The Appleton Wetland;
Its Decline, Cause and Recommended Action

Appendix N: Appleton PSW and ANSI

Report prepared by

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of the
Mississippi Valley Field Naturalists

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Appleton Provincially Significant Wetland and Area of Natural and Scientific Interest

This Appendix contains a selection of information related to the designation of the Appleton Wetland as a Provincially Significant Wetland (PSW) and as an Area of Natural and Scientific Interest (ANSI).

The information was collected by Neil Carleton with assistance from Shaun Thompson, Kemptville District Ecologist, of Ministry of Natural Resources (MNR). The information includes:

- PSW Colour Boundary Map
- PSW Detailed Black Line Map
- PSW Wetland Evaluation Record
- PSW Wetland Data Record
- ANSI Boundary Colour Map
- ANSI Boundary Black Line Map
- ANSI Life Science Checksheet

These seven items are reproduced in that order in the pages that follow.

PSWs are those areas identified by the province as being the most valuable. They are defined as any evaluated wetland that scores a total of 600 or more points, or 200 or more points in either the biological or the special features component.

The 628 Ha Appleton Wetland was designated as a class 2 PSW on the basis of a 1984 evaluation conducted by Bruce Brown and Jeff McNaughton of MNR. This included field observations, map and air photo references, MNR creel surveys, and a review of published research. Their points-based assessment consisted of 4 components:

• Biological Component	183
• Social Component	181
• Hydrological Component	95
• Special Features Component	220
• Total	679

In 1991, the ANSI evaluation was completed by David J. White of MNR. To date, it remains with ANSI candidate status only. We have not been able to find any information on the details of the evaluation other than the summary in the Life Science Checksheet. This Checksheet does contain some noteworthy items:

- "Water levels and flows are regulated by dams at Almonte and Appleton, however, the effect on the wetland appears to be limited."
- "The candidate is on clay plain landform (Chapman & Putnam, 1984) and offers the only provincially significant representation of riverine marsh, swamp, and upland forest on clay plain. …. This area is most similar to the riverine deciduous swamp stands on the Innisville Wetlands, however, the latter are on limestone plain and organic (peak and muck) landform (Chapman & Putnam, 1984)."

Appleton Wetland

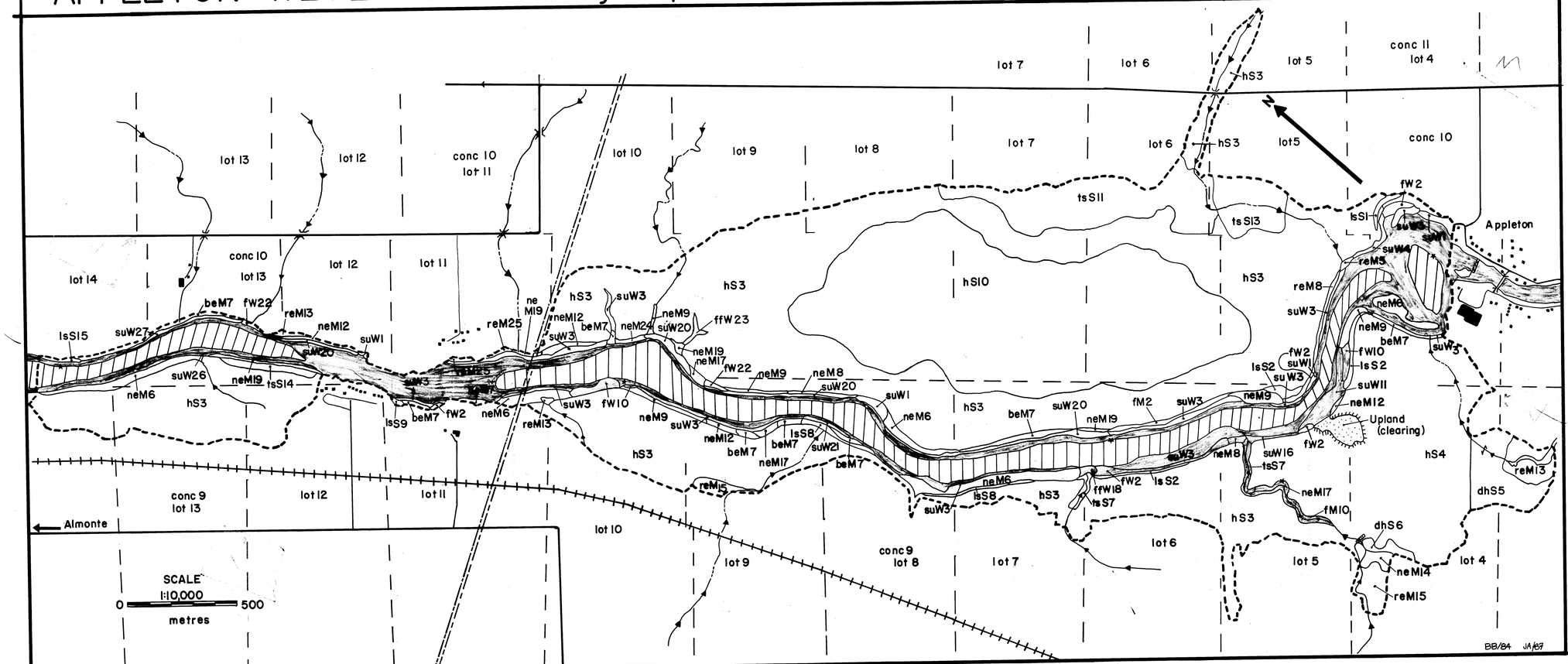
Documents related to

Designation as a

Provincially Significant Wetland

East Burnt Lands
GOLDEN LINE RD
RAMSAY CONCESSION 12
OLD ALMONTE RD
APPLETON SIDE RD
HAMILTON RD
TURNER RD
HILLCREST DR
APPLE ST
WILSON ST
RIVER RD
Appleton Wetland
RAMSAY DR
TOROK DR
DRUMMOND RD
RAMSAY CONCESSION 8
RAMSAY CONCESSION 7A
COUNTY RD 29
RAE RD
DUNCAN DR
SMART ST
OLD PERTH RD
CHRISTIAN ST
ST ANDREWS ST
EUPHEMIA ST
MALCOLM ST
BRIDGE ST
WATER ST
ANN ST
KING ST
JAMIESON ST
COUNTRY ST
SPRING ST
JOHANNA ST

APPLETON WETLAND / Ramsay Twp. / Lanark County / Ontario



LEGEND

- Open water (<2m deep)
- Highway
- County Road
- Minor Road
- Trail
- Railway
- Utility Corridor
- Wetland Boundary
- Upland/Pit
- Buildings
- Campsite/Picnic Site
- Bridge
- Dyke
- Beaver Dam
- River, Creek
- Intermittent Stream
- Conductivity Site

EXAMPLE OF VEGETATION COMMUNITY LABEL:

ne M2 — Dominant Vegetation Form / Community Number / Wetland Type

- Open water (>2m deep)

VEGETATION FORMS

h	Deciduous Trees
c	Coniferous Trees
dh,dc	Dead Trees
ts	Tall Shrubs
ls	Low Shrubs
ds	Dead Shrubs
sr	Shrub-rich
gc	Herbs (ground cover)
m	Moss
ne	Narrow-leaved Emergents
be	Broad-leaved Emergents
re	Robust Emergents
ff	Free-Floating Plants
f	Floating Plants (rooted)
su	Submerged Plants
u	Unvegetated

WETLAND TYPES

M	Marsh
W	Open Water Marsh
S	Swamp
F	Fen
B	Bog

VEGETATION COMMUNITIES

Map Code	Vegetation Forms	Dominant Species
Marsh		
W1	f, su	Floating-Leaf Pondweed, Milfoil
W2	f, su	White Water Lily, Yellow Pond Lily, Elodea
W3	su	Flat-Stemmed Pondweed, Elodea, Coontail
W4	su	Flat-Stemmed Pondweed, Water Celery, Filamentous Algae
M5	re, f, su	Cattails, Yellow Pond Lily, Elodea
M6	ne, be, f	Wild Rice, Pickerelweed, White Water Lily
M7	be, ne, f	Pickerelweed, Burreed, Yellow Pond Lily
M8	ne, be	Burreed, Mud Plantain
M9	ne, be, f	Wild Rice, Mud Plantain, Pickerelweed, Yellow Pond Lily
W10	su	Yellow Pond Lily
W11	su, f	Flat-Stemmed Pondweed, White Water Lily, Yellow Pond Lily
M12	ne, be	Burreed, Pickerelweed
M13	re, gc	Cattails, Purple Loosestrife
M14	gc	Purple Loosestrife
M15	ne, re	Reed Canary Grass, Cattails
M16	su, f	Water Celery, Yellow Pond Lily
M17	ne	Wild Rice, Burreed
W18	ff, be, ne, f	Duckweed, Watercress, Burreed, Yellow Pond Lily
M19	ne, f	Burreed, White Water Lily, Yellow Pond Lily
W20	f, su	Floating Pondweed, Elodea, Water Celery
W21	su	Sago Pondweed, Elodea
W22	f	Yellow Pond Lily, Floating-Leaf Pondweed
W23	ff, ne, be	Duckweed, Burreed, Arrowhead
M24	be, f, su	Mud Plantain, Floating Pondweed, Water Celery
M25	re, be	Cattails, Pickerelweed
W26	su	Flat-Stemmed Pondweed, Bassweed
W27	su, f	Elodea, Floating-Leaf Pondweed

Map Code	Vegetation Forms	Dominant Species
Swamp		
S1	ls	Swamp Loosestrife
S2	ls	Swamp Loosestrife, Sweetgale
S3	h, gc	Red Maple, Black Ash, Sensitive Fern
S4	h	Black Ash, Red Maple
S5	dh, ne, gc, re	Dead Hardwoods, Canary Grass, Purple Loosestrife, Cattails
S6	dh, h	Dead Hardwoods, Red Maple, Black Ash
S7	ts, ls	Red Osier Dogwood, Willow, Sweetgale
S8	ls, gc	Swamp Loosestrife, Sensitive Fern
S9	ls, re, h, ts	Swamp Loosestrife, Cattails, Black Ash, Red Osier Dogwood
S10	h, c	Black Ash, Red Maple, White Cedar
S11	h, gc, re, ne	Red Maple, Purple Loosestrife, Sensitive Fern, Cattails, Cut Grass
S12	ts	Red Osier Dogwood, Red Maple Saplings
S13	ts	Red Maple Saplings
S14	ts, h	Red Osier Dogwood, Speckled Alder, Black Ash, Red Maple
S15	ls, ne, f	Swamp Loosestrife, Burreed, White Water Lily

WETLAND EVALUATION RECORD

Wetland Name..... APPLETON

Result of Evaluation: CLASS 2

GENERAL INFORMATION

Ontario Ministry of Natural Resources:
- Region ..... EASTERN
- District ..... CARLETON PLACE

Conservation Authority ..... MISSISSIPPI VALLEY

County or Regional Municipality ..... LANARK

Township ..... RAMSAY

UTM Reference Zone 18T
UTM Grid Coordinates 100050

National Topographic Map Series:
- Map Scale 1:50000
- Map Number 31 F/1
- Map Name ..... CARLETON PLACE

Wetland Association ..... Single contiguous

Number of Wetlands in Complex 1

Total Size of Wetland (Ha) 628

1.0 BIOLOGICAL COMPONENT

1.1. PRODUCTIVITY VALUES

1.1.1. Growing Degree Days	14	
1.1.2. Soils	4	
1.1.3. Type of Wetland	14	
1.1.4. Site	8	
1.1.5. Nutrient Status of Surface Water	20	
TOTAL for Productivity Values		60

1.2. DIVERSITY VALUES

1.2.1. Number of Wetland Types	6	
1.2.2. Vegetation Communities	30	
1.2.3. Diversity of Surrounding Habitat	7	
1.2.4. Proximity to Other Wetlands	10	
1.2.5. Interspersion	12	
1.2.6. Open Water Types	8	
TOTAL for Diversity Values		73

1.3. SIZE (Biological Component) 50

TOTAL FOR BIOLOGICAL COMPONENT 183

2.0 SOCIAL COMPONENT

2.1. RESOURCE PRODUCTS WITH CASH VALUE		
2.1.1. Timber (lumber and firewood)	20	
2.1.2. Wild Rice	10	
2.1.3. Commercial Fish (Bait Fish and/or Coarse Fish)	30	
2.1.4. Bullfrogs	2	
2.1.5. Snapping Turtles	2	
2.1.6. Furbearers	15	
TOTAL for Resource Products with Cash Value		60
2.2. RECREATIONAL ACTIVITIES		64
2.3. AESTHETICS		
2.3.1. Landscape Distinctness	5	
2.3.2. Absence of Human Disturbances	10	
TOTAL for Aesthetics		15
2.4. EDUCATION AND PUBLIC AWARENESS		
2.4.1. Educational Uses	0	
2.4.2. Facilities and Programs	0	
2.4.3. Research and Studies	0	
TOTAL for Education and Public Awareness		0
2.5. PROXIMITY TO URBAN AREAS		10
2.6. OWNERSHIP/ACCESSIBILITY		12
2.7. SIZE (Social Component)		20
TOTAL FOR SOCIAL COMPONENT		181

3.0 HYDROLOGICAL COMPONENT

3.1. EFFECT OF ADJOINING LARGE WATER BODY

3.2. FLOW STABILIZATION

3.2.1. Detention due to Surface Area		
3.2.1.1. and		
3.2.1.2. FIRST step (from Table).....	70	
3.2.1.3. SECOND step.....	0	
3.2.1.5. THIRD step.....-50		
3.2.1.6. FOURTH step.....	0	
3.2.1.7. FIFTH step.....	40	
TOTAL for Detention Due to Surface Area		60
3.2.2. Flow Augmentation		0
TOTAL for Flow Stabilization		60

3.3. WATER QUALITY IMPROVEMENT

3.3.1 Short Term Removal of Nutrients from Surface Water		
3.3.1.1. Site type.....	4	
3.3.1.2. Wetland Area Dominated by Robust Emergents and Submergents.....	4	
3.3.1.3. Land Use in Catchment Basin	3	
TOTAL for Short Term Removal of Nutrients from Surface Water		11
3.3.2. Long Term Nutrient Trap		6
TOTAL for Water Quality Improvement		17

3.4. EROSION CONTROL

3.4.1. Erosion Buffer		
3.4.1.1. Riverine Wetlands.....	15	
3.4.1.2. Lacustrine Wetlands.....	0	
3.4.1.3. Fetch.....	0	
TOTAL for Erosion Buffer		15
3.4.2. Sheet Erosion		3
TOTAL for Erosion Control		18

TOTAL FOR HYDROLOGICAL COMPONENT 95

4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY AND/OR SCARCITY

4.1.1. Individual Wetlands.....			5
4.1.2. Wetland Type Representation.....			20
4.1.3. Individual Species			
4.1.3.1. Breeding Habitat for an Endangered Animal or Plant Species.....	0		
4.1.3.2. Traditional Migration or Feeding Habitat for an Endangered Animal Species..	0		
4.1.3.3. Breeding or Feeding Habitat for a Provincially Significant Animal Species.	150		
4.1.3.4. Provincially Significant Plant Species.....	0		
4.1.3.5. Regionally Significant Species.....	10		
TOTAL for Individual Species		160	
TOTAL for Rarity and/or Scarcity			185

4.2. SIGNIFICANT FEATURES AND/OR FISH AND WILDLIFE HABITAT

4.2.1. Nesting of Colonial Waterbirds.....	3	
4.2.2. Winter Cover for Wildlife.....	10	
4.2.3. Waterfowl Staging.....	0	
4.2.4. Waterfowl Production.....	5	
4.2.5. Migratory Passerine and/or Shorebird Stopover Area.....	0	
4.2.6. Significance for Fish Spawning and Rearing.....	15	
4.2.7. Unusual Geological or other Surficial Features.....	0	
TOTAL for Significant Features and/or Fish and Wildlife Habitat		33

4.3. ECOLOGICAL AGE 2

TOTAL FOR SPECIAL FEATURES COMPONENT 220

SUMMARY OF EVALUATION RESULTS

Wetland Name: APPLETON

TOTAL FOR 1.0 BIOLOGICAL COMPONENT	183
TOTAL FOR 2.0 SOCIAL COMPONENT	181
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT	95
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT	220
TOTAL	679
CLASS	2

INVESTIGATORS:

BRUCE BROWN
JEFF MCNAUGHTON

AFFILIATION .. MNR CARLETON PLACE
DATE 07/05/84

Extra copy ~ Version 2 evaluation.

WETLAND DATA RECORD

(i). WETLAND NAME AND/OR NUMBER Appleton Marsh

(ii). ADMINISTRATIVE REGION Eastern , AND DISTRICT Carleton Place OF ONTARIO MINISTRY OF NATURAL RESOURCES

(iii). CONSERVATION AUTHORITY JURISDICTION Mississippi Valley Conservation Authority

If not within a designated Conservation Authority, check here ___

(iv). COUNTY OR REGIONAL MUNICIPALITY Lanark County

(v). TOWNSHIP Ramsay

(vi). LOTS AND CONCESSIONS Con II Lots 4-14
Con I Lots 4-14 Con. XI Lots 5, 6.

(vii). MAP AND AIR PHOTO REFERENCES

(a) Longitude and Latitude 76°07' 45°14'

(b) U.T.M. Grid Reference Zone: 18T ; Grid: 100050

(c) National Topographic Series Scale and Map Number(s) & Name
1:50,000 31 F/1 Carleton Place

(d) Air Photos

(1) Date photo taken 1978

(2) Scale of air photos 1:10,000

(3) Flight and plate numbers 4513 - 116, 4514 - 55
4515 - 155, 4516 - 76.

(viii). WETLAND SIZE AND BOUNDARIES

(a) Single contiguous wetland area: 628 hectares

OR

(b) "Wetland Complex" comprised of _____ individual wetlands as follows:.

Wetland Number (for reference purposes)	Size of each wetland in the complex
Wetland No. 1	_____ hectares
Wetland No. 2	_____ "
Wetland No. 3	_____ "
Wetland No. 4	_____ "
Wetland No. 5	_____ "
Wetland No. 6	_____
Total size of wetland complex:	_____ "

1.0. BIOLOGICAL COMPONENT

1.1. PRODUCTIVITY VALUES

1.1.1. Growing Degree-Days

Number of accumulated growing degree-days (check one)

_____	<2800
_____	2800 to 3200
✓	3200 to 3600
_____	>3600

1.1.2. Soils

	Estimated % of Area
- Clays, loams or silts (mineral)	_____
- Organic	70
- Undesignated	30

1.1.3. Type of Wetland

(check one or more)

		Estimated % of Area
_____	Bog	_____
_____	Fen	_____
✓	Swamp	75
✓	Marsh (includes Open Water Marsh)	25

1.1.4. Site

(check one or more)

		Estimated % of Area
_____	Isolated	_____
_____	Palustrine (permanent or intermittent outflow)	_____
✓	Riverine	100
_____	Riverine (at rivermouth)	_____
_____	Lacustrine (at rivermouth)	_____
_____	Lacustrine (on enclosed bay)	_____
_____	Lacustrine (exposed to lake)	_____

1.1.5. Nutrient Status of Surface Water

(a) Write conductivity bridge reading and calculate T.D.S. at 25°C as per tables in Appendix VIII.

Location Sampled (ie. inflow, outflow, etc.)	Initial Specific Conductance (umhos/cm)	Temperature (°C)		Total Dissolved Solids (T.D.S.) (mg/l)
1 outflow	160	26	=	97.9
2 inflow	150	26	=	97.9
3	150	26	=	97.9
4	150	~~26~~ 22	=	106.3
		Average T.D.S.	=	100.0

(b) Check appropriate category (from (a))

Average T.D.S.(mg/l)	
<100	
100-500	✓
501-1500	
>1500	
NO READING	

1.2. DIVERSITY VALUES

1.2.1. Number of Wetland Types

(check one)

_____ One
✓ Two
_____ Three
_____ Four

1.2.2. Vegetation Communities (Revised categorically Oct 87)

(enter form and map code if available, or enter dominant species if known, and appropriate code/symbol)

a) One form

Code	
S1	ls Swamp Loosestrife
W10	su yellow pond lily
M14	gc Purple loosestrife
S2	ls Water willow, sweetgale
S4	h black Ash, Red Maple
W3	su flat-stemmed pondweed, elodea, coontail
W4	su flat-stemmed pondweed, water celery, filamentous
W22	f yellow pond lily, floating-leaf pondweed. algae
M17	ne wild rice, burreed.

one form

1 Form con't.

W26	su	flat stemmed pondweed, bassweed.
S12	ts	red osier dogwood, Red Maple saplings.
S13	ts	red maple saplings

b) Two forms

Code		
W1	f floating pondweed	su-milfoil
M15	ne reed canary grass	re cattails
W20	f floating pondweed	su Elodea, water celery
S10	h Black Ash, Red Maple	c white cedar
W27	su Elodea	f floating leaf pondweed
M8	ne burreed	be mud plantain

c) Three forms

Code			
M5	re cattails	f yellow pond lily	su Elodea
M16	ne wild rice	be pickerelweed	f white water lily
M7	be pickerelweed	ne burreed	f yellow pond lily
W23	ff duckweed	ne burreed	be arrowhead
S15	ls swamp loosestrife	ne burreed	f white water lily
M9	ne wild rice	be mud plantain, pickerelweed	f yellow pond li
M24	be mud plantain, f floating pondweed	su water celery	

d) Four forms

Code				
S5	dh dead hardwoods	ne canary grass	gc purple loosestrife	re cattails
W18	ff duckweed	be watercress	ne burreed	f yellow pond lily
S9	ls swamp loosestrife	re cattails	h black ash	ts red osier dogwo
S11	h red maple	gc purple loosestrife, sensitive fern,	re cattails,	ne lutgra
____	____	____	____	____

e) Five forms

Code

____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

f) Six or more forms

Code

____	____	____	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____

Forms con't

M12 ne burreed be pickerelweed.

M13 re cattails gc purple loosestrife

W2 f white water lily, yellow pond lily su elodea

W11 su flat stemmed pondweed f yellow pond lily, white wate lil

S14 ts Red Osier Dogwood, speckled alder h Black Ash, Red Mapl

S3 h Red Maple, Black Ash, gc sensitive fern.

2 frms con't OVER

2 Forms con't.

S6	dh Dead hardwoods	h Red Maple, Black Ash
S7	ts Red Osier dogwood, willow	s sweetgale.
M19	ne burreed	f white water lily, yellow pond lily
M16	su water celery	f yellow water lily
M25	re cattails,	be pickerelweed
S8	ls swamp loosestrife	gc sensitive fern

1.2.3. Diversity of Surrounding Habitat

(check all appropriate items)

- ✓ row crops
- ✓ pasture
- ✓ abandoned agricultural land
- ✓ deciduous forest
- ____ coniferous forest
- ✓ urban or cottage development
- ____ pits, quarries or mining waste disposal
- ____ open lake or deep river
- ✓ fence rows with cover, or shelterbelts
- ____ terraine undulating or hilly with ravines
- ✓ creek(s)

Enter Total = 7

1.2.4. Proximity to Other Wetlands

(check first appropriate category)

i) Hydrologically connected by surface water to other wetlands (different dominant type) or open water within 1.5 km. ✓

ii) Hydrologically connected by surface water to other wetlands (same dominant type) within 0.5 km. ____

iii) Hydrologically connected by surface water to other wetlands (different dominant type) or open water body from 1.5 to 4 km away. ____

iv) Hydrologically connected by surface water to other wetlands (same dominant type) from 0.5 to 1.5 km away. ____

v) Within 0.75 km of other wetlands (different dominant type) or open water body, but not hydrologically connected by surface water. ____

vi) Within 1 km of other wetlands, but not hydrologically connected by surface water. ____

vii) No wetland within 1.5 km. ____

1.2.5. Interspersion

(check one)

Type 1	____
Type 2	✓
Type 3	____
Type 4	____

1.2.6. Open Water Types
(check one)

No open water	____
Type 1	____
Type 2	✓
Type 3	____
Type 4	____
Type 5	____
Type 6	____
Type 7	____
Type 8	____

1.3. SIZE (Biological Component)
(refer to viii)

628 hectares

2.0. SOCIAL COMPONENT

2.1. RESOURCE PRODUCTS WITH CASH VALUE

2.1.1. Timber (lumber and firewood)

(1) ✓ 51 to 100% of wetland area has mature trees (>10 cm dbh, >25% cover)
(2) ____ 10 to 50% of wetland area has mature trees (as above)
(3) ____ Wetland has few, immature or no trees

Source of information: Field observation, aerial photos.

2.1.2. Wild Rice

(1) ✓ Present
(2) ____ Absent

Source of Information: Field observation, Aug 17/84

2.1.3. Commercial Fish (Bait Fish and/or Coarse Fish)

(1) ✓ Fish harvested from the wetland (as per MNR)
(2) ____ Abundant during at least part of the year
(3) ____ Not abundant or only occasional
(4) ____ Habitat not suitable for fish

Source of Information: M.N.R. Files. Baitfish Dealer, Victor Majuary

2.1.4. Bullfrogs

(1) ✓ Present
(2) ____ Absent

Source of Information: Field observation, July 5/84, very plentiful.

2.1.5. Snapping Turtles
(1) ✓ Present
(2) _____ Absent
Source of Information: Field observation ; Aug 17/84

2.1.6. Furbearers
(check if present)

✓	muskrat	_____	mink
✓	raccoon	_____	other
✓	beaver		

Source of Information: Field observation ; July 5, 6, 9 /84

2.2. RECREATIONAL ACTIVITIES
(check appropriate spaces)

	Type of Wetland Associated Use			
Intensity of Use	Hunting	Nature Appreciation or Study	Fishing	Canoeing/Boating
High	✓ [1]			
Moderate			✓ [3]	✓ [5]
Low				
None Known		✓ [4]		
Not Possible				
Source of Information	Field observation Many Duck blinds		M.N.R. C.O.'s Creel surveys Field observation	M.N.R. Creel Surveys. Field observation

2.3. AESTHETICS

2.3.1. Landscape Distinctness
(1) ✓ Clearly distinct
(2) _____ Indistinct

2.3.2. Absence of Human Disturbances

2.3.2.1. Level of Disturbance

(1) _____ Human disturbances absent or nearly so
(2) _____ One or several singular or localized disturbances
(3) ✓ Moderate disturbance or localized water pollution
(4) _____ Impairment of natural quality intense in some areas or severe localized water pollution
(5) _____ Extremely intense disturbance or water pollution severe and widespread.

2.3.2.2. Types of Disturbances

✓ roads
✓ utility corridor
✓ buildings
_____ channelization
_____ drainage
_____ filling
✓ water pollution
✓ other: Town of Appleton.

2.4. EDUCATION AND PUBLIC AWARENESS

2.4.1. Educational Uses

(1) _____ Frequent - an average of 2 or more visits per year by one or more school groups, local clubs for the purpose of studying the animals, plants, environment, etc.
(2) _____ Infrequent - use by organized groups (one visit or less per year or only casual visits)
(3) ✓ No known visits

List groups utilizing the wetland

Name of Group(s)	Source of Information

2.4.2. Facilities and Programs
(check one)

(1) _____ Staffed interpretation center with shelters, trails, literature
(2) _____ No interpretation center or staff, but a system of self-guiding trails and observation points or brochures available
(3) ✓ No facilities or programs

2.4.3. Research and Studies
(check one)

(1) _____ One or more wetland-related scientific research papers published in a scientific journal;
(2) _____ One or more reports written outlining some aspect of the wetland's natural resources;
(3) ✓ No reports or papers.

List scientific papers, reports, etc.

_____
_____
_____

2.5. PROXIMITY TO URBAN AREAS
(check one)

(1) _____ In an urban or suburan area
(2) _____ <10 km from a population center greater than 10,000
(3) ✓ 10 to 60 km from a population center greater than 10,000
(4) _____ Isolated or relatively remote

2.6. OWNERSHIP/ACCESSIBILITY

Estimate % of area and enter in the appropriate space(s)

ACCESSIBILITY	OWNERSHIP				
	Public, unrestricted activities	Public, restricted activities	Private, open to public for limited activities	Private Club, closed to public	Private or Private and posted
1) Easy at most times by road/waterway	24	00	76		
2) Easy only at certain times of the year	00	00			
3) Limited, moderate effort required					
4) Difficult*					

* Requires extended effort due to distance from roads, navigable waterways or isolated geographical position.

Source of information M.N.R. Land Use Map.

2.7. Size (Social Component)

628 hectares (refer to viii)

3.0. HYDROLOGICAL COMPONENT

3.1. EFFECT OF ADJOINING LARGE WATER BODY
(check one)

(1) _____ Wetland located on the Ottawa, St. Lawrence, Niagara, Detroit or St. Clair Rivers (Go to 3.3)

(2) _____ Wetland bordering on one of the Great Lakes (Go to 3.3)

(3) ✓ Wetland not located as above (Go to 3.2)

If (1) or (2), omit Section 3.2, FLOW STABILIZATION. Continue with Section 3.3, WATER QUALITY IMPROVEMENT. If (3), proceed to Section 3.2.

3.2. FLOW STABILIZATION (All wetlands except those bordering on the Great Lakes or the 5 large rivers)

3.2.1. Detention Due to Surface Area

3.2.1.1. Size of Catchment Basin above Wetland Outflow

Catchment Basin Size 2773 sq. km (see Figure B)

3.2.1.2. Total Size of all Detention Areas (Lakes, Reservoirs and Wetlands) Draining into the Wetland (sq. km)

List Detention Areas	Size
Mississippi Lake	23
Sharbot Lake	15
Mazinaw Lake	16
Crotch Lake	17
Dalhousie Lake	6
Mississiagagon Lake	5
Big Gull Lake	24
Others	426
Total	532 sq. km

3.2.1.3. Size of Adjoining Lake (Lacustrine wetlands only)

0 hectares

3.2.1.4. Size of Adjoining River (Riverine wetlands only)
(not assessed)

3.2.1.5. Location and Size of Detention Areas (Lakes, Reservoirs and Wetlands) within 30 km above and below the wetland

(NOTE: 1 sq. km = 100 ha)

(a) Detention areas above the wetland (within 30 km)

Name and/or Number of Detention Area	Distance upstream from wetland (in km)	Size (hectares)	For Scoring Use
Mississippi River (1)	0	179	-5 *
Mississippi River (2)	23	184	-3 *
Mississippi Lake	8	2240	-24 *
Haley Lake & Swamp	29	744	-1 *
Lavallee Creek	4	99	-5 *
Stewart Lake & Swamp	29	744	-1 *
Cambells Creek	28	347	-1
McEwen Bay & Swamp	23	149	-1
Others	13	645	-8 *
			-48

Only enter the one's with an asterisk me

(b) Detention areas below the wetland (within 30 km)

Name and/or Number of Detention Area	Distance downstream from wetland (in km)	Size (hectares)	For Scoring Use
Mississippi River	0 km	248	-17

3.2.1.6. Land Use along River or Stream Shoreline for 20 km Below the Wetland
(Palustrine and all Riverine wetlands except those located along the 5 large rivers).

(check one)

(1) Wetland outflow exits into a deep ravine _____
(2) A village, town or urban area is located along outflow within 20 km ✓
(3) Not as above, and actively farmed agricultural land borders onto outflow, and

length of agricultural border = <1 km _____
(sum of shoreline 1-3 _____
on both sides of 4-8 _____
river within 20 km) >8 _____

(4) Not as above, (eg. lands bordering outflow within 20 km are forested, or abandonned by agriculture, or outflow enters another wetland or lake, etc.) _____

3.2.1.7. Size (Hydrological Component)
(see viii)
628 ha

3.2.2. Flow Augmentation (Palustrine wetlands only)

N/A Size of Catchment basin ~~3773~~ sq. km (See 3.2.1.1)
Wetland Area as a % of Catchment Basin Size ~~0.02~~ %
(Note: convert wetland area to sq. km before calculating %)

3.3. WATER QUALITY IMPROVEMENT (All wetlands)

3.3.1. Short Term Removal of Nutrients from Surface Water

3.3.1.1. Site Type (see 1.1.4 and check dominant site)

_____ Isolated
_____ Palustrine (with permanent or intermittent outflow)
✓ Riverine
_____ Riverine (at rivermouth)
_____ Lacustrine (at rivermouth)
_____ Lacustrine (on enclosed bay)
_____ Lacustrine (exposed to lake)

3.3.1.2. Actual Wetland Area Dominated by Robust Emergents and Submergents
(check one)

_____	<5
_____	5 - 50
✓	51 - 100
_____	101 - 250
_____	251 - 500
_____	501 - 1000
_____	>1000 hectares

3.3.1.3. Land Use in Catchment Basin
(check one)

(1) _____ Mainly agriculture and/or urban
(2) _____ Roughly 40-60% agriculture; remainder forested or abandoned agriculture
(3) ✓ Mainly forested and/or less than 40% agriculture

3.2.2. Long Term Nutrient Trap
(check one)

(1) _____ Wetland located on an active delta
(2) _____ Wetland rivermouth but without obvious delta
(3) ✓ Wetland with organic soils occupying 50% or more of the area
(4) _____ Wetland with organic soils occupying less than 50% of the area (i.e. mainly mineral or undesignated soils)

3.4. EROSION CONTROL

3.4.1. Erosion Buffer (Lacustrine and Riverine wetlands only)

NOTE: Assess for the dominant site type (see 3.3.1.1)

3.4.1.1. Riverine Wetlands (shoreland and flood plain)
(check principal vegetation form)

(1) ✓ Trees or Shrubs
(2) _____ Emergents
(3) _____ Non-vegetated or nearly so

3.4.1.2. Lacustrine Wetlands (with or without barrier beach)
(check principal vegetation form)

(1) _____ Trees or Shrubs
(2) _____ Emergents
(3) _____ Submergents and Floating
(4) _____ Non-vegetated or nearly so

3.4.1.3. Fetch (Lacustine wetlands or Riverine wetlands on any of the 5 large rivers)

Maximum distance

(1) _____ barrier beach present
(2) _____ <2 km
(3) _____ 2 to 8 km
(4) _____ >8 km

3.4.2 Sheet Erosion (All except Lacustrine wetlands)
(check the appropriate space)

Wetland Size (ha)	R FACTOR VALUE			
	<50	50-75	75-100	>100
<2				
2-5				
6-10				
11-15				
16-20				
>20		✓		

4.0. SPECIAL FEATURES COMPONENT

4.1. RARITY AND/OR SCARCITY

4.1.1. Individual Wetlands

Name of Physiographic Unit: Lanark Plain
Unit Number: 13

4.1.2. Wetland Type Representation (minimum size 0.5 ha)

(check one or more)

✓	Marsh
✓	Swamp
	Fen
	Bog

4.1.3. Individual Species

4.1.3.1. Breeding Habitat for an Endangered Animal or Plant Species

	Name of Species	Source of Information
(1)		
(2)		

4.1.3.2. Traditional Migration or Feeding Habitat for an Endangered Animal Species

	Name of Species	Source of Information
(1)		
(2)		

4.1.3.3. Breeding or Feeding Habitat for a Provincially Significant Animal Species

	Name of Species	Source of Information
(1)	Black Tern	Field observation; July 5/84
(2)	Northern Harrier	Field observation; July 9/84

4.1.3.4. Provincially Significant Plant Species

	Name of Species	Source of Information
(1)		
(2)		

4.1.3.5. Regionally Significant Species

	Name of Species	Source of Information
(1)	Eastern Milk Snake	F.R. Cook 1981 T. 46. 15(2): 75-109
(2)		
(3)		
(4)		

4.2. SIGNIFICANT FEATURES AND/OR FISH AND WILDLIFE HABITAT

4.2.1. Nesting of Colonial Waterbirds
(check one)

(1) _____ Currently nesting; species name(s) _____
(2) _____ Known to have nested within past 5 years; species name(s) _____
(3) ✓ Active feeding area
(4) _____ None known

Source of Information: Field observation (Great-blue Herons); July 5/84
Black Terns

4.2.2. Winter Cover for Wildlife
(check only highest level of significance)

(1) _____ Provincial signficance for Deer _____, Moose _____
(2) _____ Regional significance for Deer _____, Moose _____
(3) _____ Local significance for Deer _____, Moose _____
(4) ✓ Good winter cover for other species (list): Snowshoe Hare, Ruffed Grouse.
(5) _____ Poor winter cover

Source of Information: Field observation

4.2.3. Waterfowl Staging
(check only highest level of significance)

(1) _____ National significance
(2) _____ Provincial significance
(3) _____ Regional signficance
(4) ✓ Local or no significance

Source of Information: C.O.'s, local hunters.

4.2.4. Waterfowl Production
(check only highest level of significance)

(1) _____ Provincial significance
(2) _____ Regional significance
(3) ✓ Local significance
(4) _____ Little or no significance

Source of Information: Field observation; Mallards, Wood Ducks
Blue-winged Teal.

4.2.5. Migratory Passerine and/or Shorebird Stopover Area
(check one)

(1) _____ High significance
(2) ✓ No significance

Source of Information: Bruce Di Iabio

4.2.6. Significance for Fish Spawning and Rearing
(check one)

(1) _____ Regional significance
(2) ✓ Present
(3) _____ Unknown
(4) _____ Not possible

Species and Source of Information: Largemouth Bass, N. Pike, Brown Bullhead, Smallmouth Bass, White Sucker, Yellow Pickerel (M.N.R. Files, Mississippi River Lake Aug 13/84

4.2.7. Unusual Geological or other Surficial Features

Feature	Source of Information
(1)	
(2)	

4.3. ECOLOGICAL AGE

Type of Wetland	Enter % of Area
_____ Bog	_____
_____ Fen	_____
✓ Swamp	75
✓ Marsh	25

INVESTIGATORS

Bruce Brown
Jeff McNaughton

AFFILIATION

Ontario Ministry of Natural Resources

DATE

July 5, 6, 9, Aug 17, Sept 21/84

ESTIMATED TIME DEVOTED TO COMPLETING THE FIELD SURVEY IN "[redacted] HOURS"

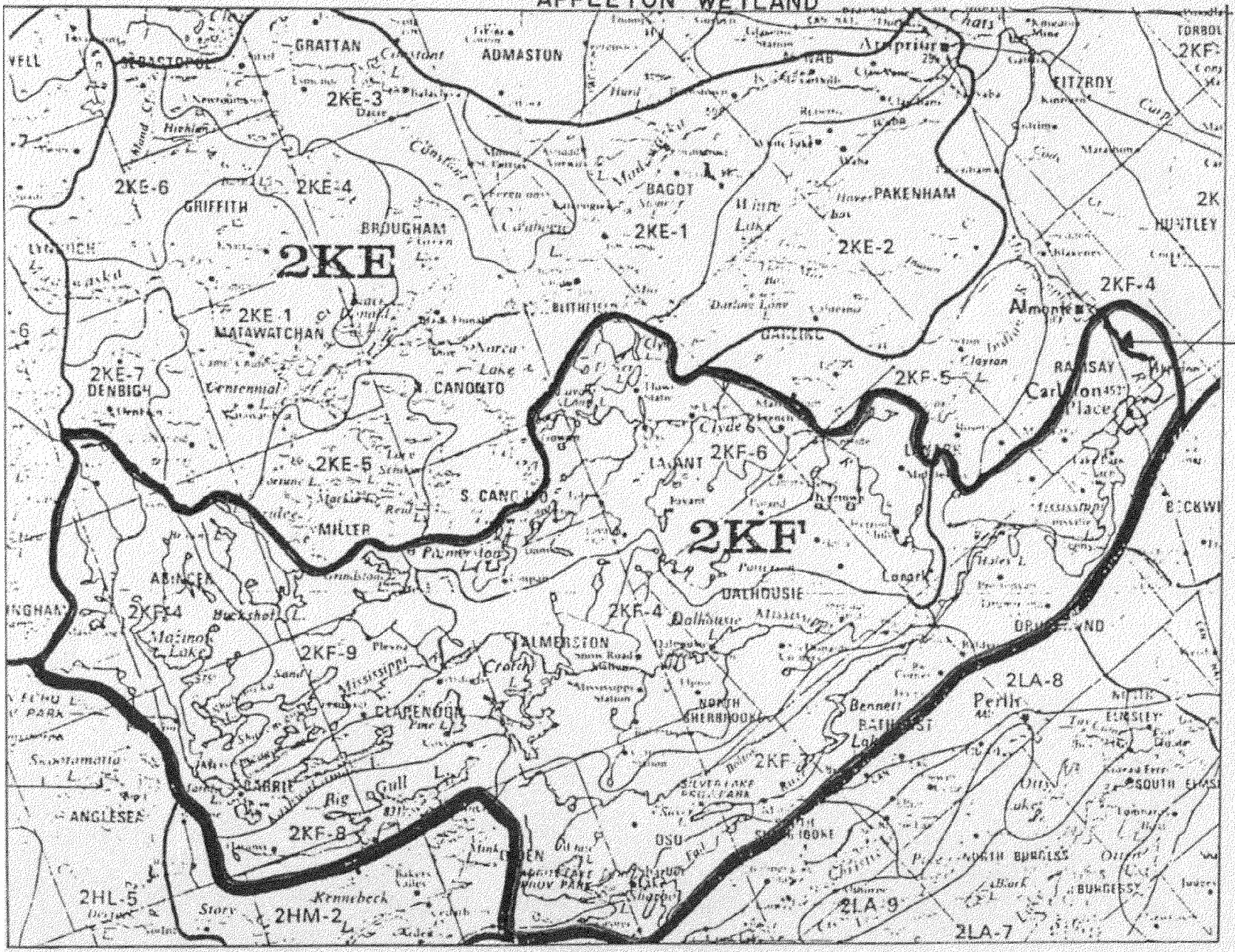
20 hrs.

WEATHER CONDITIONS

(i) at time of field work: Normal
(ii) summer conditions in general: Normal - slightly wet.

Figure B.

DRAINAGE BASIN MAP FOR THE APPLETON WETLAND



APPLETON WETLAND.

Vegetation form	Percent area in which form is dominant
h	74%
c	
dh	4%
dc	
ts	1%
ls	1%
ds	
gc	
m	
ne	3%
be	1%
re	1%
ff	
f	1%
su	3%

Wetland Type	Area in Private Ownership (ha)	Area in Public Ownership (ha)	Area Unknown Ownership (ha)	Total
Swamp	471			471
Marsh		157		157
Fen				
Bog	471	157		628

Wetland Type	Organic Soil -not placed in capability class (ha)	Wetland Area placed in Agricultural Capability Classes (ha)						
		1	2	3	4	5	6	7
Swamp	440							
Marsh								
Fen								
Bog								
Total	440							

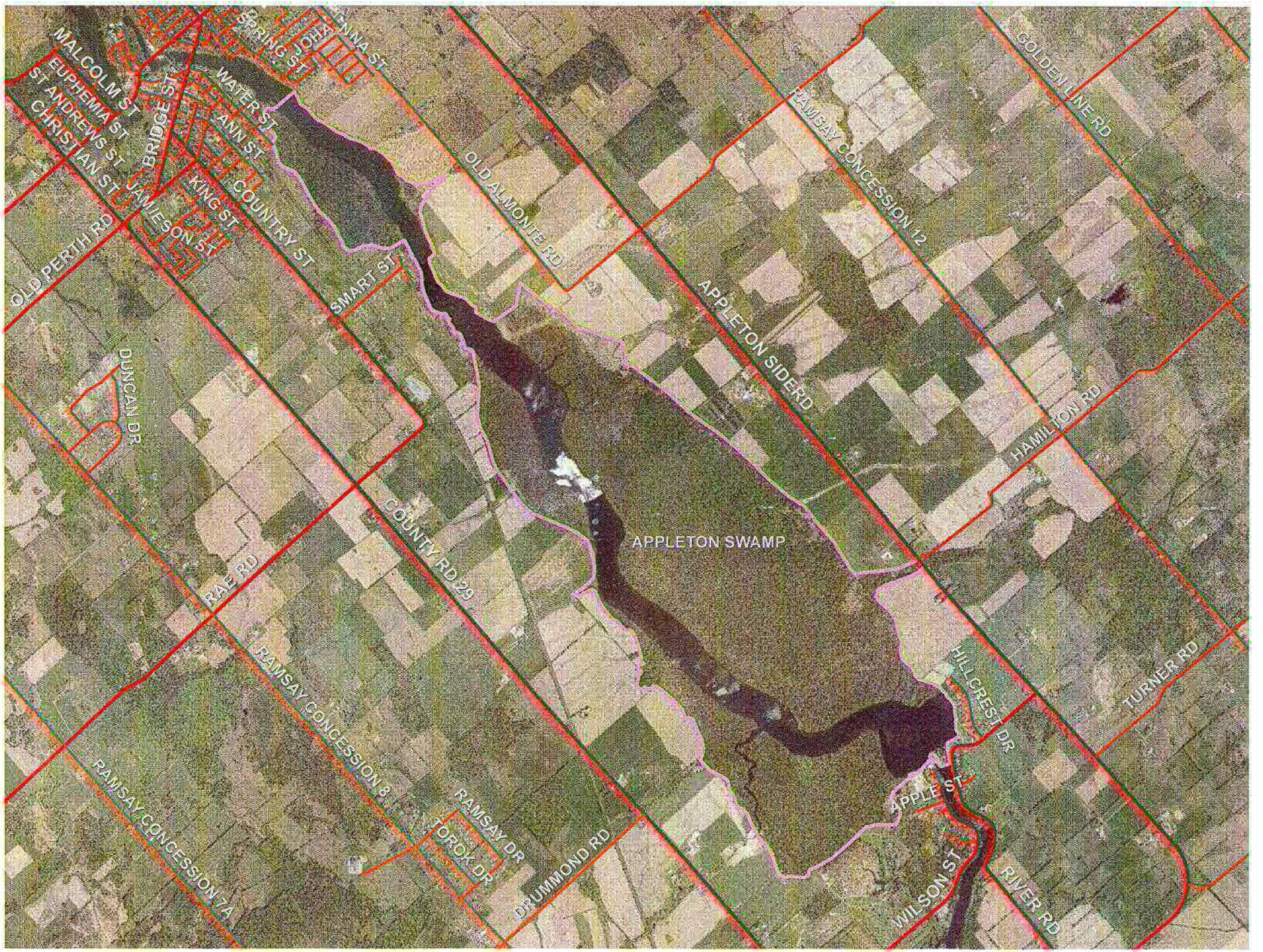
↳ the remaining 188 ha is presumably the river itself - open water types -

Appleton Wetland

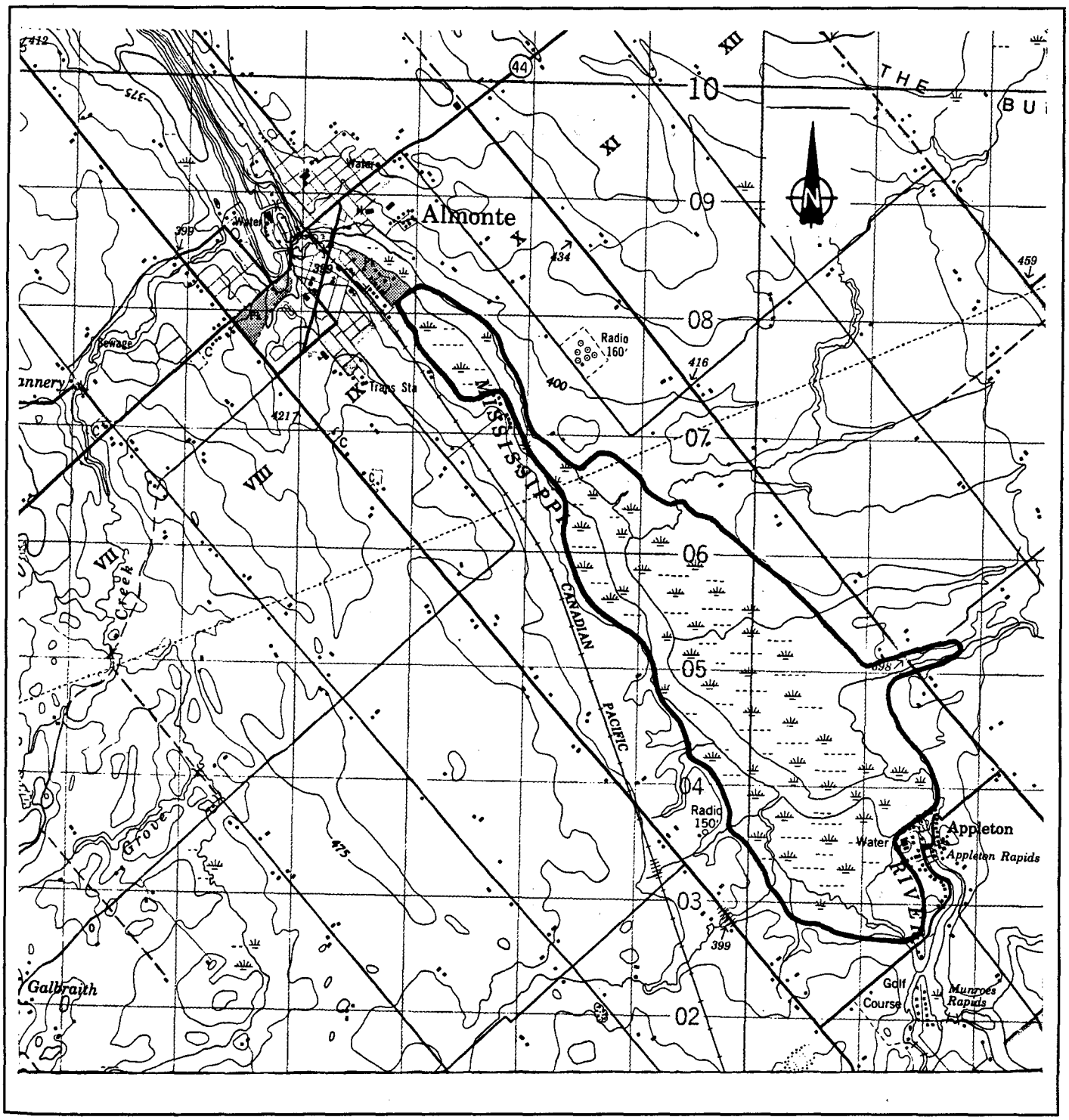
Documents related to

Candidate as an

Area of Natural and Scientific Interest


MALCOLM ST
EUPHEMIA ST
ST ANDREWS ST
CHRISTIAN ST
BRIDGE ST
WATER ST
ANN ST
KING ST
JAMIESON ST
SPRING ST
JOHANNA ST
COUNTRY ST
OLD PERTH RD
DUNCAN DR
SMART ST
OLD ALMONTE RD
RAMSAY CONCESSION 12
GOLDEN LINE RD
APPLETON SIDE RD
HAMILTON RD
APPLETON SWAMP
COUNTY RD 29
RAE RD
RAMSAY CONCESSION 8
RAMSAY CONCESSION 7A
RAMSAY DR
TOROK DR
DRUMMOND RD
HILLCREST DR
TURNER RD
APPLE ST
WILSON ST
RIVER RD

Map of Appleton Swamp (scale 1:50,000) based on 31 F/1



AREA OF NATURAL AND SCIENTIFIC INTEREST - LIFE SCIENCE CHECKSHEET

NAME	MAP NAME	MAP NUMBER	UTM REF.
Appleton Swamp	Carleton Place	31 F/1	100050

COUNTY, DISTRICT, OR REGIONAL MUNICIPALITY	LAT.	LONG.	ALT. MIN.	ALT. MAX.
Lanark	45°12'N	76°09'W	120 m	125 m

LOCALITY
5 km SE of Almonte

TOWNSHIP
Ramsay

AREA
700 ha

OWNERSHIP
Private, bed of river is Crown

MNR REGION	SITE REGION AND DISTRICT
Southern	6-11
MNR DISTRICT	**CONSERVATION AUTHORITY**
Kemptville	Mississippi Valley

AERIAL PHOTOGRAPHS
YEAR - ROLL - FLIGHT LINE - NUMBERS

1:50,000 NTS MAP SHOWING AREA BOUNDARIES 1:250,000

Please see map overleaf

PHYSICAL AND BIOLOGICAL FEATURES

An extensive riverine deciduous swamp and marsh complex associated with the floodplain of the Mississippi River. Water levels and flow are regulated by dams at Almonte and Appleton, however, the effect on the wetland appears to be limited. The deciduous swamp varies from moderately mature with little disturbance to young and recently logged. Some of the least disturbed and most mature sections along the east side have been marked for cutting. A central core within the swamp is a mixed swamp association of Cedar and Black Ash. Along the river are fairly extensive shallows of aquatic and narrow-leaved emergent marsh. At one location along the shore were several old and very large specimens of *Salix amygdaloides* (Peach-leaf Willow). The provincially significant Northern Harrier and Black Tern, and regionally significant *Cuscuta gronovii* (Dodder) are found in the site that is rated as a class 2 wetland. A limited area of upland deciduous forest occurs on the periphery of the wetland. Refer to slides 91-8-20, 22, 24.

The candidate is on clay plain landform (Chapman & Putnam, 1984) and offers the only provincially significant representation of riverine marsh, swamp, and upland forest on clay plain. Barbers Creek/Kilmarnock Marsh supports primarily robust emergent (Cattail) marsh with quiet water aquatic marsh. The present candidate supports aquatic and narrow-leaved/broad-leaved emergent marsh associated with more active water flow along the river.

This area is most similar to the riverine deciduous swamp stands of the Innisville Wetlands, however, the latter are on limestone plain and organic (peat and muck) landform (Chapman & Putnam, 1984).

MAJOR INFORMATION SOURCES
D.J. White (field survey and aerial reconnaissance, 1991) and wetland evaluation

EVALUATION AND PRIORITIES
Provincially significant riverine marsh and deciduous and mixed swamp on clay plain landform.

DATE COMPILED	COMPILER
December 1991	David J. White

CANDIDATE ANSI NO REQUIRED STATUS