



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Renewable Energy Water Body Site Investigation

Project # 1331		Project Name: 0066		Crew: B e B		Project Supervisor		Date 04- Nov 2011						
Weather		Air temp 8-13		Wind 0		Precipitation 0		Cloud Cover 10-40						
Survey start time: 0745		Survey end time: 1120		Channel Morphology (% pool, glide, slow riffle, fast riffle)		Channel Gradient (H/M/L)		In-channel vegetation (% and type) (i.e. terrestrial vs aquatic)						
Site #	GPS	Bankfull width (m)	Max channel depth (m)	Wetted width (m)	Visual discharge estimate (L/s)	Water present (Y or N) + Refuge pool dimension	Water Clarity (L/M/H)	Substrate %'s (to equal 100%)	Channel Morphology (% pool, glide, slow riffle, fast riffle)	Channel Gradient (H/M/L)	Groundwater indicators (seeps, springs, veg)	Photo #		
												u/s	d/s	Chann el
AHP 103	17T 440964 4767219	2.3	0.6	0.25	0.12	Y	H	60% Boulder 30% fine 10% gravel	40% S Riffle 40% G Riffle 20% Pool	L	N/A	323	324	325
AH 104	17T 441544 4767063	9.1	1.7	5.0	0.85	Y	L	50% gravel 50% fine	70% glide 30% Pool	L	N/A	326	327	328
AHP 105	17T 441903 4768366	7.6	1.2	6.0	0.1	Y	L	70% fine 30% gravel	100% Pool	L	N/A	329	330	331
AHP 106	17T 442110 4769185	15.5	Flow rocky	14.2	X	Y	L	40% gravel 30% Boulder 30% fine	70% glide 20% F. Riffle 10% S. Riffle	m	N/A	332	333	334

Indicate an X for yes and a strike through for no or not applicable



PROJECT (Number & Name): 1231 Barnish WF	
Field Staff: G MacVeigh	
Station: WC #12 (misp. identified using the photo #12)	Site Location:
Waterbody: unknown	GPS Datum: NAD83 Easting: 0439574
Drainage System: Asable P	Zone: 17T Northing: 4774516
Location in System:	Municipality: Strathroy-Carleton
Appr. Reach Length (m):	Lot & Concession:
Survey Date: 22 Sept 11	Weather Conditions:
Time Started: 1037	Wind: 2-3 Cloud Cover (%): 60
Time Finished: 1053	Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: forest on southeast side greater than 30m (ash, elm shrubs)
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, fleabane, goldenrod, herbs
	Vegetation Density (HML): H
Canopy	Type: grass Quality and % shade: good 75%
Land Use	agriculture
Other Notes	(groundwater, soils, pools, vegetation, etc.) dry!

CHANNEL MORPHOLOGY

Channel Width (range (m)): .5	Gradient (H/M/L): L
Bank Height (range (m)): .1-.25	Meander/Straight: Straight
Bank Slope (degrees from surface of water): 15-45°	Bank Stability: good
Bank Vegetation Type: grass/herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay:	Gravel:	Boulder:	Muck: 100
Silt:	Pebble:	Bedrock:	Detritus:
Sand:	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: Dry	Undercut Banks:	Boulder/Rock:
Riffles:	Woody Debris:	Cobble:
Backwater:	Vegetation:	Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial plants	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWI Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C):	D.O. (ppm):	pH:	Visible Characteristics/Other Parameters:
Air Temp. (°C):	D.O. (%):	TDS (ppm):	
Time Taken:	Conductivity (µs/cm):		
Location Taken:			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- dry drainage ditch
- bankful approx 1-1.5m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
974	- facing u/s (east)		
975	- facing d/s (west)		
976	- channel		
977	- south inlet		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.



PROJECT (Number & Name): 1231 Bomish wf
Field Staff: G MacVeigh
Station: WC #13 **Site Location:**
Waterbody: unknown **GPS Datum:** NAD 83 **Easting:** 0439885
Drainage System: Ausable R. **Zone:** 17T **Northing:** 4774436
Location in System: @ intersection **Municipality:** Strathroy Carleton Place
Appr. Reach Length (m): **Lot & Concession:**
Survey Date: 22 Sept 11 **Weather Conditions:**
Time Started: 1050 **Wind:** 2-3 **Cloud Cover (%):** 40
Time Finished: 1105 **Precipitation:** 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: shrubs, g rod
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: goldenrod, grass, herbs, r.o. dogwood
	Vegetation Density (HML): 1
Canopy	Type: grasses Quality and % shade: fair 30%
Land Use	agriculture
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	tile drains - flowing from recent rain

CHANNEL MORPHOLOGY

Channel Width (range (m)): .5 - 1.25	Gradient (H/ML): L
Bank Height (range (m)): .75	Meander: Straight
Bank Slope (degrees from surface of water): 45°	Bank Stability: good
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/ML): 1

CHANNEL SUBSTRATE %

Clay: 10	Gravel:	Boulder:	Muck: 55
Silt: 10	Pebble:	Bedrock:	Detritus: 15
Sand: 10	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: —
Riffles: —	Woody Debris: —	Cobble: —
Backwater: —	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWI Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 13°C	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters:
Air Temp. (°C): 17	D.O. (%): —	TDS (ppm): —	
Time Taken: 10:55	Conductivity (µs/cm): —		
Location Taken:			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent land use, roads & road names, bridges, culverts, north arrow, etc...

- 0.15m depth
- no flow - pockets of water
- grass within channel
- bank full 1.0 - 1.75m
- clear water
- frogs observed

PHOTOS TAKEN

Photo #	Description	Photo #	Description
978	u/s south view		
979	d/s north view		
980	channel view		
981	west view		
982	east view		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed



PROJECT (Number & Name): 1231 Bornish WF	
Field Staff: G. MacVeigh	
Station: WC#14	Site Location:
Waterbody: unknown	GPS Datum: UAD83 Easting: 0449242
Drainage System: Ausable	Zone: RT Northing: 4774436
Location in System: @waypoint	Municipality: Strathroy-caradoc
Appr. Reach Length (m):	Lot & Concession:
Survey Date: 22 Sept 11	Weather Conditions:
Time Started: 1107	Wind: 3 Cloud Cover (%): 30
Time Finished: 1120	Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, herbs, goldenrod, thistles, few deciduous along sides w/s
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, herbs, 9 rod, fleabane
	Vegetation Density (HML):
Canopy	Type: grass Quality and % shade: Fair 40%
Land Use	agriculture
Other Notes	(groundwater, soils, pools, vegetation, etc.)

CHANNEL MORPHOLOGY

Channel Width (range (m)): .25 - 1.25	Gradient (H/M/L): L
Bank Height (range (m)): .25 - 1	Meander/Straight:
Bank Slope (degrees from surface of water): 15 - 80°	Bank Stability: good
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: 10	Gravel:	Boulder:	Muck: 60
Silt: 5	Pebble:	Bedrock:	Detritus: 20
Sand: 5	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: —
Riffles: —	Woody Debris: —	Cobble: —
Backwater: —	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	cattail	
	algae	
	+ grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: stagnant
Air Temp. (°C): 17	D.O. (%): —	TDS (ppm): —	
Time Taken: 1110	Conductivity (µs/cm): —		
Location Taken: @ site			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- depth not greater than .20m
- no flow
- orange ditch
- no fish/frogs observed
- bankful 1-1.75m.

PHOTOS TAKEN

Photo #	Description	Photo #	Description
983	north d/s view		
984	south u/s view		
985-986	channel/pool		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Pomish w/f

Field Staff: G MacVaugh

Station: WC 115

Waterbody: unknown

Drainage System: Assable

Location in System:

Appr. Reach Length (m):

Survey Date: 22 Sept 11

Time Started: 1315

Time Finished: 1330

Site Location:

GPS Datum: NAD83 **Easting:** 043850

Zone: 17T **Northing:** 4774763

Municipality: Strathroy-Carleton Place

Lot & Concession:

Weather Conditions:

Wind:

Precipitation: 2-3

Cloud Cover (%): 30

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, agr. field, elm.
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, herbs, g. rod, steubarrel
	Vegetation Density (HML): 11
Canopy	Type: grass Quality and % shade: fair 60%
Land Use	agricultural
Other Notes	(groundwater, soils, pools, vegetation, etc.) the drain flowing

CHANNEL MORPHOLOGY

Channel Width (range (m)): .75 - 1.5	Gradient (H/M/L): L
Bank Height (range (m)): 1.0m	Meander/Straight: L
Bank Slope (degrees from surface of water): 45-90°	Bank Stability: Good
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/M/L):

CHANNEL SUBSTRATE %

Clay:	Gravel: 5	Boulder: 5	Muck: 60
Silt: 15	Pebble:	Bedrock:	Detritus:
Sand: 15	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: ✓	Boulder/Rock: ✓
Riffles: —	Woody Debris: —	Cobble: —
Backwater: —	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GW Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FM Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm):	pH:	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 20	D.O. (%):	TDS (ppm):	
Time Taken: 7:35	Conductivity (µs/cm):		
Location Taken: @ site			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- no flow
- channel defined
- bank width 1-2m, depth ~1m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
989	d/s facing N		
990	u/s South		
991	channel		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 031 Bornish wf

Field Staff: G. MacVeigh

Station: WC #6

Waterbody: unknown

Drainage System: Ausable

Location in System:

Appr. Reach Length (m):

Survey Date: 22 Sept 11

Time Started: 1330

Time Finished: 1345

Site Location:

GPS Datum: NAD83 **Easting:** 0438393

Zone: 17T **Northing:** 4774741

Municipality: Strathroy - Caradoc

Lot & Concession:

Weather Conditions:

Wind: 3 **Cloud Cover (%):** 30

Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: poplar, oak, fleabane, maple, goldenrod
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, fleabane, vines, birch, g. rods, herbs
	Vegetation Density (HML): H
Canopy	Type: Grasses Quality and % shade: Good 60%
Land Use	agricultural
Other Notes	(groundwater, soils, pools, vegetation, etc.)

CHANNEL MORPHOLOGY

Channel Width (range (m)): 7.5 - 15	Gradient (H/ML): L
Bank Height (range (m)): 0.3 - 1.0	Meander: Straight
Bank Slope (degrees from surface of water): 15 - 90°	Bank Stability: Good
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/ML): H

CHANNEL SUBSTRATE %

Clay: 10	Gravel: 10	Boulder:	Muck: 60
Silt:	Pebble: 5	Bedrock:	Detritus: 10
Sand: 5	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: ✓ little bit	Boulder/Rock: —
Riffles: —	Woody Debris: —	Cobble: —
Backwater:	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses algae	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWJ Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 13	D.O. (ppm): _____	pH: _____	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 17	D.O. (%): _____	TDS (ppm): _____	
Time Taken: 10:54	Conductivity (µs/cm): _____		
Location Taken: @ location			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- pool depth .60m
- run depth .20
- riffle depth .10
- flow 1m/s (in riffle)
- algae d/s - stagnant water
- d/s extends fields - no tree cover just grass channel becomes less defined

PHOTOS TAKEN

Photo #	Description	Photo #	Description
927	u/s view (east) w/n forest	932	d/s view from field
928	detritus/channel u/s		
929	d/s view (west) within forest		
930	channel, flow -d/s		
931	u/s view from field		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed



PROJECT (Number & Name): 1231 Barnish WF
Field Staff: G MacVeigh
Station: WC # 46
Waterbody: unknown
Drainage System: — A
Location in System: @ pond
Appr. Reach Length (m): _____
Survey Date: 21 Sept 11
Time Started: 1305
Time Finished: 1320
Site Location: _____
GPS Datum: NAD83 **Easting:** 0442673
Zone: 17T **Northing:** 4772016
Municipality: Strathroy - Caradoc
Lot & Concession: _____
Weather Conditions: _____
Wind: 3 **Cloud Cover (%):** 100
Precipitation: misting

ADJACENT LANDS

Valley	Slope: <u>Gentle (< 5°)</u> Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 <u>30+</u>
	Vegetation Type: <u>maple, poplar, ash, dogwood</u>
Riparian Zone	Flood Plain - extent of frequent flood (m): <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: <u>herbs, grasses, shrubs</u>
	Vegetation Density (HML): <u>M</u>
Canopy	Type: <u>none</u> Quality and % shade: <u>Poor 5%</u>
Land Use	<u>natural</u>
Other Notes	(groundwater, soils, pools, vegetation, etc.) <u>vernal pool - lots of frogs not connected to anything</u>

CHANNEL MORPHOLOGY

Channel Width (range (m)):	Gradient (H/M/L):
Bank Height (range (m)):	Meander/Straight:
Bank Slope (degrees from surface of water):	Bank Stability:
Bank Vegetation Type:	Bank Veg. Density (H/M/L):

CHANNEL SUBSTRATE %

Clay:	Gravel:	Boulder:	<u>Muck:</u> 50
Silt:	Pebble:	Bedrock:	<u>Detritus:</u> 50
Sand:	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: <input checked="" type="checkbox"/>	Undercut Banks: <input type="checkbox"/>	Boulder/Rock: <input type="checkbox"/>
Riffles: <input type="checkbox"/>	Woody Debris: <input type="checkbox"/>	Cobble: <input type="checkbox"/>
Backwater: <input type="checkbox"/>	Vegetation: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	<u>duckweed</u>	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 13	D.O. (ppm):	pH:	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 20	D.O. (%):	TDS (ppm):	
Time Taken: @ 1405	Conductivity (µs/cm):		
Location Taken: @ xxyprint			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- low flow - noticed in riffle section
- pools would be seperated @ low flow
- raccoon prints
- depth in pool .2 m
- depth in 'riffle' .05 m
- bankfull - 2-4m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
996	u/s - south view		
997	d/s - north view		
998-999	channel/pool		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.

- no fish observed
- water striders



PROJECT (Number & Name): 1231 Barnish wF

Field Staff: G MacVeigh

Station: wr* 38

Waterbody: unknown

Drainage System: Arable

Location in System: @ site

Appr. Reach Length (m):

Survey Date: 21 Sept 11

Time Started: 1045

Time Finished: 1100

Weather Conditions:

Wind: 3

Precipitation: 0

Site Location:

GPS Datum: NAD83

Easting: 0444411

Zone: 17T

Northing: 4774639

Municipality: Strathroy-Carleton Place

Lot & Concession:

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: d/s ash, poplar, vines, dogwood
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: d/s shrubs, jewelweed, grasses, herb robert
	Vegetation Density (HML):
Canopy	Type: Decid. Quality and % shade: good
Land Use	agriculture, forest
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	pools, clear water

CHANNEL MORPHOLOGY

Channel Width (range (m)): 0.4 - 2.5	Gradient (H/M/L): L
Bank Height (range (m)): 1.0 - 1.1	Meander/Straight:
Bank Slope (degrees from surface of water): 15 - 80°	Bank Stability: fair
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/M/L): M

CHANNEL SUBSTRATE %

Clay: 10	Gravel: 20	Boulder:	Muck: 5
Silt: 10	Pebble: 10	Bedrock:	Detritus: 5
Sand: 30	Cobble: 10	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: ✓	Boulder/Rock:
Riffles: ✓	Woody Debris: ✓	Cobble: ✓
Backwater: ✓	Vegetation: ✓	Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 13	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 20	D.O. (%): —	TDS (ppm): —	
Time Taken: 13:40	Conductivity (µs/cm): —		
Location Taken: @ site (waypoint)			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- flow - slow, barely moving
- bank 0.1 - 1.5 - 2m
- water bugs seen
- smaller further u/s
- no fish/frogs observed

PHOTOS TAKEN

Photo #	Description	Photo #	Description
992	u/s - south view		
993	d/s - north view		
994 + 995	channel view		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Barnish WF
Field Staff: G. MacVeigh
Station: WC#7
Waterbody: unknown
Drainage System: Ausable R
Location in System:
Appr. Reach Length (m):
Survey Date: 22 Sept 11
Time Started: 1400
Time Finished: 1417
Weather Conditions:
Wind: 3
Precipitation: 0
Site Location:
GPS Datum: NAD83 **Easting:** 0438499
Zone: 17T **Northing:** 4774713
Municipality: Strathroy-Carleton
Lot & Concession:

ADJACENT LANDS

Valley	Slope: <u>Gentle (< 5°)</u> Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: <u>elm, grass, ash, herbs</u>
Riparian Zone	Flood Plain - extent of frequent flood (m): <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: <u>grass, herbs</u>
	Vegetation Density (HML): <u>M</u>
Canopy	Type: <u>trees/grasses</u> Quality and % shade: <u>good - 65%</u>
Land Use	<u>agriculture</u>
Other Notes	(groundwater, soils, pools, vegetation, etc.) <u>- barely there flow</u>

CHANNEL MORPHOLOGY

Channel Width (range (m)): <u>.5 - 2.0</u>	Gradient (H/ML):
Bank Height (range (m)): <u>.25 - 1.25</u>	Meander/Straight: <u>Meander</u>
Bank Slope (degrees from surface of water): <u>45 - 80°</u>	Bank Stability: <u>good</u>
Bank Vegetation Type: <u>rocks, grass</u>	Bank Veg. Density (H/ML): <u>M</u>

CHANNEL SUBSTRATE %

Clay: <u>20</u>	Gravel: <u>5</u>	Boulder: <u>5</u>	Muck: <u>10</u>
Silt: <u>20</u>	Pebble: <u>5</u>	Bedrock:	Detritus: <u>10</u>
Sand: <u>20</u>	Cobble: <u>5</u>	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: <input checked="" type="checkbox"/>	Undercut Banks: <input checked="" type="checkbox"/>	Boulder/Rock: <input checked="" type="checkbox"/>
Riffles: <input checked="" type="checkbox"/>	Woody Debris: <input type="checkbox"/>	Cobble: <input checked="" type="checkbox"/>
Backwater: <input type="checkbox"/>	Vegetation: <input checked="" type="checkbox"/>	Other: <input type="checkbox"/>

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	<u>terrestrial grasses</u>	
	<u>algae</u>	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWJ Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C):	D.O. (ppm):	pH:	Visible Characteristics/Other Parameters:
Air Temp. (°C):	D.O. (%):	TDS (ppm):	
Time Taken:	Conductivity (µs/cm):		
Location Taken:			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- vernal pool
- lots of frogs
- no fish
- not connected to anything

PHOTOS TAKEN

Photo #	Description	Photo #	Description
946 + 947	- pool		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Bormish wf

Field Staff: G MacVeigh

Station: wcd45

Waterbody: pool/pond

Drainage System: —

Location in System: vernal pool

Appr. Reach Length (m): —

Survey Date: 21 Sept 11

Time Started: 1320

Time Finished: 1345

Site Location:

GPS Datum: NAD83 **Easting:** 244258.7

Zone: 17T **Northing:** 4772110

Municipality: Strathroy - carleton place

Lot & Concession: —

Weather Conditions:

Wind: 1 **Cloud Cover (%):** 100

Precipitation: 0 **humidity:** humid

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: poplar, ash, willow
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grasses, herbs, willow sp., dogwood
	Vegetation Density (HML): H
Canopy	Type: none Quality and % shade: poor 5%
Land Use	agriculture natural
Other Notes	(groundwater, soils, pools, vegetation, etc.) vernal pool

CHANNEL MORPHOLOGY

Channel Width (range (m)): —

Bank Height (range (m)): —

Bank Slope (degrees from surface of water): —

Bank Vegetation Type: grasses, herbs

Gradient (H/M/L): —

Meander/Straight: —

Bank Stability: good

Bank Veg. Density (H/M/L): M

CHANNEL SUBSTRATE %

Clay: —	Gravel: —	Boulder: —	Muck: 50
Silt: —	Pebble: —	Bedrock: —	Detritus: 50
Sand: —	Cobble: —	Marl: —	Other: —

INSTREAM HABITAT AND COVER

Pools:

Riffles: —

Backwater: —

Undercut Banks: —

Woody Debris: —

Vegetation:

Boulder/Rock: —

Cobble: —

Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	duckweed sp.	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWJ Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 22	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters:
Air Temp. (°C): 19	D.O. (%): —	TDS (ppm): —	
Time Taken: 1320	Conductivity (µs/cm): —		
Location Taken: @ pool			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- pond - lots of duckweed
- frogs observed!
- 20m long x 10-15m wide
- depth - 3m
- raccoon prints

PHOTOS TAKEN

Photo #	Description	Photo #	Description
948	South		
949	north		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Barnish WF

Field Staff: G. MacKiegh

Station: WC #18

Waterbody: unknown

Drainage System: Ausable

Location in System: @ fork

Appr. Reach Length (m):

Survey Date: 21 Sept 11

Time Started: 1450

Time Finished: 1505

Weather Conditions:

Wind: 1

Precipitation: 0

Cloud Cover (%): 100

Site Location:

GPS Datum: NAD83

Easting: 0438569

Zone: 17T

Northing: 4773576

Municipality: Stratroy caradoc

Lot & Concession:

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: pine plantation east west
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: pine, vines, raspberry
	Vegetation Density (HML): L
Canopy	Type: Pine Quality and % shade: Good 80%
Land Use	Plantation, agriculture
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	no flow

CHANNEL MORPHOLOGY

Channel Width (range (m)): 1-2.5m

Bank Height (range (m)): .5 - 1.25

Bank Slope (degrees from surface of water): 45-90°

Bank Vegetation Type: roots

Gradient (H/M/L): L

Meander/Straight:

Bank Stability: Good

Bank Veg. Density (H/M/L): L

CHANNEL SUBSTRATE %

Clay: 30	Gravel: 10	Boulder: 10	Muck: 10
Silt: 10	Pebble:	Bedrock:	Detritus:
Sand: 30	Cobble:	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: —
Riffles: —	Woody Debris: —	Cobble: —
Backwater: —	Vegetation: —	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): —	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: <i>murky.</i>
Air Temp. (°C): 18	D.O. (%): —	TDS (ppm): —	
Time Taken: @ 1450	Conductivity (µs/cm): —		
Location Taken:			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- no flow pockets of stagnant water after convergence
- east + west branch dry
- erosion noticed
- no fish.

PHOTOS TAKEN

Photo #	Description	Photo #	Description
962	- west branch - d/s view		
963	- "		
964	- main branch - d/s		
965	- "		
966	- east branch - u/s view		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Barnish
Field Staff: G. McVeigh
Station: WC #33
Waterbody: unknown
Drainage System: Arable
Location in System: @ forest
Appr. Reach Length (m):
Survey Date: 21 Sept 11
Time Started: 1130
Time Finished: 1145

Site Location:
GPS Datum: NAD83 **Easting:** 0442490
Zone: 17T **Northing:** 4775608
Municipality: Strathroy - Caradoc
Lot & Concession:

Weather Conditions:
Wind: 2 **Cloud Cover (%):** 100
Precipitation: 0 **humidity:** humid

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+
	Vegetation Type: elm, maple, poplar,
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: raspberry, goldenrod, grass, herbs
	Vegetation Density (HML): L
Canopy	Type: deciduous trees Quality and % shade: good 60-75%
Land Use	agriculture/natural
Other Notes	(groundwater, soils, pools, vegetation, etc.) water murky, limited flow

CHANNEL MORPHOLOGY

Channel Width (range (m)): 1.75 - 3.25
Bank Height (range (m)): .5 - 1.0
Bank Slope (degrees from surface of water): 45-80°
Bank Vegetation Type: roots, grass, herbs

Gradient (H/M/L):
Meander/Straight:
Bank Stability: fair
Bank Veg. Density (H/M/L): L

CHANNEL SUBSTRATE %

Clay: 10	Gravel: 10	Boulder:	Muck: 5
Silt: 20	Pebble: 10	Bedrock:	Detritus: 5
Sand: 30	Cobble: 10	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: <input checked="" type="checkbox"/>	Undercut Banks: <input type="checkbox"/>	Boulder/Rock: <input type="checkbox"/>
Riffles: <input checked="" type="checkbox"/>	Woody Debris: <input checked="" type="checkbox"/>	Cobble: <input checked="" type="checkbox"/>
Backwater: <input type="checkbox"/>	Vegetation: <input type="checkbox"/>	Other: <input type="checkbox"/>

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWI Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: murky
Air Temp. (°C): 18	D.O. (%): —	TDS (ppm): —	
Time Taken: 1135	Conductivity (µs/cm): —		
Location Taken: @ location			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- flow less than 1m/min
- pools connected by shallow riffles - in dry conditions would be just pockets of water
- bankful width 5.6m
- depth .05 - .30m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
935	- u/s view (east)	940	- substrate/channel d/s
936	- " "		
937	- channel/substrate u/s		
938	- d/s view (west)		
939	- " "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed.



PROJECT (Number & Name): 1231 Barnish w/		
Field Staff: G. McVeigh		
Station: W0153	Site Location:	
Waterbody: unknown	GPS Datum: NAD83	Easting: 0446073
Drainage System: Nubble R	Zone: 97	Northing: 4724869
Location in System: 1/2 from center rd	Municipality: Stratroy - Caradoc	
Appr. Reach Length (m):	Lot & Concession:	
Survey Date: 21 Sept 11	Weather Conditions:	
Time Started: 1010	Wind: 3	Cloud Cover (%): 100
Time Finished: 1027	Precipitation: 0	

ADJACENT LANDS

Valley	Slope: <u>Gentle (< 5°)</u> Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: <u>spruce, ash, grasses, g. real</u>
Riparian Zone	Flood Plain - extent of frequent flood (m): <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: <u>grass, shrubs, herbs, jewelweeds</u>
	Vegetation Density (HML): <u>11</u>
Canopy	Type: <u>Grass</u> Quality and % shade: <u>wood 60%</u>
Land Use	<u>agriculture - more east is reforest 70%</u>
Other Notes	(groundwater, soils, pools, vegetation, etc.) <u>clear, flowing 1m/5 sec</u>

CHANNEL MORPHOLOGY

Channel Width (range (m)):	<u>25-25</u>	Gradient (H/M/L):	<u>L</u>
Bank Height (range (m)):	<u>25-1</u>	Meander/Straight:	
Bank Slope (degrees from surface of water):	<u>15</u>	Bank Stability:	<u>good</u>
Bank Vegetation Type:	<u>grass, herbs</u>	Bank Veg. Density (H/M/L):	<u>11</u>

CHANNEL SUBSTRATE %

Clay:	Gravel: <u>10</u>	Boulder:	Muck:
Silt: <u>5</u>	Pebble: <u>10</u>	Bedrock:	Detritus:
Sand: <u>65</u>	Cobble: <u>10</u>	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: <u>✓ d/s</u>	Undercut Banks: <u>-</u>	Boulder/Rock: <u>-</u>
Riffles: <u>-</u>	Woody Debris: <u>-</u>	Cobble: <u>-</u>
Backwater: <u>-</u>	Vegetation: <u>-</u>	Other: <u>-</u>

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	<u>terrestrial grasses</u>	<u>abundant</u>

CODES:	SWI Surface Water Input	SCS Stream Cross Section
^HP Aquatic Habitat Point	GWJ Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): _____	pH: _____	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 17	D.O. (%): _____	TDS (ppm): _____	
Time Taken: 10:17	Conductivity (µs/cm): _____		
Location Taken: @ location			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- depth 5-10 cm
- flow 1m/5sec
- most likely dry in summer
- lots of grass within channel
- intermittent
- 2 or 3 channels flowing water

PHOTOS TAKEN

Photo #	Description	Photo #	Description
922	1/5 view (facing east)		
923	d/s view (facing west)		
924	channel view		
925	up on bank up view		
926	" " d/s view		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed



PROJECT (Number & Name): 1231 Bomish WF
Field Staff: G MacVeigh
Station: WC # 27
Waterbody: unknown
Drainage System: Ausable R.
Location in System: @ coldstream road
Appr. Reach Length (m):
Survey Date: 20 Sept 11
Time Started: 140
Time Finished: 1455
Weather Conditions:
Wind: 0
Precipitation: 0
Site Location:
GPS Datum: NAD83 **Easting:** 0444039
Zone: 17T **Northing:** 4774291
Municipality: Strathroy - Caradoc
Lot & Concession:

ADJACENT LANDS

Valley	Slope:	Gentle (< 5°)	Moderate (5 - 15°)	Steep (> 15°)	
	Extent of Natural Vegetation (m)	0-10	10 to 20	20 to 30 30+	
	Vegetation Type:	phragmites, grass, herbs			
Riparian Zone	Flood Plain - extent of frequent flood (m):	0-10	10 to 20	20 to 30 30+	
	Vegetation Type:	same as above			
	Vegetation Density (HML):	H			
Canopy	Type:	grass			
	Quality and % shade:	fair - 30%			
Land Use	agriculture				
Other	(groundwater, soils, pools, vegetation, etc.)				
Notes	south of road no channel just fields				

CHANNEL MORPHOLOGY

Channel Width (range (m)):	1.75 - 2.25	Gradient (H/M/L):	L
Bank Height (range (m)):	.5 - 1.2	Meander:	Straight
Bank Slope (degrees from surface of water):	15 - 45°	Bank Stability:	good
Bank Vegetation Type:	grasses/herbs	Bank Veg. Density (H/M/L):	H

CHANNEL SUBSTRATE %

Clay: ✓ 15	Gravel: ✓ 15	Boulder: ✓ 10	Muck: ✓ 15
Silt:	Pebble:	Bedrock:	Detritus: ✓ 15
Sand: ✓ 15	Cobble: ✓ 15	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: ✓
Riffles: —	Woody Debris: ✓	Cobble: ✓
Backwater: —	Vegetation: ✓	Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: murky + foamy
Air Temp. (°C): 22	D.O. (%): —	TDS (ppm): —	
Time Taken: 1447	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- * water flowing from culvert + pooling
- d/s lined w phragmites
- 2 channels meet on North side of cobdwater
- bank full width = 2 - 2.5m.

PHOTOS TAKEN

Photo #	Description	Photo #	Description
911	v/s - south side of road east branch	916	culvert main branch
912	d/s - north side "	917	d/s main branch
913	d/s "		
914	field south side of road - v/s - west branch		
915	d/s - north side "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Barnish w/f
Field Staff: G. MacVeigh
Station: WC# 38
Waterbody: trib to Parkhill Cr
Drainage System: Ausable R
Location in System: @ coldstream rd
Appr. Reach Length (m):
Survey Date: 20 sept 11
Time Started:
Time Finished:

Site Location:
GPS Datum: NAD83 **Easting:** 0440710
Zone: 17T **Northing:** 4775081
Municipality: Strathroy-caradoc
Lot & Concession:

Weather Conditions:
Wind: 0 **Cloud Cover (%):** 30
Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, herbs
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, flabane, herbs, goldenrod
	Vegetation Density (HML): H
Canopy	Type: Grasses Quality and % shade: good - 60%
Land Use	residential, agriculture
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	water from tile drains, good flow, 1m round culvert

CHANNEL MORPHOLOGY

Channel Width (range (m)): 7.5 - 1.25	Gradient (H/M/L): L
Bank Height (range (m)): .25	Meander/Straight:
Bank Slope (degrees from surface of water): 15 - 45°	Bank Stability: Good
Bank Vegetation Type: grasses/herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: ✓ 10	Gravel: ✓ 15	Boulder: ✓ 10	Muck:
Silt: ✓ 10	Pebble: ✓ 15	Bedrock:	Detritus: ✓ 5
Sand: ✓ 20	Cobble: ✓ 15	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: ✓
Riffles: ✓	Woody Debris: —	Cobble: ✓
Backwater: —	Vegetation: ✓	Other: Culvert

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 22	D.O. (%): —	TDS (ppm): —	
Time Taken: 12:20	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- depths ~ .25m
- water clear
- flow 1m/s (u/s)
slows in pool d/s of culvert
- bankfull 1.5 - 2.5m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
878	u/s (south) view		
879	u/s @ culvert		
880	d/s (north) view		
881	" "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

fish observed d/s of culvert (cyprinids)



PROJECT (Number & Name): 1031 Barnish wf

Field Staff: G. MacVeigh

Station: WC #2

Waterbody: trib to Parkhill cr

Drainage System: Ausable R.

Location in System: @ Roddick Rd (parallel)

Appr. Reach Length (m):

Survey Date: 20 Sept 11

Time Started:

Time Finished:

Site Location:

GPS Datum: NAD83 **Easting:** 0439351

Zone: 17T **Northing:** 4775592

Municipality: Strathroy - Carleton Place

Lot & Concession:

Weather Conditions:

Wind: 0 **Cloud Cover (%):** 30

Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: shrubs, grass
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, herbs, burdock
	Vegetation Density (HML): M
Canopy	Type: none Quality and % shade: poor - 5%
Land Use	cow grazing, agricultural
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	cows within creek/water - electric fencing

CHANNEL MORPHOLOGY

Channel Width (range (m)): .75 - 1.5	Gradient (H/M/L):
Bank Height (range (m)): .25 - .60	Meander/Straight:
Bank Slope (degrees from surface of water): 35 - 90°	Bank Stability: poor
Bank Vegetation Type: grass, herbs	Bank Veg. Density (H/M/L): L

CHANNEL SUBSTRATE %

Clay: 60	Gravel:	Boulder:	Muck: 20
Silt:	Pebble:	Bedrock:	Detritus:
Sand: 10	Cobble: 10	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks:	Boulder/Rock:
Riffles: ✓	Woody Debris:	Cobble: ✓
Backwater:	Vegetation: ✓	Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): —	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: clear water
Air Temp. (°C): 22	D.O. (%): —	TDS (ppm): —	
Time Taken: @ 1/250	Conductivity (µs/cm): —		
Location Taken: @ road			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- depth ~ .10 - .25m
- flow ~ 1m/30sec
- cow activity
- bankful width ~ 2m.

PHOTOS TAKEN

Photo #	Description	Photo #	Description
889	channel (south view) u/s		
890	d/s view (north view)		
891	d/s view small pool		
892	d/s view (closer to Raddick/coldstream intersection)		
893	u/s view "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Bomish WF

Field Staff: G. MacVeigh

Station: WC#36

Waterbody: unknown trib (trib to Parkhill Cr)

Drainage System: Ausable

Location in System: @ Hasket Rd

Appr. Reach Length (m):

Survey Date: 20 Sept 11

Time Started: 1047

Time Finished: 1105

Site Location:

GPS Datum: NAD83 **Easting:** 0443270

Zone: 17T **Northing:** 4774286

Municipality: Strathroy - Charleton

Lot & Concession:

Weather Conditions:

Wind: 0 **Cloud Cover (%):** 40

Precipitation: 0

ADJACENT LANDS

Valley Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)

Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+

Vegetation Type: cedar, shrubs, ash, poplar, sumac

Riparian Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+

Zone Vegetation Type: goldenrod, grasses, herbs, shrubs

Vegetation Density (HML): H

Canopy Type: Grasses Quality and % shade: poor - 15%

Land Use agriculture, aggregate pit

Other (groundwater, soils, pools, vegetation, etc.)

Notes water murky, flow (slow) ~ 1m/30 sec

CHANNEL MORPHOLOGY

Channel Width (range (m)): 0.5 - 2.5

Bank Height (range (m)): 1 - 3 m

Bank Slope (degrees from surface of water): 15 - 45°

Bank Vegetation Type: grasses, shrubs, herbs

Gradient (H/M/L):

Meander/Straight: slight meander

Bank Stability: Good

Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: 30 Gravel: 10 Boulder: 5 Muck: 10

Silt: 5 Pebble: Bedrock: Detritus:

Sand: 30 Cobble: 10 Marl: Other:

INSTREAM HABITAT AND COVER

Pools: Undercut Banks: Boulder/Rock:

Riffles: Woody Debris: Cobble:

Backwater: Vegetation: Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	
	callails	
	algae	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWJ Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: murky
Air Temp. (°C): 20	D.O. (%): —	TDS (ppm): —	
Time Taken: 1055	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- frogs observed
- bankfull width is 2-4m
- depth is .3 in pool @ culvert

PHOTOS TAKEN

Photo #	Description	Photo #	Description
848	west side - d/s view/culvert		
849	" " " "		
850	substrate (channel d/s)		
851	u/s (east side) view		
852	" " " "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed



PROJECT (Number & Name): 1231 Burnish Hill		Site Location:	
Field Staff: G. Hoo Veigh		GPS Datum: NAD83 Easting: 6145383	
Station: WC # 55		Zone: 17T Northing: 4774393	
Waterbody: unknown trib		Municipality: Steathray-Carleton	
Drainage System: Ausable R.		Lot & Concession:	
Location in System: @ centre road			
Appr. Reach Length (m):			
Survey Date: 20 Sept 11		Weather Conditions:	
Time Started: 945		Wind: 0 Cloud Cover (%): 30	
Time Finished: 1000		Precipitation: 0	

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grapevine, shrubs, ash, decid. trees, oak
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grasses
	Vegetation Density (HML): M
Canopy	Type: trees Quality and % shade: 40
Land Use	agriculture
Other Notes	(groundwater, soils, pools, vegetation, etc.) flowing (correct yesterday) 2m wide round culvert under road 2.5m

CHANNEL MORPHOLOGY

Channel Width (range (m)): 1-3	Gradient (H/M/L):
Bank Height (range (m)): 0.6-1.0	Meander: Straight - few meanders but has been straightened
Bank Slope (degrees from surface of water): 45-90°	Bank Stability: good
Bank Vegetation Type: grasses, vines, shrubs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: 15	Gravel: 10	Boulder: 5	Muck: 10
Silt:	Pebble:	Bedrock:	Detritus:
Sand: 30	Cobble:	Marl:	Other: veg 30

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: ✓
Riffles: —	Woody Debris: ✓	Cobble: —
Backwater: —	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	
	cattail	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWI Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14°	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: murky water
Air Temp. (°C): 17°	D.O. (%): —	TDS (ppm): —	
Time Taken: 950	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent land use, roads & road names, bridges, culverts, north arrow, etc...

- pool depth @ .60
- bankful width ~ 2-3m
- flow ~ 1m/s - flowing due to rain
- pot fish habitat - good over hanging shrubbery
- undercut banks if water was higher - erosion

PHOTOS TAKEN

Photo #	Description	Photo #	Description
828	d/s (west side) view	833	u/s along field
829	" "		
830	d/s side further down		
831	u/s (east) view		
832	" "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed.



PROJECT (Number & Name): 1231 Bormsh wf
Field Staff: G. MacVeigh
Station: WC # 29
Waterbody: unknown trib (trib to Barkhill cr)
Drainage System: Ausable R.
Location in System: @ coldstream rd crossing
Appr. Reach Length (m):
Survey Date: 20 Sept 11
Time Started: 1139
Time Finished: 1153
Site Location:
GPS Datum: NAD83 **Easting:** 0441492
Zone: 17T **Northing:** 4774898
Municipality: Strathroy - caradoc
Lot & Concession:
Weather Conditions:
Wind: 0 **Cloud Cover (%):** 40
Precipitation: 0

ADJACENT LANDS

Valley	Slope: <u>Gentle (< 5°)</u> Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: cedar, willow sp, maple tree
Riparian Zone	Flood Plain - extent of frequent flood (m): <u>0-10</u> 10 to 20 20 to 30 30+
	Vegetation Type: willow sp, grasses, herbs, fleabane
	Vegetation Density (HML): H
Canopy	Type: grasses Quality and % shade: fair 30%
Land Use	residential, agricultural
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	murky, flow present

CHANNEL MORPHOLOGY

Channel Width (range (m)): 1 - 1.75m	Gradient (H/M/L): <u>H</u>
Bank Height (range (m)): .25 - .5	Meander: <u>Straight</u>
Bank Slope (degrees from surface of water): 45°	Bank Stability: good
Bank Vegetation Type: grasses, herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: 25	Gravel: 15 15	Boulder: <u>Muck</u> 10
Silt: 10	Pebble: 15	Bedrock: Detritus:
Sand: 25	Cobble: 15 15	Marl: Other:

INSTREAM HABITAT AND COVER

Pools: <input checked="" type="checkbox"/>	Undercut Banks: <input checked="" type="checkbox"/>	Boulder/Rock: <input type="checkbox"/>
Riffles: <input checked="" type="checkbox"/>	Woody Debris: <input type="checkbox"/>	Cobble: <input checked="" type="checkbox"/>
Backwater: <input type="checkbox"/>	Vegetation: <input checked="" type="checkbox"/>	Other: culvert

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses.	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 16	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: murky.
Air Temp. (°C): 21	D.O. (%): —	TDS (ppm): —	
Time Taken: @ 1144	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- lots of water within the channel
- depth varies .5m average.
- 4m wide box culvert under rd
- bankful 2-3m

PHOTOS TAKEN

Photo #	Description	Photo #	Description
869-	u/s view (facing south).		
870-	culvert u/s view		
871-	pool @ u/s culvert		
872-	d/s (north) view		
873-	" "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:

no fish observed
lots of frogs.



PROJECT (Number & Name): 1231 Bornish WF

Field Staff: G. McVeigh

Station: WC # 27

Waterbody: unknown trib

Drainage System: Ausable R.

Location in System: @ coldstream or crossing

Appr. Reach Length (m):

Survey Date: 20 Sept 11

Time Started: 12:20

Time Finished: 12:35

Site Location:

GPS Datum: NAD83 **Easting:** 0440085

Zone: 17T **Northing:** 4775233

Municipality: Strathroy - Caradoc

Lot & Concession:

Weather Conditions:

Wind: 0

Precipitation: 0

Cloud Cover (%): 30

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: some decid trees (north side) shrubs, grasses
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grasses, shrubs, herbs, goldenrod
	Vegetation Density (HML): H
Canopy	Type: grasses Quality and % shade: good - 70%
Land Use	agriculture, house
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	south side quite overgrown, 3m box culvert

CHANNEL MORPHOLOGY

Channel Width (range (m)): 1.5 - 1.25	Gradient (H/M/L): L
Bank Height (range (m)): .25 - .5	Meander: Straight
Bank Slope (degrees from surface of water): 15 - 60°	Bank Stability: good
Bank Vegetation Type: grasses, herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: 20	Gravel: 10	Boulder: 10	Muck: 10
Silt: 20	Pebble:	Bedrock:	Detritus:
Sand: 20	Cobble: 10	Marl:	Other:

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: ✓
Riffles: ✓	Woody Debris: —	Cobble: ✓
Backwater: —	Vegetation: ✓	Other:

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	terrestrial grasses	
	cattails	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWI Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	

FLOW CONDITIONS

Cross-Section	Wetted Width (m)	5 Depths, equally spaced (cm)	Discharge/Pool/Riffle/Run/Notes
1			
2			
3			
4			
5			

WATER QUALITY

Water Temp. (°C): 14	D.O. (ppm): —	pH: —	Visible Characteristics/Other Parameters: clear
Air Temp. (°C): 22	D.O. (%): —	TDS (ppm): —	
Time Taken: @ 1225	Conductivity (µs/cm): —		
Location Taken: @ culvert			

SITE DRAWING

Include: watercourse and name, flow direction, riffle/pool/run habitat, side tributaries, station location, approx. reach length, channel modifications, adjacent landuse, roads & road names, bridges, culverts, north arrow, etc...

- flowing only through 1m of culvert - other 3m has grass/dirt
- south side two ditches meet then flow through culvert
- good cover
- fish observed
- bankful width ~ 2-3m
- tile drains noticed
- water present

PHOTOS TAKEN

Photo #	Description	Photo #	Description
882	south u/s (east channel)	887	d/s culvert + flow/channel
883	south u/s (east channel) along rd.	888	d/s view (facing North)
884	" " - facing east		
885	south u/s (west channel)		
886	" "		

GENERAL COMMENTS

Fish observed, unusual conditions, differences from previous site visit, landowner comments, topography, general land use and vegetation, etc.:



PROJECT (Number & Name): 1231 Bonish wf
Field Staff: G. MacVeigh
Station: WC # 31
Waterbody: unknown trib
Drainage System: Ausable R.
Location in System: @ coldwater rd crossing
Appr. Reach Length (m):
Survey Date: 20 Sept 11
Time Started: 11:27
Time Finished: 11:40
Site Location:
GPS Datum: NAD83 **Easting:** 0441916
Zone: 17T **Northing:** 4774790
Municipality: Strathroy - Carleton Place
Lot & Concession:
Weather Conditions:
Wind: 0 **Cloud Cover (%):** 40
Precipitation: 0

ADJACENT LANDS

Valley	Slope: Gentle (< 5°) Moderate (5 - 15°) Steep (> 15°)
	Extent of Natural Vegetation (m) 0-10 10 to 20 20 to 30 30+
	Vegetation Type: grass, shrubs
Riparian Zone	Flood Plain - extent of frequent flood (m): 0-10 10 to 20 20 to 30 30+
	Vegetation Type: cattail, grasses, herbs
	Vegetation Density (HML): H
Canopy	Type: grasses, cattails Quality and % shade: fair - 40
Land Use	agriculture
Other	(groundwater, soils, pools, vegetation, etc.)
Notes	starts w tile drains,

CHANNEL MORPHOLOGY

Channel Width (range (m)): .5 - 1.0	Gradient (H/M/L): L
Bank Height (range (m)): .25 - .30	Meander: Straight Straight
Bank Slope (degrees from surface of water): 15 - 40°	Bank Stability: good
Bank Vegetation Type: grasses, herbs	Bank Veg. Density (H/M/L): H

CHANNEL SUBSTRATE %

Clay: ✓	Gravel: ✓ 20	Boulder:	Muck: ✓ 20
Silt: ✓ 20	Pebble:	Bedrock:	Detritus: ✓
Sand: ✓ 20	Cobble:	Marl:	Other: veg ✓ 20

INSTREAM HABITAT AND COVER

Pools: ✓	Undercut Banks: —	Boulder/Rock: —
Riffles: —	Woody Debris: —	Cobble: —
Backwater: —	Vegetation: ✓	Other: —

INSTREAM VEGETATION

Type (submerg./emerg./floating)	Family/Genus/species	Description/Abundance
	cattails	

CODES:	SWI Surface Water Input	SCS Stream Cross Section
AHP Aquatic Habitat Point	GWl Groundwater Input	DOX Dissolved Oxygen Stn
AHY Aquatic Habitat Area	CKC Creek Crossing	VSS Visual Survey Stn
TMP Temp Monitor Stn	WEL Well	WQS Water Quality Stn
FLW Flow Monitor Stn	CUL Culvert	