ECOLOGICAL SENSITIVITY MAPPING

FOR THE

LOWER GREAT LAKES WATERSHED

SUBMITTED TO

ENVIRONMENTAL EMERGENCY BRANCH

ENVIRONMENT CANADA

APRIL, 1975

THURLOW & ASSOCIATES
ENVIRONMENTAL CONTROL CONSULTANTS LTD.

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April

1975

File: 9078

Mr. Nick Vanderkooy
Coordinator
Environmental Emergency Branch
Environmental Protection Service
Environment Canada
135 St. Clair Ave. W., 2nd Floor
TORONTO, Ontario M4V 1P5

Dear Mr. Vanderkooy:

In accordance with the terms of reference, we have completed an Ecological Sensitivity Mapping of the Lower Great Lakes Watershed. The mapping and accompanying text provide information on natural resources and water users which are vulnerable to spills of hazardous materials, and industrial activities which pose as possible spill threats. The mapping system uses 1:50,000 base maps for information storage, comparison and retrieval, and for access to and comparison of further information by means of superimposed cartographic conventions and references.

As a planning tool it assists in determining the type, distribution and quantity of equipment needed in the event of a hazardous spill - thereby raising the level of preparedness for spills of oil and other hazardous materials in a significant way.

The recommendations focus on improvements to future work of a similar nature and all of the recommendations could be implemented within the framework of the existing mapping system. If you wish, these may be discussed in more detail at your convenience.

.../2

P.O. BOX 2728, STATION "D", OTTAWA, ONTARIO (613) 232-4885

We wish to thank you for your cooperation and assistance throughout the course of this project.

Yours sincerely,

Thurlow & Associates
ENVIRONMENTAL CONTROL CONSULTANTS LTD.

Per:

Wm. J. Thurlow
President

WJT/him

ACKNOWLEDGEMENTS

The success of a project of this nature is directly dependent upon the quantity and quality of the information making it up, and could not be accomplished without the cooperation and assistance of many individuals. These individuals from various Federal-Provincial Government Departments and concerned agencies are listed in the information sources section. We would like to express our sincere appreciation to these people for the information and maps, much of it previously unpublished, which was invaluable in the completion of this project.

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INTRODUCTION

Spills of oil, chemicals and other hazardous materials are posing an ever increasing threat to the environment. In order to deal effectively with these spills the degree of threat prepardness must be greatly increased.

The purpose of Environmental Emergency Sensitivity Mapping is to provide a further tool in preventing and/or handling such environmental emergencies. This project is best described by what H.C.R. Gavin wrote in October 1974, Proposed Guidelines for Environmental Emergency Sensitivity Mapping ..."it is an exercise in information collection which uses an existing map base for information storage, comparison and retrieval and for access to and comparison of further information by means of superimposed cartographic conventions and references."

TERMS OF REFERENCE

1) Develop a sensitivity rating scheme with respect to seasonal variation; high use capability of land and water for fish and wildlife or aquatic recreation: high use or capital intensive places such as parks and hydro-electric installations; vulnerable places such as breeding and migration routes and water intakes.

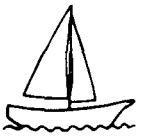
2) Determine, evaluate and plot these areas on 1:50,000 maps.

MAPPING SYSTEM

The mapping system consists of two mylar overlays on 1:50,000 scale National Topographic Series base maps for the Lower Great Lakes Watershed. Each map has two overlays which may be viewed separately or superimposed. Overlay

CONSERVATION AREAS & OTHER

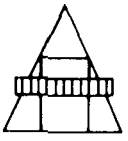
PARK



BOATING

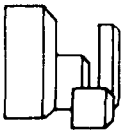
PRIVATE INTAKES

SWIMMING



COTTAGES

FISH

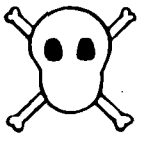


MUNICIPAL INTAKE

COMMERCIAL FISHING

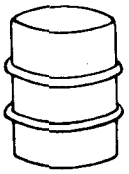
INDUSTRIAL INTAKE

WATERFOWL



TOXIC CHEMICALS

WATERBASED MAMMALS



OIL

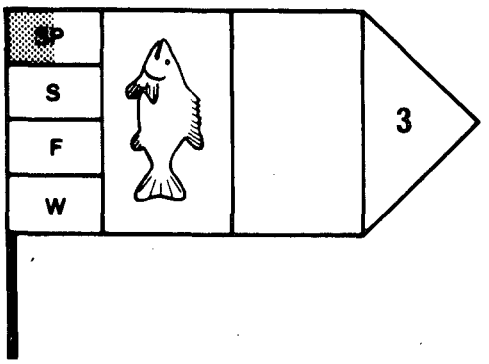
UNIQUE VEGETATION

one contains sensitive area information - waterbased resources which would be sensitive to a spill of hazardous material. Overlay two contains the following hazardous spill information; water intakes (industrial, municipal and private), industrial activities which are potential sources of hazardous spills, transportation routes of hazardous material (roads, railways, pipelines and navigation routes), and storage facilities for hazardous materials.

Identification of the sites and areas for both overlays and each map are independent of one another to uncomplicate any revisions or additions to the system. The order of identifying items for each map and the order of the maps themselves follow the involved watercourses from the source to the mouth. This convention has been adopted because water is a mobile medium (direction of flow from the source to the mouth); therefore, this is the direction that a hazardous spill would take and the respective areas that could be effected. Numbers are used for overlay one and letters are used for overlay two to avoid confusion.

Symbolic representation of the information (opposite page conforms to existing standards and others have been developed where required. The flags utilized to denote sensitive sites and areas on overlay one indicate the location with the base of the pole. Seasonal sensitivity is represented by the shaded area of the first column (seasons are abbreviated Sp, S, F, W) with the left half of the column for square 1 and the right half for square 2. For example, a fish symbol in square 1 with the left half of the first column shaded for Sp would mean that for this location fish would be sensitive to a spill in the spring.

Example: FLAG



The seasonal coding is only for the most sensitive (critical) period. Needless to say the fish resource may be sensitive to a hazardous spill for longer than merely the spring; however, indicating only the critical period minimizes arbitrary over-extrapolation of seasonal sensitivity thereby avoiding devaluation of its significance. Overlay two presents the information with the appropriate symbol where the particular activity occurs.

TEXT

The identification of the sensitive area information and the industrial information (intakes, industrial activities and storage areas) serves as a cross reference to the text. Each map has an accompanying text description for both the overlays and the format is as outlined below.

Map No. and name

Sensitive Areas
District
Region
Ontario Ministry of Natural Resources

Site No. - number on the flag
Sensitive Area- type of sensitive area
Location - geographic location with a latitude - longitude reference
Description - note description of the sensitive area resource

Map No. and name

Water Users and Industrial Activities
District
Region
Ontario Ministry of the Environment

Site No. - identification of the intake with a letter
Type - intakes are classified as follows:
M - municipal
I - industrial
P - private
User - name of the user
Lacation - geographic location with a latitude - longitude reference
Contact - contact for the water user
Telephone No - telephone number for the contact

Industrial Activities

Site No. - identification with a letter
Company - identification
Location - geographic location with a latitude - longitude reference
Operation - description
Volume Size - ranges for volumes of the hazardous material are indicated as follows:

A) 0 - 1,000 gallons
B) 1,000 - 10,000 gallons
C) 10,000 - 100,000 gallons
D) 100,000 - 1,000,000 gallons
E) more than 1,000,000 gallons

Product - description

Hazardous Materials - description

Remarks - an evaluation (statement) which reflects a hazard risk value based on the above i.e.) is a particular activity considered to be a a potentially serious source for a hazardous spill.

In addition there are two appendicies which cover the currents and prevailing winds for the lower Great Lakes, and provide a listing of hazardous materials in descending order of potential danger to the aquatic environment.

INFORMATION SOURCES

Many information sources were consulted in the course of this project but the majority was obtained through written materials from and/or interviews with the Ontario Ministry of Natural Resources, Ontario Ministry of the Environment, and the Federal Department of the Environment. A general synthesis of the data retrieval is presented below.

Ontario Ministry of Natural Resources

From readily available information the individual district offices provided maps with the location of sensitive areas

(unique ecological areas, recreation areas, commercial and sport fishing areas, waterfowl areas and waterbased mammals), brief written descritions covering the nature and utilization, and subjective evaluations of the importance and significance. Environmental ratings are discussed in the conclusions and recommendations.

The Parks Planning Branch provided information and maps for the parks, park reserves, and International Biological Programme sites.

Ontario Ministry of the Environment

From readily available information the individual district offices provided maps with the location of water users, industrial activities, and the specific data shown in the text (see Text).

Maps

For the main part 1:250,000 scale maps were used for the information retrieval process because the amount and nature of the information could be accomodated on this scale without significant loss of data or location detail. Moreover, it provided a mutually beneficial, concise, and easily retrievable overview for all the involved participants.

Federal Department of the Environment

Canada Wildlife Service personnel provided information on waterfowl populations, distributions, and movements.

Written Material

The publications and reports utilized in this project are listed in the reference section.

CONCLUSIONS

1. The Environmental Sensitivity Mapping raises the level of prepardness for spills of oil and other hazardous materials. As a planning tool it assists in determining the type, distribution and quantity of cleanup equipment needed by:

a) Permitting prompt action to stop a mobile spill where most needed with the environmentally sensitive areas and water intakes known.

b) Facilitating an assessment of the urgency of the situation relative to the nature of the spill.

c) Suggesting the containment techniques that should be used and whether or not the use of dispersants should be considered knowing the nature of the hazardous materials involved.

2. The Environmental Sensitivity Mapping contained in the accompanying Atlas is easily understood, and may be used at any mapping scale. The mapping technique may be cross referenced to additional sources of information and applied to any region in Canada.

3. The information retrieval mechanism and information sources utilized serve as a useful guide to further work of a similar nature.

4. The quantity and quality of the available information directly determines the value of the environmental sensitivity mapping. We feel that the existing readily available information provides to us - cognizant of the limitations with base-line resource information and analysis at this time - affords a functional working document which can be updated and revised as additional information becomes available.

5. By mutual agreement between the scientific authority and the consultant, it was decided that the terms of reference and available time for this project were inadequate to develop an acceptable environmental rating scheme which would be uniformly applicable for projects of this nature.

An introduction to the Recommendations

Based on our experience with this mapping project, which might be considered a pilot study, and on the preceeding conclusions, these recommendations are given to improve future work of a similar nature. All of the recommendations could be implemented within the framework of the existing mapping system.

RECOMMENDATIONS

1. Due to their value and vulnerability to spills of hazardous material, there are additional resource data bases that should be included in the environmental sensitivity mapping. These include archeological and geological features of special interest that have water contact and might be affected adversely by oil or toxic chemicals.

2. Where the information is available, the local hydraulic regime - stream flow and water quality characteristics - should be included within the resource description.

3. Proximity to potential spill sites (within the written text) and parameters such as the location of dams (on the maps), which help determine potential spill recovery sites, should be included to assist developing contingency planning measures.

4. Depending on the range of users for this mapping effort, it would be beneficial to include the spill report procedure within the text.

5. It is important to note the topography and general land-use patterns of an area to appreciate the terrestrial sensitivity in very general terms. Although this is beyond the scope of the current environmental sensitivity mapping programme, it is the consultant's opinion that such information can be included in an appendix and would provide a useful function as a comparative parallel to aquatic related sensitivity.

6. There are several areas which warrant immediate consideration and the development of criteria and/or parameters to implement them. These include:

a) A rating scheme to demonstrate the importance and significance of ecological, geomorphological, and social sensitive areas.

b) An environmental risk value to reflect the environmental dangers associated with spills of hazardous material. This risk value would be based on the major determining factors which include; the critical time duration during which damage would occur, the local hydraulic regime, risk of a spill, proximity to a potential spill and a measure of toxicity and persistence.

c) A refinement of the present mapping system which would provide more detailed delineation of the various mapping parameters for those geographical areas that have a concentration of detail, without decreasing the clarity of the visual impact.

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Ontario. Water Resources Commission. 1971. Interim province of Ontario contingency plan, for spills of oil and other hazardous materials.

The Haldimand-Norfolk Joint Study Committee. 1974. A lakeshore study of Haldimand and Norfolk counties. 51p.

APPENDIX A

SURFACE WATER MOVEMENTS

Source: International Lake Erie Water Pollution Board, and the International Lake Ontario - St. Lawrence River Water Pollution Board. 1969. Pollution of Lake Erie, Lake Ontario and the international section of the St. Lawrence River. Report to the International Joint Commission. Volumes I, II and III.

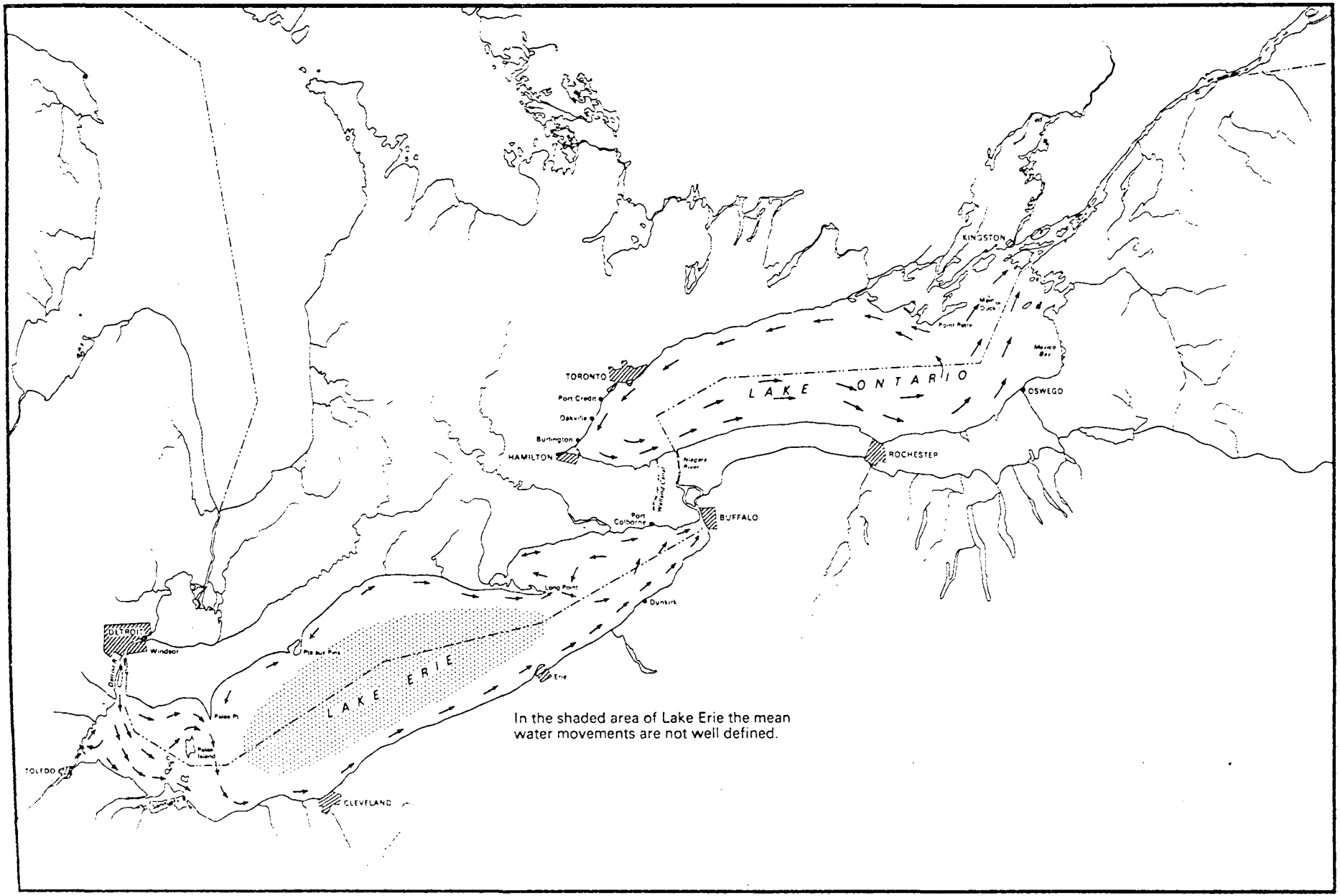


Fig. 4. 6. 1 Mean water movement in Lake Erie and Lake Ontario.

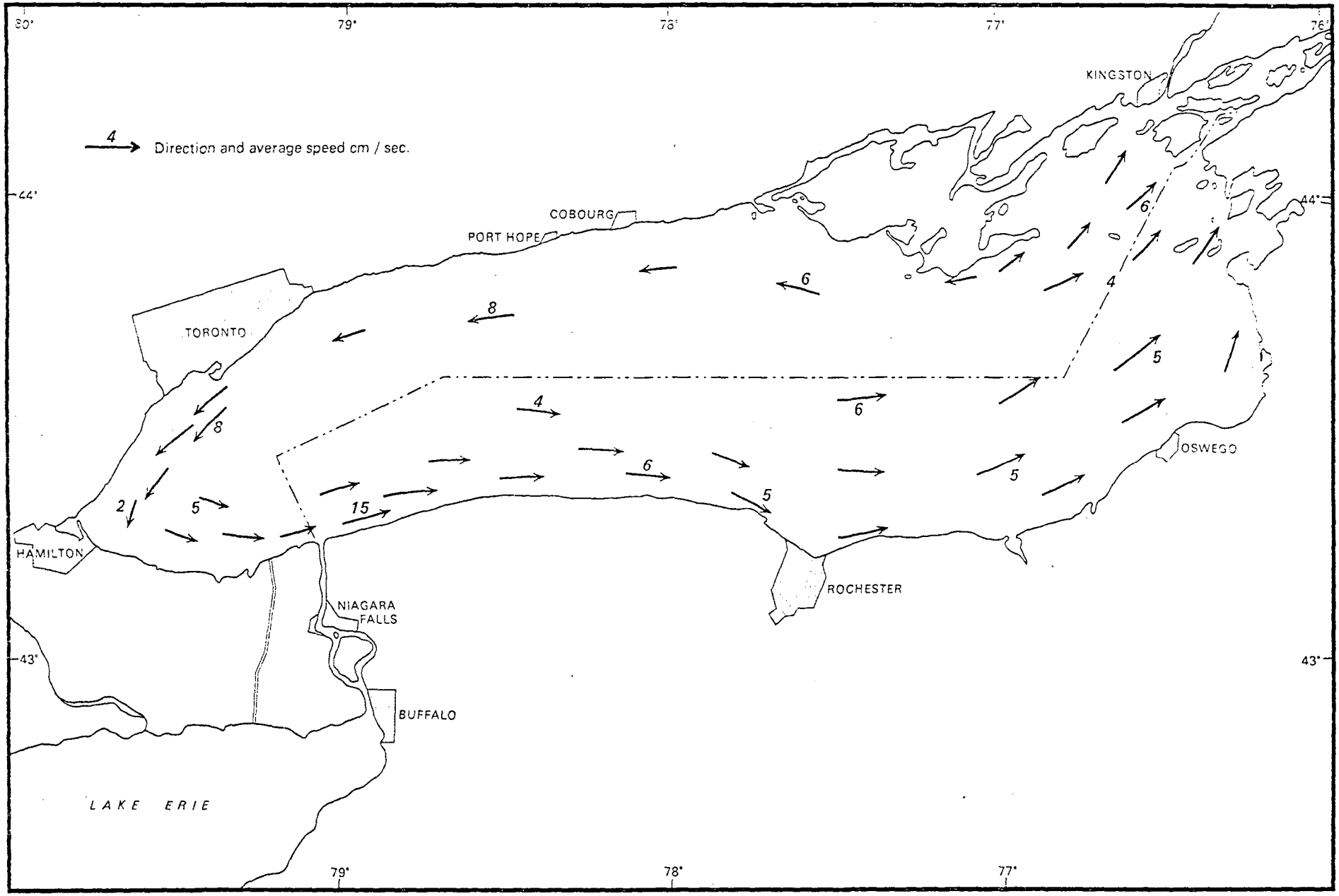


Fig. 2.1.10 Summer surface circulation as inferred from drogue and drift card observations, 1963 - 1967.

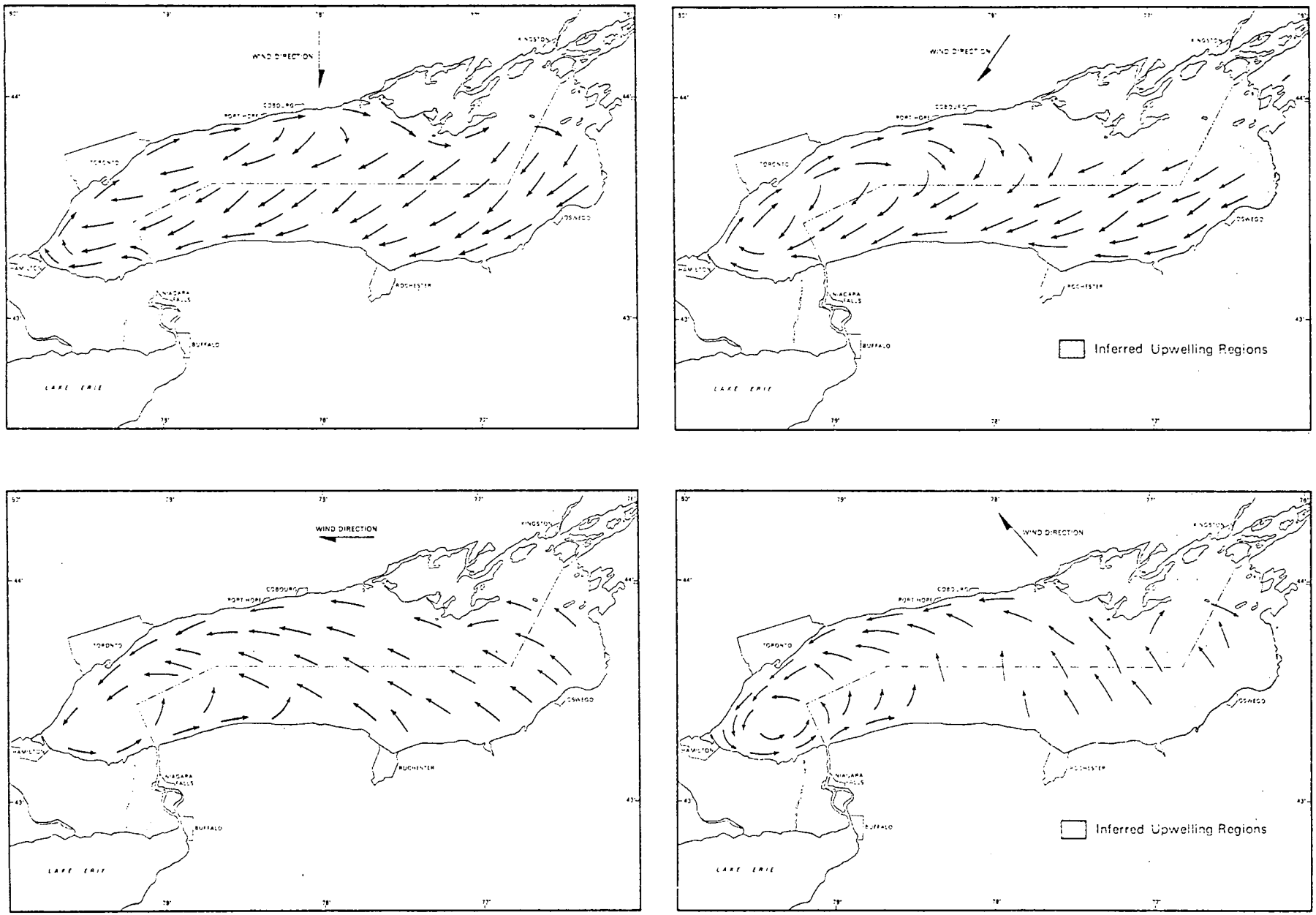


Fig. 2.1.12 Surface circulation patterns under different wind conditions, 1967.

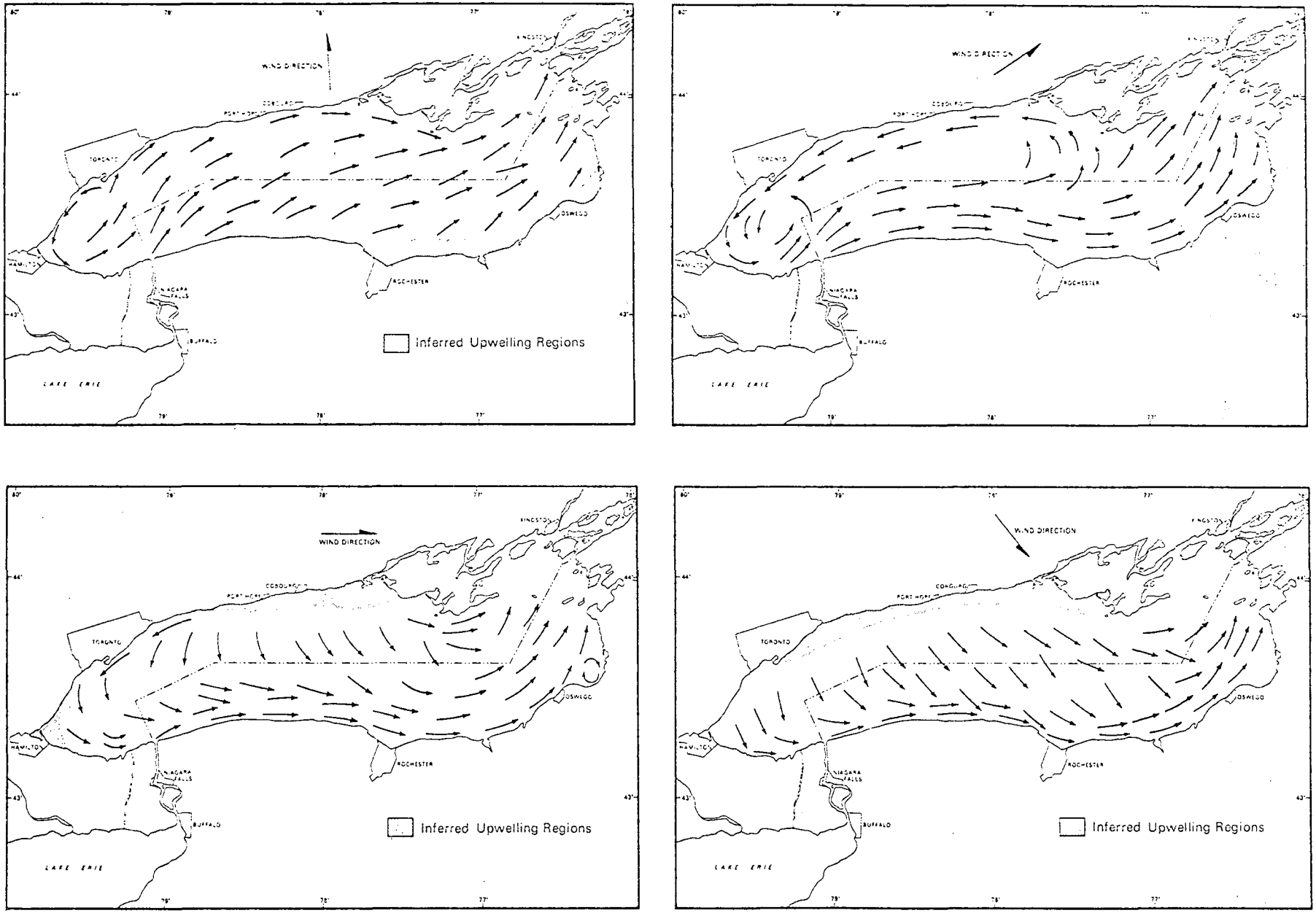


Fig. 2.1.13 Surface circulation patterns under different wind conditions, 1967.

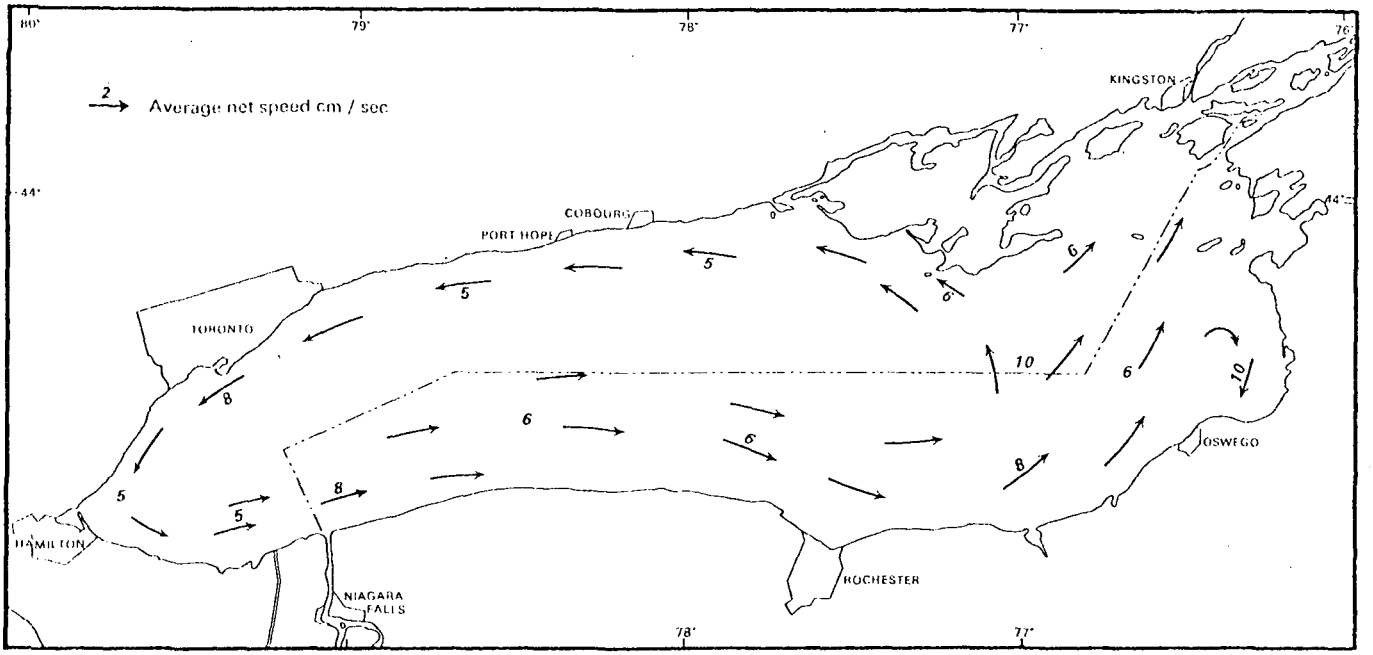


Fig. 2.1.14 Mean circulation during period of summer stratification between 10 and 120 metres.

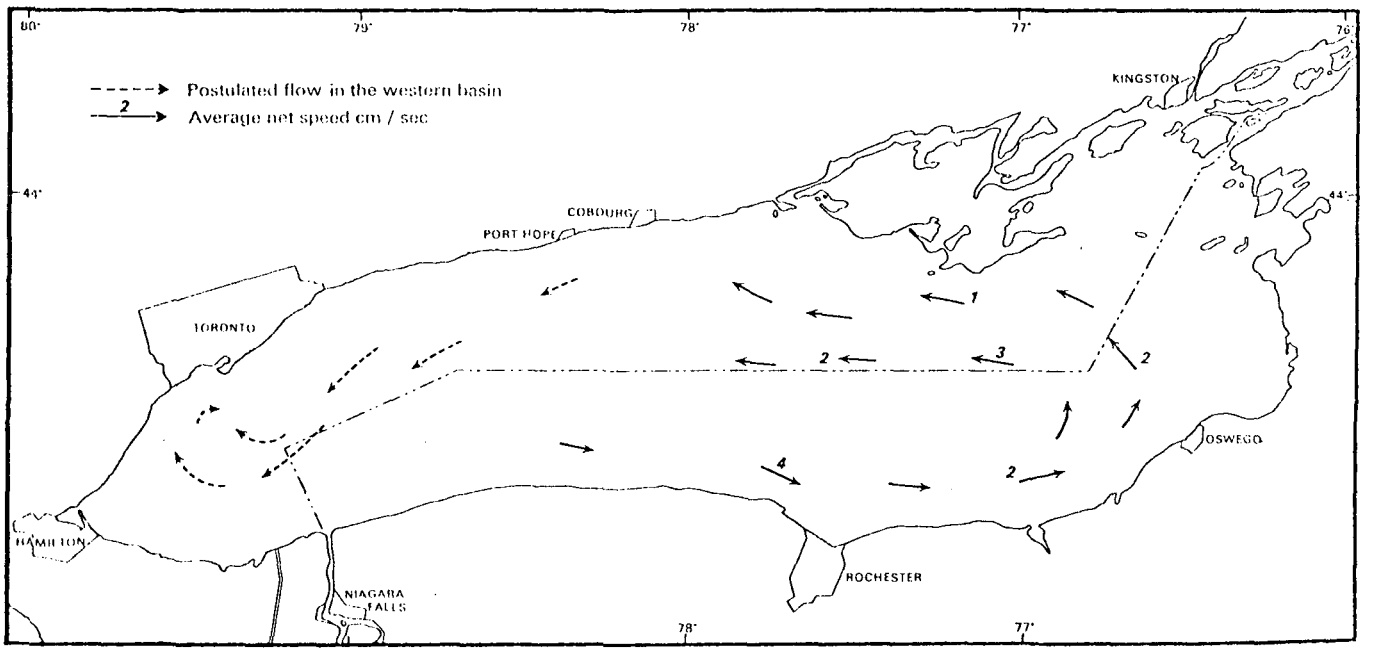


Fig. 2.1.15 Mean circulation at depth greater than 120 metres during period of summer stratification.

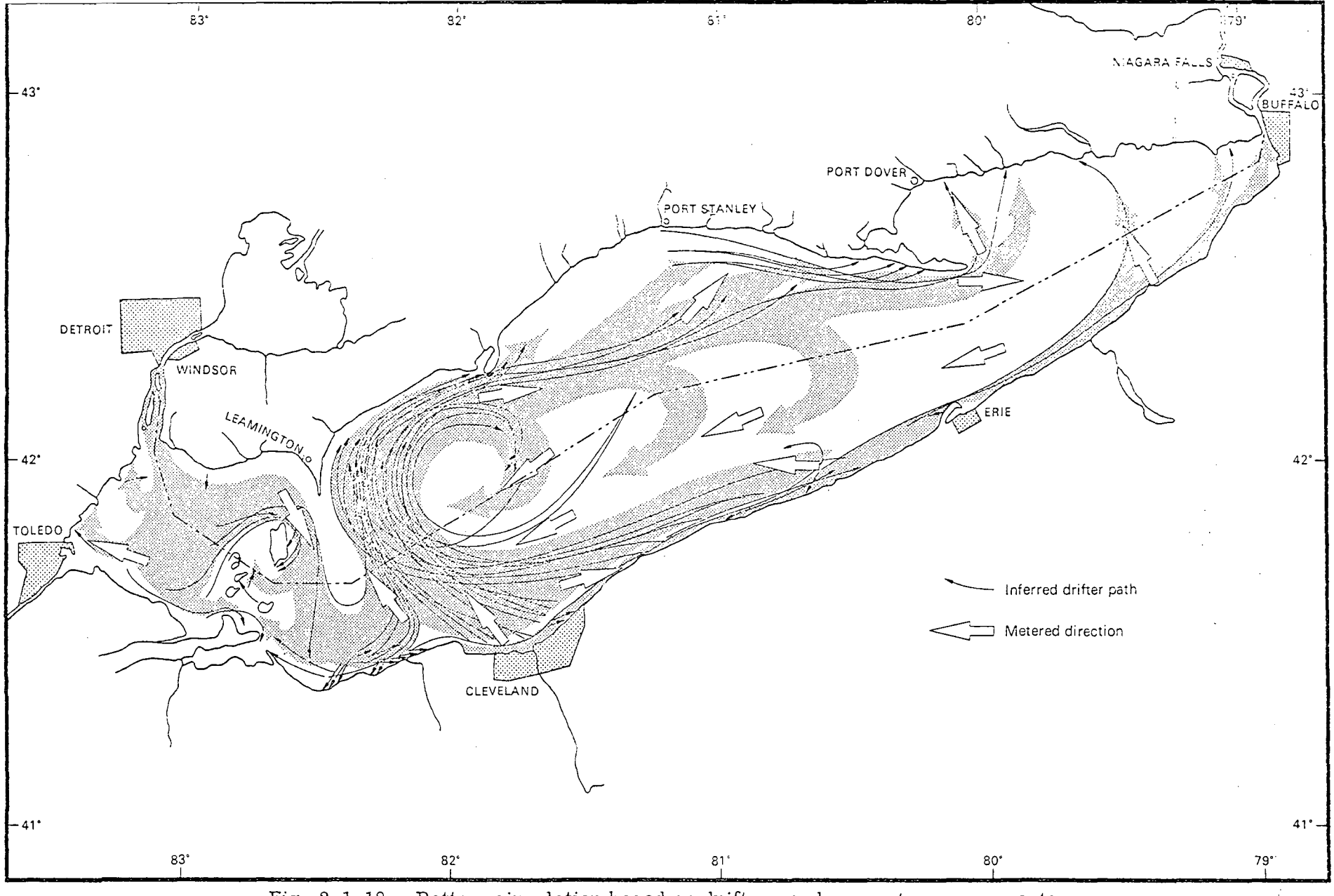
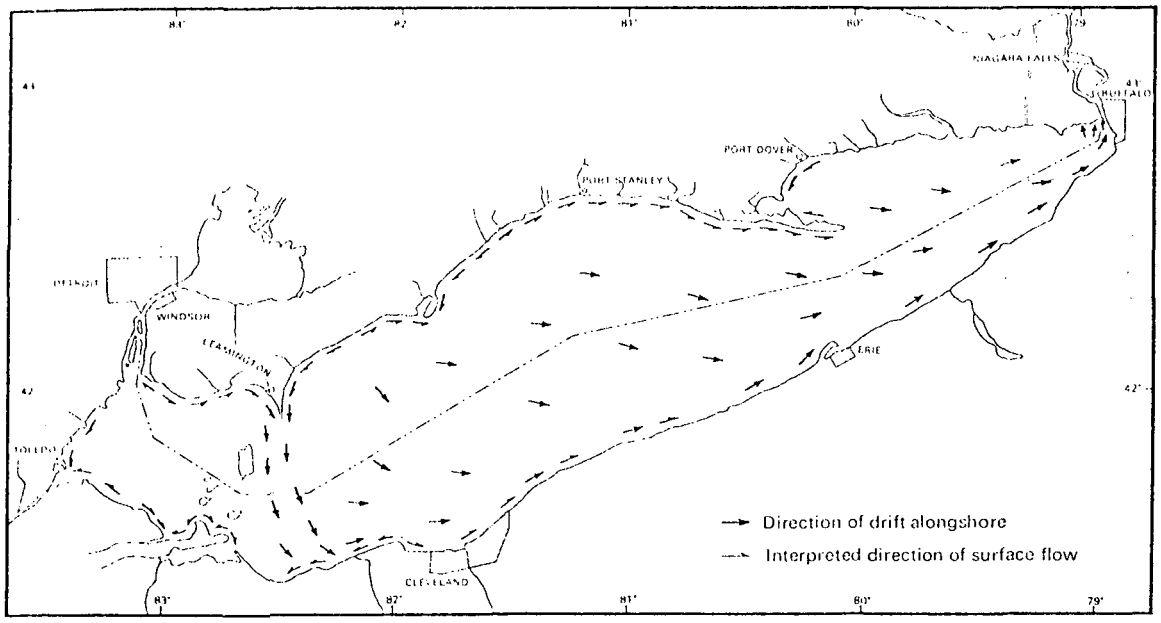
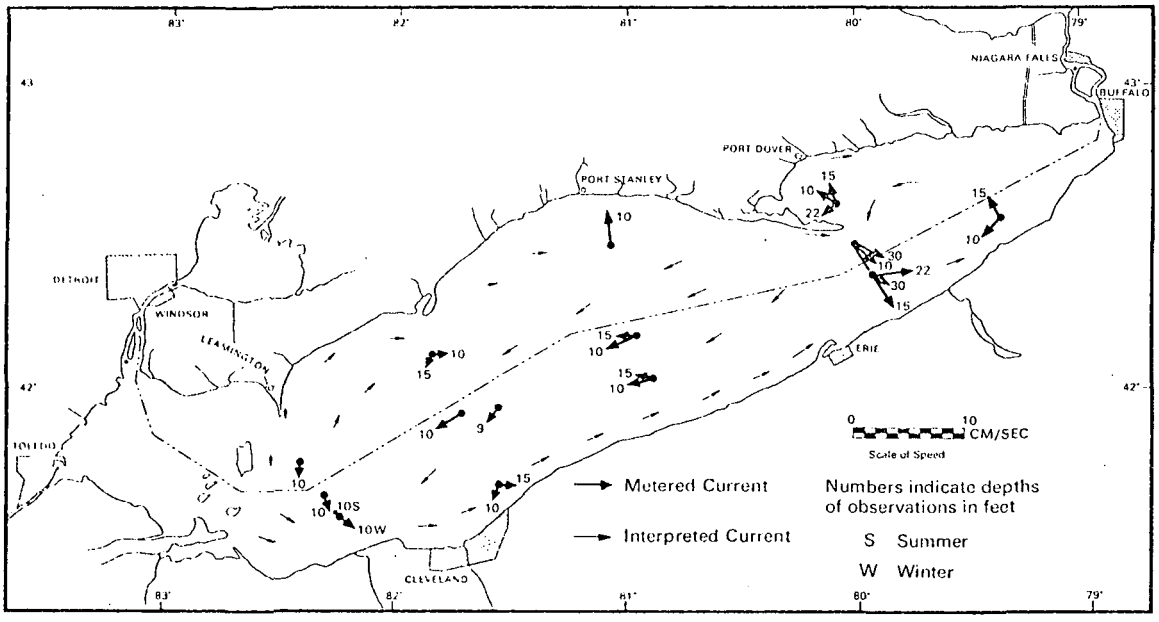


Fig. 2.1.18 Bottom circulation based on drifters and current measurements.





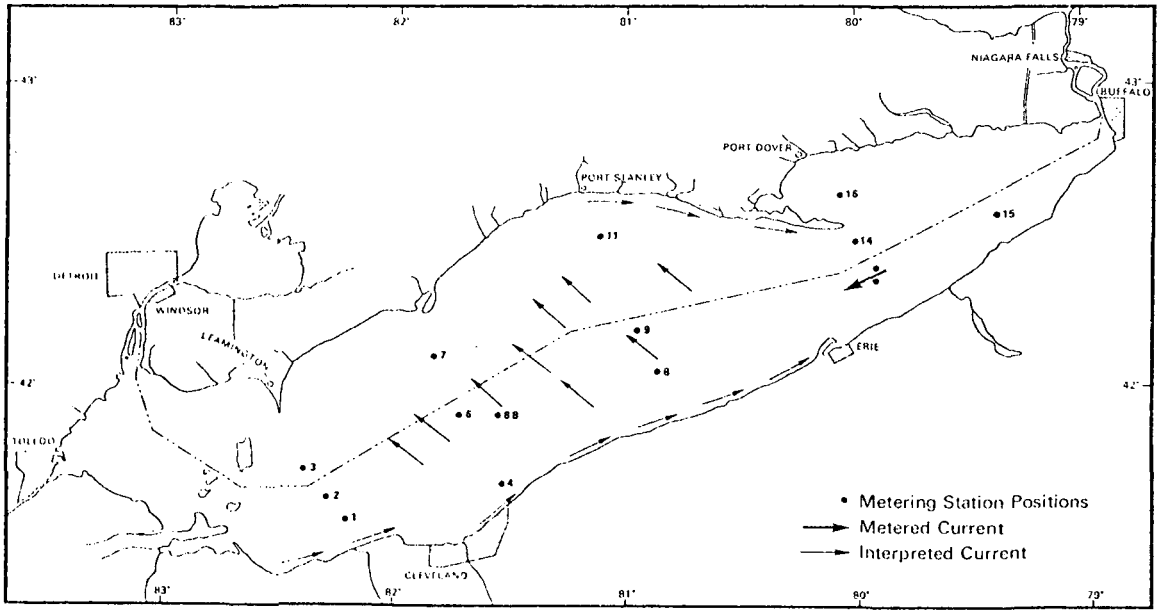


Fig. 2.1.15, 2.1.16, 2.1.17 Dominant features of the surface, intermediate and bottom circulation in the central and eastern basins of Lake Erie.

APPENDIX B

HAZARDOUS MATERIALS IN DESCENDING ORDER OF POTENTIAL DANGER TO THE AQUATIC ENVIRONMENT

Source:

James F. MacLaren Ltd., Environmental Consultants. 1974. Hazardous Polluting Substances in the Lower Great Lakes. Vol. A. Prepared for Environment Canada.

A Rating of Various Chemicals as Specific Hazards in the Great Lakes

D. M. GORBER
and
J. R. MONTEITH
Environment Canada
Ottawa, Ontario
Canada

INTRODUCTION

The identification of hazardous polluting substances in the Lower Great Lakes Basin has been carried out for Environment Canada. A listing of hazardous materials in descending order of potential danger to the aquatic environment has been developed according to the certain criteria. Criteria established as being important to the evaluation of hazard potential are toxicity to aquatic life (ecological effect); amounts used in commerce and industry (use and distribution); and mode of transport and storage in relation to amounts, means, packaging, and handling methods (risk analysis). The toxicity criteria provide a relative measure of the significance of spills of hazardous substances, while the other criteria reflect on the potential frequency of occurrence and size of accidental spills.

ACCIDENT POTENTIAL OR RISK ANALYSIS FOR TRANSPORTATION AND STORAGE

Transportation and storage of hazardous materials pose a potential hazard to aquatic life because of accidental spills. The significance of the hazards presented is dependent on a number of factors, including mode of transport and hazard associated with each; quantity of material shipped by each mode; method of shipment, such as bulk verses containerization; frequency of shipment; traffic on routes traveled; loading and unloading procedures; method of storage; and the potential of a spill reaching the aquatic environment. When combined and analyzed for each commodity, these factors provide a basis for ranking hazardous materials according to their accident potential.

Based on the findings of the current study, important factors requiring consideration in the establishment of a transportation model were the different modes of transport in the basin, the quantity of material shipped by each mode of transport, the hazard associated with each specific mode of transport, the size of a spill associated with a particular mode of transport, and the portion of a spill that is accessible to the water environment.

To obtain a measure of the threat each hazardous material poses to the water environment, and thus a ranking for hazardous materials moved by transportation systems in the Lower Great Lakes Basin, the following formula can be used:

$$R_T = (Q_s H_s A_s S_s) + (Q_r H_r A_r S_r) \\ (Q_t H_t A_t S_t) + (Q_p H_p A_p S_p)$$

where R_T = the total risk involved in transporting a hazardous material, Q = category rating for quantity of material shipped, H = the risk associated with shipment by various means of transport, A = the fraction of spills gaining access to the water environment, and S = the size factor of a spill from an accident gaining access to water. s, r, t, and p = ship, rail, truck, and pipeline transports respectively.

The general form of the equation for storage accident potential or risk can be expressed as follows (st refers to storages):

$$R_{st} = Q_{st} \times H_{st} \times A_{st} \times S_{st}$$
$$Q_{st} = Q_s + Q_r + Q_t + Q_p$$

In the analysis, quantities transported have been represented by numerical values in order to reduce the significance on the overall analysis of commodities

moved in very large quantities. In an actual situation, these quantities would be moved in bulk shipments; therefore the number of shipments per ton would be low compared to other commodities.

The method selected to represent quantities involved using the logarithmic values of the quantities shipped to one-decimal place accuracy. The numbering system is thus easy to understand, and an increase in quantity shipped only slightly increases the rating number.

By placing the values derived from the analyses of *H*, *A* and *S* in the equations and combining the equations such that

$$R_c = R_I + R_S$$

Then *Rc*, the combined risk analysis, can be represented by the simplified form

$$R_c = (Q_S \times 1.0) + (Q_F \times 0.024) + (Q \times 0.017) + (Q_D \times 0.10) + (Q_{SI} \times 0.054)$$

A partial list of the risk potential for various types of material is given in Table 1.

USE AND DISTRIBUTION RATING FOR MATERIALS USED IN COMMERCE AND INDUSTRY

The degree of hazard posed by chemicals is a function of the amounts flowing through the economy and the extent of distribution. This use and distribution rating has two rating components: quantity in use rating and distribution rating. Published data specifying the amount of individual shipments and their destinations, however, are not available. To assess these factors an alternative approach was taken. Considering that chemicals produced or used by industry are ultimately transported to the end user, the amount flowing in the economy can be approximated by how much is produced or used by industry. The extent of distribution can then be estimated by identifying which segments of industry uses these materials.

Quantity or Use Rating

This system is one in which the rating is determined by using the logarithm of the amounts present. This system tends to disperse this lowest class category but still indicates the importance of the chemicals present in large amounts. Four factors were considered in determining the quantities present: production, use, imports, and exports. The following equation outlines the relationship between these parameters.

Table 1.
Partial Summary List of Combined Risk or Accident Potential.

Food, feed, beverages	8.11
Fuel oils	8.03
Iron ore and concentrates	7.85
Coal, bituminous and others	7.83
Gasoline	7.36
Bentonitf, sand and gravel, stone	7.25
Salt	6.91
Iron and steel alloys	6.62
Lubricating oils and greases	6.55
Coke	6.37
Cement	6.36
Crude petroleum	6.20
Pulp and paper, paperboard	6.11
Asphalts, coal tars, other pet.	5.96
Metallic salts of inorganic acids	5.82
Fluorspar	5.67
Potash	5.65
Phosphate rock	5.55
Fertilizers	5.53
Alumina and bauxite ore	5.49
Manganese ores	5.45
Hides, skins, pelts	5.42
Gypsum	5.34
Wood fabricated materials	5.28
Soybean oil	5.06
Plastic materials	5.02
Rubber and allied gums, nat.	5.01
Synthetic rubber	5.00
Hydrocarbon and derivatives	5.00
Phenols, ethers, aldehydes, ketones	4.99
Alcohol and derivatives	4.98
Organic acids, amhydrides	4.98
Nitrogen-function compounds	4.97
Organic chemicals	4.96
Vegetable oils, fats, wax	4.89
Other ores	4.86
Iron and ferrous scrap	4.86
Sulphuric acid	4.84
Sodium carbonate	4.83
Inorganic bases	4.82
Inorganic acids, other	4.81
Textiles and rope	4.80
Sodium hydroxide	4.80
Inorganic chemicals	4.80
Sodium Sulphate	4.79
Calcium carbide	4.75
Copper and alloys	4.70
Chemical specialities, industrial	4.69
Crude wood and textiles	4.60
Zinc and alloys	4.38

Production + Imports = Use + Exports

(Note: It should be noted that in the above equation the "use" term refers to consumption and does not really consider the problems of ultimate disposal. Quantity

or use rating = log (amount present/ 10). The lowest rating applied is 1.0, which implies that the amounts smaller than 100 tons be assigned this value.)

To determine the amounts of a chemical present, it is necessary to evaluate one side of the equation. It was noted in the previous section that the data compiled are not sufficient to rate all chemicals using the amounts produced. Information on amounts used is the most comprehensive and should be used as a basis for rating. There are eight alternatives which may be used: amount used, amount used + amount exported, amount produced or sold, amount transported, amount produced + amount imported, amount imported, amount exported, and no data available.

The alternative employed should be the one resulting in the largest quantity.

Distribution Rating

The hazards posed by a chemical material are dependent not only on the amount present but also on the amount of distribution or flow of the chemical. The distribution rating must indicate the amount of distribution for each chemical and must differentiate between those chemicals that have a wide distribution and those that have a limited distribution.

The actual number of plants using a specific chemical is virtually impossible to determine. In this analysis, the number of industrial sectors using each chemical has been determined and from the number of industries in each of these particular sectors, the maximum potential number of plants using the chemical can be determined.

The uses of the chemical materials by the various industrial sectors was determined as outlined in Table 2. The industrial sectors considered are illustrated. By summing the plants for the sectors using the chemical, the total potential plants using each chemical material was determined. With this information the frequency of distribution to each number of plants was found using a class size of 100 plants. The resultant frequency histogram was plotted. A cumulative frequency graph was then constructed using the information as presented by the frequency histogram.

The distribution rating for each chemical material is determined from the cumulative frequency graph (Fig. 1). The usefulness of this graph becomes apparent upon examination. It may be seen that the rating applied to a chemical with total potential use at 0-100 plants is 0.2. This is the lowest rating applied, so that chemicals used in only a very few plants, or utilized at the same plant as they are produced, are not eliminated. They may still pose hazards in the event of storage spills or under other emergency conditions.

Table 2.
Industrial Sectors.

Industry Type	*Number of Plants*
Inorganic chemicals	94
Organic chemicals	31
Miscellaneous chemicals	333
Steel	45
Power	10 (est.)
Refining	40
Beverage	486
Oils, fats, waxes	31
Leather, textiles	102
Cement	26
Ceramics	41
Water and waste treatment	1,500 (est.)
Plating	177
Pharmaceuticals and medicine	214
Soap and cleaning compounds	129
Battery manufacturers	25
Pulp and paper	139
Printing inks	45
Pigments and dry colours	14
Paint and varnish	154
Plastics and synthetic resins	40
Rubber	107
Glass	128
Sugar	14
Fertilizer	74

The curve indicates that for an increase from 100 to 200 the rating increases from 0.2 to 0.4. The distribution of a chemical serving 200 plants is assumed to be twice that of a chemical serving 100 plants. The leveling off of the curve indicates that the use of a chemical at more plants does not influence the rating as much as an increase in the smaller range. The rating applied to a chemical serving 1,100 plants is 0.95, while the rating applied to a chemical serving 3,400 plants is 1.0. This implies that a chemical serving 1,100 plants is already widely distributed and a chemical serving 3,400 plants does not pose substantially higher hazards.

Chemicals having limited use in Canada, but being exported in substantial quantities should be given a minimum rating of 0.6 to indicate this movement.

Overall Use-Distribution Rating (U)

The hazards posed by a chemical material are dependent on both the quantities present and the amount of distribution. To determine an overall use-distribution rating (U), the two ratings (use rating and distribution rating) were multiplied. This rating should give an indication of the relative importance of each chemical as indicated in Table 3.

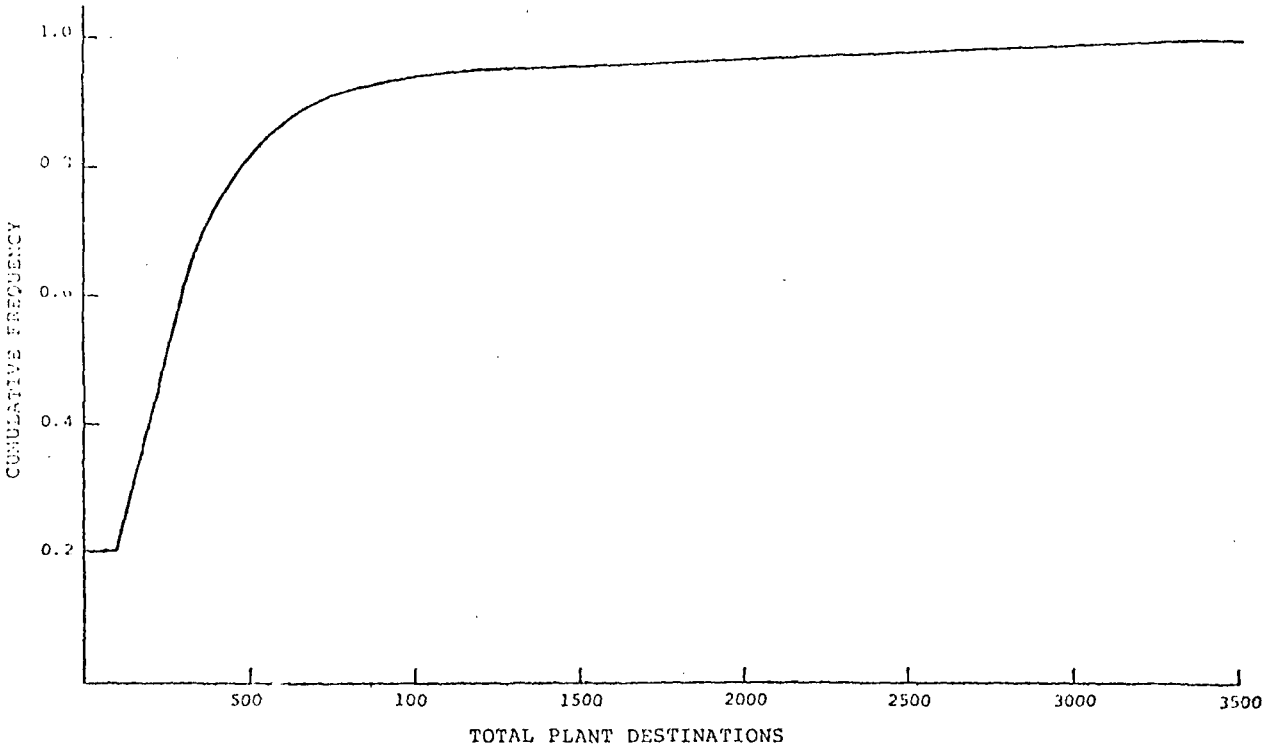


Fig. 1. Cumulative frequency of total plant destinations.

ECOLOGICAL EFFECT RATING

Generally, substances are defined as toxic if they can cause some recognizable injury, either lethal or sublethal, to aquatic life. The evaluation of the full impact of toxic materials on the environment is not easy. Any toxic effect may be direct, indirect, or induced. Direct effect is the direct action of the poison on sensitive species. Indirect toxicity results when the toxic substance acts upon one particular organism in the food chain thereby causing adverse effects observed on others. For example, a substance may promote the

Table 3.
Summary List of Use–Distribution Rating.

Motor gasoline	5.4	Urea	4.4
Heavy fuel oil (Nos. 4, 5, 6)	6.2	Aviation Gasoline	4.3
Light fuel oil (Nos. 2, 3)	6.2	Ammonium phosphates	4.1
Diesel fuel oil	5.8	Crude oil	4.1
Potassium chloride	5.5	Aluminum sulfate	4.0
Asphalt	5.4	Butane and butane mixes	4.0
Aviation turbo fuel	5.4	Calcium hydroxide	4.0
Kerosene, stove oil, tractor fuel	5.4	Iron ores, conc., scrap	4.0
Sulphuric acid	5.4	Ammonium nitrate	3.9
Ammonia, anhydrous	5.0	Sucrose	3.9
Sodium hydroxide	5.0	Sodium phosphate	3.8
Chlorine	4.8	Coal	3.7
Coke	4.8	Calcium disulfide	3.6
Lubricating oil and grease	4.8	Hydrochloric acid	3.6
Lime	4.7	Sodium chlorate	3.6
Propane and propane mixes	4.7	Sodium tripolyphosphates	3.6
Ammonium sulfates	4.5	Soybean oils	3.6
Sodium carbonate	4.5	Carbon black	3.5
Naphtha specialties	4.4	Formaldehyde	3.5
Oxygen	4.4	Gypsum	3.5

growth of procaryotic organisms (bacteria, blue-green algae). The rapid proliferation creates conditions (low oxygen concentration, pH changes, and so on) which are lethal to fish. Induced effects involve direct action on a particular organism, but the toxic response is observed only in the presence of another agent. A toxic substance may increase the susceptibility to a disease, but the actual injury is caused by a pathogenic agent.

Further problems in evaluation of cause-and-effect relationships arise when several toxic substances are present simultaneously in the aquatic ecosystem. The combined effect of these can be more than the sum of their separate effects. This condition, known as synergism, has been reported for the toxicity of zinc and copper ions to fish.

Rating materials on their ecological effect should be based on actual spill data. However, only a few field studies on large-scale accidental spills have been reported in adequate detail to be useful for establishing rating criteria. Present evaluations are based primarily on toxicity studies performed under controlled laboratory conditions. These laboratory experiments have advantages as well as shortcomings.

The overall ecological effect rating used in the study was designed to reflect toxicity and persistence and can be given by the equation

$$E = T \times P = C^n (B + b)$$

where T is ecological toxicity index C^n and P is the persistence index (B b). C is the basic toxicity rating and is defined as follows:

Basic Toxicity Rating

4-day LC_{50} concentration	*Rating value (C)*
Less than 0.1 mg/liter	4
0.1 p.p.m. to 100 mg./liter	3-Log^{10} (LC_{50}) [a]
Greater than 100 mg./liter	1

[a] LC_{50} is given in milligrams per liter. The rating value C is evaluated to two significant figures. n = solubility moderator; n is based on the ratio of the LC_{50} of the material to the solubility of the material and has assigned values of 0, 0.5, or 1.0; P, the persistence index, is given by $P = (B+b)$ where B, basic persistence rating, is based on the probable half-life and has assigned values of 1.0, 1.5, or 2.0; p is the physical state correction which is based on the physical properties of the material and has assigned values of -1.0, -0.5, 0,+ 0.5, +1.0.

The overall ecological effect rating values and their interpretation is evident in Table 4.

Table 4.
Overall Ecological Effect Rating.

Rating Value	*Comment*
0.0-1.5	Minimal hazards, low toxicity, low persistence
1.5-4.0	Slight hazards, combination of low toxicity-high persistence of moderate toxicity-low persistence
4.0-6.5	Moderate hazards, moderate toxicity, moderate to high persistence
6.5-9.0	Highly hazardous materials, moderate to high toxicity, high persistence
9.0-12.	Extreme hazards, high toxicity, very high persistence

OVERALL RATING AND HARMFUL QUANTITY IDENTIFICATION

The individual rating systems developed for ecological effects, use and distribution, and accident potential of transportation and storage have been combined into an overall rating scheme. From a combination of these terms the final order of potentially hazardous materials has been produced.

It would be convenient if the combination of the above parameters could be expressed as a simple mathematical procedure. The system should reflect the changes in the risk value associated with each criteria. The increase or decrease of any of the three parameters should alter the overall ranking accordingly. Should the value of one of the parameters drop to zero, then the potential risk value should also be zero. Obviously a zero parameter value implies no toxicity, no production-distribution, or no transportation. The expression used takes the following form:

$$OR = \sqrt{E \times UR}$$

where where OR = the overall rating value, E= the ecological effect rating value, U= the use and distribution rating value, and R = the accident botential for transportation and storage.

The overall rating scheme can be updated continually with respect to changes in the parameters. The adjustments in the individual risk values for ecological effect use and distribution and accident potential can be made in a continuous manner. The approach allows the risk values to be directly dependent on the chemical in question rather than evaluation on a purely comparative basis.

Harmful Quantities Identification

Harmful quantity is defined as the amount of substance that may cause ecological damage if a single spill occurs in a large body of water. Since this quantity is dependent on factors such as the local hydraulic regime, the time between spill and corrective action, and the inherent toxicity, large, local variations in quantity are expected to occur.

The concentration of a substance in the Lower Great Lakes Basin should not exceed a "safe" level. The safe concentration is defined as a fraction of the 96-hr. LC_{50} value. The harmful quantity for specific chemicals, therefore, can be calculated from a material balance on concentration changes resulting from an accidental spill:

$$Q_h = V (f\, LC_{50}\, C_{ex})$$

where Q_h = harmful quantity, V = volume of water in which the chemical is dispensed, f = fraction of 96-hr. LC_{50} value, and C_{ex} = existing concentration in the Lakes.

Application of the equation requires substitution of appropriate values for the parameters. The complexity of relationship, however, can be simplified by assuming uniform conditions exist in the Lakes.

The volume a spill occupies can be determined by estimating how rapidly the material disperses over a specified time period. Lacking better data, the effective dispersion of materials following a spill may be obtained from estimates of relative horizontal eddy diffusion coefficients.

In summary this hazard rating is based on the potential effects materials have on aquatic life due to accidental spillage. The harmful quantities identification was estimated on the basis of toxic concentrations and expected dispersion prior to corrective measures. These quantities represent average values, and large local variations are expected to occur.

Revised Summary Listing - Overall Rating

Chlorine	38.0
Lead Monoxide	35.3
Chromium Sulphate	33.0
Chromium in Ores, Conc	30.9
Phosphorous (yellow)	27.4
Copper Sulphate	27.2
Cadmium	25.3
Silver Chloride	24.9
Phenyl Mercuric Oleate	24.7
Silver Oxide	23.7
Calcium Plumbate	23.5
Silver Bromide	23.5
Silver Iodide	23.5
Copper Oxide	23.0
Sulphuric Acid	22.4
Sodium Cyanide	22.2
Cadmium Sulphide	22.0
Hydrochloric Acid	20.8
Copper	20.6
Silver Carbonate	20.4
Silver Chromate	20.4
Silver Azide	20.4
Diphenylamine	20.2
Chlordane	20.1
Sodium Hydroxide	19.6
Hydrogen Peroxide	19.5
Aluminum	19.5
Zinc Sulphate	19.3
Mercury	19.3
Azinphos Methyl	18.8
TDE	18.8
Toxaphene	18.8
Coumaphos	18.8
Thuricide	18.8
DDT	18.8
Dieldrin	18.8
Calcium Hypochlorite	18.6
MCPA Formulations	17.9
Diphenyl	17.8
Diuron	17.8

Cupric Chloride	17.5
Zinc	17.2
Iron Ore	16.9
Zinc Chloride	16.6
Ammonia, anhydrous	16.5
Potassium Ferricyanide	16.5
Silver Nitrate	16.5
Gold Oxide	16.4
Bromine	16.2
Potassium Dichromate	16.2
Lead Arsenate	16.0
Cadmium Cyanide	15.8
Zinc Oxide	15.8
Phorate	15.7
PCB's	15.7
Rotenone	15.7
Sodium Bromide	15.7
Allethrin	15.7
DEF	15.7
Difolatan	15.7
Trifluratin	15.7
Abate	15.7
Endrin	15.7
Demeton	15.7
Dicapthon	15.7
Dioxathion	15.7
Heptachlor	15.7
Lindane	15.7
Titanium Dioxide	15.6
Silver Phosphate	15.5
Sodium Arsenite	15.5
Sodium Azide	15.5
Simazine	15.5
Copper Naphthenate	14.8
Phosphorous, Amorphous	14.8
Strontium Acetate	14.8
Crude Oil	14.6
2, 4-D Formulations	14.6
Ammonium Chloride	14.5
Benzoic Acid	14.5

Lead Nitrate	14.5
Strontium Nitrate	14.5
Ammonium Bromide	14.4
Lead Phosphite	14.1
Light Fuel Oil	14.1
Gold Sodium Chloride	14.0
Gold Trichloride	14.0
Sodium Fluoride	13.9
Zinc Hydrosulphite	13.9
Cobalt Oxides	13.8
Motor Gasoline	13.8
Bismuth Salts	13.7
Lead Azide	13.4
Potassium Azide	13.4
Calcium Disulphide	13.3
Lead Carbonate	13.2
Lime, Chlorinated	13.2
Phenyl Mercuric Acetate	13.2
Potassium Binoxalate	13.1
Zirconium	13.1

MAP NO. 30 L/13

Dunnville
Sensitive Areas
Simcoe District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Sandusk Creek 42°50' - 80°00' to 42°49' - 79°58'	-warm water species creek; smallmouth bass, northern pike, and some panfish -fishing for the above species
2	Park	Selkirk Provincial Park 42°49' - 79°58'	-camping, swimming and fishing -163 acres
3	Creek	Stoney Creek 42°58' - 79°59' to 42°49' - 79°56'	-warm water species creek; smallmouth bass, and northern pike -fishing for the above species
4	Lake	Lake Erie	-recreational fishing for smallmouth bass and panfish -commercial fishing for smelt, yellow perch, carp, rock bass and white bass -based on a five year average of landings for 1966-70: smelt (11,230,519 lbs.) yellow perch (619,190 lbs.) carp (30,530 lbs.) rock bass (44,106 lbs.) white bass (25,542 lbs.) These statistics are for the portion of Lake Erie between the Norfolk county line and the Rainham township line.

MAP NO. 30 L/13

Dunnville
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
5	Shoreline	Lake Erie shoreline	-extensive cottage development along almost the entire shoreline
6	Park Reserve	Low Point 42°51' - 79°40'	-James N. Allan Park Reserve
7	Park	Rock Point 42°51' - 79°33'	-Rock Point Provincial Park -camping, 238 acres -waterbased recreational activities such as swimming, fishing, boating
8	Island	Mohawk Island	-a nesting and resting area for gulls and terns -an important nesting and feeding area for puddle ducks and diving ducks during fall migration -gillnet fishery harvests whitefish and walleye from this area

MAP NO. 30 L/13

Site No.	Sensitive Area	Location	Description
9	River	Lower Grand River 43°00' - 79°52' to 42°51' - 79°35'	-Fall and Spring runs of coho salmon and rainbow trout between Brantford and Port Maitland -extensive cottage development -water based recreational activities such as fishing, boating and swimming
10	Marsh	Grand River 42°55' - 79°40'	-important source of muskrat and some mink for trapping -important nesting, brood, and staging area for mallard, blue-winged teal and many other puddle ducks -late fall, many mergansers use this area to feed and rest
11	Conservation Area	Byng Island 42°54' - 79°38'	-Byng Island Conservation Area, Grand River Conservation Authority -4,000 campsites -swimming (600' of waterfront) -fishing and boating
12	River	Lower Grand River 42°54' - 79°37' to 42°51' - 79°35'	-important warm water fish spawning,nursery and feeding area -popular for angling -commercial trapnet and seining operations harvest quantities of carp, bullheads, catfish and bait fish -hook and line fishery also harvests small quantities of fish

MAP NO. 30 L/13

Site No.	Sensitive Area	Location	Description
13	Marsh	Grand River 42°53' - 79°35'	-important source of muskrat and some mink for trapping -important nesting, brood and staging area for mallard, blue-winged teal and many other puddle ducks -late fall, many mergansers use this area to feed and rest
14	Conservation Area	Chippawa Creek 43°00' - 79°31'	-Chippawa Creek Conservation Area, Niagara Peninsula Conservation Authority -wood ducks planted and expected to nest in nest boxes -501 campsites -swimming (300' of waterfront) -fishing and boating

Map No. 30 L/14

Welland
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	IBP	Marshville Station Clay Plain 42°59' - 79°24'	- poorly drained, wet, heavy clay plain - nesting herony of great blue herons - good diversity of herbs such as the rare Hay-Scented fern (DENNSTAEDTIA BUNCTILOBULA) - 24 ha., private land
2	Wildlife Extension	Mud Lake 42°56' - 79°16'	- Mud Lake Wildlife Extension - area is attractive to a great variety of bird species and is also a noted migration stopover - observation blinds, interpretive trails, waterfowl hunting - 150 acres which is owned by the St. Lawrence Seaway Authority and a private land owner.
3	IBP	Wainfleet Marsh and Peat Bog 42°55' - 79°18'	- extensive peat bog surrounded by a marginal fen of open, shallow water - peat bogs are rare in the region and there is the normal complement of rare species in this bog - Massassauga rattlesnakes occur in the area - 109 ha., private land

Map No. 30 L/14 Welland

Site No.	Sensitive Area	Location	Description
4	Island	Rock Island 42°52' - 79°26'	- important small-mouth bass spawning, nursery and feeding area. - angling popular in the immediate vicinity for bass and yellow perch
5	Conservation Area	Long Beach 42°53' - 79°26'	- Long Beach Conservation Area, Niagara Peninsula Conservation Authority - 2951 campsites - swimming (2,400 feet of waterfront) - fishing - 140 acres
6	Campsite & Waterfowl Area	Morgan Point 42°52'- 79°21'	- Port Calbrune District boy scouts recreational area - important feeding and nesting area for migrating diving ducks, especially scaup and redheads
7	Shoreline	Lake Erie - shoreline -	- this shoreline is lined with many summer cottages and a few permanent residences from Fort Erie through Port Maitland. Extensive sand beaches front nearly all of these privately owned properties.
8	Bay	Gravelly Bay - Port Colburne 42°53' - 79°16'	- important small-mouth bass spawning, nursery and feeding area - angling popular for bass and yellow perch - important feeding and nesting area for migrating diving ducks, especially scaup and redheads.

Map No. 30 L/14 Welland

Site No.	Sensitive Area	Location	Description
8	Bay	Gravelly Bay	- colonies of gulls and terns nest and rest on the Port Colburne Breakwater
9	Shoreline	Lake Erie Shoreline - Fort Erie to Port Colburne	- small-mouth bass spawning area from May to July
10	Beaches	Sherston Beaches 42°52' - 79°09'	- major water based recreational area
11	IBP	Point Abino Sand Hills 42°51' - 79°06'	- made up of 10-12 meter sand ridges - herb diversity is exceptional. This is one of the most extensive woodlands remaining on the shore of Lake Erie. - 28 ha., private land
12	Lake	Lake Erie - Eastern Basin -	- Gillnet fishery mainly for yellow perch and some Walleye - based on a five year average for 1966-70 Landings: walleye (33, 548 lbs.) yellow perch (817,966 lbs.) These statistics are for the portion of the Lake Erie eastern basin, and of the Rainham Township line.

Map No. 30 L/14 Welland

Site No.	Sensitive Area	Location	Description
12	Lake	Lake Erie - Eastern Basin -	- The area enclosed by the southerly extension of the Haldimand - Norfolk, Niagara Regional boundary and the east - west line through the Mohawk Island lighthouse and the Point Abino Lighthouse is presently closed to commercial fishing
13	Bay	Point Abino Bay 42°52' - 79°05'	- warmwater fish spawning, nursery and feeding area - important species include small and largemouth bass, pike, coalleye and yellow perch - angling for the above species - important feeding and nesting area for migrating diving ducks, especially scaup and redheads
14	Crystal Beach	Crystal Beach 42°52' - 79°04'	- Crystal Beach municipal park is an important recreational area.

MAP NO. 30 L/15

Fort Erie
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Lake Erie -shoreline-	-smallmouth bass spawning area from May to July -this same shoreline is lined with many summer cottages and few permanent residences. Extensive sand beaches front nearly all of these privately owned properties
2	IBP	Erie Beach 42°54' - 78°56'	-this is the only station in Ontario where the herb Wild Licorice (*Glycyrrhiza lepidota*) is found
3	Waterfowl wintering area	Fort Erie 42°56' - 78°55'	-important wintering area for the local population of mallard and black ducks
4	River	Upper Niagara River	-Ministry of Natural Resources stocking this area annually with maskinonge. Popular fish area for smallmouth bass and muskie - both seem to spend their entire life-cycles in the river. -at certain times walleye and rainbow trout migrate into the river from Lake Erie

MAP NO. 30 L/15

Site No.	Sensitive Area	Location	Description
4			-a large baitfish industry is based on catches from this portion of the river -important wintering area for many diving ducks of which the most significant are canvassbacks and redheads. Others include bufflehead, scamp and mergansers.
5	IBP	Miller's Creek 42°58' - 78°58'	-*Hibiscus palustris* is rare in the region, as is *Carya lacinosa* (both herbs); one individual of the very few known in Ontario is found on the site -4 ha., private land

MAP NO. 30 M/3 E

Niagara
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake Ontario	Port Weller 43° 14' - 79°13'	-Happy Rolfe Bird Sanctuary is located here. It is a feeding and nesting area for waterfowl, songbirds and game birds. This is owned by the Niagara Peninsula Conservation Authority and managed by the city of St. Catharines -migratory populations of salmon and trout are pursued by local anglers -a fall staging and feeding area for large numbers of migrating waterfowl including scamp, oldsquaws, goldeneyes and buffleheads
2	Creek	Eight Mile Creek 43°14' - 79°11'	-mouth of this stream provides nesting habitat for mallards, wood ducks, and blue-winged teal
3	River	Niagara River 43°15' - 79°03' to 43°05' - 79°03'	-wintering area for large numbers of oldsquaws and for many species of gulls, especially bonapartes gull

MAP NO. 30 M/3 E

Site No.	Sensitive Area	Location	Description
3			-smallmouth bass, smelt, whitebass and other panfish support a limited recreational fishery
4	Parkway	Niagara River Parkway	-most of the Canadian shore of the Niagara River from Fort Erie to Niagara-on-the-Lake is operated as parkland. This also includes Navy Island.
5	River	Niagara River - Whirlpool - 43°08' - 79°05'	-large numbers of Pacific salmon (coho, chinook) and rainbow trout congregate in this area during fall migrations
6	River	Niagara River - Hydro - 43°05' - 79°05'	-colonies of gulls and terns utilize the hydro diversion structure as a resting and nesting area
7	River	Niagara River - Upper - 43°05' - 79°03' to 43°00' - 79°02'	-wintering area for many species of gulls, especially Bonapartes Gull
8	Creek	Lyons Creek 43°04' - 79°03' to 43°00' - 79°09'	-natural and artificially induced wood duck and mallard nesting

Map No. 30 M/3 W

Niagara
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	St. John's 43°04' - 79°17'	- St. John's Conservation Area, Niagara Peninsula Conservation Authority - fishing - 78 acres
2	Conservation Area	Ball's Falls 43°09' - 79°23'	- Ball's Falls Conservation Authority - 751 campsites - 179 acres
3	IBP	Caves Spring Escarpment 43°10' - 79°26'	- excellent diversity of Carolinian tree species and is also possibly the only station of bird's foot violet (VIOLA PEDATA) and rue anemone (ANEMONELLA THALICTROIDES) - herbs - in the Niagara Peninsula.
4	Park	Port Dalhousie 43°13'- 19°16'	- Michigan Beach municipal park
5	Pond	Martindale Pond 43°12' - 79°17'	- this is a nesting and brooding area for mallards and wood ducks - some diving ducks use the area during fall migration

Map No. 30 M3/W

Niagara

Site No.	Sensitive Area	Location	Description
6	Creek	Fifteen Mile Creek 43°10' 79°19' 43°12' 79°19'	- The estuary is a prime nesting and rearing area for mallard, wood duck, and blue-winged teal - offshore are important feeding and resting areas for fall migrations of diving ducks especially goldeneyes, buffleheads and oldsquaws.
7	Park	Charles Daly Park 43°12' - 79°19'	- a camping and swimming area on Lake Ontario between Fifteen and Sixteen mile creeks
8	Harbour	Jordan Harbour 43°10' - 79°19' 43° 12'- 79°22'	- a nesting and brood area for mallard, wood duck, blue and green-winged teal. - offshore areas are important for fall migrations of diving ducks especially goldeneyes, buffleheads, and oldsquaws. - presence of some diving ducks during the fall migration. - muskrat and mink are important fur bearers in this area - highly productive area for warm water species including white perch, largemouth bass pike, yellow perch, buffleheads and channel fish. Used extensively by anglers .

Site No.	Sensitive Area	Location	Description
9	Lake	Lake Ontario - Vineland Area -	- salmon (coho, chinook) is the major catch for the commercial fishing.

Map No. 30 M/4E

Grimsby
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Lake Ontario - shoreline -	- many permanent residences are located on property adjacent to the publicly owned shoreline - most of this shoreline consists of coarse gravel and sand beaches
2	Lake	Lake Ontario - Grimsby Area -	- salmon (coho, chinook) is the major catch for the commercial fishing

Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
3	Conservation Area	Fifty Mile Point 43°14' - 79°38'	- Fifty Point Conservation Area, Niagara Peninsula Conservation Authority - lakeshore frontage for swimming and boating - rainbow and brook trout sport fishing

MAP NO. 30 M/4 W

Grimsby
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Park	Centennial Park 43°15' - 79°46'	-extensive sport fishing for smelt in the spring -camping, swimming and picnicking provided by this municipal park
2	Conservation Area	Welland River 43°06' - 79°50'	-Binbrook Conservation Area, Niagara Peninsula Conservation Authrotiy -provides sport fishing angling for largemouth bass and northern pike -breeding and staging area for waterfowl and a controlled waterfowl hunting area

Simcoe District
Southwestern Region
Ontario Ministry of Natural Resources

3	River	Grand River 43°06' - 80°00' to 43°00' - 79°53'	-Fall and Spring runs of coho salmon and rainbow trout between Brantford and Port Maitland -extensive cottage development -water based recreational activities such as fishing, boating and swimming

MAP NO. 30 M/5 E

Hamilton
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Oakville Creek 43°26' - 79°41'	-the mouth of Oakville Creek serves as a sport fishing area -municipal park
2	Marsh	Oakville Creek 43°27' - 79°42'	-provides a nesting area for waterfowl and habitat for other wildlife -limited amount of sport fishing

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP.NO. 30M/5 E

Hamilton

INTAKES

Central Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	I	Shell Canada Ltd.	Oakville 43°24' - 79°45'	Mr. Horwood	O. - 925-2481 Ext. 227 H. - 827-3457
C	I	British Petroleum Refining	Oakville 43°25' - 79°45'	J. Lawrence	O. - 827-1161 Ext. 201 H. - 845-2181
E	M	Town of Oakville	Oakville 43°25' - 79°45'	N. Battenshaw	O. - 845-3461 H. - 844-3458
F	I	Ford Motor Company	Oakville 43°27' - 79°40'	W.D. Follis	O. - 845-2511 H. - 845-7755
I	I	St. Lawrence Cement Co. Ltd.	Oakville 43°30' - 79°41'	C. Coles	O. - 822-1653 H. - 844-6239
K	I	Gulf Oil Canada Ltd.	Oakville 43°30' - 79°41'	P.J. Blundy	O. - 822-4222 Ext. 264 H. - 845-0454

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/5 E

Hamilton

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Shell Canada Ltd.	Oakville 43°24' - 79°45'	Oil refining	E	Petroleum products	petroleum products, caustic, sulphuric acid	Potential problem, no problem to date
D	British Petroleum Canada Ltd.	Oakville 43°25' - 79°45'	Oil refining	E	Petroleum products	petroleum products, caustic, sulphuric acid	One recent spill into Bronte Creek
H	Monsanto Chemicals	Oakville 43°26' - 79°42'	Vinyl mfg.	D		bunker fuel PVC	No problem to date
G	Ford Motor Co.	Oakville 43°27' - 79°40'	Automobile mfg.	D		bunker "C" ferric acid, sulphuric and caustic	No problem to date
J	St. Lawrence Cement Co.	Mississauga 43°30' - 79°41'	Cement mfg.	C	Portland cement, raw clinker	bunker "C"	No problem to date
L	Gulf Oil Canada Ltd.	Mississauga 43°30' - 79°41'	Oil refining	E	Petroleum products	petroleum products, caustic	Potential problem, no problem to date

MAP NO. 30 M/5 W

Hamilton
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Marsh	Redhill Creek 43°15' - 79°46'	-waterfowl breeding area
2	Skyway	Burlington Bay Skyway 43°18' - 79°47'	-sport fishing and extensive smelt fishing in the spring
3	Beach	Burlington Beach and Spencer Smith Park 43°20' - 79°47'	-sport fishing and extensive smelt fishing in the summer -summer swimming area
4	Marsh and Creek	Cootes Paradise and Spencer Creek 43°17' - 79°56'	-limited commercial fishing for carp -limited angling for rainbow trout and northern pike -breeding, nesting and staging area for a variety of waterfowl -breeding area for soft-shelled turtles -area has two observation towers and walking trails providing opportunities for observing wildlife

MAP NO. 30 M/5 W

Site No.	Sensitive Area	Location	Description
5	Park	**Bullock's** Corner 43° 16' - 79°59'	-Webster Falls municipal park
6	Marsh	Grindstone Creek 43°19' - 79°53'	-breeding area for waterfowl -also provides viewing opportunities for the general public
7	Park	Carlisle Park and Conservation Area - Bronte Creek - 43°24' - 79°59'	-good area for brook and brown trout fishing -Carlisle Community Pond Conservation Area, Halton Region -swimming (100 feet of waterfront) -30.6 acres
8	Conservation Area	Oakville Creek -Campbellville- 43°30' - 79°58'	-two conservation area ponds of the Halton Region Conservation Authority supply some angling
9	Lake	Crawford Lake 43°29' - 79°57'	-unique lake which is over 90 feet deep and valued for scientific study -used for waterbased recreation
10	Creek	Bronte Creek 43°27' - 79°58' to 43°26' - 79°57'	-spawning area for brook trout -supplies limited angling

MAP NO. 30 M/5 W

Site No.	Sensitive Area	Location	Description
11	Park	Lowville 43°26' - 79°55'	-Lowville Park is a major municipal park -over one mile of good fishing stream
12	Creek	Bronte Creek 43°27' - 79°55' to 43°27' - 79°53'	-significant spawning and rearing area for rainbow trout and brook trout -site where Coho and Chinook salmon are stocked
13	Creek	Bronte Creek 43°27' - 79°53' to 43°26' - 79°51'	-fishing and spawning area for smallmouth bass
14	Park	Bronte Creek Provincial Park 43°25' - 79°46'	-major recreation development to maintain the integrity of the valley and the creek -only limited access -spawning area for smallmouth bass

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/5 W

Hamilton

INTAKES

Central Region
Ontario Ministry of Natural Resources

Site No.	Type	User	Location	Contact	Telephone
A	M	Town of Burlington	Burlington	D. King	O. - 634-1851 H. - 634-9127

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Hercules Chemicals	Brant Street Burlington	Chemical processing	D	Crude fatty acid, tall oil, formaldehyde	crude fatty acids, tall oil, formaldehyde, bunker C	Potential problem
C	Niagara Chemicals	Brant Street Burlington	Insecticide, pesticide manufacture	D	Variety of chemicals	variety of chemicals	
D		Burlington	Chemical processing	E	Variety of chemicals	variety of chemicals	

Map No. 30 M/6E

Niagara-on-the-Lake
Sensitive Areas
Niagara District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Niagara River 43°17' - 79°04'	- mouth of the Niagara River is an important wintering area for a local population of mallards.
2	Creek	Four Mile Creek 43°16' 79°08'	- the mouth of this stream provides nesting habitat for mallards, wood ducks, and blue-wing teal.
3	Lake	Lake Ontario - Niagara River to the Welland Canal.	- the commercial fish operation harvests salmon (coho, chinook), yellow perch, white bass, and smelt.

MAP NO. 30 M/11 W & E

Toronto
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Humber River 43°38' - 79°29'	-rainbow trout, chinook and coho salmon are entering this river in the fall to spawn -pike also spawn in the marshes along the river during the spring
2	Pond	Grenadier Pond 43°39' - 79°27'	-this pond is heavily utilized for fishing of largemouth bass
3	River	Don River 43°39' - 79°21' to 43°45' - 79°17' to 79°25'	-the Don River and its tributaries (Massey Creek, Wilket Creek) have numerous parks along its course
4	Shoreline	Lake Ontario	-waterfowl nesting, staging and winter nesting area -boating is a major activity in the vicinity of the Humber River mouth

MAP NO. 30 M/11 W & E

Site No.	Sensitive Area	Location	Description
5	Shoreline	Lake Ontario, Toronto Harbour and Islands	-this area is an important waterfowl area for nesting staging and overwintering -recreational boating within the harbour, and the surrounding lake is an important recreational area -public swimming at the beaches on many of the Toronto Islands is provided
6	Shoreline	Lake Ontario	-this portion of the shoreline is important for waterfowl as a nesting, stopover, and overwintering area
		43°40' - 79°18'	-major beach area
			-boating (sailing and rowing) are carried out along this shoreline

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/11 W & E

Toronto

INTAKES

Central Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
F	M	Toronto Island Water Works (May 1 to Sept. 30)	Lake Ontario 43°37' - 79°24'		367-8278
I	I	Redpath Sugar Ltd.	95 Queens Quay E. Lake Ontario 43°39' - 79°22'	R. Tulloch	Day 366-3561 Night 366-3839
L	I	Continental Can Co. Ltd.	Comminssioner St. Lake Ontario 43°39' - 79°22'	Palmer	Day 461-0331 Night 461-7210
N	I	R.L. Hearn Generating Station	Lake Ontario 43°39' - 79°21'		485-2431
P	M	R.G. Harris Water Works	Lake Ontario 43°41' - 79°17'		694-3237
Q	M	Borough of Scarborough Water Works	Lake Ontario 43°42' - 79°16'		261-1300

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/11 W & E

Toronto

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Comapny	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Ashland Oil	150 Bronoco Toronto 43°42' - 79°28'	Storage depot	D		aromatic solvents mineral spirits	
E	Stelco	Toronto (Swansea) 43°39' - 79°29'	Metal lubrication	B	Metal products		
H	Maple Leaf Mills	417 Queens Quay Toronto 43°39' - 79°24'	Salad dressing manufacture	D	Salad dressings	soya oil	
J	Gooderham Worts	2 Trinity Rd. Toronto 43°40' - 79°22'	Distillers	D	Alcohol	alcohol	Low hazard
G	Victory Soya Mills	333 Lakeshore Bld. Toronto 43°38' - 79°25'	Grain handling, soya bean mfg.	E	Refined soya bean oil and feed grains	soya bean oil	Moderate hazard
M	Oil tank Farms	Union Ave. & Commissioners Rd. Toronto 43°39' - 79°21'	Oil storage	E		furnace oil, gasoline diesel oil, fuel oil	Moderate hazard
O	R.L. Hearn Generating Station	Union Ave. Toronto 43°39' - 79°20'	Electric power generation	D	Electric power	oil storage	Moderate hazard

MAP NO. 30M/11 W & E

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
K	Lever Bros.	Sunlight Park Toronto 43°40' - 79°22'	Soap & detergent manufacture	D	Soap and detergent	alcohol, fatty acids	Moderate hazard
B	Polyresins Ltd.	44 Beechwood Dr. Toronto (Leaside) 43°42' - 79°23'	Resin mfg.	C	Glues & varnish	solvents, soya bean oil, resins	Low hazard
C	Scenectady Chemical Ltd.	319 Comstock Rd. Scarborough 43°44' - 79°17'	Chemical mfg.	D	Various chemicals and varnishes	glycols, phenols	"
D	Surpass Chemical Ltd.	36 Upton Rd. Scarborough 43°45' - 79°18'	Chemical mfg.	E	Various chemicals	sulphuric acid, petroleum	"

MAP NO. 30 M/12 E

Brampton
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Clairville Conservation Area 43°45' - 79°38'	-administered by the Metropolitan Toronto and Region Conservation Authority -swimming and fishing opportunities are provided
2	River	Humber River 43°39' - 79°30' to 43°45' - 79°34'	-along this section of the Humber River, as it passes through Toronto, are located many municipal parks -limited access is provided above the Old Mill for rainbow trout, chinook and coho salmon
3	River	Credit River 43°35' - 79°43' to 43°33' - 79°35'	-this section of the Credit River is a major salmon run in the fall -the mouth of the Credit is an area that experiences a great deal of boating activity
4	Shoreline	Lake Ontario	-this shoreline area is an important waterfowl migratory stopover area -nesting and wintering area for divers, dabblers and geese

MAP NO. 30 M/12 E

Site No.	Sensitive Area	Location	Description
4		Rattray Marsh 43°31' - 79°36'	-waternesting area -smelt spawning takes place at the mouth of the Credit River, and Etobicoke Creek

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30 M/12 E

Brampton

INTAKES

Central Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
M	I	Texaco Canada Ltd.	Port Credit Lake Ontario 43°33' - 79°36'	S.J. Walker	O. - 443-7927 H. - 425-8563
O	I	St. Lawrence Starch Co. Ltd.	Port Credit Lake Ontario 43°34' - 79°35'	J.A.D. Gray	O. - 274-3671 ext. 11 H. - 278-7054
P	M	South Peel Water Works	Mississauga Lake Ontario 43°34' - 79°34'	B. Kindall	278-8471
Q	M	Lakeview Generating Station	Mississauga Lake Ontario 43°35' - 79°34'		274-3461
S	M	Metro Westerly Plant	43°36' - 79°33'	R.L. Clark	
T	M & I	New Toronto Pumping Station Goodyear Tire Co.	Etobicoke Lake Ontario 43°36' - 79°31'		367-8278
H	I	Gulf Oil Canada Ltd.	Mississauga Lake Ontario 43°31' - 79°37'	P.J. Blundy	O. - 822-4222 H. - 845-0454

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/12 E

Brampton

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
D	Mitchell Fuel Oil	1741 Albion Rd. Rexdale 43°43' - 79°36'	Storage depot	C		gasoline	
E	Monarch Fine Foods	195 Belfield, Rexdale 43°43' - 79°35'	Salad dressing manufacture	D		soya oil	
F	Reichhold Chemicals	1914 Wilson Ave. Rexdale 43°45' - 79°36'	Resin manufacture	D	Alkyd resins, polyester resins, emulsions	solvents, resins	
A	Orenda Engines	Mississauga 43°43' - 79°38'	Plating operations	C	Airplane engines	acid cyanide and chromium	Problem of lagoon dumping to Mimico Creek
B	Douglas Aircraft	Mississauga 43°43' - 79°39'	"	C		acid cyanide and chromium	No problem to date
C	Toronto International Airport	Mississauga 43°41' - 79°37'	Air traffic	E D C	Jet fuel Aviation gas Heavy industrial material	jet fuel, aviation gas, heavy industrial material	"

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/12 E

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
G	Anachemia Solvents	Mavis Road Mississauga 43°35' - 79°38'	Solvent recovery	E	Recovered Solvents	material solvents	Problem of solvents entering sanitary sewer
I	Gulf Oil Canada Ltd. Clarkson Refinery	385 Southdown Rd. Mississauga 43°31' - 79°37'	Oil refining	E	Full range of petroleum products	petroleum products, caustic soda	Potential, no problem to date
J	Diversey	Royal Windsor Dr. Mississauga 43°31' - 79°38'	Chemical mixing and blending	C	Chemicals	solvents & chemicals	Potential, no problem to date
K	Ashland Chemicals	Mississauga 43°31' - 79°37'	Chemical mfg.	E	Variety of chemicals		Plant at present under construction
L	Trial Waste Disposal Plant	Aronhead Rd. Mississauga 43°31' - 79°37'	Storage of industrial liquid wastes	D	Industrial liquid wastes, hydrocarbons, solvents and caustic acid	solvents, caustic acid	Storage area has no dykes or retaining walls
N	Texaco Canada Ltd.	Lakeshore Rd. Mississauga 43°33' - 79°35'	Oil refining	E	Full range of petroleum products	petroleum products, caustic acid	Potential problem, no problem to date
R	Lakeview Generating Plant	Hydro Road Mississauga	Electrical generation	D	Energy	oil, diesel fuel	Problem of oil entering Lake Ontario

MAP NO. 30 M/12 W

Brampton
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Terra Cotta Conservation Area 43° 43' - 79° 58'	-Credit Valley Conservation Authority -swimming and fishing are provided
2	River	Credit River 43° 45' - 79° 55' to 43° 37' - 79° 45'	-this entire section of the Credit is an important brook and brown trout angling and spawning area -many of the tributaries such as Rodgers and Silver Creek are also important for trout
3	Conservation Area	Kilso Conservation Area 43° 31' - 71° 57'	-Halton Region Conservation Authority -swimming, boating, and fishing are provided
4	Creek	Oakville Creek 43° 33' - 79° 50' to 43° 30' - 79° 47'	-this section of the Oakville Creek is utilized by rainbow trout as a spawning river
5	Pond	Milton Pond 43° 31' - 79° 54'	-pond is stocked annually with trout and provides a good sport fishery

MAP NO. 30 M/12 W

Brampton
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
6	Conservation Area	Heart Lake 43°44' - 79°48'	-Metropolitan Toronto and Region Conservation Authority -swimming, boating and fishing opportunities are provided

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/12 W

Bolton

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Domtar Paper	Georgetown			Paper products		
B	Abitibi Paper	"			"		
C	L. Robertson	Milton	Plating Operation		Various types of machine screws	Variety of Chemicals	

MAP NO. 30 M/13 E

Bolton
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area IBP	Cold Creek 43°54' - 79°42'	-this conservations area is administered by the Metropolitan Toronto and Region Conservation Authority -within this conservation area is one of the best examples of a black spruce bog forest (IBP site)
2	Conservation Area	Boyd Conservation Area 43°48' - 79°35'	-this area is administered by the Metropolitan Toronto and Region Conservation Authority -further development will extend this conservation authority to Kleinburg -fishing and swimming opportunities are provided
3	Conservation Area	Claireville Conservation Area 43°45' - 79°40'	-administered by Metropolitan Toronto and Region Conservation Authority -fishing and swimming opportunities are provided

MAP NO. 30 M/13 E

Site No.	Sensitive Area	Location	Description
4	River	Humber River 43°54' - 79°37'	-this river and its tributaries are the main drainage system on the NTS Map -the headwaters contain spawning area for brook trout -angling for this species is pursued over most of the area

WATER USERS AND INDUSTRIAL ACITIVITIES

MAP NO. 30M/13 E

Bolton

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
C	Canadian National Railway	Steeles & Keele Vaughan Twp. 43°48' - 79°31'	Rail terminal & storage depot	E		fuel oil, multitude of chemical compounds transported	Moderate hazard
B	Maivofuel Ltd.	Nashville 43°51' - 79°40'	Storage depot	C		fuel oil	
A	Stan Roots Co. Ltd.	Twp. of King 43°56' - 79°46'	"	C		"	

MAP NO. 30 M/13 W

Bolton
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Credit River 43° 48' - 80° 00' to 43° 45' - 79° 55'	-this portion of the Credit River is an important brook, rainbow and brown trout fishing area -spawning areas for these species occurs in the area also

Maple District
Central Region
Ontario Ministry of Natural Resources

2	Conservation Area	Palgrave Conservation Area 43°58' - 79°51'	-administered by the Metropolitan Toronto and Region Conservation Authority -swimming is provided
3	Conservation Area	Albion Hills 43°56' - 79°50'	-administered by the Metropolitan Toronto and Region Conservation Authority -swimming and fishing opportunities are provided at this park
4	River	Humber River 43°57' - 70°00' to 43°53' - 79°45'	-sport fishing for brook and brown trout takes place along this river

MAP NO. 30 M/14 E.

Markham
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Clairmont Conservation Area 43°58' - 79°05'	-administered by the Metropolitan Toronto and Region Conservation Authority -fishing is one of the park's activities
2	Conservation Area	Greenwood Conservation Area 43°54' - 79°04'	-administered by the Metropolitan Toronto and Region Conservation Authority -swimming and fishing are recreational activities pursued at this park
3	Creek	Duffin Creek 43°49' - 79°02' to 44°00' - 79°10'	-this creek is an important rainbow trout and salmon migratory route -the east branch is the more important than the west branch for spawning -recreational fishing is also important

MAP NO. 30 M/14 E.

Site No.	Sensitive Area	Location	Description
4	Conservation Area and Wetland	Pickering 44°51' - 79°04' Duffin Creek 43°49'	-these two areas are proposed development areas for the Metropolitan Toronto and Region Conservation Authority -the marsh at the mouth of Duffin Creek is an important waterfowl nesting and migration area
5	Wetland	Mouth of Rouge River 43°47' - 79°07' 43°48' - 79°06'	-waterfowl nesting area -smelt spawn at the mouth during the spring -the Lower Rouge is a Conservation Area administered by the Metropolitan Toronto and Region Conservation Authority -mouth of Petticoat Creek is a proposed Conservation area of the Metropolitan Toronto and Region Conservation Authority
6	Bay	Frenchman Bay 40°49' - 79°05'	-waterfowl nesting and migration stopover area -recreational boating -warm water fishing -swimming on the lake side of the spit at the entrance to the Bay

MAP NO. 30 M/14 E.

Site No.	Sensitive Area	Location	Description
7	Shoreline	Lake Ontario	-major migration stopover and staging area for waterfowl -puddle and diver ducks and geese overwinter along this shore and the adjacent marshes

Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
8	Creek	Lynde Creek 44°00' - 79°01'	-this cold water stream supports brook trout

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/14 E

Markham

INTAKES

Central Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
C	I	Johns Manville	5421 Lawrence Ave. E Lake Ontario 43°51' - 79°03'	K. Reed	O. - 282-3211 H. - 284-4462
E	M	Pickering Twp. Water Works	Lake Ontario 43°49' - 79°05'	P. Poulson R. Hutchinson	O. - 282-6664 H. - 668-5374 O. - 839-1136
F	M	Town of Ajax	Lake Ontario 43°49' - 79°02'		683-2800

INDUSTRIAL ACTIVITY

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Surpass Chemical Co.	West Hill Lake Ontario 43°46' - 79°12'	Chemical Mfg.	E	Various chemicals	oil additives, petroleum, caustic acid	Low hazard
B	Rohm and Haas Canada Ltd.	West Hill Lake Ontario 43°47' - 79°10'	"	D	"	petroleum peroxide styrene vinylacetate	"
D	United Co-op Ltd.	Claremont Duffin Creek 43°59' - 79°08'	Storage	C		aqua ammonia	"

MAP NO. 30 M/14 E

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
G	Drew Chemicals	Ajax 43°51' - 79°02'	Cleaning chemical manufacturing	D	Variety of chemicals such as solvents, fatty acids, caustic soda	solvents, fatty acids, caustic soda	
H	Dominion Colour Corp. Ltd.	Ajax 43°51' - 79°03'	Pigment mfg.	C	Chrome yellow molybdenum orange	lead nitrate, sodium chromate	

MAP NO. 30 M/14 W

Markham
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake, Conservation Area	Wilcox Lake St. George Lake 43°57' - 79°26'	-Wilcox Lake is used for such recreational activities as swimming and fishing (largemouth bass and pike) -St. George Lake is to be developed by the Metropolitan Toronto and Region Conservation Authority
2	Conservation Area	Bruce's Creek 43°57' - 79°21'	-administered by Metropolitan Toronto and Region Conservation Authority -swimming and fishing activities are provided -Bruce's Creek is part of the Rouge River system
3	Conservation Area	Milne Conservation Area 43°52' - 79°16'	-administered by Metropolitan Toronto and Region Conservation Authority -swimming and fishing opportunities are provided

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/14 W

Markham

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	King Cole Duck	Stouffville 43°58' - 79°16'	Poultry processing	E	Poultry	organic waste-water stored in holding ponds	Moderate hazard
B	Ramer Fuels	Richmond Hill 43°54' - 79°27'	Storage depot	C		fuel oil	
C	R.W. Perkins Ltd.	Unionville 43°52' - 79°19'	Storage depot	C		fuel oil	Low hazard risk
D	Chemgro	Concord 43°49' - 79°30'	Manufacture of agricultural chemicals	C		solvent storage	
	Gulf Oil Canada Ltd.	3485 Keele St. Toronto	Storage depot	E		diesel oil, furnace oil	
	Texaco Canada Ltd.	3999 Keele St. Toronto	"	E		fuel oil	
E	Liquifuels	1132 Finch Ave. W 43°45' to 47' 79°28' to 30'	"	E		furnace & stove oil	
	Petrofina	1133 Finch Ave. W	"	E		diesel oil, gasoline	

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/14 W

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
E	Imperial Oil	1150 Finch Ave. W	Storage depot	E		organic solvents, gasoline, aviation fuel	
	Supertest	601 Supertest Rd.	"	E		gasoline	
F	Canadian Pacific Railway	Shephard & Markham Scarborough 43°49' - 79°16'	Railway terminal storage	E		fuel oil & stored chemical compounds	

MAP NO. 30 M/15

Oshawa
Sensitive Area
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	43°58' - 44°00' to 78°58' - 78°59'	-Lynde Creek north of Brooklin, -brook trout area -recreational fishing
2	Wetland, IBP	43°51' - 78°58'	-mouth of Lynde Creek -fish spawning - pike, white bass -waterfowl; migration stopover for dabblers, divers geese, and sea ducks -waterfowl production, dabblers and geese -waterfowl overwinter dabblers, divers, geese -IBP area - Ontario Hospital marsh, 17 ha.
3	Conservation Area	43°57' - 78°60'	-Heber Down -368 acres -swimming -tributary to Lynde Creek -under the administration of Central Lake Ontario Conservation Authority

MAP NO. 30 M/15

Site No.	Sensitive Area	Location	Description
4	IBP	43°51' - 78°58'	-Le Vays Marsh -18 ha.
5	River	43°56' - 44°00' to 78°53' - 78°56'	-Oshawa Creek -recreational trout fishing
6	Creek	43°54' - 43°59' to 78°47' - 78°49'	-Farewell Creek, north of Hwy. 401 -trout stream
7	Wetland	43°53' - 78°49'	-Second Marsh -waterfowl breeding and migration stopover -spawning area for pike and white bass -IBP site, only breeding area in the new world for Larus minutus
8	Park	43°55' - 78°51'	-Harmony Valley, under the administration of the Central Lake Ontario Conservation Authority
9	Creek	43°54' - 44°00' to 78°40' - 78°47'	-Bowmanville Creek -rainbow and brook trout fishing

MAP NO. 30 M/15

Site No.	Sensitive Area	Location	Description
10	Wetland	43°54' - 78°41' to 43°54' - 78°40'	-waterfowl breeding -spawning of northern pike and white bass -beach area
11	Creek	43°54' - 44°00' to 78°35' - 78°39'	-waterfowl production and migration stopover -IBP area, Bowmanville Marsh -Wilmont Creek and tributaries- one of the best trout and salmon streams flowing into Lake Ontario
12	Creek	43°54' - 44°00' to 78°34' - 78°30'	-Graham Creek and tributaries, major trout and salmon stream
13	Lake	43°53' - 78°37'	-commercial fishing area
		43°53' - 78°35'	-commercial fishing and spawning area
14	Park	43°53' - 78°48'	-Darlington Provincial Park -beach area along shoreline

WATER USERS AND INDUSTRIAL INTAKES

MAP NO. 30M/15

Oshawa

INTAKES

Central Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
J	M	Town of Newcastle	Lake Ontario 43°54' - 78°34'		
I	M	Town of Bownmanville	Lake Ontario 43°54' - 78°41'	A. Traybol B. Christie	O. - 623-7760 H. - 623-5318 H. - 668-5804
H	M	City of Oshawa	Lake Ontario 43°52' - 78°51'		723-7233
C	I	Lake Ontario Steel Co.	Lake Ontario 43°51' - 78°55'	B. Peterson	668-8811
A	M	Town of Whitby	Lake Ontario 43°52' - 78°57'		668-3525

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 30M/15

Oshawa

INDUSTRIAL ACTIVITIES

Central Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
G	Shell Canada Ltd.	Oshawa 43°53' - 78°50'	Storage depot	E	Oil	fuel oil	Low hazard risk
	D.X. Oil Co.	"	"	E	"	"	"
	Lander Stark	"	"	E	"	"	"
	Murphy Oil Co. Ltd.	"	"	E	"	"	"
E	Houdaille Industries Ltd.	Oshawa 43°53' - 78°52'	Metal plating	C	Car bumpers	chromic acid, nickel plating solution, sulphuric acid baths	Moderate hazard risk
D	Robson Laing Leathers Ltd.	Oshawa 43°53' - 78°52'	Tannery	C	Leather	spent pickle liquor, acid rinse water, chrome tanning solutions	"
F	Dixon Fuels Ltd.	Oshawa 43°54' - 78°51'	Storage depot	D		fuel oil	
B	Texaco Canada Ltd.	Whitby 43°52' - 78°57'	Storage depot	E		fuel oil	Low hazard risk

MAP NO. 30 M/16

Port Hope
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Graham Creek 43°54' - 44°00' to 78°27' - 78°30'	-sport fishing for rainbow trout and brook trout -chinook and coho salmon run on lower reaches -smelt fishing and spawning at mouth of river
2	Creek	Port Britain Creek 43°56' - 44°00' to 78°22' - 78°25'	-sport fishing for trout -rainbow trout spawning run -smelt fishing and spawning at mouth of river
3	River	Ganaraska River 43°57' - 44°00' to 78°17' - 78°23'	-sport fishing river for trout -important spawning river for lake run rainbow and brown trout, chinook and coho salmon -smelt fishing and spawning at mouth of river
4	Park	43°60' - 78°20'	-Sylvan Glen Conservation Area -administered by Ganaraska Conservation Authority

MAP NO. 30 M/16

Site No.	Sensitive Area	Location	Description
5	Park	43°58' - 78°18'	-swimming and fishing -Port Hope Conservation Area -administered by the Ganaraska Conservation Authority
6	Creek	Gage Creek 43°57' - 44°00' to 78°14' - 78°17'	-sport fishing for trout -lake run for rainbow trout -spawning run -smelt fishing and spawning at mouth of creek
7	Creek	Cobourg Creek 43°57' - 44°00' to 78°10' - 78°14'	-cold water stream, sport fishing for trout -spawning stream for trout -smelt fishing and spawning at mouth of creek
8	Park	43°58' - 78°09'	-Cobourg Conservation Area, administered by the Ganaraska Conservation Authority -fishing
9	Creek	Hortop Creek 43°58' - 44°00' to 78°02' - 78°03'	-lake rainbow trout spawn up to the 1st dam at West Mill -sport fishing for rainbow trout -smelt fishing and spawning at mouth of creek

MAP NO. 30M/16

Site No.	Sensitive Area	Location	Description
10	Creek	Shelter Valley Creek 43°58' - 44°00' to 78°0.1' - 78°00'	-important fish migration route for rainbow trout, chinook and coho salmon -sport fishing for trout and salmon -smelt fishing at mouth of creek
11	Lake	43°54' - 78°28'	-fish spawning and commercial fishing for white fish
		43°56' - 43°57' to 78°12' - 78°15'	
		43°51' - 43°55' to 78°00' - 78°30'	-as above -coho, kokankee commercially harvested (spawning in rivers) -two to three operators work out of Port Hope
12	Wetland, IBP	43°56' - 78°22'	-marsh at mouth of Port Britain Creek
		43°57' - 78°16'	-marsh at mouth of Gage Creek
		43°57' - 78°13'	-IBP site, cattail marsh -waterfowl -these above areas as well as the entire Lake Ontario shoreline are utilized by migration waterfowl as a stopover area

WATER USERS AND INDUSTRIAL INTAKES

MAP NO. 30M/16

Port Hope

Central Region
Ontario Ministry of the Environment

INTAKES

Site No.	Type	User	Location	Contact	Telphone
A	M	Port Hope	Lake Ontario 43°57' - 78°19'	L. Nelson	O. - 885-2269 H. - 885-5608
				A.D. MacGillis	O. - 885-2269 H. - 885-4892
D	M	Town of Cobourg	Lake Ontario 43°58' - 78°08'	W.A. Woods	O. - 372-7112 H. - 372-5544

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Cosmos Chemical Ltd.	Port Hope 43°58' - 78°11'	Organic chemicals solvent preparation	B	Solvents, organic chemicals	Solvents	Low hazard
E	Fuel Terminal & unloading	Cobourg 43°58' - 78°11'	Transfer from boat to shore storage	E	Oils, gasoline	oil & gasoline	Low hazard
C	Gulf Oil Canada Ltd.	Port Hope 43°57' - 78°18'	Storage	E		fuel oil	

MAP NO. 30M/16

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
C	Texaco Canada Ltd.	Port Hope 43°57' - 78°18'	Storage	E		fuel oil	
	Shell Oil Canada Ltd.	"	"	E		"	
	Fina Canada Ltd.	"	"	E		"	
	Trans Northern Pipeline Co. Ltd.	"	"	E		"	

MAP NO. 30 N/13

Presqu'ile
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Lakeport Creek 43° 59' - 44° 00' to 77° 54' - 77° 57'	-migratory route for lake run rainbow trout
2	Beach	43° 58' - 77° 59' to 43° 58' - 77° 54'	-beaches at both locations utilized during the summer months
3	Lake	43° 54' - 43° 55' to 77° 54' - 78° 00'	-commercial fishing and spawning area for whitefish

Presqu'ile
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
4	Park	43° 60' - 76° 43'	-Presqu'ile Provincial Park -swimming -waterfowl migration and staging area

MAP NO. 30 N/13

Site No.	Sensitive Area	Location	Description
5	Shoreline	43°58' - 77°34' to 44°00' - 77°36'	-important waterfowl migration and staging area
		43°56' - 77°31' to 44°00' - 77°36'	-this area and the northwest shore of Wellers Bay is important for salmon and rainbow spawning -lake herring spawn along the east side of the sand bar from Island Point to 44°00' - 77°36'
6	Park	43°58' - 77°32'	-North Beach Provincial Park -large beach area
7	Shoreline	Scotch Bonnett Island 43°54' - 77°33'	-important island for the nesting of gulls and terns

MAP NO. 30 N/14 E

Wellington
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Park, IBP	43°54' - 77°14'	-Outlet Beach Provincial Park -swimming and fishing -one of the major beaches on Lake Ontario -unique vegetation associations for the Province
2	Shoreline	Point Petre 43°51' - 77°09' to 43°53' - 77°03'	-major waterfowl migration and staging area
3	Shoreline	Salmon Point 43°52' - 77°15' to Petticoat Pt. 43°54' - 77°00'	-important whitefish spawning area in Lake Ontario
4	Lake	Prince Edward Bay 43°57' - 77°01'	-an important migration and staging area for waterfowl

MAP NO. 30 N/14 W

Wellington
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Huycks Point 43°56' - 77°30'	-this shoreline area is important as a smallmouth bass and yellow perch spawning area
2	Wetland	Pleasant Bay to the Villages of Hillo and Wellington including the shoreline area	-an important waterfowl migration and staging area
3	Lake	Wellington Bay from the Village of Wellington to West Point	-this area is an important salmon spawning area as well as an important yellow perch spawning area -commercial fishing of yellow perch
4	Park	43°55' - 77°17'	-Sandbanks Provincial Park -this is a major beach area on Lake Ontario -sensitive sand dunes characterize the park area

MAP NO. 30 N/15 E

Duck Island
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline, Lake	Duck Island 43°56' - 76°37'	-nesting and staging area for waterfowl

MAP NO. 30 N/15 W

Duck Island
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Prince Edward Bay	-an important migratory staging area for waterfowl
2	Wetland	Long Point 43°56' - 76°55'	-an important staging and migration area for waterfowl
3	I.B.P.	Timber Island 43°58' - 76°50'	-gull and tern nesting site -wilderness area -rare plant species present
4	Shoreline	43°54' - 77°00' to Prince Edward Pt.	-important spawning area for whitefish in Lake Ontario

MAP NO. 31 C/1

Wolfe Island
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Cataraqui River 44° 14' - 76° 28'	-boating area, entrance to the Rideau Canal System
2	Park	Cedar Island 44° 13' - 76° 27'	-St. Lawrence Islands National Park
3	Shoreline, Wetland	Wolfe Island	-the waters surrounding Wolfe Island are important for angling, commercial fishing and a spawning area for pike, smallmouth bass, yellow perch -this area also has concentrations of trout and salmon
		44° 08' - 76° 30' to 44° 08' - 76° 28'	-shoreline area is a spawning area for smallmouth bass
		44° 08' - 76° 30' to 44° 06' - 76° 30' (Long Point)	-an important waterfowl area, migration stopover and staging area
		Reeds Bay 44° 07' - 76° 28'	-both shorelines of Long Point are smallmouth bass spawning areas
		Big Sandy Bay 44° 06' - 76° 27'	-waterfowl migration stopover and staging area

MAP NO. 31 C/1

Site No.	Sensitive Area	Location	Description
		Bear Point 44°06' - 76°27'	-smallmouth bass spawning area
		44°08' - 76°25' to 44°08' - 76°21'	-smallmouth bass spawning area -waterfowl migration stopover and staging area
4	Shoreline/Wetland	Wolfe Island Hinckley Point 44°08' - 76°21'	-shoreline areas in the vicinity of this point are smallmouth bass spawning areas
		Button Bay 44°08' - 76°22'	-this bay and the shoreline areas extending in either direction are utilized by waterfowl for migration stopovers and staging areas
		Bayfield Bay 44°12' - 76°21'	-staging and migration stopover area for waterfowl -wetland area at head of the bay is of importance as a nesting area for waterfowl -the shoreline of this bay is utilized by smallmouth bass for spawning
5	Shoreline	Wolfe Island Beauvais Pt. Quebec Head. Brakey Bay Dignam Pt. Rattray Pt. to Irvine Bay Holiday Pt. Oak Pt. Brophy Pt.	-these areas are important for the spawning of smallmouth bass

MAP NO. 31 C/1

Site No.	Sensitive Area	Location	Description
5	Shoreline	Knapp Pt. Brown Bay Dawson Pt. Barrett Bay Garden Island Mill Pt. to Boat Channel	-these areas are important for the spawning of smallmouth bass

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/1

Wolfe Island

Southeastern Region
Ontario Ministry of the Environment

INTAKES

Site No.	Type	User	Location	Contact	Telephone
A	M	Kingston 44°14' - 76°30'	Kingston Harbour	K. Allen	542-1763

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Queens University	Kingston 44°14' - 76°30'	Education Institution	D	Knowledge	oil storage	High Hazard
C	S. Anglin Co. Ltd.	44°15' - 76°29'	Storage and distribution	E		oil storage	"
E	Rosen Fuels Ltd.	44°15' - 76°30'	Storage and distribution	E		oil storage	"
D	Imperial Oil Ltd.	44°15' - 76°30'	Storage and distribution	E		oil storage	"

MAP NO. 31 C/2

Bath
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Napanee River 44° 12' - 44° 15' to 76° 57' - 77° 00'	-this section of the Napanee River is utilized by rainbow trout and chinook and coho salmon as a migratory route -pickerel and pike also use this river for spawning
2	Lake	Hay Bay 44° 10' - 76° 56'	-this area is important as a pickerel spawning area -waterfowl nesting occurs along the eastern shore areas and the entire bay area is used by migrating flocks
3	Park	44° 04' - 76° 60'	-Adolphustown Provincial Park -swimming and fishing
4	Lake	Adolphus Reach 44° 02' - 44° 08' to 76° 50' - 77° 00'	-shoreline area is an important spawning area for white perch -the entire area supports winter commercial fishing for white perch -area also supports a commercial harvest of coarse fish -entire area is an important staging area for waterfowl -an overwintering area for diver ducks

MAP NO. 31 C/2

Site No.	Sensitive Area	Location	Description
			-boating is also an important activity as it is a sheltered route between the Rideau and Trent River Systems
5	Creek	Millhaven Creek 44°12' - 44°15' to 76°44' - 76°48'	-rainbow trout, chinook and coho salmon use this creek as a migratory route and spawning area
6	Lake	North Channel 44°08' - 76°47' to 44°07' - 76°47'	-spawning areas for smallmouth bass
7	Lake	Kerr Point 44°11' - 76°44'	
		Sand Bay 44°11' - 76°38'	
		Melville Shoal 44°11' - 76°35'	
		Brother Islands 44°13' - 76°38'	-this area of the North Channel is important for angling, and commercial fishing -boating activity is also important in this area as it is a sheltered access route between the Rideau and Trent River systems

MAP NO. 31 C/2

Site No.	Sensitive Area	Location	Description
8	Creek, Wetlands, Park	Little Cataraqui Creek 44°13' - 44°15'	-an important waterfowl breeding and migration stopover area -this area is also important for angling and spawning of pike, large and smallmouth bass
		44°15' - 76°33'	-Little Cataraqui Conservation Area, administered by the Cataraqui Conservation Authority -fishing
9	Lake	Lake Ontario 44°00' - 44°13' to 76°30' - 77°00'	-entire shoreline area is an important migratory staging area for waterfowl (ducks and geese) -some geese overwinter on the open water areas -important commercial fishing here for eel, lake whitefish, white perch and yellow perch
10	Lake	44°09' - 76°32'	-centred around this point is a major salmon concentration
11	Shoreline	Four Mile Point to Simcoe Island on Simcoe Island	-shoreline areas are important as spawning areas for smallmouth bass
		Snake Island	-also important as waterfowl breeding and staging areas

MAP NO. 31 C/2

Site No.	Sensitive Area	Location	Description
11		Horseshoe Island	
		Wolfe Island	-geese overwinter on the open water areas

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/2

Bath

INTAKES

Southeastern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Napanee	Napanee 44°15' - 76°57'	R. Lawrence	354-3325
B	M	Sandhurst	North Channel 44°07' - 76°54'		
C	M	Bath	44°11' - 76°47'	W. Tompkins	352-7539
H	M	Quinte View	44°11' - 76°46'	Mrs. Dyon	
L	M	Floating Bridge	44°13' - 76°42'	Cep Drinka	389-4970
M	M	Harewood Vlg.	44°13' - 76°41'	"	"
N	M	Amherstview	44°13' - 76°38'	"	"
O	M	Kingston Township	44°14' - 76°36'	R. Caird	546-4043
P	M	Kingston Township	Lake Ontario 44°14' - 76°34'	R. Caird	"
I	I	Millhaven Fibres Ltd.	Millhaven 44°13' - 76°44'	Mr. D. McRobie	389-2210
E	I	Lennox Generating System	Bath 44°13' - 76°43'	G. Hawkins	352-3381 Ext. 351
Q	I	DuPont (Canada) Ltd.	Kingston 44°13' - 76°35'	D. Dickson	544-6000

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31 C/2

Site No.	Type	User	Location	Contact	Telephone
G	I	Canada Cement Lafarge	Bath 44°11' - 76°48'	D. Courtney	352-7711

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
J	Liquifuels Ltd.	Millhaven 44°13' - 76°43'	Petroleum	E	Petroleum products	oil	High Hazard
K	Millhaven Fibres Ltd.	Millhaven 44°13' - 76°43'	Milling	D	Fibres	alcohol and oil storage	"
D	Lennox Generating Station	Bath 44°10' - 76°49'	Power station	E	Energy	oil storage	"
R	DuPont Canada Ltd.	Kingston 44°13' - 76°35'	Chemical mfg.	D	Hydrocarbons	oil, acid and hydrocarbon storage	"
F	Canada Cement Lafarge	Bath 44°10' - 76°49'	Cement products	D	Building products	oil storage	"

MAP NO. 31 C/3

Belleville
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Mouth of Moira River 44°09' - 77°24'	-important angling and spawning area for pike, pickerel -important boating area
2	Lake	Bay of Quinte	-important waterfowl area for nesting and staging
		Wallbridge Pt. 44°09' - 77°21'	-important pickerel spawning and fishing areas
		Massasauga Pt. 44°09' - 77°19'	
		Horse Pt. 44°09' - 77°18'	
		Ox Pt. 44°09' - 77°19'	
		Point Anne 44°09' - 77°18'	
3	River	Salmon River 44°11' - 44°15' to 77°09' - 77°15'	-pickerel, pike and salmon spawning area

MAP NO. 31 C/3

Site No.	Sensitive Area	Location	Description
4	River, Shoreline	Marysville Creek 44°11' - 77°13'	-important pike, pickerel and smallmouth bass spawning areas
		Sucker Creek 44°11' - 77°07' and shoreline along the north shore of Telegraph Narrows	
5	Lake	Bay of Quinte Big Island from Richson Pt. 44°05' - 77°18' to 44°08' - 77°14'	-entire Bay of Quinte is heavily utilized for sport fishing and boating -commercial fishing is carried on for white perch, pickerel, eel, yellow perch, and freshwater drum, carp -the 1970 landings in pounds were: white perch (401,840 lbs!) eel (67,367 lbs.) pickerel (5,938 lbs.) yellow perch (150,704 lbs) freshwater drum (15,203 lbs.) carp(171,211 lbs.) -important pickerel spawning area
		44°08' - 77°12' to 44°11' - 77°04' and Foresters Island	-this area is an important migratory staging area in the spring and fall -the Bay of Quinte is also important as a boating area as it is a sheltered route between the Trent and Rideau Canal systems

MAP NO. 31 C/3

Site No.	Sensitive Area	Location	Description
6	Lake	Long Beach 44°03' - 44°11' to 77°04' - 77°05'	-this area is an important angling and spawning area for pickerel -important area for migrating waterfowl during the spring and summer -important boating area as mentioned above
7	Lake, Park	Hay Bay 44°07' - 77°02'	-important pickerel angling and spawning area -important staging area
8	Park	44°03' - 77°04'	-Lake on the Mountain Provincial Park -swimming and fishing
9	Park	44°06' - 77°01'	-Hay Bay Conservation Area -administered by the Cataraqui Conservation Authority -swimming and fishing
		44°04' - 77°00'	-Adolphustown Provincial Park -swimming and fishing
10	IBP	The Big Swamp 44°02' - 77°20' to 44°02' - 77°14'	-two parts of this swamp are IBP sites, east and west of Highway 14 -several rare plant species

MAP NO. 31 C/3

Site No.	Sensitive Area	Location	Description
11	Lake, Creek	Consecon Lake 44°01' - 77°28' Consecon Creek 44°01' - 77°17' to 44°01' - 77°25'	-pike and pickerel spawning -largest pickerel run in the region up this creek

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/3

Belleville

INTAKES

Southeastern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Bayside School	Bay of Quinte 44°07' - 77°29'	B. Bond	
L	M	Belleville	44°09' - 77°24'	J. Serivin	962-2669
M	M	Deseronto	44°12' - 77°03'	S. Knapp	
N	M	Picton	Picton Bay 44°02' - 77°09'	L. Tolley	476-2337
O	I	Lake Ontario Cement Ltd.	Picton Bay 44°04' - 77°08'	J. Wynen	476-3233
I	I	Union Carbide	Belleville 44°10' - 77°21'	R. Carter	968-5501
K	I	Metcalfe Foods	Deseronto 44°11' - 77°04'	D.T. Craft	396-2122

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/3

Belleville

INDUSTRIAL ACTIVITIES

Southeastern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
C	Texaco Canada Ltd.	Cannifton 44°13' - 77°24'	Storage	E		oil storage tanks	High Hazard
D	Shell Canada Ltd.	Cannifton 44°13' - 77°23'	Storage	E		gasoline, oil storage	"
E	Gulf Oil Canada Ltd.	44°13' - 77°23'	"	E		oil and gasoline storage	"
G	Moira Schuster Fuels	Belleville 44°10' - 77°24'	"	E		oil storage	"
H	Imperial Oil Ltd.	44°10' - 77°24'	"	E		oil storage	Moderate Hazard
F	Dussek Brothers	44°11' - 77°24'	"	D		oil storage	"
B	Corby Distillery Ltd.	Corbyville 44°14' - 77°24'	Distillery	D	Alcohol	alcohol	High Hazard
J	Union Carbide Ltd.	Belleville 44°10' - 77°21'	Resin manufacture	E	Organic chemicals	alcohol, formaldehyde, phenolic resins, phenolic wastes	"

MAP NO. 31 C/4

Trenton
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek, IBP	Percy Creek 44°13' - 44°13' to 77°49' - 78°00'	-cold water stream of importance as a brook and brown trout stream
		44°14' - 77°06'	-IBP site -typical swamp valley in drumlin type terrain
2	Creek	Burnley Creek 44°09' - 44°13' to 77°51' - 78°00'	-cold water stream of importance as a brook and brown trout stream
3	Creek	Salt Creek 44°07' - 44°14' to 77°45' - 47°60'	-cold water stream of importance as a brook and brown trout stream
4	Fish hatchery, Creek	Codrington Creek Hatchery 44°09' - 77°44'	-Provincial hatchery -production of all species of trout
		Marsh Creek 44°08' - 44°12' to 77°47' - 77°48'	-cold water stream -trout spawning

MAP NO. 31 C/4

Site No.	Sensitive Area	Location	Description
5	Wetland	Murray Marsh 44°12' - 77°45'	-this area is significant for waterfowl resting and as a migration stopover
6	River	Percy Reach 44°14' - 77°47'	-Percy Reach forms part of the Trent Canal System -maskinonge and pike spawning grounds -fast water below dam at Meyers is an important pickerel spawning area
7	Creek, IBP	Cold Creek 44°13' - 44°12' to 77°30' - 77°59'	-Cold Creek and tributaries - Bidely Creek and Breakaway Creek are important brook and brown trout streams
		Biddy Creek 44°04' - 77°03'	-IBP site -good example of a swamp scrubland succession into an open pond
8	River	Trent River 44°15' - 77°35' to 44°07' - 77°35'	-this river has extensive watercraft traffic -it is also important as a pike, pickerel, maskinonge and largemouth bass spawning and angling area

MAP NO. 31 C/4

Site No.	Sensitive Area	Location	Description
8	River	Trent River 44°07' - 77°36' to 44°11' - 77°36' to 44°12' - 77°36'	-these locations are the more significant spawning areas.
9	Creek	Maghew Creek 44°07' - 77°35' to 44°06' - 77°42'	-brook trout spawning and angling stream

MAP NO. 31 C/4

Trenton
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
10	Brook	Shelter Valley Brook 44°00' - 78°00' to 44°63' - 78°00'	-an important migratory route for spawning rainbow trout and salmon -also an important recreational fishing stream

MAP NO. 31 C/4

Site No.	Sensitive Area	Location	Description
11	Creek	Lakeport Creek 44°00' - 77°49' to 44°03' - 77°51'	-both of these creeks are spawning areas for rainbow trout, kokanee, coho, and chinook salmon
		Loughbreeze Creek 44°00' - 77°53' to 44°03' - 77°54'	
12	Creek	Salem Creek 44°00' - 44°03' to 77°50' - 77°51'	-as above
		Spencer Point Creek 44°00' - 44°01' to 77°48' - 74°44'	-as above
13	Park, Bay	Presqu'ile Provincial Park 44°0.5' - 77°44'	-swimming -an important nesting, staging and migratory stopover for waterfowl
		Presqu'ile Bay 44°01' - 77°42'	-important migratory and staging area for waterfowl -cottage concentration at Goose Point

MAP NO. 31 C/4

Site No.	Sensitive Area	Location	Description
14	Lake	Lake Ontario 44°01' - 77°38' to 44°00' - 77°36'	-an important waterfowl migration stopover and staging area -high cottage concentration from Shoal Pt. to Barcovan Beach -salmon and rainbow trout spawn along the lake shore of Bald Head Island
15	Lake	Bay of Quinte	-major boating area due to the presence of the Trent Canal -important sport and commercial fishery
		Mouth of Trent River 44°06' - 77°35'	-pickerel spawning area
		Twelve O'Clock Pt. 44°04' - 77°35'	-as above
		Indian Island 44°10' - 77°34'	-as above
		Baker Island 44°06' - 77°32'	-as above

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP. NO. 31C/4

Trenton

INTAKES

Southeastern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Batawa	Trent River 44°11' - 77°36'	A. Marek	
B	M	Trenton	Lake Tremur 44°07' - 77°37'	J. Bryer	392-4978
C	M	Trenton	Trent River 44°08' - 77°35'	J. Bryer	392-4978
D	I	Domtar Packaging Ltd.	Trent River 44°08' - 77°35'		392-6505

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
E	Domtar Chemical Ltd.	Trenton 44°07' - 77°35'	Chemical mfg.	D		creosote, cresote/ petroleum, pentha, methylene chloride	High Hazard
F	C.F.B. Trenton	Trenton 44°07' - 77°32'	Air base	D		jet fuel, aviation gas, oil	Moderate Hazard

MAP NO. 31 C/5

Campbellford
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Onse River 44° 25' - 44° 30' to 77° 58' - 78° 00'	-cold water stream inhabited by trout -trout spawning -sport fishing
2	Lake	Round Lake 44° 29' - 77° 53'	-high concentration of cottages
3	Lake	Belmont Lake 44° 28' - 77° 50'	-high concentration of cottages
4	River	Trent Canal 44° 17' - 44° 24' to 77° 52' - 77° 00'	-major boating area
		44° 19' - 77° 57'	-pickerel spawning area below dam
5	River	Trent Canal 44° 18' - 44° 24' to 77° 48' - 74° 52'	-major boating area
		44° 22' - 77° 47' to 44° 19' - 77° 48'	-pickerel spawning from below dam to below swing bridge

MAP NO. 31 C/5

Site No.	Sensitive Area	Location	Description
6	Park	44°17' - 77°48'	-pickerel spawning -Ferris Provincial Park -boating and swimming
7	River	Trent Canal 44°15' - 44°18' to 77°34' - 77°48'	-major boating area
8	Park	44°23' - 77°45'	-Crowe Valley Conservation Area, administered by the Crowe Valley Conservation Authority -boating and swimming
9	Park	44°20' - 77°38'	-King's Mill Conservation Area, administered by Lower Trent Conservation Authority -fishing

MAP NO. 31 C/5

Campbellford
Sensitive Areas
Tweed District
Souteastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
10	River	Crowe Lake 44° 29' - 77° 44'	-high concentration of cottages -sport fishing for warm water species

MAP NO. 31 C/5

Site No.	Sensitive Area	Location	Description
10	River	Crowe River 44° 28' - 44° 30' to 77° 41' - 77° 43'	-sport fishing

MAP NO. 31 C/6

Tweed
Sensitive Areas
Tweed District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Moira Lake 44° 29' - 77° 27'	-high concentration of cottages -recreational fishing -pickerel spawning in many of the streams entering the lake where suitable habitat is present
2	Lake	Stoco Lake 44° 29' - 77° 18'	-high concentration of cottages -recreational fishing for warm water species -pickerel spawning in many of the creeks and streams entering the lake
3	River	Moira River 44° 22' - 44° 30' to 77° 16' - 77° 20'	-sport fishing for warm water species -pike, pickerel and maskinonge spawning and angling
4	Park	44° 24' - 77° 19' East of Thomasburg	-Vanderwater Conservation Area, administered by the Moira River Conservation Authority -623 acres -swimming, fishing available

MAP NO. 31 C/6

Site No.	Sensitive Area	Location	Description
5	Lake	Beaver Lake 44°30' - 77°02'	-high cottage concentration
6	IBP	Goose Creek Ponds 44°28' - 77°06'	-well developed marsh basin complex -many rich vegetation patterns
7	Lake	Lime Lake 44°25' - 77°07'	-pickerel fishing and spawning
	IBP	IBP - northeast section of lake and surrounding wetlands	-IBP - cedar swamp with many rare plant species

Tweed
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
8	River	Moira River 44°15' - 44°22'	-sport fishing and spawning for pike, maskinonge and pickerel -maskinonge and pike inhabit the marshy areas of the lower Moira
9	Conservation Area, Wetland	44°17' - 77°25'	-Moira River Conservation Area, administered by the Moira River Conservation Authority -waterfowl nesting

MAP NO. 31 C/6

Site No.	Sensitive Area	Location	Description
9		44°16' - 77°21'	-waterfowl nesting area, Thresher Corners Swamp
10	Wetland	Mud Lake 44°21' - 77°07'	-relic, boreal bog -waterfowl nesting area

MAP NO. 31 C/7

Sydenham
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Camden Lake 44°25' - 76°52'	-both ducks and geese use this area for breeding and migration stopover -provincial wildlife management area -this area includes the wetlands surrounding the Napanee River as far east as Highway 38 -wild rice is found in the wetlands from Camden Lake to Highway 38 -muskrats are harvested along this stretch of the river
2	Lake	Varty Lake 44°23' - 76°49'	-ducks and geese utilize this area for breeding and migration stopovers -water mammals (muskrat) are also harvested in this area -pike, small and largemouth bass spawning -angling for the above species
3	Lake	Pearkes Lake 44°30' - 76°33'	-osprey nesting site
		Pond Lily Lake 44°30' - 76°32'	-blue heron nesting site

MAP NO. 31 C/7

Site No.	Sensitive Area	Location	Description
4	Park	Gould Lake 44°29' - 76°35'	-Gould Lake Conservation area -fishing and swimming
		Cronk Lake 44°23' - 76°34'	-Cronk Lake Conservation Area -fishing and swimming -both areas administered by the Cataraqui Conservation Authority
5	Lake	Knowlton Lake 44°28' - 76°37'	-osprey nesting site
6	Lake	Sydenham Lake 44°26' - 76°34'	-lake trout lake -high cottage concentration
		44°26' - 76°31'	-Sydenham Lake Conservation Area, administered by the Cataraqui Conservation Authority
7	IBP	Harrowsmith Bog 44°25' - 76°42'	-one of the few peat bogs in the area, contains unusual plant associations
8	Lake	Odessa Lake 44°19' - 76°41'	-waterfowl nesting and staging area -muskrat trapping is carried on around this lake

MAP NO. 31 C/7

Site No.	Sensitive Area	Location	Description
9	Lake	Loughborough Lake 44°23' - 76°32' to 44°21' - 76°34'	-high density of cottages -Loughborough Conservation Area -fishing -administered by the Cataraqui Conservation Authority -lake trout, whitefish, bass and pike are heavily fished in this lake

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/7

Sydenham

Southeastern Region
Ontario Ministry of the Environment

INTAKES

Site No.	Type	User	Location	Contact	Telephone
A	M	Napanee	Napanee 44°16' - 76°57'	R. Lawrence	354-3325

INDUSTRIAL ACTIVITIES

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Shell Canada Ltd.	Kingston 44°17' - 76°33'	Storage and distribution	E		oil	
C	Gulf Oil Canada Ltd.	44°17' - 76°33'	"	E		"	
D	Fina Ltd.	44°17' - 76°33'	"	E		"	
E	Texaco Ltd.	44°17' - 76°33'	"	E		"	

MAP NO. 31 C/8

Gananoque
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Wetland	Herbert Bog 44°29' - 76°29'	-this area is designated as a nature reserve -this sphagnum bog contains many rare or endangered plant and animal species
2	Lake	Loughborough Lake 44°26' - 76°26'	-high density of cottages
		44°25' - 76°30'	-lake trout and whitefish spawning area
		44°25' - 76°28'	-Lakes Bay, lake trout and whitefish spawning area
3	Lake	Collins Lake 44°22' - 76°29'	-maskinonge spawning and angling in this lake -the southerly part of this lake is utilized by waterfowl for breeding and a migration stopover
4	Lake, Park	Little Cranberry Lake 44°29' - 76°16'	-high cottage concentration on all three lakes
		Seeleys Bay 44°29' - 76°14'	-Seeleys Bay Conservation Area, administered by the Cataraqui Conservation Authority -fishing

MAP NO. 31 C/8

Site No.	Sensitive Area	Location	Description
4	Lake, Park	Cranberry Lake 44°26' - 76°19'	-high boating concentration due to the Rideau Canal through Little Cranberry and Cranberry Lake
		Dog Lake 44°26' - 76°20'	
5	River	River Styx 44°17' - 44°22' to 76°21' - 76°28'	-concentrated boating activity due to presence of Rideau Canal -high cottage concentration -small commercial fishing for bullheads in this area
		Steventown Creek 44°19' - 44°20' to 76°21' - 76°25'	-both creeks are important for angling and as spawning areas for pike and largemouth bass
		Bear Creek 44°21' - 44°23' to 76°23' - 76°26'	
6	Wetland, River	44°17' - 76°28'	-Cataraqui marsh -important waterfowl area for breeding and migration -muskrats are harvested locally from this area -coarse fish are harvested on a small scale -boating activity is concentrated here due to the presence of the Rideau Canal

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 31C/8

Gananoque

INTAKES

Southeastern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Joyceville Institution	Rideau Canal 44°22' - 76°22'	Federal Government	
E	M	Milton Subdivision	St. Lawrence River 44°24' - 76°31'	R. Sweeney	544-2520

MAP NO. 31 C/9

Westport
Sensitive Areas
Napanee District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Wolfe Lake 44°40'-76°30'	-high concentration of cottages -sport fishing for warm water species; pike, bass and pickerel
2	Lake	Devil Lake 44°35' - 76°27'	-high cottage concentration
		44°35' - 76°26' 44°35' - 76°26'	-spawning area for lake trout
		Papoose Island 44°35' - 76°26' to 44°34' - 76°26'	-lake trout sport fishing
3	Lake	Big Salmon Lake 44°33' - 76°30' to 44°33' - 76°29'	-spawning and sport angling for lake trout
4	Lake	Hamilton Lake 44°34' - 76°23'	-osprey nesting site
5	Lake	Buck Lake 44°32' - 76°27'	-high concentration of cottages

MAP NO. 31 C/9

Westport
Sensitive Areas
Brockville District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
6	Lake	Upper Rideau Lake 44°41' - 76°21'	-high cottage concentration -concentration of boating activity due to the Rideau Canal System -sport fishing for warm water fish species
7	Lake, Park	Newboro Lake 44°37' - 76°18'	-high concentration of cottages -boating activity is heavy due to Rideau Canal System -sport fishing for warm water species
		44°36' - 76°22'	-Mosquito Lake Conservation Area, administered by the Cataraqui Conservation Authority -sport fishing
8	Lake	Opinicon Lake 44°34' - 76°20' Sand Lake 44°34' - 76°16'	-both lakes have a high concentration of cottages and boating activity is intense due to the presence of the Rideau Canal System

MAP NO. 31 C/9

Site No.	Sensitive Area	Location	Description
9	Lake	Upper Beverley Lake 44°37' - 76°05'	-high concentration of cottages on both lakes
		Lower Beverley Lake 44°36' - 76°08'	-sport fishing for warm water fish species
10	Lake	Whitefish Lake 44°31' - 76°15'	-high concentration of cottages -important boating lake due to the presence of the Rideau Canal System

MAP NO. 31 C/10

Tichborne
Sensitive Areas
Tweed District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	Lake	Kennebec Lake 44°44' - 76°57'	-high density of cottages -recreational sport fishing, mainly for pickerel
2	Lake	Big Clear Lake 44°43' - 76°55' to 44°44' - 76°55'	-high density of cottages -pickerel spawning area
3	Lake	Arden Lake 44°43' - 76°56' to 44°43' - 76°56'	-pickerel spawning area
		Buck Lake 44°43' - 76°57'	-pickerel spawning at mouth of Salmon River
		Horsehoe Lake 44°41' - 76°59'	-pickerel spawning at narrows where Bull Lake enters Horseshoe Lake
		Bull Lake 44°42' - 76°59'	-both Bull and Horseshoe Lakes have high cottage development
4	Lake	Fifth Depot Lake 44°37' - 76°53'	-pickerel spawning -sport fishing

MAP NO. 31 C/10

Site No.	Sensitive Area	Location	Description
5	Lake	Third Depot Lake 44°34' - 76°47'	-pickerel spawning and sport fishing
		Second Depot Lake 44°33' - 76°46' to 44°33' - 76°46'	-pickerel spawning and sport fishing -Second Depot Lake Conservation Area administered by the Napanee River Conservation Authority -swimming and boating
6	Wetlands	Hinchinbrooke Twp., Sheffield Twp., Kennebee Twp.	-high concentration of beaver throughout these townships
7	Lake	Kingsford Lake 44°34' - 76°33'	-important bald eagle nesting site in the province
8	Lake	Paddys Lake 44°36' - 76°31'	-these three lakes are important brook trout lakes
		Moulton Lake 44°34' - 76°31'	
		Tetsmine Lake 44°34' - 76°30'	
		Clearwater Lake 44°34' - 76°32'	-

MAP NO. 31 C/11

Kaladar
Sensitive Areas
Tweed District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Marsh	North and northeast portion of map	-high beaver concentration throughout this area -major area in province for beaver trapping
2	River	44°45' - 44°32' to 77°20' - 77°30'	-Black River and tributaries, warm water and cold water fisheries
3	Lake	Moira Lake 44°30' - 77°26'	-high concentration of cottages -pickeral spawning at most inlets
4	River	Skootamatta River 44°32' - 44°45' to 77°08' - 77°20'	-important warm and cold water fisheries -utilized for sport fishing
5	Park	44°34' - 77°20'	-Price Conservation Area, administered by the Moira River Conservation Authority -fishing
6	Lake	44°36' - 77°01'	-Sheffield Long Lake -pickerel spawning in tributary streams and rivers entering this lake

MAP NO. 31 C/11

Site No.	Sensitive Area	Location	Description
7	Lake	Beaver Lake 44°31' - 77°02'	-high concentration of cottages -part of the Salmon River System

MAP NO. 31 C/12

Bannockburn
Sensitive Areas
Bancroft District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Methuen Lake 44°44' - 78°55'	-high concentration of cottages -sport fishing for warm water species
		Kasshabog Lake 44°38' - 78°57'	-high concentration of cottages -sport fishing for pickerel and maskinonge
		44°40' - 78°56'	-pickerel spawning area
		West Twin Lake 44°38' - 78°53'	-high concentration of cottages

Bannockburn
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

2	River	Ouse River 44°30' - 44°33' to 77°59' - 77°60'	-trout stream spawning
3	Lake	Cordova Lake 44°34' - 77°50'	-high concentration of cottages
4	Hatchery	44°33' - 77°49'	-Ministry of Natural Resources Fish Hatchery

MAP NO. 31 C/12

Site No.	Sensitive Area	Location	Description
5	Lake	Belmont Lake 44°31' - 77°49'	-high concentration of cottages
6	Wetlands	the area bounded by 44°40' - 44°45' to 77°43' - 77°48'	-high concentration of beaver in this area -associated with the beaver ponds are waterfowl populations
7	River	Crowe River 44°36' - 44°45' to 77°47' - 77°52'	-warm and cold water fish -important headwater stream
8	Creek	Beaver Creek 44°30' - 44°45' to 77°42' - 77°47'	-Beaver Creek and its tributaries are important headwater streams for the area -sport fishing for both warm and cold water species
9	River	Moira River 44°30' - 44°45' to 77°31' - 77°37'	-Moira River and tributaries are important headwater streams for Moira Lake and lower stretches of the river
10	Conservation Area	O'Hara Mill Conservation Area 44°31' - 77°32'	-O'Hara Mill Conservation Area, administered by the Moira River Conservation Authority -public fishing -35 acres

MAP NO. 31 C/13

Coe Hill
Sensitive Areas
Bancroft District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Lower Paudash Lake 44°58' - 77°59'	-high cottage concentration
		44°59' - 77°59'	-lake herring and white fish spawning area
2	Lake, Park	Lavallée Lake 44°57' - 78°56'	-sport fishing for bass and lake trout -trailer park on south shore of lake
3	Lake	Chandos Lake 44°48' - 78°58'	-high concentration of cottages -sport fishing for lake trout
		44°49' - 78°60'	-lake herring spawning grounds along shoreline of the North Bay of Chandos Lake
4	Lake	Wollaston Lake 44°50' - 78°51'	-high concentration of cottages -good sport fishing for bass -lake trout lake

MAP NO. 31 C/13

Site No.	Sensitive Area	Location	Description
5	Lake	Limerick Lake 44°54' - 78°37'	-high concentration of cottages -good sport fishing for bass -lake trout lake
6	Lake	Steenburg Lake 44°50' - 78°41'	-high concentration of cottages -sport fishing
		Dickey Lake 44°47' - 78°45'	-high concentration of cottages

MAP NO. 31 C/14

Mazinaw Lake
Sensitive Areas
Tweed District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Partridge Creek 44°45' - 44°58' to 77°17' - 77°30'	-part of Beaver Creek system -important sport fisheries for warm water species
2	Marsh	West of Lingham Lake 44°35' - 44°48' to 77°27' - 77°30'	-waterfowl nesting area -one of the few concentrated areas within the district
3	Marsh	44°45' - 44°53' to 77°00' - 77°30'	-high concentration of beaver colonies -the Tweed District accounts for a high proportion of Beaver pelts -many of these beaver ponds support duck populations
4	Park	44°54' - 77°15'	-Bon Echo Provincial Park -only the western portion of this park occurs within the Lake Ontario watershed -15,500 acres -swimming -fishing -boating

MAP NO. 31 C/14

Site No.	Sensitive Area	Location	Description
5	Lake	Skootamatta 44°50' - 77°15'	-part of the Skootamatta River system -high cottage density -pickerel fishing and spawning -spawning takes place at or upstream from many of the streams and creeks entering the lake

MAP NO. 31 C/15

Sharbot Lake
Sensitive Areas
Tweed District
Eastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Hungry Lake 44°48' - 76°54'	-pickerel spawning areas as indicated by the base of the flag
2	Lake	Kennebee Lake 44°46' - 76°55'	-pickerel spawning in Crooked Creek Lake (not identified as such), the eastern portion of Kennebee -high cottage density

MAP NO. 31 D/1

Rice Lake
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Cavan Creek 44°12' - 44°14' to 78°22' - 78°30'	-trout stream with stocked and native brook trout -sport fishing
2	Creek	Baxter Creek 44°06' - 44°12' to 78°21' - 78°30'	-trout stream; both native and stocked species -sport fishing along entire length
3	Creek	Squirrel Creek 44°06' - 44°10' to 78°21' - 78°26'	-as above
4	River, Marsh IBP	Otonabee River 44°09' - 44°15' to 78°14' - 78°21'	-boating; part of Trent Canal System
		Squirrel Creek Conservation Area 44°11' - 78°21'	-boating -administered by the Ottawa River Conservation Authority
		Whitfield Landing Conservation Area 44°13' - 78°22'	-boating -administered by the Ottawa River Conservation Authority

MAP NO. 31 D/1

Site No.	Sensitive Area	Location	Description
4		Bensfort Bridge 44°12' - 78°17' 44°15'to 78°12'	-this stretch of the Otanabee River is a fish sanctuary
		44°13' - 78°21'	-pickerel spawning area
		44°13' - 78°17'	-pickerel spawning area
		44°09' - 78°14'	-maskinonge spawning and waterfowl breeding area
		44°12' - 44°13' to 78°17' - 78°20'	-IBP site -typical swamp-river complex
		44°13' - 78°14'	-IBP site -marsh-meadow complex
5	Lake, Marsh IBP	Rice Lake 44°5' - 44°7' to 78°16' - 78°20'	-high density of cottages on this end of the lake -boating and sport fishing (warm water species) are important activities on this lake
		44°05' - 78°20'	-shoreline at Beaudley; beach area
		44°06' - 78°20'	-marshy area used for maskinonge and largemouth bass spawning -IBP site; waterfowl breeding and migration

MAP NO. 31 D/1

Site No.	Sensitive Area	Location	Description
6	Lake, Marsh	Rice Lake 44°07' - 44°12' to 78°08' - 78°16'	-high concentration of cottages and homes along shore -part of Trent Canal System -sport fishing for maskinonge, pike, pickerel and bass
		44°09' - 78°16' to 44°09' - 78°13'	-areas around these points are used for commercial fishing of carp (winter)
		West Sugar Island 44°08' - 78°15'	-heronry
		44°10' - 78°11'	-pickerel spawning area, from Harwood on the south shore to Hiawatha on the north shore
7	Park	44°13' - 78°10'	-Serpent Mounds Provincial Park
8	Lake, Marsh	Rice Lake 44°12' - 44°15' to 78°04' - 78°08'	-high cottage concentration -sport fishing and boating are major activities
		44°12' - 78°10'	-maskinonge and largemouth bass spawning area

MAP NO. 31 D/1

Site No.	Sensitive Area	Location	Description
		44° 14' - 78° 09' at mouth of Indian Creek	-maskinonge spawning -waterfowl breeding and migration stopover
9	Park	Garden Hill 44° 04' - 78° 25'	-swimming and sport fishing -administered by the Central Lake Ontario Conservation Authority
10	River	Ganaraska River 44° 00' - 44° 06' to 78° 20' - 78° 30'	-headwaters of Ganaraska River are important trout waters. Spawning and sport fishing
11	Creek	Gage Creek 44° 00' - 44° 05'	-cold water stream used by trout for spawning -sport fishing also important
12	Creek	Coburg Brook 44° 00' - 44° 05' to 78° 10' - 78° 12'	-trout stream
13	Creek	Shelter Valley Creek 44° 03' - 44° 06' to 78° 00' - 78° 04'	-important trout stream for native and stocked species -sport fishing

MAP NO. 31 D/2

Scugog
Sensitive Area
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Wildlife area (Conservation Area)	44°08' - 78°59'	-Nonguon River Provincial Wildlife Area -waterfowl breeding
2	Lake	Scugog Lake	-high concentration of cottages on this lake -boating and sport fishing for maskinonge, pike and bass
		44°14' - 78°56'	-maskinonge spawning area
		44°15' - 78°51'	-maskinonge spawning area
		44°13' - 78°53'	-park reserve
3	Lake, Wetland	South end of Scugog Lake 44°06' - 78°54'	-major spawning area for pike, maskinonge, and bass -waterfowl migration and breeding area -private hunting area
4	IBP, River	Pigeon River 44°05' - 44°15' to 78°38' - 78°42'	-brook trout river
		44°10' - 78°41'	-IBP site -Bunker Hill Swamp -vegetation typical of spillway

MAP NO. 31 D/2

Site No.	Sensitive Area	Location	Description
5	IBP, creek	Fleetwood Creek 44° 08' - 44° 15' to 78° 35' - 78° 37'	-brook trout creek, sport fishing
		44° 08' - 78° 36'	-IBP site -nesting site for many bird species
6	Creek	Cavan Creek 44° 07' - 44° 12' to 78° 30' - 78° 32'	-sport fishing for brook trout
		Baxter Creek 44° 07' - 78° 30'	-headwaters of this creek contain brook trout
7	Creek	Headwaters of Oshawa Creek 44° 00' - 44° 02' 44° 02' to 78° 58'	-important for native and stocked brook trout
8	Creek	Bowmanville Creek 44° 00' - 44° 03' to 78° 46' - 78° 50'	-brook trout spawning and sport fishing
		Enniskillon Conservation Area 44° 01' - 78° 48'	-sport fishing in conservation area -conservation area administered by the Central Lake Ontario Conservation Authority

MAP NO. 31 D/2

Site No.	Sensitive Area	Location	Description
9	Creek	Wilmont Creek 44° 00' - 44° 03' 78° 38' - 78° 39'	-open creek from Lake Ontario to headwaters -migrating brook, rainbow and brown trout as well as introduced Pacific salmonids have access to this section of the creek
10	River	Ganaraska River	-important trout stream for both spawning and sport fishing

MAP NO. 31 D/3

Newmarket
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	44°05' - 79°02' to 44°09' - 79°00'	-headwaters of Layton River -angling and spawning area for brook trout
2	River	Nonquon River 44°03' - 79°02' to 44°06' - 79°00'	-headwaters of this river are angling and spawning areas for trout -the lower portion of the river is managed for waterfowl and upland game birds by the Ministry of Natural Resources. See Map 31 D/2, No. 1 for further description
3	Creek	Lynde Creek 44°01' - 79°03' to 44°00' - 79°01'	-headwaters of Lynde Creek -angling and spawning for trout are provided

MAP NO. 31 D/3

Newmarket
Sensitive Areas
Maple District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
4	Creek	Duffin Creek 44°01' - 79°04'	-headwaters of Duffin Creek serve as a spawning area for brook trout

MAP NO. 31D/7

Lindsay
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek, Wetland	Mariposa Brook and tributaries 44° 24' - 44° 16' to 78° 45' - 78° 58'	-brook trout spawning and fishing along brook from 79° 50' west -maskinonge spawning from 79° 50' east to the mouth of the Brook -waterfowl breeding in lower sections of Brook
2	River	Scugog River 44° 22' - 78° 44'	-pickerel spawning below locks at Lindsay -this spawning area is a provincial fish sanctuary
3	IBP	Goose Lake 44° 26' - 78° 52'	-example of a late successional stage lake -waterfowl utilize the area for breeding and migration -water mammals present -plant associations are noted to be exceptional
4	Creek, Wetland	McLaren Creek and tributaries 44° 21' - 44° 25' to 78° 47' - 78° 52'	-upper reaches of creek (junction of the creek and its main tributary) brook trout -down river maskinonge spawning -waterfowl breeding and migration stopover most prominent in marshes at mouth of McLaren Creek

MAP NO. 31 D/7

Site No.	Sensitive Area	Location	Description
4			-waterfowl hunting is heavy during the fall harvest
5	Lake, Wetland	Sturgeon Lake	-high cottage concentration on this lake -as part of the Trent Canal System, the lake has intense boating usage
		Goose Bay 44° 25' - 78° 45'	-major sport fishing area -maskinonge and carp spawning area -waterfowl also present -fish sanctuary
		44° 29' - 78° 43'	-this area of the lake used for the commercial harvest of carp
6	Lake, Wetland IBP	Emily Lake and Emily Creek 44° 21' - 44° 30' to 78° 32' - 78° 38'	-Emily Lake - IBP site -noted for exceptional plant associations, waterfowl migration and breeding as well as maskinonge spawning -Emily Creek - waterfowl breeding and migration stopover -maskinonge and bass spawning up river to Emily Lake -fish sanctuary -mouth area heavily utilized for duck hunting

MAP NO. 31 D/7

Site No.	Sensitive Area	Location	Description
7	River	Pigeon River 44°00' - 44°03' to 78°33' - 78°38'	-maskinonge and bass spawning area -waterfowl breeding and migration stopover
8	Park	Emily Provincial Park 44°20' - 78°32'	-provincial park on the Pigeon River
9	Lake	Pigeon Lake 44°29' - 78°31' 44°27' - 78°30' 44°25' - 78°31' 44°23' - 78°31'	-waterfowl breeding area and maskinonge spawning areas associated with the marshes along the west shore of this lake -shoreline areas have high concentrations of cottages -as part of the Trent Canal System the lake is utilized extensively for boating

MAP NO. 31 D/8

Peterborough
Lindsay District
Sensitive Area
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Pigeon Lake	-high density cottage concentrations -sport fishing for warm water species -part of Trent Canal System
		44° 23' - 44° 26' along east shore of Pigeon Lake	-maskinonge spawning
		44° 30' - 78° 28'	-maskinonge spawning in Fultons Bay
2	Lake	Budkhorn Lake	-high concentration of cottages -sport fishing for warm water species -major boating area as part of the Trent Canal System
		44° 29' - 78° 27'	-pickerel spawning in the vicinity of the bridge over Gannon Narrows -this area is also a fish sanctuary
		44° 30' - 78° 28'	-maskinonge spawning area in Sandy Creek Bay
		44° 27' - 78° 24'	-maskinonge and largemouth bass spawning area

MAP NO. 31 D/8

Site No.	Sensitive Area	Location	Description
2	Lake	44° 29' - 78° 24'	-marsh areas surrounding Fox Island are maskinonge spawning areas
3	Lake	Chemung Lake	-shoreline areas have high concentrations of cottages -sport fishing for warm water species -Chemung Lake has access to the Trent Canal System, thus boating is a major activity
		44° 21' - 78° 29'	-these three marshes are used by bass and maskinonge for spawning
		44° 20' - 78° 29'	
		44° 21' - 78° 28'	
		44° 24' - 78° 23'	-pickerel spawning area at causeway
		44° 29' - 78° 22'	-maskinonge and largemouth bass spawning area
4	Park	Chemung Park 44° 23' - 78° 23'	-Chemung Park administered by the Otonabee Conservation Authority -swimming and boating

MAP NO. 31 D/8

Site No.	Sensitive Area	Location	Description
5	Park	Young's Point 44° 30' - 78° 15'	-Young's Point Conservation Area administered by Otonabee Conservation Authority -swimming and boating
6	IBP	44° 30' - 78° 16'	-Moore Lake Swamp -typical swamp forest complex
7	Lake	Clear and Katchewanook Lakes and Otonabee River 44° 15' - 44° 30' to 78° 12' - 78° 21'	-high concentration of cottages and boating activities along this narrow stretch of water
8	IBP	44° 27' - 44° 28' to 78° 09' - 78° 12'	-IBP site; Long Lake and Sawyer Creek
9	Lake	44° 15' - 44° 18' to 78° 19' - 78° 20'	-pickerel spawning area, fish sancturary
10	Park	44° 28' - 78° 08'	-Warsaw Lakes Provincial Park
11	Wetland Lake	Rice Lake 44° 15' - 44° 18' to 78° 00' - 78° 07'	-high concentration of cottages and boating activity
		44° 16' - 78° 05' to 44° 17' - 78° 03'	-great blue heron heronry -waterfowl breeding area -wild rice found growing here

MAP NO. 31 D/8

Site No.	Sensitive Area	Location	Description
12	Wetland Lake	Cavan Swamp 44°15' - 44°17' to 78°25' - 78°30'	-unique vegetation, orchids

MAP NO. 31 D/9

Burleigh Falls
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Catchacoma Lake 44°44' - 78°18'	-all four lakes have high concentrations of cottages and of some importance as lake trout lakes
		Beaver Lake 44°44' - 78°17'	
		Gold Lake 44°44' - 78°16'	
		Mississauga Lake 44°43' - 78°19'	

Burleigh Falls
Sensitive Areas
Bancroft District
Algonquin Region
Ontario Ministry of Natural Resources

2	Lake	Anstruther Lake 44°44' - 78°13'	-high concentration of cottages -lake trout lake
		Wolf Lake 44°44' - 78°11'	-high concentration of cottages
3	Lake	Long Lake 44°42' - 78°10'	-a lake trout lake and high concentration of cottages
		Loucks Lake 44°41' - 78°13'	-lake trout lake
		Compass Lake 44°41' - 78°14'	-brook trout lake
		Triangle Lake 44°40' - 78°15'	-lake trout lake

MAP NO. 31 D/9

Site No.	Sensitive Area	Location	Description
4	Lake	Big Cedar Lake 44°37' - 78°12'	-both have high concentration cottages
		Julian Lake 44°36' - 78°11'	-sport fishing for pickerel, lake trout and maskinonge
5	Lake	Jacks Lake 44°43' - 78°03'	-high concentration of cottages along shoreline -pickerel spawning area
6	Park, Creek	44°37' - 78°03'	-Peterborough Petroglyph park reserve
		Eels Creek 44°37' - 78°07'	-Eels Creek below High Falls, pickerel spawning area
		Jack Creek 44°36' - 78°03'	-pickerel spawning at mouth of Jack Creek

Burleigh Falls
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

7	Lake	Pigeon Lake	-see No. 8, Map 31 D/10 for description
8	Lake	Little Bald Lake 44°35' - 78°26'	-high concentration of cottages -sport fishing and other water based activities are prevelent
		Big Bald Lake 44°35' - 78°25'	
		Sandy Lake 44°33' - 78°25'	

MAP NO. 31 D/9

Site No.	Sensitive Area	Location	Description
9	Lake	Buckhorn Lake & Lower Buckhorn Lake	-high cottage concentration area -major boating area as part of the Trent Canal System
		44°34' - 78°21'	-pickerel spawning area half mile below dam
		Lost Lake Channel 44°35' - 78°18'	-maskinonge spawning area
10	Lake	Stony Lake and Clear Lake	-part of Trent Canal System -high concentration of cottages on the mainland and islands -sport fishing for warm water species
		44°35' - 78°13'	-pickerel spawning below dams at Burleigh Falls
		44°33' - 78°07'	-pickerel spawning

MAP NO. 31 D/10

Fenelon Falls
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Head Lake 44°43' - 78°55'	-refer to Map 31 D/15, No. 7 for description
	Wetland	44°45' - 78°54'	-nesting site for herons
2	Lake, River	Shadow Lake 44°43' - 78°47'	-high concentration of cottages
		Silte Lake 44°42' - 78°47'	-important boating area - access to Trent Canal System
		Gull River to Babam Lake	-pickerel spawning (spring) and sport fishing area
3	Lake	Four Mile Lake 44°41' - 78°44'	-high concentration of cottages
4	River	Burnt River 44°42' - 78°41' to 44°36' - 78°45'	-boating and cottages along this stretch of river
5	Wetland	Mouth of Burnt River 44°36' - 78°45'	-waterfowl breeding and migration -maskinonge spawning

MAP NO. 31 D/10

Site No.	Sensitive Area	Location	Description
6	Lake, River	Bass Lake 44°41' - 78°32'	-high concentration of cottages
		Noquis Creek 44°37' - 78°32'	-an important maskinonge spawning area, lower part of this creek is a fish sanctuary -heronry as indicated by flag

Fenelon Falls
Sensitive Areas
Lindsay District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
7	Lake	Balsam Lake 44°35' - 78°50'	-high concentration of cottages -as part of the Trent Canal System this lake is utilized extensively for boating and fishing
		North Bay 44°40' - 78°50'	-maskingonge spawning
		West Bay 44°33' - 78°54'	-maskinonge spawning
		South Bay 44°32' - 78°53'	-maskinonge spawning
		Mouth of Gull River 44°39' - 78°48'	-fish sanctuary

MAP NO. 31 D/10

Site No.	Sensitive Area	Location	Description
8	Park	Balsam Lake Provincial Park 44°38' - 78°51'	-includes a beach area on North Bay
9	River	Rosedale River 44°35' - 78°47'	-pickerel spawning in spring below the dam and locks on river -maskinonge spawning in marshy areas at the river mouth and the Burnt River mouth
10	Lake	Cameron Lake 44°33' - 78°46' to 44°33' - 78°45'	-high concentration of cottages -this lake is extensively used for boating and sport fishing as it is part of the Trent Canal System -private beach
11	River	Fenelon River 44°32' - 78°44'	-pickerel spawning below dam and locks
12	Lake	Sturgeon Lake 44°32' - 78°35' to 78°43'	-as part of the Trent Canal System this lake receives a large volume of boat traffic -high concentration of cottages -sport fishing is a major activity

MAP NO. 31 D/10

Site No.	Sensitive Area	Location	Description
13	River	Bobcaygeon River 44°33' - 78°32'	-pickerel spawning below locks
		Little Bob Channel 44°33' - 78°32'	-pickerel spawning below dam
		Mouth of Nogus Creek	-maskinonge spawning
14	Lake	Pigeon Lake 44°33' - 78°31'	-high concentration of cottages -extensive boat traffic -heavily utilized for sport fishing

MAP NO. 31 D/16

Gooderham
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Koshlong Lake 44°58' - 78°28'	-high concentration of cottages -important sport fishery lake (lake trout)
2	Lake	Stormy Lake 44°58' - 78°25'	-high concentration of cottages
		Little Glamour & Glamour Lake 44°57' - 44°59' to 78°23'	-high concentration of cottages
3	Lake	Gooderham Lake 44°55' - 78°23'	-high concentration of cottages -lake trout lake
		Trooper Lake 44°54' - 78°21'	-high concentration of cottages
4	Lake	Contaw Lake 44°54' - 78°26'	-high concentration of cottages
5	Wetland	44°59' - 78°17'	-both breeding and migratory waterfowl use this area

MAP NO. 31 D/16

Site No.	Sensitive Area	Location	Description
5	Wetland	44°56' - 78°16'	-waterfowl breeding and migration stopover
		44°56' - 78°13'	-heronry
6	Lake	Monrock Lake 44°58' - 78°12'	-high concentration of cottages in both lakes
		Buckskin Lake 44°58' - 78°12'	
7	River	Irondale River 45°00' - 78°13' to 44°54' - 78°30'	-used for sport fishing
8	Lake	Salmon Lake 44°49' - 78°28'	-high concentration of cottages
		Fortescué Lake 44°51' - 78°28'	-high concentration of cottages and important lake trout lake
9	Lake	Salerno Lake 44°52' - 78°29'	-high concentration of cottages
		Crystal Lake 44°46' - 78°29'	-high concentration of cottages -sport fishing for lake trout and warm water species

MAP NO. 31 D/16

Site No.	Sensitive Area	Location	Description
10	Lake	Catchacoma Lake 44°56' - 78°20'	-high concentration of cottages

Gooderham
Sensitive Areas
Bancroft District
Algonquin Region
Ontario Ministry of Natural Resources

11	Lake	Paudash Lake 44°58' - 78°04'	-high concentration of cottages -sport fishing for lake trout of importance on this lake
		Lower Paudash Lake 44°58' - 78°05'	-spawning area for lake whitefish and cisco
		Deer Creek 44°59' - 78°03'	-pickerel spawning area along lower reaches of Deer Creek
		44°58' - 78°03'	-at entrance to Inlet Bay white fish and lake herring (cisco) spawning area
12	Lake	Eels Lake 44°54' - 78°07'	-high concentration of cottages -both warm and cold water fish species are fished
13	Lake	Chandos Lake 44°47' - 78°02'	-high concentration of cottages -sport fishing for lake trout and cisco (spring)
14	Lake	Anstruther Lake 44°56' - 78°12'	-high concentration of cottages

MAP NO. 31 E/1

Wilberforce
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Percy Lake 45°13' - 78°22'	-important lake trout lake -golden eagle nest as indicated by flag
2	Lake	Haliburton Lake 45°11' - 78°24'	-dense concentration of cottages
3	Lake	Moose Lake 45°08' - 45°10'	-high concentration of cottages -good lake trout lake
		Eagle Lake 78°28' - 78°30'	-high concentration of cottages
4	Lake	Drag Lake 45°04' - 78°24'	-high concentration of cottages -important lake trout lake
5	Lake	Long Lake 45°03' - 78°22'	-high concentration of cottages -important sport fishing lake
		Milskwabi Lake 45°03' - 78°19'	-high concentration of cottages -important lake trout lake -waterfowl migration stopover area

MAP NO. 31 E/1

Site No.	Sensitive Area	Location	Description
6	Lake	Haas Lake 45°12' - 78°27'	-important sport fishing area
7		Wilbermere Lake 45°0.5' - 78°13'	-sport fishing for cold and warm water species
		Irondale River from Pussey Lake to Wilbermere Lake	-water mammals
8	Lake	Diamond Lake 45°05' - 78°02'	-high intensity sport fishing -high cottage concentration -good lake trout lake
9	Lake	Deer Lake 45°02' - 78°06'	-good lake trout lake

MAP NO 31 E/2

Haliburton
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Kennisis Lake 45°13' - 78°38'	-important lake trout lake -very high density of summer cottages -heavily utilized for fishing
2	Lake	Big Hawk & Little Hawk Lake 45°10' - 78°43'	-high concentration of summer cottages
		Big Brother Lake 45°09' 78°46'	-high concentration of summer cottages
		Partridge Lake 45°07' - 78°48'	-brook and rainbow trout fishing
3	Lake	Halls Lake 45°07' - 78°45'	-high concentration of summer cottages -important sport fishery lake for lake trout
4	Lake	Boshkung Lake 45°04' - 78°44'	-important lake trout lake -high concentration of cottages

MAP NO. 31 E/2

Site No.	Sensitive Area	Location	Description
5	Lake	St. Nora Lake 45°10' - 78°50'	-important sport fishery
		Koshog Lake 45°06' - 78°47'	-medium to high density of cottages on these lakes -lake trout are still found in St. Nora and Kushog Lakes
		Kabakwa Lake 45°07' - 78°47'	
6	Lake	Macdonald Lake 45°14' - 78°34'	-high concentration of cottages on these lakes
		Clear Lake 45°15' - 78°32'	
		Marsden Lake 45°14' - 78°31'	
		Little Redstone Lakes 45°13' - 78°34'	
7	Lake	Redstone Lake 45°11' - 78°33'	-important lake trout lake
		Cruiser Lake 45°12' - 78°34'	-sport fishing for lake trout and warm water species
		Burdock Lake 45°10' - 78°35'	-sport fishing for brook trout
8	Lake	Eagle Lake 45°08' - 78°31'	-high concentration of summer cottages

MAP. NO. 31 E/2

Site No.	Sensitive Area	Location	Description
9	Lake	Cranberry Lake 45°08' - 78°32' Pine Lake 45°07' - 78°35' Green Lake 45°07' - 78°37'	-high concetrations of cottages on all three lakes -lakes utilized for sport fishing
10	Lake	Maple Lake 45°07' - 78°40' Beach Lake 45°04' - 78°42'	-both lakes have high concentrations of cottages
11	Lake	Little Boshkung Lake 45°02' - 78°03' Twelve Mile Lake 45°01' - 78°42'	-high concentration of cottages -both are utilized for sport fishing, including lake trout fishing
12	Lake	Head Lake 45°03' - 78°31'	-pickerel spawning area -sport fishing on Head Lake
13	Lake	Kashagawigamog Lake 45°01' - 78°34'	-high concentration of cottages -sport fishing for warm water species and lake trout

MAP NO. 31 E/7 E

Kawagama Lake
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Johnson Lake 45°16' - 78°38'	-good lake trout lake
		Kelly Lake 45°15' - 78°37'	-good lake trout lake
		Little Kensis Lake 45°15' - 78°35'	-good lake trout lake -high concentration of cottages

MAP NO. 31 E/8

Whitney
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description

Note: The Redstone River System (45°22' - 78°27' to 45°15' - 78°30') drains into Lake Ontario. The other drainage systems found on this map either flow into Georgian Bay or the Ottawa River.

MAP NO. 31 E/15

Minden
Sensitive Areas
Minden District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Marsh	44° 58' - 78° 47'	-waterfowl breeding and migration area
2	Lake	Mountain Lake 44° 59' - 78° 43' Horseshoe Lake 44° 59' - 78° 41'	-high concentration of cottages in both lakes -both used extensively for sport fishing, mainly warm water species -lake trout fished in Mountain Lake
3	Lake, River	Minden Lake 44° 57' - 78° 42' Gull River from Horseshoe Lake to Gull Lake	-high concentration of cottages
4	Lake	Bob Lake 44° 55' - 78° 47'	-an important lake trout lake -high density of cottages
5	Lake	Gull Lake 44° 52' - 78° 46' and surrounding lakes - North Pigeon, Denna, Little Gull Lake	-high density cattage area -Gull Lake is an important lake trout lake -the lake is also important for sport fishing -east side of lake and inland beaver are harvested

MAP NO. 31 E/15

Site No.	Sensitive Area	Location	Description
6	Lake	Moore Lake 44°48' - 78°47'	-high concentration of cottages -the dam at Moore Falls is an important fishing area -beaver harvested around the lake
7	Lake	Head Lake 44°46' - 78°55'	-high concentration of cottages
8	Lake	Kashagawigamog Lake 44°58' - 78°36'	-see Map No. 31 E/2, No. 15
		Canning Lake 44°57' - 78°38'	-high concentration of cottages
9	Lake	South Lake 44°55' - 78°41'	-high concentration of cottages
10	Lake	Davis Lake 44°47' - 78°43'	-high concentration of cottages
11	Lake	Koshlong Lake 44°58' - 78°31'	-see Map No. 31 D/16, No. 1 for comments
12	Lake	Salerno Lake 44°52' - 78°31'	-see Map No. 31 D/16, No. 12 for comments

MAP NO. 31 E/15

Site No.	Sensitive Area	Location	Description
13	Wetlands	Burnt River 44°49' - 78°37' to 44°54' - 78°37' Irondale River 44°49' - 78°33' to 44°53' - 78°30'	-major traplines for beaver in this district

MAP NO. 31 F/4 W

Bancroft
Sensitive Areas
Bancroft District
Algonquin Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description

Note: The lakes and rivers in the lower left portion of this map drain into Lake Ontario. This drainage system includes Albion Lake, Littlefools and Bigfools Lake, Bentley and Bow Lakes. These lakes represent the headwaters of the Crowe River System.

Map No. 40 G/10 East

Kelleys Island
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Island	Fish Point 41°43' - 82°40'	-significant geomorphological feature (sand pit) -Heron and Egre colonies, significant nesting areas for Great Blue Herons and Black Crown Night Herons (rare species)
2	Lake	Lake Erie Western Basin	-site No. 3, Map No. 40 G/15E. and 40 G/16 W., Pelee

Map No. 40 G/15 East and 40 G/16 West Pelee

Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Park Marsh/Wetland	Point Pelee National Park 41°59' - 82°31'	-significant geomorphological feature (sand pit) -wide variety of important plant, fish and animal species -waterfowl breeding and staging area; ducks, geese, swans -marsh mammal habitat; muskrat and mink -fish habitat and spawning ground; particularly important to shallow water spawning species such as the centrarchids, eg. black bass, sunfish, etc. -Great Blue Heron, Black crown Night Heron, Common Egret, Cattle Egret and Glossy Ibis sometimes sited (uncommon bird species) -spotted and soft shelled turtles (rare species)
2	Migration Route and Spawning Area	Shoreline of Point Pelee National Park 42°00' - 82°30' to 41°54' - 82°30'	-entire shoreline is an important migration route and spawning area (mainly shoals) for numerous fish species; walleye, yellow perch, and white bass. -important smelt spawning area due to the sandy beaches

Map No. 40 G/15 East and 40 G/16 West

Site No.	Senstive Area	Location	Description
3	Lake	Lake Erie, Western Basin	-Lake Erie supports the largest fresh water fishery in the world with the majority of the fish harvest coming from the Canadian portion of the western basin and its vincinity -most important species harvested are walleye, yellow perch, and white bass - based on a five year average for 1966-1970 Landins -walleye (402,794 lbs.) -yellowperch (5,212,362 lbs.) -white bass (593,914 lbs.) These statistics are for Point Peelee westward
4	Island	Lighthouse Point of Pelee Island 41°50' - 82°39'	-Blue Racer and Pelee Island Water Snakes (rare reptiles) -Bald Eagle nests (rare species)

Map No. 40 G/15 West and 40 G/14 East Pelee

Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Park Reserve	South Colchester 42°00' - 82°50'	-19-acre park reserve
2	Shoreline	Lake Erie Shoreline	-migration route for numerous fish species, walleye, smelt, yellow perch, and white bass
3	Island	East Sister Island 41°49' - 82°52'	-large heron, egret (rare species) and gull colony -Blue Herons and Black Crown Night Herons
4	Island	Bick Chick Island 41°46' - 82°50'	-important cormorant (rare species) and gull colony

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40G/15 W

Pelee

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Harrow System	Detroit River 41°60' - 82°57'	C. Hawkins M.O.E.	738-2284

Map No. 40 I/5 East

Ridgetown
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Lake Erie Shoreline	-entire shoreline is a migration route for numerous fish species; smelts, walley, yellow perch, and white bass
2	Lake	Lake Erie Central Basin	-most important fish species harvested are walleye, yellow perch, white bass and smelts

Map No. 40 I/5 West

Ridgetown
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	Shoreline	Lake Erie Shoreline	-entire shoreline is a migration route for numerous fish species; smelts, walleye, yellow perch, and white bass
2	Mammal Habitat	42°23' - 81°50'	-small population of Badgers (rare species)
3	Park	Rondeau Provincial Park 42°17' - 81°52'	-provincial park -significant geomorphological feature (sand pit) -Bald Eagle nests (rare species) -spotted and soft-shelled turtles, and Fowler's toads (rare species)
4	Marsh/Wetland and Open Water Bay	Rondeau Harbour 42°17' - 82°55'	-important fish habitat and spawning ground; particularly for shallow water spawning species such as the centrarchids, eg., black bass, sunfish, etc. -marsh mammal habitat, muskrat and mink -waterfowl breeding and staging area

Map No. 40 I/5 West

Site No.	Sensitive Area	Location	Description
5	Spawning	Point aux Pins 42°15' - 82°51'	-important smelt spawning area

Map No. 40 I/9

Long Point
Sensitive Areas
Simcoe District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Big Creek 42° 37' - 80° 30' to 42° 37' - 80° 26'	-warm water fisheries; large and smallmouth bass, northern pike and panfish -waterfowl habitat
2	Conservation Area	Rowan Mills 42° 36' - 80° 30'	-Rowan Mills Conservation Area, Long Point Conservation Authority -fishing -54 acres
3	Conservation Area	Backus 42° 40' - 80° 26'	-Backus Conservation Area, Long Point Conservation Authority -461 campsites, fishing -217 acres
4	Cottages	West of Long Point Provincial Park 42° 35' - 80° 25'	-extensive cottage development area
5	Park	Long Point Provincial Park 42° 43' - 80° 20'	-waterfowl management and waterfowl hunting area -excellent waterbased recreational activities such as fishing, boating, camping and swimming -viewing of wildlife -848 acres

Map No. 40 I/9

Site No.	Sensitive Area	Location	Description
6	Marsh	Long Point Marsh 42°35' - 80°21'	-see Site No. 9, this map
7	Forestry Station	St. Williams Provincial Forestry Station 42°42' - 80°28'	-wildlife habitat -salmonid fishery -swimming
8	Creek	Dedrick Creek 42°45' - 80°27' to 42°37' - 80°27'	-good rainbow trout run fishing
9	Marsh	Turkey Point Marsh 42°41' - 80°22'	-waterbased mammal area and supports mainly muskrat trapping -breeding and migration stop-over location for waterfowl -supports carolinian species, wild rice and highly productive area
10	Park	Turkey Point Provincial Park 42°35' - 80°24'	-wildlife management area -excellent waterbased recreational activities such as fishing, boating, camping and swimming -viewing of wildlife -782 acres

Map No. 40 I/9

Site No.	Sensitive Area	Location	Description
11	Creek	Cranes Creek 42° 44' - 80° 22' to 42° 43' - 80° 19'	-good salmonid migration and spawning; rainbow and brown trout -fishing
12	IBP	Spooky Hollow 42° 44' - 80° 20'	-nature sanctuary -this rich sandy area supports many uncommon and rare plants: Moccasin Flower (*Cypripedium acaule*), yellow lady's slipper (*Cypripedium calceolus*), bayberry (*Myrica pensylvenica*)
13	Creek	Fishers Creek 42° 45' - 80° 21' to 42° 44' - 80° 17'	-ideal salmonid spawning and migration, rainbow, brook and brwon trout -fishing for the above species
		Fisher's Glen 42° 43' - 80° 18'	-Fisher Conservation Area, Long Point Conservation Authority -fishing -122 acres

Map No. 40 I/9

Site No.	Sensitive Area	Location	Description
14	Bay	Inner Bay Lake Erie	-recreational fishing for such species as smallmouth largemouth bass, northern pike, panfish, rainbow trout and pacific salmon -important spawning area for bass, smelt and yellow perch -waterfowl breeding and migration area
15	Bay	Long Point Bay Lake Erie	-commercial fishing for bass, smelt and yellow perch -recreational fishing for such species as small and largemouth bass, panfish, rainbow and brown trout, and pacific salmon -waterfowl breeding and migration area, on the Mississippi and Eastern Sea Board Migratory Routes

Map No. 40 I/10

Port Burwell
Sensitive Areas
Simcoe District
Southwestern Region
Ontario Minsitry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Big Creek 42° 38' - 80° 32' to 42° 37' - 80° 30'	-warm water fisheries; largemouth bass, smallmouth bass, northern pike and panfish
		42° 43' - 80° 34' to 42° 38' - 80° 32'	-marginal salmonid spawning and migration; rainbow, brook and brown trout -panfish -fishing for the above species
		42° 45' - 80° 35' to 42° 43' - 80° 34'	-ideal salmonid spawning and migration; rainbow, brook and brown trout -accomodates the salmon run for spawning; Coho and Chinook -largemouth bass -fishing for the above species
2	Conservation Area	Abigal Becker 42° 41' - 80° 32'	-Abigal Becker Conservation Area, Long Point Conservation Authority -13 acres
3	Conservation Area	Rowan Mills 42° 40' - 80° 33'	-Rowan Mills Conservation Area, Long Point Conservation Authority -34 acres -fishing

Map No. 4 I/10

Site No.	Sensitive Area	Location	Description
4	Conservation Area	Deer Creek 42° 44' - 80° 38'	-Deer Creek Conservation Area, Long Point Conservation Authority -65 acres, fishing -swimming (450 ft. of waterfront)
5	Creek	Venison Creek 42° 43' - 80° 38' to 42° 40' - 80° 30'	-marginal to good salmonid spawning and migration; rainbow, brook and brown trout -panfish -fishing for the above species
		42° 45' - 80° 38' to 42° 43' - 80° 38'	-ideal salmonid spawning and migration; rainbow, brook and brown trout -accomodates the salmon run for spawning, Coho and Chinook -fishing for the above species
6	Creek	Clear Creek -Upper Branches 42° 39' - 80° 36' and 80° 40' to 42° 37' - 80° 35'	-marginal to good salmonid spawning and migration; rainbow and brook trout -accomodates the salmon run for spawning, Coho and Chinook -northern pike -fishing for the above species
		-Main Branch 42° 37' - 80° 36' to 42° 35' - 80° 35'	-warm water fisheries such as smallmouth bass

Map No. 4 I/10

Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
7	Creek	Big Otter Creek 42° 45' - 80° 52' to 42° 39' - 80° 49'	-accomodates an excellent run of rainbow and brown trout -accomodates the pacific salmon run for spawning, Coho and Chinook -fishing for the above species and warm water species such as bass and suckers -smelt fishing at the mouth of the creek
8	Conservation Area and Pond	Port Burwell 42°40' - 81°50'	-Port Burwell Conservation Area, Long Point Conservation Authority -boating and fishing -30 acres
			-Iroquois Beach Provincial Park -6,000 feet of beach, some small dunes and marshes -waterbased recreational activities such as swimming, boating and fishing
9	Park	Sand Hills Study Area 42° 37' - 80° 45'	-good beaches and waterbased recreational activities such as swimming -presence of several sand dunes -area is privately owned

Map No. 4 I/10

Site No.	Sensitive Area	Location	Description
10	Wildlife Management Area	Calton Swamp 42° 45' - 80° 54'	-spring and summer viewing of waterfowl (wood ducks in particular) and song birds -fall hunting for waterfowl -60 acres
11	Lake	Lake Erie -Central Basin	-gill net fishing area for walleye, yellow perch and bass -smelt fishing is becoming increasingly important -shoreline is a migration route for the above mentioned species -based on a five year average for 1966-70 Landings: walleye (346 lbs.) yellow perch (4,489,156 lbs.) white bass (34,496 lbs.) smelt (971,015 lbs.) These statistics are for the portion of the Lake Erie central basin for the Port Stanley and Port Burwell maps.

Map No. 40 I/11

Port Stanley
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	Park	John E. Pearce Provincial Park 42°36' - 81°25'	-nature reserve which contains unique clay cliffs -168 areas -boating and other water based recreational activities
2	Creek	Talbot Creek 42°45' - 81°20' to 42°37' - 81°20'	-provides angling for trout and warm water species such as bass and suckers -some spawning for migratory salmon -smelt fishing at the mouth
3	Special Land Area	Colonel Tabolt Estate and Study Area 42°37' - 81°20'	-approximately 500 feet of beach at the mouth of Talbot Creek -altogether several thousand acres -boating and other waterbased recreational activities
4	Creek	Kettle Creek 42°45' - 81°13' to 42°40' - 81°13'	-provides angling for trout (rainbow run) and warm water species such as bass and suckers -some spawning for migratory salmon -smelt fish at the mouth

Site No.	Sensitive Areas	Location	Description
5	Beach	Port Stanley 42°40' - 81°13'	-public beach -waterbased recreational activities
6	Park	Port Bruce Provincial Park 42°40' - 81°01'	-5 acre beach park -waterbased recreational activities -adjacent to the park is a town beach containing ½ to 3/4 of a mile of shoreline
7	Creek	Catfish Creek 42°45' - 81°03' to 42° 40' - 81° 01'	-provides angling for trout (rainbow run) and warm water species such as bass and suckers -some spawning for migratory salmon -smelt fishing at the mouth
8	Swamp	Jolley Swamp 42° 43' - 81° 10'	-permanent swamp, headwaters of a stream -the only remanent white cedar swamp in Elgin County with a number of rare plant species such as Showy Lake-Slipper (*Cypripedium Reginae*) -mink, raccoon and cottontail rabbits are representative animal species

Site No.	Sensitive Areas	Location	Description
9	Conservation Area	Little Otter Creek 42°43' - 81°03'	-Little Otter Creek Conservation Area, Long Point Conservation Authority -an unusual diversity of ferns and herbs -Eastern Milk Snake is the representative animal species
10	Lake	Lake Erie Central Basin	-gill net fishing area for walleye, yellow perch and bass -smelt fishing is becoming increasingly important -shoreline is a migration route for the above mentioned species
11	Wildlife Area	Fingal 42°42' - 81°20'	-small game and waterfowl management area
12	Conservation Area	Springwater Creek 42°45' - 81°00'	-Springwater Conservation Area Catfish Conservation Authority -561 Campsites -swimming (1,000 feet of waterfront) -fishing

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40I/11 E & W

Port Stanley

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Port Stanley	Detroit River 42°40' - 81°13'	-	782-3381
B	M	Elgin Area Water Supply System	Detroit River 42°40' - 81°10'	M.O.E.	782-3101

Map No. 40 I/12 East

Bothwell
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Thames River 42° 45' - 81° 31' to 42° 39' - 81° 45'	-see Site No. 2, Map No. 40I/West
	Conservation Area	Big Bend 42° 40' - 81° 43'	-Big Bend Conservation Area, Lower Thames Valley Conservation Authority -fishing and boating -100 acres
2	IBP	Thames River Flood Plain 42° 44' - 81° 32'	-exceptional diversity of trees and herbs -a flood plain elevated about 3 metres above the river -rare species: Blue and Green Herons -red bellied woodpecker, bob-white quail, waterfowl 20 ha., private land
3	Pond	Wardsville Pond 42° 39' - 81° 45'	-cold water (trout) fishing pond -a good water based recreational resource

Map No. 40 I/12

Site No.	Sensitive Area	Location	Description
4	IBP	West Lorne Woodlot -West Lorne 42° 36' - 81° 35'	-a good representation of Carolinian deciduous forest, one of the largest known stands in Canada -rare species: a heronry (great blue heron) is reported -81 ha., private land
5	Pond	Miller Pond -Dutton 42° 41' - 81° 31'	-cold water (trout) fishing pond -a good water based recreational resource
6	Access Point	Port Glasgow 42° 30' - 81° 37'	-Beatly Access Point -this access point has approximately 1,200 feet of beach and between 300-400 campsites
7	Lake	Lake Erie - Central Basin	-gill net fishing area for walleye, yellow perch and bass -smelt fishing is becoming increasingly important -shoreline is a migration route for numerous fish species

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40I/12 E

Bothwell

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	West Lorne	Detroit River 42° 34' - 81° 35'	-	768-1880

Map No. 40 I/12 West

Bothwell
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Shetland	-conservation area, Sydenham Valley Conservation Authority -25 acres -swimming (500 feet of waterfront) -fishing
2	River	Thames River 42°39' - 81°45' to 42°32' - 82°00'	-fish migration and spawning, particularly walleye
3	IBP	Thamesville Sand Hills 42°32' - 82°01'	-permanent and intermittent swamps -good stand of abundantly regenerating black gum (Nyssa Sylvatica) -hog-nosed snake (rare species) -13 ha., private land
4	IBP	Shelton Rolling Sandland 42°31' - 82°01'	-permanent and intermittent swamps -pawpaws (Asimina Triloba) and tulip trees, generally rare in the region -20 ha., private land

Map No. 40 I/13

Strathroy
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Strathroy, in the town of Strathroy 42°58' - 81°38'	-145 acres, Sydenham Valley Conservation Authority

Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
2	Conservation Area	A.W. Campbell 42°50' - 81°50'	-315 acres, Sydenham Valley Conservation Authority -swimming (800 ft. of waterfront) -fishing
3	Marsh/Wetland	42°52' - 82°54' 81°	-colony for black crowned night heron (rare species)

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40I/13

Strathroy

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Alvinston System	Sydenham River 42°49' - 81°52'	M.O.E. (Project under development)	-

Map No. 40 I/14 East

St. Thomas
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	IBP Swamps	Dorchester Swamps 42°58' - 81°01'	-area is a typically diverse white cedar swamp -rare plant species: Showy Lakey-Slipper (*Cypripedium Reginae*); Purple-Fringed Orchids (*Habenaria Psycodes*); Yellow Lady-Slipper (*Cypripedium Calceolus*) -white-tailed deer -182 ha., conservation area in the Upper Thames River Conservation Authority -extension of this area to the northwest is private land and comprises 161 ha.
2	River	Thames River 43°00' - 81°00' to 43°58' - 81°15'	-this portion of the Upper Thames has poor water quality due to wastewater disposal -fish habitat for small mouth bass, rock bass, suckers and carp -recreational fishing for the above species

Site No.	Sensitive Areas	Location	Description
3	IBP Ponds	Dingman Ponds 42°57' - 81°02'	-good examples of wetland and pond communities -one of the most southerly of swampy bog habitats and association complexes in Ontario -63ha., private land
4	IBP Ponds	Foster Ponds 42°57' - 81°03'	-good examples of wetland and pond communities -100 ha., private land
5	Ponds	Walker Ponds 43°57' - 81°13'	-ponds are associated with bog conditions containing forest flora typical of northern Ontario, but rather unique to southern Ontario
6	Reservoir	St. Thomas Reservoir 42°48' - 81°11'	-warm water fishing pond -good recreational resource fo fishing such species as bass and suckers

Site No.	Sensitive Areas	Location	Description
7	Creeks	Catfish Creeks Main Branch 42°46' - 81°00' to 42°45' - 81°04' East Branch 42°50' - 81°00' to 42°46' - 81°04' West Branch 42°46' - 81°00' to 42°46' - 81°04'	-important rainbow trout run -provides angling for trout and warm water species such as bass and suckers

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40I/14 E

St. Thomas

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Perfect Circle	Centre of City	Piston rings	A	Piston Rings	Oil	Adequate dyking
B	Ford Motor Co. of Canada	Talbotville Talbotville Royale	Auto Assembly	E	Automobiles	Oil, Acid alkali	Satisfactory controls

Map No. 40 I/14 West

St. Thomas
Sensitive Areas
Aylmer District
Southeastern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	IBP	Sifton Botanical Bog 42°59' - 81°16'	-municipal park -area shows a good example of classical bog succession and a considerable amount of research has been conducted in the area -Blanding's turtle -rare species: glossy buckthorn *(Rhamnus Frangula)*
2	River	Lower Thames 42°57' - 81°16' to 42°46' - 81°30'	-the Lower Thames is significant for both its commercial and recreational value -artificial barriers do not interfere with the movement of barriers of populations between the river and lake environments - spawning for cold water species and habitat for numerous warm water species -important for the salmon run -particularly important to the Lake St. Claire - Lower Lake Huron yellow pickerel fishery. Yellow pickerel migrate into the Thames to spawn in the gravel riffles of the river as far upstream as London -smallmouth bass, largemouth bass, yellow pickerel, channel catfish, white bass, carp and yellow perch are common catches

Site No.	Sensitive Areas	Location	Description
3	Conservation Area	Dingman Creek 42°56' - 81°20'	-Dingman Conservation Area, Upper Thames River Conservation Authority -fishing -50 acres
4	Conservation Area	Sharon Creek 42°53' - 81°24'	-Sharon Creek Conservation Area, Lower Thames Valley Conservation Authority -boating and fishing -150 acres
5	Creek	Springers Creek 43°00' - 81°24' to 42°57' - 81°23'	-good quality stream capable of supporting cold water fisheries
6	Gravel Pits	Komaka 42°56' - 81°26'	-significant potential for fishing and waterfowl production
7	Conservation Area	Millstream 42°54' - 81°26'	-Millstream Conservation Area, Lower Thames Valley Conservation Authority -fishing -25 acres

Site No.	Sensitive Areas	Location	Description
8	Conservation Area	Longwood 42°53' - 81°27'	-Longwood Conservation Area, Lower Thames Valley Conservation Authority -fishing -146 acres

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40I/14 W

St. Thomas

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Nachurs Plant Food	City of London	Fertilizer blending	D	Liquid fertilizer	Ammonia, Urea	Adequate control
	Almatex	"	Paint Mfg.	D	Paints	Solvents	Good in-plant control
	G.S.W.	"	Appliance Mfg	C	Appliances	Oil, acid alkali	Good in-plant control
	Sun Oil	"	Bulk storage	E	Gasoline, oil	Gasoline, oil	"
	Imperial Oil	"	"	E	"	"	"
	Shell	"	"	E	"	"	"
	Texaco	City of London	Bulk storage	E	Gasoline, oil	Gasoline, oil	Good in-plant control
	B.P.	"	"	E	"	"	"
	Sterling Fuels	"	"	D	"	"	"

Map No. 40 I/15

Tillsonburg
Sensitive Areas
Simcoe District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area	Norwhich 42° 59' - 80° 36'	-Norwich Dam Conservation Area, Long Point Conservation Authority -swimming (100 ft. of waterfront) -fishing -200 acres
2	Conservation Area	Oatman 42° 57' - 80° 35'	-Oatman Conservation Area, Long Point Conservation Authority -fishing -12 acres
3	Creek	Big Otter Creek 43° 00' - 80° 32' to 42° 52' - 80°42'	-accomodates an excellent run of rainbow trout and brown trout -accomodates the salmon run for spawning, (Coho and Chinook) also some pickerel -fishing for the above species and warm water species such as bass and suckers marginal
4	Conservation Area	Lehman Dam 42° 52' - 80° 31'	-Lehman Dam, Long Point Conservation Authority -355 acres -fishing

Map No. 40 I/15

Site No.	Sensitive Area	Location	Description
5	Creek	Big Creek 42° 52' - 80°30' to 42° 45' - 80° 31'	-salmonid spawning and migration; rainbow, brook and brown trout -fishing for the above species

Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
6	Reservoir	Tillsonburg - St. Joseph's Lake 42° 53' - 80° 45'	-warm water fishing pond for such species as bass and carp
7	Creek	Big Otter Creek 42° 53' - 80° 42' to 42° 45' - 80° 52'	-see Site No. 3 this map
8	Creek	Catfish Creek -West Branch 42° 53' - 20° 56' to 42° 52' - 81° 00' -East Branch 42° 52' - 80°55' to 42°51' - 81°00'	-provides angling for trout (rainbow run) and warm water species such as bass and suckers -some spawning for migratory salmon

Map No. 40 I/15

Site No.	Sensitive Area	Location	Description
9	Wildlife Management Area	Aylmer Station 42° 49' - 80° 59'	-Aylmer Wildlife Management area -contains ponds and managed by the ministry for waterfowl and upland game -caters to hunting and viewing

Map No. 40 I/16

Simcoe
Sensitive Area
Simcoe District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Lynn River 42° 50' - 80° 17' to 42° 47' - 80° 12'	-waterfowl habitat -salmonid spawning and migration with limitations to marginal; rainbow and brook trout -fishing for the above species
		Patterson Creek 42° 54' - 80° 23' to 42° 51' - 80° 19'	-ideal salmonid spawning and migration, mainly brook trout fishing
		Kent Creek 42° 52' - 80° 23' to 42° 51' - 80° 19'	-good salmonid spawning and migration, mainly brook trout -panfish -fishing for the above species
2	Wildlife Extension	Waterford Lakes 42° 57' - 80° 20'	-lakes provide an opportunity to hunt and view waterfowl -Canada geese nest during the spring along with wood ducks and mallards -wildlife management demonstration area and interpretive trail -750 acre property

Map No. 40 I/16

Site No.	Sensitive Area	Location	Description
	Conservation Area	Waterford Lakes	-Waterford Conservation Area, Long Point Conservation Authority -swimming (1600 ft. of waterfront) -fishing -257 acres
3	Conservation Area	Sutton Pond 42°52' - 80°19'	-Sutton Pond Conservation Area, Long Point Conservation Authority -60 acres
4	Port	Port Dover 42°47' - 80°12'	-major recreational port -fishing for rainbow trout, brown trout, small and largemouth bass in the harour vicinity
5	Conservation Area	Black Creek 42°48' - 80°12'	-Black Creek Conservation Area, Long Point Conservation Authority -fishing -21 acres
6	Conservation Area	Hay Creek 42°47' - 80°17'	-Hay Creek Conservation Area, Long Point Conservation Authority -fishing, 301 campsites -100 acres

Map No. 40 I/16

Site No.	Sensitive Area	Location	Description
7	IBP	Windham Centre Sandy Swampland 42°55' - 80°24'	-a white cedar fen within the stand has a usually high diversity of rare herbs -rare species: Poison Sumach (*Rhus vernix*), yellow Lady-Slipper (*Cypripedium calceolus*) -private land, 32 ha.
8	IBP	Munroe Landon's Woodlot 42° 48' - 80° 22'	-a great diversity of trees and herbs -rare species: Ginseng (*Panax quinquefolia*), Showy Orchis (*Orchis spectabius*), Rattleshake Plantsun Orchid (*Goodyera pubescens*)
9	Creek	Young Creek 42° 48' - 80° 26' to 42° 46' - 80° 16'	-good salmonid spawning and migration; rainbow and brown trout -fishing for the above species
10	Port	Port Ryerse 42° 46' - 80° 16'	-major recreational port and cottage area -fishing for rainbow and brown trout, and pacific salmon in the harbour vicinity
11	Conservation Area	Norfolk 42° 45' - 80° 16'	-Norfolk Conservation Area, Long Point Conservation Authority -fishing -26 acres

Map No. 40 I/16

Site No.	Sensitive Area	Location	Description
12	Conservation Area	Victoria 42° 47' - 80° 20'	-Victoria Conservation Area, Long Point Conservation Authority -fishing -46 acres

Map No. 40 J/1 East

Romney
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	Shoreline	Lake Erie Shoreline	-migration route for numerous fish species; walley, smelt, yellow perch and white bass
2	Lake	Lake Erie Western Basin	-Lake Erie supports the largest fresh water fishery in the world with the majority of the fish harvest coming from the Canadian portion of the western basin and its vincinity -most important species harvested are walley, yellow perch, and white bass -based on a five year average for 1966-70 Landings: -walleye (19,999 lbs.) -yellow perch (12,265,506 lbs.) -white bass (109,775 lbs.) These statistics are for the Kent County Line to Point Peelee

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP. NO. 40J/1-E

Romney

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	P	Union Gas - Port Alma	Detroit River 42°11' - 82°15'	-	689-4889
A	P	Port Crewes	Detroit River 42°11' - 82°15'	-	689-4889
C	I	Erie Canning Co. Ltd.	Detroit River 42°12' - 82°12'	-	689-4252

Map No. 40 J/1 West

Romney
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Marsh/Wetland	Hillman Creek 42°03' - 82°29'	-waterfowl breeding and staging area; ducks, geese, swans -marsh mammal habitat; muskrat and mink support a good trapping industry -fish habitat and spawning ground; particularly important to shallow water spawning species such as the centrarchids, eg., black bass, sunfish, etc. -herons and egrets (rare species) sometimes observed
2	Marsh/Wetland	Muddy Creek 42°04' - 82°27'	-see Site No. 1, this map
3	Park	Wheatly Provincial Park 42°05' - 82°28'	-64-acre provincial park
4	Shoreline	Lake Erie Western Basin	-migration route for numerous fish species, walley, smelt, yellow perch, and white bass

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP. NO. 40J/1 W

Romney

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Wheatley System	Detroit River 42°04' - 82°29'	-	825-4211

Map No. 40 J/2 East

Essex
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Lake Erie	-walleye spawning -migration route for numerous fish species; walleye, smelt, yellow perch, white bass
2	IBP	Leamington Sand Hills 42°07' - 82°38'	-permanent swamps -exceptional diversity of ferns and heraceous plants -most of these are very uncommon in southwestern Ontario, as their centre of distribution is north of the Carolinian zone

Map No. 40 J/2 West

Essex
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Shoreline	Lake Erie 42°00' - 82°45' and 42°00' - 83°00'	-walleye spawning area -migration route for numerous fish species; walleye, smelt, yellow perch, white bass
2	Creek Marsh/Wetland	Cedar Creek 42°02' - 82°50' to 42°01' - 82°47'	-wide variety of important plant, fish and animal species -waterfowl breeding and staging area; ducks, geese, swans -marsh mammal habitat; muskrat and mink support a good trapping industry -fish habitat and spawning ground; particularly important to shallow water spawning speces such as the centrarchids eg., black bass, sunfish, etc. -bald eagle nests (rare species) -great blue heron, black crown night heron, common egret, cattle egret and glossy ibis sometimes sited (uncommon bird species

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40J/2 E

Essex

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Windsor - Tecumseh	Lake St. Clair 42°21' - 82°55'	-	735-4772
B	M	City of Windsor	Detroit River 42°20' - 82°59'	-	254-1692
C	I	Ford Motor Co. of Canada Ltd.	Detroit River 42°20' - 82°59'	-	256-5555

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40J/2 E

Essex

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
D	Ford Motor Co. of Canada Ltd.	Detroit River (Windsor) 42°20' - 82°59'	Engine Plant	C	Auto Engines	Acid, Alkali oil storage	Good in-plant control

Map No. 40 J/3 East

Amherstburg
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Marsh/Wetland	Fighting Island 42°14' - 83°06'	-waterfowl breeding and staging areas -marsh and shore bird habitat -marsh mammal habitat; muskrat, mink, etc. -fish habitat and spawning grounds; bass, sunfish, pike, etc.
2	River	Detroit River 42°15' - 83°08' to 42°03' - 83°08'	-General: see Site No. 1 for Map No. 40 J/7 W., Belle River
3	Marsh/Wetland	Canard Creek including Turkey Island 42°12' - 83°03' to 42°10' - 83°06'	-see site No. 1 this map -Mississauga Rattlesnakes (an uncommon species) have been observed in the vincinity
4	Park	Bois Blanc Island 42 06' -83 07'	-a popular amusement park

Site No.	Sensitive Area	Location	Description
5	Marsh/Wetland	Those associated with Big Creek 42°08' - 83°05' to 42°03' - 83°03'	-see Site No. 1 this map
6	IBP	Malden Centre Marsh 42°03' - 83°04'	-productive marsh and pond, river -a great abundance and diversity of shore birds and waterfowl, especially herons and bitterns (rare). Uncommon trees and plants are also present -control of water level to optimize bird habitat -midland pointed turtles, snapping turtles, bullfrogs -private land, 273 ha.
	Park	Holiday Beach Provincial Park	-offers fall waterfowl hunting ans spring to fall viewing on 50 acres of marsh and 200 acres of open fields. Mallards, black ducks, blue-winged teal, and Canada geese are the principal species harvested

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP. NO. 40J/3 E

Amherstburg

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
B	M	Amherstburg Water System	Detroit River 42° 08' - 82° 07'	M.O.E.	336-4030
C	I	Allied Chemicals	Detroit River 42° 07' - 83° 07'	W. Holmes	736-2111
E	P	Bob-Lo Island	Detroit River 42° 05' - 83° 08'	-	-
F	I	Calvert Distillers Ltd.	Detroit River 42° 05' - 82° 07'	R. Brinkman	736-2161

MAP NO. 40J/3 E

INDUSTRIAL ACTIVITIES

Amherstburg

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Jones Oil	Detroit River 42°15' - 82°17'	Bulk Storage	C	Oil, gasoline	same	Adequate Dyking
B	Allied Chemical	Detroit River 42°07' - 83°07'	Chemicals	E	Soda ash	Calcium chloride, oil	Adequate Dyking
G	Calvert of Canada	Detroit River 42°- 05' - 83°07'	Distillery	D	Distilled Alcohol	Malts	Good in-plant control

Map No. 40 J/6 East

Windsor
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Detroit River 42°15' - 83°07' to 42°20' - 83°00'	-see Site No. 1 for Map No. 40 J/7 W., Belle River

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40J/6 E

Windsor

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	I	Hiram Walker & Sons Ltd.	Detroit River 42° 21' - 83° 01'	M. Sobolov	254-5171
B	I	Canadian Salt Co. Ltd.	Detroit River 42° 20' - 83° 03'	-	256-3105

MAP NO. 40J/6 E

Windsor

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
C	Hiram Walker & Sons Ltd.	Detroit River (Windsor)	Distillery	D	Distilled alcohol	Malts, oil storage	In-plant control
	Chrysler Canada Ltd.	Centre of City	Auto complex	D	Automobiles	Oil, acid alkali	Adequate dyking
	General Motors	"	Auto complex	D	-	Oil, acid alkali	"
	Texaco	"	Oil, gasoline storage	E	-	Oil, gasoline, other petroleum products	"
	Gulf	"	"	E	-	"	"
	Shell	"	"	E	-	"	"
	Esso	"	"	E	-	"	"
	Sterling Fuels	"	"	E	-	"	"
	B.P.	"	"	A	-	"	"

Map No. 40 J/7 East

Belle River
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake and Shoreline	Lake St. Clair and Shoreline	-lake, see Site No. 2, Map No. 40 J/10 E., St. Clair Flats -shoreline, see Site No. 2, Map No. 40 J/10,E., St. Clair Flats
2	Shoreline	Stony Point Area 42°19' - 82°30' and 82°45'	-particularly important walleye spawning grounds
3	Park Reserve	Tremblay Beaches 42°18' - 82°30'	-park reserve, 120 acres

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40J/7 E

Belle River

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Tilbury North Twp.	Lake St. Clair 42°19' - 82°33'	Stoney Point M.O.E.	694-3115
B	M	Belle River	Lake St. Clair 42°18' - 82°43'	-	728-2700

Map No. 40 J/7 West

Belle River
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Detroit River 40°20' - 83°00'	-flow rate is greater than 200,000 cubic feet/sec. causing a current of between 2 and 3 knots -great number and variety of recreational boats during summer -heavily utilized by several migrating fish populations including walleye -supports a large recreational fishery for walleye, bass and perch -river remains unfrozen in the winter, therefore, an important resting and feeding area for a wide variety of diving ducks - especially Canvasback Ducks. Rafts of Canvasbacks numbering in the many thousands are not uncommon in Jan. and Feb.

Site No.	Sensitive Area	Location	Description
2	IBP Area	Emerville Clay Plain 42°16' - 82°46'	-woodlots in this immediate area are very rare -this young stand contains most of the characteristic ground flora of a wet clay community -permanent swamps -private land, 16 hectors

Map No. 40 J/8 East

Chatham
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Thames River 42°30' - 82°04' to 42°25' - 82°15'	-fish migration and spawning, particularly walleye
2	Conservation Area	Cornhill 42°26' - 82°10'	-conservation area, Lower Thames Valley Conservation Authority -26 acres -fishing
3	Conservation Area	401 Harwich 42°23' - 82°09'	-conservation area, Lower Thames Valley Conservation Authority -75 acres -fishing
4	Shoreline	Lake Erie	-receeding shoreline, clay/sand cliffs exposed to water erosion -yellow perch spawning area and major migration route for numeroux fish species; walleye, smelt, yellow perch, and white bass

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40J/8 E

Chatham

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Ontario Steel	City of Chatham	Auto parts	C	-	Oil	Good in-plant control
	Eaton-Towne-Yale	"	Auto parts	C	-	Oil	"

MAP NO. 40 J/8 West

Chatham
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Lake St. Clair and Shoreline	-see Site No. 2, Map No. 40 J/10 E., St. Clair Flats
2	Wetland/Marsh	St. Anne Island 42° 29' - 82° 28'	Shallow - Water/Wetland Habitat General: Marshes in the Chatham District comprise a significant portion of the total marsh area associated with the Great Lakes. Waterfowl breeding and staging area -ducks, geese, swan Marsh and shore bird habitat -herons, egrets, bitterns, gallinules, rails, black birds, marsh Marsh mammal habitat -muskrat and mink support a good trapping industry -an important mid-winter water supply for White-tailed Deer, and Raccoons Fish habitat and spawning grounds -bass, sunfish, pike Rare or uncommon species -the Spotted and Soft Shelled Turtle, their entire Canadian range in and around

MAP NO. 40 J/8 West

Site No.	Sensitive Area	Location	Description
			Lake St. Clair. The Canadian range of a variety of marsh plant species (eg. swamp rose mallow) is limited to these areas in Southern Ontario Uncontrolled Marsh - no dyke protection
3		Mitchell Point 42°27' - 82°26'	General: same as above Controlled Marsh - protected by dykes Undeveloped shoreline
4		Tacky Marsh Bay 42°24' - 82°25' to 42°22' - 82°25'	General: same as above Controlled Marsh - protected by dykes Undeveloped shoreline
5	Wetland/Marsh	Thames River 42°22' - 82°25' to 42°19' - 82°25'	General: same as above Developed Shoreline - residential and/or beaches
6	Wetland/Marsh	Big Creek and Tilbury 42°16' - 82°28' to 42°19' - 82°26'	General: same as above Controlled Wetlands - protected by dykes

MAP NO. 40 J/8 West

Site No.	Sensitive Area	Location	Description
7	River	Thames River 42°23' - 82°15' to 42°19' - 82°28'	-important fish migration route, particularly walleye coming from as far as Lake Huron and western Lake Erie -walleye important for both recreational and commercial fishing -boating -cottaging

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40 J/8 West

Chatham

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Mitchell's Bay	St. Clair River 42°29' - 82°24'	M.O.E. (project under development)	-
B	M	Tilbury	Lake St. Clair 42°19' - 82°28'	-	682-2141

Map. No. 40 J/9 East

Wallaceburg
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Sydenham River 42°42' - 82°00' to 42°36' - 82°15'	-fish migration and spawning
2	River	Thames River 42°33' - 82°00' to 42°30' - 82°05'	-fish migration and spawning, particularly walley

MAP NO. 40 J/9 West

Wallaceburg
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	St. Clair River 42°45' - 82°29' to 42°41' - 82°30'	-known as the "Blue River" because of its depth and clarity -200,000 cubic feet per second flow -important fish migration route for a variety of fish species -habitat for open water birds such as ducks, gulls and terns
2	Creek	Clay Creek 42°45' - 82°29'	-habitat for rare and valuable species such as soft-shelled turtles
3	Port	Sombra 42°43' - 82°29'	-important recreational harbour
4	River	Sydenham River -North Branch- 42°44' - 82°22' to 42°34' - 82°25' -East Branch- 42°36' - 82°15' to 42°34' - 82°25'	-fish migrationa and spawning in the upper reaches, particularly the East Branch

MAP NO. 40 J/9 West

Site No.	Sensitive Area	Location	Description
5	Marsh/Wetland	Walpole Delta 42°32' - 82°30'	-see Site No. 3, Map No. 40 J/10 E., St. Clair Flats

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40 J/9 West

Wallaceburg

INTAKES

Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Type	User	Location	Contact	Telephone
A	M	Sombra (Police Village)	St. Clair River 42°43' - 82°29'	R. Tomlin	892-3434
B	I	Chinook Chemicals Ltd.	St. Clair River 42°43' - 82°29'	M. Millar	892-3411
C	M	Sombra Township	St. Clair River 42°42' - 82°30'	R. Tomlin	892-3434
D	M	Wallaceburg	Detroit River Chenal Ecarté 42°35' - 82°26'	-	-

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40 J/9 West

Wallaceburg

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
E	Durochrome Ltd.	Sydenham River 42°36' - 82°23'	Plating	B	Hardware	Acid, cyanide	Good in-plant control
	Decedar Bros.	"	Painting Shop	A	-	Acid, Alkali	"
	National Hardware	"	Chrome plating	C	Fixtures	Chrome, alkali, acid	"
	North American Plastics	"	Plating	C	Auto parts	Chrome, acid, alkali	"
	Waltec Industries	"	Plating	B	Plumbing Fixtures	Heavy metals	"
	Waltec Forging	"	Acid cleaning	A	Plumbing Fixtures	Acid, alkali	"

Map No. 40 J/10 East

St. Clair Flats
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	St. Clair River 42° 43' - 82° 30' to 42° 30' - 82° 36' and 82° 42'	-see Site No. 2, Map No. J/16 W., Sarnia
2	Lake and Shoreline	Lake St. Clair and Shoreline	-shallow, averaging less than 30 ft. -a large recreational boating pressure in the summer -recreational fishing utilization throughout most of the year -closed to commercial fishing due to mercury contamination -large number of fall hunters for the waterfowl -important spawning area for shallow water spawning species, yellow walleye, yellow perch, black bass, sturgeon -other - catfish, carp, panfish -undeveloped shoreline

Map No. 40 J/10 East St. Clair Flats

Site No.	Sensitive Area	Location	Description
3	Marsh/Wetland	Walpole Island and Squirrel Island 42°32' - 82°33'	-essential wetland habitat shallow - water/wetland habitat -marshes in the Chatham District comprise a significant portion of the total marsh area associated with the Great Lakes -waterfowl breeding and staging area for ducks, geese and swan -marsh and shore bird habitat for herons, egrets, bitterns, gallinules, rails, black birds -marsh mammal habitat: muskrat and mink support a good trapping industry -an important mid-winter water supply for White-tailed deer, and raccoons -fish habitat and spawning grounds: bass, sunfish, pike -rare or uncommon species: the spotted and soft-shelled turtle, their entire Canadian range of a variety of marsh plant species (eg. swamp rose mallow) is limited to these areas in southern Ontario -uncontrolled marsh - no dyke protection

WATER USERS AND INSUTRIAL ACTIVITIES

MAP NO. 40J/10 E

St. Clair Flats

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	M	Sombra Twp.	St. Clair River 42°30' - 82°41'	R. Tomlin	892-3434
B	M	Port Lambton	St. Clair River 42°30' - 82°40'	-	677-5235

Map No. 40 J/16 East

Sarnia
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	IBP	Mandamin Nature Reserve or/Centre Marsh 42°58' - 82°13'	-productive marsh and pond, river -abundance and diversity of shorebirds and waterfowl -Midland painted turtles, rare snapping turtles, bullfrogs -area is severely distrubed and can be regarded as being merely representative for the region -control of water level to optimize bird habitat -privateland, 273 ha.
2	Conservation Area	Petrolia 42°54' - 82°08'	-conservation area, Sydenham Valley Conservation Authority -50 acres -fishing

Map No. 40 J/16 West

Sarnia
Sensitive Areas
Chatham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Park	Point Edward 43°59' - 82°25'	-provincial park
2	River	St. Clair River 43°00' - 82°26' to 42°45' - 82°29'	-General: known as the "The Blue River" because of its depth and water clarity -200,000 c.f.s. -important fish migration route for a variety of fish species -habitat for open water birds such as ducks, gulls, terns
3	Marsh/Wetland	Stag Island 42°54' - 82°29'	-waterfowl breeding and staging area -marsh and shore bird habitat

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP. NO. 40J/16 W.

Sarnia

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	I	Imperial Oil Enterprises	St. Clair River 42°59' - 82°25'	-	337-8221
C	I	Polysar Ltd.	St. Clair River 42°59' - 82°25'	I. Harris	337-8251
E	I	Dow Chemical Ltd.	St. Clair River 42°58' - 82°25'	L.M. Tod	337-8282
H	I	Sun Oil Co. Ltd.	St. Clair River 42°58' - 82°26'	-	337-2301
J	I	Shell Canada Ltd.	St. Clair River 42°56' - 82°27'	T. Barry	862-1491
L	I	Dupont of Canada Ltd.	St. Clair River 42°55' - 82°28'	L. Orbane, W. Lewis	862-1445
N	I	Allied Chemical of Canada Ltd.	St. Clair River 42°54' - 82°28'	H. Bohius	862-1481
P	I	Ontario Hydro Electric Commission	St. Clair River 42°50' - 82°28'	-	867-2663
R	I	Canadian Industries Ltd.	St. Clair River 42°48' - 82°29'	-	867-2739

MAP NO. 40J/16 W

INDUSTRIAL ACTIVITIES

Sarnia

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
B	Imperial Oil Enterprises	St. Clair River 42°59' - 82°25'	Petroleum Refining	E	Full range of petroleum products	Petroleum products Acid, Alkali storage	Adequate Dyking
D	Fibreglass of Canada Ltd.	St. Clair River 42°59' - 82°25'	Fibreglass	E	Fibreglass	Oil storage	Adequate Dyking
F	Polysar Ltd.	St. Clair River 42°58' - 82°25'	Rubber Mfg.	E	Synthetic rubber	Styrene, Benzene, etc.	Good in-plant control
	Dow Chemical	"	Petro Chemical Complex	E	Chlorine, Styrene, Ethylene Glycol	Oil storage	Good in-plant control
I	Sun Oil Co. Ltd.	St. Clair River 42°58' - 82°26'	Petroleum Refining	E	Full range of Petroleum products	Same + Acid & Alkali storage	Good in-plant control
K	Shell Canada Ltd.	St. Clair River 42°56' - 82°27'	Petroleum Refining	E	Full range of Petroleum products	Same + Acid & Alkali storage	Good in-plant control
M	Dupont of Canada Ltd.	St. Clair River 42°55' - 82°28'	Ethylene Mfg.	E	Polyethylene	Oil storage	Good in-plant control
O	Allied Chemical of Canada Ltd.	St. Clair River 42°54' - 82°28'	Chemical Mfg.	E	Misc. chemicals	same	Good in-plant control
Q	Ontario Hydro Electric Commission	St. Clair River 42°50' - 82°28'	Power Station	E	Energy	Oil storage	Good in-plant control

MAP NO. 40J/16 W

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
S	Canadian Industries Ltd.	St. Clair River 42°48' - 82°29'	Fertilizer complex	E	Ammonia fertilizers	Chemical storage	Good in-plant control

MAP NO. 40 P/1

Brantford
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Blue Lake 43°15' - 80°20'	-good commercial trapping opportunities for muskrat, mink, and raccoon -good bass sport fishing -nesting area for wood ducks
2	Creek	Blue Creek 43°14' - 80°18'	-good commercial trapping area for muskrat and mink -waterfowl nesting area.
3	Creek	Fairchilds Creek 43°13' - 80°14'	-commercial bait fishing operation -good commercial trapping for muskrat, mink and raccoon
4	River	Ninth River 43°12' - 80°27' to 43°12' - 80°25'	-moderate angling for pike and bass -good commercial trapping for muskrat, mink and raccoon
5	River	Grand River -Paris-	-junction of the Ninth and Grand River -good angling opportunities for bass and pike -good commercial trapping for muskrat and mink -waterfowl feeding area

MAP NO. 40 P/1

Site No.	Sensitive Area	Location	Description
		Paris to Brantford	-recreational boating
6	Creek	Whiteman's Creek 43°09' - 80°22'	-good angling opportunities for brook and brown trout -site of Brant Rod and Glen Club campground
7	Conservation Area	Grand River 43°10' - 80°19'	-Brant Conservation Area, Grand River Conservation Authority -camping, picnicking, swimming and fishing -424 acres
8	River	Grand River -dam to Newport- 43°07' - 80°14'	-good angling opportunities for pickerel, pike, bass, coho s salmon and rainbow trout -commercial bait fishing -fair commercial trapping for mink and muskrat -municipal park
9	Reservoir, Park	Mount Pleasant 43°05' - 80°20'	-50,000 man days angling provided annually by a provincially operated put and take fishery for rainbow and brook trout

Map No. 40 P/2

Woodstock
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area - Pond	Harrington West Pond 43°15' - 80°59'	-Harrington Conservation Area, Upper Thames River Conservation Authority -cold water (trout) fishing pond -good recreational resource, 10 acres
2	Conservation Area - Pond	Embro Pond 43°11' - 80°55'	-Embro Conservation Area, Upper Thames River Conservation Authority -cold water (trout) fishing pond -good recreational resource, 29 acres
3	River	Middle Thames River 43°07' - 81°55' to 43°00' - 81°59'	-this portion of the Upper Thames has poor water quality due to wastewater disposals -fish habitat for smallmouth bass, rock bass, suckers and carp -recreational fishing for the above species

Map No. 40P/2 Woodstock

Site No.	Sensitive Area	Location	Description
4	Conservation Area - Reservoir	Pittock Reservoir 43°11' - 80°43'	-Pittock Conservation Area, Upper Thames River Conservation Authority -fishing, camping, boating -good recrational resource, 2,640 acres
5	River	Southern Thames River 43°15' - 81°43' to 43°00' - 81°57'	see Site No. 3 on this map
6	Conservation Area	Centreville 43°04' - 80°51'	-Centrevill Conservation Area, Upper Thames River Conservation Authority -6 acres
7	IBP	Folden Swamp 43°03' - 80°48'	-rich cedar - larch swamp area with diverse understory flora (mosses and liverworts) -60 ha., private land

WATER USERS AND INDUSTRIAL INTAKES

MAP NO. 40P/2

Woodstock

INTAKES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Type	User	Location	Contact	Telephone
A	I	William Neilson Limited, Beachville	Thames River 43°06' - 80°51'	-	423-6421

Map No. 40/P3

Lucan
Sensitive Areas
Aylmer District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Thames River 43°15' - 81°09' to 43°00' - 81°17'	-this portion of the Upper Thames has poor water quality due to waste water disposal -fish habitat for smallmouth bass, rock bass, suckers and carp -recreational fishing for the above species
2	Conservation Area - Lake	Fanshawe Lake 43°04' - 81°12'	-Fanshawe Conservation Area, Upper Thames River Conservation Authority -2,465 acres -fishing, boating
3	Conservation Area	Coldstream 43°02' - 81°30'	-Coldstream Conservation Area, Sydenham Valley Conservation Authority -125 acres -swimming (1,000 feet of waterfront) -fishing, boating

Map. No. 40 P/6

St. Mary's
Sensitive Areas
Wingham District
Southwestern Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	North Thames 43°30' - 81°12' to 43°15' - 81°10'	-this portion of the Upper Thames has poor water quality due to wastewater disposal -fish habitat for smallmouth bass, rock bass, suckers, and carp -recreational fishing for the above fish species
2	Conservation Area	Fullerton 43°23' - 31°12'	-Fullerton Conservation Area, Upper Thames River Conservation Authority -77 acres -fishing
3	Conservation Area	Kirkton 43°19' - 81°19'	-Kirkton Conservation Area, Upper Thames River Conservation Authority -3 acres
4	Conservation Area	Woodham 43°20' - 81°18'	-Woodham Conservation Area, Upper Thames Conservation Authority -74 acres
5	Conservation Area	Wildwood Lake 43°15' - 81°00' to 81°05'	-Wildwood Conservation Area, Upper Thames River Conservation Authority -fishing -3100 acres

WATER USERS AND INDUSTRIAL INTAKES

MAP NO. 40P/6

St. Mary's

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
A	Delong Scovill	Thames River 43°16' - 81°08'	Chrome plating	A	Fixtures	Acids	Dyked acid storage facilities

MAP NO. 40 P/7

Stratford
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Pond	Farwell's Pond 43°30' - 80°31'	-brook trout angling
2	Lake	Sunfish Lake 43°29' - 80°39'	-bass fishing -cottage area
3	Lake	Paradise Lake 43°30' - 80°40'	-noted for swimming, water skiing, and boating
4	Creek	Bamberg Creek 43°30' - 80°42' to 43°26' - 80°43'	-good area for commercial bait fishing -fair potential for commercial trapping
		Bamberg Creek 43°30' - 80°42'	-fishing preserve and trout farm
		Bamberg Lake 43°29' - 80°42'	-bass fishing
		Youngstown Dam 43°29' - 80°42'	-commercial picnic grounds
5	River	Ninth River 43°30' - 86°52' to 43°19' - 80°30'	-angling for smallmouth bass -camping -good commercial trapping for muskrat

MAP NO. 40 P/7

Site No.	Sensitive Area	Location	Description
6	IBP	Ninth River Flood Plain 43°20' - 80°39'	-private nature reserve -twin leaf is unusually abundant and the open canopy favours a high density of herbs -9.3 ha.
7	Creek	Baden Creek 43°24' - 80°40' to 43°22' - 80°40'	-brown trout fishery
8	Creek	Wilmot Creek 43°23' - 80°45' to 43°19' - 80°40'	-fair commercial trapping area for muskrat
		43°26' - 80°43' to 43°18' - 80°38'	-good commercial trapping for muskrat and mink -limited angling for bass and pike
9	Creek	Washington Creek 43°20' - 80°36' to 43°18' - 80°33'	-spawning and fish area for brook trout -good commercial trapping for mink, muskrat and raccoon
10	IBP	Spongy Lake 43°25' - 80°39'	-exceptional diversity of plant communities -many rare northern bog species are present here -47 ha., private land

MAP NO. 40 P/7

Site No.	Sensitive Area	Location	Description
11	Lake	Hofstetter Lake 43°24' - 80°37'	-angling for largemouth bass
12	Creek	Alder Creek 43°25' - 80°36' to 43°19' - 80°31'	-commercial bait fishing -limited commercial trapping for muskrat
		43°23' - 80°34' to 43°20' - 80°32'	-trout hatchery -some angling for northern pike
13	Swamp and River	Drumbo Swamp and Black River 43°16' - 80°35'	-spawning area for northern pike -excellent commercial trapping for muskrat, mink, beaver and raccoon -large deer yard -nesting and staging area for several species of waterfowl, including wood ducks
14	River	Ninth River 43°16' - 80°32'	-moderate fishing for bass and pike -good commercial trapping for muskrat, mink and raccoon

MAP NO. 40 P/8

Galt
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Conservation Area, Park	Burns Conservation Area - Bronte Creek - 43°30' - 80°02'	-Burns Conservation Area, Halton Region Conservation Authority -fishing, picnicking and hiking -77 acres
2	Creek	Bronte Creek 43°26' - 80°04' to 43°25' - 80°03'	-large breeding and staging area for ducks and geese -sport fishing for largemouth bass -hiking and picnicking
3	Conservation Area, Park	Valens 43°24' - 80°09'	-Valens Conservation Area, Hamilton Region Conservation Authority -intensively used for outdoor recreation such as camping, boating, fishing and swimming -swimming (1,000 feet of waterfront) -northern pike and bass fishing in the summer is particularly popular in Spencer Creek -opportunities to hunt and view waterfowl -550 acres

MAP NO. 40 P/8

Site No.	Sensitive Area	Location	Description
4	Conservation Area	Beverly Swamp 43°23' - 80°07'	-Beverly Swamp Conservation Area, Hamilton Region Conservation Authority -waterfowl such as mallards, black ducks, green winged teal and wood ducks are present throughout -opportunities for hunting and viewing -numerous white-tailed deer -small game species such as cottontail rabits, grouse, woodcock and pheasants -good brook trout angling in Spencer Creek which runs through the swamp -1,063 acres, comprising approximately 1/6th the total area of the swamp
5	Creek	Spencer Creek 43°16' - 80°04' to 43°16' - 80°02'	-good angling opportunities for largemouth bass -picnicking and swimming
6	Creek	Galt Creek -Aberfoyle to Galt- 43°29' - 80°09' to 43°22' - 80°19'	-good brook and brown trout fishing

MAP NO. 40 P/8

Site No.	Sensitive Area	Location	Description
7	Lake	Puslinch Lake 43°25' - 80°16'	-good pike and pickerel sport fishing -swimming, boating and camping -wildlife area and crown game reserve
8	River	Speed River -Guelph to Cambridge-	-good sport fishing for smallmouth bass and pike -commercial trapping for muskrat, mink and raccoon -resting area for Giant Canada Geese
9	River, Conservation Area	Grand River Breslau 43°29' - 80°26'	-Breslau Conservation Area, Grand River Conservation Authority -sport fishing for smallmouth bass and pike -good commercial trapping for muskrat
10	Creek	Fishermill Creek -Ellis Creek- 43°30' - 80°22' to 43°27' - 80°21'	-good commercial trapping for muskrat, beaver, mink and raccoon -waterfowl nesting area for ducks and geese

MAP NO. 40 P/8

Site No.	Sensitive Area	Location	Description
11	Creeks	Blair Creek 43° 23' - 80°25'	-good brook trout angling -some commercial trapping opportunities for mink and raccoon
		Strosburg Creek 43°24' - 80°26'	-brook trout fishing available
		Cedar Creek 43°20' - 80°26'	-good brook trout angling
12	Conservation Area, Park	Shade Mill Dam -Galt Creek- 43°22' - 80°19'	-Shades Mill Conservation Area, Grand River Conservation Authority -good angling for trout and pike -nesting area for ducks and geese -swimming and picnicking
13	IBP	Twp. of North Dumfries (North Dumfries)	-numerous International Biological Programme sites and areas as covered below:
	IBP, Conservation Area	Paris Cranberry Bog 43°16' - 80°23'	-Conservation Area administere by the Ministry of Natural Resources -largest and best preserved open bog of its type in the locality -popular among naturalists and berry pickers -46 ha., private land

MAP NO. 40 P/8

Site No.	Sensitive Area	Location	Description
	IBP, Wilderness Area	Dickson Wilderness Area 43°16' - 80°24'	-Dickson Wilderness Area, Sand Ridges and Marsh, Grand River Conservation Authority Tract -site is occupied by a diversity of representative plants -17 ha.
	IBP	Oliver's Bog 43°20' - 80°18'	-gives an excellent example of bog succession with typical zonation clearly visible -valuable for educational purposes -17 ha., private land
	IBP	Roseville Swamp 43°22' - 80°26'	-good wetland forest complex, and is an important bird breeding area -white-tailed deer, many breeding bird species, including the northern water thrush -206 ha., private land
	IBP	Lake Altrieve 43°22' - 80°24'	-one of the few sites where the rare herb, spurred Gentian (*Halenia deflexa*) occurs south of the Bruce Peninsula -34 ha., private land

MAP NO. 40P/8

Site No.	Sensitive Area	Location	Description
	IBP, Wildlife Area	Bannister Lake Wrigley Lakes 43°18' - 80°24'	-Bannister Lake Conservation Area, Grand River Conservation Authority -sport fishing for catfish and pike -breeding populations of shorebirds and waterfowl -migratory stopover for waterfowl -good example of seasonally emergent aquatic habitat -50 ha.
	IBP, Conservation Area	Pinehurst Lake 43°16' - 80°23'	-Pinehurst Conservation Area, Grand River Conservation Authority -great tree and herb species diversity, good examples of sandland oak-hickory communities -waterfowl nesting area -stocked bass and rainbow trout fishery -camping, swimming, boating -23 ha.
	IBP	Spottiswood Lakes 43°16' - 80°23'	-this warmer than normal microhabitat supports a sand hill ecosystem with intermediate aged forest having some Carolinian attributes

MAP NO. 40 P/8

Site No.	Sensitive Areas	Location	Description
			-good bass fishing opportunities -commercial trapping for mink, muskrat and raccon -waterfowl nesting and staging area -300 ha., private land
14	River	Nith River -Ayr- 43°17' - 80°28'	-extensive sport fishing for smallmouth bass and northern pike -good commercial trapping for muskrat
15	River	Grand River 43°18' - 80°20' to 43°17' - 80°21'	-some angling for bass -waterfowl feeding area and crown game reserve
16	Marsh/Wetland	43°16' - 80°19'	-waterfowl breeding area -good commercial trapping for muskrat and mink

MAP NO. 40 P/9

Guelph
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Areas	Location	Description
1	Lake	Fairy Lake 43° 38' - 80° 03'	-good sport fishing for largemouth bass and northern pike
2	IBP	Blue Springs Scout Reserve 43° 37' - 80° 05'	-rare and relic herb species, Maire's Tail (*Hipparis vulgaris*) and Narrow-Leaf Gention (*Gentiana linearis*)
3	Marsh/Wetland	Lutteval Creek 43° 41' - 80° 10'	-good habitat for a variety of wildlife especially as a production and staging area for waterfowl
4	River	Eramos River 43° 45' - 80° 04' to 43° 38' - 80° 10'	-high quality stream which is excellent for fishing -undeveloped valley land
		43° 37' - 80° 10' to 43° 35' - 80° 09'	-provides good angling opportunities -crown game preserve provides wildlife viewing especially geese

MAP NO. 40 P/9

Site No.	Sensitive Area	Location	Description
5	Park	Rockwood 43°37' - 80°09'	-Rockwood Conservation Area, Grand River Valley Conservation Authority -significant fishing area -camping, swimming and boating facilities -197 acres
6	Lake	Lake Belwood 43°45' - 80°20'	-conservation area, 3281 acres -good sport fishing -rainbow trout and northern pike are stocked -perch and bass are also available to the angler -swimming
7	River	Grand River 43°45' - 80°20' to 43°42' - 80°23'	-good sport fishing as the area is stocked with rainbow trout -some commercial trapping for mink, muskrat, and raccoon
		43°42' - 80°23' to 43°41' - 80°26'	-Elora Gorge is noted for its scenic beauty
8	Park	Elora - Grand River - 43°41' - 80°27'	-scenic park providing good camping, swimming,and fishing

MAP NO. 40 P/9

Site No.	Sensitive Area	Location	Description
9	Creek	Irvine Creek 43°45' - 80°26' to 43°41' - 80°26'	-good brook trout fishing -some commercial trapping for muskrat, mink and beaver
10	River	Grand River -Winterbourne- 43°34' - 80°29'	-moderate angling pressure for smallmouth bass -fair commercial trapping for muskrat
11	Creek	Swan Creek 43°40' - 80°21'	-excellent brook trout spawning and fishing area
12	Creek	Cox Creek 43°38' - 80°20'	-commercial bait fishing operations -commercial trapping for mink, muskrat, raccoon and beaver -waterfowl nesting area
13	Creek	Hopwell Creek 43°33' - 80°23' to 43°30' - 80°25'	-good commercial trapping area for muskrat and raccoon
14	Research Station and Park	Guelph - Speed River - 43°31' - 80°16'	-Kortwright Waterfowl Research Station and Park -major research station for ducks and geese -park for viewing waterfowl

WATER USERS AND INDUSTRIAL ACTIVITIES

MAP NO. 40P/9

Guelph

INDUSTRIAL ACTIVITIES

Southwestern Region
Ontario Ministry of the Environment

Site No.	Company	Location	Operation	Volume Size	Product	Hazardous Material	Remarks
	Beardmore Tannery	Acton	Vegetable and Chrome tanning	E	Lime, chromium salt, sulphuric acid	lime, chromium salt, sulphuric acid	Potential problem

MAP NO. 40 P/10

Conestogo
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Caroll Creek 43°44' - 80°34' to 43°43' - 80°32'	-fair angling potential for brook trout -commercial trapping for mink
2	Creek	Canagagigue Creek -feeder stream- 43°41' - 80°33'	-moderate angling potential for brook trout -commercial bait fishing
3	Creek	Canagagigue Creek 43°41' - 80°36' to 43°35' - 80°30'	-commercial bait fishing -commercial trapping for muskrat
4	Park	Conestogo Lake 43°41' - 80°43'	-Conestogo Conservation Park, Grand River Conservation Authority -boating, swimming, camping, and fishing -5,796 acres
5	Lake	Conestogo Lake 43°43' - 80°43' to 43°41' - 80°43'	-excellent commercial bait fishing -rainbow trout are poor above Conestogo Dam, good below the dam -limited opportunities for ducks and geese hunting

MAP NO. 40 P/10

Site No.	Sensitive Area	Location	Description
6	River	Conestogo River 43°41' - 80°43' to 43°36' - 80°39'	-sport fishing for rainbow trout and smallmouth bass -commercial trapping for muskrat
7	River	Conestogo River 43°36' - 80°39' to 43°34' - 80°37'	-moderate fishing pressure for smallmouth bass -extensive commercial trapping for muskrat -moderate hunting pressure for ducks and geese
		43°34' - 80°37' to 43°33' - 80°30'	-moderate fishing pressure for smallmouth bass -extensive commercial trapping for muskrat and beaver -moderate hunting pressure for ducks and geese
8	Creek	Martin Creek 43°31' - 80°37'	-commercial bait fishing -fair commercial trapping for muskrat
9	Creek	Wellesley Township Creek 43°35' - 86°44'	-commercial bait fishing -fair commercial trapping for muskrat
10	River	Ninth River 43°32' - 80°51'	-commercial bait fishing -fair commercial trapping for muskrat

MAP NO. 40 P/15

Palmerston
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Creek	Four Mile Creek 43°56' - 80°41'	-commercial bait fishing -commercial trapping for muskrat, mink, and raccoon
2	Creek	Rothsay Creek 43°55' - 80°40'	-commercial bait fishing -commercial trapping -brook trout are available for sport fishing
		43°51' - 80°43' to 43°49' - 80°43'	-commercial bait fishing -poor sport fishing for coarse fish only -high commercial trapping potential for muskrat
3	River	Conestogo River 43°55' - 80°43' to 43°50' - 80°43'	-commercial bait fishing -commercial trapping for mink, muskrat, and raccoon
4	River	Conestogo River 43°50' - 80°38' to 43°45' - 80°41'	-commercial bait fishing -commercial trapping for muskrat and mink -some sport fishing for smallmouth bass -waterfowl production and staging area

MAP NO. 40 P/15

Site No.	Sensitive Area	Location	Description
5	Stream	43°46' - 80°36'	-commercial bait fishing

MAP NO. 40 P/16

Orangeville
Sensitive Areas
Cambridge District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	Lake	Luther Lake 43° 57' - 80° 26'	-extremely important area for commercial bait fishery -important trapping area for beaver, muskrats, mink, raccoon, coyote and fox -important waterfowl breeding, nesting and staging area. Provides 5,000 man days hunting recreation
2	Conservation Area	Luther Marsh 43° 58' - 80° 24'	-Luther Marsh Conservation Area, Grand River Conservation Authority -boat launching -fishing, picnicking, and wildlife viewing -7,830 acres
	Wildlife Management Area	surrounds Luther Lake	-Luther Marsh Wildlife Management Area surrounds Luther Lake and consists of 11,000 acres -managed on a cooperative basis between the Grand River Conservation Authority and the Ministry of Natural Resources for waterfowl and upland game -marsh has nesting colonies of black-crowned night herons and great blue herons (rare species)

MAP NO. 40 P/16

Site No.	Sensitive Area	Location	Description
3	River	Grand River 43°57' - 80°20' to 43°50' - 80°19'	-some sport fishing for bass and perch -commercial trapping for muskrat, mink, beaver and raccoon
4	River and Stream	Grand River 44°00' - 80°24' to 43°45' - 80°20' Willow Brook 44°00' - 80°16' to 43°54' - 80°17'	-waterfowl production and staging areas
5	Conservation Area	Grand Valley 43°54' - 80°19'	-Grand Valley Conservation Area, Grand River Conservation Authrotiy -fishing and swimming -101 campsites -14 acres
6	Lake	Belwood Lake 43°47' - 80°20'	-area stocked with rainbow trout and northern pike by the Grand River Conservation Authority for sport fishing -entire lake is a high use area for campground, and cottages

MAP NO. 40 P/16

Orangeville
Sensitive Areas
Huronia District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
7	Wildlife Extension Area and Conservation Area	Orangeville Reservoir 43°57' - 80°05'	-Orangeville Dam & Reservoir Conservation Area, Credit Valley Conservation Authority -780 Acres -nesting and staging area for numerous waterfowl species including shore-birds and herons -waterfowl hunting and viewing
8	Conservation Area	Orangeville 43°57' - 80°06'	-Monora Conservation Area, Credit Valley Conservation Authority -301 campsites, picnicking -swimming (200 feet of waterfront) -fishing

MAP NO. 41 A/1

Dundalk
Sensitive Areas
Huronia District
Central Region
Ontario Ministry of Natural Resources

Site No.	Sensitive Area	Location	Description
1	River	Grand River 44°07' - 80°20' to 44°00' - 80°23'	-waterfowl production and staging area