

Appendix C

Field Notes



RAPID ASSESSMENT FORM FOR AQUATIC HABITAT

1
NWB

Stantec

Project Napier
Station # 1
Photos Taken 508-515
GPS Coordinates 91a
Descriptive Location Brown Rd, 1000 m north of Napierton Drive

Project # 160960697
Field Staff KE + MF
Date Nov. 28 2011
Time 11:15 am

Water Quality

Dissolved Oxygen (mg/L) _____ pH _____ Conductivity (µS/cm) _____
Water Temperature (°C) _____ Air Temperature (°C) _____
Weather conditions in previous 24 hrs _____

Watercourse Dimensions & Morphology

Mean Watercourse Width _____ (m) Maximum Pool Depth _____ (cm)
Mean Bankfull Width _____ (m) Mean Water Depth _____ (cm)
_____ % Riffle _____ % Pool _____ % Run _____ % Flat
Evidence of eroding banks, Comments on bank stability _____

Substrate - Upstream (% cover)

_____ Bedrock _____ Silt _____ Boulder _____ Clay _____ Cobble
_____ Muck _____ Gravel _____ Marl _____ Sand _____ Detritus

Substrate - Downstream (% cover)

_____ Bedrock _____ Silt _____ Boulder _____ Clay _____ Cobble
_____ Muck _____ Gravel _____ Marl _____ Sand _____ Detritus

In-water Cover

Cover Types Present (circle): _____ Undercut Banks _____ Deep Pool _____ Vascular Plants _____
Overhanging Vegetation _____ Woody Debris _____ Boulder _____ Other _____

Riparian Zone

Riparian Cover (% of watercourse shaded, dominant vegetation, mature or early successional)
Upstream _____
Downstream _____

Adjacent Land Use

Upstream _____
Downstream _____

Fish Habitat Potential

Critical Habitat (spawning or nursery areas, groundwater upwellings)
Upstream _____
Downstream _____

Migratory Obstructions (seasonal, permanent)

Upstream _____
Downstream _____

Note any fish observations _____

Other Habitat Notes, Incidental Wildlife Observations, etc.

No water body in field for R2 turbine
- shrubs too thick, cannot comment on adjacent woodlot/wetland



RAPID ASSESSMENT FORM FOR AQUATIC HABITAT

2
WB.

Stantec

Project Napier Project # 160960697
 Station # 2 Field Staff KE JMF
 Photos Taken 518-528 Date Nov. 28 2011
 GPS Coordinates 174753820 439305 Time 11:52
 Descriptive Location Kerwood, 500 m north of Katesville Dr.

Water Quality

Dissolved Oxygen (mg/L) 10.22 pH 7.4 Conductivity (μ S/cm) 760
 Water Temperature ($^{\circ}$ C) 9.17 Air Temperature ($^{\circ}$ C) 50
 Weather conditions in previous 24 hrs cold + rain

Watercourse Dimensions & Morphology

Mean Watercourse Width 0.75 (m) Maximum Pool Depth 10 (cm)
 Mean Bankfull Width 2 (m) Mean Water Depth 5 (cm)
20 % Riffle — % Pool 80 % Run — % Flat

Evidence of eroding banks, Comments on bank stability

appear stable + veg, some cobble/boulder placed

Substrate - Upstream (% cover)

— Bedrock — Silt 100 Boulder — Clay — Cobble
— Muck — Gravel — Marl — Sand — Detritus

Substrate - Downstream (% cover)

— Bedrock — Silt — Boulder 75 Clay 25 Cobble
— Muck — Gravel — Marl — Sand — Detritus

In-water Cover

Cover Types Present (circle): Overhanging Vegetation Undercut Banks Deep Pool Vascular Plants
 Woody Debris Boulder Other —

Riparian Zone

Riparian Cover (% of watercourse shaded, dominant vegetation, mature or early successional)

Upstream 20% spruce tree line
 Downstream 75% cottonwood + dec. woodlot

Adjacent Land Use

Upstream Ag fields
 Downstream —

Fish Habitat Potential

Critical Habitat (spawning or nursery areas, groundwater upwellings)

Upstream none
 Downstream none

Migratory Obstructions (seasonal, permanent)

Upstream fixed
 Downstream dry in summer?

Note any fish observations none

Other Habitat Notes, Incidental Wildlife Observations, etc.

- ups the drainage into culvert, WB for 3m over cobble
- d/s clay incised channel lined w/ riparian trees
- 1st km d/s were complex w/ some cobble, before farm access road

- slow run d/s of farm crossing



RAPID ASSESSMENT FORM FOR AQUATIC HABITAT

3

Stantec

Project Nappier Project # 160960697
 Station # 3 Field Staff KE + MP
 Photos Taken 529-534 Date Nov. 28 2011
 GPS Coordinates 17 4755627 439334 Time 12:10 pm
 Descriptive Location Kerwood Rd, 200 m south of Napperton.

Water Quality

Dissolved Oxygen (mg/L) 10.85 pH 7.76 Conductivity (µS/cm) 1398
 Water Temperature (°C) 10.3° Air Temperature (°C) 5°
 Weather conditions in previous 24 hrs cold & rain

Watercourse Dimensions & Morphology

Mean Watercourse Width 0.75 (m) Maximum Pool Depth 10 (cm)
 Mean Bankfull Width 3 (m) Mean Water Depth 5 (cm)
 % Riffle 50 % Pool 50 % Run 50 % Flat 5
 Evidence of eroding banks, Comments on bank stability stable + veg.

east
west

Substrate - Upstream (% cover)

catch basin/vertical culvert
 Bedrock 0 Silt 0 Boulder 0 Clay 4 Cobble 0
 Muck 0 Gravel 0 Marl 0 Sand 0 Detritus 0

Substrate - Downstream (% cover)

Bedrock 0 Silt 0 Boulder 60 Clay 10 Cobble at culvert
 Muck 0 Gravel 0 Marl 0 Sand 30 Detritus 0

In-water Cover

Cover Types Present (circle): Overhanging Vegetation Undercut Banks 0 Deep Pool 0 Vascular Plants cattails + RCG
 Woody Debris 0 Boulder 0 Other 0

Riparian Zone

Riparian Cover (% of watercourse shaded, dominant vegetation, mature or early successional)
 Upstream 0%
 Downstream 0% open

Adjacent Land Use

Upstream Ag fields
 Downstream Ag fields

Fish Habitat Potential

Critical Habitat (spawning or nursery areas, groundwater upwellings)
 Upstream none
 Downstream none
 Migratory Obstructions (seasonal, permanent)
 Upstream dry in summer?
 Downstream dry in summer?
 Note any fish observations none

Other Habitat Notes, Incidental Wildlife Observations, etc.

- tile drainage inputs
- incised channel, some cattails + RCG
- very slow flow + some standing/poored water

- adjacent to future wastewater collection system