NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 15 APR 14
Time Started: 1245
Time Finished: 1255

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation:
Precipitation in Prior 48hrs (mm): 0.2 mm

Site Code: LSCT052
Feature Name: Gray DR / Little Bear Cr Dr
Drainage System: Lake St Clair
Location in System: at Union / Prime Albert

GPS Location
Easting: 0395835
Northing: 4708649
Water Body No. 050

Estimated Length Assessed
Upstream: 100
Downstream: 100

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized

Avg. Wetted Width (m): 15.5 Avg. Water Depth (m): unk Max Pool Depth (m): unk
Avg. Bankfull Width (m): 18 Avg. Bankfull Depth (m): unk
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: —
Bed Morphology (%) Flat: 100 Riffle: Run: Pool:
Bank Slope & Stability: High slope / High stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr, Turbidity too high

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): large deposits of woody debris
Vegetation (with % dominant): Phrag (100%) along edge of channel

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Pioneer Comments: cannot see channel bed.

Riparian Habitat
Vegetation: T. Grasses / Phrag
Canopy Cover (% and species): Q
Adjacent Land Use: Ag

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs.
25 m span bridge ~ cobble embankments
Large wb signs of recent clean out

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	929	SE		Other:	934	NE	U/S Gray Dr
Downstream:	930	NW					
Feature Bed:	931	—					
Culvert / Bridge:	932	—					
Vegetation:	933	—					
Landscape Photo:	934	E					

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A Can't see bed.
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
debris deposits along banks, cannot see bed.
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense woody debris / Phrag along edges of channel
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Large WB, well defined banks suggest permanence

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Renewable Energy Water Body Site Investigation

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 15 APR 15
Time Started: 1300
Time Finished: 1315

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation:
Precipitation in Prior 48hrs (mm): 0.0 mm

Site Code: LSCT053
Feature Name: Little Bear Cr Dr
Drainage System: Lake St Clair
Location in System: along Prince Albert RD

GPS Location
Easting: 0395541
Northing: 4708994
Water Body No. WB051

Estimated Length Assessed
Upstream: 100
Downstream: 100

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized

Avg. Wetted Width (m): 25 Avg. Water Depth (m): unk Max Pool Depth (m): unk
Avg. Bankfull Width (m): 28.5 Avg. Bankfull Depth (m): unk
Substrate Composition (%) Boulder: Cobble: Gravel: Fines:
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: high slope / low stability Feature Gradient (H/M/L):
Other Comments: Turbidity too high for substrate determination
Channelized

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense patches of woody debris
Vegetation (with % dominant): patches of phrag along edge (70%) w/ traces of duckweed (30%)

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: T. Grasses / Phrag / D. Shrubs
Canopy Cover (% and species): Ø
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs, areas of erosion along both banks
Sig WB Channel definition implies permanence
high turbidity makes substrate eval impossible
Signs of recent clearing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	071	SE	—	Other:	—	—	—
Downstream:	072	NW	—				
Feature Bed:	073	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	—	—	—				
Landscape Photo:	074	E	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
—
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Size of WB and presence of aquatic veg sugests permanence

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Project (No. & Name): 162 N. Kent **Field Staff:** BEB

Survey Date: 15 APR 15
Time Started: 1315
Time Finished: 1325

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°C, 3/E, 20%, 0
Precipitation in Prior 48hrs (mm): 0.2 mm

Site Code: LSCT054
Feature Name: Bean Dr
Drainage System: Lake St Clair
Location in System: at Annes Gilbert Rd

GPS Location
Easting: 0398552
Northing: 4709061
Water Body No. WB052

Estimated Length Assessed
Upstream: 50
Downstream: 0

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.3 Max Pool Depth (m): 0.45
Avg. Bankfull Width (m): 8.5 Avg. Bankfull Depth (m): 0.85
Substrate Composition (%) ~~Boulder:~~ ~~Cobble:~~ ~~Gravel:~~ ~~Fines:~~
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High Slope / High Stability
Feature Gradient (H/M/L): Low
Other Comments:
Channelized Dr,
Turbidity too high for Sub Strate assessment

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense overhanging Bank veg
Vegetation (with % dominant): Phrag (10%) only on edge of Stream bed

Surface Water Quality
Temp (°C): 9 Turbidity (O/M/H): Low Colour: Green Comments: channel bed barely visible

Riparian Habitat
Vegetation: T. Grasses / Phrag
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No fish obs
well defined channel w dense phrag along banks
Signs of bank erosion

Photographs	No.	Direction	Description
Upstream:	NE	0935	—
Downstream:	—	—	—
Feature Bed:	—	0936	—
Culvert / Bridge:	—	—	—
Vegetation:	—	0937	—
Landscape Photo:	NE	0938	—

Other:	No.	Direction	Description
	—	—	—

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
— cannot see through turbid water
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
N/A
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
N/A cannot see bed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached ~~Algae~~, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Due to size / channel definition, channel is cutting through bank veg w very slight sinosity

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N Kent **Field Staff:** BEG

Survey Date: 15 APR 15 **Weather Conditions**
Time Started: 1325 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1335 *Precipitation in Prior 48hrs (mm):* 0 2 mm

Site Code: LSCT065 **GPS Location** **Estimated Length Assessed**
Feature Name: Little Bear Cr Dr Easting: 0395397 Upstream: 100
Drainage System: Lake St Claire Northing: 4702948 Downstream: 100
Location in System: ext Prince Albert Rd *Water Body No.* WB053

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☑ Straight	☐ Meandering (H/M/L Sinuosity):	☑ Defined	☐ Poorly Defined
☐ Standing Water	☐ Low Flow / Baseflow	☐ Moderate Flow	☐ High / Flood Flow
☑ Freshet Flow			

Avg. Wetted Width (m): 2.75 Avg. Water Depth (m): unk - ~1m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 30 Avg. Bankfull Depth (m): unk
Substrate Composition (%) ~~Boulder: unk~~ Cobble: unk ~~Gravel: unk~~ ~~Fines: unk~~
Bed Morphology (%) Flat: 100 Riffle: Run: Pool:
Bank Slope & Stability: High Slope Low Stability Feature Gradient (H/M/L):
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense patches of woody debris along edges
Vegetation (with % dominant): Phrag along edges (70%) w patches of duckweed (30%)

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Brown Comments: cannot see channel bed

Riparian Habitat
Vegetation: Phrag
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
areas of erosion along banks
Significant WB
3 km Spans Bridge

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	939	NE	-	Other:	945	NW	U/S Prince Albert Dr
Downstream:	940	SW	-				
Feature Bed:	941	-	-				
Culvert / Bridge:	942	-	-				
Vegetation:	943	-	-				
Landscape Photo:	944	SW	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A cannot see
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
N/A cannot see
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
Dense patches of woody debris/Phrag No seeps/springs/high water table evidence
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Size of WB, Channel definition

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N-Kent **Field Staff:** BES

Survey Date: 21 APR 15 **Weather Conditions**
Time Started: 0945 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1000 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 128 **GPS Location** **Estimated Length Assessed**
Feature Name: Little Bear Cr Dr Easting: 0392135 Upstream: 50
Drainage System: Lake St Clair Northing: 5706867 Downstream: 50
Location in System: at St Clair Rd *Water Body No.* 055

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 28 Avg. Water Depth (m): >1.5m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 30 Avg. Bankfull Depth (m): ~2m.
Substrate Composition (%) Boulder: unk Cobble: unk Gravel: unk Fines: unk
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High Slope Moderate Stability Feature Gradient (H/M/L):
Other Comments: well defined channel, turbidity too high for substrate analysis

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense over hanging bank veg
Vegetation (with % dominant): Turbidity too high times of duck weed obs
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Brown Comments:

Riparian Habitat
Vegetation: Dense Phrag / Ds Shrubs
Canopy Cover (% and species): 52 Ds Shrubs
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel w dense over hanging bank veg
Turbidity too high for detailed analysis
35m Span bridge

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	361	NE	-	Other:	-	-	-
Downstream:	362	SW	-				
Feature Bed:	363	-	-				
Culvert / Bridge:	364	-	-				
Vegetation:	365	-	-				
Landscape Photo:	366	E	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
-
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
-
Presence of Hydric Soils:
-
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
-
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on size/channel definition and presence of aquatic veg
most likely a permanent WB

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Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 20APR15 **Weather Conditions**
Time Started: 1500 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1515 *Precipitation in Prior 48hrs (mm):*

Site Code: LSCT 117 **GPS Location** **Estimated Length Assessed**
Feature Name: Little bear cr dr Easting: 0391728 Upstream: 10
Drainage System: Lake St Clair Northing: 4706890 Downstream: 10
Location in System: ont Green Valley Ln *Water Body No.* 056

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 20 Avg. Water Depth (m): unk >2m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 25 Avg. Bankfull Depth (m): unk ~3m
Substrate Composition (%) Boulder: unk Cobble: unk Gravel: unk Fines: unk
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High slope High Stability Feature Gradient (H/M/L):
Other Comments:
well defined channel Turbidity too high to see channel bed

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): over hanging T. Veg
Vegetation (with % dominant): none visible
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: T. Grasses Phrag, D. Trees
Canopy Cover (% and species): 5-7% D. Trees
Adjacent Land Use: Ag

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel, Large wB

3m Span bridge w/ Cobble embankments

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	296	SE	-	Other:	-	-	-
Downstream:	297	NW	-				
Feature Bed:	298	-	-				
Culvert / Bridge:	299	-	-				
Vegetation:	300	-	-				
Landscape Photo:	301	SE	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
none visible
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Large well defined wB, high water mark (ie bankfull) visible on both banks

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Project (No. & Name): 1612 Nukent **Field Staff:** BEP

Survey Date: 20 APR 15
Time Started: 1325
Time Finished: 1340

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation:
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT 112
Feature Name: Little Bear Cr
Drainage System: Lake St clair
Location in System: along Bush Ln

GPS Location
Easting: 0380415
Northing: 4707618
Water Body No. 057

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 18 Avg. Water Depth (m): unk ~2m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 28 Avg. Bankfull Depth (m): unk ~~22~~ >3m
Substrate Composition (%) ~~Boulder: unk~~ ~~Cobble: unk~~ ~~Gravel: unk~~ ~~Fines: unk~~
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: moderate slope High stability Feature Gradient (H/M/L):
Other Comments:
well defined channel
Turbidity too high to see channel bed, water level too high to access

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): over hanging bank veg
Vegetation (with % dominant): none visible

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses D. Shrubs
Canopy Cover (% and species): Ø
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Large WB w̄ welldefined channel
36 m Span Bridge

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	267	SE	–	Other:	–	–	–
Downstream:	268	NW	–				
Feature Bed:	269	–	–				
Culvert / Bridge:	270	–	–				
Vegetation:	271	–	–				
Landscape Photo:	272	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Turbidity too high
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Size / Significance and channel definition suggests permanance.

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEN

Survey Date: 16APR15 **Weather Conditions**
Time Started: 1310 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9°C, 4/S, 30%, ⊗
Time Finished: 1326 *Precipitation in Prior 48hrs (mm):* 0.0mm

Site Code: LSCT094 **GPS Location** **Estimated Length Assessed**
Feature Name: Simpson Dr Easting: 0392921 Upstream: 50
Drainage System: Lake St Clair Northing: 4707591 Downstream: 50
Location in System: at country view Ln *Water Body No.* 058

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 3.5 Avg. Water Depth (m): 0.14 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 4.5 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: mod Feature Gradient (H/M/(L)): Low
Other Comments: channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense cattails / over hanging bank veg
Vegetation (with % dominant): Cattail sp (40%) water cress (45%) duck weed (15%)
Surface Water Quality
Temp (°C): 10 Turbidity ((L)/M/H): Low Colour: Brown Comments: —

Riparian Habitat
Vegetation: T. Grasses / Dr Shrubs
Canopy Cover (% and species): ⊗
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly defined channel = Filimentus algae
1.25 m CSP culvert at road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	105	SE	—	Other:	—	—	—
Downstream:	106	SW	—				
Feature Bed:	107	—	—				
Culvert / Bridge:	108	—	—				
Vegetation:	109	—	—				
Landscape Photo:	110	E	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surrounding Ag fields, no coarse substrate.
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
bank slumps deposited sediment at toe of banks, has been vegetated but likely recent deposit
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
traces of dry grasses / cattails throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
presence of Aquatic Veg suggests some permanence, minor channel development (ie banks
Areas of Channel bed w no veg.

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Renewable Energy Water Body Site Investigation
Office Use Only

Project (No. & Name): 1612 McKeon **Field Staff:** BEB

Survey Date: 17APR15 **Weather Conditions**
Time Started: 0750 Temp (°C), Wind, Cloud Cover (%), Precipitation: 12°, 2 SW, 0, 0
Time Finished: 0815 *Precipitation in Prior 48hrs (mm):* 5.0 mm

Site Code: LSCT097 **GPS Location** **Estimated Length Assessed**
Feature Name: McNevlage Drain Easting: 0401237 Upstream: 100
Drainage System: Lake St Clair Northing: 4705197 Downstream: 50
Location in System: at Caledonia Rd *Water Body No.* 059

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 3.0 Avg. Water Depth (m): 0.03 Max Pool Depth (m): 0.4
Avg. Bankfull Width (m): 4.5 Avg. Bankfull Depth (m): 0.65
Substrate Composition (%) Boulder: - Cobble: - Gravel: - Fines: 10+
Bed Morphology (%) Flat: - Riffle: - Run: - Pool: 100
Bank Slope & Stability: High slope moderate stability Feature Gradient (H/M/L):
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): very dense cattails - d/s
Vegetation (with % dominant): Cattail sp (50%) - D/S Phrag (50%) - U/S

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Clear Comments: —

Riparian Habitat
Vegetation: Tall Grasses / D. Shrubs
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Recently cleaned channel
dense cattail sp d/s of culvert
1.2m CSP in concrete ☐ cobble embankments

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	182	SE	-	Other:	-	-	-
Downstream:	183	W	-				
Feature Bed:	184	-	-				
Culvert / Bridge:	185	-	-				
Vegetation:	186	-	-				
Landscape Photo:	187	W	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surrounding Ag fields, some coarse material deposited from culvert area
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
deposit of sediment on u/s side of structures
Presence of Hydric Soils:
-
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Very dense dry grasses / cattails Throughout, some minor woody debris on bed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
poorly defined channelized dr w/ cattails suggests some degree of permanence
Areas of bed w/ no veg. growth

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Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 17APR15 **Weather Conditions**
Time Started: 1115
Time Finished: 1130
Temp (°C), Wind, Cloud Cover (%), Precipitation: 16°, 2 N, 0, 0
Precipitation in Prior 48hrs (mm): 5.0mm

Site Code: LSCT 107
Feature Name: Campbell Dr
Drainage System: Lake St Clair
Location in System: at Brooks Ln

GPS Location
Easting: 0400206
Northing: 4704959
Water Body No. 060

Estimated Length Assessed
Upstream: 10
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 3.5 Avg. Water Depth (m): 0.10 Max Pool Depth (m): 0.20
Avg. Bankfull Width (m): 4.5 Avg. Bankfull Depth (m): 0.70
Substrate Composition (%) Boulder: Cobble: Gravel: Fines: 100
Bed Morphology (%) Flat: 100 Riffle: Run: Pool:
Bank Slope & Stability: High Slope Low stability - exposed soil Feature Gradient (H/M/L):
Other Comments: Channelized Dr
Cleaning in progress

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense build up of woody debris along channel
Vegetation (with % dominant): - none Recent clean out

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Brown Comments:

Riparian Habitat
Vegetation: T. Grasses / D. Shrubs
Canopy Cover (% and species): - Recent clean out
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense build up of woody debris / over hanging veg
2.5m open box culvert at Brook Ln

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	239	SE	-	Other:	-	-	-
Downstream:	240	NW	-				
Feature Bed:	242	-	-				
Culvert / Bridge:	243	-	-				
Vegetation:	241	-	-				
Landscape Photo:	244	NW	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surranding Ag. Fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
N/A cleaning in progress
Presence of Hydric Soils:
-
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Very Dense woody debris build up through out
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Channel definition and Sub/Sorting Suggests sand degree of flowing

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 16 APR 15 **Weather Conditions**
Time Started: 1540 Temp (°C), Wind, Cloud Cover (%), Precipitation: 11°C, 3/SE, 30%, 0
Time Finished: 1555 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT-092 **GPS Location** **Estimated Length Assessed**
Feature Name: Campbell dr Easting: 0398867 Upstream: 50
Drainage System: Lake St Clair Northing: 4705637 Downstream: 50
Location in System: at Clayton Ln *Water Body No.* 061

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 5.0 Avg. Water Depth (m): 0.30 Max Pool Depth (m): 0.4
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: high slope high stability Feature Gradient (H/M/L): Low
Other Comments:

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Isolated patches of woody debris
Vegetation (with % dominant): phrag (45%) Pond weed sp (40%) duckweed (15%)
Surface Water Quality
Temp (°C): 10 Turbidity (L/M/H): Low Colour: Clear Comments: foam build up on d/s side

Riparian Habitat
Vegetation: Phrag / T. Grass
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Pike obs
defined channel w abundant organic veg
deep centre channel, low flow
4.5 m open box culvert w cobble embankments

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	153	SE	–	Other:	–	–	–
Downstream:	154	NW	–				
Feature Bed:	155	–	–				
Culvert / Bridge:	156	–	–				
Vegetation:	157	–	–				
Landscape Photo:	158	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Fine Similar to surrounding Ag fields, fine, sandy sed. deposits on bed
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
thick sandy deposits on bed and along edges where dense veg is growing
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Abundant phrag debris Throughout w/B, old veg. debris on bed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of pond weed and N. Pike suggest Permanence, portions of bed with no veg growth

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 16 APR 15
Time Started: 1520
Time Finished: 1535

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 11°C, 3/SE, 30%, Ø
Precipitation in Prior 48hrs (mm): 0.0mm

Site Code: LSCT091
Feature Name: Campbell dr
Drainage System: Lake St Clair
Location in System: at Prince Albert Dr

GPS Location
Easting: 0398235
Northing: 4705740
Water Body No. 062

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 5.5 Avg. Water Depth (m): 0.25 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 7.0 Avg. Bankfull Depth (m): 0.85
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: high slope/high stability Feature Gradient (H/M/L): Low
Other Comments: Signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense build up of phrag debris, possible undercut banks.
Vegetation (with % dominant): phrag (85%) Duckweed (15%)
Surface Water Quality
Temp (°C): 10 Turbidity (L/M/H): MEDIUM Colour: Brown Comments: –

Riparian Habitat
Vegetation: T. Grasses / Phrag
Canopy Cover (% and species): Ø
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs

4.5 m open box culvert w/ cobble embankments

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	147	NE	–	Other:	–	–	–
Downstream:	148	SW	–				
Feature Bed:	149	–	–				
Culvert / Bridge:	150	–	–				
Vegetation:	151	–	–				
Landscape Photo:	152	SW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surrounding Ag. Fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Bank slumping is depositing material along edges of channel
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense build up of phrag debris
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of Phrag / duck weed suggests permanent, portions of bed with no veg growth
Low Flow channel developing

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Renewable Energy Water Body Site Investigation
Office Use Only

Project (No. & Name): 162 N. Kent **Field Staff:** BEB

Survey Date: 16APR19 **Weather Conditions**
Time Started: 1350 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9°C, 4/S, 30%, 0
Time Finished: 1405 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT086 **GPS Location** **Estimated Length Assessed**
Feature Name: Campbell dr Easting: 0397532 Upstream: 50
Drainage System: Lake St Clair Northing: 4706368 Downstream: 50
Location in System: cut country view In *Water Body No.* 063

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 5.5 Avg. Water Depth (m): 0.35 Max Pool Depth (m): 0.45
Avg. Bankfull Width (m): 7.5 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High slope Low Stability Feature Gradient (H/M/L): Low
Other Comments: Exposed soil and signs of erosion
Channelized Dr
Recently cleaned out - removal of bank veg

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense deposits of woody debris Throughout
Vegetation (with % dominant): duckweed - 100%

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Low Colour: Brown Comments: —

Riparian Habitat
Vegetation: T.Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
dense build up of woody debris Throughout Channel
4.5m open box culvert at road sag

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	117	SE	—	Other:	—	—	—
Downstream:	119	NW	—				
Feature Bed:	118	—	—				
Culvert / Bridge:	121	—	—				
Vegetation:	120	—	—				
Landscape Photo:	122	SE	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
~~Sediment deposits around debris piles on channel bed~~ fine sediments deposited, similar to surrounding Ag fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Sediment deposits around debris piles on channel bed
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Abundant woody debris Throughout channel
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
presence of duckweed/algae suggest permanence, areas on bed where no veg occurs, sediment deposits around debris piles

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Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 16APR15
Time Started: 0800
Time Finished: 0816

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 9° SSE½ 40% ,0
Precipitation in Prior 48hrs (mm): 0.0mm

Site Code: LSCT067
Feature Name: Henderson-Campbell dr
Drainage System: Lake St Clair
Location in System: at Cedar Ln

GPS Location
Easting: 0396165
Northing: 4707065
Water Body No. 064

Estimated Length Assessed
Upstream: 100
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

- ☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
- ☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
- ☑ Freshet Flow Channelized Dr

Avg. Wetted Width (m): 4.76 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.25
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.65
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High Slope moderate Stability Feature Gradient (H/M/L): Low
Other Comments: Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense patches of Cattail debris
Vegetation (with % dominant): 95% Cattail sp 5% duckweed

Surface Water Quality
Temp (°C): 10 Turbidity (L/M/H): Low Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Channelized dr 0 Signs of substrate sorting
4x5 open box culvert

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	010	SW	–	Other:	–	–	–
Downstream:	011	NE	–				
Feature Bed:	012	–	–				
Culvert / Bridge:	013	–	–				
Vegetation:	014	–	–				
Landscape Photo:	015	SW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
similar to surrounding Ag. Fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Thick seal deposits across bed
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense patches of cattail debris throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
none
Attached (Algae) Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of aquatic veg Sugest permanence, some veg growing on channel bed but areas devoid of veg on bed also occur.

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 162 N. Kent **Field Staff:** BEB

Survey Date: 28APR15 **Weather Conditions**
Time Started: 1435 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.1°, 3N, 30%, 0
Time Finished: 1510 *Precipitation in Prior 48hrs (mm):* No Data

Site Code: LSCT176 **GPS Location** **Estimated Length Assessed**
Feature Name: Henderson-Campbell Dr Easting: 0395337 Upstream: 150
Drainage System: Lake St Clair Northing: 4707646 Downstream: 150
Location in System: Near TDR *Water Body No.* 065

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☑ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 5.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.4
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High Slope Low Stability - Signs of Erosion Feature Gradient (H/M/L):
Other Comments:
Expansive soil / No visible Flow

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): patches of Dry Grasses sporadically throughout
Vegetation (with % dominant): Water cress (25%) Phragmites (65%)

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): L Colour: Clear Comments: —

Riparian Habitat
Vegetation: T. Grasses / Phrag along banks & edge of channel
Canopy Cover (% and species): 8
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
patches of water cress w times of duckweed throughout

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	834	SE	—	Other:	—	—	—
Downstream:	835	NW	—				
Feature Bed:	836	—	—				
Culvert / Bridge:		—	—				
Vegetation:	837	—	—				
Landscape Photo:	838	NW	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
dense aq. veg growing across entire bed surface
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
some deposits along edge of channel
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Patches of Dry grasses Throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) N/A

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on presence of watercress suggests some degree of permanency

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Renewable Energy Water Body Site Investigation

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 15 APR 15
Time Started: 1400
Time Finished: 1415

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/E, 20%, Ø
Precipitation in Prior 48hrs (mm): 2.2 mm

Site Code: LSCT057
Feature Name: Henderson-Campbell dr
Drainage System: Lake St Clair
Location in System: at Union Ln

GPS Location
Easting: 0395061
Northing: 4707941
Water Body No. 066

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 4.5 Avg. Water Depth (m): 0.35 Max Pool Depth (m): 0.45
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: — Cobble: — Gravel: 20 Fines: 80
Bed Morphology (%) Flat: 80 Riffle: — Run: 20 Pool: —
Bank Slope & Stability: High slope moderate stability - signs of Erosion Feature Gradient (H/M/L): LOW
Other Comments: Signs of erosion
Signs of cleaning D/S
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense patches of dry phrag
Vegetation (with % dominant): Phrag (90%) traces of duck weed (10%)

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): LOW Colour: Brown Comments: —

Riparian Habitat
Vegetation: Phrag / T. Grasses
Canopy Cover (% and species): Ø
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense Phrag along banks
4.5m open box culvert at Union Ln
well defined channel

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	0951	SE	—	Other:	—	—	—
Downstream:	0952	NW	—				
Feature Bed:	0953	—	—				
Culvert / Bridge:	0954	—	—				
Vegetation:	0955	—	—				
Landscape Photo:	0956	SE	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Sandy, fine grained, similar to surrounding Ag. fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
layer of sed. deposits on channel bed
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense Phrag deposits throughout, no leaf litter on bed.
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Channel definition / Phrag suggest permanence high water mark (ie bankfull) visible
some sub sort, some veg on channel bed.

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 17APR15 **Weather Conditions**
Time Started: 0835 Temp (°C), Wind, Cloud Cover (%), Precipitation: 11.6°, 3 NNW, 0, 0
Time Finished: 0850 *Precipitation in Prior 48hrs (mm):* 5.0 mm

Site Code: LSCT022 **GPS Location** **Estimated Length Assessed**
Feature Name: Campbell dr. Easting: 0401980 Upstream: 100
Drainage System: Lake St Clair Northing: 4704327 Downstream: 50
Location in System: at Caledonia Rd *Water Body No.* 067

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 4.5 Avg. Water Depth (m): 0.10 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.50
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: 100
Bank Slope & Stability: High slope High Stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Very dense Cattail patches Throughout
Vegetation (with % dominant): Cattail sp. (90%) duckweed (10%)

Surface Water Quality
Temp (°C): 9° Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Soft substrates w very dense cattail patches
1.0m CSP in concrete blocks at Road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	094	SE	–	Other:	–	–	–
Downstream:	095	SW	–				
Feature Bed:	096	–	–				
Culvert / Bridge:	097	–	–				
Vegetation:	098	–	–				
Landscape Photo:	099	SW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Can't see beyond veg debris seems to be thick deposits of fines, similar to surrounding soils
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Thick deposits on u/s side of structure / culvert
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Very dense cattails Through out, dense veg. debris on bed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
–None–
Attached (Algae), Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of cattails and duckweed suggest some permanence or frequent flow

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Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** DHB

Survey Date: 17 APR16
Time Started: 0820
Time Finished: 0830

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 11.6°, 3 NNW, Ø, Ø
Precipitation in Prior 48hrs (mm): 5.0 mm

Site Code: LSCT098
Feature Name: Campbell dr
Drainage System: Lake St Clair
Location in System: along Ebents Ln

GPS Location
Easting: 0401604
Northing: 4704328

Estimated Length Assessed
Upstream: 10
Downstream: 10

Water Body No. 068

Channel Characteristics and Morphology N/A. ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☑ Straight	☐ Meandering (H/M/L Sinuosity):	☑ Defined	☐ Poorly Defined
☐ Standing Water	☐ Low Flow / Baseflow	☐ Moderate Flow	☐ High / Flood Flow
☑ Freshet Flow			

Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.10 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 7.5 Avg. Bankfull Depth (m): 0.35
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: — Riffle: — Run: — Pool: 100
Bank Slope & Stability: moderate slope moderate stability Feature Gradient (H/M/L):
Other Comments: Channelized dr, minor sinuosity developing through veg patches along channel edge

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Patches of dense cattails and over hanging bank veg.
Vegetation (with % dominant): Cattail sp (75%) Duckweed (25%)

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: T.Grasses + C.Trees
Canopy Cover (% and species): 30% D/S C.Trees
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense patches of cattail sp through out
Soft substrates through out
Loam CSP at road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	188	SE	–	Other:	–	–	–
Downstream:	189	NW	–				
Feature Bed:	190	–	–				
Culvert / Bridge:	191	–	–				
Vegetation:	192	–	–				
Landscape Photo:	193	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Fine grained deposits, consistently dispersed across bed. Similar to surrounding soils
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Thick sed deposits on d/s side of road.
Presence of Hydric Soils:

Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense cattail deposits D/S, Traces of Leaf litter and dry cattail through out
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) N/A

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of cattails / Duckweed suggests permanence.

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 24APR15 **Weather Conditions**
Time Started: 0900 Temp (°C), Wind, Cloud Cover (%), Precipitation: 3°, 3N, -, 0
Time Finished: 0935 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT166 **GPS Location** **Estimated Length Assessed**
Feature Name: CAMPBELL Dr Easting: 040119 Upstream: 100
Drainage System: Lake St Clair Northing: 4704811 Downstream: 100
Location in System: near T12 *Water Body No.* 069

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Dr F Signs of recent clean out
Avg. Wetted Width (m): 2.0 Avg. Water Depth (m): 0.3 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.8
Substrate Composition (%) Boulder: - Cobble: - Gravel: - Fines: 100
Bed Morphology (%) Flat: - Riffle: - Run: - Pool: 100
Bank Slope & Stability: moderate Slope High stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense woody debris Throughout
Vegetation (with % dominant): FG grasses (100%)

Surface Water Quality
Temp (°C): 3 Turbidity (L/M/H): Colour: Brown Comments:

Riparian Habitat
Vegetation: D. Trees / Shrubs
Canopy Cover (% and species): 30% D. Shrubs
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Recently Cleaned dr F abundant woody debris
no aquatic veg obs

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	87	SE	-	Other:	-	-	-
Downstream:	88	NW	-				
Feature Bed:	89		-				
Culvert / Bridge:			-				
Vegetation:	90	-	-				
Landscape Photo:	91	SE	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
same as surrounding Ag. Fields.
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
N/A recent clean out
Presence of Hydric Soils:
-
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense woody debris Throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) N/A

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Though this reach has been recently cleaned overall channel definition/size and U/S observations implies some degree of permanence

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Office Use Only

Project (No. & Name): 1612 N. Kent **Field Staff:** BE/B

Survey Date: 17 APR 15 **Weather Conditions**
Time Started: 1130 Temp (°C), Wind, Cloud Cover (%), Precipitation: 16°, 2N, 0, 0
Time Finished: 1145 *Precipitation in Prior 48hrs (mm):* 5.0 mm

Site Code: LST 108 **GPS Location** **Estimated Length Assessed**
Feature Name: ~~Campbell~~ dr McKay Drain Easting: 400 150 Upstream: 10
Drainage System: Lake St Clair Northing: 4704392 Downstream: 50
Location in System: at Brook Ln *Water Body No.* 070

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 2.0 Avg. Water Depth (m): 0.10 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 50 Riffle: – Run: – Pool: 50
Bank Slope & Stability: high slope / high stability Feature Gradient (H/M/L):
Other Comments:
channelized Dr w signs of regular clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Occ D. Shrubs w Dense Phrag D/S
Vegetation (with % dominant): Dense Phrag (100%) D/S - Recent clean out
Surface Water Quality
Temp (°C): 12 Turbidity (L/M/H): Colour: Brn Comments:

Riparian Habitat
Vegetation: D. Shrubs Phrag
Canopy Cover (% and species): - Recent clean out 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly defined channel w no signs of permanence U/S - low flow channel cut into bed
0.5m CSP ut Brooks Ln

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	245	S		Other:			
Downstream:	246	N					
Feature Bed:	247						
Culvert / Bridge:	248						
Vegetation:							
Landscape Photo:	249	S					

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surrounding Ag fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
woody debris on u/s side of culvert, no leaf litter debris on bed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached (Algae), Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of Phrag / filamentous algae suggest some degree of permanence, presence of low flow channel on bed

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEG

Survey Date: 16APR15 **Weather Conditions**
Time Started: 1600 Temp (°C), Wind, Cloud Cover (%), Precipitation: 12°C, 2/SE, 20%, 0
Time Finished: 1610 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT093 **GPS Location** **Estimated Length Assessed**
Feature Name: CATTON Dr Easting: 0398216 Upstream: 5
Drainage System: Lake St Clair Northing: 4705946 Downstream: 50
Location in System: out Claymore Dr *Water Body No.* 071

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Dr
Avg. Wetted Width (m): 0.20 Avg. Water Depth (m): 0.05 Max Pool Depth (m): 0.07
Avg. Bankfull Width (m): 0.75 Avg. Bankfull Depth (m): 0.45
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: Moderate Slope high stability Feature Gradient (H/M/L): Low
Other Comments:
beginning of Drain

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): abundant cattail sp throughout channel
Vegetation (with % dominant): cattail (100%)
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Low Colour: clear Comments: –

Riparian Habitat
Vegetation: T.Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Presence of cattails suggests permanence
no channel U/S of Road
1.2 CSP w cobble embankments at road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	159	SE	–	Other:	–	–	–
Downstream:	160	NW	–				
Feature Bed:	161	–	–				
Culvert / Bridge:	162	–	–				
Vegetation:	163	–	–				
Landscape Photo:	164	N	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Same as surrounding fields
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense cattail deposits throughout, some Tigra
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None.
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) N/A

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of cattails suggest some degree of permanence, minimal veg or debris on channel bed
Channel begins on d/s side of road as intermittent

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Renewable Energy Water Body Site Investigation

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEN

Survey Date: 28APR15 **Weather Conditions**

Time Started: 1810 Temp (°C), Wind, Cloud Cover (%), Precipitation: 13.7°, 3N, 30%, 0

Time Finished: 1835 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 181 **GPS Location** **Estimated Length Assessed**

Feature Name: SYLvester Dr Easting: 0397206 Upstream: 150

Drainage System: Lake St arm Northing: 4703550 Downstream: 150

Location in System: New T 38 *Water Body No.* 072

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☐ Straight ☑ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined

☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow

☑ Freshet Flow

Avg. Wetted Width (m): 2.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1

Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.4

Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100

Bed Morphology (%) Flat: — Riffle: — Run: — Pool: 100

Bank Slope & Stability: moderate Slope moderate Stability Feature Gradient (H/M/L):

Other Comments: No visible Flow

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Dense Phrag

Vegetation (with % dominant): Phrag (85%) w Thems of Duckweed (15%)

Surface Water Quality

Temp (°C): 11 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat

Vegetation: Phrag

Canopy Cover (% and species): 0

Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)

No Fish Obs

Poorly defined dam w/ Very dns Phrag in Stream

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	859	S	—	Other:	—	—	—
Downstream:	860	N	—				
Feature Bed:	861	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	862	—	—				
Landscape Photo:	858	N	—				

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

—

Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:

—

Presence of Hydric Soils:

—

Describe Debris and / or Leaf Litter in Feature (type,amount, location):

Dense Phrag Debris Throughout

Seepage Areas / Springs / Evidence of High Water Table in or near Feature:

None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature

(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required

Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral

Evidence of Water Body Status: Based on presence of Duckweed

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Project (No. & Name): 162 N. Kawl **Field Staff:** KEB

Survey Date: 28 APR 16 **Weather Conditions**
Time Started: 1835 Temp (°C), Wind, Cloud Cover (%), Precipitation: 13.7°, 3 N, 30%, 0
Time Finished: 1900 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 182 **GPS Location** **Estimated Length Assessed**
Feature Name: Sylvester Dr Easting: 0392193 Upstream: 100
Drainage System: Lake St Clair Northing: 4703879 Downstream: 100
Location in System: mouth T35 *Water Body No.* 073

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 2.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.6
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: 100
Bank Slope & Stability: Moderate Slope moderate Stability Feature Gradient (H/M/(L)):
Other Comments:
No visible flow

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense Phrag
Vegetation (with % dominant): Phrag (50%) watercress (50%)

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: Phrag
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly Defined dr w dense patches of watercress

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	864	SW	–	Other:	–	–	–
Downstream:	865	NE	–				
Feature Bed:	866	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	867	–	–				
Landscape Photo:	806	NE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense Phrag Throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
Water cress
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of water cress

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Project (No. & Name): 1612 N Kent **Field Staff:** BEB

Survey Date: 16/MAR/15 **Weather Conditions**
Time Started: 1505 Temp (°C), Wind, Cloud Cover (%), Precipitation: 11°C, 3/SE, 30%, 0
Time Finished: 1515 *Precipitation in Prior 48hrs (mm):* 0.0mm

Site Code: LSCT 090 **GPS Location** **Estimated Length Assessed**
Feature Name: Sylvester Dr Easting: 0397344 Upstream: 50
Drainage System: Lake St Clair Northing: 4704307 Downstream: 50
Location in System: at Clay Moore Ln *Water Body No.* 074

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Dr
Avg. Wetted Width (m): 3.5 Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.30
Avg. Bankfull Width (m): 4.0 Avg. Bankfull Depth (m): 0.7
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: high slope moderate stability Feature Gradient (H/M/L): Low
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Buildup of woody debris and Cattail debris
Vegetation (with % dominant): Cattails (45%) watercress (45%) duckweed (10%)
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): MEDIUM Colour: Brown Comments: —

Riparian Habitat
Vegetation: T, Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly defined channel ~ dense aquatic veg
1.2 m Box culvert w concrete blocks at Road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	141	SE	—	Other:	—	—	—
Downstream:	142	NW	—				
Feature Bed:	143	—	—				
Culvert / Bridge:	144	—	—				
Vegetation:	145	—	—				
Landscape Photo:	146	SE	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense overhanging Bank Veg along length
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
Water Cress Suggests ground water input
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
presence of aquatic Veg Suggests permanency

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 16APR15
Time Started: 1410
Time Finished: 1425

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 10°C, 2/SE, 30%, Ø
Precipitation in Prior 48hrs (mm): 0.0 mm

Site Code: LSCT087
Feature Name: Sylvester Dr
Drainage System: Lake St Clair
Location in System: at country view Ln

GPS Location
Easting: 0396394
Northing: 4705385
Water Body No. 075

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.30 Max Pool Depth (m): 0.35
Avg. Bankfull Width (m): 7.0 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: high slope low stability. Feature Gradient (H/M/L): LOW
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense Phrag buildup
Vegetation (with % dominant): Phrag 100%
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): LOW Colour: Brown Comments: –

Riparian Habitat
Vegetation: Phrag
Canopy Cover (% and species): Ø
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs.
Poorly defined phrag lined channel ≈ no indication of permanence
4.5m open box culvert at Roadside

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	123	SE	–	Other:	–	–	–
Downstream:	124	NW	–				
Feature Bed:	125	–	–				
Culvert / Bridge:	126	–	–				
Vegetation:	127	–	–				
Landscape Photo:	128	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense over hanging phrag throughout channel
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Though no indication of permanent water flow, presence of phrag implies an intermittent WB

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1612 N. Road **Field Staff:** BEP

Survey Date: 16APR15
Time Started: 1618
Time Finished: 1630

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/SE, 10%, 0
Precipitation in Prior 48hrs (mm): 0.8 mm

Site Code: LSCT066
Feature Name: Sylvester dr
Drainage System: Lake St Clair
Location in System: at Cedar hedge Line

GPS Location
Easting: 0395260
Northing: 4706283
Water Body No. 076

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.25 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 7.5 Avg. Bankfull Depth (m): 1.0
Substrate Composition (%) Boulder: – Cobble: – Gravel: 15 Fines: 85
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High Slope Low Stability Feature Gradient (H/M/L): LOW
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense over hanging T. Grasses
Vegetation (with % dominant): Cuthal sp (100%) - very little instream veg

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): LOW Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses Dogwood
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
4.5m open box culvert recently replaced
abundant algae build up

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	004	SE	–	Other:	–	–	–
Downstream:	005	NW	–				
Feature Bed:	006	–	–				
Culvert / Bridge:	007	–	–				
Vegetation:	008	–	–				
Landscape Photo:	009	SE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense patches of dry grasses u/s of crossing
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of Cuthal sp suggests permanence

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Project (No. & Name): 1612 N. Kent **Field Staff:** BER

Survey Date: 15APR15
Time Started: 1400
Time Finished: 1435

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/E, 20%, 0
Precipitation in Prior 48hrs (mm): 2.2mm

Site Code: LSR058
Feature Name: Sylvester Dr
Drainage System: Lake St Clair
Location in System: at Union Ln

GPS Location
Easting: 0394339
Northing: 4707311
Water Body No. 077

Estimated Length Assessed
Upstream: 50
Downstream: 100

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

- ☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
- ☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
- ☑ Freshet Flow

Avg. Wetted Width (m): 4.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: High slope / low stability Feature Gradient (H/M/L): —
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense build up of woody debris
Vegetation (with % dominant): — Dense algae mat & traces of Duckweed

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Low Colour: Green Comments: —

Riparian Habitat
Vegetation: T-Grasses D. Trees
Canopy Cover (% and species): 2
Adjacent Land Use: Ag

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No fish obs
4.5m open box culvert
well defined channel w signs of erosion

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	957	SE	—	Other:	—	—	—
Downstream:	958	NW	—				
Feature Bed:	959	—	—				
Culvert / Bridge:	960	—	—				
Vegetation:	961	—	—				
Landscape Photo:	962	NW	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
—
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
channel definition / duckweed suggests permanence

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Project (No. & Name): 162 N kent **Field Staff:** BEB

Survey Date: 15 APR 15
Time Started: 1605
Time Finished: 1615

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/SE, 10%, 0
Precipitation in Prior 48hrs (mm): 0.8 mm

Site Code: LSCTO 66
Feature Name: Pollock Dr
Drainage System: Lake st clair
Location in System: out Cedar hedge LA

GPS Location
Easting: 0394791
Northing: 4705850
Water Body No. 078

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 2.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.45
Substrate Composition (%) Boulder: – Cobble: – Gravel: 25 Fines: 75
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High slope Low stability Feature Gradient (H/M/L): Low
Other Comments: Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense c-Mail debris
Vegetation (with % dominant): 100% cattail sp

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Low Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses / D. Trees
Canopy Cover (% and species): 50% D. Trees
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
1.5 m open box culvert
dense cattail / T grasses within channel

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	997	SE	–	Other:	–	–	–
Downstream:	998	NW	–				
Feature Bed:	999	–	–				
Culvert / Bridge:	001	–	–				
Vegetation:	002	–	–				
Landscape Photo:	003	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Dense cattail debris algae algae
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
–
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
presence of cattail / algae suggest some degree of permanence

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Project (No. & Name): 162 N. Kent **Field Staff:** BEB

Survey Date: 28APR 15 **Weather Conditions**
Time Started: 1600 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.4°, 3 NNW, 30%, 0
Time Finished: 1630 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 178 **GPS Location** **Estimated Length Assessed**
Feature Name: Pollock Dr Easting: 0394183 Upstream: 150
Drainage System: Lake St Clair Northing: 4706543 Downstream: 150
Location in System: Near T14 *Water Body No.* 079

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow No visible flow Channelized
Avg. Wetted Width (m): 0.7 Avg. Water Depth (m): 0.1 Max Pool Depth (m) 0.1
Avg. Bankfull Width (m): 1.5 Avg. Bankfull Depth (m): 0.4
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: 100
Bank Slope & Stability: Moderate Slope Moderate Stability Feature Gradient (H/M/L):
Other Comments: Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dams Patches of cattail debris
Vegetation (with % dominant): cattail sp (30%) water cress (30%)

Surface Water Quality
Temp (°C): 12 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species):
Adjacent Land Use:

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly defined channel w/ patches of water cress throughout

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	844	SE	–	Other:	–	–	–
Downstream:	845	NW	–				
Feature Bed:	846	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	847	–	–				
Landscape Photo:	848	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
–
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
water cress patches throughout
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of Aquatic veg / water cress suggest permanency

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Project (No. & Name): 162 N-Ford **Field Staff:** BER

Survey Date: 28 APR 17 **Weather Conditions**
Time Started: 1615 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14 3°, 4 NNW, 30%, 0
Time Finished: 1555 *Precipitation in Prior 48hrs (mm):* No data.

Site Code: LSCT177 **GPS Location** **Estimated Length Assessed**
Feature Name: Pollock Dr Easting: 0394005 Upstream: 150
Drainage System: Lake St Creek Northing: 4706740 Downstream: 150
Location in System: Near T14 4R *Water Body No.* 080

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized dr
Avg. Wetted Width (m): 1.2 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 3.5 Avg. Bankfull Depth (m): 0.4
Substrate Composition (%) Boulder: - Cobble: - Gravel: - Fines: 100
Bed Morphology (%) Flat: - Riffle: - Run: - Pool: 100
Bank Slope & Stability: moderate slope High stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Debris Grass/cattail debris Throughout
Vegetation (with % dominant): Cattail sp 100%
Surface Water Quality
Temp (°C): 12 Turbidity (L/M/H): Colour: Green Comments: -

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Channelized dr w Trace of cattail sp

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	839	SE	-	Other:	-	-	-
Downstream:	840	NW	-				
Feature Bed:	841	-	-				
Culvert / Bridge:	-	-	-				
Vegetation:	842	-	-				
Landscape Photo:	843	NW	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
-
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
Presence of Hydric Soils:
-
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense cattail / Dry Grass Debris Throughout
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on V/S obs and presence of Aquatic veg

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 15APR15
Time Started: 1440
Time Finished: 1455

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/E, 20%, 0
Precipitation in Prior 48hrs (mm): 8.8mm

Site Code: LSCT069
Feature Name: Pollock Dr
Drainage System: Lake St Clair
Location in System: at Union Ln

GPS Location
Easting: 0393947
Northing: 4706498
Water Body No. 081

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology ☐ N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

- ☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
- ☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
- ☑ Freshet Flow

Avg. Wetted Width (m): 2.5 Avg. Water Depth (m): 0.35 Max Pool Depth (m): 0.4
Avg. Bankfull Width (m): 3.5 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High slope poor stability
Feature Gradient (H/M/L): –
Other Comments:
Channelized Dr w signs of erosion

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense cattails
Vegetation (with % dominant): cattail sp (100%)

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Low Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel w dense cattails
4.5m open box culvert

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	963	SE	–	Other:	–	–	–
Downstream:	964	NW	–				
Feature Bed:	965	–	–				
Culvert / Bridge:	966	–	–				
Vegetation:	967	–	–				
Landscape Photo:	968	SE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
–
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
Dense cattail debris u/s of culvert No seeps
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Cattails / dense algae suggest permanent

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Project (No. & Name): 1612 N. Kent **Field Staff:** BER

Survey Date: 28 APR 15 **Weather Conditions**
Time Started: 1700 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.3°, 3N, 30%, 0
Time Finished: 1735 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 178 **GPS Location** **Estimated Length Assessed**
Feature Name: Pollard Dr Easting: 0393218 Upstream: 150
Drainage System: Lower St Clair Northing: 4707578 Downstream: 100
Location in System: Moore T 44 *Water Body No.* 082

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Ditch

Avg. Wetted Width (m): 1.75 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 2.5 Avg. Bankfull Depth (m): 0.55
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High slope Low stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr w/ Exposed Soil

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Trace of Dry Grasses / cattail sp
Vegetation (with % dominant): Cattail sp (100%)

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Brown Comments: –

Riparian Habitat
Vegetation: Phrag
Canopy Cover (% and species): 0%
Adjacent Land Use: Ag

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Heavy cattail dr w/ traces of cattail sp throughout
Areas of exposed sediment

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	849	SE	–	Other:	–	–	–
Downstream:	850	NW	–				
Feature Bed:	851	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	852	–	–				
Landscape Photo:	853	SE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Limited patches of cattail sp
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on presence of Aquatic veg

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Project (No. & Name): 1612 N. Kent **Field Staff:** BLB

Survey Date: 1st APR 15 **Weather Conditions**

Time Started: 1522 Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°C, S/E, 20%, 0

Time Finished: 1535 *Precipitation in Prior 48hrs (mm):* 2.2 mm

Site Code: LSCT 062 **GPS Location** **Estimated Length Assessed**

Feature Name: Pollock Dr Easting: 0393167 Upstream: 150

Drainage System: Lake St Clair Northing: 4706273 Downstream: 150

Location in System: along Union Ln *Water Body No.* 083

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined

☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow

☑ Freshet Flow

Avg. Wetted Width (m): 4.0 Avg. Water Depth (m): 0.3 Max Pool Depth (m): 0.35

Avg. Bankfull Width (m): 5.5 Avg. Bankfull Depth (m): 0.55

Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100

Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —

Bank Slope & Stability: High slope Low stability Feature Gradient (H/M/L): LOW

Other Comments:

Channelized Dr

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Dense patches of cattails

Vegetation (with % dominant): Cattails along edges of stream bed (100%)

Surface Water Quality

Temp (°C): 11 Turbidity (O/M/H): LOW Colour: Green Comments: —

Riparian Habitat

Vegetation: T. Grasses

Canopy Cover (% and species): 0

Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)

No Fish obs

abundant algae on cattail debris

Dense cattails

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	979	NE	—	Other:	—	—	—
Downstream:	980	SS	—				
Feature Bed:	981	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	982	—	—				
Landscape Photo:	983	NE	—				

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

—

Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:

—

Presence of Hydric Soils:

—

Describe Debris and / or Leaf Litter in Feature (type,amount, location):

patches of cattail debris along length of Drain

Seepage Areas / Springs / Evidence of High Water Table in or near Feature:

None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature

(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required

Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral

Evidence of Water Body Status:

Presence of cattail sp and aquatic invrts suggest permanence

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Project (No. & Name): 162 N. Kent **Field Staff:** BEB

Survey Date: 16 Apr 15
Time Started: 1457
Time Finished: 1510

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°C, 3/E, 20%, 0
Precipitation in Prior 48hrs (mm): 2.8 mm

Site Code: LSCT060
Feature Name: Pollock Dr
Drainage System: Lake St Clair
Location in System: Union Ln

GPS Location
Easting: 0393595
Northing: 4706652
Water Body No. 084

Estimated Length Assessed
Upstream: 100
Downstream: 100

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond

☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Online/Offline

Avg. Wetted Width (m): 2 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 3 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: moderate stability moderate slope Feature Gradient (H/M/L): –
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): T. Grasses w patches of cattail
Vegetation (with % dominant): 60% T. Grasses 35% Cattail sp 5% duckweed

Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): MEDIUM Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
T. Grass along entire bed w patches of cattail and algae

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	969	NE	–	Other:	–	–	–
Downstream:	970	SW	–				
Feature Bed:	971	–	–				
Culvert / Bridge:			–				
Vegetation:	972	–	–				
Landscape Photo:	973	NE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–

Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:

Presence of Hydric Soils:
–

Describe Debris and / or Leaf Litter in Feature (type, amount, location):

Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination
Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Though T. Grasses along Stream bed presence of cattails suggests permanence

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Renewable Energy Water Body Site Investigation

Office Use Only

Project (No. & Name): 162 Nekeat
Field Staff: BEB

Survey Date: 17APR15
Time Started: 0915
Time Finished: 0930

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 13.6°, 3 NNW, Ø, Ø
Precipitation in Prior 48hrs (mm): 5.0 mm

Site Code: LSCT 101
Feature Name: Mills Dr
Drainage System: Lake st Clair
Location in System: at Darrel Ln

GPS Location
Easting: 0402757
Northing: 4703480
Water Body No. 085

Estimated Length Assessed
Upstream: 50
Downstream: 50

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☐ Defined ☑ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 2.0 Avg. Water Depth (m): 0.10 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 3.5 Avg. Bankfull Depth (m): 0.85
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 50 Riffle: 20 Run: 30 Pool: —
Bank Slope & Stability: High slope moderate stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr w̄ signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Sparse deposits of woody debris
Vegetation (with % dominant): cattail sp (100%)
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: T-Grasses
Canopy Cover (% and species): 2
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Traces of Filamentous algae
poor channel definition w̄ signs of recent clean out
1.2m csp at Road Side

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	206	SE	—	Other:	—	—	—
Downstream:	207	NW	—				
Feature Bed:	208	—	—				
Culvert / Bridge:	209	—	—				
Vegetation:	210	—	—				
Landscape Photo:	211	SE	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Few traces of debris w̄ signs of recent clean out
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of cattails suggest some degree of permanence

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Project (No. & Name): 1612 N. Kew **Field Staff:** BEB

Survey Date: 17APR15
Time Started: 0855
Time Finished: 0910

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation:
Precipitation in Prior 48hrs (mm): 50 mm

Site Code: LSCT100
Feature Name: Big Creek Dr
Drainage System: Lake St Clair
Location in System: along Caledonia Rd

GPS Location
Easting: 0402668
Northing: 4703581
Water Body No. 086

Estimated Length Assessed
Upstream: 10
Downstream: 10

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow

Avg. Wetted Width (m): 8.5 Avg. Water Depth (m): unk >1m Max Pool Depth (m): unk >1m
Avg. Bankfull Width (m): 10.5 Avg. Bankfull Depth (m): unk ~3m
Substrate Composition (%) Boulder: unk Cobble: unk Gravel: unk Fines: unk
Bed Morphology (%) Flat: 90 Riffle: 10 Run: — Pool: —
Bank Slope & Stability: moderate slope low stability Feature Gradient (H/M/L): —
Other Comments:
well defined channel w abundant over hanging veg
Turbidity too high & exposed soil

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense over hanging bank veg
Vegetation (with % dominant): Traces of duckweed

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Green Comments: —

Riparian Habitat
Vegetation: D. Trees U/S T. Grasses D/S
Canopy Cover (% and species): 25% - U/S D. Trees
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel w encrusting algae and over hanging bank veg
2X 4m x 4m open box culvert

Photographs	No.	Direction	Description	No.	Direction	Description
Upstream:	200	E	—	Other: —	—	—
Downstream:	201	W	—			
Feature Bed:	202	—	—			
Culvert / Bridge:	203	—	—			
Vegetation:	204	—	—			
Landscape Photo:	206	W	—			

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
over hanging bank veg along length
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Size of WB and channel definition implies permanence, presence of algae along bank edges

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Project (No. & Name): 1612 NKemi **Field Staff:** BEB

Survey Date: 24APR 17 **Weather Conditions**
Time Started: 1005 Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.7°, 4N, -, 0
Time Finished: 1026 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 168 **GPS Location** **Estimated Length Assessed**
Feature Name: Bog Cr Dr Easting: 0401482 Upstream: 100
Drainage System: Lake St Clair Northing: 4703929 Downstream: 100
Location in System: New TS *Water Body No.* 097

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Dr
Avg. Wetted Width (m): 7.0 Avg. Water Depth (m): 0.5 Max Pool Depth (m): 0.9
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): 1.7
Substrate Composition (%) Boulder: - Cobble: - Gravel: - Fines: 100
Bed Morphology (%) Flat: 100 Riffle: - Run: - Pool: -
Bank Slope & Stability: moderate slope moderate stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): none
Vegetation (with % dominant): none - Recently cleaned Dr
Surface Water Quality
Temp (°C): 8 Turbidity (L/M/H): Colour: Brown Comments: -

Riparian Habitat
Vegetation: T.Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
N. Pike obs
well defined channel - no visible aquatic veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	97	SW	-	Other:	-	-	-
Downstream:	98	NE	-				
Feature Bed:	99	-	-				
Culvert / Bridge:	-	-	-				
Vegetation:	100	-	-				
Landscape Photo:	101	SW	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
-
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
-
Presence of Hydric Soils:
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on presence of N. Pike and size/channel definition

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 24 APR 15 **Weather Conditions**
Time Started: 0940 Temp (°C), Wind, Cloud Cover (%), Precipitation: 3°, 3N, -, 0
Time Finished: 1000 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT167 **GPS Location** **Estimated Length Assessed**
Feature Name: Big Cr Dr Easting: 0401262 Upstream: 100
Drainage System: Lake St Clair Northing: 4703820 Downstream: 100
Location in System: New TS *Water Body No.* 098

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized

Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.4 Max Pool Depth (m): 0.4
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): 1.5
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —
Bank Slope & Stability: Moderate Slope moderate Stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): none
Vegetation (with % dominant): none - Recently cleaned out
Surface Water Quality
Temp (°C): 8 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
Fish obs
well defined Channel — no visible aquatic veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	92	SW	-	Other:	-	-	-
Downstream:	93	NE	-				
Feature Bed:	94	-	-				
Culvert / Bridge:	-	-	-				
Vegetation:	95	-	-				
Landscape Photo:	96	SW	-				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
—
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
none observed
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached (Algae), Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on Fish obs on site

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Project (No. & Name): 1612 N. Kent **Field Staff:** BEB

Survey Date: 17 APR 15 **Weather Conditions**

Time Started: 1055 Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°, 3 NW, B, P

Time Finished: 1110 *Precipitation in Prior 48hrs (mm):* 5.0mm

Site Code: LSCT106 **GPS Location** **Estimated Length Assessed**

Feature Name: Big Cr Drain Easting: 0400814 Upstream: 50

Drainage System: Lake St Clair Northing: 4702313 Downstream: 50

Location in System: ext Prince Albert RD *Water Body No.* 089

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined

☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow

☑ Freshet Flow

Avg. Wetted Width (m): 10 Avg. Water Depth (m): unk <1m Max Pool Depth (m): unk

Avg. Bankfull Width (m): 12.5 Avg. Bankfull Depth (m): unk ~1m

Substrate Composition (%) Boulder: Cobble: Gravel: Fines:

Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —

Bank Slope & Stability: High Slope Low Stability Signs of erosion Feature Gradient (H/M/L):

Other Comments:

Turbidity too high

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Over hanging bank veg

Vegetation (with % dominant): Traces of duckweed 100%

Surface Water Quality

Temp (°C): 9 Turbidity (L/M/H): Colour: Green Comments: —

Riparian Habitat

Vegetation: T. Grasses

Canopy Cover (% and species): 0

Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)

No Fish obs

Well defined channel w filamentous algae and over hanging bank veg

2x 4.5m open box culvert at Prince Albert Rd

Photographs	No.	Direction	Description	No.	Direction	Description
Upstream:	233	NE	—	Other: —		
Downstream:	234	SW	—			
Feature Bed:	235	—	—			
Culvert / Bridge:	238	—	—			
Vegetation:	236	—	—			
Landscape Photo:	237	NE	—			

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

- can't see too turbid

Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:

- can't see too turbid.

Presence of Hydric Soils:

—

Describe Debris and / or Leaf Litter in Feature (type, amount, location):

Turbidity too high

Seepage Areas / Springs / Evidence of High Water Table in or near Feature:

None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature *(Circle any present)*

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required

Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral

Evidence of Water Body Status:

Size of WB, channel difinition, and presence of duckweed/algae suggests permanent

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Project (No. & Name): 1612 N. Kent **Field Staff:** RETS

Survey Date: 22 APR 15 **Weather Conditions**
Time Started: 1250 Temp (°C), Wind, Cloud Cover (%), Precipitation: 5.4°, 5 WNW, 100%, Snow
Time Finished: 1305 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 160 **GPS Location** **Estimated Length Assessed**
Feature Name: Big Cr Dr Easting: 0400201 Upstream: 50
Drainage System: Lake St Clair Northing: 4703092 Downstream: 50
Location in System: along Ebert's Rd *Water Body No.* 090

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 9.5 Avg. Water Depth (m): Unk Max Pool Depth (m): Unk
Avg. Bankfull Width (m): 16.0 Avg. Bankfull Depth (m): Unk
Substrate Composition (%) ~~Boulder:~~ ~~Cobble:~~ ~~Gravel:~~ ~~Fines:~~
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: moderate slope High stability Feature Gradient (H/M/L):
Other Comments: Turbidity too high

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): over hanging bank veg
Vegetation (with % dominant): none visible
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 0%
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined Channel
no instream veg obs
20m Seam bridge

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	545	SE	–	Other:	–	–	–
Downstream:	546	NW	–				
Feature Bed:	547	–	–				
Culvert / Bridge:	544	–	–				
Vegetation:	548	–	–				
Landscape Photo:	549	SE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
–
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
–
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
over hanging bank veg
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Bared or WB definition / size

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Project (No. & Name): 1612 N. Kent **Field Staff:** VSEB

Survey Date: 24APR15 **Weather Conditions**

Time Started: 1035 Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.7°, 4 N, —, 0

Time Finished: 1104 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT169 **GPS Location** **Estimated Length Assessed**

Feature Name: Big Cr Dr Easting: 0399047 Upstream: 150

Drainage System: Lake St Clair Northing: 4703538 Downstream: 150

Location in System: New T37 *Water Body No.* 091

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline

☐ Straight ☑ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined

☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow

☑ Freshet Flow Channelized Dr

Avg. Wetted Width (m): 10.0 Avg. Water Depth (m): 0.3 Max Pool Depth (m): 0.3

Avg. Bankfull Width (m): 11.5 Avg. Bankfull Depth (m): 0.75

Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100

Bed Morphology (%) Flat: 100 Riffle: — Run: — Pool: —

Bank Slope & Stability: Moderate Slope moderate Stability Feature Gradient (H/M/L):

Other Comments:

Channelized Dr

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Recently cleaned

Vegetation (with % dominant): Dense Filamentous algae

Surface Water Quality

Temp (°C): 8 Turbidity (L/M/H): Colour: Green Comments: —

Riparian Habitat

Vegetation: TG grasses

Canopy Cover (% and species): 0

Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)

No Fish obs

well defined Channel w dense Filament ovs algae

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	102	E	—	Other:	—	—	—
Downstream:	103	W	—				
Feature Bed:	104	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	105	—	—				
Landscape Photo:	106	W	—				

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

—

Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:

—

Presence of Hydric Soils:

—

Describe Debris and / or Leaf Litter in Feature (type,amount, location):

Recently cleaned - none

Seepage Areas / Springs / Evidence of High Water Table in or near Feature:

None

Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature

(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required

Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral

Evidence of Water Body Status:

Based on WB size / channel definition and U/S observation

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Project (No. & Name): 1612 N. Kent **Field Staff:** KER

Survey Date: 22 APR 14 **Weather Conditions**
Time Started: 1230 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1245 *Precipitation in Prior 48hrs (mm):* no data

Site Code: LSCT 159 **GPS Location** **Estimated Length Assessed**
Feature Name: Big Cr Dr Easting: 0397723 Upstream: 50
Drainage System: Lake St Clair Northing: 4702764 Downstream: 150
Location in System: online Brook Ln *Water Body No.* 092

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/O Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow
Avg. Wetted Width (m): 9.0 Avg. Water Depth (m): <1m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 11.0 Avg. Bankfull Depth (m): ~1-1.5m
Substrate Composition (%) Boulder: – Cobble: – Gravel: ~20% Fines: ~80%
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High Slope Low Stability - Signs of Erosion Feature Gradient (H/M/O):
Other Comments: Turbidity Too high to see substrates, percentages are estimates as are depths

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense over hanging woody debris
Vegetation (with % dominant): no instream veg
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: D. Trees D. Shrubs
Canopy Cover (% and species): 40% D. Shrubs
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel = dense over hanging bank veg
No instream bank veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	539	E	–	Other:	–	–	–
Downstream:	540	SW	–				
Feature Bed:	541	–	–				
Culvert / Bridge:	———		–				
Vegetation:	542	–	–				
Landscape Photo:	543	SW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A can't see
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
sed deposits along edges of channel
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense over hanging woody debris through out
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
None
Attached Algae, Clam or Mussel Shells, Crayfish Chimneys or Exoskeltons, or Aquatic Insect Larvae in or near Feature
(Circle any present)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on WB size / channel definition, woody debris

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Renewable Energy Water Body Site Investigation
Office Use Only

Project (No. & Name): 1612 N Kear **Field Staff:** RES

Survey Date: 22 APR 15 **Weather Conditions**
Time Started: 1215 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1225 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 168 **GPS Location** **Estimated Length Assessed**
Feature Name: Big Cr Dr Easting: 039 7356 Upstream: 150
Drainage System: Lake St Clair Northing: 4702441 Downstream: 150
Location in System: along Rock In *Water Body No.* 093

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☑ Straight ☐ Meandering (H/M/L Sinuosity): ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☑ Freshet Flow Channelized Dr
Avg. Wetted Width (m): 9.5 Avg. Water Depth (m): <1m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 11.0 Avg. Bankfull Depth (m):
Substrate Composition (%) Boulder: 0 Cobble: 0 Gravel: ~20% Fines: ~80%.
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High Slope Low Stability Feature Gradient (H/M/L):
Other Comments: Channelized Dr & Signs of erosion

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense overhanging woody debris
Vegetation (with % dominant): no instream Veg obs

Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: D. Shrubs D. Trees
Canopy Cover (% and species): 60% D. Trees
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
well defined channel - dense overhanging woody debris
no instream Veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	534	NE	–	Other:	–	–	–
Downstream:	535	SW	–				
Feature Bed:	536	–	–				
Culvert / Bridge:			–				
Vegetation:	537	–	–				
Landscape Photo:	538	NE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Turbidity too high can't see substrate