

Contacts and sources of data used in this report

Water Quality Indicators

Provincial water quality monitoring (1960s-present)

Mr. Brian Whitehead, Ministry of the Environment, Toronto. Telephone (416) 235-6256

Mr. Aaron Todd, Ministry of the Environment, Toronto. Telephone (416) 235-6240, email

Aaron.Todd@ene.gov.on.ca

Algae, Chlorophyll a, nutrients, dissolved oxygen (1998-present)

Mr. Paul Hamilton, Research Division, Canadian Museum of Nature. Telephone (613) 364-4080, email

phamilton@mus-nature.ca

Chlorophyll a, nutrients (1993-1995)

Dr. Frances Pick, Department of Biology, University of Ottawa. Telephone (613) 562-5486 ext. 6364, email

frpick@science.uottawa.ca

Beach closures

Mooney's Bay - Jean-Guy Albert, City of Ottawa, Public Health (Environmental Health Department). Telephone (613) 722-2200 ext. 23653.

Baxter Conservation Centre - Rudy Dyck, Rideau Valley Conservation Authority. Telephone 692-3571 ext. 135.

Rideau River Provincial Park - Krista Lynn Powers, Ministry of Natural Resources (public health inspector).

Telephone (705) 755-1716.

Smiths Falls and Merrickville – Mr. Randy Moir, Leeds Grenville and Lanark Health Unit (Smiths Falls). Telephone 283-2740.

Biological Indicators

Species diversity

Canadian Museum of Nature, Rideau River Biodiversity Project (available on-line at

<http://www.nature.ca/research/rideau>)

Mr. Stewart Hamill, Wildlife Biologist, Merrickville, Ontario. Telephone (613) 269-3415, email shamill@istar.ca

Species at risk

Ontario Species at Risk Listing available on-line at

<http://www.speciesatrisk.gc.ca/Species/English/SearchResults.cfm?StatusID=&Range=ON&Latin=&Common=>

Fish diversity and abundance

Mr. Scott Smithers, Area Biologist, Ministry of Natural Resources (Kemptonville Office). Telephone (613) 258-8214, email scott.smithers@mnr.gov.on.ca

Fisheries Assessment Reports (MNR, 2000; RMOC 1998a, 1999a, 1999b, 2000)

Restrictions on fish consumption

The 2000-2001 Guide to Eating Ontario Sport Fish

Available on-line at <http://www.ene.gov.on.ca/envision/guide/>

Aquatic plant diversity and abundance

Dr. Lynn Gillespie, Research Scientist, Canadian Museum of Nature. Email lgillespie@mus-nature.ca

Aquatic plant harvesting

Ms. Mary Ann Ovington, Eastern Ontario Field Unit, Parks Canada Smiths Falls. Telephone (613) 283-7199,

email mary_ovington@pch.gc.ca

Zebra mussels

Dr. André Martel, Research and Collections, Canadian Museum of Nature, Telephone (613) 364-4061, email

amartel@mus-nature.ca

Stress Indicators

Population growth

Statistical profile of Canadian Communities, Statistics Canada, Census 1996, available on-line at <http://ceps.statcan.ca/english/profil/PlaceSearchForm1.cfm>

City of Ottawa population, and urban growth and density

Ms. Deborah Irwin, Natural Environmental Biologist, City of Ottawa. Telephone (613) 244-5300 ext. 3000, email Deborah.Irwin@city.ottawa.on.ca

Permits to take water

Mr. Nicholas Murphy, Ontario Ministry of the Environment, email Nicholas.Murphy@ene.gov.on.ca
Mr. John Demorest, Rideau Valley Conservation Authority. Telephone (613) 692-3571 ext. 121. Email demorest@rideauvalley.on.ca

Boat traffic

Ms. Mary Ann Ovington, Eastern Ontario Field Unit, Parks Canada, Smiths Falls. Telephone (613) 283-7199, email mary_ovington@pch.gc.ca

Water level manipulation (draw down)

Mr. Kerry McGonegal, Eastern Ontario Field Unit, Parks Canada, Smiths Falls. Telephone 1-800-230-0016, email Kerry_McGonegal@pch.gc.ca
Fisheries Assessment Reports (MNR, 2000; RMOC 1998a, 1999a, 1999b, 2000)

Population served by wastewater treatment

Municipal Water Use Database (MUD), available on-line at <http://www3.ec.gc.ca/MUD/ENG/Default.cfm>

Wastewater treatment plant performance

Ontario Clean Water Agency Sewage Plant Performance Assessments
Mr. Jim Mahoney, Ontario Ministry of the Environment (Eastern Region), Telephone (613) 549-4000

Agricultural activities

1996 Census of Agriculture
Ms. Kellie Templeton, Statistics Canada, telephone 951-8116, email kellie.templeton@statcan.ca

Rideau River Roundtable Research and Monitoring Sub-Committee Members

Steve Burns, Ontario Ministry of the Environment

Victor Castro, Ontario Ministry of the Environment

Kerry Coleman, Ontario Ministry of Natural Resources

Stewart Hamill, private consultant

Paul Hamilton, Canadian Museum of Nature

Deborah Irwin, City of Ottawa

Jeff Kohl, Rideau River Roundtable

Patrick Larson, Rideau Valley Conservation Authority

Simon Lunn, Parks Canada

Dr. Frances Pick, University of Ottawa

Scott Smithers, Ontario Ministry of Natural Resources

Bibliography

Basu, B.K. & F.R. Pick. 1995. Longitudinal and seasonal development of planktonic chlorophyll a in the Rideau River, Ontario. *Can. J. Fish. Aquat. Sci.* 52: 805-815.

Basu, B.K. & F.R. Pick. 1996. Factors regulating phytoplankton and zooplankton biomass in temperate rivers. *Limnol. Oceanogr.* 41(7): 1572-1577.

Basu, B.K. & F.R. Pick. 1997. Phytoplankton and zooplankton development in a lowland, temperate river. *J. Plankton Res.* 19(2): 237-253.

Canadian Council of Ministers of the Environment (CCME). 2001. Canadian water quality guidelines for the protection of aquatic life: Summary table. Updated. In: Canadian environmental quality guidelines, 1999, Canadian Council of Ministers of the Environment, Winnipeg.

City of Ottawa. 1993. *Land and Water Background Report: State of the Environment Reporting Program*. Environmental Management Branch, Department of Engineering and Works. 120 p.

Chambers, P.A., M. Guy, E.S. Roberts, M.N. Charlton, R. Kent, C. Gagnon, G. Grove and N. Foster. 2001. *Nutrients and their impact on the Canadian environment*. Agriculture and Agri-Food Canada, Environment Canada, Fisheries and Oceans Canada, Health Canada and Natural Resources Canada. 241 p.

Environment Canada. 1996. *Measuring Up: A Resource Guide for Municipal State of the Environment Reporting*. State of the Environment Directorate, Environment Canada. 70 p.

Environment Canada. 2001. *Nutrients in the Canadian Environment: Reporting on the State of Canada's Environment*. Indicators and Assessment Office, Ecosystem Science Directorate, Environmental Conservation Service. 70 p.

Government of Canada. 1991. *The State of Canada's Environment*. Minister of Supply and Services.

Hamilton, P.B., L.M. Ley, M. Poulin & F.R. Pick. 1997. Seasonal and disturbance event fluctuations in phytoplankton composition and water quality in the lower Rideau River, including Mooney's Bay, during 1996. Part I. Centre for Aquatic Biology and Environmental Research (CABER) Technical Report, Canadian Museum of Nature 97/1: 1-196.

Hopkins, G. 2000. *Enhancement of Fishing Opportunities in the Ottawa Area*. 46 p.

Martel, A. 1995. Demography and growth of the exotic zebra mussel (*Dreissena polymorpha*) in the Rideau River (Ontario). *Can. J. Zool.* 73: 2244-2250.

Martel, A.L., D.A. Pathy, J.B. Madill, C.B. Renaud, S.L. Dean & S.J. Kerr. 2001. Decline and regional extirpation of freshwater mussels (Unionidae) in a small river system invaded by *Dreissena polymorpha*: the Rideau River, 1993-2000. Canadian Journal of Zoology (in press).

Ministry of Environment and Energy (MOEE). 1994. *Water management policies guidelines: provincial water quality objectives of the Ministry of Environment and Energy*. Revised October 1998. Available online at: www.ene.gov.on.ca/envision/gp/3303e.pdf

Ontario Ministry of Natural Resources (MNR), 2000. *Rideau River Fisheries Assessment Report 1998-1999: Index Netting & Contaminant Analysis, Kilmarnock & Andrewsville Reaches*. Ontario Ministry of Natural Resources, Kemptville District Office. 34 p.

Phelps, A., C.B. Renaud & F. Chapleau. 2000. First record of a freshwater drum, *Aplodinotus grunniens*, in the Rideau River, Ottawa, Ontario. The Canadian Field-Naturalist 114: 121-125.

Regional Municipality of Ottawa-Carleton (RMOC), 1993. *Urban Development in Ottawa-Carleton: A Historical Perspective*. RMOC Planning Department #6-05.

Region of Ottawa-Carleton (RMOC), 1998a. *Rideau River Fisheries Assessment Report (Index Netting, Nursery Habitat Inventory, Contaminant and Fall Drawdown Monitoring), 1995-1997*. Prepared by the Surface Water Quality Branch, Environment and Transportation Department, Regional Municipality of Ottawa-Carleton. 63 p.

Region of Ottawa-Carleton (RMOC), 1998b. *Regional Profile*. Planning and Development Approvals Department #6-12.

Region of Ottawa-Carleton (RMOC), 1999a. *Trends in Water Quality Parameters Pertinent to Fish and Contaminant Levels in Fish in the Rideau and Ottawa Rivers*. Prepared by the Surface Water Quality Branch, Environment and Transportation Department, Region of Ottawa-Carleton. 122 p.

Region of Ottawa-Carleton (RMOC), 1999b. *1998 Rideau River Fisheries Assessment Report - Index Netting, Nursery Habitat Inventory, Contaminant and Fall Draw Down Monitoring*. Prepared by the Surface Water Quality Branch, Environment and Transportation Department, Regional Municipality of Ottawa-Carleton. 67 p.

Region of Ottawa-Carleton (RMOC), 2000. *1999 Rideau River Fisheries Assessment Report - Index Netting, Nursery Habitat Inventory, Contaminant Analysis and Fall Draw Down Monitoring*. Prepared by the Surface Water Quality Branch, Environment and Transportation Department, Regional Municipality of Ottawa-Carleton. 69 p.

Rideau Valley Conservation Authority. 2000. *Existing conditions and trends in the Tay River watershed*.

Snetsinger, R.D., D. Kristensen, M.A. Snetsinger, A. Hansen & A. Blyth. 1998. *A Broader View: Toward Ecosystem Management on the Rideau Canal*. Report prepared for Parks Canada. pp 87-104.

St. Lawrence Centre. 1996. *State of the Environment Report on the St. Lawrence River. Volume 1: The St. Lawrence Ecosystem*. Environment Canada – Quebec Region, Environmental Conservation, and Éditions Multimondes, Montreal. “St. Lawrence UPDATE” series.

St. Lawrence Centre. 1996. *State of the Environment Report on the St. Lawrence River. Volume 2: The State of the St. Lawrence*. Environment Canada – Quebec Region, Environmental Conservation, and Éditions Multimondes, Montreal. “St. Lawrence UPDATE” series. 153 p.

Water Survey of Canada. 1990. Historical streamflow summary, Ontario. Environment Canada, pp 461-463.

Yang, J.-R., B.K. Basu, P.B. Hamilton & F.R. Pick. 1997. The development of a true riverine phytoplankton assemblage along a lake-fed lowland river. *Arch. Hydrobiol.* 140 (2): 243-260.

Appendix 1 Canadian Water Quality Guidelines and Ontario Water Quality Objectives for the protection of aquatic life in freshwater.

| Metal | Canadian Guideline | Provincial Objective |
|-------------------|--|--|
| Aluminum | 100 µg/L at pH ≥ 6.5; Ca ²⁺ ≥ 4mg/L; DOC ≥ 2 mg/L | 75 µg/L at pH 6.5 to 9.0 (total Al in clay-free samples) (interim) |
| Barium | none | none |
| Beryllium | none | 11 µg/L, at < 75 mg/L CaCO ₃ 1100 µg/L, at > 75 mg/L CaCO ₃ |
| Cadmium | 0.017 µg/L (interim) or 10 ^[0.86(log(hardness))-3.2] | 0.1 µg/L, at 1-100 mg/L CaCO ₃ 0.5 µg/L, at > 100 mg/L CaCO ₃ (revised, interim) |
| Chromium | 1.0 µg/L (hexavalent) 8.9 µg/L (trivalent)(interim) | 1.0 µg/L (hexavalent) 8.9 µg/L (trivalent) |
| Cobalt | none | 0.9 µg/L |
| Copper | 2 µg/L at 0-120 mg/L CaCO ₃ 3 µg/L at 120-180 mg/L CaCO ₃ 4 µg/L at >180 mg/L CaCO ₃ | 1 µg/L at 0-20 mg/L CaCO ₃ 5 µg/L at > 20 mg/L CaCO ₃ (revised, interim) |
| Dissolved Oxygen | warm-water biota: 6000 µg/L (early life stages) 5500 µg/L (other life stages) cold-water biota: 9500 µg/L (early life stages) 6500 µg/L (other life stages) | temp warm-water cold-water biota 0°C 8 mg/L 7 mg/L 5°C 7 mg/L 6 mg/L 10°C 6 mg/L 6 mg/L 15°C 6 mg/L 5 mg/L 20°C 5 mg/L 4 mg/L 25°C 5 mg/L 4 mg/L |
| Iron | 300 µg/L | 300 µg/L |
| Lead | 1 µg/L at 0-60 mg/L CaCO ₃ 2 µg/L at 60-120 mg/L CaCO ₃ 4 µg/L at 120-180 mg/L CaCO ₃ 7 µg/L at > 180 mg/L CaCO ₃ | 1 µg/L at < 30 mg/L CaCO ₃ 3 µg/L at 30-80 mg/L CaCO ₃ 5 µg/L at >80 mg/L CaCO ₃ (revised, interim) |
| Molybdenum | 73 µg/L (interim) | 40 µg/L (interim) |
| Nickel | 25 µg/L at 0-60 mg/L CaCO ₃ 65 µg/L at 60-120 mg/L CaCO ₃ 110 µg/L at 120-180 mg/L CaCO ₃ 150 µg/L at > 180 mg/L CaCO ₃ | 25 µg/L |
| Nitrate | Concentrations that stimulate weed growth should be avoided | none |
| Nitrite | 60 µg/L | none |
| Phosphorus, total | none | 30 µg/L to avoid excessive plant Growth in rivers; 20 µg/L in lakes (interim general guideline) |
| Strontium | none | none |
| Titanium | none | none |
| Vanadium | none | 6 µg/L (interim) |
| Zinc | 30 µg/L | 20 µg/L (revised, interim) |

Sources: CCME, 2001; MOEE, 1994

Appendix 2 Location of Ministry of the Environment water quality monitoring sites on the Rideau River.

| STATION ID | STATION NAME | SAMPLE LOCATION | DISTANCE FROM OTTAWA | LATD | LONGD | FIRST SAMPLED |
|-------------|--------------|---------------------------------------|----------------------|--------|---------|---------------|
| 18003300502 | RIDEAU RIVER | AT OLD SLY LOCKS, SMITH FALLS | 97.202 | 44.892 | -76.006 | 1966 |
| 18003300402 | RIDEAU RIVER | AT HIGHWAY 43 | 96.880 | 44.886 | -75.991 | 1964 |
| 18003302602 | RIDEAU RIVER | AT DAM IN KILMARNOCK | 88.190 | 44.887 | -75.928 | 1970 |
| 18003302702 | RIDEAU RIVER | AT KILMARNOCK | 87.707 | 44.888 | -75.928 | 1970 |
| 18003301102 | RIDEAU RIVER | HIGHWAY 43 MERRICKVILLE | 76.120 | 44.917 | -75.839 | 1968 |
| 18003301002 | RIDEAU RIVER | AT CPR BRIDGE MERICKVILLE | 75.315 | 44.922 | -75.831 | 1968 |
| 18003303502 | RIDEAU RIVER | AT NICOLSON'S LOCK ANDREWSVILLE | 73.545 | 44.951 | -75.820 | 1980 |
| 18003301802 | RIDEAU RIVER | AT BURRITT RAPIDS BRIDGE | 67.591 | 44.983 | -75.798 | 1968 |
| 18003301502 | RIDEAU RIVER | AT BRIDGE TOWN OF KARS | 41.037 | 45.150 | -75.644 | 1968 |
| 18003302902 | RIDEAU RIVER | AT BRIDGE DOWNSTREAM OF KARS | 38.945 | 45.162 | -75.634 | 1970 |
| 18003301402 | RIDEAU RIVER | AT OSGOODE TOWNSHIP ROAD 5 | 30.899 | 45.218 | -75.665 | 1968 |
| 18003303702 | RIDEAU RIVER | AT LONG ISLAND GAUGING STATION | 25.910 | 45.249 | -75.705 | 1980 |
| 18003302802 | RIDEAU RIVER | DNSTR.FROM CONFLUENCE WITH JOCK RIVER | 24.461 | 45.263 | -75.706 | 1970 |
| 18003301202 | RIDEAU RIVER | AT DAM IN BLACK RAPIDS | 17.702 | 45.321 | -75.696 | 1968 |
| 18003303102 | RIDEAU RIVER | AT HOG'S BACK ROAD OTTAWA | 11.426 | 45.371 | -75.697 | 1972 |
| 18003303402 | RIDEAU RIVER | ST. PATRICK STREET BRIDGE OTTAWA | 1.609 | 45.437 | -75.679 | 1969 |
| 18003300102 | RIDEAU RIVER | AT SUSSEX DRIVE EAST OTTAWA | 0.322 | 45.441 | -75.695 | 1966 |
| 18003300202 | RIDEAU RIVER | AT SUSSEX DRIVE WEST OTTAWA | 0.322 | 45.439 | -75.697 | 1966 |

Appendix 3 Location of Canadian Museum of Nature Biodiversity Project water sampling sites on the Rideau River.

| SITE | LOCATION | UTM Coordinates | |
|---------|-------------------------------|-----------------|---------|
| | | | |
| RRBP1 | Lower Rideau Lake | 411526 | 4968222 |
| RRBP2 | Smiths Falls | 417644 | 4971647 |
| RRBP18 | The Swale (Smiths Falls) | 418263 | 4972243 |
| RRBP3 | Edmond's Lock (Smiths Falls) | 422601 | 4969207 |
| RRBP5 | Merrickville | 433119 | 4973969 |
| RRBP6 | Burritts Rapids | 436041 | 4980408 |
| RRBP8 | Becketts Landing (Kemptville) | 446441 | 4988421 |
| RRBP9 | Baxter Centre | 450346 | 4993233 |
| RRBP121 | Kars | 450176 | 5001112 |
| RRBP119 | Nicholson's Locks (Manotick) | 444821 | 5010872 |
| RRBP13 | Jock River | 444964 | 5013290 |
| RRBP118 | Black Rapids (Nepean) | 445475 | 5018847 |
| RRBP167 | Mooney's Bay | 445475 | 5024072 |
| RRBP108 | Bank St. (Ottawa) | 446915 | 5026382 |
| RRBP103 | St. Patrick St. (Ottawa) | 446950 | 5031717 |

Appendix 4 Location of Canadian Museum of Nature long-term aquatic plant monitoring plots on the Rideau River.

| SITE | LATITUDE | LONGITUDE |
|-----------------|----------|-----------|
| Smiths Falls | 44.893 | -76.044 |
| Old Slys | 44.881 | -75.986 |
| Merrickville | 44.914 | -75.849 |
| Baxter | 45.092 | -75.636 |
| Bank St. | 45.390 | -75.678 |
| St. Patrick St. | 45.437 | -75.676 |

Appendix 5 Rideau River Biodiversity Project Species Lists

Appendix 5a List of phytoplankton species reported in the Rideau River. Source: Canadian Museum of Nature

| | | |
|--|--|--|
| Bacillariophyta | <i>Urosolenia eriensis</i> | <i>Crucigenia quadrata</i> |
| <i>Acanthoceras zachariasii</i> | Chlorophyta | <i>Crucigenia tetrapedia</i> |
| <i>Achnanthes minutissima</i> | <i>Actinastrum hantzschii</i> | <i>Crucigeniella apiculata</i> |
| <i>Amphipleura pellucida</i> | <i>Actinastrum hantzschii</i> var. <i>subtile</i> | <i>Crucigeniella neglecta</i> |
| <i>Asterionella formosa</i> | <i>Ankistrodesmus bibraianus</i> | <i>Crucigeniella pulchra</i> |
| <i>Aulacoseira ambigua</i> | <i>Ankistrodesmus fusiformis</i> | <i>Desmাত্রactum spryii</i> |
| <i>Aulacoseira granulata</i> | <i>Ankistrodesmus gracilis</i> | <i>Dichotomococcus curvatus</i> |
| <i>Cocconeis placentula</i> | <i>Ankyra judayi</i> | <i>Dictyosphaerium ehrenbergianum</i> |
| <i>Cyclotella meneghiniana</i> | <i>Ankyra lanceolata</i> | <i>Dictyosphaerium elegans</i> |
| <i>Cyclotella radiosa</i> | <i>Basichlamys sacculifera</i> var. | <i>Dictyosphaerium pulchellum</i> |
| <i>Cymatopleura solea</i> | <i>Botryococcus braunii</i> | <i>Dictyosphaerium subsolitarium</i> |
| <i>Cymbella minuta</i> | <i>Carteria ellipsoidalis</i> | <i>Dimorphococcus lunatus</i> |
| <i>Cymbella silesiaca</i> | <i>Carteria klebsii</i> | <i>Echinosphaeridium norstedtii</i> |
| <i>Diatoma tenuis</i> | <i>Carteria lohammari</i> | <i>Elakatothrix gelatinosa</i> |
| <i>Diatoma vulgare</i> | <i>Carteria multifilis</i> | <i>Euastrum abruptum</i> |
| <i>Entomoneis paludosa</i> | <i>Carteria peterhofiensis</i> | <i>Euastrum pseudoboldtii</i> |
| <i>Epithemia sorex</i> | <i>Chlamydocapsa bacillus</i> | <i>Euastrum umbonatum</i> |
| <i>Fragilaria capucina</i> | <i>Cladophora glomerata</i> | <i>Eudorina californica</i> |
| <i>Fragilaria capucina</i> var. <i>rumpens</i> | <i>Closteriopsis longissima</i> | <i>Eudorina elegans</i> |
| <i>Fragilaria crotonensis</i> | <i>Closterium acerosum</i> | <i>Eudorina unicocca</i> |
| <i>Fragilaria nitzschoides</i> | <i>Closterium acutum</i> | <i>Eutetramorus fottii</i> |
| <i>Frustulia rhomboides</i> | <i>Closterium acutum</i> var. <i>linea</i> | <i>Franceia droescheri</i> |
| <i>Gomphoneis olivacea</i> | <i>Closterium erhenbergii</i> | <i>Franceia polychaeta</i> |
| <i>Gomphonema truncatum</i> | <i>Closterium gracile</i> var. <i>elongatum</i> | <i>Golenkinia radiata</i> |
| <i>Gyrosigma acuminatum</i> | <i>Closterium leibleinii</i> | <i>Gonium formosum</i> |
| <i>Gyrosigma wormleyi</i> | <i>Closterium moniliferum</i> | <i>Gonium pectorale</i> |
| <i>Hannaea arcus</i> | <i>Closterium parvulum</i> | <i>Hydrodictyon reticulatum</i> |
| <i>Hantzschia amphioxys</i> | <i>Coelastrum microspororum</i> | <i>Kirchneriella aperta</i> |
| <i>Melosira varians</i> | <i>Coelastrum reticulatum</i> | <i>Kirchneriella diana</i> var. <i>major</i> |
| <i>Meridion circulare</i> | <i>Coenocystis planctonica</i> var. <i>hercynica</i> | <i>Kirchneriella irregularis</i> |
| <i>Navicula capitata</i> | <i>Coenocystis subcylindrica</i> | <i>Kirchneriella obesa</i> |
| <i>Navicula capitoradiata</i> | <i>Cosmarium angulare</i> var. <i>canadense</i> | <i>Lagerheimia ciliata</i> |
| <i>Navicula cincta</i> | <i>Cosmarium bioculatum</i> | <i>Lagerheimia citrifomis</i> |
| <i>Navicula radiosa</i> | <i>Cosmarium bipunctatum</i> | <i>Lagerheimia quadriseta</i> |
| <i>Navicula tripunctata</i> | <i>Cosmarium botrytis</i> | <i>Lagerheimia subsalsa</i> |
| <i>Navicula viridula</i> var. <i>linearis</i> | <i>Cosmarium conspersum</i> f. <i>minus</i> | <i>Lobomonas ampla</i> |
| <i>Nitzschia acicularis</i> | <i>Cosmarium depressum</i> var. <i>achondrum</i> | <i>Lobomonas gracilis</i> |
| <i>Nitzschia palea</i> | <i>Cosmarium granatum</i> | <i>Lobomonas stellata</i> |
| <i>Nitzschia sigmoidea</i> | <i>Cosmarium humile</i> | <i>Lobomonas verrucosa</i> |
| <i>Pinnularia biceps</i> | <i>Cosmarium kjellmanii</i> | <i>Micractinium pusillum</i> |
| <i>Rhoicosphenia abbreviata</i> | <i>Cosmarium montrealense</i> | <i>Micractinium quadrisetum</i> |
| <i>Rhopalodia gibba</i> | <i>Cosmarium perpallidum</i> var. <i>nanum</i> | <i>Monoraphidium arcuatum</i> |
| <i>Skeletonema potamos</i> | <i>Cosmarium porrectum</i> | <i>Monoraphidium convolutum</i> |
| <i>Staurosira construens</i> | <i>Cosmarium portianum</i> | <i>Monoraphidium flexuosum</i> |
| <i>Staurosirella pinnata</i> | <i>Cosmarium punctulatum</i> | <i>Monoraphidium griffithii</i> |
| <i>Stephanodiscus binderanus</i> | <i>Cosmarium reniforme</i> | <i>Monoraphidium komarkovae</i> |
| <i>Stephanodiscus hantzschii</i> | <i>Cosmarium reniforme</i> var. <i>compressum</i> | <i>Monoraphidium minutum</i> |
| <i>Stephanodiscus niagarae</i> | <i>Cosmarium sexangulare</i> | <i>Nephrocytium agardhianum</i> |
| <i>Stephanodiscus parvus</i> | <i>Cosmarium sphaerostichum</i> | <i>Oedogonium inconspicuum</i> |
| <i>Surirella ovalis</i> | <i>Cosmarium tinctum</i> | <i>Oocystis borgei</i> |
| <i>Synedra ulna</i> | <i>Cosmarium turpinii</i> var. <i>podolicum</i> | <i>Oocystis lacustris</i> |
| <i>Tryblionella debilis</i> | <i>Crucigenia lauterbornii</i> | <i>Oocystis marssonii</i> |

| | | |
|--|--|--|
| <i>Pandorina charkowiensis</i> | <i>Staurastrum punctulatum</i> | <i>Cryptomonas reflexa</i> |
| <i>Pandorina morum</i> | <i>Staurastrum tetracerum</i> f. <i>tetragonum</i> | <i>Cryptomonas rostratiformis</i> |
| <i>Pandorina morum</i> var. <i>major</i> | <i>Stauroidesmus dejectus</i> | <i>Cryptomonas tenuis</i> |
| <i>Papenfussiomonas cordata</i> | <i>Stauroidesmus dejectus</i> var. <i>apiculatus</i> | <i>Katablepharis ovalis</i> |
| <i>Paradoxia multiseta</i> | <i>Stauroidesmus pachyrhynchus</i> | <i>Rhodomonas minuta</i> |
| <i>Paulschulzia pseudovolvox</i> | <i>Tetrachlorella alternans</i> | <i>Rhodomonas minuta</i> var. |
| <i>Pediastrum boryanum</i> | <i>Tetraedron caudatum</i> | Cyanoprokaryophyta |
| <i>Pediastrum boryanum</i> var. <i>longicorne</i> | <i>Tetraedron minimum</i> | <i>Anabaena circinalis</i> |
| <i>Pediastrum duplex</i> | <i>Tetraedron regulare</i> | <i>Anabaena cylindrica</i> |
| <i>Pediastrum duplex</i> var. <i>gracillimum</i> | <i>Tetraselmis cordiformis</i> | <i>Anabaena flos-aquae</i> |
| <i>Pediastrum simplex</i> | <i>Tetrastrum staurogeniaeforme</i> | <i>Anabaena lemmermannii</i> |
| <i>Pediastrum tetras</i> | <i>Treubaria planctonica</i> | <i>Anabaena planctonica</i> |
| <i>Planktosphaeria gelatinosa</i> | <i>Westella botryoides</i> | <i>Anabaena smithii</i> |
| <i>Polydriopsis spinulosa</i> | <i>Willea irregularis</i> | <i>Anabaena spiroides</i> |
| <i>Quadrigula closterioides</i> | Chrysophyta | <i>Anabaena spiroides</i> f. <i>crassa</i> |
| <i>Radiococcus planktonicus</i> | <i>Aulamonas purdyi</i> | <i>Anabaena subcylindrica</i> |
| <i>Scenedesmus acuminatus</i> | <i>Bicosoeca annulata</i> | <i>Anabaena torulosa</i> |
| <i>Scenedesmus acunae</i> | <i>Bicosoeca cylindrica</i> | <i>Aphanizomenon flos-aquae</i> |
| <i>Scenedesmus acutiformis</i> | <i>Chrysamoeba extensa</i> | <i>Aphanizomenon issatschenkoii</i> |
| <i>Scenedesmus acutus</i> | <i>Chrysamoeba planctonica</i> | <i>Aphanocapsa holsatica</i> |
| <i>Scenedesmus bicaudatus</i> | <i>Chrysochromulina parva</i> | <i>Aphanothece minutissima</i> |
| <i>Scenedesmus brasiliensis</i> | <i>Chrysolykos planktonicus</i> | <i>Calothrix pulvinata</i> |
| <i>Scenedesmus dimorphus</i> | <i>Chrysochaerella longispina</i> | <i>Gloeotrichia echinulata</i> |
| <i>Scenedesmus disciformis</i> | <i>Codonosigopsis kosmo</i> | <i>Limnothrix planktonica</i> |
| <i>Scenedesmus ecornis</i> | <i>Codosiga botrytis</i> | <i>Lyngbya birgei</i> |
| <i>Scenedesmus gutwinskii</i> | <i>Codosiga corymbosa</i> | <i>Merismopedia elegans</i> |
| <i>Scenedesmus gutwinskii</i> var. | <i>Codosiga furcata</i> | <i>Merismopedia tenuissima</i> |
| <i>Scenedesmus intermedius</i> | <i>Codosiga umbellata</i> | <i>Microcystis aeruginosa</i> |
| <i>Scenedesmus linearis</i> | <i>Desmarella moniliformis</i> | <i>Microcystis botrys</i> |
| <i>Scenedesmus magnus</i> | <i>Desmarella pyriformis</i> | <i>Microcystis flos-aquae</i> |
| <i>Scenedesmus obtusus</i> | <i>Dinobryon annulatum</i> | <i>Microcystis wesenbergii</i> |
| <i>Scenedesmus opoliensis</i> var. | <i>Dinobryon attenuatum</i> | <i>Oscillatoria limosa</i> |
| <i>Scenedesmus praetervisus</i> | <i>Dinobryon bavaricum</i> | <i>Planktolyngbya subtilis</i> |
| <i>Scenedesmus quadricauda</i> | <i>Dinobryon crenulatum</i> | <i>Snowella litoralis</i> |
| <i>Scenedesmus smithii</i> | <i>Dinobryon dilatatum</i> | <i>Trichodesmium lacustre</i> |
| <i>Scenedesmus spinosus</i> | <i>Dinobryon divergens</i> | <i>Woronichinia elorantae</i> |
| <i>Schroederia indica</i> | <i>Dinobryon monad</i> | <i>Woronichinia naegeliana</i> |
| <i>Schroederia robusta</i> | <i>Dinobryon petiolatum</i> | Euglenophyta |
| <i>Schroederia setigera</i> | <i>Dinobryon sertularia</i> | <i>Euglena acus</i> |
| <i>Sorastrum spinulosum</i> | <i>Dinobryon sociale</i> | <i>Euglena antefossa</i> |
| <i>Spermatozopsis exsultans</i> | <i>Dinobryon sociale</i> var. <i>americanum</i> | <i>Euglena hemichromata</i> |
| <i>Sphaerellopsis fluviatile</i> | <i>Mallomonas acaroides</i> | <i>Euglena proxima</i> |
| <i>Sphaerellopsis gloeosphaera</i> | <i>Mallomonas akrokomos</i> | Pyrrhophyta |
| <i>Sphaerocystis planctonica</i> | <i>Mallomonas pseudocoronata</i> | <i>Ceratium hirundinella</i> |
| <i>Sphaerocystis schroeteri</i> | <i>Mallomonas radiata</i> | <i>Gymnodinium coronatum</i> |
| <i>Spirogonium chlorogonioides</i> | <i>Mallomonas tonsurata</i> | <i>Peridinium bipes</i> |
| <i>Spondylosium luetkemuelleri</i> | <i>Spiniferomonas cornuta</i> | <i>Peridinium cunningtonii</i> |
| <i>Spondylosium planum</i> | <i>Uroglena americana</i> | <i>Peridinium penardiforme</i> |
| <i>Staurastrum alternans</i> | Cryptophyta | <i>Peridinium umbonatum</i> |
| <i>Staurastrum avicula</i> | <i>Cryptomonas brevis</i> | <i>Peridinium willei</i> |
| <i>Staurastrum bieneanum</i> | <i>Cryptomonas curvata</i> | Xanthophyta |
| <i>Staurastrum gracile</i> | <i>Cryptomonas erosa</i> | <i>Centritractus belenophorus</i> |
| <i>Staurastrum hexacerum</i> | <i>Cryptomonas marssonii</i> | <i>Isthmochloron lobulatum</i> |
| <i>Staurastrum longipes</i> var. <i>contractum</i> | <i>Cryptomonas ovata</i> | <i>Pseudostaurastrum limneticum</i> |
| <i>Staurastrum muticum</i> | <i>Cryptomonas phaseolus</i> | |
| <i>Staurastrum pseudosebaldi</i> | <i>Cryptomonas pusilla</i> | |

Appendix 5b List of aquatic plant species reported in the Rideau River in 1998 and 1999.

Source: Canadian Museum of Nature

| CATEGORY | SCIENTIFIC NAME | COMMON NAME | |
|----------------------------|---|-------------------------------------|-------------------------------|
| Submerged | <i>Megalodonta beckii</i> | Water marigold | |
| | <i>Ceratophyllum demersum</i> | Coontail | |
| | <i>Elodea canadensis</i> | Common waterweed | |
| | <i>Myriophyllum sibiricum</i> | Northern water milfoil | |
| | <i>Myriophyllum spicatum</i> | Eurasian water milfoil (introduced) | |
| | <i>Myriophyllum verticillatum</i> | Bracted water milfoil | |
| | <i>Najas flexilis</i> | Slender water nymph | |
| | <i>Potamogeton amplifolius</i> | Large-leaved pondweed | |
| | <i>Potamogeton crispus</i> | Curly pondweed (introduced) | |
| | <i>Potamogeton epihydrus</i> | Ribbon-leaved pondweed | |
| | <i>Potamogeton foliosus</i> | Leafy pondweed | |
| | <i>Potamogeton friesii</i> | Fries' pondweed | |
| | <i>Potamogeton illinoensis</i> | Illinois pondweed | |
| | <i>Potamogeton natans</i> | Floating-leaved pondweed | |
| | <i>Potamogeton nodosus</i> | Knotted pondweed | |
| | <i>Potamogeton pectinatus</i> | Sago pondweed | |
| | <i>Potamogeton praelongus</i> | Whitestem pondweed | |
| | <i>Potamogeton pusillus</i> | Slender pondweed | |
| | <i>Potamogeton richardsonii</i> | Richardson's pondweed | |
| | <i>Potamogeton robinsii</i> | Robbin's pondweed | |
| | <i>Potamogeton zosteriformis</i> | Flat-stemmed pondweed | |
| | <i>Ranunculus aquatilis</i> var <i>diffusus</i> | White water-crowfoot | |
| | <i>Utricularia vulgaris</i> | Common bladderwort | |
| | <i>Vallisneria americana</i> | Tape grass | |
| | <i>Zannichellia palustris</i> | Horned pondweed | |
| | <i>Zosterella dubia</i> | Water star-grass | |
| | Floating & floating-leaved | <i>Hydrocharis morsus-ranae</i> | European frogbit (introduced) |
| | | <i>Lemna minor</i> | Lesser duckweed |
| | | <i>Lemna trisulca</i> | Star duckweed |
| | | <i>Nuphar microphylla</i> | Small yellow pond lily |
| | | <i>Nuphar variegata</i> | Yellow pond lily |
| <i>Nymphaea odorata</i> | | Fragrant white water lily | |
| <i>Spirodela polyrhiza</i> | | Greater duckweed | |
| <i>Wolffia columbiana</i> | | Columbia watermeal | |
| <i>Wolffia borealis</i> | | Dotted watermeal | |
| Emergent | | <i>Alisma triviale</i> | Northern water plantain |
| | <i>Alisma gramineum</i> | Grass-leaved water plantain | |
| | <i>Butomus umbellatus</i> | Flowering rush (introduced) | |
| | <i>Pontederia cordata</i> | Pickerelweed | |
| | <i>Polygonum amphibium</i> | Water smartweed | |
| | <i>Sagittaria latifolia</i> | Broad-leaved arrowhead | |
| | <i>Sagittaria cuneata</i> | Floating arrowhead | |
| | <i>Sagittaria rigida</i> | Stiff arrowhead | |
| | <i>Scirpus americanus</i> | Threesquare | |
| | <i>Scirpus fluviatilis</i> | River bulrush | |
| | <i>Scirpus validus</i> | Softstem bulrush | |
| | <i>Sparganium emersum</i> | Green-fruited bur-reed | |
| | <i>Sparganium eurycarpum</i> | Large-fruited bur-reed | |
| <i>Zizania palustris</i> | Wild rice | | |
| Pteridophytes | <i>Equisetum fluviatile</i> | Water horsetail (introduced) | |
| | <i>Azolla caroliniana</i> | Eastern mosquito-fern (introduced) | |
| Bryophytes | <i>Drepanocladus exannulatus</i> | Curved branch moss | |
| | <i>Fontinalis hypnoides</i> | Water moss | |
| Charophytes | <i>Chara vulgaris</i> | Stonewort or muskgrass | |
| | <i>Chara globularis</i> | Stonewort or muskgrass | |
| | <i>Chara braunii</i> | Stonewort or muskgrass | |
| | <i>Nitella acuminata</i> | Stonewort | |
| | <i>Nitella flexilis</i> | Stonewort | |
| | <i>Nitella furcata</i> | Stonewort | |

Appendix 5c List of fish species reported in the Rideau River and Canal, from literature records since 1883. * species captured in the Rideau River during 1998-1999 season; ** found in tributaries of the Rideau R. Sources: Phelps, Renaud & Chapleau, 2000; Canadian Museum of Nature

| FAMILY | SCIENTIFIC NAME | COMMON NAME |
|-----------------|----------------------------------|-------------------------------|
| Petromyzontidae | <i>Ichthyomyzon unicuspis</i> | Silver lamprey |
| Lepisosteidae | <i>Lepisosteus osseus</i> | Longnose gar |
| Anguillidae | <i>Anguilla rostrata</i> | American eel |
| Clupeidae | <i>Alosa pseudoharengus</i> | Alewife |
| Salmonidae | <i>Oncorhynchus mykiss</i> | Rainbow trout (introduced) |
| | <i>Salmo trutta</i> | Brown trout (introduced) |
| Esocidae | <i>Esox lucius</i> * | Northern pike |
| | <i>Esox masquinongy</i> * | Muskellunge |
| Umbridae | <i>Unbra limi</i> * | Central mudminnow |
| Cyprinidae | <i>Cyprinus carpio</i> * | Common carp (introduced) |
| | <i>Hybognathus hankinsoni</i> ** | Brassy minnow |
| | <i>Hybognathus regius</i> | Eastern silvery minnow |
| | <i>Luxilus cornatus</i> * | Common shiner |
| | <i>Margariscus margarita</i> | Pearl dace |
| | <i>Notemigonus crysoleucas</i> * | Golden shiner |
| | <i>Notropis atherinoides</i> * | Emerald shiner |
| | <i>Notropis heterodon</i> * | Blackchin shiner |
| | <i>Notropis heterolepis</i> * | Blacknose shiner |
| | <i>Notropis hudsonius</i> * | Spottail shiner |
| | <i>Notropis rubellus</i> ** | Rosyface shiner |
| | <i>Notropis volucellus</i> ** | Mimic shiner |
| | <i>Phoxinus eos</i> | Northern redbelly dace |
| | <i>Phoxinus neogaeus</i> | Finescale dace |
| | <i>Pimephales notatus</i> * | Bluntnose minnow |
| | <i>Pimephales promelas</i> | Fathead minnow |
| | <i>Rhinichthys cataractae</i> | Longnose dace |
| | <i>Semotilus atromaculatus</i> | Creek chub |
| | <i>Semotilus corporalis</i> * | Fallfish |
| Catostomidae | <i>Catostomus commersoni</i> * | White sucker |
| | <i>Moxostoma anisurum</i> * | Silver redbhorse |
| | <i>Moxostoma macrolepidotum</i> | Shorthead redbhorse |
| | <i>Moxostoma valenciennesi</i> * | Greater redbhorse |
| Ictaluridae | <i>Ameiurus natalis</i> | Yellow bullhead |
| | <i>Ameiurus nebulosus</i> * | Brown bullhead |
| | <i>Ictalurus punctatus</i> | Channel catfish |
| | <i>Noturus flavus</i> | Stonecat |
| | <i>Noturus gyrinus</i> * | Tadpole madtom |
| Gadidae | <i>Lota lota</i> | Burbot |
| Percopsidae | <i>Percopsis omiscomaycus</i> | Trout-perch |
| Cyprinodontidae | <i>Fundulus diaphanus</i> * | Banded killifish |
| Atherinidae | <i>Labidesthes sicculus</i> * | Brook silverside |
| Gasterosteidae | <i>Culaea inconstans</i> | Brook stickleback |
| Centrarchidae | <i>Ambloplites rupestris</i> * | Rock bass |
| | <i>Lepomis gibbosus</i> * | Pumpkinseed |
| | <i>Lepomis macrochirus</i> * | Bluegill |
| | <i>Micropterus dolomieu</i> * | Smallmouth bass |
| | <i>Micropterus salmoides</i> * | Largemouth bass |
| | <i>Pomoxis nigromaculatus</i> * | Black crappie |
| Percidae | <i>Etheostoma exile</i> | Iowa darter |
| | <i>Etheostoma nigrum</i> | Johnny darter |
| | <i>Etheostoma olmstedii</i> * | Tesselated darter |
| | <i>Perca flavescens</i> * | Yellow perch |
| | <i>Percina caprodes</i> * | Logperch |
| | <i>Stizostedion canadense</i> | Sauger |
| | <i>Stizostedion vitreum</i> * | Walleye |
| Sciaenidae | <i>Aplodinotus grunniens</i> * | Freshwater drum (introduced?) |
| Cottidae | <i>Cottus bairdi</i> * | Mottled sculpin |
| Cichlidae | <i>Astronotus ocellatus</i> * | Oscar (introduced) |

Appendix 5d List of bird species reported in the Rideau River by Canadian Wildlife Service researchers for the Rideau River Biodiversity Project (1998-1999). Source: Canadian Museum of Nature

| CATEGORY | SCIENTIFIC NAME | COMMON NAME |
|-------------------|---------------------------------|----------------------------|
| Waterfowl | <i>Aix sponsa</i> | Wood duck |
| | <i>Anas acuta</i> | Northern pintail |
| | <i>Anas americana</i> | American wideon |
| | <i>Anas clypeata</i> | Northern shoveler |
| | <i>Anas crecca carolinensis</i> | American green-winged teal |
| | <i>Anas discors</i> | Blue-winged teal |
| | <i>Anas platyrhynchos</i> | Mallard |
| | <i>Anas rubripes</i> | American black duck |
| | <i>Anser caerulescens</i> | Snow goose |
| | <i>Aythya affinis</i> | Lesser scaup |
| | <i>Aythya americana</i> | Redhead |
| | <i>Aythya collaris</i> | Ring-necked duck |
| | <i>Aythya marila</i> | Greater scaup |
| | <i>Aythya valisineria</i> | Canvasback |
| | <i>Branta canadensis</i> | Canada goose |
| | <i>Bucephala albeola</i> | Bufflehead |
| | <i>Bucephala clangula</i> | Common goldeneye |
| | <i>Cygnus olor</i> | Mute swan |
| | <i>Lophodytes cucullatus</i> | Hooded merganser |
| | <i>Mergus merganser</i> | Common merganser |
| Other water birds | <i>Ardea herodias</i> | Great blue heron |
| | <i>Gavia immer</i> | Common loon |
| | <i>Phalacrocorax auritus</i> | Double-crested cormorant |

Appendix 5e List of amphibian and reptile species reported along the Rideau River. * denotes species identified during the Rideau River Biodiversity Project (1998-1999). Source: Canadian Museum of Nature

| CATEGORY | SCIENTIFIC NAME | COMMON NAME |
|-----------------------|-------------------------------------|---------------------------|
| Salamanders (Caudata) | <i>Ambystoma laterale</i> | Blue-spotted salamander* |
| | <i>Ambystoma maculatum</i> | Yellow-spotted salamander |
| | <i>Eurycea bislineata</i> | Two-lined salamander * |
| | <i>Necturus maculosus</i> | Mudpuppy * |
| | <i>Notophtalmus viridescens</i> | Red-spotted newt |
| | <i>Plethodon cinereus</i> | |
| Frogs (Anura) | <i>Bufo americanus</i> | American toad * |
| | <i>Hyla versicolor</i> | Grey treefrog * |
| | <i>Pseudacris crucifer</i> | Spring peeper * |
| | <i>Pseudacris triseriata</i> | Chorus frog* |
| | <i>Rana catesbeiana</i> | Bullfrog * |
| | <i>Rana clamitans</i> | Green frog * |
| | <i>Rana palustris</i> | Pickerel frog |
| | <i>Rana pipiens</i> | Leopard frog * |
| | <i>Rana septentrionalis</i> | Mink frog* |
| <i>Rana sylvatica</i> | Wood frog* | |
| Turtles (Testudinata) | <i>Chelydra serpentina</i> | Snapping turtle * |
| | <i>Chrysemys picta marginata</i> | Midland painted turtle * |
| | <i>Emydoidea blandingii</i> | Blanding's turtle* |
| | <i>Graptemys geographica</i> | Map turtle |
| | <i>Sternotherus odoratus</i> | Musk turtle* |
| | <i>Trachemys scripta elegans</i> | Red-eared slider* |
| Snakes (Serpentes) | <i>Diadophis punctatus</i> | Ringneck snake |
| | <i>Elaphe obsoleta</i> | Black rat snake |
| | <i>Nerodia sipedon sipedon</i> | Northern water snake* |
| | <i>Opeodryas vernalis</i> | Smooth green snake |
| | <i>Storeria occipitomaculata</i> | Redbelly snake* |
| | <i>Thamnophis sirtalis sirtalis</i> | Common garter snake * |

Appendix 5f List of clam species reported in the Rideau River. Source: Canadian Museum of Nature

| CATEGORY | SCIENTIFIC NAME | COMMON NAME |
|----------|------------------------------|---------------------------|
| Clams | <i>Alasmidonta marginata</i> | Ridged wedge-mussel |
| | <i>Dreissena polymorpha</i> | Zebra mussel (introduced) |
| | <i>Elliptio complanata</i> | Eastern elliptio |
| | <i>Lampsilis ovata</i> | Pocket-book |
| | <i>Lampsilis radiata</i> | Eastern lamp-mussel |
| | <i>Lasmigona costata</i> | Fluted shell |
| | <i>Ligumia recta</i> | Black sand-shell |
| | <i>Pyganodon</i> species | Floater |
| | <i>Strophitus undulatus</i> | Squaw foot |

Appendix 5g List of aquatic invertebrates reported in the Rideau River. Source: Canadian Museum of Nature.

| | |
|--|--|
| Protozoa- Rhizopoda | Clams |
| Hydrozoa- Hydra | Bivalva- Pea clam- Pisidium |
| Flatworms | Bivalva- Fingernail clam- Sphaerium |
| Turbellaria- sp. 1 | Insects |
| Turbellaria- sp. 2 | Ephemeroptera- Callibaetis sp. |
| Turbellaria- sp. 3 | Ephemeroptera- Caenis sp. |
| Leeches | Ephemeroptera- Tricorythodes |
| Hirudinea- Helobdella fusca | Ephemeroptera- Leptohyphes sp. |
| Hirudinea - Helobdella triserialis | Ephemeroptera- Baetis sp. |
| Hirudinea - Helobdella stagnalis | Ephemeroptera- Stenacron sp. |
| Worms | Ephemeroptera- Centroptilum sp. |
| Oligochaeta- Naididae | Ephemeroptera- Cloeon sp. |
| Oligochaeta- Stylaria lacustris | Odonata- Basiaeschna janata |
| Oligochaeta- Stylaria sp. 2 | Odonata- Neurocordulia sp. |
| Oligochaeta- Pristina | Odonata- Enallagma |
| Oligochaeta | Odonata- Ephemera sp. |
| Tubificidae | Odonata- Argia sp. |
| Mites | Odonata- Chromagrion sp. |
| Hydracarina- Limnochares sp. | Odonata- Ischnura |
| Hydracarina- Arrenurus spp. | Odonata- Amphigrion sp. |
| Hydracarina- Limnesia | Hemiptera- Gerridae- Trepobates sp. |
| Hydracarina- Atractides sp. | Hemiptera- Gerridae- Gerris sp. |
| Hydracarina- Forelia sp. | Hemiptera- Hebridae- Merragata sp. |
| Hydracarina- Hydrodroma despiciens | Mesoveliidae- Water Treaders sp. 1 |
| Hydracarina- Atractides sp. | Mesoveliidae- Water Treaders sp. 2 |
| Hydracarina- Oxus sp | Pleidae- Plea striola |
| Hydracarina- Arrenurus sp | Veliidae- Microvelia borealis |
| Hydracarina- Koenikea sp. | Lepidoptera- Pyralidae- Synclita sp. |
| Hydracarina- Lebertia | Lepidoptera- Pyralidae |
| Hydracarina- Krendowskia similis | Lepidoptera- Parapoynx sp. 1 |
| Hydracarina- Neumania | Lepidoptera- Parapoynx sp. 2 |
| Hydracarina- Forelia | Trichoptera- Leptocerus americanus |
| Hydracarina- Sperchon sp. | Trichoptera- Phryganea sp. |
| Hydracarina- Unionicola | Trichoptera- Triaenodes sp. |
| Hydracarina- Frontipoda americana | Trichoptera- Hydroptila sp. |
| Hydracarina- Piona | Trichoptera- Oxyethira sp. |
| Oribatei (soil mites)- Hydrozetes sp. | Trichoptera- Agraylea sp. |
| Crustaceans | Trichoptera- Oecetis sp. |
| Podocopidae- sp. 1- brown mottling | Trichoptera- Orthotrichia sp. |
| Podocopidae- sp. 2- small, white | Trichoptera- Nectopsyche sp. |
| Podocopidae- sp. 3- large | Trichoptera- Helicopsyche borealis |
| Cladocera- Euryercus lamellatus | Trichoptera- Cheumatopsyche sp. |
| Cladocera- Sida crystallina | Trichoptera- Hydropsyche sp. |
| Cladocera- Latona setifera | Trichoptera- Polycentropus sp. |
| Cladocera- Simocephalus vetulus | Diptera- Anthomyiidae- Limnophora sp. |
| Cladocera- Simocephalus serrulatus | Diptera- Culicinae- pupa |
| Cladocera- Scapholeberis mucronata | Diptera- Culicinae- Anopheles sp. |
| Cladocera- Chydorus | Diptera- Empididae- larvae |
| Cladocera- Kurzia latissima | Diptera- Heleidae- Probezzia/Bezzia |
| Cladocera- Polyphemus pediculus | Diptera- Tanypodinae- Pentaneura sp. |
| Cyclopoidae | Diptera- Tanypodinae |
| Amphipoda- Hyalella azteca | Diptera- Sciomyzidae- Dictya sp. |
| Amphipoda- Gammarus sp. | Diptera- Sciomyzidae- Sepedon sp. |
| Amphipoda- Crangonyx sp. | Diptera- Chironominae-pupa |
| Cambarinae- Orconectes virilis | Diptera- Chironomidae |
| Isoptera- Caecidotea sp. | Coleoptera- Chrysomelidae- Donacia/Neohaemonia |
| Snails | Coleoptera- Dytiscidae- Copelatus sp. |
| Gastropoda-limpet Ferrissia sp. | Coleoptera- Dytiscidae |
| Gastropoda- Planorbidae | Coleoptera- Elmidae-Dubiraphia sp. |
| Gastropoda- Valvata tricarinata | Coleoptera- Elmidae- Stenelmis sp. |
| Gastropoda- Helisoma sp. | Coleoptera- Elmidae- larvae 2+ sp. |
| Gastropoda- Helisoma anceps | Coleoptera- Haliplidae- Peltodytes sp. |
| Gastropoda- Helisoma campanulatum | Coleoptera- Gyrinidae-larvae 1+sp |
| Gastropoda- Helisoma pilsbryi infracarinatedum | Coleoptera- Hydrophilidae- Berosus sp. |
| Gastropoda- Physa | Coleoptera- Hydrophilidae- Enochrus sp. |
| Gastropoda- Amnicola limosa | Coleoptera- Hydrophilidae- Tropisternus sp. |
| Gastropoda- Pseudosuccinea columella | Coleoptera- Psephenidae (Water Pennies) |
| Gastropoda- Viviparus georgianus | |
| Gastropoda- Bithynia tentaculata | |

Appendix 6 COSEWIC terms and risk categories

| | |
|-----------------|--|
| SPECIES | Any indigenous species, subspecies, variety or geographically defined population of wild fauna and flora. |
| EXTINCT | A species that no longer exists. |
| EXTIRPATED | A species that no longer exists in the wild in Canada, but occurring elsewhere. |
| ENDANGERED | A species facing imminent extirpation or extinction. |
| THREATENED | A species that is likely to become endangered if limiting factors are not reversed. |
| SPECIAL CONCERN | A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events. |
| NOT AT RISK | A species that has been evaluated and found to be not at risk. |
| DATA DEFICIENT | A species for which there is insufficient scientific information to support status designation. |

Appendix 7 MNR status categories

| | |
|------------------------------------|---|
| EXTINCT (EXT) | Any species formerly native to Ontario that no longer exists. |
| EXTIRPATED (EXP) | Any native species no longer existing in the wild in Ontario, but existing elsewhere in the wild. |
| ENDANGERED (END) | Any native species that, on the basis of the best available scientific evidence, is at risk of extinction or extirpation throughout all or a significant portion of its Ontario range if the limiting factors are not reversed. Endangered species are protected under the province's Endangered Species Act. |
| THREATENED (THR) | Any native species that, on the basis of the best available scientific evidence, is at risk of becoming endangered throughout all or a significant portion of its Ontario range if the limiting factors are not reversed. |
| VULNERABLE (VUL) | Any native species that, on the basis of the best available scientific evidence, is a species of special concern in Ontario, but is not a threatened or endangered species. |
| INDETERMINATE (IND) | Any native species for which there is insufficient scientific information on which to base a status recommendation. |
| NOT IN ANY COSSARO CATEGORY (NIAC) | Any native species evaluated by COSSARO which does not currently meet criteria for assignment to a provincial risk category. |