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:** REB

Survey Date: 22 APR 15
Time Started: 1325
Time Finished: 1335

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.9°, 4 WNW, 100%, Ø
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT162
Feature Name: Johnson Dr
Drainage System: Lake St Clair
Location in System: along Eberts La

GPS Location
Easting: 0399520
Northing: 4702481
Water Body No. 109

Estimated Length Assessed
Upstream: 150
Downstream: 150

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): 2.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.70
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): patches of cattail debris
Vegetation (with % dominant): Cattails (50%) duckweed (50%)
Surface Water Quality
Temp (°C): 6 Turbidity (L/M/H): Colour: clear Comments: —

Riparian Habitat
Vegetation: 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
No Flow obs
Channelized dr w/ poor channel definition

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	555	NE	—	Other:	—	—	—
Downstream:	556	SW	—				
Feature Bed:	557	—	—				
Culvert / Bridge:	—		—				
Vegetation:	558	—	—				
Landscape Photo:	559	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):
Sparse patches of cattail 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) 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 within stream bed

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

Survey Date: 22APR15 **Weather Conditions**
Time Started: 1340 Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.9°, 4 WNW, 100%, 0
Time Finished: 1350 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT163 **GPS Location** **Estimated Length Assessed**
Feature Name: Johnson Dr Easting: 0399019 Upstream: 150
Drainage System: Lake St Clair Northing: 4702044 Downstream: 150
Location in System: along Ebers Ln *Water Body No.* 110

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): 0.25 Max Pool Depth (m): 0.24
Avg. Bankfull Width (m): 3.5 Avg. Bankfull Depth (m): 0.70
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 ∴ no sign of flow

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): abundant water cress throughout
Vegetation (with % dominant): water cress (95%) Duckweed (5%)

Surface Water Quality
Temp (°C): 6 Turbidity (L/M/H): Colour: clear Comments: –

Riparian Habitat
Vegetation: T. Grasses & 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 ∴ abundant water cress through out channel
No visible Flow

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	560	NE	–	Other:	–	–	–
Downstream:	561	SW	–				
Feature Bed:	562	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	563	–	–				
Landscape Photo:	560	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:
Dense water cress Thrugh out stream bed
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 water cress Through out Stream bed

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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: 1430 Temp (°C), Wind, Cloud Cover (%), Precipitation: 10°C, 2/SE, 30%, 0
Time Finished: 1440 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT088 **GPS Location** **Estimated Length Assessed**
Feature Name: Hooker Dr Easting: 039510 Upstream: —
Drainage System: Lake St Clair Northing: 4704467 Downstream: 10
Location in System: mt County View *Water Body No.* 101

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): 0.55 Avg. Water Depth (m): 0.05 Max Pool Depth (m): 0.10
Avg. Bankfull Width (m): 1.26 Avg. Bankfull Depth (m): 0.25
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:
Channelized Ort evidence of ground water input

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): abundant instream veg
Vegetation (with % dominant): U/S phrag (40%) water cress (60%) D/S watercress (100%)
Surface Water Quality
Temp (°C): 5 Turbidity (L/M/H): Low Colour: clear Comments: —

Riparian Habitat
Vegetation: T Grasses
Canopy Cover (% and species): 0
Adjacent Land Use: Ag / Golf course

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish
abundant water cress and cold water suggest permanence
0.75 m CSP culvert crossing country view Rd

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	129	NE	—	Other:	—	—	—
Downstream:	130	NW	—				
Feature Bed:	131	—	—				
Culvert / Bridge:	132	—	—				
Vegetation:	133	—	—				
Landscape Photo:	134	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:
abundant water cress suggests groundwater 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 water cress implies groundwater input and some degree of permanence

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

Survey Date: 13 APR 15
Time Started: 1512
Time Finished: 1520

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

Site Code: LSCT-061
Feature Name: Kennedy Dr
Drainage System: Lake St Chb
Location in System: at Union Ln

GPS Location
Easting: 0393381
Northing: 4706460
Water Body No. 112

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): 0.20 Max Pool Depth (m): 0.25
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: moderate slope moderate stability Feature Gradient (H/M/L): Low
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense Phrag / woody debris
Vegetation (with % dominant): Phrag (80%) Duckweed (10%)

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

Riparian Habitat
Vegetation: T. Grasses / D. Shrubs
Canopy Cover (% and species): 15% D. Shrubs
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense Phrag build up near confluence
over hanging T. Grasses

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	974	SE	–	Other:	–	–	–
Downstream:	975	SW	DS in Pollock Dr				
Feature Bed:	976	–	–				
Culvert / Bridge:			–				
Vegetation:	977	–	–				
Landscape Photo:	978	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 Phrag Buildup w/ patches of woody 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 / duckweed Sugests permanence near confluence

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

Survey Date: 15 APR 18
Time Started: 1537
Time Finished: 1650

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

Site Code: LSCT063
Feature Name: Townline DR / Pollock Dr
Drainage System: Lake St Clair
Location in System: at St Clair RD / Union Ln

GPS Location
Easting: 0392899
Northing: 4706034
Water Body No. 113

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): 3.6 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 5 Avg. Bankfull Depth (m): 0.70
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:
Channelized dr
Signs of erosion along banks

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense patches of phrag Throughout Dr
Vegetation (with % dominant): water cress (20%) Phrag (40%) Duckweed (15%) Pond weed sp (20%) Cattail (5%)

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

Riparian Habitat
Vegetation: Phrag / 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 patches of water cress + pondweed along Dmin
dense aquatic veg through out
2.5m open box culvert at union Ln

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	0984	SE	Townln Dr	Other:	0985	NE	U/S Pollock Dr
Downstream:	0989	NW	Townln Dr				
Feature Bed:	0996	–	–				
Culvert / Bridge:	0988	–	–				
Vegetation:	0987	–	–				
Landscape Photo:	0990	–	–				

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 / cattail debris
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
watercress observed at road crossing
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:
Dense aquatic veg and water cres suggest permanance

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Renewable Energy Water Body Site Investigation

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

Survey Date: 15/APR/15
Time Started: 1552
Time Finished: 1600

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 3/SE, 10%, 0
Precipitation in Prior 48hrs (mm): 0.2 mm

Site Code: LSCT064
Feature Name: Townline Dr
Drainage System: Lake St Clair
Location in System: crossing St Clair Rd

GPS Location
Easting: 0392345
Northing: 4706090
Water Body No. 114

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):
- ☐ Standing Water
- ☐ Low Flow / Baseflow
- ☑ Freshet Flow
- ☑ Defined ☐ Poorly Defined
- ☐ Moderate Flow ☐ High / Flood Flow

Avg. Wetted Width (m): 4.0 Avg. Water Depth (m): 0.25 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 5.6 Avg. Bankfull Depth (m): 0.55
Substrate Composition (%) Boulder: — Cobble: — Gravel: — Fines: 100
Bed Morphology (%) Flat: 80 Riffle: 20 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 cattail debris
Vegetation (with % dominant): cattail sp (80%) water cress (20%)

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

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., 2.6 m culvert at St Clair rd
watercress obs on Road crossing
dense aquatic veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	991	SE	—	Other:	—	—	—
Downstream:	996	SW	—				
Feature Bed:	992	—	—				
Culvert / Bridge:	993	—	—				
Vegetation:	994	—	—				
Landscape Photo:	995	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 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:
water cress / aquatic veg suggests permanence

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 16 12 Nokal **Field Staff:** BER

Survey Date: 21APR15 **Weather Conditions**
Time Started: 1130 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.9°, 6 WSW, 100%, 0
Time Finished: 1145 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 133 **GPS Location** **Estimated Length Assessed**
Feature Name: DYER DR Easting: 0393335 Upstream: 50
Drainage System: Lake St Clair Northing: 4702457E Downstream: 100
Location in System: At Cedar Helen In *Water Body No.* 115

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): 1.0 Avg. Water Depth (m): 0.16 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 2.0 Avg. Bankfull Depth (m): 0.4
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):
Other Comments:
Channelized Dr

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

Surface Water Quality
Temp (°C): 10 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)
No Fish obs
channelized Dr w/ dense Cattail debris
Poor channel definition

Photographs	No.	Direction	Description	No.	Direction	Description
Upstream:	388	SE	–	Other:	–	–
Downstream:	390	NE	–			
Feature Bed:	391	–	–			
Culvert / Bridge:			–			
Vegetation:	392	–	–			
Landscape Photo:	393	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 cattail d.bris build up
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:
Presence of cattails suggest some degree of permanence

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Renewable Energy Water Body Site Investigation

Office Use Only

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

Survey Date: 21 APR 15
Time Started: 1148
Time Finished: 1200

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.8°, 6 W, 100%, ∅
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT 134
Feature Name: Dyer Dr
Drainage System: Lake St Clair
Location in System: alum cedar bedge Ln

GPS Location
Easting: 0393177
Northing: 4704445
Water Body No. 116

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

Avg. Wetted Width (m): 1.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 2.5 Avg. Bankfull Depth (m): 0.40
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):
Other Comments: Channelized Dr w̄ signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Recently cleaned out
Vegetation (with % dominant): Cattail sp (100%)

Surface Water Quality
Temp (°C): 10 Turbidity (L/M/H): Colour: Brown Comments: —

Riparian Habitat
Vegetation: Tall grasses
Canopy Cover (% and species): ∅
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Channelized Dr w̄ signs of recent clean out
poorly defined channel

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	394	NE	—	Other:	—	—	—
Downstream:	395	SW	—				
Feature Bed:	396	—	—				
Culvert / Bridge:	—		—				
Vegetation:	397	—	—				
Landscape Photo:	398	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):
Recently cleaned
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:
Presence of cattails suggest some degree of permanence

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Office Use Only

Project (No. & Name): 162 N. Kml **Field Staff:** REB

Survey Date: 21 APR 16 **Weather Conditions**
Time Started: 1200 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.8°, LW, 100%, 0
Time Finished: 1215 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 135 **GPS Location** **Estimated Length Assessed**
Feature Name: DYER Dr Easting: 0392979 Upstream: 100
Drainage System: Lk. St Clair Northing: 4702872 Downstream: 50
Location in System: at Cedar Cr Th *Water Body No.* 4

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): 1.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.20
Avg. Bankfull Width (m): 2.5 Avg. Bankfull Depth (m): 0.5
Substrate Composition (%) Boulder: – Cobble: – Gravel: 30 Fines: 70
Bed Morphology (%) Flat: 70 Riffle: – Run: 30 Pool: –
Bank Slope & Stability: High slope moderate Stability Feature Gradient (H/M/L):
Other Comments:
Channelized dr w signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): – Recently cleaned Dr
Vegetation (with % dominant): Cattail Sp (100%)

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

Riparian Habitat
Vegetation: 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 Fish obs
Poorly defined Channelized Dr w deposits of cattail debris
1.2m CSP in Loose concrete blocks

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	399	NE		Other:	–	–	–
Downstream:	400	NW	–				
Feature Bed:	401	–	–				
Culvert / Bridge:	402	–	–				
Vegetation:	403	–	–				
Landscape Photo:	404	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):
Sparse patches of cattail debris along 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) None

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

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 160 Aikens **Field Staff:** BEB

Survey Date: 21 APR 15 **Weather Conditions**
Time Started: 0905 Temp (°C), Wind, Cloud Cover (%), Precipitation: 3.5°, 6SW, 100%, 0
Time Finished: 0920 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 126 **GPS Location** **Estimated Length Assessed**
Feature Name: OYER Dr Easting: 0392805 J Upstream: 50
Drainage System: Lake St Clair Northing: 4706318 Downstream: 50
Location in System: at Pow. Ch. Ln *Water Body No.* 118

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): 2.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 4.0 Avg. Bankfull Depth (m): 0.45
Substrate Composition (%) Boulder: – Cobble: – Gravel: 30 Fines: 70
Bed Morphology (%) Flat: 70 Riffle: 30 Run: – Pool: –
Bank Slope & Stability: High Slope Moderate Stability Feature Gradient (H/M/L):
Other Comments: Channelized Dr – Signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Recent cleaned out
Vegetation (with % dominant): no In Stream veg
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): 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
well defined channel

2.5 m concrete box culvert at Road crossing

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	349	SE	–	Other:	–	–	–
Downstream:	350	NW	–				
Feature Bed:	351	–	–				
Culvert / Bridge:	352	–	–				
Vegetation:	353	–	–				
Landscape Photo:	354	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:
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 channel definition and U/S Observations

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

Survey Date: 20APR15 **Weather Conditions**

Time Started: 1440 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.1°, 5 SW, 100%, RAIN

Time Finished: 1455 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 116 **GPS Location** **Estimated Length Assessed**

Feature Name: DYER Dr Easting: 0391245 Upstream: 30

Drainage System: Lake St Clair Northing: 4706467 Downstream: 100

Location in System: off Greenvalley Ln *Water Body No.* 119

Channel Characteristics and Morphology W / 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): 0.25 Max Pool Depth (m): 0.40

Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.75

Substrate Composition (%) Boulder: Cobble: Gravel: 15 Fines: 85

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

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

Other Comments: Evidence of recent clean out

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): none - Recently cleaned

Vegetation (with % dominant): Traces of Duckweed (<0.07%) - recently cleaned channel

Surface Water Quality

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

Riparian Habitat

Vegetation: T.G 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

Natural channel w/ large areas of exposed soil along banks

well defined channel

2ea. half CSP in Broken concrete at Greenvalley Ln

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	290	S	–	Other:	–	–	–
Downstream:	291	NE	–				
Feature Bed:	292	–	–				
Culvert / Bridge:	293	–	–				
Vegetation:	294	–	–				
Landscape Photo:	295	NE	–				

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

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

Large exposed sediment deposits along banks

Presence of Hydric Soils:

–

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

Recently cleaned

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 WB w/ a high degree of Channel definition.

duck weed suggests some degree of permanence.

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

Survey Date: 20APR15 **Weather Conditions**
Time Started: 1345 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.1°, 5 SW, 100%, RAIN
Time Finished: 1400 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 113 **GPS Location** **Estimated Length Assessed**
Feature Name: Baldon Dr Easting: 0389857 Upstream: 50
Drainage System: Lake St Clair Northing: 4707113 Downstream: 50
Location in System: at Bush Ln *Water Body No.* 120

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): 2.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 40 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 High stability Feature Gradient (H/M/L):
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense build up of Terr. debris
Vegetation (with % dominant): Cattail sp (50%) Duckweed (50%)
Surface Water Quality
Temp (°C): 11 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)
No Fish obs
Channelized dr w patches of cattails and dense Leaf litter build up
0.8m CSP w Broken concrete embankments

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	273	SE	–	Other:	–	–	–
Downstream:	274	NW	–				
Feature Bed:	275	–	–				
Culvert / Bridge:	276	–	–				
Vegetation:	277	–	–				
Landscape Photo:	278	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 Terr. 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:
Presence of Aquatic veg Suggests some degree of permanency

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

Survey Date: 16 APR 15 **Weather Conditions**
Time Started: 0905 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 0920 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT071 **GPS Location** **Estimated Length Assessed**
Feature Name: Little Bear Cr Dr Easting: 0392384 Upstream: 50
Drainage System: Lake St Clair Northing: 4708150 Downstream: 50
Location in System: at Cedar Hedge Ln *Water Body No.* 121

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
Avg. Bankfull Width (m): 10.5 Avg. Bankfull Depth (m): unk
Substrate Composition (%) ~~Boulder: unk~~ ~~Cobble: unk~~ ~~Gravel: 30~~ ~~Fines: unk 70~~
Bed Morphology (%) Flat: 50 Riffle: — Run: 50 Pool: —
Bank Slope & Stability: High slope moderate Stability Feature Gradient (H/M/L):
Other Comments:
Turbidity to high
exposed soil - signs of erosion

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense build up of dry grasses / woody debris along edge of wb
Vegetation (with % dominant): no instream veg

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

Riparian Habitat
Vegetation: T-Grasses / Deciduous
Canopy Cover (% and species): ~ 40% D. Trees
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No fish obs
signs of erosion along stream bank
Dense over hanging bank veg
25m span bridge

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	30	SE	—	Other:	—	—	—
Downstream:	31	NW	—				
Feature Bed:	32	—	—				
Culvert / Bridge:	33	—	—				
Vegetation:	34	—	—				
Landscape Photo:	35	NW	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Similar to surrounding area may contain some coarse substrate, high turbidity = difficult to see
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
evidence of flooding along banks ~ 4m from edge of wb
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dense build up of dry grasses / woody debris along edges of wb
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:
Sig ws with well defined banks

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

Survey Date: 16APR15 **Weather Conditions**
Time Started: 1120 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1140 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT078 **GPS Location** **Estimated Length Assessed**
Feature Name: Chinnicks Dr Easting: 0399890 Upstream: 50
Drainage System: Lake St Clair Northing: 4708433 Downstream: 50
Location in System: along Country View Dr *Water Body No.* 122

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): 5.26 Avg. Water Depth (m): 0.03 Max Pool Depth (m): N/A
Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.85
Substrate Composition (%) Boulder: — Cobble: — Gravel: 20 Fines: 80
Bed Morphology (%) Flat: 70 Riffle: - Run: 30 Pool:
Bank Slope & Stability: moderate slope moderate stability Feature Gradient (H/M/L):
Other Comments:
well defined channel w/ signs of sub strate sorting / continuous water flow

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense cattail patches
Vegetation (with % dominant): Cattail (70%) Pond weed sp (30%)

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

Riparian Habitat
Vegetation: Dense T. Grasses D. Trees / C. Trees
Canopy Cover (% and species): 40% D. Trees U/S C. Trees D/S
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish sp
well defined banks w/ dense patches of cattails
evidence of sub sort and dense algae build up
6.5 m open box culverts

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	70	SE	-	Other:	—	-	—
Downstream:	71	NW	-				
Feature Bed:	72	—	-				
Culvert / Bridge:	73	—	-				
Vegetation:	74	—	-				
Landscape Photo:	75	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 cattail patches 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:
presence of Aquatic Veg / Sub sorting suggests permanence

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

Survey Date: 22 APR 15 **Weather Conditions**
Time Started: 0900 Temp (°C), Wind, Cloud Cover (%), Precipitation: 5.7°, 4W, 100%, 0
Time Finished: 0915 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 148 **GPS Location** **Estimated Length Assessed**
Feature Name: Rankin Cr Dr Easting: 0394277 Upstream: 10
Drainage System: Lake St clair Northing: 4702121 Downstream: 10
Location in System: at Baldwin Rd *Water Body No.* 123

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): 4.6 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: Moderate Slope moderate Stability Feature Gradient (H/M/L):
Other Comments:
Dense in stream veg u/s

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense T. Veg - U/S abundant Leaf Litter - D/S
Vegetation (with % dominant): T. Grasses (80%) Trees of Duckweed (20%)

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

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 70% D. Trees D/S
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Poorly defined channel E In Stream T-Veg
Mostly Rock obs
0.25 m CSP in Loose Concrete Blocks

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	477	NE	–	Other:	–	–	–
Downstream:	478	SW	–				
Feature Bed:	479	–	–				
Culvert / Bridge:	480	–	–				
Vegetation:	481	–	–				
Landscape Photo:	482	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 T. Grasses Through out U/S
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:
Presence of Duckweed and mustrat suggest permanence

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

Survey Date: 22 APR 15
Time Started: 0915
Time Finished: 0930

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 5°, 4W, 100%, Ø
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT 146
Feature Name: Rankin Dr
Drainage System: Lake St Clair
Location in System: at Country view Ln

GPS Location
Easting: 0393548
Northing: 4702847
Water Body No. 124

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): 4.5 Avg. Water Depth (m): 0.2 Max Pool Depth (m):
Avg. Bankfull Width (m): 6.0 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):
Other Comments:
over hanging Bank veg

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): Turbidity (L/M/H): Colour: Brown 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
well defined channel w/ traces of duckweed
1.2 m csp at Road side

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	465	S	–	Other:	–	–	–
Downstream:	466	N	–				
Feature Bed:	467	–	–				
Culvert / Bridge:	468	–	–				
Vegetation:	469	–	–				
Landscape Photo:	470	S	–				

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):
Traces of leaf litter U/S
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 WB size and presence of Duckweed

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

Survey Date: 22 APR 15 **Weather Conditions**
Time Started: 0750 Temp (°C), Wind, Cloud Cover (%), Precipitation: 7°, 3 SW, 100%, 0
Time Finished: 0815 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 145 **GPS Location** **Estimated Length Assessed**
Feature Name: Ranton Dr. Easting: 0393545 Upstream: 50
Drainage System: Lake St Clair Northing: 4702922 Downstream: 50
Location in System: at Baldwin RD *Water Body No.* 125

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): 7.6 Avg. Water Depth (m): 0.20 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 9.0 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 Low stability Feature Gradient (H/M/L):
Other Comments:
Signs of erosion
Recently cleaned

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): - Recently cleaned
Vegetation (with % dominant): Traces of Duckweed

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

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 20% - D/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/ signs of erosion
1.2 m CSP in Loose cobble at road side

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	459	S	–	Other:	–	–	–
Downstream:	460	N	–				
Feature Bed:	461	–	–				
Culvert / Bridge:	462	–	–				
Vegetation:	463	–	–				
Landscape Photo:	464	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):
- Recently cleaned
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 Channel definition and presence of aquatic veg

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Renewable Energy Water Body Site Investigation
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Project (No. & Name): 1610 N. Kent **Field Staff:** BAB

Survey Date: 21 APR 15 **Weather Conditions**
Time Started: 1220 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.8°, 6 W, 100%, 0
Time Finished: 1235 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT136 **GPS Location** **Estimated Length Assessed**
Feature Name: Rankin Cr Easting: 0392828 Upstream: 50
Drainage System: Lake St Clair Northing: 4703753 Downstream: 50
Location in System: east Baldoon RD *Water Body No.* 1260

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): 4.4 Avg. Water Depth (m): 0.65 Max Pool Depth (m): 0.75
Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.85
Substrate Composition (%) ~~Boulder:~~ ~~Cobble:~~ ~~Gravel:~~ Fines: –
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: High slope Low stability - Signs of erosion Feature Gradient (H/M/L):
Other Comments: Turbidity 100 high

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): over hanging bank veg along channel
Vegetation (with % dominant): Duck weed Cladophora

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

Riparian Habitat
Vegetation: T.Grasses - D/S Phrag/D-Shrubs - U/S
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 Signs of erosion
1.8m csp in dense cobble embankment

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	405	SE	–	Other:	–	–	–
Downstream:	406	NW	–				
Feature Bed:	407	–	–				
Culvert / Bridge:	408	–	–				
Vegetation:	409	–	–				
Landscape Photo:	410	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):
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:
Size / Definition and presence of duck weed suggests permanent

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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: 21 APR 15 **Weather Conditions**
Time Started: 1240 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.8°, LOW, 100%, Ø
Time Finished: 1255 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT137 **GPS Location** **Estimated Length Assessed**
Feature Name: LRaftin Cr Easting: 0392452 Upstream: 50
Drainage System: Lake St Clair Northing: 4703801 Downstream: 50
Location in System: 55 Cedar Hedge Ln *Water Body No.* 127

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): 0.4 Max Pool Depth (m): 0.5
Avg. Bankfull Width (m): 7.0 Avg. Bankfull Depth (m): 0.85
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): none visible
Vegetation (with % dominant): Duck weed (65%) Pond weed sp. (15%) water cress (20%)
Surface Water Quality
Temp (°C): 10 Turbidity (L/M/H): Colour: Green 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
well defined channel ≈ Low bank stability
1.8 m CSP in dense cobble embankment

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	411	E	–	Other:	–	–	–
Downstream:	412	W	–				
Feature Bed:	413	–	–				
Culvert / Bridge:	414	–	–				
Vegetation:	415	–	–				
Landscape Photo:	416	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):
none visible
Seepage Areas / Springs / Evidence of High Water Table in or near Feature:
water cress obs
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 suggests permanence

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Project (No. & Name): 182 N. Kant **Field Staff:** BEB

Survey Date: 21 APR 16 **Weather Conditions**
Time Started: 0830 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 0945 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 124 **GPS Location** **Estimated Length Assessed**
Feature Name: Rankin Ck Dr Easting: 0391219 Upstream: 50
Drainage System: Lake St chn Northing: 4704600 Downstream: 50
Location in System: at Down Ctr Ln *Water Body No.* 128

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): 6.0 Avg. Water Depth (m): unk <1m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): unk ~2m
Substrate Composition (%) ~~Boulder:~~ 0 ~~Cobble:~~ 0 ~~Gravel:~~ ~10% Fines: ~90%
Bed Morphology (%) Flat: none Riffle: — Run: — Pool: —
Bank Slope & Stability: high slope low Stability Feature Gradient (H/M/L):
Other Comments:
well defined Channel no Turbidity too high for Sub assessment

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): none
Vegetation (with % dominant): no in stream veg
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Green Comments: —

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): 40% 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 Signs of erosion
Painted Turtle obs
4.5m CSP at Road S/b

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	336	E	-	Other:	-	-	-
Downstream:	337	W	-				
Feature Bed:	338	-	-				
Culvert / Bridge:	339	-	-				
Vegetation:	340	-	-				
Landscape Photo:	341	E					

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
- Possible Sands + other fines, can't see channel bed
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
bank slumps, material at toe of slope, sed deposit on outside meander bend
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:
Presence of Painted Turtle suggests permanance, well defined channel, bank erosion high water mark (i.e bankfull visible)

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Renewable Energy Water Body Site Investigation

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Project (No. & Name): 16 12 N. Kent **Field Staff:** BEB

Survey Date: 21 APR 15
Time Started: 0800
Time Finished: 0815

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 9°, 4 SW, 100%, Light Rain
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT 123
Feature Name: Rankin Creek Dr
Drainage System: Lake St Clair
Location in System: at Dover ctr Ln

GPS Location
Easting: 0390852
Northing: 4704254
Water Body No. 129

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): unk <1m Max Pool Depth (m): unk
Avg. Bankfull Width (m): 8.5 Avg. Bankfull Depth (m): unk 1.5-2m
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: Turbidity too high
areas of erosion / exposed soil
High turbidity, dark water = channel bed not visible

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): deposits of woody debris through out
Vegetation (with % dominant): – only duckweed visible (100%)

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

Riparian Habitat
Vegetation: T. Grasses / D. Shrubs
Canopy Cover (% and species): 10% U/S 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 w/ signs of erosion
4.5 m open box cu[illegible] at road side

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	331	N	–	Other:	–	–	–
Downstream:	330	S	–				
Feature Bed:	332	–	–				
Culvert / Bridge:	333	–	–				
Vegetation:	334	–	–				
Landscape Photo:	336	NE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A can't see bed – defined channel
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None visible
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
very sparse deposits of woody debris 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) N/A.

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

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

Survey Date: 21 APR 15 **Weather Conditions**
Time Started: 1325 Temp (°C), Wind, Cloud Cover (%), Precipitation: 10.8, 6W, 100%, 0
Time Finished: 1340 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT 140 **GPS Location** **Estimated Length Assessed**
Feature Name: Rankin Cr Easting: 0390845 Upstream: 50
Drainage System: Lake St Clair Northing: 4703654 Downstream: 50
Location in System: upt Rear Ln *Water Body No.* 130

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): 6.0 Avg. Water Depth (m): 0.20 Max Pool Depth (m): 0.3
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: moderate Slope high Stability Feature Gradient (H/M/L):
Other Comments: well defined channel

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): over hanging bank veg
Vegetation (with % dominant): Duckweed (10%) Pondweed (50%) watercress (40%)

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

Riparian Habitat
Vegetation: T. 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
dense over hanging bank veg

4.5m open box culvert out road cross

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	430	N	-	Other:	-	-	-
Downstream:	431	SW	-				
Feature Bed:	432	-	-				
Culvert / Bridge:	433	-	-				
Vegetation:	434	-	-				
Landscape Photo:	435	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):
Patches of 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:
Based on presence of aquatic veg most likely permanent wb

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

Survey Date: 22 APR 16 **Weather Conditions**
Time Started: 0840 Temp (°C), Wind, Cloud Cover (%), Precipitation: 5°, 4 W, 100%, 0
Time Finished: 0855 *Precipitation in Prior 48hrs (mm):* No data

Site Code: 1 SCP 147 **GPS Location** **Estimated Length Assessed**
Feature Name: Kent Dr Easting: 0392883 Upstream: 10
Drainage System: Lake St. Clair Northing: 4702656 Downstream: 50
Location in System: Along Baldwin RD *Water Body No.* 131

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): 2.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 3.0 Avg. Bankfull Depth (m): 0.45
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 70 Riffle: – Run: 30 Pool: –
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): Dense woody Debris - U/S Dense Cattail Debris - D/S
Vegetation (with % dominant): Cattail (50%) T. Grasses (50%)
Surface Water Quality
Temp (°C): 9 Turbidity (L/M/H): Colour: clear Comments: –

Riparian Habitat
Vegetation: T. Grasses D. Shrubs
Canopy Cover (% and species): 20% D. Shrubs U/S
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense Debris through out
T. Grasses along Stream bed
0.7 m CSP in Loose concrete blocks

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	471	NE	–	Other:	–	–	–
Downstream:	472	SW	–				
Feature Bed:	473	–	–				
Culvert / Bridge:	474	–	–				
Vegetation:	475	–	–				
Landscape Photo:	476	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):
Dense woody debris / Cattail 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) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
T. Grasses Suggest long dry periods however Cattail Sp Suggest some degree of permanence

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

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

Time Started: 1345 Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°C, 3/E, 20%, 0

Time Finished: 1355 *Precipitation in Prior 48hrs (mm):* 2.0 mm

Site Code: LSCT056 **GPS Location** **Estimated Length Assessed**

Feature Name: Prince Albert Dr Easting: 0395191 Upstream: 150

Drainage System: Lake St Clair Northing: 4709196 Downstream: 150

Location in System: Along Prince Albert Dr. *Water Body No.* 132

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): 0.3 Max Pool Depth (m): 0.4

Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.7

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

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

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

Other Comments:

Bare soil / Signs of erosion

Signs of recent clean out

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): patches of mucky debris / dry grasses

Vegetation (with % dominant): recently clean out - Traces of Duckweed (100%)

Surface Water Quality

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

Riparian Habitat

Vegetation: Phragmites / Dog weed

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 drain

traces of duck weed suggest permanent

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	946	NW	—	Other:	—	—	—
Downstream:	947	SE	—				
Feature Bed:	948	—	—				
Culvert / Bridge:	—		—				
Vegetation:	949	—	—				
Landscape Photo:	950	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:

recently cleaned drain, Signs of duckweed / Phrag imply permanence

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Renewable Energy Water Body Site Investigation

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

Survey Date: 16 APR 15 **Weather Conditions**
Time Started: 0900 Temp (°C), Wind, Cloud Cover (%), Precipitation: 12°C, 3/E, 30%, 0
Time Finished: 0915 *Precipitation in Prior 48hrs (mm):* 2.0 mm

Site Code: LSCT038 **GPS Location** **Estimated Length Assessed**
Feature Name: Prince Albert Dr Easting: 0394832 Upstream: 150
Drainage System: Lake St Clair Northing: 4709611 Downstream: 150
Location in System: out Prince Albert / Greenmantle Dr *Water Body No.* 133

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): 0.25 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 5.0 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): —
Other Comments:
Recently cleaned Channelized Drain

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): deposits of dry grasses
Vegetation (with % dominant): - no recently cleaned no instream veg (isolated traces of Duckweed)

Surface Water Quality
Temp (°C): 8 Turbidity (L/M/H): MEDIUM Colour: Brown Comments: —

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
Recently cleaned channelized Dr
Confluence of Prince Albert Dr and Unnamed Dr at Prince Albert / Green valley
4.5 m open box culvrt

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	855	NW	—	Other:	854	NE	U/S view and Dr
Downstream:	856	SE	—				
Feature Bed:	857	—	—				
Culvert / Bridge:	858	—	—				
Vegetation:	859	—	—				
Landscape Photo:	860	E	—				

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:
N/A recent clean out, sed. deposits on bed near road & culvrt
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Isolated patches of Dry grasses
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:
Isolated traces of duckweed / Phrag Suggest permanence

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

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

Time Started: 0830 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9°, 0, 30%, 0

Time Finished: 0840 *Precipitation in Prior 48hrs (mm):* 2.8 mm

Site Code: LSCI-036 **GPS Location** **Estimated Length Assessed**

Feature Name: Prince Albert Dr Easting: 0394 028 Upstream: 150

Drainage System: Lake St Clair Northing: 4710 438 Downstream: 150

Location in System: Along Prince Albert RD *Water Body No.* 134

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): 0.25 Max Pool Depth (m): 0.3

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: High Slope moderate Stable Feature Gradient (H/M/L): Low

Other Comments:

Channelized Drain Signs of recent Cleaning

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Dry Grasses

Vegetation (with % dominant): – Recent cleaning no instream veg

Surface Water Quality

Temp (°C): 9 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

Recent clearing

Channelized drain Signs of erosion along banks

some bank destn Closer to road

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

Additional Characteristics

Describe Bed Material and Soil Conditions in and around Feature:

fines, similar to surrounding ag. fields

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

N/A recent clean out

Presence of Hydric Soils:

Cattails present, no other evidence

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

evidence of some veg on feature bed, 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) N/A

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

Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral

Evidence of Water Body Status:

Recent channel cleaning observed assessment however dry cattails on banks suggest ephemeral

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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: 14 APR 14
Time Started: 1100
Time Finished: 1110

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 2/NE, 40%, Ø
Precipitation in Prior 48hrs (mm): 2.2mm

Site Code: LSCT-022
Feature Name: Prince Albert Drain
Drainage System: Lake St Clair
Location in System: at Bush Line / Prince Albert RD

GPS Location
Easting: 0393897
Northing: 4710641
Water Body No. 135

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 Dr

Avg. Wetted Width (m): 5P Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.3
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): LOW
Other Comments:
Channelized Road Side drain
very minor flow

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dry grasses along edge of stream bed
Vegetation (with % dominant): 100% Duckweed

Surface Water Quality
Temp (°C): 8 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
4.5m open box culvert
very minor flow
Channelized road side drainage ditch evidence of drain cleaning

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	771	–	–	Other:	–	–	–
Downstream:	772	–	–				
Feature Bed:	774	–	–				
Culvert / Bridge:	773	–	–				
Vegetation:	775	–	–				
Landscape Photo:	776	–	–				

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:
Some deposits on u/s side perpendicular to flow
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
None, 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) N/A

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
no To veg along stream bed however no evidence of substrate sorting or continuous water

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

Survey Date: 14 APR-15
Time Started: 1115
Time Finished: 1125

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 4°C, 2/NE, 40%, R
Precipitation in Prior 48hrs (mm): 8.8mm

Site Code: LSCT-023
Feature Name: Prince Albert DR
Drainage System: Lake St Clair
Location in System: on Prince Albert RD

GPS Location
Easting: 0393590
Northing: 4710983
Water Body No. 1316

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 Roadside Drain
Avg. Wetted Width (m): 2.5 Avg. Water Depth (m): 0.5 Max Pool Depth (m): 0.6
Avg. Bankfull Width (m): 2.0 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 low stability - Evidence of erosion Feature Gradient (H/M/L): Low
Other Comments:
Channelized Roadside drain Indication of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): pockets of woody debris / dry grass
Vegetation (with % dominant): Duck weed (100%)

Surface Water Quality
Temp (°C): 8 Turbidity (L/M/H): MEDIUM Colour: Brown Comments: —

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

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
Channelized Roadside Drain w Signs of recent clean out
Stream bed free of veg / debris
no fish obs
some bank definition (minor)

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	777	SE	—	Other:	—	—	—
Downstream:	778	NW	—				
Feature Bed:	779	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	780	—	—				
Landscape Photo:	781	E	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
—
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):
Isolated areas of woody debris / dry grasses along channel edges
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:
Size of WB and presence of duck weed suggest permanence however lack of bed definition suggests intermittent WB

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

Survey Date: 13-APR-15 **Weather Conditions**
Time Started: 1450 Temp (°C), Wind, Cloud Cover (%), Precipitation: 2&6 NW, 100%, Light Rain
Time Finished: 1500 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT-007 **GPS Location** **Estimated Length Assessed**
Feature Name: Prince Albert Dr Easting: 0392977 Upstream: 100
Drainage System: Lake St Clair Northing: 4711663 Downstream: 100
Location in System: – *Water Body No.* 137

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): 0.3 Max Pool Depth (m): 0.5
Avg. Bankfull Width (m): 5.0 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 moderate slope Feature Gradient (H/M/L): –
Other Comments:
Channelized DR along Prince Albert Rd

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Patches of woody debris
Vegetation (with % dominant): Phrag (95%) Duck weed 5%

Surface Water Quality
Temp (°C): 10 Turbidity (C/M/H): Low Colour: Brn 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 evidence of drain cleanout

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	47	SE	–	Other:	–	–	–
Downstream:	48	NW	–				
Feature Bed:	–	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	48	–	–				
Landscape Photo:	50	NW	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
Same as surrounding area, densely packed fine substrate
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
no evidence of sediment deposit
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
patches of Leaf litter / woody 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) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
presence of duck weed suggests permanence.

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

Survey Date: 20 APR 15
Time Started: 1545
Time Finished: 1600

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 14.3°, 6 WSW, 100%, Ø
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT119
Feature Name: Townline Dr
Drainage System: Lake St Clair
Location in System: along St Clair RD

GPS Location
Easting: 0391209
Northing: 4707940
Water Body No. 138

Estimated Length Assessed
Upstream: 150
Downstream: 150

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): 4.5 Avg. Water Depth (m): 0.30 Max Pool Depth (m): 0.45
Avg. Bankfull Width (m): 6.0 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 Feature Gradient (H/M/L):
Other Comments:
Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): deposits of over hanging bank veg
Vegetation (with % dominant): none
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: 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
poorly defined channelized dr w̄ encrusting algae

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	307	SE	–	Other:	–	–	–
Downstream:	308	NW	–				
Feature Bed:	309	–	–				
Culvert / Bridge:	—		–				
Vegetation:	310	–	–				
Landscape Photo:	311	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:
[illegible] patches
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Sporatic patches of T. veg debris along 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) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Based on observations US/DS and presence of dense algae

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Project (No. & Name): 1617 N. Kent **Field Staff:** BEB

Survey Date: 20APR15 **Weather Conditions**
Time Started: 1525 Temp (°C), Wind, Cloud Cover (%), Precipitation: 15.1°, 6 SW, 100%, 0
Time Finished: 1540 *Precipitation in Prior 48hrs (mm):* no data

Site Code: LSCT 118 **GPS Location** **Estimated Length Assessed**
Feature Name: Town Ln Dr Easting: 039 1914 Upstream: no
Drainage System: Lake St Clair Northing: 4703143 Downstream: 100
Location in System: along St Clair RD *Water Body No.* 139

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 Channalized Dr
Avg. Wetted Width (m): 1.5 Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.2
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 Low stability - Signs of Erosion Feature Gradient (H/M/L):
Other Comments:
Channalized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Over hanging bank veg
Vegetation (with % dominant): Signs of recent clam cut
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: clear Comments: –

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

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
poorly defined channel w dense patches of filamentus algae
Signs of erosion / Exposed soil and signs of recent clam cut

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	302	SE	–	Other:	–	–	–
Downstream:	303	NW	–				
Feature Bed:	304	–	–				
Culvert / Bridge:	——	–	–				
Vegetation:	305	–	–				
Landscape Photo:	306	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):
Isolated patches of filamentus algae and Dry grasses
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:
Dense algae suggests some degree of permanance

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

Survey Date: 14 APR 15 **Weather Conditions**
Time Started: 1235 Temp (°C), Wind, Cloud Cover (%), Precipitation: 14°C, 2/SE, 40%, 0
Time Finished: 1245 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT028 **GPS Location** **Estimated Length Assessed**
Feature Name: 13th Con RD DR N. Easting: 0389520 Upstream: 150
Drainage System: Lake St Clair Northing: 4711856 Downstream: 150
Location in System: Bush Ln *Water Body No.* 140

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): 3 Avg. Water Depth (m): 0.15 Max Pool Depth (m):
Avg. Bankfull Width (m): N/A Avg. Bankfull Depth (m): N/A
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): –
Other Comments:
entire stream bed lined w phrag poory defined, possible clean out in previous year

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense Phrag along entire Stream bed
Vegetation (with % dominant): Phrag (100%)

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

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
Channelized Drain entirely lined w phrag no indication of continuous water flow

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	800	NE	–	Other:	–	–	–
Downstream:	801	SW	–				
Feature Bed:	802		–				
Culvert / Bridge:	———		–				
Vegetation:	803		–				
Landscape Photo:	804	NE	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
same as Surrounding ag
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None, possible recent clean out.
Presence of Hydric Soils:
–
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Dense Phrag along entire Stream bed, low flow area where no veg or leaf litter.
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:
Dense Phrag along entire stream bed no indication of some water flow along stream bed no aquatic veg

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Project (No. & Name): 1610 N. Front **Field Staff:** BEB

Survey Date: 15 APR 18 **Weather Conditions**
Time Started: 0935 Temp (°C), Wind, Cloud Cover (%), Precipitation: 12°C, 3/E, 80%, 0
Time Finished: 0950 *Precipitation in Prior 48hrs (mm):* 8.8 mm

Site Code: LSCT040 **GPS Location** **Estimated Length Assessed**
Feature Name: Unnamed Dr Easting: 0395781 Upstream: 150
Drainage System: Lake stream Northing: 4710644 Downstream: 150
Location in System: along Greenvalley Ln *Water Body No.* 14

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 Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.35
Avg. Bankfull Width (m): 4 to 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 / High stability Feature Gradient (H/M/L): Low
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Over hanging T. Grasses
Vegetation (with % dominant): T. Grasses (80%) Traces of Duck weed (20%)

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
over hanging T. Grasses in channel
Traces of duckweed suggest permanence

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	866	NE	-	Other: —	—	—	—
Downstream:	867	SW	-				
Feature Bed:	868	-	-				
Culvert / Bridge:	—		-				
Vegetation:	869	-	-				
Landscape Photo:	870	E	-				

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):
grasses + algae along feature 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 Duckweed / algae suggest permanence

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

Survey Date: 15 APR 15 **Weather Conditions**
Time Started: 0920 Temp (°C), Wind, Cloud Cover (%), Precipitation: 12°C, 3/E, 30%, 0
Time Finished: 0930 *Precipitation in Prior 48hrs (mm):* 2.2mm

Site Code: LSCT038 **GPS Location** **Estimated Length Assessed**
Feature Name: Unnamed Dr Easting: 0395343 Upstream: 150
Drainage System: Lake St Clair Northing: 4710066 Downstream: 150
Location in System: Along Greenmeadow Ln *Water Body No.* 142

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): 3.0 Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.3
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: High slope / High Stability Feature Gradient (H/M/L): Low
Other Comments:
Channelized Roadside dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Over hanging T. Grasses
Vegetation (with % dominant): T. Grass (70%) Duckweed (30%)
Surface Water Quality
Temp (°C): 9 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
Traces of Duckweed Suggest permanence
Dense areas of Dry Grasses

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	861	NE	—	Other:	—	—	—
Downstream:	862	SW	—				
Feature Bed:	863	—	—				
Culvert / Bridge:			—				
Vegetation:	864	—	—				
Landscape Photo:	865	E	—				

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:
None
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type, amount, location):
Dry Traces of T. Grasses No leaf litter.
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:
Traces of Duck weed Suggest permanence

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

Survey Date: 16 APR 16
Time Started: 1230
Time Finished: 1245

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 15°C, B/E, 20%, 0
Precipitation in Prior 48hrs (mm): 2.2 mm

Site Code: LSCT051
Feature Name: Gray Dr
Drainage System: Lake St Clair
Location in System: Union Ln

GPS Location
Easting: 0395951
Northing: 4708731
Water Body No. 1443

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

Avg. Wetted Width (m): 3.5 Avg. Water Depth (m): 0.2 Max Pool Depth (m): 0.3
Avg. Bankfull Width (m): 5.0 Avg. Bankfull Depth (m): 0.45
Substrate Composition (%) Boulder: — Cobble: 10 Gravel: 10 Fines: 80
Bed Morphology (%) Flat: 50 Riffle: — Run: 50 Pool: —
Bank Slope & Stability: High Slope / High Stability Feature Gradient (H/M/L): Low
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): dense dry phrag debris
Vegetation (with % dominant): T. Grasses 20%, algae 30%

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

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

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
Dense phrag lined channelized drain
well defined stream bed w signs of substrate sorting
W of n open box culvert across Union Ln
No Fish

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	NE	923	—	Other:	—	—	—
Downstream:	SW	924	—				
Feature Bed:	—	926	—				
Culvert / Bridge:	—	925	—				
Vegetation:	—	928	—				
Landscape Photo:	E	927	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
similar to surrounding ag field some coarse cobble near culvert
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):
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:
algae, Phrag as well as sub sorting suggests permanent

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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: 20APR15
Time Started: 1230
Time Finished: 1240

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 17, 4 m/w, 100%, Light Rain
Precipitation in Prior 48hrs (mm): No data

Site Code: LSCT109
Feature Name: Town Ln Dr
Drainage System: Lake St Clair
Location in System: Oh St Clair RD

GPS Location
Easting: 0389891
Northing: 4709383
Water Body No. 144

Estimated Length Assessed
Upstream: 150
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 dr
Avg. Wetted Width (m): 6.5 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: 100
Bank Slope & Stability: Low slope high stability Feature Gradient (H/M/L):
Other Comments: Channelized dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): abundant cattail debris
Vegetation (with % dominant): cattail sp (70%) duck weed (30%
Surface Water Quality
Temp (°C): 11 Turbidity (L/M/H): Colour: Green Comments: –

Riparian Habitat
Vegetation: T. Grasses / Phrm
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 Road side dr aquatic veg Suggests some degree of permanence
No visible Flow

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	250	SE	–	Other:	–	–	–
Downstream:	251	NW	–				
Feature Bed:	252	–	–				
Culvert / Bridge:	—	–	–				
Vegetation:	253	–	–				
Landscape Photo:	254	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):
Very dense 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 Suggests some degree of permanence

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

Survey Date: 21 APR 15 **Weather Conditions**
Time Started: 1030 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.6° 6 WSW, 100%, 0
Time Finished: 1045 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT130 **GPS Location** **Estimated Length Assessed**
Feature Name: Town In Dr Easting: 0393566 Upstream: 150
Drainage System: L.R. St Clair Northing: 4705899 Downstream: 150
Location in System: Outlet St Clair RD *Water Body No.* 145

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): 3.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 4.0 Avg. Bankfull Depth (m): 0.5
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):
Other Comments: - Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense Phrag bulk up
Vegetation (with % dominant): Phrag (100%)

Surface Water Quality
Temp (°C): 11 Turbidity (C/M/H): Colour: clear 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 Channelized Dr – Dense Phrag through out

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	372	SE	–	Other:	–	–	–
Downstream:	373	NW	–				
Feature Bed:	374	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	375	–	–				
Landscape Photo:	376	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 Phrag 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) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Presence of Dense Phrag Through out Stream bed

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

Survey Date: 21APR 15 **Weather Conditions**
Time Started: 1010 Temp (°C), Wind, Cloud Cover (%), Precipitation: 9.6°, 6 WSW, 100%, B
Time Finished: 1025 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSCT129 **GPS Location** **Estimated Length Assessed**
Feature Name: Town Ln Dr Easting: 0393053 Upstream: 150
Drainage System: Lk. St Clair Northing: 4705858 Downstream: 150
Location in System: along St Clair RD *Water Body No.* 1410

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): 3.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 4.0 Avg. Bankfull Depth (m): 0.40
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):
Other Comments: Channel. 2nd Dr

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

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

Riparian Habitat
Vegetation: T.Grass / 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
Channlized dr w dense Phrag along stream bed

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	367	SE	-	Other:	-	-	-
Downstream:	368	NW	-				
Feature Bed:	369	-	-				
Culvert / Bridge:	-	-	-				
Vegetation:	370	-	-				
Landscape Photo:	371	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 build up of Phrag along stream 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:
Dense Phrag along stream bed suggests Long dry periods

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Project (No. & Name): T6L N. Kami **Field Staff:** BER

Survey Date: 28 APR 15 **Weather Conditions**
Time Started: 1340 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1425 *Precipitation in Prior 48hrs (mm):* No data

Site Code: LSPT 175 **GPS Location** **Estimated Length Assessed**
Feature Name: Little Bear Cr Easting: 0395086 Upstream: 150
Drainage System: Lake St Clair Northing: 4708801 Downstream: 20
Location in System: Non T 3 *Water Body No.* 147

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): 15.0 Avg. Water Depth (m): ~1m Max Pool Depth (m): Unk
Avg. Bankfull Width (m): 16.0 Avg. Bankfull Depth (m): ~1m
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: Exposed soil
Turbidity Too high
Recently cleared

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Patches of woody debris
Vegetation (with % dominant): none visible

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)
Fish obs V/S
Large wb well defined banks
High turbidity

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	829	NE	—	Other:	—	—	—
Downstream:	830	SE	—				
Feature Bed:	831	—	—				
Culvert / Bridge:	—	—	—				
Vegetation:	832	—	—				
Landscape Photo:	833	SW	—				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A not visible
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None visible
Presence of Hydric Soils:
—
Describe Debris and / or Leaf Litter in Feature (type,amount, location):
Patches of woody debris sporadically 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:
Based on presence of Fish and V/S obs

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Project (No. & Name): 162 Mikal **Field Staff:** BEN

Survey Date: 28 APR 15 **Weather Conditions**
Time Started: 1705 Temp (°C), Wind, Cloud Cover (%), Precipitation:
Time Finished: 1900 *Precipitation in Prior 48hrs (mm):* ~10 mm

Site Code: LSCT180 **GPS Location** **Estimated Length Assessed**
Feature Name: Little Bear Cr Easting: 039318 Upstream: 100
Drainage System: Lake Stanley Northing: 4707634 Downstream: 100
Location in System: Near TH4 *Water Body No.* 148

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): 18.5 Avg. Water Depth (m): >1m Max Pool Depth (m): 1.5+
Avg. Bankfull Width (m): 20 Avg. Bankfull Depth (m): >1.5m
Substrate Composition (%) Boulder: Cobble: Gravel: ~10% Fines: ~90%
Bed Morphology (%) Flat: 100 Riffle: Run: Pool:
Bank Slope & Stability: High slope over Short to Feature Gradient (H/M/L):
Other Comments:
Channelized Ow Turb High Turbidity

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): None visible
Vegetation (with % dominant): None visible

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

Riparian Habitat
Vegetation: Pine
Canopy Cover (% and species): 80
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
Fish Sp obs
Large well defined WB w very steep banks
areas of over Hanging Bank veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	854	–	–	Other:	–	–	–
Downstream:	855	–	–				
Feature Bed:	856	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	857	–	–				
Landscape Photo:	858	–	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A not visible
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
None visible
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)

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

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

Survey Date: 07 May 15
Time Started: 1540
Time Finished: 1605

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 22.6°, 3 SE, 5, 0
Precipitation in Prior 48hrs (mm): 11.0 mm

Site Code: LSCT189
Feature Name: Big Cr Dr
Drainage System: Lake St Clair
Location in System: US of Dover Ctr Ln

GPS Location
Easting: 0392942
Northing: 4705174
Water Body No. 150

Estimated Length Assessed
Upstream: 150
Downstream: 150

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): 0.25
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): 0.55
Substrate Composition (%) Boulder: Cobble: Gravel: Fines:
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: –
Bank Slope & Stability: Hi Slope Hi Stability Feature Gradient (H/M/L):
Other Comments:
Spotted Gar obs

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Turbidity 100 High
Vegetation (with % dominant): none visible

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

Riparian Habitat
Vegetation: T.Grasses / D.Shrubs
Canopy Cover (% and species): 20% D.Shrub
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
GAR Sp obs on site
well defined channel – very High Turbidity

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	SE	911	–	Other:	910		GAR Sp
Downstream:	NW	912	–				
Feature Bed:	–	913	–				
Culvert / Bridge:	—	–	–				
Vegetation:		914	–				
Landscape Photo:	SE	915	–				

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)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
Spotted Gar obs on site
well defined channel – very High turbidity

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Project (No. & Name): 1618 N. Kent **Field Staff:** BEB

Survey Date: 07 May 15 **Weather Conditions**
Time Started: 1310 Temp (°C), Wind, Cloud Cover (%), Precipitation: 22.4°, 3 SSE, 5, 0
Time Finished: 1340 *Precipitation in Prior 48hrs (mm):* 11.0 mm

Site Code: LSCT 185 **GPS Location** **Estimated Length Assessed**
Feature Name: Rankin Cr. DL Easting: 0394105 Upstream: 150
Drainage System: Lak. St Chain Trib Northing: 4702122 Downstream: 130
Location in System: South of Baldoon Ln *Water Body No.* 149

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): 4.0 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 5.0 Avg. Bankfull Depth (m): 0.4
Substrate Composition (%) Boulder: Cobble: Gravel: Fines: 100
Bed Morphology (%) Flat: Riffle: Run: Pool: 100
Bank Slope & Stability: M. Slope M. Stability Feature Gradient (H/M/L):
Other Comments:
Channelized

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): none
Vegetation (with % dominant): Duckweed sp. (90%) T. Grass (5%)
Surface Water Quality
Temp (°C): 18 Turbidity (L/M/H): Colour: Brown Comments: -

Riparian Habitat
Vegetation: 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 Fish obs
Drain Duckweed Throughout w/ patches of T. Grasses

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	E	890	-	Other:	-	-	-
Downstream:	~	891	-				
Feature Bed:		892	-				
Culvert / Bridge:	—		-				
Vegetation:		893	-				
Landscape Photo:	~	894	-				

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:
Presence of Duck Duckweed

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

Survey Date: 07 May 15 **Weather Conditions**
Time Started: 1610 Temp (°C), Wind, Cloud Cover (%), Precipitation: 22C, 3SE, 5, 0
Time Finished: 1625 *Precipitation in Prior 48hrs (mm):* 11.0 mm

Site Code: LSCT190 **GPS Location** **Estimated Length Assessed**
Feature Name: Big Cr Dr Easting: 0392292 Upstream: 150
Drainage System: Lake St Chain Northing: 4706647 Downstream: 150
Location in System: South of 1st Crk RD *Water Body No.* 151

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): <1m. Max Pool Depth (m): est.
Avg. Bankfull Width (m): 8.0 Avg. Bankfull Depth (m): ~1m
Substrate Composition (%) Boulder: – Cobble: – Gravel: ~10% Fines: ~90%
Bed Morphology (%) Flat: 50 Riffle: – Run: 50 Pool: –
Bank Slope & Stability: M. Slope H. 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): 12 Turbidity (L/M/H): Colour: Brown Comments: –

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

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
Fish Sp. Obs
well defined channel w/ paths of over hanging bank veg

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	S	916	–	Other:	–	–	–
Downstream:	NW	917	–				
Feature Bed:	–	918	–				
Culvert / Bridge:			–				
Vegetation:	–	919	–				
Landscape Photo:	S	920	–				

Additional Characteristics
Describe Bed Material and Soil Conditions in and around Feature:
N/A not visible, likely very fine
Describe Sediment Deposits in Feature and on Floodplain - Recent / Historic:
deposits along inside meander bend.
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)

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☑ Permanent ☐ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
well defined channel ≈ High turbidity Fish obs within Reach
Sinuous channel, established bank veg

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

Survey Date: 08 May 15 **Weather Conditions**
Time Started: 0745 Temp (°C), Wind, Cloud Cover (%), Precipitation: 20, 0, 40%, 0
Time Finished: 0820 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT198 **GPS Location** **Estimated Length Assessed**
Feature Name: SYLVESTER Dr Easting: 0394757 Upstream: 150
Drainage System: Lake St ch.* Northing: 4706866 Downstream: 50
Location in System: New T26 *Water Body No.* 152

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): 2.5 / 3.0 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.5
Avg. Bankfull Width (m): Avg. Bankfull Depth (m): 0.6
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: H. Slope M. stability Feature Gradient (H/M/L):
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Sparse patches of overhanging bank veg
Vegetation (with % dominant): water cress (10%) pond weed (10%)

Surface Water Quality
Temp (°C): 14 Turbidity (L/M/H): L Colour: Brown Comments: –

Riparian Habitat
Vegetation: Tall Grass / Phrag @
Canopy Cover (% and species):
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
N Fish obs
defined channel w patches of water cress throughout

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	S	956	–	Other:	–	–	–
Downstream:	N	957	–				
Feature Bed:		948	–				
Culvert / Bridge:	———	–	–				
Vegetation:		0959	–				
Landscape Photo:	N	0960	–				

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):
Very Sparse patches of aquatic 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) No

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:** BEB

Survey Date: 8 May 15
Time Started: 0930
Time Finished: 1010

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 23.8°, 25, 40%, Ø
Precipitation in Prior 48hrs (mm): 0.0mm

Site Code: LSCT209
Feature Name: Millard Leak Dr
Drainage System: Lake St Clair
Location in System: Near T

GPS Location
Easting: 0397737
Northing: 4707827
Water Body No. 153

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 Channelised Dr
Avg. Wetted Width (m): 3.0 Avg. Water Depth (m): 0.15 Max Pool Depth (m): 0.15
Avg. Bankfull Width (m): 4.0 Avg. Bankfull Depth (m): 0.75
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: H slope H-Stability Feature Gradient (H/M/L)
Other Comments:
Channelised Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense over hanging veg
Vegetation (with % dominant): Duckweed (100%)
Surface Water Quality
Temp (°C): 15 Turbidity (L/M/H): Colour: Brown Comments: –

Riparian Habitat
Vegetation: T. Grasses / D. Shrubs
Canopy Cover (% and species): 70% D. Shrubs
Adjacent Land Use: AG

General Comments (Fish observed, unusual conditions, culvert/bridge description, groundwater indicators and description)
No Fish obs
Dense over hanging bank veg and canopy shrubs

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	971	SE	–	Other:	–	–	–
Downstream:	972	N	–				
Feature Bed:	973	–	–				
Culvert / Bridge:	—	–	–				
Vegetation:	974	–	–				
Landscape Photo:	975	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):
abundant 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:
Based on Duckweed and Signs of Substrate Sorting

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Project (No. & Name): 162 N. Rees **Field Staff:** BLB

Survey Date: 9 May 15 **Weather Conditions**

Time Started: 1015 Temp (°C), Wind, Cloud Cover (%), Precipitation: 24.9°, 2 SSW, 40 %, 0

Time Finished: 1050 *Precipitation in Prior 48hrs (mm):* 0.0 mm

Site Code: LSCT202 **GPS Location** **Estimated Length Assessed**

Feature Name: Little Beaver Cr. D Easting: 0399315 Upstream: 150

Drainage System: Lake St Clair Northing: 4708760 Downstream: 150

Location in System: New T30 *Water Body No.* 154

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): 6.0 Avg. Water Depth (m): 0.6 Max Pool Depth (m):

Avg. Bankfull Width (m): 7.0 Avg. Bankfull Depth (m): 1.25

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

Bed Morphology (%) Flat: 45 Riffle: 5 Run: – Pool: 30

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

Other Comments:

Large beaver dam within Reach

Instream Aquatic Habitat

Features (e.g. woody debris, undercut banks): Patches of woody debris throughout

Vegetation (with % dominant): Duckweed (100%)

Surface Water Quality

Temp (°C): 12 Turbidity (L/M/H): Colour: Brown Comments: –

Riparian Habitat

Vegetation: T. Grasses D. Trees

Canopy Cover (% and species): 100% 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/ Large Beaver dam
Signs of Substrate Sorting

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	976	E	–	Other:	–	–	–
Downstream:	977	W	–				
Feature Bed:	978	–	–				
Culvert / Bridge:			–				
Vegetation:	979	–	–				
Landscape Photo:	980	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):

Dense woody debris patches 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:

Size of WB and presence of duckweed suggest permanence

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

Survey Date: 28-May-15
Time Started: 1200
Time Finished: 1210

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 28, 0, 0, 0
Precipitation in Prior 48hrs (mm): 10.8mm

Site Code: LSCT-204
Feature Name: Cotton Dr
Drainage System: Lake St Clair
Location in System: DN 7460065

GPS Location
Easting: 0398725
Northing: 4705766
Water Body No. 155

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 Dr
Avg. Wetted Width (m): 1.5 Avg. Water Depth (m): 0.1 Max Pool Depth (m): 0.1
Avg. Bankfull Width (m): 2.0 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 High stability Feature Gradient (H/M/D): L
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense Phrag debris throughout
Vegetation (with % dominant): Duckweed (65%) Phrag (35%)
Surface Water Quality
Temp (°C): 19.5 Turbidity (L/M/H): H Colour: Green Comments: –

Riparian Habitat
Vegetation: Phrag / 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 dr ⇒ no visible flow

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	55	E	–	Other:	–	–	–
Downstream:	56	W	–				
Feature Bed:	57	–	–				
Culvert / Bridge:	–	–	–				
Vegetation:	58	–	–				
Landscape Photo:	59	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):
Trees of 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:
Poor definition but presence of Duckweed suggests permanence

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

Survey Date: 22 APR 16 **Weather Conditions**
Time Started: 1550 Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.9°, 5 W, 100%, Ø
Time Finished: 1605 *Precipitation in Prior 48hrs (mm):* no data

Site Code: SWLT008 **GPS Location** **Estimated Length Assessed**
Feature Name: Unnamed Dr Easting: 0398632 Upstream: 50
Drainage System: South west Lower Thames Northing: 4698948 Downstream: 50
Location in System: mlong *Water Body No.* WB156

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): 0.35 Max Pool Depth (m): 0.30
Avg. Bankfull Width (m): 6.0 Avg. Bankfull Depth (m): 0.80
Substrate Composition (%) Boulder: – Cobble: 10 Gravel: – Fines: 90
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: moderate Slope High stability Feature Gradient (H/M/L): Low
Other Comments:
no in stream debris
Signs of recent clean out

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): none
Vegetation (with % dominant): Recently cleaned out, Fringe of Duckweed (100%)

Surface Water Quality
Temp (°C): 6 Turbidity (L/M/H): MEDIUM Colour: Brown Comments: –

Riparian Habitat
Vegetation: Tr 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
well defined Channel, Recently cleaned out
Ø
2.5 m box culvert in cobble embankment

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	596	SE	–	Other:	–	–	–
Downstream:	598	NW	–				
Feature Bed:	597	–	–				
Culvert / Bridge:	599	–	–				
Vegetation:	600	–	–				
Landscape Photo:	601	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):
– none Recently cleaned
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 channel definition and WB size

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

Survey Date: 22 APR 15 **Weather Conditions**

Time Started: 1530 Temp (°C), Wind, Cloud Cover (%), Precipitation: 4.9°, 5W, 100%, 0

Time Finished: 1545 *Precipitation in Prior 48hrs (mm):* No data

Site Code: SWLT007 **GPS Location** **Estimated Length Assessed**

Feature Name: Unnamed Dr Easting: 0398325 Upstream: 50

Drainage System: South West Lower Thames Northing: 4689853 Downstream: 50

Location in System: at St Clair RD *Water Body No.* 157

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): 0.25 Max Pool Depth (m): 0.25

Avg. Bankfull Width (m): 6.5 Avg. Bankfull Depth (m): 0.7

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): –

Other Comments:

Instream Aquatic Habitat

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

Vegetation (with % dominant): T. Grasses (50%) Duckweed (50%)

Surface Water Quality

Temp (°C): 6 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
well defined channel in patches of T. Grasses along edges of stream bed
4.5m open box culvert

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	590	NE	–	Other:	–	–	–
Downstream:	591	SW	–				
Feature Bed:	592	–	–				
Culvert / Bridge:	593	–	–				
Vegetation:	594	–	–				
Landscape Photo:	595	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 – no instream 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) 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 permanent and instream Duckweed & T. Grasses suggests Some degree of Dry periods

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

Survey Date: 8 May 15
Time Started: 1140
Time Finished: 1225

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 27°, 3SSW, 40%, Ø
Precipitation in Prior 48hrs (mm): 3.0 mm

Site Code: SWLT08
Feature Name: Unnamed Dr
Drainage System: South west Lower Thame
Location in System: U/S of Bar Ln

GPS Location
Easting: 0387729
Northing: 4699218
Water Body No. 158

Estimated Length Assessed
Upstream: 150
Downstream: 150

Channel Characteristics and Morphology N/A ☐ Lake ☐ Pond ☐ Man-made pond Online/Offline
☐ Straight ☑ Meandering (H/M/L Sinuosity): L ☑ Defined ☐ Poorly Defined
☐ Standing Water ☐ Low Flow / Baseflow ☐ Moderate Flow ☐ High / Flood Flow
☐ Freshet Flow Channelized Dr
Avg. Wetted Width (m): 1.5 Avg. Water Depth (m): 0.25 Max Pool Depth (m): 0.25
Avg. Bankfull Width (m): 2.0 Avg. Bankfull Depth (m): 0.50
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: 100 Riffle: – Run: – Pool: –
Bank Slope & Stability: M. Slope M. Stability Feature Gradient (H/M/L): L
Other Comments:
Channelized Dr

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Over hanging bank veg
Vegetation (with % dominant): Pond weed sp (100%)
Surface Water Quality
Temp (°C): 14 Turbidity (L/M/H): M Colour: Brown Comments: –

Riparian Habitat
Vegetation: T. Grasses D. Shrubs
Canopy Cover (% and species): 20% D. Shrubs
Adjacent Land Use: AG

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

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	E	986	–	Other:	–	–	–
Downstream:	W	987	–				
Feature Bed:	–	988	–				
Culvert / Bridge:			–				
Vegetation:	–	989	–				
Landscape Photo:	E	990	–				

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 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) None

Water Body Determination Water Body? ☑ Yes ☐ No ☐ Additional evidence required
Flow Regime: ☐ Permanent ☑ Intermittent ☐ Ephemeral
Evidence of Water Body Status:
abundant aquatic veg Throughout

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Renewable Energy Water Body Site Investigation

Office Use Only

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

Survey Date: 24 APR 15
Time Started: 0800
Time Finished: 0815

Weather Conditions
Temp (°C), Wind, Cloud Cover (%), Precipitation: 1.7°, 3 NNW, –, Ø
Precipitation in Prior 48hrs (mm): No data

Site Code: SWLT 043
Feature Name: Unnamed Dr
Drainage System: South West Lower Thames
Location in System: along Pine Ln

GPS Location
Easting: 0397069
Northing: 4698468
Water Body No. 159

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): M ☐ 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): 0.20 Max Pool Depth (m): 0.2
Avg. Bankfull Width (m): 5.0 Avg. Bankfull Depth (m): 0.70
Substrate Composition (%) Boulder: – Cobble: – Gravel: – Fines: 100
Bed Morphology (%) Flat: – Riffle: – Run: – Pool: 100
Bank Slope & Stability: High Slope Low Stability Feature Gradient (H/M/L): L
Other Comments:
-Frozen U/S

Instream Aquatic Habitat
Features (e.g. woody debris, undercut banks): Dense cattail sp Debris
Vegetation (with % dominant): Cattail sp (100%)
Surface Water Quality
Temp (°C): 1 Turbidity (L/M/H): M Colour: Brown Comments: –

Riparian Habitat
Vegetation: T. Grasses
Canopy Cover (% and species): Dr. Trees 60% U/S
Adjacent Land Use: AG

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

1m cpp in Loose cobble at road side

Photographs	No.	Direction	Description		No.	Direction	Description
Upstream:	69	SE	–	Other:	–	–	–
Downstream:	70	NW	–				
Feature Bed:	71	–	–				
Culvert / Bridge:	72	–	–				
Vegetation:	73	–	–				
Landscape Photo:	74	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 Cattail debris D/S
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: