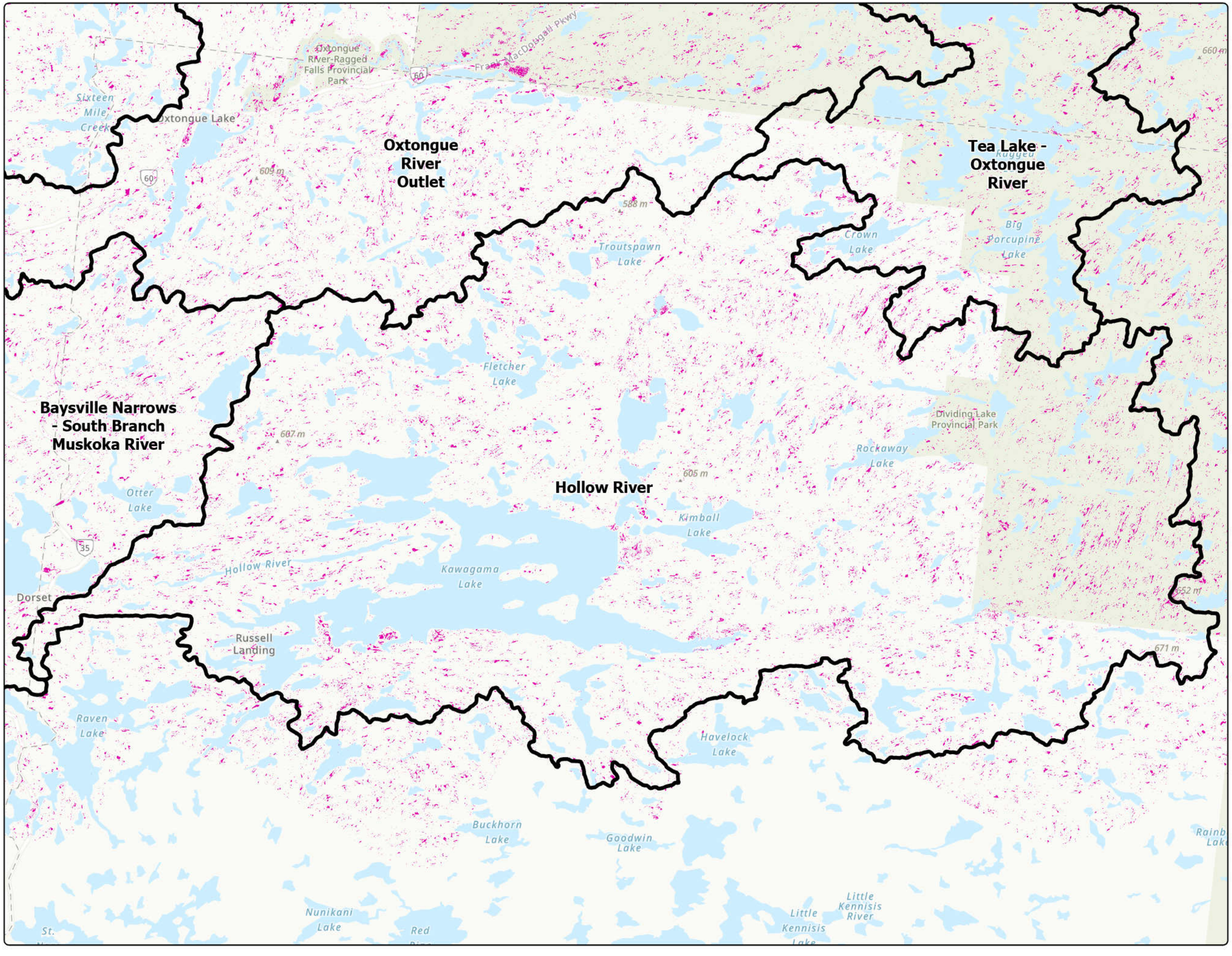
3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder



Map 3-2-4: Vernal Pools Hollow River

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 1,000 2,000 4,000

Metres

1:109,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-5: Vernal Pools
Lake Muskoka - Muskoka River

Muskoka River Watershed IWM -
Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 1,250 2,500 5,000

Metres

1:142,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

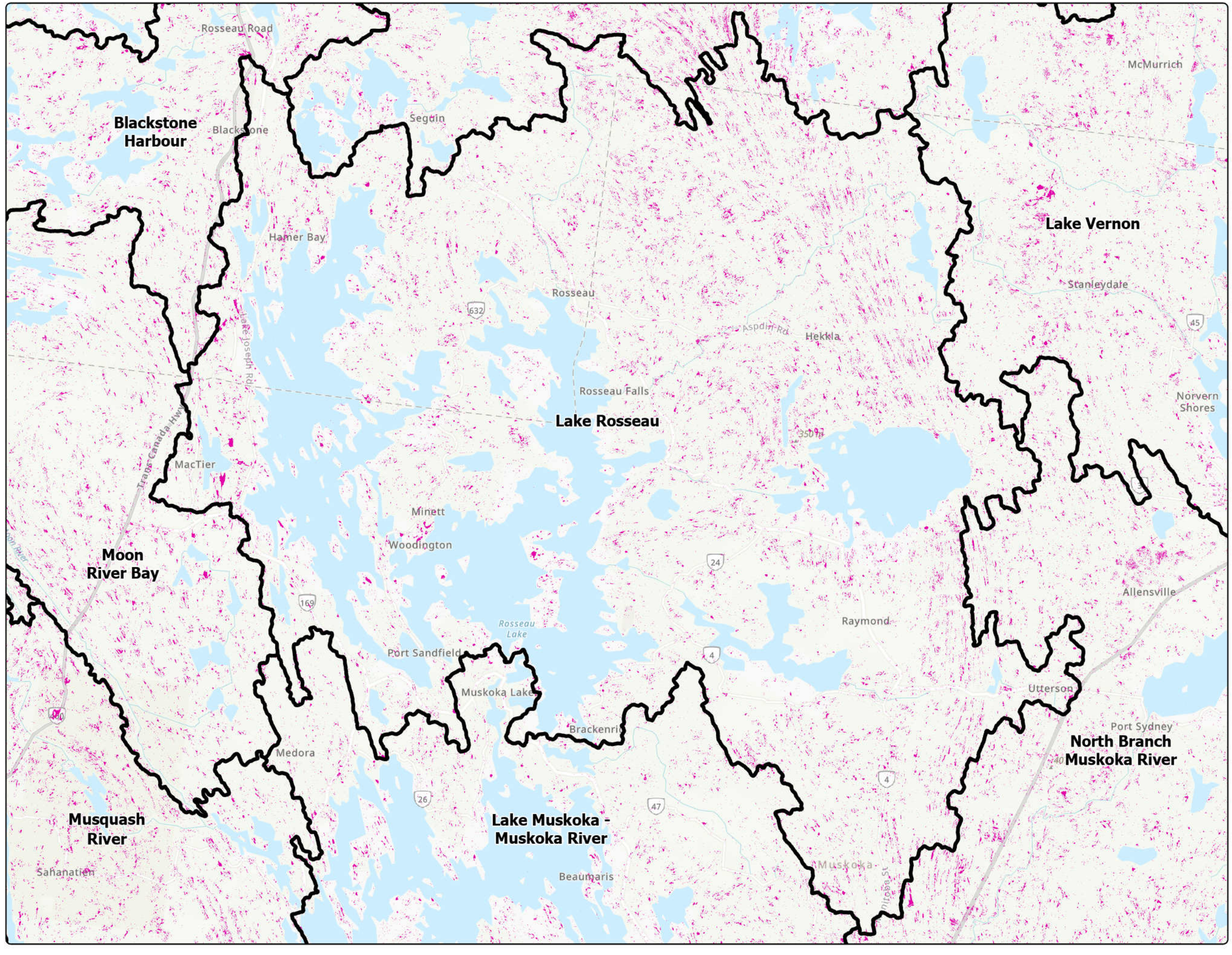
CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-6: Vernal Pools Lake Rosseau

Muskoka River Watershed IWM - Natural Capital Inventory



Vernal Pools

Quaternary Watersheds

0 1,250 2,500 5,000

Metres

1:145,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-7: Vernal Pools Lake Vernon

Muskoka River Watershed IWM - Natural Capital Inventory

- Vernal Pools
- Quaternary Watersheds

0 1,000 2,000 4,000
Metres

1:106,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

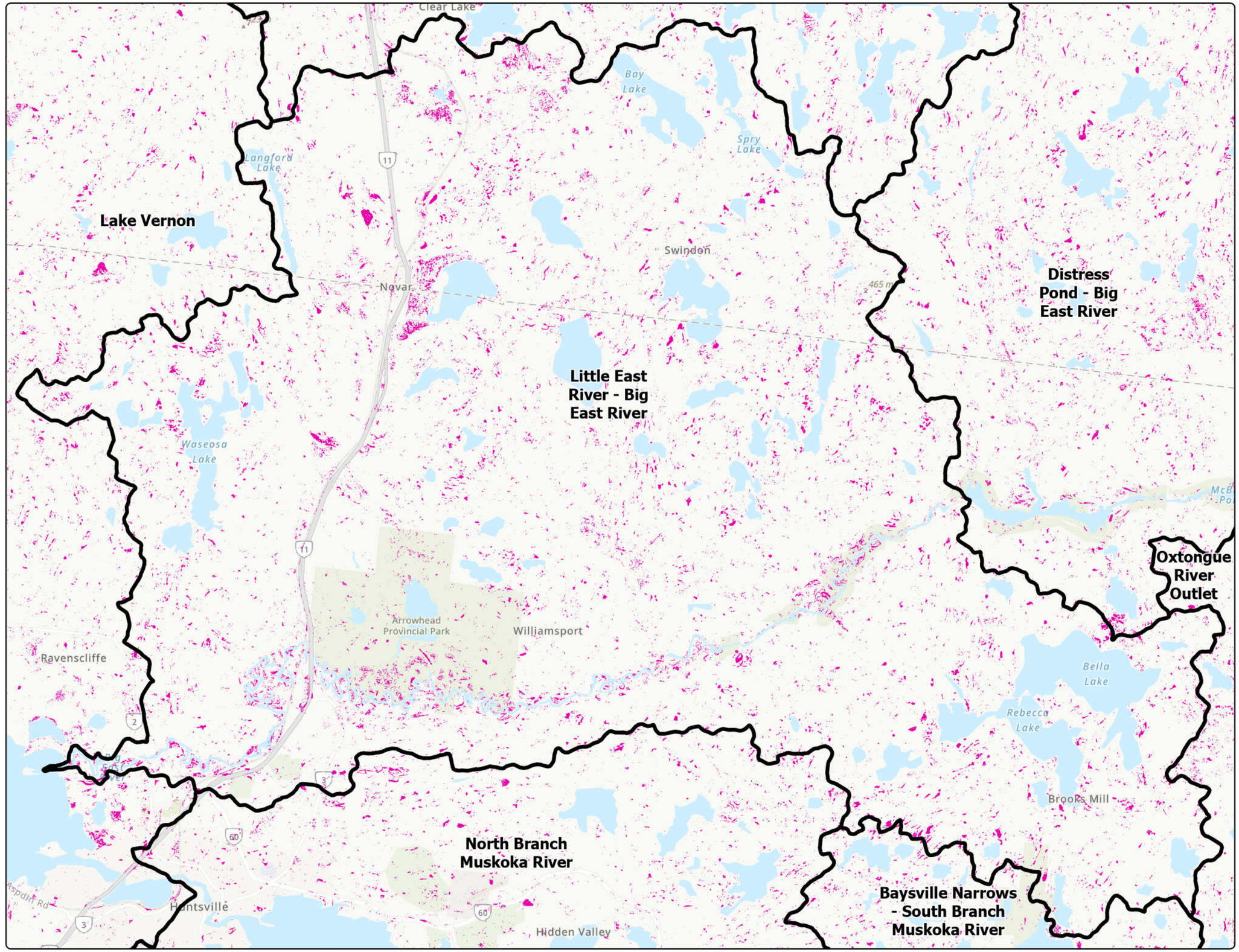
DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-8: Vernal Pools
Little East River - Big East River

Muskoka River Watershed IWM -
Natural Capital Inventory

Vernal Pools

Quaternary Watersheds



0 500 1,000 2,000
Metres

1:77,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-9: Vernal Pools Moon River Bay

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 500 1,000 2,000

Metres

1:97,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-10: Vernal Pools Musquash River

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 1,000 2,000 4,000

Metres

1:127,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-11: Vernal Pools North Branch Muskoka River

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 1,000 2,000 4,000

Metres

1:124,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

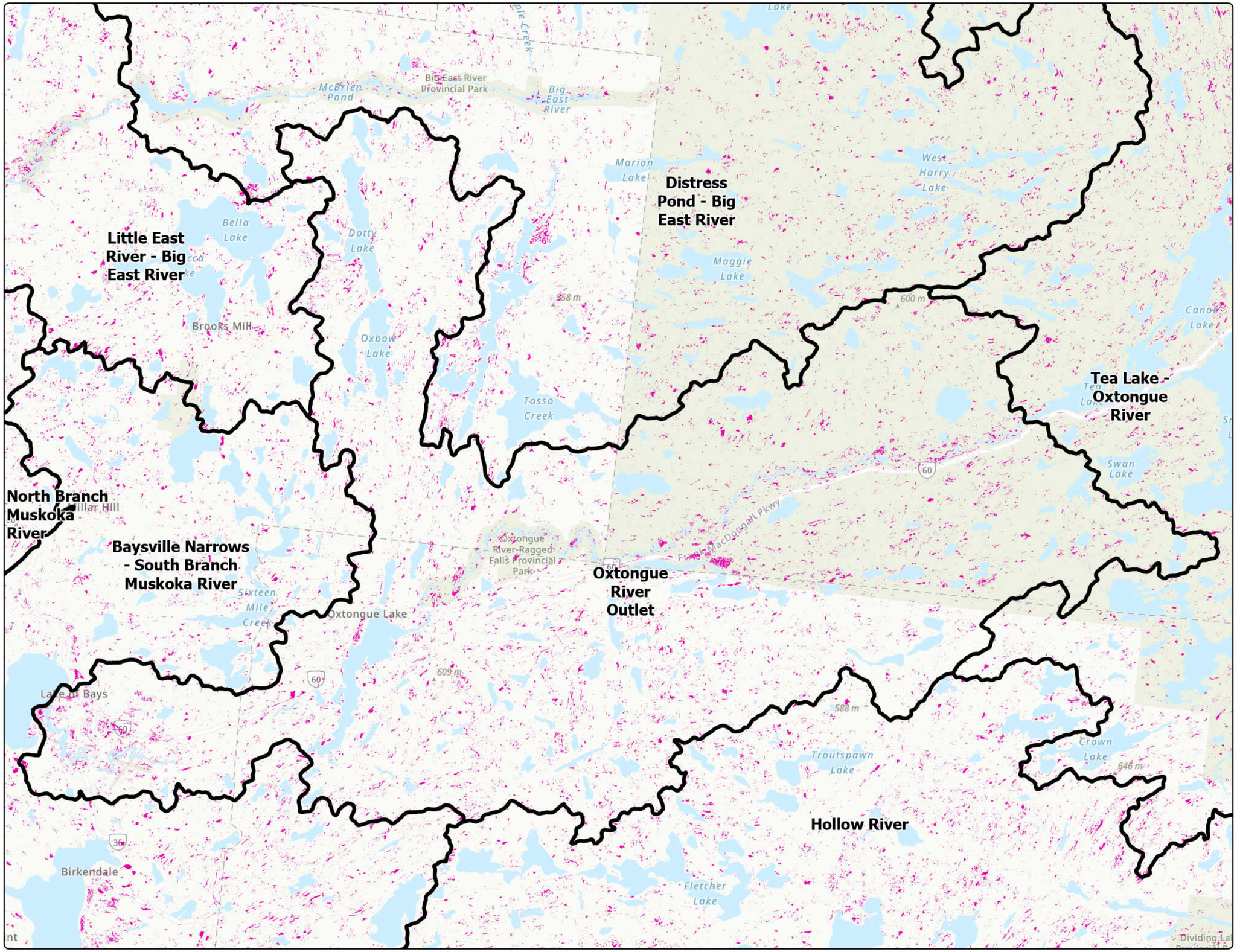
3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder



Map 3-2-12: Vernal Pools
Oxtongue River Outlet

Muskoka River Watershed IWM -
Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 500 1,000 2,000
Metres

1:100,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

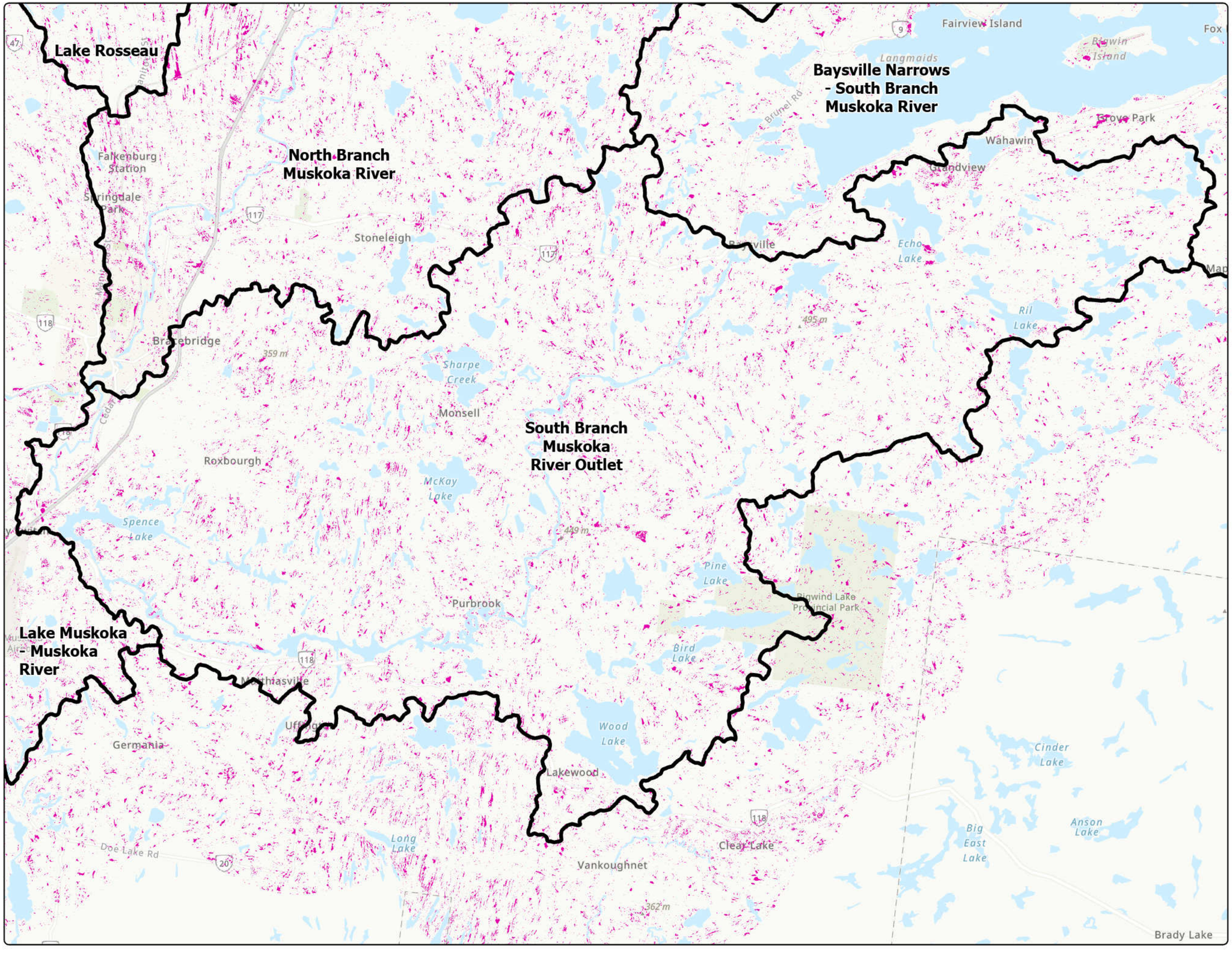
3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder



Map 3-2-13: Vernal Pools
South Branch Muskoka River Outlet

Muskoka River Watershed IWM - Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

0 1,000 2,000 4,000

Metres

1:108,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca

PROJECT: DA21-086-01

CLIENT: District of Muskoka

DATE: 16, December 2022

DRAWN BY: J. Lacsamana / J. Sauder

Map 3-2-14: Vernal Pools
Tea Lake - Oxtongue River

Muskoka River Watershed IWM -
Natural Capital Inventory

Vernal Pools

Quaternary Watersheds

Distress Pond - Big East River

Tea Lake - Oxtongue River

Oxtongue River Outlet

Hollow River

Islet Lake
McIntosh Lake
Trout Lake
Brûlé Lake
Happy Isle Lake
Otterslide Lake
Sunbeam Lake
Little Otterslide Lake
Rotter Lake
McCraney Lake
Littledoe Lake
Burnt Island Lake
Hailstorm Lake
Marion Lake
West Harry Lake
Joe Lake
Canoe Lake
Owl Lake
Linda Lake
Maggie Lake
Canoe Lake
Source Lake
Tea Lake
Smoke Lake
Little Island Lake
Tanamakoon Lake
Algonquin Park
Swan Lake
Cache Lake
Lake of Two Rivers
Provoking Lake
Head Lake
Ragged Lake
Whitefish Lake
Lawrence Lake
Big Porcupine Lake
Crown Lake
Troutspawn Lake
Lake Louisa
Fletcher
Rock
Frank MacDougall Pkwy
60
50
565 m
581 m
600 m
660 m
588 m

0 1,000 2,000 4,000
Metres

1:122,000

North American 1983 CSRS UTM Zone 17N

Basemap Source: Province of Ontario, Esri Canada, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NRCan, Parks Canada

The information displayed on this map has been compiled from various sources. While every effort has been made to accurately depict the information, this map should not be relied on as being a precise indicator of locations, features, or roads, nor as a guide to navigation. MNRF data provided by King's Printer of Ontario. Use of the data in any derivative product does not constitute an endorsement by the MNRF or the Ontario Government of such products.

DOUGAN & ASSOCIATES
ECOLOGICAL CONSULTING & DESIGN

3-7 EDINBURGH ROAD SOUTH GUELPH ON N1H 5N8
T 519.822.1609 F 519.822.5389 www.dougan.ca