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An Adirondack Watershed Data Base: Attribute and Mapping Information for Regional Acidic Deposition Studies

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AN ADIRONDACK WATERSHED DATA BASE: ATTRIBUTE AND MAPPING INFORMATION FOR REGIONAL ACIDIC DEPOSITION STUDIES

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CONTENTS

LIST OF FIGURES

LIST OF TABLES

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Data Base Design:	R. J. Olson, J. M. Malanchuk, C. T. Hunsaker, G. K. Gruendling, D. J. Bogucki
Data Base System:	R. J. Olson, A. E. Rosen, R. C. Durfee, D. L. Wilson, P. R. Coleman

Data Base Contents:

Lake Inventory - G. K. Gruendling, D. J. Bogucki, A. E. Rosen, C. T. Hunsaker

Morphology - G. K. Gruendling, J. P. Baker, A. E. Rosen

Physiography - P. R. Coleman, R. J. Olson

Bedrock - D. L. Wilson

Soils - R. S. Turner, C. C. Brandt, R. P. Curran, R. J. Olson

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ABSTRACT

ROSEN, A. E., R. J. OLSON, G. K. GRUENDLING, D. J. BOGUCKI, J. L. MALANCHUK, R. C. DURFEE, R. S. TURNER, K. B. ADAMS, D. L. WILSON, P. R. COLEMAN, C. C. BRANDT, and C. T. HUNSAKER. 1988. An Adirondack Watershed Data Base: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10144. Oak Ridge National Laboratory, Oak Ridge, Tennessee. 258 pp.

The Adirondack Watershed Data Base (AWDB) provides a means to test hypotheses concerning the relative importance of various watershed attributes that may contribute to increased acidification of Adirondack surface waters. A companion report, "Empirical Relationships between Watershed Attributes and Aquatic Resources in the Adirondacks" (ORNL/TM-9838), discusses this application. In addition, the AWDB is a valuable resource for the study of other ecological phenomena. The AWDB consists of digital watershed boundaries and digital geographic data (topography, soils, land cover, etc.), stored within a geographic information system, and watershed/lake attribute data stored in a data management system (SAS[1]) for 463 Adirondack headwater lakes. Attributes include watershed morphology, physiography, bedrock, soils, land cover, wetlands, disturbances (e.g. cabins, fire, and logging), beaver activity, precipitation, and atmospheric deposition. Over 600 variables are available for each watershed. These data can be combined with water chemistry data and fish community status for regional-scale examinations of watershed attributes that may account for variability and change in water chemistry and fish populations in the Adirondacks.

[1]SAS is the registered trademark of SAS Institute, Cary, N.C.

This report describes the design of the AWDB, documents sources and history of the data; defines the format of the AWDB contents; and characterizes the data using summary statistics, frequency bar charts, and other graphics. In addition, it provides information necessary for researchers using the data base on their own computer systems.

1. INTRODUCTION

A set of lakes within the Adirondack region of New York State was selected to empirically test alternative hypotheses concerning the relative importance of various watershed attributes that may contribute to acidification of Adirondack surface waters. The primary objective was to examine, on a regional scale, watershed attributes which may account for variability and change in water chemistry and fish populations in the Adirondacks. Secondarily, empirical relationships developed through statistical analyses of lakes with water chemistry data were used to assess the status of additional headwater lakes in the Adirondacks. The results of these analyses are discussed in Hunsaker et al. (1986a), Hunsaker et al. (in press), and Olson et al. (1986a). In addition, an atlas of computer generated maps of parameters used in the analysis is being prepared to show spatial patterns of the data and to describe procedures used to manipulate geographic data (Olson et al. in prep.). This report describes the development and the contents of the Adirondack Watershed Data Base (AWDB) which was used in the analyses cited above. The sources and history of the data are given and summary statistics, frequency base charts, and other graphic displays are used to characterize the data within the AWDB.

2. DATA BASE DESIGN

Lake and watershed parameters thought to be associated with lake acidification were compiled at Oak Ridge National Laboratory (ORNL) from a variety of sources (Table 1) into the Adirondack Watershed Data Base (AWDB). The AWDB includes basic information (e.g., lake name, location, size, and elevation) for all 2759 lakes in the Adirondack ecological zone (AEZ) and watershed attributes for a subset of 463 headwater lakes. The AWDB is designed to link data on a watershed's morphology, physiography, bedrock, soils, land cover, wetlands, disturbances (cabins, fire, and logging), beaver activity, land use, and atmospheric deposition with a lake's water chemistry and fish community status.

The AWDB consists of cartographic data, both digital watershed boundaries and digital data (topography, soils, landcover, etc.), stored within a geographic information system (GIS), and watershed/lake attribute data (mean water chemistry, lake size, average slope, total wet deposition, etc.) stored within a statistical data management system (SAS). The combined system is designed to provide the capability to extract spatial data, to perform statistical analyses or run models, and to map attributes and display results of analyses.

2.1 SPATIAL AND TEMPORAL CHARACTERISTICS

The geographic coverage of the AWDB is the Adirondack ecological zone that is defined by the approximate 300-m elevation contour surrounding the Adirondack Park in northeastern New York State. The AEZ encompasses approximately 2.5 million ha and contains 2759 lakes

Table 1. Data sources used to compile the Adirondack Watershed Data Base

Data Type	Source[a]	Compiled By[b]
Morphology	USGS topographic maps (1:62,500 or 1:24,000), NYSDEC records, aerial photos (1:20,000, 1968, B/W)	SUNY
Physiography	DMA TOPOCOM digital representation of USGS 1:250,000 topographic maps	ORNL
Bedrock	1982 geologic map, Norton et al, 1982	ORNL
Soils	1974 USDA/SCS Mesoscale maps, USDA/SCS SOILS-5	APA/ORNL
Land cover	1978 Landsat imagery	APA/ORNL
Wetlands	1982 Wetland map	SUNY
Cabins	1978-1983 Aerial photos	SUNY
Fire, logging	1916 NY state map (1:126,720)	SUNY
Beavers	1978-1981 Aerial photos (1:24,000)	SUNY
Deposition	1951-1980 Precipitation norms 1980-1982 Deposition monitoring	ORNL
Water chemistry	FIN-Assembled from several sources	NCSU
Fish community status	FIN-Assembled from several sources	NCSU

[a]USGS - U.S. Geological Survey, NYSDEC - New York State Department of Environmental Conservation, DMA - Defense Mapping Agency, USDA/SCS - U.S. Department of Agriculture, Soil Conservation Service, FIN - Fish Information Network - North Carolina State University.

[b]SUNY - State University of New York at Plattsburgh; ORNL - Oak Ridge National Laboratory; APA - Adirondack Park Agency; NCSU - North Carolina State University.

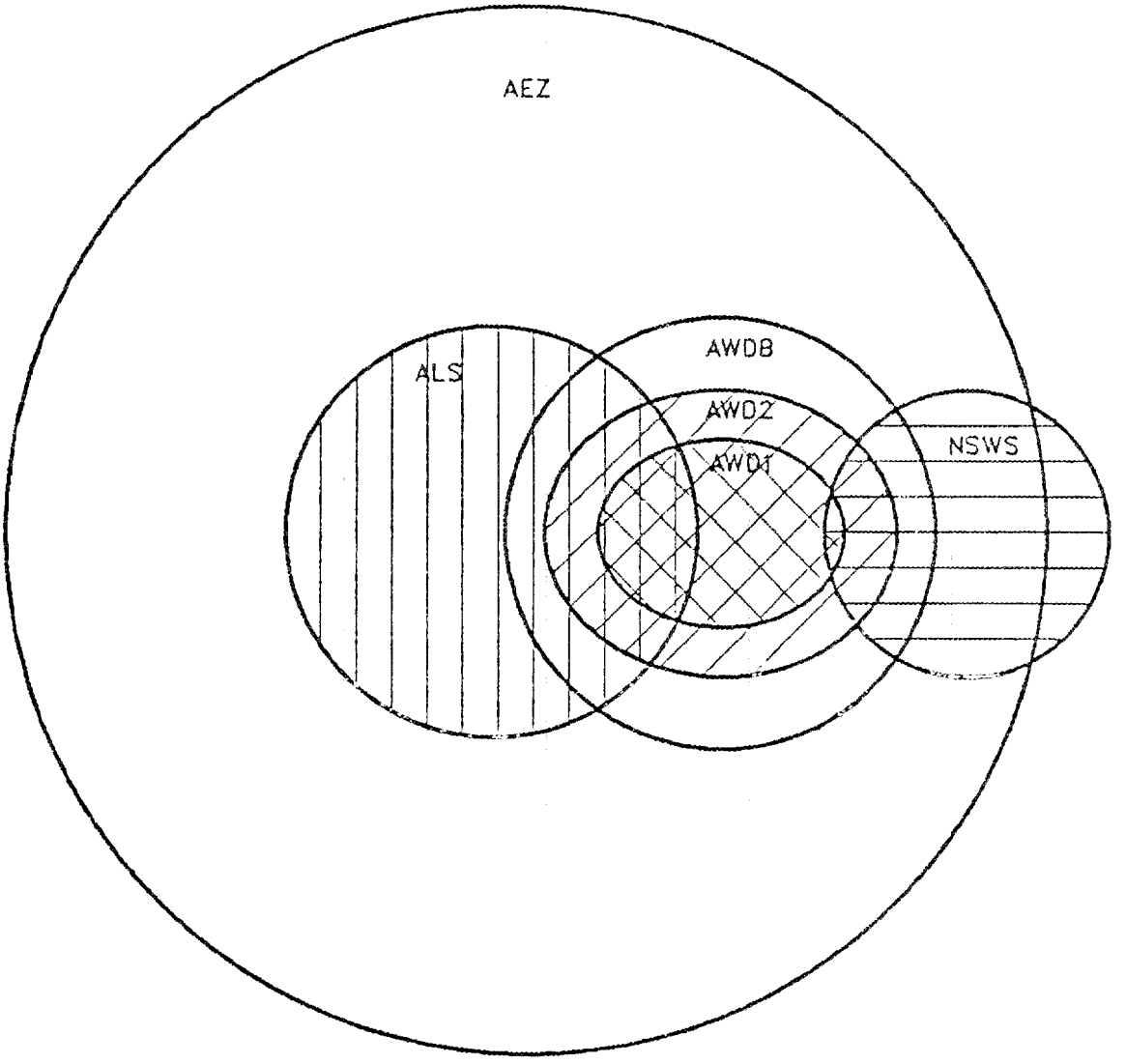
(Colquhoun et al. 1984). The AWDB includes extensive data for a subset of 463 headwater lakes and their watersheds located in the central part of the AEZ. Candidate headwater lakes located in the peripheral zone of the AEZ (approximately 37% of the total area) were not included due to lack of adequate wetland maps.

Subsets of the 2759 lakes in the Adirondacks have been surveyed by various groups which has resulted in the development of data bases containing extensive water chemistry data plus some fish and watershed data. While there has been no design for including the same lakes in subsequent surveys, there is overlap between the surveys. The Fish Information Network (FIN) (Baker et al. 1984) data base compiled extant chemistry and fish community status data for Adirondack lakes; FIN has current pH data (1974-1983) for 693 lakes. The Adirondack Lake Survey (ALS) sampled 422 lakes in 1984 and an additional 400 lakes in each of the next two summers (ALSC 1985). The ALS data base includes extensive water chemistry, fish information, and morphologic data for each lake. The ALS is funded jointly by the New York State Department of Environmental Conservation (NYSDEC) and Empire State Electric Energy Research Corporation (ESEERCO). The 1984 Environmental Protection Agency (EPA) National Surface Water Survey (NSWS) sampled 204 lakes in the NSWS Region 1A, which covers northeastern New York and includes the Adirondacks. The number of lakes included in each of these surveys is summarized in Table 2 with the overlap of the various sets of lakes shown in Figure 1.

The spatial resolution for the AWDB is primarily watershed units, or the immediate area draining into each lake as defined from large

ORNL-DWG 87-1778

OVERLAP OF ADIRONDACK DATA SETS



Survey or data set:
- AEZ -- Adirondack Ecological Zone (2,759 Lakes)
- ALS -- Adirondack Lake Survey, 1984 (422 lakes)
- NSWS -- National Surface Water Survey, Region IA (204 Lakes)
- AWDB -- Adirondack Watershed Data Base (464 Headwater Lakes)
- ADW1 -- ADWB Subset with 1975 Chemistry (122 Lakes)
- AWD2 -- AWDB Subset 2ith 1984-83 Mean Chemistry (256 Lakes)

Circles With Crosshatching Indicate Available Water Chemistry Data.

Fig. 1. Overlap of lakes in surveys or data sets.

Table 2. Number of ponded waters common to several surveys or data sets

	Data Set[a]					
Data Set	AEZ	AWDB	AWD1	AWD2	ALS	NSWS
AEZ	2759					
AWDB	464	464				
AWD1	122	121	121			
AWD2	256	256	121	256		
ALS	1245	219	49	125	1245	
NSWS	179	49	17	35	30	204

[a] AEZ - Adirondack Ecological Zone;
AWDB - Adirondack Watershed Data Base containing extensive watershed data; for simple, headwater lakes;
AWD1 - AWDB subset with 1975 chemistry including pH, alkalinity, aluminum, zinc, etc., data;
AWD2 - AWDB subset with 1974-1983 mean chemistry for pH, alkalinity, and conductivity;
ALS - Adirondack Lake Survey, lakes sampled in 1984, 1985, and 1986; and
NSWS - National Surface Water Survey, lakes sampled in 1984.

scale topographic maps. Therefore, attributes such as the percentage of wetlands in a watershed may be known for the watershed as a whole but the location of the wetlands within the watershed is not known. However, some of the digital files containing the data used to extract the watershed attributes have finer spatial resolutions. Resolution of the source materials used to create digital files varied from 1:250,000 topographic maps to 1:15,840 scale aerial photos. Soils, landcover, and topography files are stored in 0.4 ha grid cells, deposition files have 3.75' cell resolution, and bedrock geology has very detailed resolution associated with its polygonal representation. By using these cartographic files with the watershed boundary file, additional spatial resolution can be obtained within a watershed unit.

The AWDB utilizes the New York State Department of Environmental Conservation (NYSDEC) "Pond" (or "p") numbers as unique lake/watershed identifiers. These identifiers consist of a watershed basin code (basins 04 to 08 cover the Adirondacks) and a lake number. Pond numbers were assigned to lakes in hydrologic order in the 1930's using large scale topographic maps. However, since then, the system has been modified to accommodate "new" lakes (reservoirs, beaver ponds, or lakes not on the original maps) by adding a single letter as a suffix to the "p" number. The NYSDEC regional office at Ray Brook maintains a master set of maps and "p" numbers for the Adirondack region.

The temporal coverage varies by data type and spans from the early 1900's for historic disturbance data (fire or logging) to the 1980's for water chemistry and deposition data. Most of the initial statistical analyses were based on data for the eight-year period

centered on 1978. The temporal resolution is either the most recent state of those parameters such as soils or bedrock geology that are in a longterm, static condition or an annual average for those parameters displaying a more dynamic temporal pattern such as water chemistry or deposition. The water chemistry data are based on the average value for all summer observations for a lake measured between 1974 and 1983. Deposition values reflect the annual average based on measurements obtained between 1980 and 1982.

2.2 CARTOGRAPHIC DATA

Cartographic or map data define the locations and boundaries of spatial features within the AEZ. The digital watershed boundaries (polygons) define the common spatial units used to extract and integrate data representing each of the watershed attributes. Another type of geographic data represented by thematic maps (e.g., soils, land use, and elevation maps) were obtained in digital form for the entire 2.5 million-ha Adirondack region. Attribute data were extracted and categorized for each watershed by overlaying the digital boundaries of the watersheds on the thematic data using the GIS. Digital files were also used to calculate new variables, such as slope and aspect from elevation data and adjusted total wet deposition by combining interpolated concentration values for H^+, sulfate, and nitrate with interpolated precipitation data over the region.

2.3 ATTRIBUTE DATA

Attribute data are characteristics associated with points or areas defined by the cartographic data base. Most attribute data refer to the lake or entire watershed unit. Attribute data include lake morphology, water chemistry, fish population status, bedrock, soils, hydrology, vegetation, wetlands, beaver activity, fire and logging disturbances, land use, climate, and atmospheric deposition. Watershed data were compiled primarily from extant sources such as maps and aerial photographs.

The attribute data in the AWDB is organized into 34 data sets (Table 3), each having the prefix "I" followed by a number. Additional data sets may be created as new data become available. Each of these data sets contains data relating to a specific thematic area, for example, wetlands, soils, elevation, slope, etc. Many of the data sets have a single observation (record) for each watershed. Others have multiple observations per watershed. The common variable in most of the data sets is the New York State Department of Environmental Conservation pond number (POND_NO). This common variable allows for merging among the data sets.

In addition to the "I" data sets there are three other data sets, designated G01, G02, and G03, which document the data base. G01 contains a title, description, data source, temporal and spatial characteristics, reference years, number of records, and number of variables for each data set. G02 contains variable names, labels, units of measure, and formats for variables within each data set.

G03 contains coded value descriptions. Table 3 lists each data set in the AWDB and its title. Complete descriptions for each of the data sets can be found in Appendix A. Each data set description is a summary of all relevant information about the data set, including descriptive statistics and graphics. Appendix B is an alphabetical listing of variables in the data base, including labels and units of measure.

Table 3. Data set designations and titles

Data set	Title	Number of variables
G01	Directory of data sets	49
G02	Directory of variables	9
G03	Formats for code variables	4
I00	Integrated list of lakes in Adirondacks	17
I01	Physical attributes of lakes	32
I02A	Watershed area by forest type	13
I02B	Watershed area by disturbance type	15
I02C	Number of cabins	3
I03	Watershed area by land cover type	7
I04	Soil mapping unit areas	3
I05A	Soils - A/E horizon values	11
I05B	Soils - mean of A/E & B horizon values	11
I05C	Soils - mean of A/E, B, C horizon values	11
I05D	Soils - values depend on runoff class	11
I06A	Soils - A/E horizon values	14
I06B	Soils - mean of A/E & B horizon values	14
I06C	Soils - mean of A/E, B, C horizon values	14
I06D	Soils - values depend on runoff class	14
I07	Soil chemistry by soil mapping unit	62
I08	National Wetlands Inventory cover types	7
I09	Wetlands - acidification classes	11
I10	Wetlands - description of NWI codes	9
I11	Beavers - dams and lodges	11
I12	Beavers - aggregated by watershed	22
I13	Watershed area by slope class	49
I14	Watershed area by aspect class	10
I15	Watershed area by elevation class	105
I16	Annual wet deposition - H^+, NO^3, SO_4	11
I17	Watershed area by bedrock class	5
I18	Water chemistry - Schofield lakes	20
I19	Water chemistry - FIN lakes	28
I20	Water chemistry - NSWS lakes	37
I21	Cross-reference file to other data bases	7
I22	Comments on lake history	5
I23	Integrated analysis file	224
I24	Soil-related watershed characteristics	26
I25	Annual runoff	2

3. DATA BASE DEVELOPMENT

The initial step in creating the AWDB was the selection of lake/watershed units. Large scale, USGS topographic maps (primarily 15 minute maps at 1:62,500 scale) were manually scanned to identify headwater lakes. Headwater lakes are defined as those lake systems consisting of a single lake not linked by streams or wetlands to other lakes higher in the drainage system. Approximately 37% of the AEZ that lacked wetland maps was excluded, and some individual lakes that appeared to have confounding influences (man-made reservoirs, quarries, lakes adjacent to road or railroad fills, etc.) were also excluded. The boundary of each watershed was marked on the topographic maps, and unique identifiers were assigned to each lake/watershed by using the NYSDEC pond numbering system and master maps. All subsequent data were linked together with pond numbers in the data base.

The watershed boundaries were digitized with the Video Projection Digitizing System of the Oak Ridge National Laboratory (ORNL) GIS. Computer maps at the same scale and projection as the USGS source maps were generated to check the digitizing process. In addition, watershed areas and centers were calculated. The watershed polygons were subsequently used to intersect with data from other digital files (such as topography, land cover, and soils) to extract watershed data.

3.1 DATA SOURCES

The AWDB is comprised of data that have been integrated from many different sources (Table 1). The major sources and agencies of these data include the Acid Deposition System (ADS) (Watson and Olsen 1984),

the Adirondack Park Agency (APA), the Defense Mapping Agency (DMA), FIN (Baker et al. 1984), the National Oceanic and Atmospheric Administration (NOAA), the New York State Department of Environmental Conservation (NYSDEC), the State University of New York at Plattsburgh (SUNY), the U.S. Geological Survey (USGS), the U.S. Department of Agriculture/Soil Conservation Service (USDA/SCS), and the National Surface Water Survey (NSWS). The contributions of each of these sources are detailed in Section 5. In addition, Appendix A lists a source for each data set.

The APA provided digital data on land cover from classified Landsat data and soils from digitized county soil maps (R. Curran, personal communication). Subsequently the ORNL/Geographic Data Systems Group (GDSG) used the digital watershed boundaries to extract land cover and soils data from the APA data for each watershed. The ORNL/GDSG also used the digital boundaries for each watershed to extract topographic data computed from the Defense Mapping Agency (DMA) TOPOCOM (topographical characteristics) data base.

Data on lake morphology, beaver activity, and disturbances for each watershed were provided by SUNY (Gruendling et al. 1985).

Water chemistry and fish data were obtained from the FIN data base (Baker et al. 1984). Chemistry data are available for only about half of the AWDB lakes. Lakes with the most complete chemistry data are a subset of 121 high elevation lakes (within the 463) which were surveyed by Schofield (1976b) in 1975. This subset is designated AWD1 and was used by Hunsaker et al. (1986) to test hypotheses dealing with aluminum (Al^{3+}), sulfate (SO_4^{2-}), nitrate (NO_3^-), etc. A second subset of 256

lakes (including the 121 AWD1 lakes) includes all lakes within the 463 that have either pH or alkalinity measurements within the time period 1974 to 1983. This subset is designated AWD2. A third subset of lakes includes the 46 lakes within the AWDB that were sampled by the NSWS.

3.2 QUALITY ASSURANCE

Quality assurance (QA) checks and documentation are essential for the integrity of a data base composed of variables compiled from different sources and at different times. QA is an ongoing process and includes cross-checking data from different sources, internal consistency checks, statistical identification of outliers, and maps/plots to identify unusual patterns. Often files from different sources contain data for the same variable, e.g., lake size, elevation, depth, etc. When possible, these values are compared and those with large differences checked. Internal data checks include comparing water chemistry relationships (e.g., a lake with low pH and high alkalinity), comparing perimeter length against the minimum possible perimeter (calculated by the circumference of a circle of area equal to the lake size), verifying that percentage data sum to 100%, etc. The statistical analyses, including calculating univariate statistics for each variable, often indicate outliers to be checked as potential errors. Another QA check is to compare digitized data against the source maps. Maps of watershed boundaries and lake coordinates were drawn at the same scale as source maps and were overlaid on the original source maps to check for digitizing errors. New data were entered by two independent data entry persons followed by comparing the files for transcription and typographical errors.

4. DATA BASE SYSTEM

4.1 ORNL/GIS

The GIS used in this study was developed by the Geographic Data Systems Group (GDSG) at ORNL (Durfee et al. 1986). Functions of the ORNL GIS include (1) data input and editing, (2) data transformation and manipulation, (3) data management and extraction, (4) integration and analysis, and (5) output and display.

The ORNL GIS utilizes several approaches to contour irregularly spaced data such as the precipitation and deposition data described below. The general approach consists of three distinct steps: (1) establishing a Thiessen polygon network between the points, (2) interpolating to a regularly spaced grid from the Thiessen network, and (3) generating contours from the resulting regularly spaced grid. One algorithm used to interpolate from the Thiessen network to the grid consists of producing triangles by constructing straight lines from each point to its nearest Thiessen neighbors. This triangulation, called the "dual" of the polygon network, has values at the vertices of each triangle that correspond to the measured data. For each grid cell within each triangle, interpolated values are then calculated as a function of the vertex values and "cell-to-vertex" distances. A quadratic weighting function based on the distance of the grid cell to each of the vertices of the triangle creates a continuous quadratic surface that assures a smooth transition between adjacent triangles. The weighting function causes the interpolated values to have the same slope along the edge between two triangles as it is approached from either side.

As with all types of complex contouring techniques, there are special spatial configurations that must be checked to avoid anomalies. This is especially true in areas of sparse data points where the approach described above may calculate grid values from less than optimal data points. An alternative method triangulates the Thiessen polygons themselves to produce "extra" vertex points, which are combined with the original known points to perform the interpolation. However, when this method is used with data in which adjacent points are radically different, the results may be less accurate than the initial approach. The two methods can be used to complement each other with some sets of data. Also, to prevent extrapolating beyond the range of the data, large areas with no data need to be excluded from either procedure.

Both interpolation methods were used with the deposition and precipitation data in the Adirondacks. Deposition monitoring stations are spaced irregularly (most were far apart, but several were very close together) and have a wide spread in data values. Therefore, the dual triangulation method (the first one described) was used to force a smooth transition between the original data values. Because the precipitation data are more dense and uniformly distributed, the second method was used on these data. Quadratic weighting was used with both methods. Section 5.13 has examples of these methods.

Thus, 3.75-minute grid cells were assigned values by using rigorous mathematical procedures that define smooth surfaces from irregularly spaced data. Other interpolating methods that could be used include least squares quadratic surface fit using the 16 closest

neighbors (two in each octant) within a given search radius, cubic spline functions, or kriging. These non-Thiessen techniques generally require longer computer times for results that may be no better. When the known data points are extremely far apart and no exclusion is used, a more global interpolation technique might be used.

The last step calculates the path of contour lines through the grid cell array. Based on the cell values and the contour level, the path is defined by a series of vectors that traverse from the side of one grid cell to another. The contouring program calculates intersection points along the sides of each cell and determines the left and right of each vector as being above or below the contour lines being traced; this information is later used in mapping and polygon-intersection software. The resulting vectors are then mapped as contour lines with appropriate shading to indicate increasing or decreasing levels.

4.2 SAS

SAS is a multi-purpose data analysis system which can be used for data entry, data management, statistical analysis, and graphic displays. SAS was chosen because most attribute data processing needs for this project could be handled by this single software system. Since SAS runs on a wide variety of machines and operating systems, the AWDB is easily transportable.

4.3 GIS/SAS INTERFACE

The link between cartographic data in the GIS and the attribute data in SAS is the pond number. For every watershed in the data base

the GIS contains a pond number and a set of digitized coordinates defining the boundary of the watershed and its center. To map attribute data, the SAS data set containing the data of interest is written to an external (non-SAS) file and then read by the GIS. The GIS can then associate the attribute data with the digitized watershed to produce thematic maps.

5. DATA BASE CONTENTS

The AWDB contains 34 data sets (Table 1) with each data set generally created from a single source (e.g., a map) or representing a specific theme (e.g. lake morphologic descriptors). The following 15 sections describe the creation of the data sets grouped by thematic orientation. Appendix A provides additional documentation including variable names and labels, statistics, and graphical displays. A combined list of all variables is presented in Appendix B. All 463 lakes are listed in Appendix C including pond number, name, location, and elevation. Section 5.15 describes an aggregated data set created from selected variables within other data sets. The extent of available watershed attributes for the headwater watersheds are indicated in the summary statistics in Appendix A. The 34 data sets collectively contain over 600 variables for each watershed requiring 5 megabytes of disk storage. Most watersheds have data for all parameters except lake depth and volume (available for 234 lakes), beaver activity (available for 402 watersheds), water chemistry (available for about half of the lakes), and fish population status (available for about one-third of the lakes).

5.1 LAKE INVENTORY (I00 and I21)

The AEZ includes 2759 lakes. The NYSDEC pond number, name, location (coordinates, quad sheet, and county), size (lake and watershed area), and elevation are contained in data set I00. I00 also contains some lakes outside the AEZ. In addition, a file (I21) is maintained which provides lake ID designations used by other researchers to allow cross-referencing to NYSDEC pond number codes.

Data set 100 represents an inventory of lakes in all or parts of the following 12 New York counties: Clinton, Essex, Franklin, Fulton, Hamilton, Herkimer, Lewis, St. Lawrence, Saratoga, Warren, Washington, and Oneida.

To develop the inventory, lakes in the FIN data base were matched with lakes in the NYSDEC data base. A confidence index (CI) was developed to indicate whether two lakes with the same name and in the same county were, in fact, the same lake. Latitude and longitude, elevation, and surface area were compared. Based on the results of these comparisons the following CI numbers were assigned:

1: All parameters agreed

2: Latitude/longitude matched; elevation and/or area did not agree.

3: Elevation and/or area missing; latitude/longitude agreed.

4: Latitude/longitude missing; elevation and area agreed.

Lakes in FIN, but not in NYSDEC, were matched with lakes in the USGS Geographic Names Information System (GNIS). A confidence index of 5 was assigned if latitude/longitude was missing from FIN.

In addition to the confidence index, source and flag fields for latitude/longitude, elevation, and surface area are included. The source field indicates whether the data is from FIN, NYSDEC, or GNIS. Values for the flag field were established based on the outcome of comparing latitude/longitude, area, and elevation. These values are:

0: data value appears to be reliable (two sources agree)

1: reliability in doubt (two sources differ)

2: reliability uncertain (no cross-check)

missing: no data available.

The 463 AWDB headwater lakes are generally smaller and occur at higher elevations than the average lake within the Adirondack ecological zone. The average size of the 2759 lakes in the Adirondack Park is 41 ha, whereas the AWDB lakes average 18 ha (Figure 2). The median size of AWDB lakes is 10 ha. Figure 2 also compares average lake sizes of other subsets of Adirondack lakes. The 463 AWDB lakes include 9% of the total 99,666 ha of surface area of the 2759 lakes within the Adirondacks. The average elevation of lakes in the Adirondacks is 499 m, while the AWDB lakes average 587 m (Figure 3). Thus, the AWDB headwater lakes, selected so that watershed influences would not be confounded by upstream lake processes, are a subset of lakes somewhat atypical of the Adirondack ecological zone in terms of size and elevation.

It has been suggested that the small, high elevation lakes are the most susceptible to acidification from acidic deposition. Schofield (1976b) defined lakes above 610 m (2000 ft) as high elevation lakes in the Adirondack Region. Colquhoun et al. (1984) also referred to high elevation lakes above 610 m and defined small lakes as those with an area of less than 40 ha (100 acres). Logically, headwater lakes tend to be small and at high elevations (Figure 4). Size and elevation are compared for the Adirondack headwater lakes and all lakes in the Adirondacks in Table 4. The percentage of simple lakes smaller than 5 ha is less than for all Adirondack lakes smaller than 5 ha, but 92% of the simple lakes are smaller than 40 ha in size, whereas only 70% of all the lakes in the Adirondacks are smaller than 40 ha. The average elevation of the simple lakes is much higher than that for all lakes in

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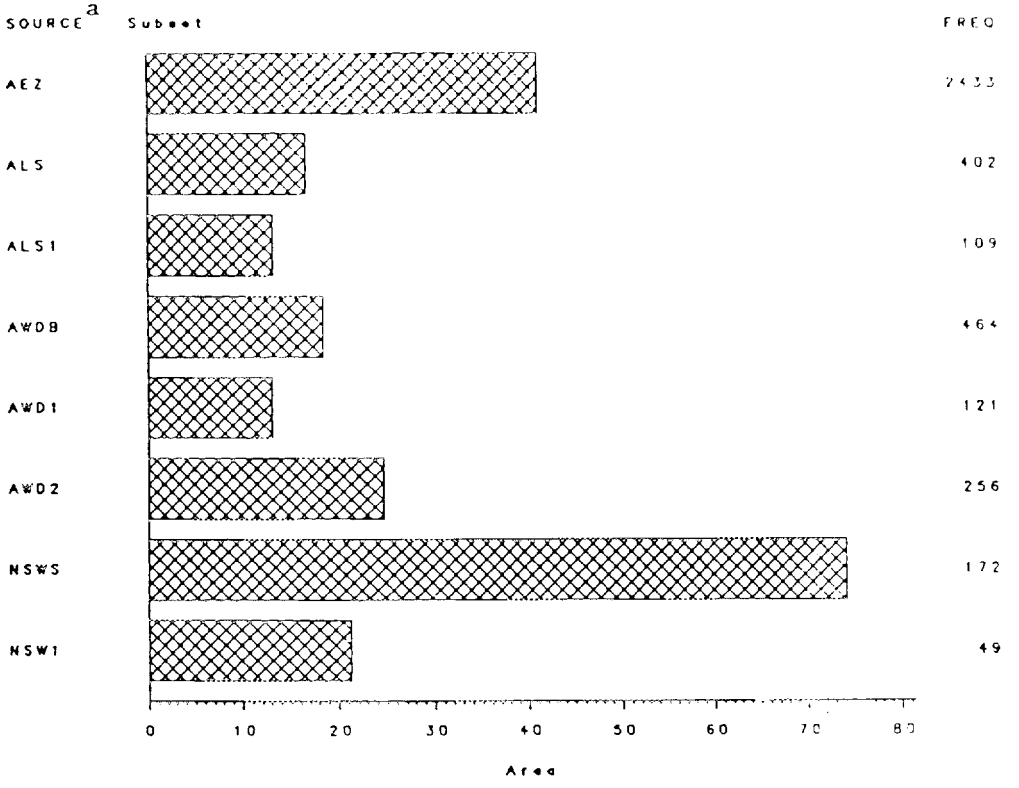

[a] AEZ – Adirondack Ecological Zone;
AWDB – Adirondack Watershed Data Base containing extensive watershed data; for simple, headwater lakes.
AWD1 – AWDB subset with 1975 chemistry including pH, alkalinity, almunium, zinc, etc., data;
AWD2 – AWDB subset with 1974–1983 mean chemistry for pH, alkalinity, and conductivity;
ALS – Adirondack Lake Survey, lakes sampled in 1984; and
NSWS – National Surface Water Survey, lakes sampled in 1984.

Fig. 2. Mean surface area (ha) of lakes in the Adirondack region.

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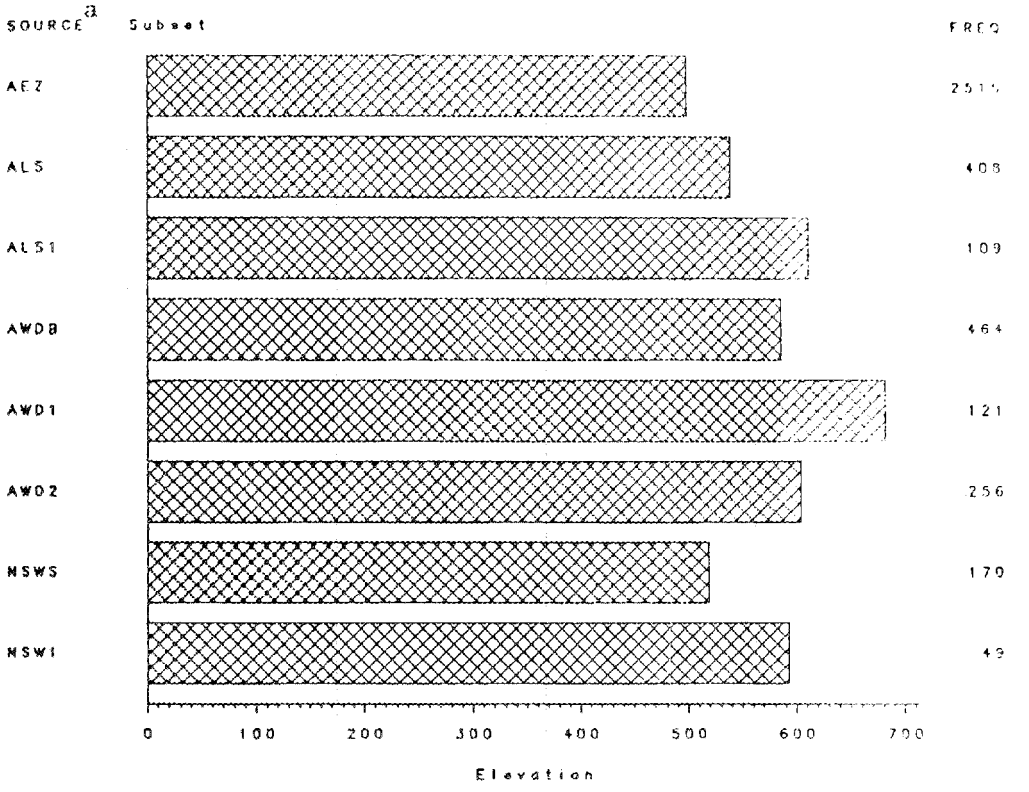

[a] AEZ – Adirondack Ecological Zone;
AWDB – Adirondack Watershed Data Base containing extensive watershed data; for simple, headwater lakes.
AWD1 – AWDB subset with 1975 chemistry including pH, alkalinity, almunium, zinc, etc., data;
AWD2 – AWDB subset with 1974–1983 mean chemistry for pH, alkalinity, and conductivity;
ALS – Adirondack Lake Survey, lakes sampled in 1984; and
NSWS – National Surface Water Survey, lakes sampled in 1984.

Fig. 3. Mean elevation (m) of lakes included in the Adirondack region.

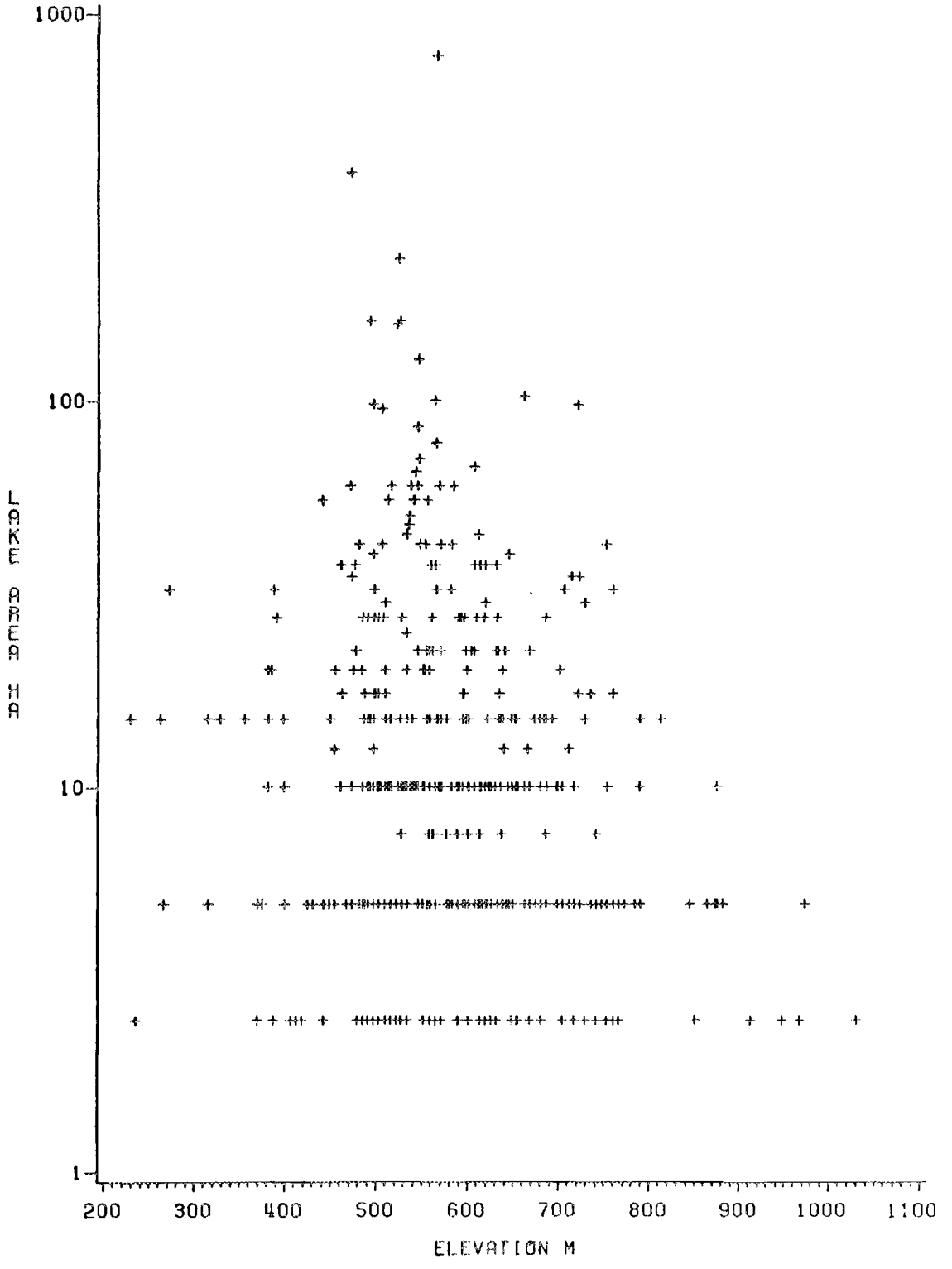

Fig. 4. Lake surface area (ha) versus elevation (m) for selected watersheds in the Adirondack region.

Table 4. Size and elevation of lakes in the Adirondack Region

	Adirondack Simple Ponds %	All Adirondack Lakes %
Lake Area (ha)		
<5.0	23	36
5.0-40.0	69	34
>40.0	8	10
missing	0	20
Lake Elevation (m)		
<600	58	68
600-800	39	14
>800	3	1
missing	0	20
Total Lakes	463	3831

the Adirondacks: 42% of the simple lakes are above 600 m, whereas only 12% of all the lakes in the Adirondacks are above this elevation. Figure 5 shows the location of AWD1 lakes with respect to elevation and pH class. The location of AWD2 lakes and their pH class is shown in Figure 6. Almost all acidic lakes in these data sets occur above an elevation of 600 m.

5.2 MORPHOLOGY

Morphologic data (IO1) available for many of the headwater lake systems include the average depth of a lake, the maximum depth of a lake, and shoreline perimeter length. A shoreline development ratio (independent of human activity, which is indicated by cabins) was calculated for all lakes by dividing the perimeter length by the circumference of a circle equal to the surface area of the lake (Hutchinson 1957). This ratio should have a minimum value of 1.0; however, approximately 20% of the smaller lakes have ratios less than 1.0. These errors were traced to the different scales of the maps used in measuring lake areas and perimeters. Enlarged maps were used to measure perimeters, while small-scale maps were used to derive estimates of surface area. Shoreline development ratios of less than 1.0 were set to 1.0.

Lake volumes were estimated by multiplying mean depth by surface area. If mean depth was not available, then maximum depth was multiplied by 0.464 (Wetzel 1975) to approximate a mean depth and was used to estimate a volume.

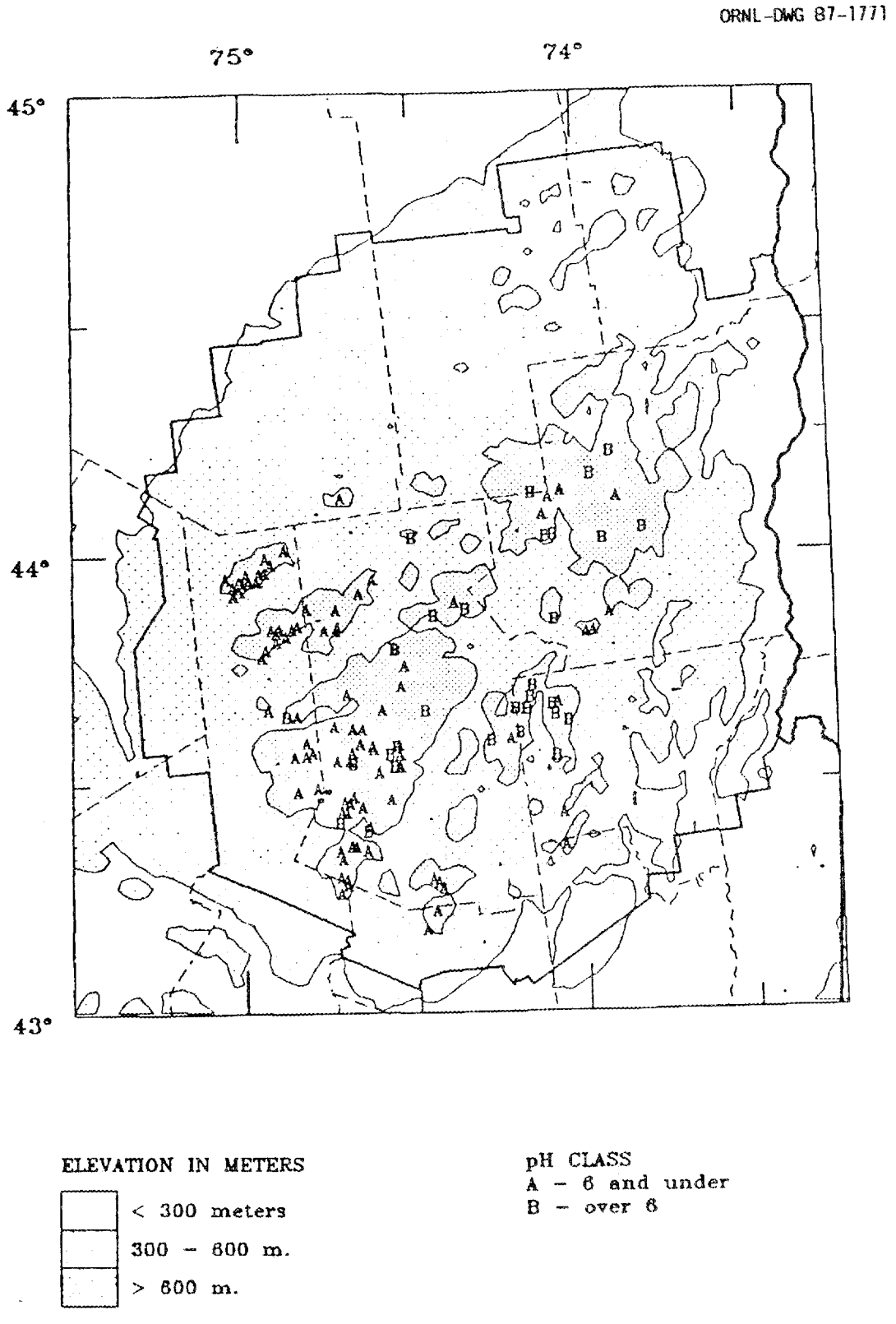

Fig. 5. Location of selected AWDI lakes with respect to elevation and pH class within the Adirondack region.

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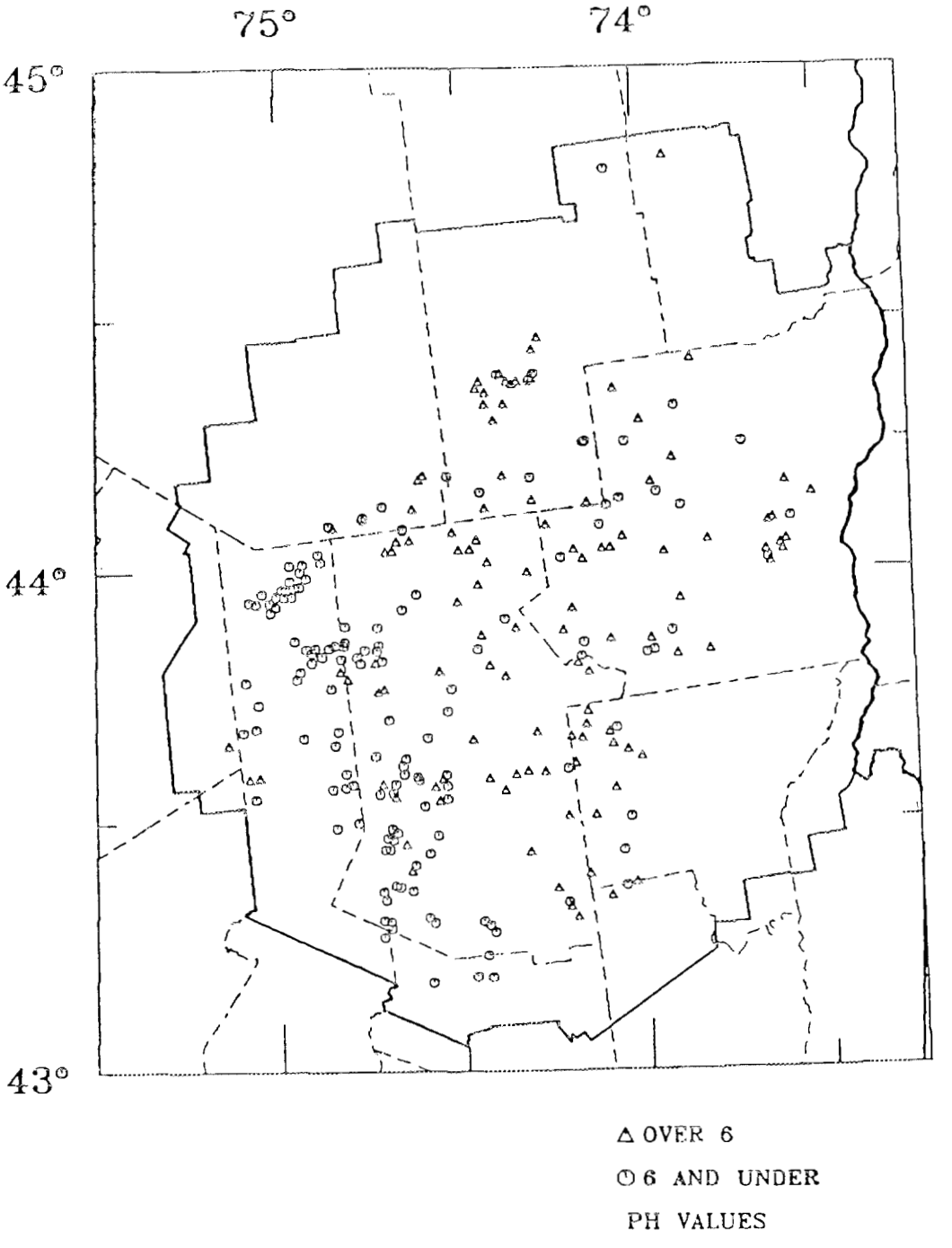

Fig. 6. Location of selected AWD2 lakes and their pH class within the Adirondack region.

The type of drainage a lake has is an important factor in a lake's overall susceptibility to acidification (Schnoor et al. 1984, Eilers et al. 1983). Four drainage types have been defined: (1) a seepage lake with no inlets or outlets, (2) an inflow lake with inlets but no outlets, (3) a drainage lake with both inlets and outlets, and (4) a spring lake with only outlets. The numbers of inlets and outlets for lakes in this study were determined from USGS 1:62,500 scale maps, and, as such, may substantially underestimate the occurrence of these features. The predominant drainage type for the Adirondack simple lakes is that of a spring lake (70%). Drainage lakes represent 22% and seepage lakes represent 7% of these headwater lakes.

Watershed areas were determined for each of the simple lakes. The average watershed size for the 463 lakes is 230 ha; the AWD1 and AWD2 subsets average 165 ha and 244 ha, respectively. The median watershed size for the AWD8 lakes is 103 ha. AWD8 lake and watershed areas have a correlation of 0.70 ($p < .0001$, $n = 463$) (Figure 7), and the average ratios of watershed to lake area are 19, 15, and 15 for the AWD8, AWD1, and AWD2 groups of lakes, respectively.

5.3 PHYSIOGRAPHY (I13-I15)

Physiographic characteristics of the watershed include minimum (same as lake surface) and maximum elevation, relief, average slope, percentage of the watershed with slope greater than 8° and 14° (approximately 15 and 25%), dominant aspect, and percentage of the watershed with a southern aspect. The topographic data were computed from 0.4-ha cells for each watershed from the Defense Mapping Agency

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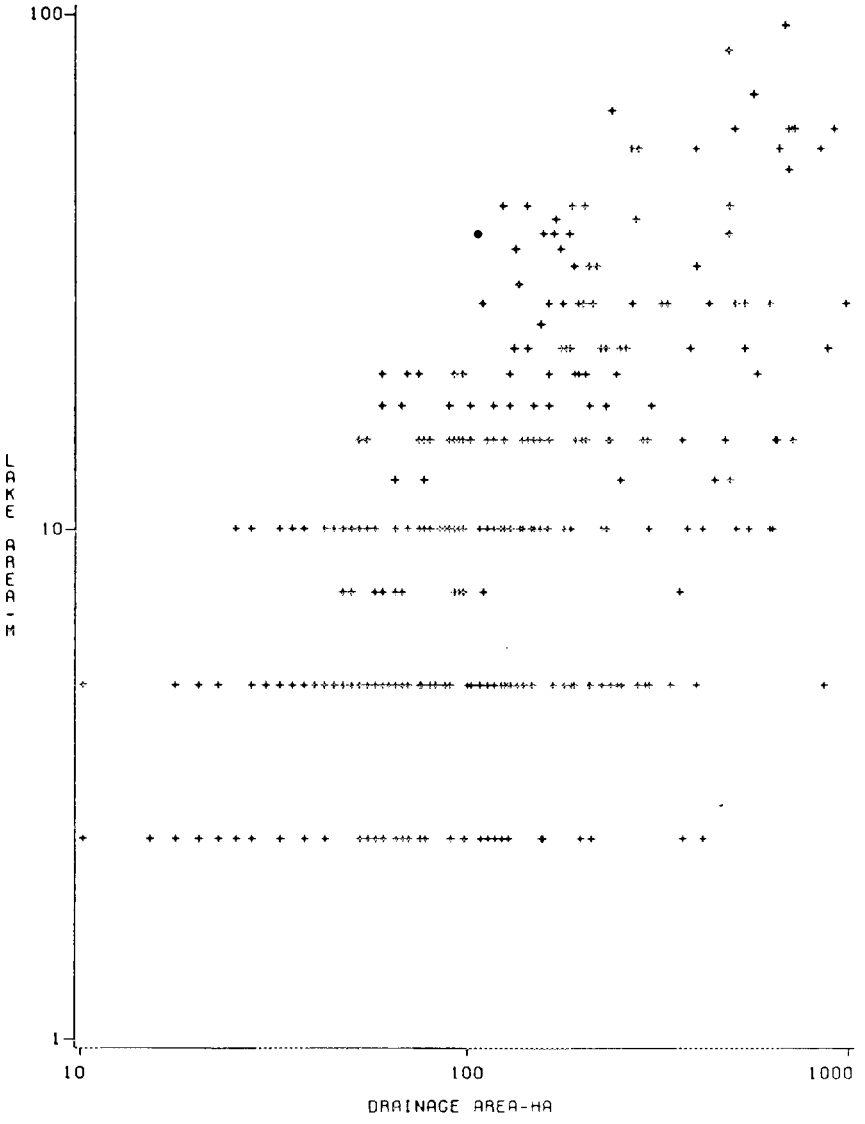


Fig. 7. Lake surface area (ha) versus watershed area (ha) for selected watersheds in the Adirondack region.

digital elevation TOPOCOM file. These data provide elevation contours based on digitized 1:250,000-scale USGS topographic maps. A quadratic interpolant was used to calculate elevations on a grid cell basis, with the terrain gradient and normal vector (computed from elevations of surrounding cells) used to calculate the percent of slope and aspect (orientation with respect to north) for each cell. A polygon-cell intersection method was used to determine frequency distributions for elevation (I13), slope (I14), and aspect (I15) classes for each watershed. Using the TOPOCOM data, Figure 8 presents the terrain of the AEZ as a three-dimensional (3-D) perspective view.

South is the dominant aspect for 33% of the Adirondack simple watersheds, with 20-26% of the other watersheds having a dominant aspect in each of the other three directions. Approximately 36% of the watersheds have less than 100 m of relief and 50% have average slope less than 6°. Approximately 21% of the watersheds have over 60% of their area in slopes greater than 8° (15%).

5.4 BEDROCK (I17)

Bedrock buffering capacity was determined from a state level map (Norton et al. 1982) that is based on the interpretation of the New York State geologic map. The map was digitized by the GDSG at ORNL and the percentage of bedrock types (based on buffering capacity) was determined for each watershed by intersecting the bedrock file with the watershed boundary file. Most of the watersheds are underlain by bedrock with none to low (12%) or low to moderate (86%) buffering capacity.

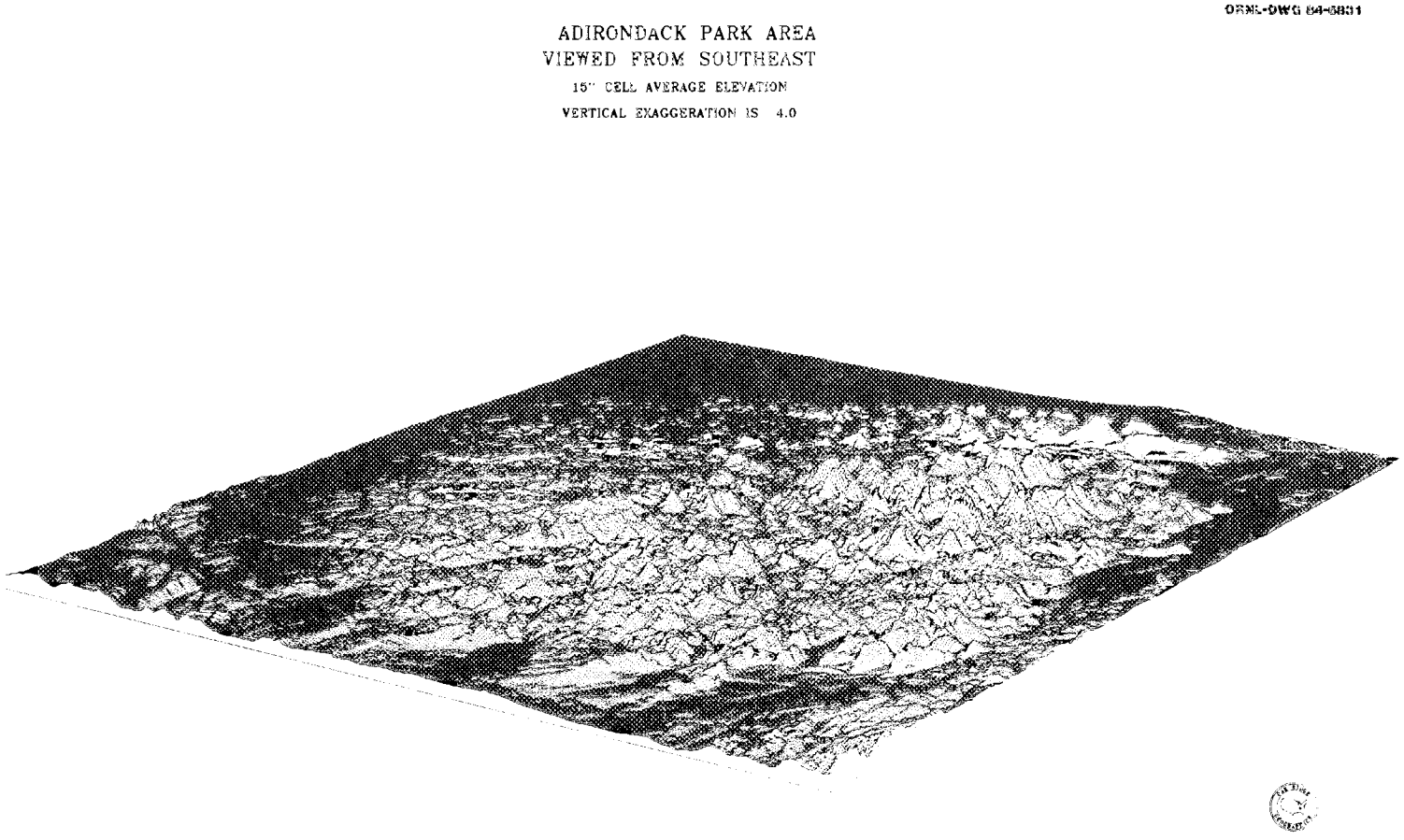


Fig. 8. Terrain of the AEZ as a three-dimensional perspective view.

5.5 SOILS (I04-I07)

Data on the mesolevel soil units for the Adirondack park were digitized from 1974 SCS county maps (1:62,500 scale) and provided to ORNL by the Adirondack Park Agency (R. Curran, personal communication). The digitized map contains approximately two hundred mapping units represented by 0.4-ha cells. The area of the soil units within each of the 463 watersheds (I04) was estimated by intersecting the digitized watershed boundaries with the digitized soil map.

The percentage of each soil series within a soil map unit, the slope, and texture modifiers were obtained from county soil reports. Usually each map unit contained one to three series plus an "other" class. The "other" area was proportioned between the areas of the identified series. When the same map unit occurred in several counties, the percentages of the component series were averaged.

Soil chemistry parameters for the mapping unit components were derived from the SCS Pedon database (Brandt et al. in preparation). Series level data in the Pedon data base were aggregated to subgroup and major horizon and merged with the mapping unit components on the basis of subgroup. Series properties such as depth to bedrock were obtained from the SCS Soils-5 file.

I07 contains four sets of chemistry values for each mapping unit component. The different sets are identified by a numeric suffix in the variable name (e.g. ACID_1, ACID_2, ACID_3, and ACID_4). Only A/E horizon values were used in calculating the _1 variables. The mean of A/E and B horizons was used for the _2 variables, and the mean of A/E,

B, and C horizons was used for the _3 variables. The _4 variables used the mean of A/E, B, and C horizon for components in hydrologic groups A and B, the mean of A/E and B values for hydrologic group C, and the A/E values for hydrologic group D.

File I07 was merged with the watershed composition file (I04) and the area of each component in a watershed was calculated by multiplying the component percentage by the mapping unit area in the watershed. From this merged file, two sets of four files each were created. The first set, files I05A, I05B, I05C, and I05D, contains area weighted means for the soil chemistry parameters by watershed. I06A thru I06D represent the area in each watershed which satisfy various combinations of soil properties. The character suffixes correspond to the numeric suffixes used in the variable names in I07. For example, the area weighted means in I05A are based on A/E horizon values.

The soils files have been used to calculate areas which may contribute to acidification of surface waters (Turner et al. 1986). For example, soil pH less than 5.0 may contribute to lake acidification. Therefore, the percentage of a watershed with soils with low pH values (based on the subgroup chemistry data) was determined. Similar values were estimated for base saturation, soil cation exchange capacity, exchangeable bases, and organic matter. The soil map unit descriptions provided estimates of amount of exposed rock, steepness, and hydrologic group. The hydrologic groups are the classes used by the SCS and represent an integration of factors related to water runoff/infiltration.

Uncertainty: Soil mapping units were assigned chemical properties by merging chemistry data aggregated to the subgroup with each soil series identified in a mapping unit. Occasionally, data were not available for a soil series, or mapping units included a "miscellaneous" category. In all cases, the chemistry values for mapping units were derived by prorating the available data for soil series according to their relative abundance within a mapping unit. The uncertainty or variability of the soil chemistry data is unknown because often there are only single measurements available on typical soil series profiles. These problems are being addressed by ORNL staff in collaboration with the SCS National Soils Laboratory and also by the EPA soils survey projects.

5.6 LAND COVER (I02, I03)

Land cover data from remotely sensed imagery taken in 1978 are available for the watersheds in this analysis and are provided by the Adirondack Park Agency (R. Curran, personal communication). The area of a watershed with the following land cover types was determined from LANDSAT scenes: hardwood, mixed, conifer, wet conifer, and nonforest (e.g., grassland, barren, and water). The cover type that occupies the largest area in a watershed was considered to be the dominant type, except for conifer, which was classified as dominant if more than 33% of the area was covered by the sum of conifer types. Twenty-one percent of the watersheds are conifer, 65% hardwood, and 14% mixed.

Uncertainty: Land cover data involved the unsupervised classification of LANDSAT scenes. Four LANDSAT scenes are required to cover the Adirondack Region. The cloud-free scenes selected were from different dates in the summer months of 1978 (R. Curran, personal communication).

5.7 DISTURBANCES (I02)

Clear-cutting and uncontrolled wildfire reached a peak in the early 1900's (DiNunzio 1984) and have been subject to more control in later years. Currently, 38% of the Adirondack Park is within the State Forest Preserve with logging precluded. The occurrence of fires and logging on the watersheds was determined by examining various historical records that included those maintained by the New York Department of Environmental Conservation (and its predecessor organizations). Data include the type of disturbance and areal extent estimated as accurately as possible from available descriptions. The primary source was a 1916 1:126,720 scale map showing the extent of logged, burned, and other wasted/denuded areas (Gruendling et al. 1985). Thirty-one percent of the watersheds have a history of logging, 12% were burned, and 5% were classified as being wasted/denuded.

Using aerial photographs taken between 1978 and 1983, the number of shoreline dwellings and manmade dams was determined for the watersheds associated with Adirondack simple lakes. Most lakes have no cabins (81%) or only a few, while Lake Placid, also one of the simple lakes, has >200 cabins.

Uncertainty: Uncertainty for data for the watershed disturbances relates to interpretation of aerial photos and errors in source maps. Information on wildfires was obtained from a small scale map produced in 1916 with limited documentation. The land management was obtained from the current APA park plan which reflects land use planning zones and may not accurately represent current land use.

5.8 WETLANDS (I08-I10)

For watersheds with wetlands, data are available for wetland area, wetland distance from a lake, length of wetland in direct contact with a lake, number of wetlands at a lake, and National Wetlands Inventory cover type (Cowardin et al. 1979). Wetland data were compiled from recently completed 1:24,000 scale wetland maps (Bogucki and Gruendling 1982). These wetland types were grouped into four categories for analysis (see ACID_C in I10): very acid, moderately acid, nonacid, and other (D. J. Bogucki, personal communication). The very acid cover type is predominantly needle-leaved evergreen forest and scrub/shrub vegetation including bog mats, whereas the nonacid cover type is predominantly broad-leaved deciduous forest and scrub/shrub vegetation. The moderately acid cover type includes a vegetation mixture of needle-leaved evergreen and broad-leaved deciduous forest and scrub/shrub. Persistent emergent vegetation, dead forest, open water, etc., are included in the other category. The wetland type that occupies the largest area in a watershed was considered to be the dominant type.

For analyses, three variables were calculated for each of the four wetland types: watershed percentage (wetland area divided by watershed area), lake percentage (wetland area divided by lake area), and contact percentage (distance of wetland in contact with the lake divided by the length of the lake shoreline). Only 7% of the watersheds do not have any wetlands, while 14% of the AWDB lakes do not have wetlands in direct contact with the lakes. Based on percentage of watershed area, 54% are very acid, 23% nonacid, and 16% other types. Based on the percentage of the shoreline contact, 41% of the watersheds are classified as having very acid wetlands and 32% as having nonacid wetlands.

5.9 BEAVERS (I11-I12)

It had been suggested that the presence of beavers on a lake may influence water chemistry and fishery habitat (Retzsch et al. 1982); therefore, historical (1948, 1958, and 1968) and current (1978 and 1981) data on beavers for the Adirondack simple lakes were determined from aerial photography (Gruendling et al. 1985). Of the historical data, the 1968 data are the most complete. The number of beaver dams, the number of broken and unbreached beaver dams by inlets and outlets, the number of lodges, and the distance from a lake to each dam were recorded. The number of unbreached dams as counted on the 1978/1981 photos on inlets, on outlets, and at the lake outflow were used as three measures of beaver activity. Half of the lakes (53%) had one or more dams, with one lake having 16 dams. A single index of beaver activity (BVRINDEX in I12) was calculated for each lake

(Hunsaker et al. 1986) by dividing the sum of beaver dams on or at the inlet(s) and outlet(s) for 1968 and 1978 by the lake area. Data from 1978 were weighted by a factor of two since chemistry data were from 1974 to 1984. Extensive analysis of the beaver data were performed by Lambert et al. (in preparation).

5.10 WATER CHEMISTRY (I18-I20)

Water chemistry data were obtained from FIN at North Carolina State University (Baker et al. 1984) and the NSWS. The most complete set of chemistry data available are for a set of 121 high elevation lakes (within the 463 AWDB lakes) which were surveyed by Schofield (1976b) in 1975. These data are in file I18.

Appendix A, summary statistics for I19, shows the number of simple lakes for which specific water chemistry data are available. Data on pH, total alkalinity, and conductivity are available for approximately 50% of the simple lakes, and other chemistry data are available for approximately 25-30% of the lakes. The values for visual water color are the same as the values used in Baker et al. (1984) (scale of 1 through 5, defined later). For other parameters used in the I19 file (AWD2) the mean of surface observations at a lake was calculated for the summer months (May-September) of 1974-1983. The pH observations were restricted to air equilibrated laboratory electrometric measurements, and alkalinity observations were restricted to Gran plot measurements. The pH and alkalinity measured in 1979 by the NYSDEC analytical laboratory appear to be suspect. For this reason all pH and alkalinity data for 1979 collected by the NYSDEC and measured

electrometrically were not included in the I19 data set. The pH data measured with the Hellige method in 1979 were adjusted to be compatible with equilibrium pH values (N. F. Gmur, personal communication) and included in I19.

Visual water color measurements are available from FIN for 101 of the Adirondack simple lakes. No data are available on dissolved organic carbon (DOC) from FIN, so visual color measurements were used as a surrogate for DOC. Observations from field surveys were coded as: clear (1), light brown (3), brown (4), dark brown (5). (There is no color = 2). Average values <1.5 indicate lakes consistently coded as clear water and thus are considered indicative of low levels of DOC. Average values >2.5 indicate lakes consistently coded light brown, brown, or dark brown and thus are considered indicative of high concentrations of dissolved organics. Average values of 1.5 to 2.5 suggest that field crews were inconsistent in their evaluation of visual color. Like Baker et al. (1984), we used visual color values from 1960 to the present to increase our sample size. Classification of a water as clear (average value <1.5) or colored (average value >2.5) is only a rough indicator of DOC. Mean visual color values are significantly correlated ($r = 0.54$, $p \leq 0.05$, $n = 18$) with the NSWS measurements of DOC.

Uncertainty: Baker and Harvey (1984), describe the uncertainties in the FIN Adirondack chemistry data and approaches to dealing with that uncertainty. Data within FIN were collected by a variety of investigators for a variety of purposes using a variety of analytical techniques. As a result, the data are often not ideally suited for use

in statistical analyses. Two pervasive problems are the representativeness of the sample and variations in data quality. Imperfections in the data base often limit our ability to thoroughly resolve certain issues, but we have attempted to qualitatively and quantitatively (where possible) address these uncertainties.

The quality of pH values within FIN is variable because of different methods for measurement and measurement by different investigators. Only pH values measured electrometrically in the laboratory with air equilibration are included. Mean values were calculated for a lake and are the averages of pH, not H^+ concentration. Previous reports (e.g., Schofield 1981) have identified particular problems with electrometric pH measurements taken in 1979 by the NYSDEC. Apparently the quality of the pH probe was inadequate for use in the low ionic strength waters typical of the Adirondacks. Values taken in 1979 have been reported for some lakes to be 0.5 to 1.0 pH units too low. In 1979, the NYSDEC surveyed 396 Adirondack waters (Pfeiffer and Festa 1980); these data were excluded from this analysis. Many of these waters have never been resurveyed, so that exclusion of these 1979 values from pH analyses significantly reduces sample size.

To be consistent with the time period used for pH data and because it is believed that the same inaccurate pH probe may have been used for alkalinity measurements, all 1979 alkalinity measurements made by the NYSDEC are also excluded from these analyses. Some variation in alkalinity measurements for other years is to be expected because measurements were done by different investigators.

An analysis of variance of within- and between-lake variability was performed for pH and alkalinity for those simple lakes having more than one value for the 1974-1983 period. In both cases, the F statistic was significant at $p < 0.0001$, indicating that the between-lake variability is greater than the within-lake variability and that there are significant differences between lakes for both pH and alkalinity. The analysis of variance also provides an estimate of the variation within each lake. The estimated coefficient of variability is 4.5% for pH (the transformed negative log of H^+ ion concentration) and 38.9% for alkalinity. Sources of within-lake variation include errors due to measurement and changes in techniques, sampling variability related to location on the lake, depth of sample, day of the year, time of day, seasonal variability, year to year variability, etc.

A subset of 121 of the Adirondack simple lakes has measurements for aluminum and zinc as well as pH, total alkalinity, and other parameters. The uncertainty of data in the AWD1 subset is less than the uncertainty in the AWD2 subset because these data are from one survey done in 1975 on high elevation lakes (Schofield 1976a).

The NSWS measured pH, alkalinity, aluminum, zinc, color, dissolved organic carbon, and other parameters in the fall of 1984 for 46 of our Adirondack simple lakes. The air equilibrated laboratory determination of lake pH (PHEQ11) was used in the analyses as the most appropriate estimate of lake pH. Although measurements on each lake were made only once, extensive precautions were taken to minimize any variability associated with field and sample handling, laboratory bias in analysis,

and data entry (approximately 30% of data were collected for QA checking). Lakes were selected to be regionally representative by using a stratified systematic sampling scheme based on alkalinity class and geographic region and subregion (USEPA 1984). The overall uncertainty of NSWS chemistry values should be less than that for FIN chemistry data.

5.11 HISTORICAL WATER CHEMISTRY

Baker and Harvey (1984) have examined current and historical pH data to determine whether trends in pH over time are evident. Their findings are included for 59 of the AWD1 and 147 of the AWD2 lakes. The following paragraph describes their methods.

For each lake in the Adirondack ecological zone with sufficient data, coefficients for the linear model:

$$y_i = b_o + b_i x_i + e_i$$

were estimated, where y_i is the mean pH measured on a given day over all depths, x_i is Julian time converted to units of decades, b_o and b_i are the y-intercept and slope respectively, and e_i is the random error term. All pH measurements in FIN were used with the exception of 1979 electrometric pH data. Lakes were considered to have sufficient data for analysis of trends if pH data spanned a minimum of 10 years. Thus, the change in pH over time (b_i in the above equation) was estimated for lakes with as few as two pH measurements separated by at least 10 years. Obviously, the statistical significance of these trends, based on two data points, could not be evaluated. The

likelihood of detecting significant trends increases as the number of pH observations increases. Examination of trends in a sample of lakes (with n = 3 to 27) suggested that the linear approximation of pH as a function of time was adequate and was no better or worse than the alternative model considering H^+ concentration as a linear function of time. The pH was selected for trend analysis, rather than alkalinity, because of its direct application to potential effects on fish and because of the greater uncertainty concerning the validity of comparing current and historic measurements of alkalinity.

5.12 FISH (I19)

Baker and Harvey (1984) defined an ordinal index of fish community status and developed values of this index for the FIN lakes having sufficient data. The following paragraph, taken from their report, explains their rating system.

For each lake with sufficient data a single summary rating, on a scale of 0 to 5, was assigned expressing the overall status of the fish community. Criteria for classifying community status included the number (proportion) of fish species apparently declining or lost from the lake, the quantity and quality of data available for assessing decline or loss of the populations, and the expected sensitivity of those species to acidification. By incorporating previous information (Baker 1984) on the relative sensitivities of fish species to acidification, and the observed order through time in which species within a lake were affected, the fish community status rating from 0 (low) to 5 (high) expressed not only the severity of change in

community structure, but also the likelihood that the observed changes resulted from lake acidification. The essence of the fish community status rating system were as follows:

Rating	Key Community Characteristics
0	Community appears 'healthy.' Any changes in species composition through time appear random and apparently due to normal fluctuations. For a lake with only recent survey data available, species diversity is high and/or characteristic for the Adirondacks. Species considered acid-sensitive are present.
1	One or two species have apparently declined in abundance and/or disappeared from the lake. These species are not, however, considered particularly acid-sensitive (relative to other species in the lake), and it is unlikely that population declines or losses resulted from acidification.
2	One or two species have apparently declined in abundance and/or disappeared from the lake. The species affected may be acid-sensitive (relative to other species in the lake); thus, the community decline may be a result of acidification. Neither the evidence for loss of populations nor the indications of the potential influence of acidification are particularly strong, however. A number of populations have maintained constant or increased levels of abundance over time.
3	Several species have disappeared from the lake. These species are expected to be acid-sensitive relative to other species remaining in the lake, suggesting the possibility that community decline may be a result of acidification.
4	All species or the majority of species have disappeared. Any species left are expected to be acid tolerant (e.g., brown bullhead, yellow perch). No questions regarding sampling techniques, although the absence of most species is only confirmed by one sample.
5	All species have disappeared. No fish caught in two or more samples (in two or more years). No questions regarding sampling techniques.

Notice that classification of fish community status is based only on fish survey results, stocking records, and relative species sensitivity to acidity (from information in the available literature). The scale 0 to 5 was designed such that lakes rated 0 or 1 were unlikely to have been affected by acidification, lakes rated 3, 4, or 5 were likely to have been affected by acidification, with higher ratings indicating higher confidence. Lakes rated 2 were marginal, with some suggestions of effects of acidification but no clear evidence or trends. (Baker and Harvey 1984)

Data are included in AWD1 and AWD2 for fish community status and the individual status of brook trout (e.g., declining, lost, healthy, etc.) for Adirondack simple lakes in FIN.

Uncertainty: Baker and Harvey (1984) made extensive use of the FIN data base to assess the status of fish populations and communities in the Adirondacks. The following material, excerpted from Baker and Harvey (1984), describes the uncertainties in the Adirondack fisheries data and their solution to dealing with that uncertainty.

Sampling techniques and procedures have varied widely both over time and among lakes. Although gill nets and/or trap nets were the primary gears used in most surveys, nets were of different size, set at different times of the year, etc. To a certain extent, general gear characterizations have also changed over time, e.g., the shift from gill nets made from cotton to nets of monofilament nylon. Surveys were conducted as appropriate to the immediate needs of the fisheries biologist, ranging from a general survey of fish species present to specific collection of individual species to confirm stocking success,

measure growth, or collect eggs. The effect of these variations in sampling techniques and procedures on survey results must be considered. Even with standardized sampling techniques, results from fisheries surveys are highly variable. In addition, details on sampling techniques were not recorded in many cases.

As a result, Baker and Harvey (1984) do not feel that simple quantitative measures such as catch per unit effort or probability of catch or no catch can be used to accurately express changes in fish population status over time. They have defined semi-quantitative indicators of population status (i.e., an ordered classification) that incorporate the uncertainties associated with varying, and at times unknown, sampling techniques. Ordered classifications are commonly used whenever different degrees of some phenomenon can be recognized but not expressed with a standard unit of measurement on a continuous scale. Procedures for statistical analysis are well established.

Evaluations of fish population status and possible explanations for observed changes were conducted blindly, with no information on lake identification or specific locale, water chemistry, or acidity status. Results from fish surveys and associated information were reviewed for each lake. Codes denoting the quantity of survey data available (number of surveys over what time span) and the date of the last survey were recorded. Only lakes with post-1960 survey data were evaluated further. Seven hundred and fifty-eight lakes (76% of the total lake surface area in the Adirondacks) have been surveyed in one or more years (with the most recent survey post-1960); 552 lakes (57% of the total lake surface area) in two or more years. During phase 1,

three confidence ratings were assigned to each of the 14 species of interest that occurs or occurred in a given lake. The ordinal scale from 0 (low) to 9 (high) indicates: (1) evidence that the fish population has remained constant or increased in abundance through time, (2) evidence that the fish population has declined (decreased abundance, reproductive failure, and/or population extinction) through time, and (3) evidence that the fish population has been lost. A summary rating, on a scale of 0 (low) to 5 (high), expressed the status of the fish community as a whole. Finally, in phase 2, for populations that may be declining or lost (based on evaluations in phase 1), the likelihood that the observed change occurred as a result of acidification was ranked on a scale 0 (low) to 9 (high). The final evaluation of the potential effects of acidification obviously requires some combination of the strength of the evidence for population decline or loss (phase 1) and the strength of the evidence that the decline or loss resulted from acidification (phase 2).

Ranking systems introduce some subjectivity. Specific criteria for rating populations were established to reduce the subjectivity and improve consistency. To evaluate the consistency of ratings within each phase, fish populations in 90 lakes, systematically selected to cover the range of fish response and quantity and quality of data, are being re-evaluated both by the principal investigator and by two independent investigators. The results, however, are not yet available.

Variations in assignment of population ratings decrease one's ability to detect correlations between confidence ratings and indicators of acidity or acidification, but do not bias the results.

A significant correlation between fish population status and lake acidity, although not proving cause and effect, can not be attacked on the basis of the semi-quantitative procedures for assessment of fish population status. (Baker and Harvey 1984)

In the appendix to their report, Baker and Harvey (1984) provided matrices of recommended ratings used in conjunction with their ranking system. Their innovative but systematic approach, attention to detail, and clear effort to avoid bias are commendable and contribute to making their indices as reliable as practicable, given the inherent limitations in the quantity and quality of the data.

5.13 DEPOSITION (I16)

Annual average wet atmospheric deposition values for sulfate, nitrate, and total hydrogen ion were calculated for headwater watersheds based on the years 1980-1982. Estimates of the concentration of ions in wet deposition were overlain with precipitation levels to calculate total wet deposition. The deposition data from several networks were obtained from ADS (Watson and Olsen 1984), and precipitation data consisted of 1951-1980 norms from the network of the National Oceanic and Atmospheric Administration (NOAA) weather stations. Data from the irregularly spaced monitoring sites and weather stations were contoured by establishing a Thiessen polygon network, interpolating to a regularly spaced grid (3.75 minute latitude/longitude cells), and generating contours. The concentration and precipitation values calculated to latitude/longitude grid cells were used to calculate wet

deposition and assign deposition values to watersheds. Figures 9 and 10 show the patterns of precipitation and wet hydrogen ion deposition in the Adirondack Region. Figure 11 presents the relationship of wet hydrogen ion deposition and precipitation for the 463 simple lakes. This approach gives better spatial resolution and implicitly adjusts for orographic influences; however, the technique needs additional review of the relationship between precipitation and concentrations. Dry deposition data were not available for the region.

Uncertainty: The wet deposition data contain uncertainty related to extrapolating from monitoring stations to the individual watersheds. Concentration and precipitation distributions were calculated from the randomly distributed points by generating a Thiessen polygon network between the points, interpolating to a regularly spaced grid, and calculating contours. The depositions were computed for each grid cell and then contoured. This rigorous mathematical approach defines a smooth surface between the irregularly spaced monitoring sites, but it does not explicitly account for possible significant orographic factors.

5.14 UNCERTAINTY OF INFORMATION

Measurements of pH are potentially uncertain for a number of reasons, including principally the method of measurement and the degree to which one or a few pH measurements (frequently all that are available) can adequately characterize the mean pH of a lake. In addition, if the motivation to collect pH data is influenced by known problems with particular lakes, a sampling program itself could be biased in that "problem" lakes would be overrepresented.

ORNL-DWG 87-1774

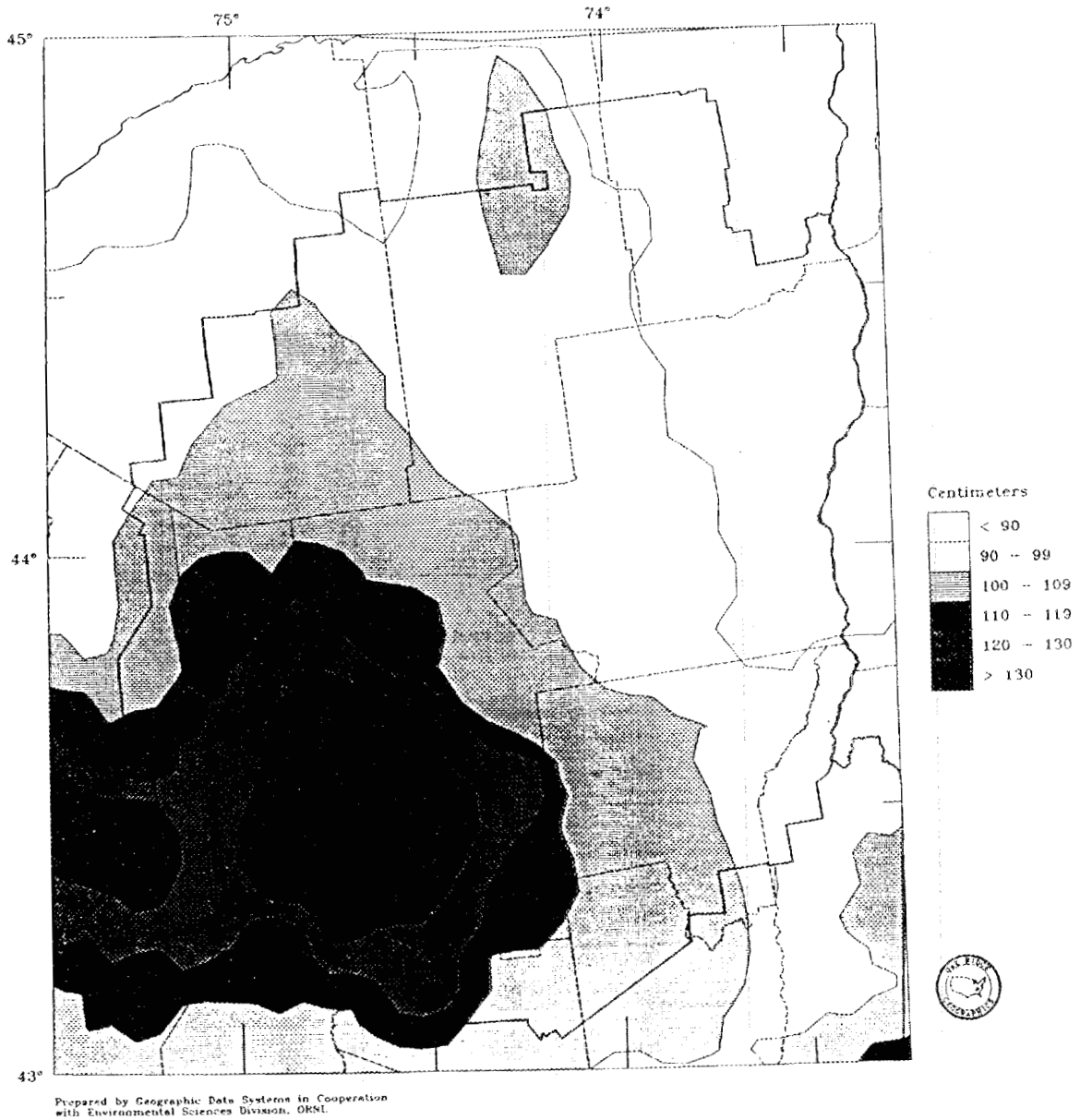


Fig. 9. Normal (1951-1980) annual precipitation (cm) patterns for the Adirondack region.

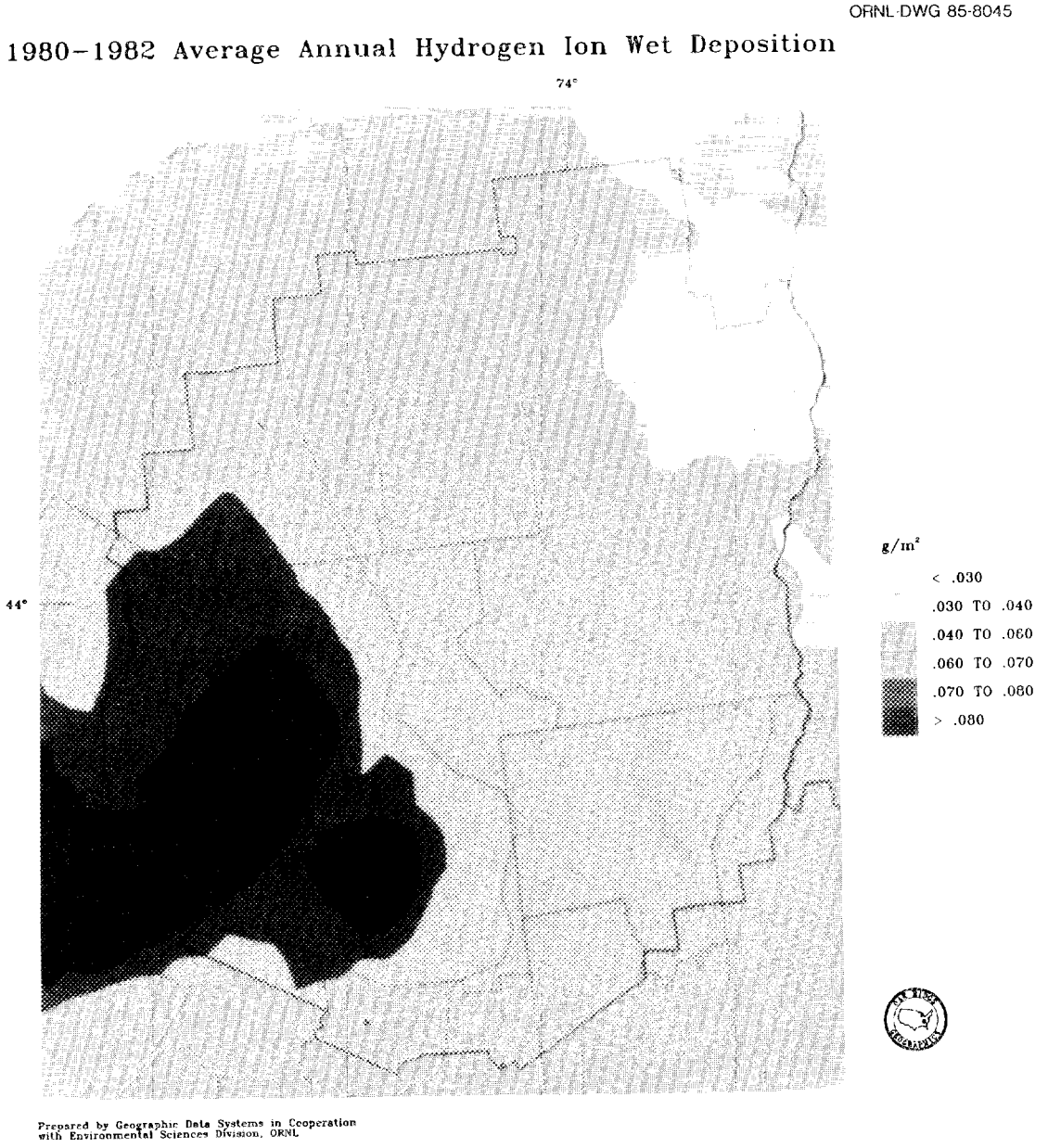


Fig. 10. Mean (1980–1982) annual wet hydrogen ion deposition (g/m^2) patterns for the Adirondack region.

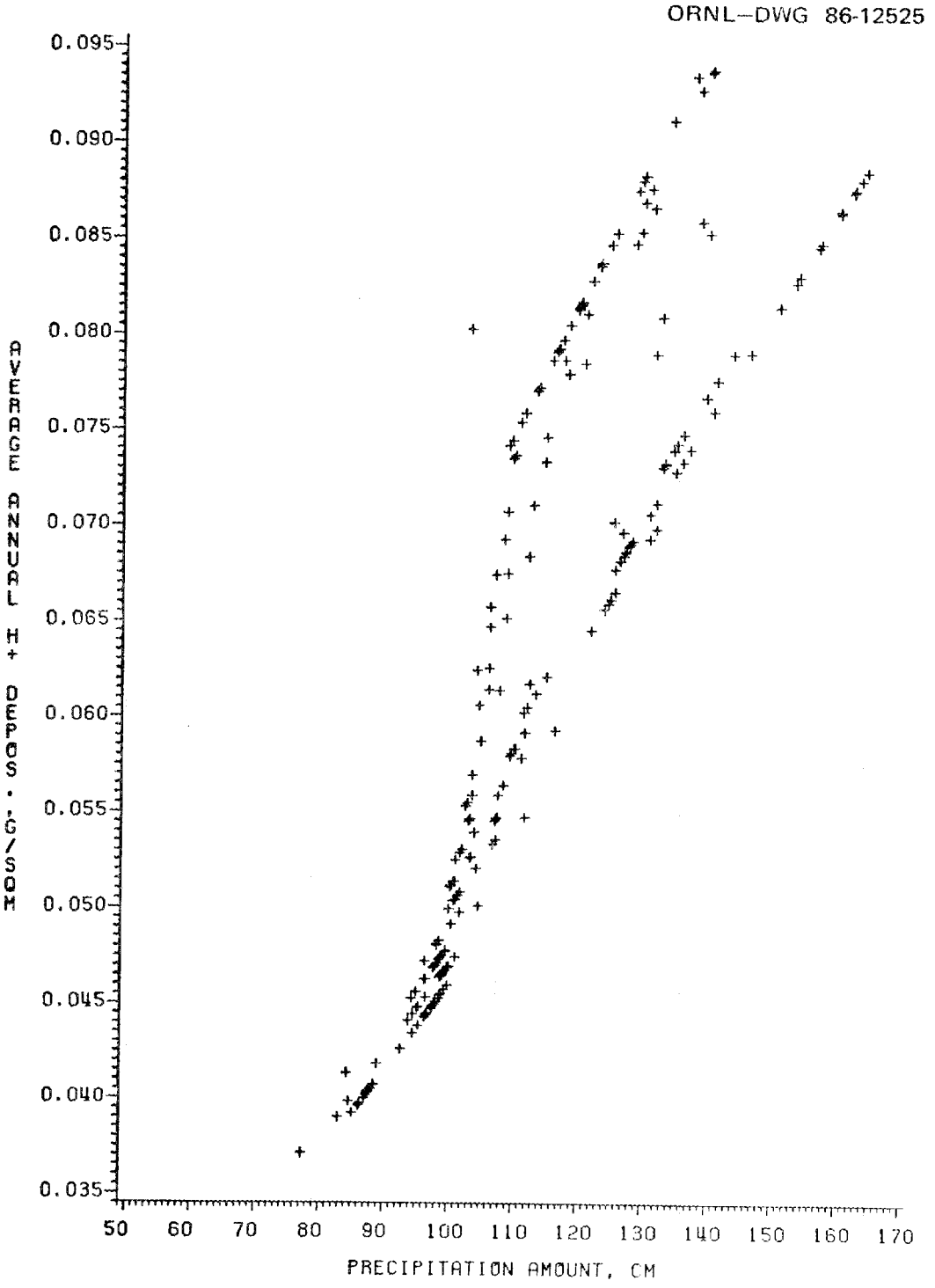


Fig. 11. Relationship of wet hydrogen ion deposition and precipitation for selected watersheds in the Adirondack region.

By its very nature, our data set of headwater lakes is not representative of Adirondack lakes as a whole. In particular, higher elevation lakes are overrepresented. This factor would obviously affect extrapolation from our data base, but it does not *per se* create a bias. The two sources of potential bias which seem most important are: (a) the possibility that within our sample, "problem" lakes (e.g., those that have lost fish populations or are suspected to have been acidified) may be more likely to have recently recorded pH data, and (b) the possibility that the largely nonelectrometric pH measurement methods used prior to 1975 have a systematic bias relative to the more recent electrometric measurements. The former possibility would, if true, lead to overestimation of the extent of acidification. The effect of the latter possibility would depend on the direction of bias and the representation of 1974 samples in relation to the number of samples from 1975–1983.

Watershed attributes were compiled from remote imagery, aerial photographs, maps of various scale, and sparse regional monitoring networks. Uncertainty of the data relates to the spatial scale of source materials, interpretation errors, and assignment of mapping units with parameters used in the analysis. Because of the small size of watersheds and the small scale of some source maps, it is possible that individual watersheds may be assigned incorrect attributes. However, the regional coverage and large number of watersheds should minimize the effects of individual watershed misclassifications.

5.15 INTEGRATED FILE (I23)

Selected variables from the individual data sets described above were integrated into a data set (I23) to conduct the statistical analyses. This file contains over 200 variables representing statistics for each watershed. Three variables, AWD1, AWD2, and AWD3, are true (=1) if an observation is for a lake that has chemistry data from I18 (Schofield 1976a), I19, or I20 (NSWS), respectively. If a lake does not have data from these sources, that variable is set to false (=0).

6. ACCESSING THE DATA BASE

The data base can be accessed either by connecting to the ORNL computer system, or by transporting the data base to other systems. The data base is available either as SAS data sets or card-image files.

6.1 FORMATS

Data set G03 contains formats created by SAS PROC FORMAT for use with code variables. Any variable whose values are codes ends with "_C" and the associated format has a similar variable name but ends with "_F". For any given format, the coded value and its meaning are listed in Appendix A. In data set G02, which contains all variables in the data base, a code variable's format name is given in the CODEFMT field. These names correspond to the values in the CODEFMT field of G03.

For example, the variable HGRP_C in data set I07 which represents runoff potential classes has a CODEFMT of $HGRP_F. The G03 data set has the possible values the variable can have and the meaning of each. The user can specify the CODEFMT value in a FORMAT statement with many SAS procedures. For example, to find the number of different runoff potential classes a user could do the following:

```
PROC FREQ DATA = AWD.I07;
  TABLES HGRP_C;
  FORMAT HGRP_C $HGRP_F.;
```

Note that the format name ends with a ".". This is required SAS syntax for format names. Many SAS procedures only print the first 16 characters of a formatted value. Therefore, in some cases it will be necessary to get the entire formatted value from data set G03.

6.2 DATA BASE AVAILABILITY

Researchers interested in the AWDB should contact R. J. Olson to make arrangements for acquiring the data base. Users should verify that the data have been correctly transported to their systems by generating some or all of the statistics presented in Appendix A. These statistics were generated in SAS (PROC MEANS), but can be duplicated in other statistical packages or languages. If the statistics generated by the user differ from those presented here, the data sets may have been corrupted in transport.

These statistics are presented only as a tool to ensure proper reading of the data sets. They are not to be construed as an analysis of the AWDB.

7. ACRONYMS

ACID	Acidification Chemistry Information Data Base (BNL)
ADDNET	Acid Deposition Data Network (ORNL)
ADS	Acid Deposition System (PNL)
AEZ	Adirondack Ecological Zone
ALAPCO	Association of Local Air Pollution Control Officials
ALS	Adirondack Lake Survey
ANL	Argonne National Laboratory
APA	Adirondack Park Agency
APN	Canadian Air and Precipitation Monitoring Network
ASCII	American Standard Code for Information Interchange
AWD1	AWDB subset with 1975 chemistry including pH, alkalinity, aluminum, zinc, etc., data
AWD2	AWDB subset with 1974-1983 mean chemistry for pH, alkalinity, and conductivity
AWDB	Adirondack Watershed Data Base (EPA)
BNL	Brookhaven National Laboratory
bpi	bits per inch
DMA	Defense Mapping Agency
DOE	U.S. Department of Energy
EBCDIC	Extended Binary Coded Decimal Interchange Code
EPA	U.S. Environmental Protection Agency
EPRI	Electric Power Research Institute
ESEERCO	Empire State Electric Energy Research Corporation
FIN	Fish Information Network (NCSU)

FIPS	Federal Information Processing Standards
FORET	Forests of East Tennessee (model)
GDSG	Geographic Data Systems Group (ORNL)
GIS	Geographic Information System
GNIS	Geographic Names Information System (USGS)
ILWAS	Integrated Lake Watershed Acidification Study (EPRI)
LAMP	Lake Acidification Mitigation Project (EPRI)
LUDA	Land Use Data (USGS)
NADP	National Atmospheric Deposition Program (USDA)
NAPAP	National Acid Precipitation Assessment Program
NASA	National Aeronautics and Space Administration
NCDC	National Climatic Data Center (NOAA)
NCIC	National Cartographic Information Center (USGS)
NCSU	North Carolina State University
NSWS	National Surface Water Survey (EPA)
ORNL	Oak Ridge National Laboratory
RILWAS	Regional Integrated Lake-Watershed Acidification Study (EPRI)
SAS	SAS System Software
SCS	U.S. Soil Conservation Service
STORET	Water Storage and Retrieval System (EPA)
SUNY	State University of New York (Plattsburgh)
TOPOCOM	Topographic Characteristics Data (DMA)
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

8. REFERENCES

Adirondack Lakes Survey Corporation (ALSC). 1985. Adirondack Lakes Survey 1984 Report. Volumes 1-5. New York State Department of Environmental Conservation, Ray Brook, NY.

Baker, J. 1984. Fish, pp. 5-74 to 5-129. In: The Acidic Deposition Phenomenon and its Effects, Critical Assessment Review Papers, Vol. II (A. Altshuller and R. Linthurst, eds.), EPA-600/8-83-06BF. U.S. Environmental Protection Agency, Washington, D.C.

Baker, J. P., and T. B. Harvey. 1984. Critique of acid lakes and fish population status in the Adirondack Region of New York state, draft. Acid Deposition Program, North Carolina State University, Raleigh, North Carolina.

Baker, J. P., T. B. Harvey, and J. P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern U.S. susceptible to acid deposition. Draft final report to the U.S. Environmental Protection Agency.

Bogucki, D. J., and G. K. Gruendling. 1982. Wetland interpretation and mapping project for the Adirondack Park. Final report to Adirondack Park Agency, Ray Brook, New York. 29 pp. plus 104 maps.

Bogucki, D. J. Personal communication. State University of New York, Plattsburgh, New York.

Brandt, C. C. , R. S. Turner, and R. J. Olson. (In preparation). An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Busby, M. W. 1966. Annual runoff in the conterminous United States. IN: Hydrologic Investigations, Atlas HA-212. Geological Survey, U.S. Dept. of Interior, Reston, VA.

Colquhoun, J., W. Kretser, and M. Pfeiffer. 1984. Acidity status update of lakes and streams in New York state. New York State, Department of Environmental Conservation, Albany, New York.

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. Office of Biological Services, U.S. Department of the Interior, Washington, D.C.

Curran, R. Personal communication. Adirondack Park Agency, New York.

DiNunzio, M. G. 1984. Adirondack wildguide, a natural history of the Adirondack Park. Bradock Press, Inc., Utica, New York. 159 pp.

Durfee, R. C., and the Geographic Data Systems Section. 1986. Review of Geographic Processing Techniques Applicable to Regional Analysis. ORNL/CSD/TM-226. Computing and Telecommunications Division, Martin Marietta Energy Systems, Inc., Oak Ridge, TN (in press).

Gmur, N. F. Personal communication. Brookhaven National Laboratory, Upton, New York.

Greeson, P. E., and F. L. Robinson. 1970. Characteristics of New York State Lakes. Part I. Gazetteer of lakes, ponds and reservoirs. Bulletin 68, U.S. Geological Survey and N.Y.S. Department of Environmental Conservation.

Gruendling, G. K., D. J. Bogucki, and K. B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Hunsaker, C. T., J. L. Malanchuk, R. J. Olson, S. W. Christensen, and R. S. Turner. 1986. Adirondack headwater lake chemistry relationships with watershed characterstics. Water, Air, and Soil Pollution 31:79-88.

Hunsaker, C. T., S. W. Christensen, J. J. Beauchamp, R. J. Olson, and R. S. Turner. 1986. Empirical relationships between watershed attributes and headwater lake chemistry in the Adirondack Region, ORNL/TM-9838, Oak Ridge National Laboratory, Oak Ridge, Tennessee, 117 pp.

Hutchinson, G. E. 1957. A treatise on limnology. Geography, Physics, and Chemistry, Vol. 1. John Wiley & Sons, New York. 1015 pp.

Kanciruk, P., J. M. Eilers, R. A. McCord, D. H. Landers, D. F. Brakke, and R. A. Linthurst. 1986. Characteristics of lakes in the Eastern United States. Volume III: Data compendium of site characterstics and chemical variables. EPA-600/4-86-007C, U.S. Environmental Protection Agency, Washington, D.C.

Lambert, N. J., C. T. Hunsaker, S. W. Christensen, and G. K. Gruendling. In preparation. The effect of beaver on water chemistry and fish populations in the Adirondacks.

Linthurst, R. A., D. H. Landers, J. M. Eilers, D. F. Brakke, W. S. Overton, E. P. Meier, and R. E. Crowe. 1986. Characteristics of lakes in the Eastern United States. Volume I: Population descriptions and physico-chemical relationships. EPA-600/4-86-007A, U.S. Environmental Protection Agency, Washington, D.C.

Norton, S. A., J. J. Akielaszek, T. A. Haines, K. L. Stromberg, and J. R. Longcore. 1982. Bedrock geologic control of sensitivity of acidic ecosystems in the United States to acidic deposition. National Atmospheric Deposition Program.

Olson, R. J., R. C. Durfee, and D. L. Wilson. 1986a. Application of a Geographic Information System in the Study of Acidic Deposition. Proc. Geographic Information Systems for Environmental Protection, Univ. of Nevada, Las Vegas.

Olson, R. J., R. C. Durfee, D. L. Wilson, P. R. Coleman, and A. E. Rosen. (In preparation). An Adirondacks Atlas: Attributes Related to Acidic Deposition Studies. Oak Ridge National Laboratory, Oak Ridge, TN.

Overton, W. S., P. Kanciruk, L. A. Hook, J. M. Eilers, D. H. Landers, D. J. Blick, Jr., D. F. Brakke, R. A. Linthurst, and M. D. DeHaan. 1986. Characterstics of lakes in the Eastern United States. Volume II: Lakes sampled and descriptive statistics for physical and chemical variables. EPA-600/4-86-007B, U.S. Environmental Protection Agency,

Payne, R. L. 1983. USGS digital cartographic data standards. The Geographic Names Information System. U.S. Geological Survey circular 895-F. U.S. Geological Survey, Reston, VA.

Pfeiffer, M. H., and P. J. Festa. 1980. Acidity status of lakes in the Adirondack Region of New York in relation to fish resources. Bureau of Fisheries, New York State Department of Environmental Conservation, Albany, New York.

Retzsch, W. C., A. G. Everett, P. F. Duhaime, and R. Notwanger. 1982. Alternative explanations for aquatic ecosystems effects attributed to acidic deposition. Report to the Utility Air Regulatory Group.

Schnoor, J. L., N. P. Nikolaidis, and G. E. Glass. 1986. Lake resources at risk to acidic deposition in the upper Midwest. J. Water Pollut. Control Fed. 58(2):139-148.

Schofield, C. 1976a. Dynamics and management of Adirondack fish populations. Project report April 1, 1975-March 31, 1976, No. F-28-R-4, New York Department of Environmental Conservation, Albany, New York.

Schofield, C. 1976b. Acid precipitation: Effects on fish. Ambio 5:228-230.

Schofield, C. L. 1981. Historical Fisheries Changes as Related to Surface Water pH Changes in the United States. Department of Natural Resources, Cornell University, Ithaca, NY. 32 pp.

Turner, R. S., R. J. Olson, and C. C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

U.S. Environmental Protection Agency. 1984. National Surface Water Survey National Lake Survey--Phase I. NAPAP project reference number E-23. Office of Research and Development, Washington, D.C.

Watson, C. R. and A. R. Olsen. 1984. Acid Deposition System (ADS) for statistical reporting: System design and user's code manual. EPA-600/8-84-023. U.S. Environmental Protection Agency, Research Triangle Park, NC.

Wetzel, R. G. 1975. Limnology. W. B. Sanders Co., Philadelphia, PA. 743 pp.

APPENDIX A. DATA SET DOCUMENTATION

Appendix A documents the individual data sets in the AWDB that are listed in Table 3. Each data set description includes the basic information for that particular data set. Data set descriptors from data set G01 and variable names, labels with units of measure, and variable type, length, and format from data set G02 are listed as part of each data set description. In addition, basic statistics are listed for each data set to indicate the overall range of values for each variable and to use in verifying that data have been correctly transported to another system. They are not to be construed as an analysis of the AWDB. Dictionary tables are included for several data sets to provide reference lists of values for variables that are codes. The three-character data set number (DSN) is used in numbering pages, tables, and figures, to easily associate all materials for a data set.

Bar charts are often used to indicate frequency distributions. The bars have been partitioned into three classes to indicate the amount of water chemistry data available. Class 1 (crosshatched) represents those 121 high elevation lakes sampled in 1975 (Schofield 1976b), and possibly afterwards, which have several water quality variables; class 2 (hatched) represents other lakes that have at least pH or alkalinity measured between 1974 and 1983. Some lakes in class 1 also have additional measurements between 1974 and 1983. The class 3 lakes (no crosshatching) are those with no water chemistry data.

The descriptive fields used in Appendix A include:

Year(s): The date refers to the year or years in which the data were collected or the data source was published.

Temporal Resolution: The temporal unit is defined as annual, point, or annual mean. This field is blank for index and dictionary data sets and for data sets which reflect contemporary environmental conditions, such as soils or bedrock geology.

Geocoverage: Geographic coverage of the data set is defined as the Adirondack region of New York State.

Spatial resolution: Geographic units are either lake or watershed.

Number of Records: Total number of records in the data set: Data sets having single records per watershed have 463 records.

Variables Per Record: Number of SAS variables in the data set.

Created/Updated: Gives the date the data set was originally added to the Data Base or that significant changes were incorporated.

Data Set Type: This field provides information about how the data set is structured: Single (one record per watershed unit); Multiple (several records per watershed, e.g., a record for each wetland type occurring in a watershed; or Dictionary (names and characteristics associated with codes, e.g., wetland type code names).

Date Released: Date the data set was made available to users.

Update Dates: Anticipated time of updates to the data set.

Compiler: Individuals involved in compiling, digitizing, editing, or other aspects of creating the data set for the AWDB.

Description: Information is included about the contents and creation of the data set.

Reference(s): Complete citations are listed of sources or applications of the data.

Variable: Names listed correspond exactly to the spelling of SAS variables within the data base.

Label: Brief informative description of the variable corresponding to the SAS labels stored within the data base. Because SAS restricts the label to 40 characters, the label printed in the Appendix may include abbreviations used to accommodate this limit. If a variable has a unit of measure associated with it, the unit's abbreviation is right-justified in the label field. Table A.1 lists all unit abbreviations in alphabetical order and their meanings.

Type: Indicates whether the SAS variable is character or numeric.

Len (Length): The number of bytes used to store values of the variable.

Format: The SAS format that is used when values are printed.

Codefmt. (Code format): The name of a format created with SAS PROC FORMAT. This field will only have a value for variables whose values are codes. For those data sets that contain code variables, there is another table that lists each format name, possible values, and meaning of each value.

Table A.1.

Abbreviation or Format	Unit
CM	centimeter
CODE	see format values and labels
DD.DDDD	latitude (decimal degrees)
DDD.DDDD	longitude (decimal degrees)
DD MM SS	latitude (degrees, minutes, seconds)
DDD MM SS	longitude (degrees, minutes, seconds)
DEG	degree (slope)
DEG C	degrees celsius
G/M2	grams/square meter
HA	hectare
KM	kilometer
M	meter
MEQ/100 G	milliequivalents/100 grams
MG/L	milligrams/liter
NTU	nephelometric turbidity units
PCU	platinum cobalt units
UEQ/L	microequivalents/liter
UG/L	micrograms/liter
UMHOS/CM	micromhos/centimeter
US	microsemens
YR	year
10**6 M3	cubic meter (millions)
%TWTRSHD	percent of terrestrial watershed area
%WTRSHD	percent of watershed area
%LAKE AREA	percent of lake area
%LAKE PERIM	percent of lake perimeter
%MAPPING UNIT	percent of soil mapping unit
%HORIZON	percent of soil horizon

AWD Contents for Data Set: G01 - DIRECTORY OF DATA SETS

Year(s):
Geocoverage:
Number of Records: 37
Created/Updated: 21APR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution:
Variables per Record: 49
Data Set Type: Single
Update dates:

Description:

This data set describes all the data sets in the AWDB. It contains one observation for each data set in the data base. Each observation gives the data set name, source of the data, geographic coverage, spatial and temporal resolution, reference citation, a brief description of the data set, and other information pertinent to the data set.

Variable	Label	Type	Len.	Format	Codefmt.
COMPILER	DATA COMPILER(S)	CHAR	50		
CREATED	DATE CREATED	NUM	8	DATE7.	
DS_NAME	FULL DATASET NAME	CHAR	31		
DSN	DATA SET NUMBER	CHAR	6		
GEOCOVER	GEOGRAPHIC COVERAGE	CHAR	11		
GEOUNIT	SPATIAL RESOLUTION	CHAR	10		
ITEMS	NUMBER OF VARIABLES	NUM	4	F4.	
RECORDS	NUMBER OF RECORDS	NUM	4	F4.	
REF1	REFERENCE FOR DATA, LINE 1	CHAR	72		
REF2	REFERENCE FOR DATA, LINE 2	CHAR	72		
REF3	REFERENCE FOR DATA, LINE 3	CHAR	72		
REF4	REFERENCE FOR DATA, LINE 4	CHAR	72		
REF5	REFERENCE FOR DATA, LINE 5	CHAR	72		
REF6	REFERENCE FOR DATA, LINE 6	CHAR	72		
REF7	REFERENCE FOR DATA, LINE 7	CHAR	72		
REF8	REFERENCE FOR DATA, LINE 8	CHAR	72		
REF9	REFERENCE FOR DATA, LINE 9	CHAR	72		
REF10	REFERENCE FOR DATA, LINE 10	CHAR	72		
REF11	REFERENCE FOR DATA, LINE 11	CHAR	72		
REF12	REFERENCE FOR DATA, LINE 12	CHAR	72		
REF13	REFERENCE FOR DATA, LINE 13	CHAR	72		
REF14	REFERENCE FOR DATA, LINE 14	CHAR	72		
REF15	REFERENCE FOR DATA, LINE 15	CHAR	72		
REF16	REFERENCE FOR DATA, LINE 16	CHAR	72		
REF17	REFERENCE FOR DATA, LINE 17	CHAR	72		
REF18	REFERENCE FOR DATA, LINE 18	CHAR	72		
REF19	REFERENCE FOR DATA, LINE 19	CHAR	72		

Variable	Label	Type	Len.	Format	Codefmt.
REF20	REFERENCE FOR DATA, LINE 20	CHAR	72		
RELEASED	DATE RELEASED/DISTRIBUTED	NUM	4	DATE7.	
SECTOR	SECTOR CODE LETTER	CHAR	1		
SOURCE	SOURCE OF DATA	CHAR	22		
STATUS	DATA SET STATUS	CHAR	16		
TEMPORAL	TEMPORAL RESOLUTION	CHAR	12		
TEXT1	DESCRIPTIVE TEXT, LINE 1	CHAR	72		
TEXT2	DESCRIPTIVE TEXT, LINE 2	CHAR	72		
TEXT3	DESCRIPTIVE TEXT, LINE 3	CHAR	72		
TEXT4	DESCRIPTIVE TEXT, LINE 4	CHAR	72		
TEXT5	DESCRIPTIVE TEXT, LINE 5	CHAR	72		
TEXT6	DESCRIPTIVE TEXT, LINE 6	CHAR	72		
TEXT7	DESCRIPTIVE TEXT, LINE 7	CHAR	72		
TEXT8	DESCRIPTIVE TEXT, LINE 8	CHAR	72		
TEXT9	DESCRIPTIVE TEXT, LINE 9	CHAR	72		
TEXT10	DESCRIPTIVE TEXT, LINE 10	CHAR	72		
THEME	THEMATIC SECTOR TITLE	CHAR	20		
TITLE	DATA SET TITLE	CHAR	55		
TYPE	DATA SET TYPE	CHAR	10		
UPDATES	ANTICIPATED UPDATE INTERVAL	CHAR	16		
VOLUME	LOCATION OF VOLUME	CHAR	6		
YEARS	REFERENCE YEAR(S) OF THE DATA	CHAR	16		

AWD Contents for Data Set: G02 - DIRECTORY OF VARIABLES

Year(s):
Geocoverage:
Number of Records: 903
Created/Updated: 21APR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution:
Variables per Record: 9
Data Set Type: Single
Update dates:

Description:
This data set lists all the variables in the data base. It includes the name of the data set in which the variable is found, the variable's type, length, label, and code format (see G03).

Variable	Label	Type	Len.	Format	Codefmt.
CODEFMT	FORMAT USED WITH CODE VARIABLES	CHAR	8		
DSN	DATA SET NUMBER (MEMBER NAME)	CHAR	8		
FORMAT	FORMAT OF VARIABLE	CHAR	8		
INFORMAT	INFORMAT OF VARIABLE	CHAR	8		
LABEL	LABEL OF VARIABLE	CHAR	40		
LENGTH	LENGTH OF VARIABLE	NUM	8	F4.	
SORTID	ALLOWS VARIABLE TO PRINT IN PROPER ORDER	NUM	8	F4.	
TYPE	TYPE OF VARIABLE	CHAR	4		
VARIABLE	NAME OF VARIABLE	CHAR	8		

AWD Contents for Data Set: G03 - FORMATS FOR CODE VARIABLES

Year(s):
Geocoverage:
Number of Records: 659
Created/Updated: 21APR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution:
Variables per Record: 4
Data Set Type: Single
Update dates:

Description:

Variables that have coded values have SAS formats, which can be used with SAS procedures. For each format (CODEFMT) the data set contains the coded value and the meaning (LABEL) of each value.

Variable	Label	Type	Len.	Format	Codefmt.
CODEFMT	FORMAT NAME	CHAR	8		
LABEL	FORMAT VALUE LABEL	CHAR	40		
TYPE	TYPE OF FORMAT	CHAR	1		
VALUE	VALUE FOR FORMAT	CHAR	16		

AWD Contents for Data Set: I00 - INTEGRATED LIST OF LAKES IN ADIRONDACKS

Year(s): 1984
Geocoverage: Adirondacks
Number of Records: 3831
Created/Updated: 01FEB85
Date Released: 01MAY86
Compiler(s): A.E. Rosen, C.T. Hunsaker

Temporal Resolution:
Spatial Resolution: Lake
Variables per Record: 17
Data Set Type: Single
Update dates:

Description:

An integrated inventory of lakes in the Adirondack region was compiled, containing latitude/longitude, surface area, and elevation. Source and flag fields are included to indicate the source and reliability of the data. Reliability was determined by comparing size , elevation, and location as recorded by different sources and checking for differences.

Reference(s):

Baker, J.P., T.B. Harvey, and J.P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern United States susceptible to acidic deposition. Final report to the U.S. Environmental Protection Agency for NAPAP Project E3-24. North Carolina State University, Raleigh, NC. (in press).

Greeson, P.E., and F.L. Robinson. 1970. Characteristics of New York State Lakes. Part I. Gazetteer of lakes, ponds and reservoirs. Bulletin 68, U.S. Geological Survey and N.Y.S. Department of Environmental Conservation.

Payne, R.L. 1983. USGS digital cartographic data standards. The Geographic Names Information System. U.S. Geological Survey circular 895-F. U.S. Geological Survey, Reston, VA.

Variable	Label		Type	Len.	Format	Codefmt.
CI	CONFIDENCE INDEX		NUM	8	F1.	
COUNTY	FIPS COUNTY NUMBER		NUM	3	Z3.	
DEC_ID	DEC ID NUMBER ASSIGNED BY ORNL		NUM	8	F4.	
GNIS_ID	GNIS ID NUMBER ASSIGNED BY ORNL		NUM	8	F4.	
LAKE_A	LAKE SURFACE AREA	HA	NUM	8	F7.1	
LAKE_AF	AREA FLAG		NUM	8	F1.	
LAKE_AS	SOURCE FOR AREA		CHAR	6		
LAKE_E	LAKE ELEVATION ABOVE M.S.L.	M	NUM	8	F7.1	
LAKE_EF	ELEVATION FLAG		NUM	8	F1.	
LAKE_ES	SOURCE FOR ELEVATION		CHAR	6		
LAKE_NM	LAKE NAME		CHAR	46		
LAT_DEC	LATITUDE	DD.DDDD	NUM	8	F8.4	
LATLON_F	LAT/LONG FLAG		NUM	8	F1.	
LATLON_S	SOURCE FOR LAT/LONG		CHAR	6		
LON_DEC	LONGITUDE	DDD.DDDD	NUM	8	F8.4	
POND_NO	POND NUMBER		CHAR	7		
STATE	FIPS STATE NUMBER		NUM	2	Z2.	

SUMMARY STATISTICS FOR I00

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
CI	1645	2186	1.61	1.32	1.00	5.00
LAKE_A	3079	752	48.30	489.56	0.00	15539.90
LAKE_E	3069	762	466.91	151.30	6.70	1524.00
LAT_DEC	2347	1484	43.92	0.42	42.81	45.01
LON_DEC	2347	1484	74.44	0.81	44.32	76.44

AWD Contents for Data Set: I01 - PHYSICAL ATTRIBUTES OF LAKES

Year(s): 1975-1984
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen, G.K. Gruendling

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 32
Data Set Type: Single
Update dates:

Description:

This data set contains the physical attribute data for each of the watersheds. It includes such information as latitude, longitude, surface area, elevation, depth, volume, perimeter length, number of inlets and outlets, terrestrial watershed area, and total drainage area.

Reference(s):

Baker, J.P., T.B. Harvey, and J.P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern United States susceptible to acidic deposition. Final report to the U.S. Environmental Protection Agency for NAPAP Project E3-24. North Carolina State University, Raleigh, NC. (in press).

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
COUNTY	FIPS COUNTY NUMBER		NUM	3	Z3.	
DRAIN_A	DRAINAGE AREA	HA	NUM	8	F7.1	
INLETS	NO. OF INFLOWS DEFINED BY USGS TOPO MAP		NUM	4	F1.	
LAKE_A	LAKE AREA	HA	NUM	4	F7.1	
LAKE_DEV	LAKE DEVELOPMENT RATIO - PERIM/CIRCLE		NUM	8	F7.1	
LAKE_E	LAKE ELEVATION ABOVE M.S.L.	M	NUM	4	F7.1	
LAKE_NM	LAKE NAME		CHAR	30		
LAKE_V	LAKE VOLUME CALC. FROM FIN	10**6 M3	NUM	8	F7.1	
LAT_DEC	LATITUDE FROM ORNL	DD.DDDD	NUM	8	F8.4	
LAT_DMS	LATITUDE FROM ORNL	DD MM SS	CHAR	10		
LAT_FIN	LATITUDE FROM FIN	DD.DDDD	NUM	8	F8.4	
LIME1	FIRST YEAR THAT LAKE WAS LIMED		NUM	8	F4.	
LIME2	MOST RECENT YEAR LAKE WAS LIMED		NUM	8	F4.	
LKCHN_C	NOTICEABLE LAKE SURFACE CHANGE	CODE	CHAR	1		$LKCHN_F
LON_DEC	LONGITUDE FROM ORNL	DDD.DDDD	NUM	8	F8.4	

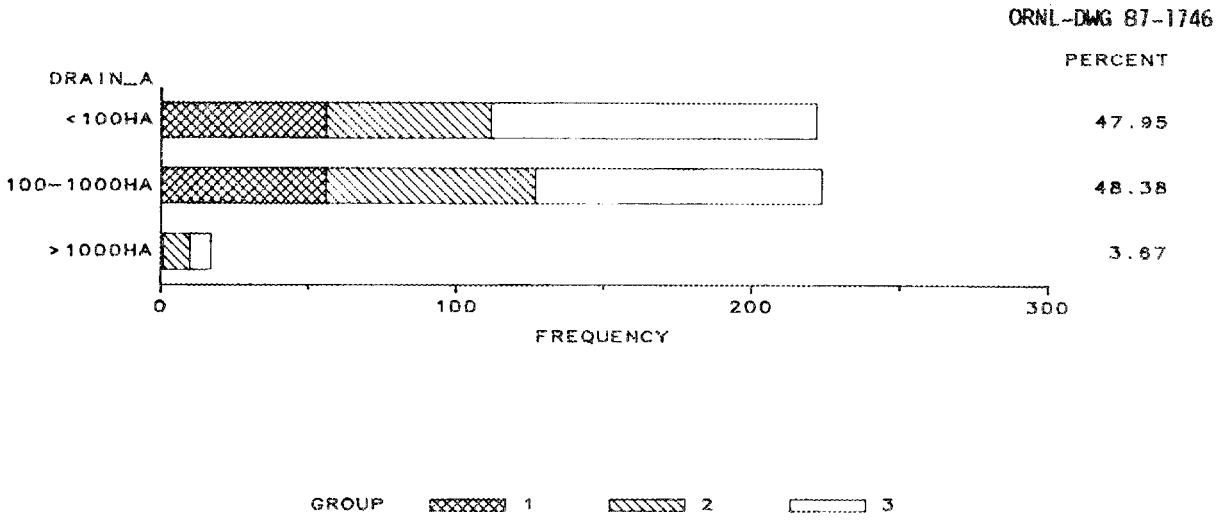
Variable	Label		Type	Len.	Format	Codefmt.
LON_DMS	LONGITUDE FROM ORNL	DDD MM SS	CHAR	11		
LON_FIN	LONGITUDE FROM FIN	DDD.DDDD	NUM	8	F8.4	
MAXDPTH	MAX. DEPTH OF LAKE FROM FIN	M	NUM	8	F8.1	
MEANDPTH	MEAN DEPTH OF LAKE FROM FIN	M	NUM	4	F8.1	
OUTLETS	NO. OF OUTFLOWS DEFINED BY USGS TOPO MAP		NUM	4	F1.	
PERIMETR	SHORELINE PERIMETER PLUS ISLANDS	M	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		
QUAD	QUADRANGLE WHERE LAKE IS LOCATED		CHAR	4		
RCLM1	FIRST YEAR OF RECLAMATION		NUM	8	F4.	
RCLM2	MOST RECENT YEAR OF RECLAMATION		NUM	8	F4.	
RELIEF	RELIEF, MAX ELEV. - LAKE ELEV.	M	NUM	8	F7.1	
RELIEF_R	RELIEF TO SQRT(WTRSHD_A) RATIO		NUM	8	F7.1	
STATE	FIPS STATE NUMBER		NUM	2	Z2.	
WATERSHD	WATERSHED CODE		NUM	4	F1.	
WTRSHD_A	TERRESTRIAL WATERSHED AREA	HA	NUM	8	F7.1	
WTRSHD_E	WATERSHED MAX. ELEV ABOVE M.S.L.	M	NUM	4	F7.1	
WTRSHD_R	DRAINAGE AREA TO LAKE AREA RATIO		NUM	8	F7.1	

Format Values and Labels for Code Variables in I01

Variable	Codefmt	Type	Value	Label
LKCHN_C	$LKCHN_F	C	0	NO NOTICEABLE CHANGE
			1	NOTICEABLE CHANGE

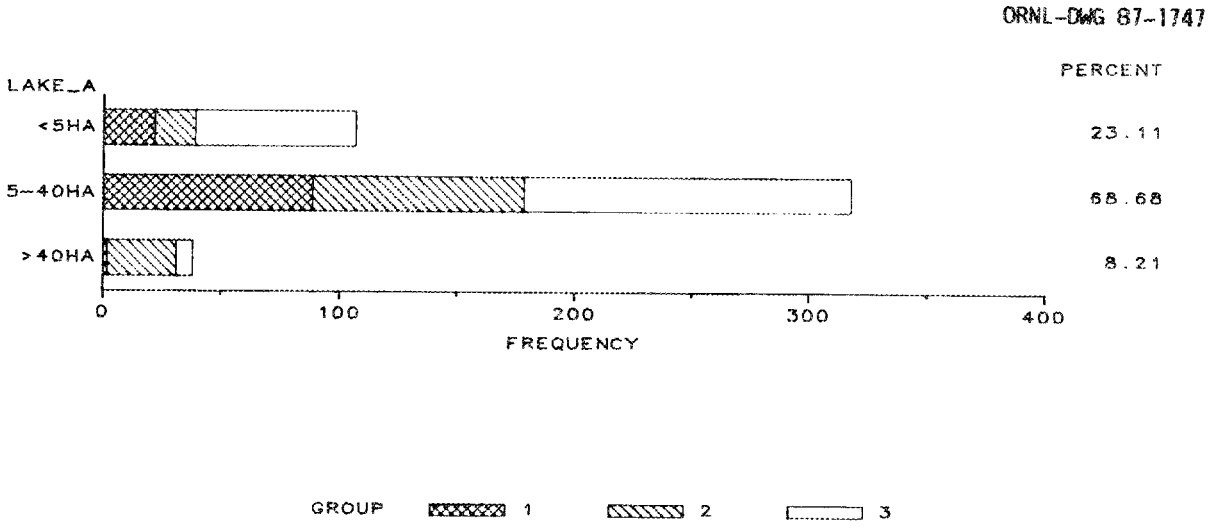
SUMMARY STATISTICS FOR I01

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
DRAIN_A	463	0	230.74	454.56	11.50	5082.00
INLETS	463	0	0.29	0.61	0.00	5.00
LAKE_A	463	0	17.51	45.97	2.50	788.80
LAKE_DEV	463	0	1.41	0.46	1.00	6.13
LAKE_E	463	0	587.04	115.66	173.74	1129.28
WTRSHD_E	463	0	756.96	171.59	338.33	1628.85
LAKE_V	235	228	1.49	8.37	0.01	125.42
LAT_DEC	463	0	43.85	0.31	43.18	44.47
LAT_FIN	455	8	43.85	0.32	43.18	44.83
LIME1	12	451	1973.08	6.88	1953.00	1979.00
LIME2	12	451	1975.33	7.91	1953.00	1982.00
LON_DEC	463	0	74.45	0.40	73.51	75.16
LON_FIN	455	8	74.45	0.40	73.51	75.86
MAXDPTH	234	229	8.14	5.90	0.60	46.00
MEANDPTH	72	391	3.87	2.83	0.30	15.90
OUTLETS	463	0	0.93	0.28	0.00	2.00
PERIMETR	463	0	1839.82	2080.52	254.00	31607.16
RCLM1	53	410	1960.98	10.18	1930.00	1984.00
RCLM2	53	410	1963.62	10.67	1930.00	1984.00
RELIEF	463	0	169.92	137.94	18.29	1021.99
RELIEF_R	463	0	14.72	7.17	2.74	50.93
WTRSHD_A	463	0	213.23	423.45	9.00	4293.20
WTRSHD_R	463	0	20.18	32.77	3.00	459.40



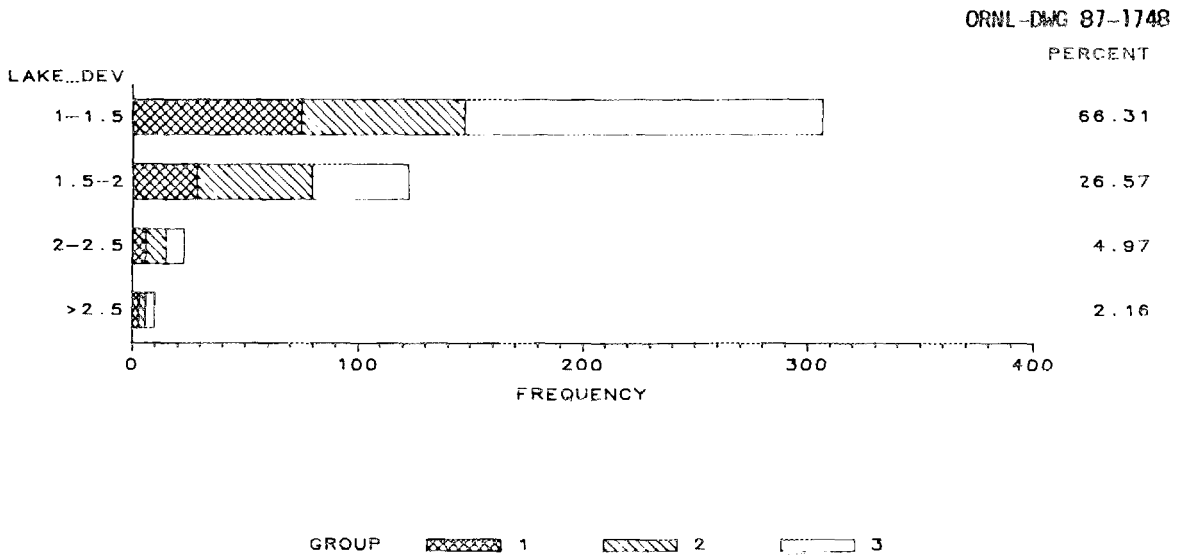
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. 101.1. Frequency distribution of watershed area (ha) for selected watersheds in the Adirondack region.



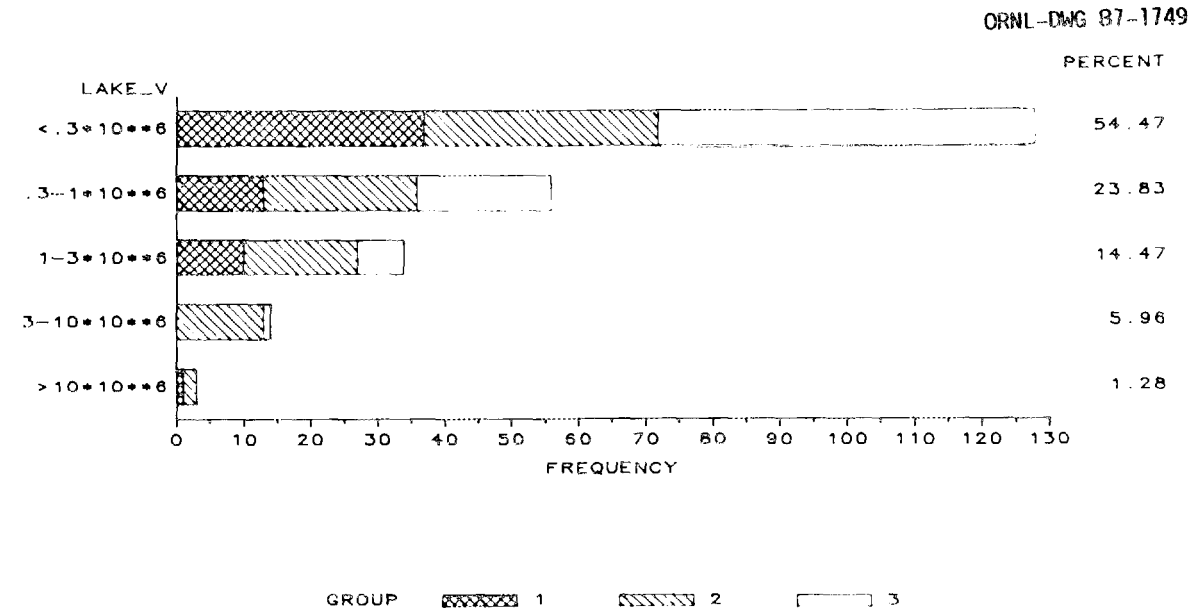
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. 101.2. Frequency distribution of lake surface area (ha) for selected headwater lakes in the Adirondack region.



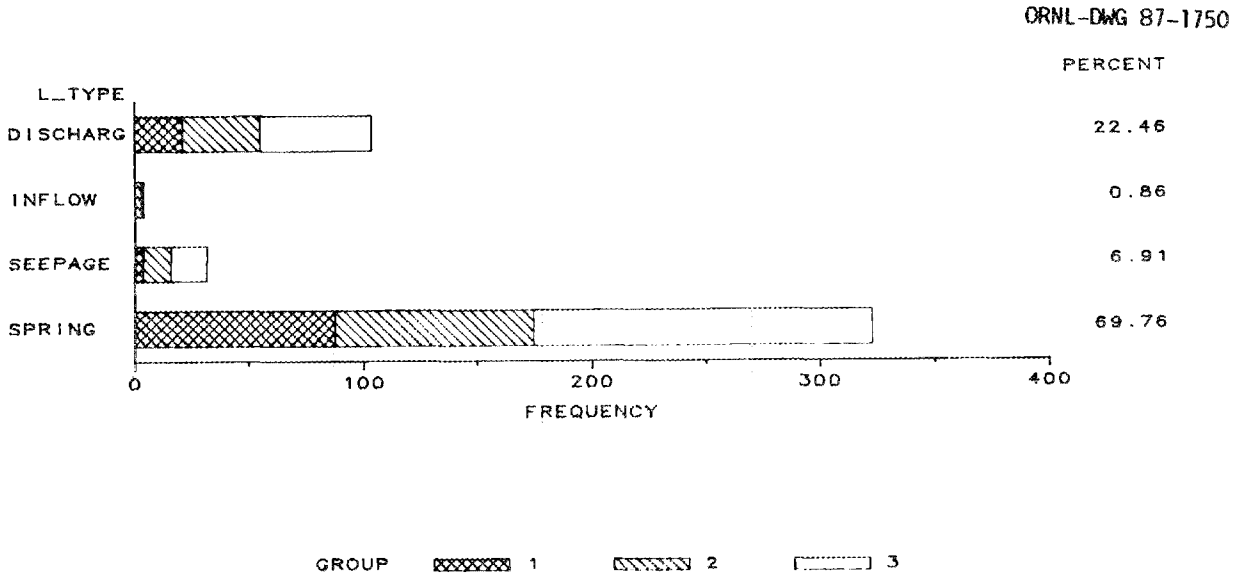
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I01.3. Frequency distribution of shoreline development for selected headwater lakes in the Adirondack region.



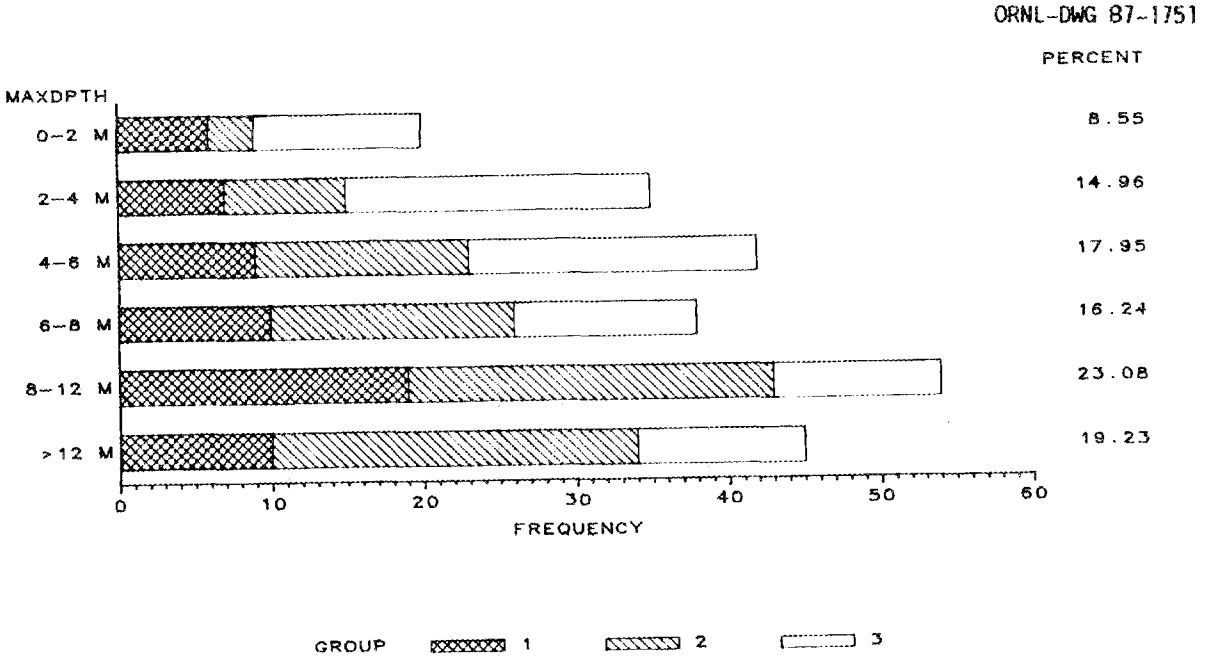
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I01.4. Frequency distribution of lake volume ($m^3 \times 10^6$) for selected headwater lakes in the Adirondack region.



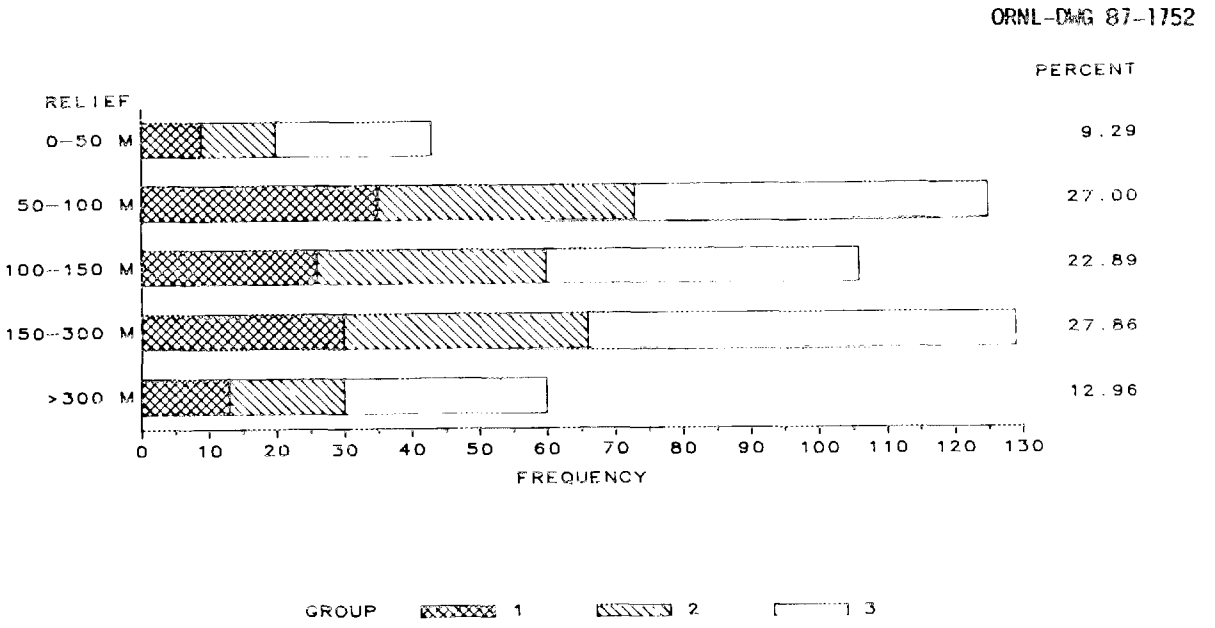
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I01.5. Frequency distribution of lake type for selected headwater lakes in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I01.6. Frequency distribution of maximum lake depth (m) for selected headwater lakes in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. 101.7. Frequency distribution of relief (m) for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I02A- WATERSHED AREA BY FOREST TYPE

Year(s): 1948-1949
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): K.B. Adams

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 13
Data Set Type: Single
Update dates:

Description:

This data set contains forest type area within each of the watersheds as determined from USFS maps (scale 1:62500) which were made from 1948-49 black and white infrared photography (scale 1:20000).

Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
ASPEN_A	ASPEN-GRAY BIRCH AREA	HA	NUM	4	F7.1	
AVAIL_C	DATA AVAILABILITY	CODE	NUM	4	F1.	AVAIL_F
BIRCH_A	WHITE BIRCH AREA	HA	NUM	4	F7.1	
HEMLCK_A	HEMLOCK AREA	HA	NUM	4	F7.1	
LARCH_A	LARCH-CEDAR-BLACK SPRUCE AREA	HA	NUM	4	F7.1	
MISC_F_A	MISCELLANEOUS AREA	HA	NUM	4	F7.1	
N_HRD_A	NORTHERN HARDWOOD AREA	HA	NUM	4	F7.1	
NONFOR_A	NON-FORESTED AREA	HA	NUM	4	F7.1	
POND_NO	POND NUMBER		CHAR	7		
S_FIR_A	SPRUCE-FIR AREA	HA	NUM	4	F7.1	
SF_HRD_A	SPRUCE-FIR-HARDWOOD AREA	HA	NUM	4	F7.1	
WP_HRD_A	WHITE PINE-HARDWOOD AREA	HA	NUM	4	F7.1	
WPINE_A	WHITE PINE AREA	HA	NUM	4	F7.1	

Format Values and Labels for Code Variables in I02A

Variable	Codefmt	Type	Value	Label
AVAIL_C	AVAIL_F	N	0	DATA AVAILABLE
			1	NO DATA AVAILABLE

SUMMARY STATISTICS FOR I02A

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ASPEN_A	317	146	1.63	8.99	0.00	127.25
BIRCH_A	317	146	5.55	60.99	0.00	908.07
HEMLCK_A	317	146	0.00	0.00	0.00	0.00
LARCH_A	317	146	0.00	0.00	0.00	0.00
MISC_F_A	317	146	0.00	0.00	0.00	0.00
N_HRD_A	317	146	97.30	174.45	0.00	1987.12
NONFOR_A	317	146	2.72	27.03	0.00	452.40
S_FIR_A	317	146	24.54	157.43	0.00	2682.06
SF_HRD_A	317	146	41.91	77.41	0.00	666.97
WP_HRD_A	317	146	3.74	25.52	0.00	336.81
WPINE_A	317	146	0.37	3.74	0.00	55.25

AWD Contents for Data Set: I02B- WATERSHED AREA BY DISTURBANCE TYPE

Year(s): 1916
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): K.B. Adams

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 15
Data Set Type: Single
Update dates:

Description:

This data set contains disturbance type areas within each of the watersheds as determined from a 1916 map (scale 1:126720).

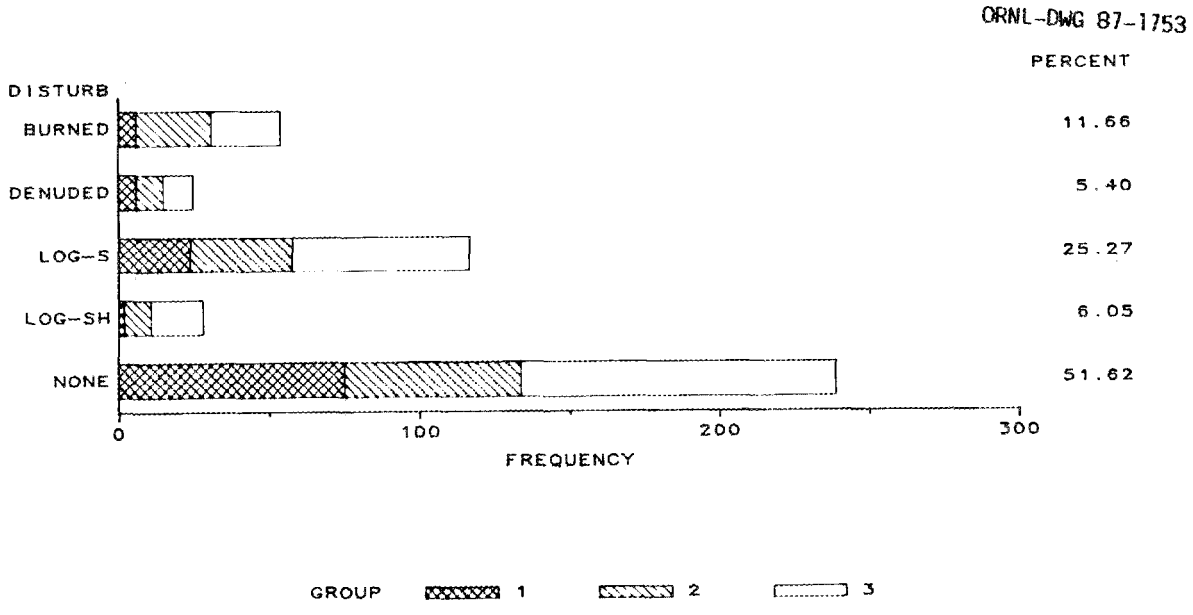
Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
BURNED_A	BURNED AREA	HA	NUM	4	F7.1	
BURNED_Y	BURNED YEAR		NUM	4	F4.	
DENUDE_A	WASTE/DENUDED AREA	HA	NUM	4	F7.1	
DENUDE_Y	WASTE/DENUDED YEAR		NUM	4	F4.	
G_TMBR_A	GREEN TIMBER AREA	HA	NUM	4	F7.1	
G_TMBR_Y	GREEN TIMBER YEAR		NUM	4	F4.	
LOG_S_A	LOGGED SOFTWOOD AREA	HA	NUM	4	F7.1	
LOG_S_Y	LOGGED SOFTWOOD YEAR		NUM	4	F4.	
LOG_SH_A	LOGGED SOFTWOOD AND HARDWOOD AREA	HA	NUM	4	F7.1	
LOG_SH_Y	LOGGED SOFTWOOD AND HARDWOOD YEAR		NUM	4	F4.	
OPEN_A	OPEN AREA	HA	NUM	4	F7.1	
OPEN_Y	OPEN YEAR		NUM	4	F4.	
OTHER_A	OTHER AREA	HA	NUM	4	F7.1	
OTHER_Y	OTHER YEAR		NUM	4	F4.	
POND_NO	POND NUMBER		CHAR	7		

SUMMARY STATISTICS FOR I02B

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
BURNED_A	463	0	11.40	40.85	0.00	446.63
BURNED_Y	35	428	1906.69	3.62	1901.00	1915.00
DENUDE_A	463	0	5.72	34.10	0.00	432.65
DENUDE_Y	4	459	1909.50	5.45	1903.00	1914.00
G_TMBR_A	463	0	147.66	357.86	0.00	3973.70
G_TMBR_Y	0	463				
LOG_S_A	463	0	31.85	108.31	0.00	1067.00
LOG_S_Y	36	427	1911.03	3.64	1903.00	1915.00
LOG_SH_A	463	0	11.58	104.14	0.00	2042.39
LOG_SH_Y	18	445	1913.33	1.41	1910.00	1915.00
OPEN_A	463	0	5.02	51.66	0.00	957.66
OPEN_Y	0	463				
OTHER_A	463	0	0.00	0.00	0.00	0.00
OTHER_Y	0	463				



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I02B.1. Frequency distribution of disturbances for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I02C- NUMBER OF CABINS

Year(s): 1945, 1978
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): K.B. Adams

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 3
Data Set Type: Single
Update dates:

Description:

This data set has the number of cabins in each watershed for 1945 and 1978 as determined from USGS topographic maps and aerial photographs.

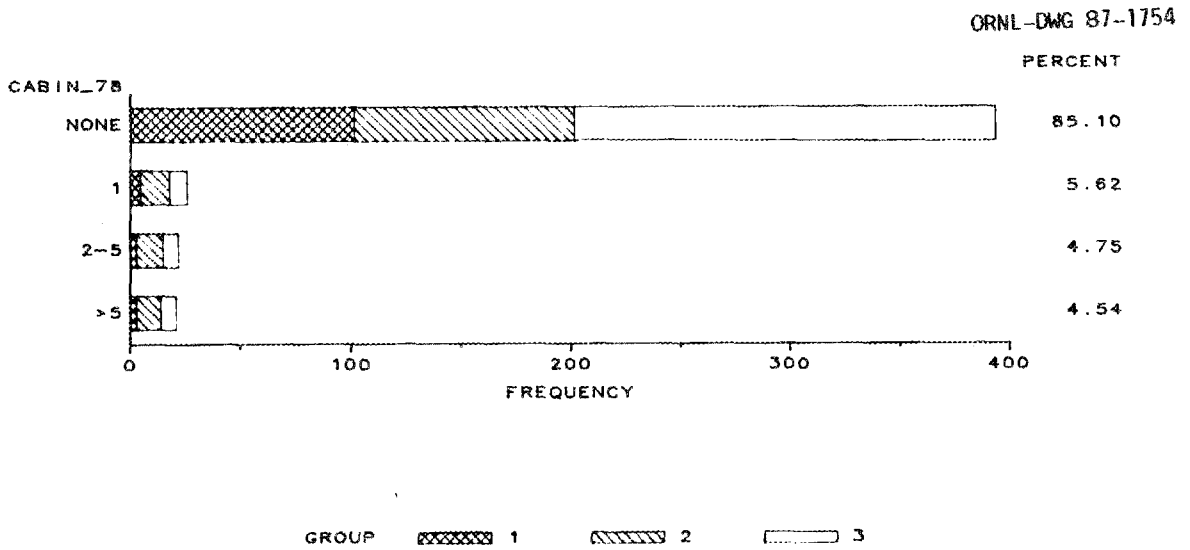
Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label	Type	Len.	Format	Codefmt.
CABIN_45	NO. OF CABINS, 1945/54 DATA	NUM	4	F3.	
CABIN_78	NO. OF CABINS, 1978 DATA	NUM	4	F3.	
POND_NO	POND NUMBER	CHAR	7		

SUMMARY STATISTICS FOR I02C

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
CABIN_45	463	0	1.36	14.07	0.00	293.00
CABIN_78	463	0	3.81	20.71	0.00	273.00



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I02C.1. Frequency distribution of cabins for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I03 - WATERSHED AREA BY LAND COVER TYPE

Year(s): 1978
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): R. Curran, P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 7
Data Set Type: Single
Update dates:

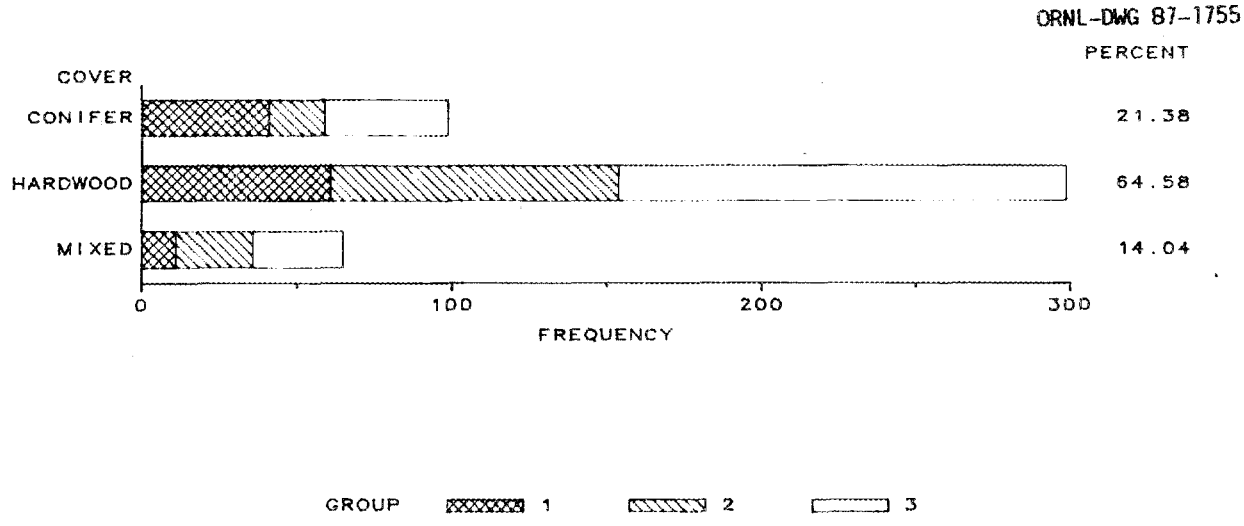
Description:
This data set contains land cover types for each of the watersheds as determined from 1978 LANDSAT imagery.

Reference(s):
Curran, R. Personal communication. Adirondack Park Agency, New York.

Variable	Label	Type	Len.	Format	Codefmt.
BARREN_A	BARREN AREA HA	NUM	8	F7.1	
BRUSH_A	BRUSH AREA HA	NUM	8	F7.1	
CONFR_A	CONIFER AREA HA	NUM	8	F7.1	
GRASS_A	GRASS AREA HA	NUM	8	F7.1	
HRDWD_A	HARDWOOD AREA HA	NUM	8	F7.1	
MIXED_A	MIXED AREA HA	NUM	8	F7.1	
POND_NO	POND NUMBER	CHAR	7		

SUMMARY STATISTICS FOR I03

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
BARREN_A	463	0	0.03	0.28	0.00	3.63
BRUSH_A	463	0	0.21	1.98	0.00	39.37
CONFR_A	463	0	40.64	99.61	0.64	1590.15
GRASS_A	463	0	0.46	3.14	0.00	44.02
HRDWD_A	463	0	118.21	246.17	0.00	2386.88
MIXED_A	463	0	53.67	121.57	0.00	1311.27



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I03.1. Frequency distribution of land cover based on 1978 LANDSAT imagery for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I04 - SOIL MAPPING UNIT AREAS

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 1751
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): R. Curran, P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 3
Data Set Type: Multiple
Update dates:

Description:
This data set contains the area of each soil mapping unit within a watershed as determined from 1974 USSCS county maps (scale 1:62500).

Reference(s):
Curran R. Personal communication. Adirondack Park Agency, New York.

Variable	Label		Type	Len.	Format	Codefmt.
POND_NO	POND NUMBER		CHAR	7		
SOIL_A	AREA OF SOIL MAPPING UNIT IN WTRSHD	HA	NUM	4	F7.1	
SOIL_C	SOIL MAPPING UNIT IDENTIFIER	CODE	NUM	4	F3.	

SUMMARY STATISTICS FOR I04

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
SOIL_A	1751	0	56.38	102.28	1.01	1409.01

AWD Contents for Data Set: I05A- SOILS - A/E HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains area weighted mean soil chemistry parameters for each watershed. The data set was generated by merging the watershed composition file (I04) with the A/E horizon chemistry data from the map unit components file (I07).

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_EX	MEAN EXTRACTABLE ACIDITY	MEQ/100 G	NUM	8	F6.1	
BSAT_N	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G	NUM	8	F6.1	
BSAT_S	MEAN BASE SATURATION (SUM)	MEQ/100 G	NUM	8	F6.1	
CEC	MEAN CATION EXCHANGE CAPACITY	MEQ/100 G	NUM	8	F6.1	
CLAY	MEAN CLAY CONTENT	%HORIZON	NUM	8	F6.1	
ORG_MAT	MEAN ORG. MATTER CONTENT	%HORIZON	NUM	8	F6.1	
PH_CACL	MEAN SOIL PH (CACL2)		NUM	8	F6.2	
PH_H2O	MEAN SOIL PH (H2O)		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
SUMBSE	MEAN SUM OF BASES	MEQ/100 G	NUM	8	F6.1	
SUMCAT	MEAN SUM OF CATIONS	MEQ/100 G	NUM	8	F6.1	

SUMMARY STATISTICS FOR I05A

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_EX	463	0	17.21	2.23	9.39	23.04
BSAT_N	463	0	24.34	12.33	16.68	142.98
BSAT_S	463	0	15.01	6.42	6.41	61.47
CEC	463	0	16.14	3.99	13.80	50.06
CLAY	463	0	13.33	3.49	4.26	34.48
ORG_MAT	463	0	3.30	0.90	2.53	9.08
PH_CACL	463	0	3.88	0.24	3.56	5.14
PH_H2O	463	0	4.51	0.22	4.24	5.64
SUMBSE	463	0	3.51	2.46	1.33	22.24
SUMCAT	463	0	20.72	3.26	17.14	35.54

AWD Contents for Data Set: I05B- SOILS - MEAN OF A/E & B HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains area weighted mean soil chemistry parameters for each watershed. The data set was generated by merging the watershed composition file (I04) with the mean of the A/E and B horizons chemistry data from the map unit components file (I07).

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_EX	MEAN EXTRACTABLE ACIDITY	MEQ/100 G	NUM	8	F6.1	
BSAT_N	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G	NUM	8	F6.1	
BSAT_S	MEAN BASE SATURATION (SUM)	MEQ/100 G	NUM	8	F6.1	
CEC	MEAN CATION EXCHANGE CAPACITY	MEQ/100 G	NUM	8	F6.1	
CLAY	MEAN CLAY CONTENT	%HORIZON	NUM	8	F6.1	
ORG_MAT	MEAN ORG. MATTER CONTENT	%HORIZON	NUM	8	F6.1	
PH_CACL	MEAN SOIL PH (CACL2)		NUM	8	F6.2	
PH_H2O	MEAN SOIL PH (H2O)		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
SUMBSE	MEAN SUM OF BASES	MEQ/100 G	NUM	8	F6.1	
SUMCAT	MEAN SUM OF CATIONS	MEQ/100 G	NUM	8	F6.1	

SUMMARY STATISTICS FOR I05B

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_EX	463	0	22.54	3.12	9.90	28.36
BSAT_N	463	0	21.94	11.88	14.61	128.37
BSAT_S	463	0	11.80	6.66	4.80	52.88
CEC	463	0	18.75	6.16	11.75	69.16
CLAY	463	0	12.58	3.93	4.16	39.46
ORG_MAT	463	0	3.56	0.96	2.56	10.56
PH_CACL	463	0	4.17	0.22	3.85	5.20
PH_H2O	463	0	4.74	0.23	4.40	5.79
SUMBSE	463	0	2.87	1.97	1.28	17.76
SUMCAT	463	0	25.41	2.35	20.30	30.86

AWD Contents for Data Set: I05C- SOILS - MEAN OF A/E, B, C HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains area weighted mean soil chemistry parameters for each watershed. The data set was generated by merging the watershed composition file (I04) with the mean of the A/E, B, and C horizons chemistry data from the map unit components file (I07).

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_EX	MEAN EXTRACTABLE ACIDITY	MEQ/100 G	NUM	8	F6.1	
BSAT_N	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G	NUM	8	F6.1	
BSAT_S	MEAN BASE SATURATION (SUM)	MEQ/100 G	NUM	8	F6.1	
CEC	MEAN CATION EXCHANGE CAPACITY	MEQ/100 G	NUM	8	F6.1	
CLAY	MEAN CLAY CONTENT	%HORIZON	NUM	8	F6.1	
ORG_MAT	MEAN ORG. MATTER CONTENT	%HORIZON	NUM	8	F6.1	
PH_CACL	MEAN SOIL PH (CACL2)		NUM	8	F6.2	
PH_H2O	MEAN SOIL PH (H2O)		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
SUMBSE	MEAN SUM OF BASES	MEQ/100 G	NUM	8	F6.1	
SUMCAT	MEAN SUM OF CATIONS	MEQ/100 G	NUM	8	F6.1	

SUMMARY STATISTICS FOR I05C

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_EX	463	0	16.89	1.96	9.94	23.23
BSAT_N	463	0	27.53	12.29	17.43	143.58
BSAT_S	463	0	15.49	5.98	10.87	51.40
CEC	463	0	14.56	7.02	9.53	73.85
CLAY	463	0	11.93	4.04	4.06	41.01
ORG_MAT	463	0	2.61	1.01	1.79	10.72
PH_CACL	463	0	4.40	0.18	4.22	5.36
PH_H2O	463	0	4.98	0.19	4.74	5.96
SUMBSE	463	0	2.52	1.69	1.46	16.62
SUMCAT	463	0	19.40	1.77	15.84	26.56

AWD Contents for Data Set: I05D- SOILS - VALUES DEPEND ON RUNOFF CLASS

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains area weighted mean soil chemistry parameters for each watershed. The data set was generated by merging the watershed composition file (I04) with the map unit components file (I07). For components in hydrologic group A or B, the chemistry parameters were calculated as the mean of the A/E, B, and C horizon values. The mean of the A/E and B horizon values was used for components in hydrologic group C, while only the A/E values were used for hydrologic group D components.

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_EX	MEAN EXTRACTABLE ACIDITY	MEQ/100 G	NUM	8	F6.1	
BSAT_N	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G	NUM	8	F6.1	
BSAT_S	MEAN BASE SATURATION (SUM)	MEQ/100 G	NUM	8	F6.1	
CEC	MEAN CATION EXCHANGE CAPACITY	MEQ/100 G	NUM	8	F6.1	
CLAY	MEAN CLAY CONTENT	%HORIZON	NUM	8	F6.1	
ORG_MAT	MEAN ORG. MATTER CONTENT	%HORIZON	NUM	8	F6.1	
PH_CACL	MEAN SOIL PH (CACL2)		NUM	8	F6.2	
PH_H2O	MEAN SOIL PH (H2O)		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
SUMBSE	MEAN SUM OF BASES	MEQ/100 G	NUM	8	F6.1	
SUMCAT	MEAN SUM OF CATIONS	MEQ/100 G	NUM	8	F6.1	

SUMMARY STATISTICS FOR I05D

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_EX	463	0	22.24	3.39	9.90	28.36
BSAT_N	463	0	21.86	11.70	14.70	128.37
BSAT_S	463	0	11.74	6.48	4.80	52.88
CEC	463	0	18.56	6.98	11.10	75.31
CLAY	463	0	12.65	4.23	4.16	41.20
ORG_MAT	463	0	3.52	1.05	1.87	11.01
PH_CACL	463	0	4.16	0.20	3.85	5.15
PH_H2O	463	0	4.74	0.21	4.40	5.72
SUMBSE	463	0	2.91	2.14	1.28	17.76
SUMCAT	463	0	25.15	2.98	16.37	30.86

AWD Contents for Data Set: I06A- SOILS - A/E HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 14
Data Set Type: Single
Update dates:

Description:

This data set contains the area in each watershed satisfying various soil chemistry criteria. The soil chemistry data are from the I07 file for the A/E horizon.

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_A	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
BSA_L_A	BASE SAT. (NH4OAC) <= 20%, AREA	HA	NUM	8	F7.1	
BSA_M_A	BASE SAT. (NH4OAC) 20-60%, AREA	HA	NUM	8	F7.1	
BSC_L_A	BASE SAT. (SUM) <= 20%, AREA	HA	NUM	8	F7.1	
BSC_M_A	BASE SAT. (SUM) 20-60%, AREA	HA	NUM	8	F7.1	
CEC_L_A	CATION EXC. CAP. <= 10 MEQ/100G, AREA	HA	NUM	8	F7.1	
CECS_L_A	SUM OF CATIONS <= 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
EBS_L_A	EXC. BASES <= 3 MEQ/100G, AREA	HA	NUM	8	F7.1	
OM_H_A	ORG. MATTER CONTENT => 2%, AREA	HA	NUM	8	F7.1	
PH_L_A	SOIL PH (H2O) <= 5.0, AREA	HA	NUM	8	F7.1	
PH_VL_A	SOIL PH (H2O) <= 4.5, AREA	HA	NUM	8	F7.1	
PHC_L_A	SOIL PH (CACL2) <= 5.0, AREA	HA	NUM	8	F7.1	
PHC_VL_A	SOIL PH (CACL2) <= 4.5, AREA	HA	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		

SUMMARY STATISTICS FOR I06A

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_A	463	0	15.59	45.85	0.00	679.36
BSA_L_A	463	0	128.87	266.95	0.00	3172.67
BSA_M_A	463	0	33.98	65.38	0.00	686.29
BSC_L_A	463	0	148.60	296.10	0.00	3305.76
BSC_M_A	463	0	15.03	46.87	0.00	686.29
CEC_L_A	463	0	3.26	24.58	0.00	443.66
CECS_L_A	463	0	91.15	203.41	0.00	2206.70
EBS_L_A	463	0	75.38	143.77	0.00	1440.10
OM_H_A	463	0	164.79	312.44	3.94	3374.45
PH_L_A	463	0	152.76	299.08	0.00	3301.47
PH_VL_A	463	0	74.14	138.76	0.00	1517.83
PHC_L_A	463	0	159.32	313.81	0.00	3331.52
PHC_VL_A	462	1	147.62	296.89	3.94	3297.18

AWD Contents for Data Set: I06B- SOILS - MEAN OF A/E & B HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 14
Data Set Type: Single
Update dates:

Description:

This data set contains the area in each watershed satisfying various soil chemistry criteria. The soil chemistry data are the mean of the A/E and B horizons from the I07 file.

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_A	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
BSA_L_A	BASE SAT. (NH4OAC) <= 20%, AREA	HA	NUM	8	F7.1	
BSA_M_A	BASE SAT. (NH4OAC) 20-60%, AREA	HA	NUM	8	F7.1	
BSC_L_A	BASE SAT. (SUM) <= 20%, AREA	HA	NUM	8	F7.1	
BSC_M_A	BASE SAT. (SUM) 20-60%, AREA	HA	NUM	8	F7.1	
CEC_L_A	CATION EXC. CAP. <= 10 MEQ/100G, AREA	HA	NUM	8	F7.1	
CECS_L_A	SUM OF CATIONS <= 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
EBS_L_A	EXC. BASES <= 3 MEQ/100G, AREA	HA	NUM	8	F7.1	
OM_H_A	ORG. MATTER CONTENT => 2%, AREA	HA	NUM	8	F7.1	
PH_L_A	SOIL PH (H2O) <= 5.0, AREA	HA	NUM	8	F7.1	
PH_VL_A	SOIL PH (H2O) <= 4.5, AREA	HA	NUM	8	F7.1	
PHC_L_A	SOIL PH (CACL2) <= 5.0, AREA	HA	NUM	8	F7.1	
PHC_VL_A	SOIL PH (CACL2) <= 4.5, AREA	HA	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		

SUMMARY STATISTICS FOR I06B

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_A	463	0	66.34	131.98	0.00	1490.42
BSA_L_A	463	0	145.68	293.26	0.00	3297.18
BSA_M_A	463	0	19.22	52.18	0.00	686.29
BSC_L_A	463	0	155.86	305.91	0.00	3305.76
BSC_M_A	463	0	8.77	23.75	0.00	185.87
CEC_L_A	463	0	5.28	26.32	0.00	450.59
CECS_L_A	463	0	21.29	50.25	0.00	540.88
EBS_L_A	463	0	145.68	293.26	0.00	3297.18
OM_M_A	463	0	163.93	311.14	3.94	3374.45
PH_L_A	463	0	147.34	293.82	0.00	3305.76
PH_VL_A	463	0	56.81	114.05	0.00	1210.99
PHC_L_A	463	0	157.77	312.19	0.00	3305.76
PHC_VL_A	462	1	147.62	296.89	3.94	3297.18

AWD Contents for Data Set: I06C- SOILS - MEAN OF A/E, B, C HORIZON VALUES

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 14
Data Set Type: Single
Update dates:

Description:

This data set contains the area in each watershed satisfying various soil chemistry criteria. The soil chemistry data are the mean of the A/E, B, and C horizons from the I07 file.

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_A	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
BSA_L_A	BASE SAT. (NH4OAC) <= 20%, AREA	HA	NUM	8	F7.1	
BSA_M_A	BASE SAT. (NH4OAC) 20-60%, AREA	HA	NUM	8	F7.1	
BSC_L_A	BASE SAT. (SUM) <= 20%, AREA	HA	NUM	8	F7.1	
BSC_M_A	BASE SAT. (SUM) 20-60%, AREA	HA	NUM	8	F7.1	
CEC_L_A	CATION EXC. CAP. <= 10 MEQ/100G, AREA	HA	NUM	8	F7.1	
CECS_L_A	SUM OF CATIONS <= 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
EBS_L_A	EXC. BASES <= 3 MEQ/100G, AREA	HA	NUM	8	F7.1	
OM_H_A	ORG. MATTER CONTENT => 2%, AREA	HA	NUM	8	F7.1	
PH_L_A	SOIL PH (H2O) <= 5.0, AREA	HA	NUM	8	F7.1	
PH_VL_A	SOIL PH (H2O) <= 4.5, AREA	HA	NUM	8	F7.1	
PHC_L_A	SOIL PH (CACL2) <= 5.0, AREA	HA	NUM	8	F7.1	
PHC_VL_A	SOIL PH (CACL2) <= 4.5, AREA	HA	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		

SUMMARY STATISTICS FOR I06C

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_A	463	0	57.70	115.11	0.00	1239.63
BSA_L_A	463	0	70.62	167.15	0.00	2082.20
BSA_M_A	463	0	94.28	171.98	0.00	1941.02
BSC_L_A	463	0	154.78	304.83	0.00	3305.76
BSC_M_A	463	0	10.10	27.38	0.00	217.57
CEC_L_A	463	0	23.71	52.24	0.00	540.88
CECS_L_A	463	0	101.30	214.06	0.00	2206.70
EBS_L_A	463	0	145.68	293.26	0.00	3297.18
OM_H_A	463	0	77.23	154.97	0.00	2003.41
PH_L_A	463	0	75.98	140.60	0.00	1517.83
PH_VL_A	463	0	1.50	6.28	0.00	68.96
PHC_L_A	463	0	157.08	308.97	0.00	3305.76
PHC_VL_A	462	1	147.65	296.88	3.94	3297.18

AWD Contents for Data Set: I06D- SOILS - VALUES DEPEND ON RUNOFF CLASS

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 14
Data Set Type: Single
Update dates:

Description:

This data set contains the area in each watershed satisfying various soil chemistry criteria. The soil chemistry data are the mean of the A/E, B, and C horizons for hydrologic groups A or B, the mean of the A/E and B horizons for hydrologic group C, and the A/E horizon for hydrologic group D.

Reference(s):

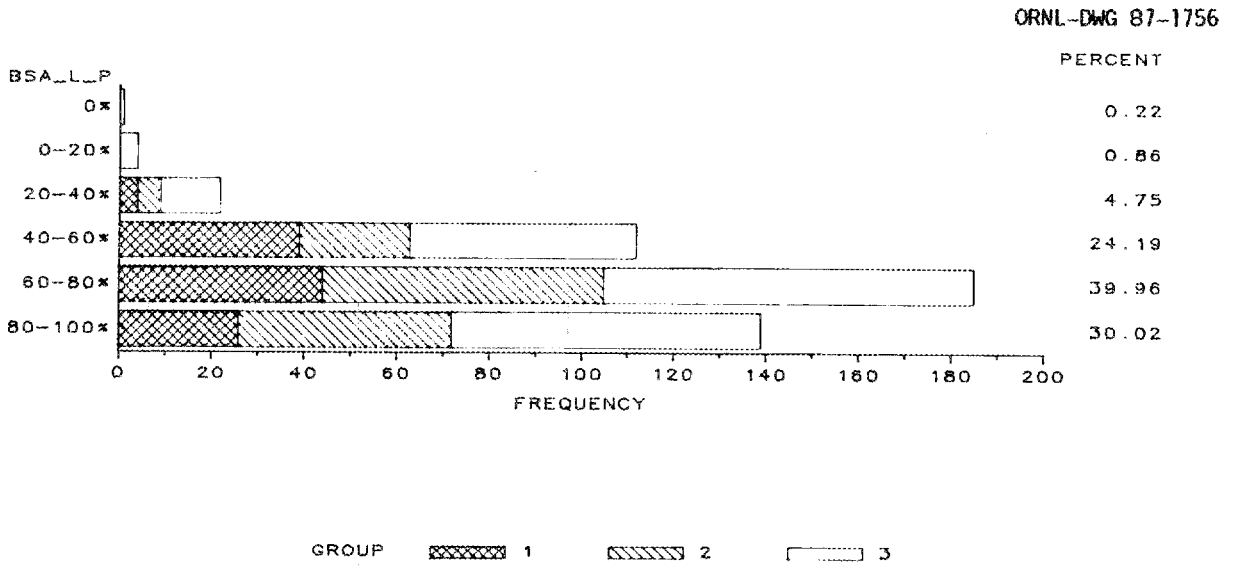
Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_A	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
BSA_L_A	BASE SAT. (NH4OAC) <= 20%, AREA	HA	NUM	8	F7.1	
BSA_M_A	BASE SAT. (NH4OAC) 20-60%, AREA	HA	NUM	8	F7.1	
BSC_L_A	BASE SAT. (SUM) <= 20%, AREA	HA	NUM	8	F7.1	
BSC_M_A	BASE SAT. (SUM) 20-60%, AREA	HA	NUM	8	F7.1	
CEC_L_A	CATION EXC. CAP. <= 10 MEQ/100G, AREA	HA	NUM	8	F7.1	
CECS_L_A	SUM OF CATIONS <= 20 MEQ/100G, AREA	HA	NUM	8	F7.1	
EBS_L_A	EXC. BASES <= 3 MEQ/100G, AREA	HA	NUM	8	F7.1	
OM_H_A	ORG. MATTER CONTENT => 2%, AREA	HA	NUM	8	F7.1	
PH_L_A	SOIL PH (H2O) <= 5.0, AREA	HA	NUM	8	F7.1	
PH_VL_A	SOIL PH (H2O) <= 4.5, AREA	HA	NUM	8	F7.1	
PHC_L_A	SOIL PH (CACL2) <= 5.0, AREA	HA	NUM	8	F7.1	
PHC_VL_A	SOIL PH (CACL2) <= 4.5, AREA	HA	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		

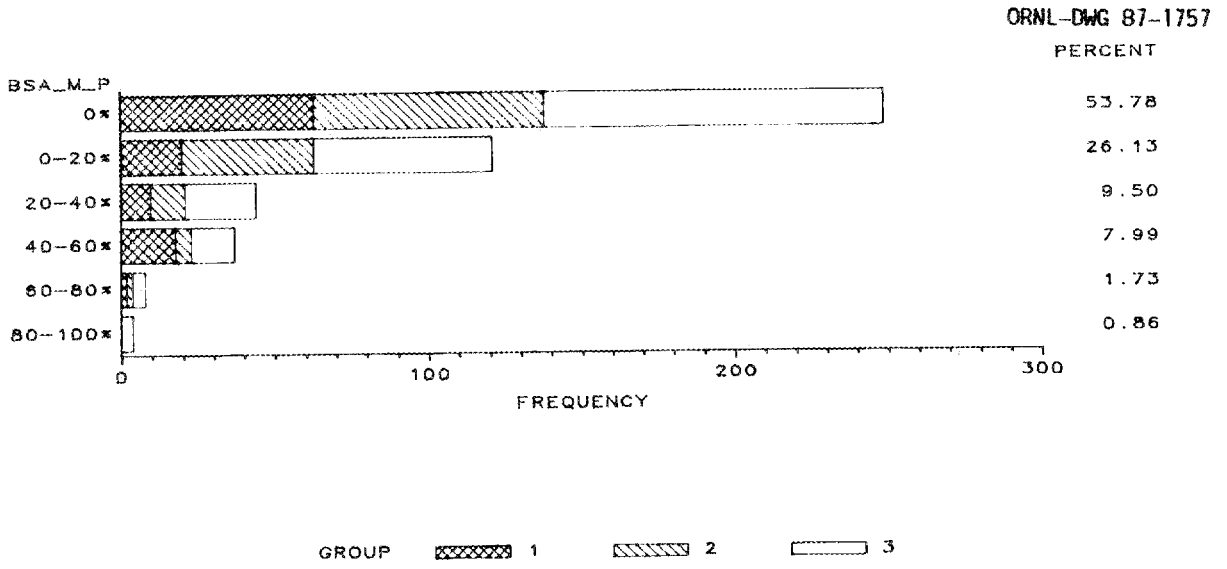
SUMMARY STATISTICS FOR I06D

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_A	463	0	65.27	131.78	0.00	1490.42
BSA_L_A	463	0	145.30	293.05	0.00	3297.18
BSA_M_A	463	0	19.60	52.20	0.00	686.29
BSC_L_A	463	0	154.78	304.83	0.00	3305.76
BSC_M_A	463	0	10.16	27.42	0.00	217.57
CEC_L_A	463	0	4.70	28.49	0.00	447.13
CECS_L_A	463	0	36.44	94.95	0.00	927.33
EBS_L_A	463	0	145.68	293.26	0.00	3297.18
OM_H_A	463	0	148.32	276.16	0.00	2876.11
PH_L_A	463	0	131.14	258.24	0.00	2818.84
PH_VL_A	463	0	56.81	114.05	0.00	1210.99
PHC_L_A	463	0	160.01	317.07	0.00	3331.52
PHC_VL_A	462	1	147.62	296.89	3.94	3297.18



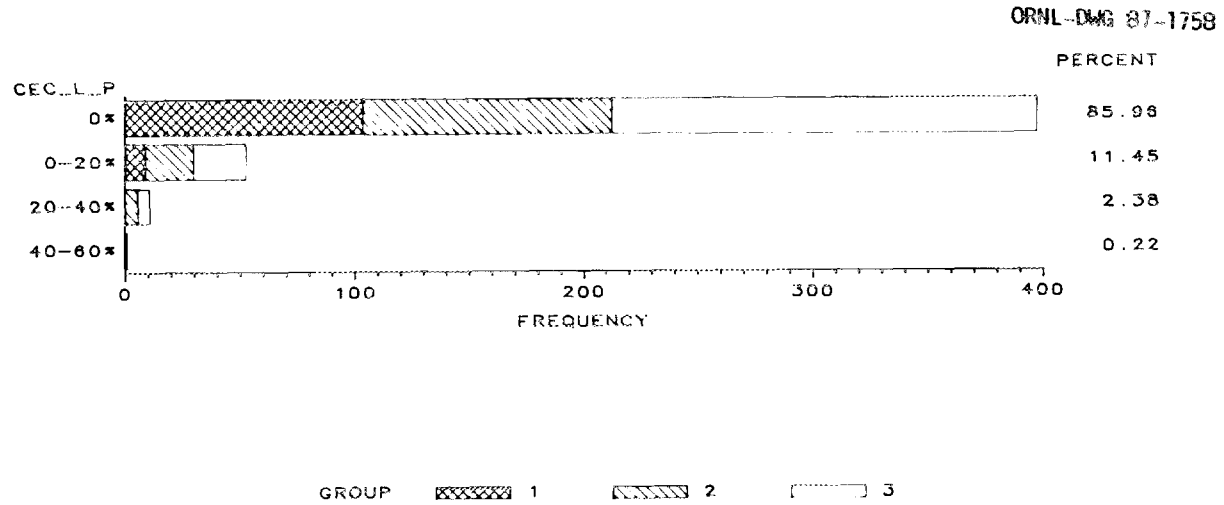
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.1. Frequency of percentage of the Watershed with base saturation less than 20% for selected watersheds in the Adirondack region.



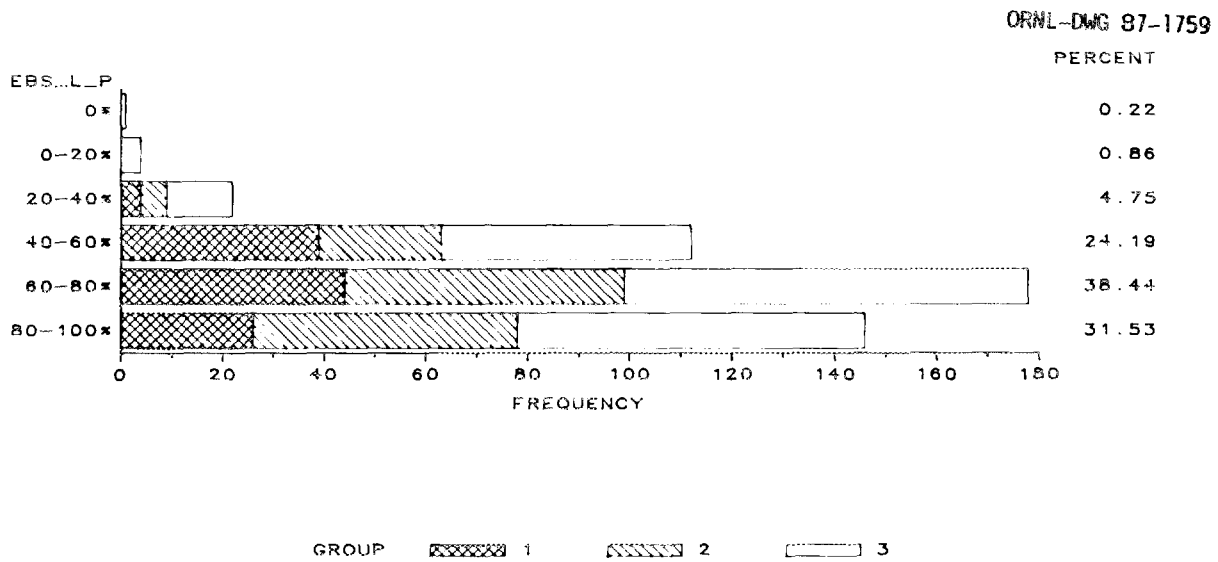
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.2. Frequency of percentage of the watershed with base saturation between 20% and 60% for selected watersheds in the Adirondack region.



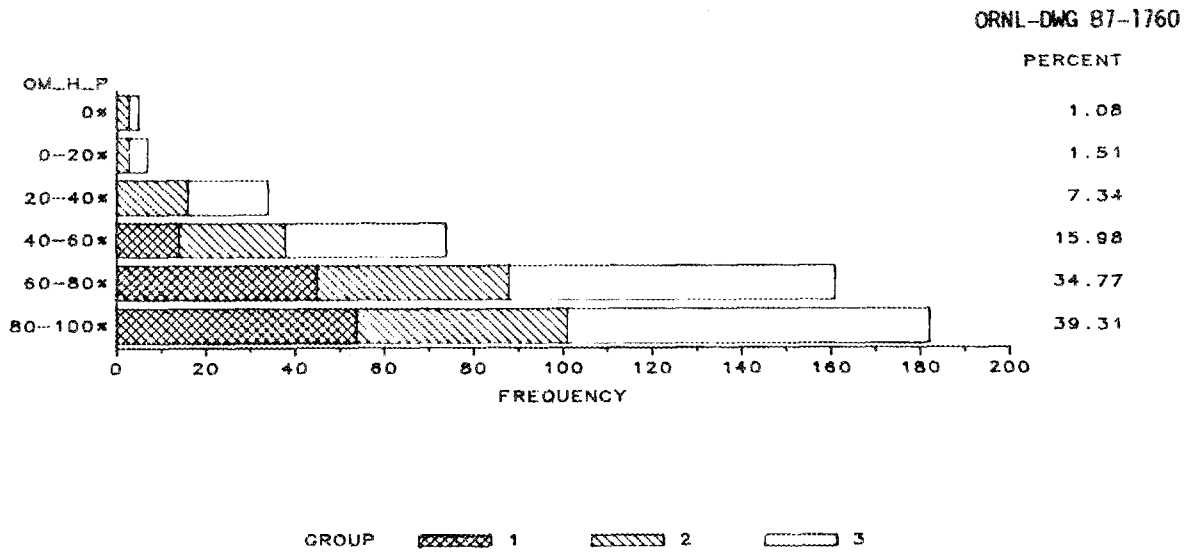
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.3. Frequency of percentage of the watershed with cation exchange capacity less than 10 μeq/100 g for selected watersheds in the Adirondack region.



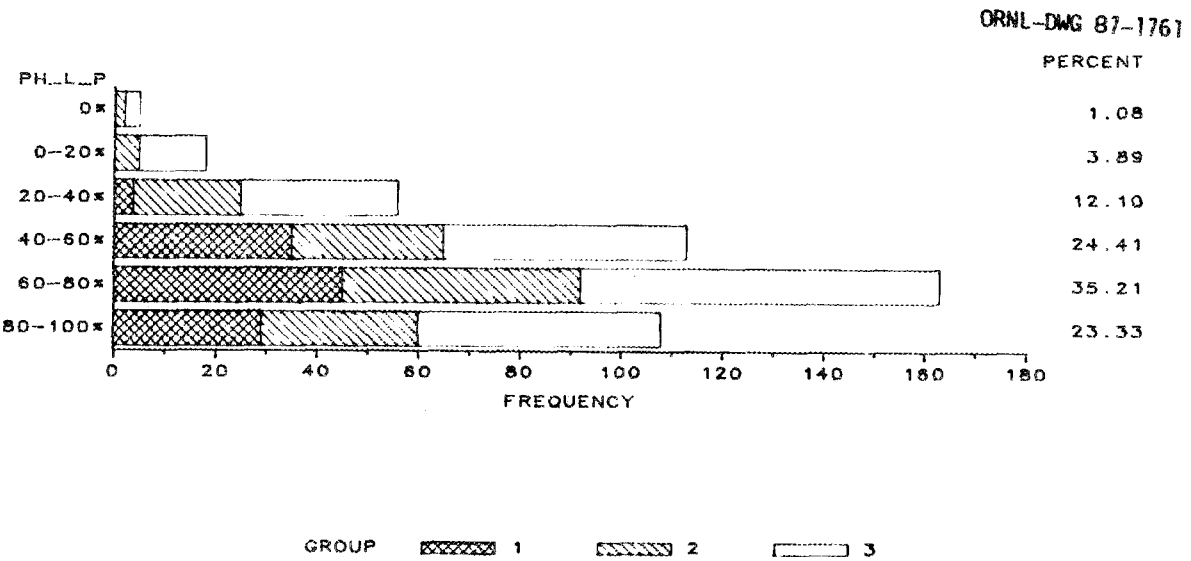
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.4. Frequency of percentage of the watershed with exchangeable bases less than 3 μeq/100 g for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.5. Frequency of percentage of the watershed with organic matter greater than 2% for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I06D.6. Frequency of percentage of the watershed with soil pH less than 5.0 for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I07 - SOIL CHEMISTRY BY SOIL MAPPING UNIT

Year(s): 1974
Geocoverage: Adirondacks
Number of Records: 336
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution:
Variables per Record: 62
Data Set Type: Dictionary
Update dates:

Description:

This data set contains chemical, physical, and taxonomic data for soil mapping unit components. The chemistry data are subgroup level values derived from the SCS Pedon data base, while the physical and taxonomic data are series characteristics obtained from the SCS Soils-5 file. Hypotheses 1 thru 4 refer to the method used in calculating the chemistry data: 1) only A/E horizon values, 2) the mean of the A/E and B horizon values, 3)the mean of the A/E, B, and C horizon values, 4) the mean of the A/E, B, and C horizon values for hydrologic groups A or B, the mean of the A/E and B horizon values for hydrologic group C, and the A/E horizon values for hydrologic group D.

Reference(s):

Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
ACID_1	EXTRACT. ACIDITY - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	
ACID_2	EXTRACT. ACIDITY - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
ACID_3	EXTRACT. ACIDITY - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
ACID_4	EXTRACT. ACIDITY - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
AREA_P	SOIL SERIES AREA	%MAPPING UNIT	NUM	4	F6.1	
BSATN_1	BASE SAT. (NH4OAC) - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	
BSATN_2	BASE SAT. (NH4OAC) - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
BSATN_3	BASE SAT. (NH4OAC) - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
BSATN_4	BASE SAT. (NH4OAC) - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
BSATS_1	BASE SAT. (SUM) - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	
BSATS_2	BASE SAT. (SUM) - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
BSATS_3	BASE SAT. (SUM) - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
BSATS_4	BASE SAT. (SUM) - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
CEC_1	CATION EXC. CAP. - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	

Variable	Label		Type	Len.	Format	Codefmt.
CEC_2	CATION EXC. CAP. - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
CEC_3	CATION EXC. CAP. - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
CEC_4	CATION EXC. CAP. - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
CLAY_1	CLAY CONTENT - HYPOTH 1	%HORIZON	NUM	8	F6.1	
CLAY_2	CLAY CONTENT - HYPOTH 2	%HORIZON	NUM	8	F6.1	
CLAY_3	CLAY CONTENT - HYPOTH 3	%HORIZON	NUM	8	F6.1	
CLAY_4	CLAY CONTENT - HYPOTH 4	%HORIZON	NUM	8	F6.1	
CRSE_C	COARSENESS CLASS	CODE	CHAR	1		$CRSE_F
DPTH_B_L	DEPTH TO BEDROCK - LOWER	CM	NUM	4	F6.	
DPTH_B_U	DEPTH TO BEDROCK - UPPER	CM	NUM	4	F6.	
DPTH_P_L	DEPTH TO LOW PERM. LAYER - LOWER	CM	NUM	4	F6.	
DPTH_P_U	DEPTH TO LOW PERM. LAYER - UPPER	CM	NUM	4	F6.	
DPTH_R_L	DEPTH TO ROOT RES. LAYER - LOWER	CM	NUM	8	F6.	
DPTH_R_U	DEPTH TO ROOT RES. LAYER - UPPER	CM	NUM	8	F6.	
FMNRL_C	FAMILY MINERALOGY	CODE	CHAR	2		$MNRL_F
FOTHR_C	FAMILY OTHER CHARACTERISTICS	CODE	CHAR	2		$OTHR_F
FPS_C	FAMILY PARTICLE SIZE	CODE	CHAR	3		$PS_F
FRCTN_C	FAMILY REACTION	CODE	CHAR	2		$RCTN_F
FTEMP_C	FAMILY TEMPERATURE	CODE	CHAR	2		$TEMP_F
GGRP_C	GREAT GROUP	CODE	CHAR	5		$GGRP_F
HGRP_C	HYDROLOGIC GROUP-RUNOFF POTENTIAL	CODE	CHAR	3		$HGRP_F
ORG_1	ORG. MATTER CONTENT - HYPOTH 1	%HORIZON	NUM	8	F6.1	
ORG_2	ORG. MATTER CONTENT - HYPOTH 2	%HORIZON	NUM	8	F6.1	
ORG_3	ORG. MATTER CONTENT - HYPOTH 3	%HORIZON	NUM	8	F6.1	
ORG_4	ORG. MATTER CONTENT - HYPOTH 4	%HORIZON	NUM	8	F6.1	
PHCACL_1	SOIL PH (CACL2) - HYPOTH 1		NUM	8	F6.2	
PHCACL_2	SOIL PH (CACL2) - HYPOTH 2		NUM	8	F6.2	
PHCACL_3	SOIL PH (CACL2) - HYPOTH 3		NUM	8	F6.2	
PHCACL_4	SOIL PH (CACL2) - HYPOTH 4		NUM	8	F6.2	
PHH2O_1	SOIL PH (H2O) - HYPOTH 1		NUM	8	F6.2	
PHH2O_2	SOIL PH (H2O) - HYPOTH 2		NUM	8	F6.2	
PHH2O_3	SOIL PH (H2O) - HYPOTH 3		NUM	8	F6.2	
PHH2O_4	SOIL PH (H2O) - HYPOTH 4		NUM	8	F6.2	
SER_NM	SOIL SERIES NAME		CHAR	20		
SGRP_C	SUB GROUP MODIFIER	CODE	CHAR	4		$SGRP_F
SLOPE_C	SLOPE CLASS OF MAPPING UNIT	CODE	CHAR	1		$SLOPE_F
SOIL_C	SOIL MAPPING UNIT IDENTIFIER	CODE	NUM	4	F3.	
SOIL_D	SOIL TAXONOMIC DESCRIPTION		CHAR	30		
SOIL_NM	SOIL MAPPING UNIT NAME		CHAR	40		
SUMBSE_1	SUM OF BASES - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	
SUMBSE_2	SUM OF BASES - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
SUMBSE_3	SUM OF BASES - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
SUMBSE_4	SUM OF BASES - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
SUMCAT_1	SUM OF CATIONS - HYPOTH 1	MEQ/100 G	NUM	8	F6.1	
SUMCAT_2	SUM OF CATIONS - HYPOTH 2	MEQ/100 G	NUM	8	F6.1	
SUMCAT_3	SUM OF CATIONS - HYPOTH 3	MEQ/100 G	NUM	8	F6.1	
SUMCAT_4	SUM OF CATIONS - HYPOTH 4	MEQ/100 G	NUM	8	F6.1	
WGRP_C	WEATHERING GROUP	CODE	CHAR	1		$WGRP_F

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
CRSE_C	$CRSE_F	C	A	STONY
			B	VERY STONY
			C	BOULDERY
			D	VERY BOULDERY
FMNRL_C	$MNRL_F	C	02	
			04	CALCAREOUS
			05	CARBONATIC
			07	CLASTIC
			08	COPROGENOUS
			09	CHLORITIC
			10	DIATOMACEOUS
			12	FERRIHUMIC
			14	FERRITIC
			18	GIBBSITIC
			20	GLAUCONITIC
			22	GYPSIC
			24	HALLOYSITIC
			26	ILLITIC
			27	ILLITIC (CALCAREOUS)
			28	KAOLINITIC
			30	MARLY
			32	MICACEOUS
			34	MIXED
			35	MIXED (CALCAREOUS)
			37	MONTMORILLONITIC
			38	MONTMORILLONITIC (CALCAREOUS)
			40	OXIDIC
			42	SEPIOLITIC
			44	SERPENTINITIC
			46	SILICEOUS
			50	VERMICULITIC
FOTHR_C	$OTHR_F	C	02	
			04	COATED
			05	CRACKED
			06	LEVEL
			08	MICRO
			12	ORTSTEIN
			14	SHALLOW
			15	SHALLOW AND COATED
			16	SLOPING
			17	SHALLOW AND UNCOATED
			19	ORTSTEIN AND SHALLOW
			20	UNCOATED

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
FPS_C	$PS_F	C	002	
			003	CINDERY
			004	CINDERY OVER SANDY OR SANDY-SKELETAL
			005	ASHY
			006	CINDERY OVER LOAMY
			007	ASHY OVER CINDERY
			008	ASHY OVER LOAMY
			009	ASHY-SKELETAL
			010	MEDIAL
			011	MEDIAL-SKELETAL
			012	MEDIAL OVER CINDERY
			013	ASHY OVER LOAMY-SKELETAL
			014	MEDIAL OVER CLAYEY
			015	CINDERY OVER MEDIAL-SKELETAL
			016	MEDIAL OVER FRAGMENTAL
			017	CINDERY OVER MEDIAL
			018	MEDIAL OVER LOAMY
			019	ASHY OVER MEDIAL
			020	MEDIAL OVER LOAMY-SKELETAL
			022	MEDIAL OVER SANDY OR SANDY-SKELETAL
			024	MEDIAL OVER THIXOTROPIC
			026	THIXOTROPIC
			027	THIXOTROPIC-SKELETAL
			028	THIXOTROPIC OVER FRAGMENTAL
			030	THIXOTROPIC OVER SANDY OR SANDY-SKELETAL
			032	THIXOTROPIC OVER LOAMY-SKELETAL
			034	THIXOTROPIC OVER LOAMY
			036	FRAGMENTAL
			044	SANDY-SKELETAL
			046	SANDY-SKELETAL OVER LOAMY
			047	SANDY-SKELETAL OVER CLAYEY
			050	LOAMY-SKELETAL
			051	LOAMY-SKELETAL OVER FRAGMENTAL
			052	LOAMY-SKELETAL OVER SANDY
			054	LOAMY-SKELETAL OVER CLAYEY
			056	CLAYEY-SKELETAL
			058	CLAYEY-SKELETAL OVER SANDY
			062	SANDY
			063	SANDY OR SANDY-SKELETAL
			064	SANDY OVER LOAMY
			066	SANDY OVER CLAYEY
			068	LOAMY
			072	LOAMY OVER SANDY OR SANDY-SKELETAL
			080	COARSE-LOAMY
			082	COARSE-LOAMY OVER FRAGMENTAL
			084	COARSE-LOAMY OVER SANDY OR SANDY-SKELET.

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
FPS_C	$PS_F	C	086	COARSE-LOAMY OVER CLAYEY
			088	COARSE-SILTY
			090	COARSE-SILTY OVER FRAGMENTAL
			092	COARSE-SILTY OVER SANDY OR SANDY-SKELET.
			094	COARSE-SILTY OVER CLAYEY
			096	FINE-LOAMY
			097	FINE-LOAMY OVER CINDERY
			098	FINE-LOAMY OVER FRAGMENTAL
			100	FINE-LOAMY OVER SANDY OR SANDY-SKELETAL
			102	FINE-LOAMY OVER CLAYEY
			106	FINE-SILTY
			108	FINE-SILTY OVER FRAGMENTAL
			110	FINE-SILTY OVER SANDY OR SANDY-SKELETAL
			112	FINE-SILTY OVER CLAYEY
			114	CLAYEY
			116	CLAYEY OVER FRAGMENTAL
			118	CLAYEY OVER SANDY OR SANDY-SKELETAL
			120	CLAYEY OVER LOAMY-SKELETAL
			122	CLAYEY OVER FINE-SILTY
			124	CLAYEY OVER LOAMY
			126	FINE
			134	VERY FINE
FRCTN_C	$RCTN_F	C	02	
			04	ACID
			08	DYSIC
			10	EUIC
			12	NONACID
			14	NONCALCAREOUS
FTEMP_C	$TEMP_F	C	02	
			04	FRIGID
			06	HYPERTHERMIC
			08	ISOFRIGID
			10	ISOHYPERTHERMIC
			12	ISOMESIC
			14	ISOTHERMIC
			16	MESIC
			18	THERMIC
GGRP_C	$GGRP_F	C	AAQAL	ALBAQUALF
			AAQDU	DURAQUALF
			AAQFR	FRAGIAQUALF
			AAQGL	GLOSSAQUALF
			AAQNA	NATRAQUALF

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
GGRP_C	$GGRP_F	C	AAQOC	OCHRAQUALF
			AAQPN	PLINTHAQUALF
			AAQTR	TROPAQUALF
			AAQUM	UMBRAQUALF
			ABOCR	CRYOBORALF
			ABOEU	EUTROBORALF
			ABOFR	FRAGIBORALF
			ABOGL	GLOSSOBORALF
			ABONA	NATRIBORALF
			ABOPA	PALEBORALF
			AUDAG	AGRUDALF
			AUDFE	FERRUDALF
			AUDFR	FRAGIUDALF
			AUDFS	FRAGLOSSUDALF
			AUDGL	GLOSSUDALF
			AUDHA	HAPLUDALF
			AUDNA	NATRUDALF
			AUDPA	PALEUDALF
			AUDTR	TROPUDALF
			AUSDU	DURUSTALF
			AUSHA	HAPLUSTALF
			AUSNA	NATRUSTALF
			AUSPA	PALEUSTALF
			AUSPN	PLINTHUSTALF
			AUSRH	RHODUSTALF
			AXEDU	DURIXERALF
			AXEFR	FRAGIXERALF
			AXEHA	HAPLOXERALF
			AXENA	NATRIXERALF
			AXEPA	PALEXERALF
			AXEPN	PLINTHOXERALF
			AXERH	RHODOXERALF
			DARDU	DURARGID
			DARHA	HAPLARGID
			DARND	NADURARGID
			DARNT	NATRARGID
			DARPA	PALEARGID
			DORCL	CALCIORTHID
			DORCM	CAMBORTHID
			DORDU	DURORTHID
			DORGY	GYPSIORTHID
			DORPA	PALEORTHID
			DORSA	SALORTHID
			EAQCR	CRYAQUENT
			EAQFL	FLUVAQUENT
			EAQHA	HAPLAQUENT

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
GGRP_C	$GGRP_F	C	EAQHY	HYDRAQUENT
			EAQPS	PSAMMAQUENT
			EAQSU	SULFAQUENT
			EAQTR	TROPAQUENT
			EARAR	ARENT
			EFLCR	CRYOFLUVENT
			EFLTO	TORRIFLUVENT
			EFLTR	TROPOFLUVENT
			EFLUD	UDIFLUVENT
			EFLUS	USTIFLUVENT
			EFLXE	XEROFLUVENT
			EORCR	CRYORTHENT
			EORTO	TORRIORTHENT
			EORTR	TROPORTHENT
			EORUD	UDORTHENT
			EORUS	USTORTHENT
			EORXE	XERORTHENT
			EPSCR	CRYOPSAMMENT
			EPSQU	QUARTZIPSAMMENT
			EPSTO	TORRIPSAMMENT
			EPSTR	TROPOPSAMMENT
			EPSUD	UDIPSAMMENT
			EPSUS	USTIPSAMMENT
			EPSXE	XEROPSAMMENT
			HFIBO	BOROFIBRIST
			HFICR	CRYOFIBRIST
			HFILU	LUVIFIBRIST
			HFIME	MEDIFIBRIST
			HFISP	SPHAGNOFIBRIST
			HFITR	TROPOFIBRIST
			HFOBO	BOROFOLIST
			HFOCR	CRYOFOLIST
			HFOTR	TROPOFOLIST
			HHEBO	BOROHEMIST
			HHECR	CRYOHEMIST
			HHELU	LUVIHEMIST
			HHEME	MEDIHEMIST
			HHESI	SULFIHEMIST
			HHESO	SULFOHEMIST
			HHETR	TROPOHEMIST
			HSABO	BOROSAPRIST
			HSACR	CRYOSAPRIST
			HSAME	MEDISAPRIST
			HSATR	TROPOSAPRIST
			IANCR	CRYANDEPT

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
GGRP_C	$GGRP_F	C	IANDU	DURANDEPT
			IANDY	DYSTRANDEPT
			IANEU	EUTRANDEPT
			IANHY	HYDRANDEPT
			IANPK	PLACANDEPT
			IANVI	VITRANDEPT
			IAQAN	ANDAQUEPT
			IAQCR	CRYAQUEPT
			IAQFR	FRAGIAQUEPT
			IAQHL	HALAQUEPT
			IAQHP	HAPLAQUEPT
			IAQHU	HUMAQUEPT
			IAQPK	PLACAQUEPT
			IAQPN	PLINTHAQUEPT
			IAQSU	SULFAQUEPT
			IAQTR	TROPAQUEPT
			IOCCR	CRYOCHREPT
			IOCDU	DUROCHREPT
			IOCDY	DYSTROCHREPT
			IOCEU	EUTROCHREPT
			IOCFR	FRAGIOCHREPT
			IOCUS	USTOCHREPT
			IOCXE	XEROCHREPT
			IPLPL	PLAGGEPT
			ITRDY	DYSTROPEPT
			ITREU	EUTROPEPT
			ITRHU	HUMITROPEPT
			ITRSO	SOMBRITROPEPT
			ITRUS	USTROPEPT
			IUMCR	CRYUMBREPT
			IUMFR	FRAGIUMBREPT
			IUMHA	HAPLUMBREPT
			IUMXE	XERUMBREPT
			MALAR	ARGIALBOLL
			MALNA	NATRALBOLL
			MAQAR	ARGIAQUOLL
			MAQCA	CALCIAQUOLL
			MAQCR	CRYAQUOLL
			MAQDU	DURAQUOLL
			MAQHA	HAPLAQUOLL
			MAQNA	NATRAQUOLL
			MBOAR	ARGIBOROLL
			MBOCA	CALCIBOROLL
			MBOCR	CRYOBOROLL
			MBOHA	HAPLOBOROLL

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
GGRP_C	$GGRP_F	C	MBONA	NATRIBOROLL
			MBOPA	PALEBOROLL
			MBOVE	VERMIBOROLL
			MRERE	RENDOLL
			MUDAR	ARGIUDOLL
			MUDHA	HAPLUDOLL
			MUDPA	PALEUDOLL
			MUDVE	VERMUDOLL
			MUSAR	ARGIUSTOLL
			MUSCA	CALCIUSTOLL
			MUSDU	DURUSTOLL
			MUSHA	HAPLUSTOLL
			MUSNA	NATRUSTOLL
			MUSPA	PALEUSTOLL
			MUSVE	VERMUSTOLL
			MXEAR	ARGIXEROLL
			MXECA	CALCIXEROLL
			MXEDU	DURIXEROLL
			MXEHA	HAPLOXEROLL
			MXENA	NATRIXEROLL
			MXEPA	PALEXEROLL
			OAQGI	GIBBSIAQUOX
			OAQOC	OCHRAQUOX
			OAQPN	PLINTHAQUOX
			OAQUM	UMBRAQUOX
			OHUAC	ACROHUMOX
			OHUGI	GIBBSIHUMOX
			OHUHA	HAPLOHUMOX
			OHUSO	SOMBRIHUMOX
			OORAC	ACRORTHOX
			OOREU	EUTRORTHOX
			OORGI	GIBBSIORTHOX
			OORHA	HAPLORTHOX
			OORSO	SOMBRIORTHOX
			OORUM	UMBRIORTHOX
			OTOTO	TORROX
			OUSEU	EUTRUSTOX
			OUSHA	HAPLUSTOX
			OUSSO	SOMBRIUSTOX
			SAQCR	CRYAQUOD
			SAQDU	DURAQUOD
			SAQFR	FRAGIAQUOD
			SAQHA	HAPLAQUOD

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
GGRP_C	$GGRP_F	C	SAQPK	PLACAQUOD
			SAQSI	SIDERAQUOD
			SAQTR	TROPAQUOD
			SFEFE	FERROD
			SHUCR	CRYOHUMOD
			SHUFR	FRAGIHUMOD
			SHUHA	HAPLOHUMOD
			SHUPK	PLACOHUMOD
			SHUTR	TROPOHUMOD
			SORCR	CRYORTHOD
			SORFR	FRAGIORTHOD
			SORHA	HAPLORTHOD
			UAQAL	ALBAQUULT
			UAQFR	FRAGIAQUULT
			UAQOC	OCHRAQUULT
			UAQPA	PALEAQUULT
			UAQPN	PLINTHAQUULT
			UAQTR	TROPAQUULT
			UAQUM	UMBRAQUULT
			UHUHA	HAPLOHUMULT
			UHUPA	PALEHUMULT
			UHUPN	PLINTHOHUMULT
			UHUSO	SOMBRIHUMULT
			UHUTR	TROPOHUMULT
			UNKW1	MISSING
			UNKW2	NOT APPLICABLE
			UUDFR	FRAGIUDULT
			UUDHA	HAPLUDULT
			UUDPA	PALEUDULT
			UUDPN	PLINTHUDULT
			UUDRH	RHODUDULT
			UUDTR	TROPUDULT
			UUSHA	HAPLUSTULT
			UUSPA	PALEUSTULT
			UUSPN	PLINTHUSTULT
			UUSRH	RHODUSTULT
			UXEHA	HAPLOXERULT
			UXEPA	PALEXERULT
			VTOTO	TORRERT
			VUDCH	CHROMUDERT
			VUDPE	PELLUDERT
			VUSCH	CHROMUSTERT
			VUSPE	PELLUSTERT
			VXECH	CHROMOXERERT
			VXEPE	PELLOXERERT

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
HGRP_C	$HGRP_F	C	A	LOW
			A/D	LOW(DRAINED)/HIGH(UNDRAINED)
			B	LOW TO MODERATE
			C	MODERATE TO HIGH
			C/D	MOD TO HIGH(DRAINED)/HIGH(UNDRAINED)
			D	HIGH
SGRP_C	$SGRP_F	C	AA	TYPIC
			AB	ABRUPTIC
			AB04	ABRUPTIC ARIDIC
			AB08	ABRUPTIC CRYIC
			AB10	ABRUPTIC HAPLIC
			AB14	ABRUPTIC UDIC
			AB16	ABRUPTIC XEROLLIC
			AE	AERIC
			AE03	AERIC ARENIC
			AE05	AERIC GROSSARENIC
			AE06	AERIC HUMIC
			AE08	AERIC MOLLIC
			AE09	AERIC TROPIC
			AE10	AERIC UMBRIC
			AE12	AERIC XERIC
			AL	ALBAQUIC
			AL02	ALBAQUULTIC
			AL04	ALBIC
			AL08	ALBIC GLOSSIC
			AL10	ALFIC
			AL12	ALFIC ARENIC
			AL13	ALFIC ANDEPTIC
			AL16	ALFIC LITHIC
			AN	ANDIC
			AN01	ANDEPTIC
			AN03	ANDAQUIC
			AN06	ANDIC DYSTRIC
			AN22	ANDIC USTIC
			AN24	ANDAQUEPTIC
			AN30	ANTHROPIC
			AQ	AQUALFIC
			AQ02	AQUENTIC
			AQ04	AQUEPTIC
			AQ06	AQUIC
			AQ08	AQUIC ARENIC
			AQ14	AQUIC DURIC
			AQ16	AQUIC DURORTHIDIC
			AQ18	AQUIC DYSTRIC
			AQ24	AQUIC HAPLIC

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
SGRP_C	$SGRP_F	C	AQ26	AQUIC LITHIC
			AQ31	AQUIC PSAMMENTIC
			AQ34	AQUOLLIC
			AQ36	AQUULTIC
			AR	ARENIC
			AR02	ARENIC ARIDIC
			AR03	ARENIC ORTHOXIC
			AR04	ARENIC PLINTHAQUIC
			AR06	ARENIC PLINTHIC
			AR08	ARENIC RHODIC
			AR10	ARENIC ULTIC
			AR14	ARENIC UMBRIC
			AR16	ARENIC USTALFIC
			AR18	ARENIC USTOLLIC
			AR22	ARGIAQUIC
			AR24	ARGIAQUIC XERIC
			AR26	ARGIC
			AR28	ARGIC LITHIC
			AR30	ARGIC PACHIC
			AR32	ARGIC VERTIC
			AR34	ARIDIC
			AR36	ARIDIC CALCIC
			AR42	ARIDIC DURIC
			AR50	ARIDIC PACHIC
			AR52	ARIDIC PETROCALCIC
			BO	BORALFIC
			BO02	BORALFIC LITHIC
			BO04	BORALFIC UDIC
			BO06	BOROLLIC
			BO08	BOROLLIC GLOSSIC
			BO10	BOROLLIC LITHIC
			BO12	BOROLLIC VERTIC
			CA	CALCIC
			CA04	CALCIC PACHIC
			CA06	CALCIORTHIDIC
			CA10	CALCIXEROLLIC
			CA20	CAMBIC
			CH	CHROMIC
			CH06	CHROMUDIC
			CR	CRYIC
			CR10	CRYIC LITHIC
			CR14	CRYIC PACHIC
			CU	CUMULIC
			CU02	CUMULIC UDIC
			CU04	CUMULIC ULTIC
			DU	DURARGIDIC

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
SGRP_C	$SGRP_F	C	DU02	DURIC
			DU08	DURIXEROLLIC
			DU10	DURIXEROLLIC LITHIC
			DU11	DUROCHREPTIC
			DU12	DURORTHIDIC
			DU14	DURORTHIDIC XERIC
			DY02	DYSTRIC
			DY03	DYSTRIC ENTIC
			DY04	DYSTRIC FLUVENTIC
			DY06	DYSTRIC LITHIC
			DY08	DYSTROPEPTIC
			EN	ENTIC
			EN02	ENTIC LITHIC
			EN06	ENTIC ULTIC
			EP	EPIAQUIC
			EP10	EPIAQUIC ORTHOXIC
			EU	EUTRIC
			EU02	EUTROCHREPTIC
			EU04	EUTROPEPTIC
			FE	FERRUDALFIC
			FI	FIBRIC
			FI02	FIBRIC TERRIC
			FL02	FLUVAQUENTIC
			FL06	FLUVENTIC
			FL12	FLUVENTIC UMBRIC
			FR10	FRAGIAQUIC
			FR18	FRAGIC
			GL02	GLOSSAQUIC
			GL04	GLOSSIC
			GL10	GLOSSIC UDIC
			GL12	GLOSSIC USTOLLIC
			GL14	GLOSSOBORALFIC
			GL16	GLOSSOBORIC
			GR	GROSSARENIC
			GR01	GROSSARENIC ENTIC
			GR04	GROSSARENIC PLINTHIC
			HA	HAPLAQUODIC
			HA01	HAPLAQUIC
			HA02	HAPLIC
			HA05	HAPLOHUMIC
			HA07	HAPLOXEROLLIC
			HA09	HAPLUDIC
			HA12	HAPLUDOLLIC
			HA16	HAPLUSTOLLIC
			HE	HEMIC

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
SGRP_C	$SGRP_F	C	HE02	HEMIC TERRIC
			HI	HISTIC
			HI02	HISTIC LITHIC
			HI06	HISTIC PERGELIC
			HU	HUMIC
			HU02	HUMIC LITHIC
			HU05	HUMIC PERGELIC
			HU06	HUMOXIC
			HU10	HUMAQUEPTIC
			HY	HYDRIC
			HY02	HYDRIC LITHIC
			LE	LEPTIC
			LI	LIMNIC
			LI15	LITHIC RUPTIC-XEROCHREPTIC
			LI02	LITHIC
			LI04	LITHIC MOLLIC
			LI06	LITHIC RUPTIC-ALFIC
			LI07	LITHIC RUPTIC-ARGIC
			LI08	LITHIC RUPTIC-ENTIC XEROLLIC
			LI09	LITHIC RUPTIC-ENTIC
			LI10	LITHIC UDIC
			LI11	LITHIC RUPTIC-XERORTHENTIC
			LI12	LITHIC ULTIC
			LI13	LITHIC RUPTIC-ULTIC
			LI14	LITHIC UMBRIC
			LI16	LITHIC USTIC
			LI18	LITHIC USTOLLIC
			LI20	LITHIC VERTIC
			LI22	LITHIC XERIC
			LI24	LITHIC XEROLLIC
			MO	MOLLIC
			NA06	NATRIC
			OC	OCHREPTIC
			OR	ORTHIDIC
			OR01	ORTHIC
			OR02	ORTHOXIC
			OX	OXIC
			PA	PACHIC
			PA02	PACHIC UDIC
			PA04	PACHIC ULTIC
			PA06	PALEORTHIDIC
			PA08	PALEUSTOLLIC
			PA10	PALEXEROLLIC
			PA20	PARALITHIC VERTIC
			PE	PERGELIC

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
SGRP_C	$SGRP_F	C	PE01	PERGELIC RUPTIC-HISTIC
			PE02	PERGELIC SIDERIC
			PE04	PETROCALCIC
			PE06	PETROCALCIC USTALFIC
			PE08	PETROCALCIC USTOLLIC
			PE14	PETROCALCIC XEROLLIC
			PE16	PETROFERRIC ACROHUMOX
			PE20	PETROGYPSIC
			PK	PLACIC
			PK10	PLAGGEPTIC
			PK12	PLAGGIC
			PL	PLINTHAQUIC
			PL04	PLINTHIC
			PL06	PLINTHUDIC
			PS	PSAMMAQUENTIC
			PS02	PSAMMENTIC
			QU	QUARTZIPSAMMENTIC
			RE	RENDOLLIC
			RH	RHODIC
			RU02	RUPTIC-ALFIC
			RU09	RUPTIC-LITHIC
			RU11	RUPTIC-LITHIC-ENTIC
			RU15	RUPTIC-LITHIC-XEROCHREPTIC
			RU17	RUPTIC-ULTIC
			RU19	RUPTIC-VERTIC
			SA	SALORTHIDIC
			SA02	SAPRIC
			SA04	SAPRIC TERRIC
			SI	SIDERIC
			SO04	SOMBRIHUMIC
			SP	SPHAGNIC
			SP02	SPHAGNIC TERRIC
			SP04	SPODIC
			SU	SULFIC
			TE	TERRIC
			TH04	THAPTO-HISTIC
			TH06	THAPTO-HISTIC TROPIC
			TO	TORRERTIC
			TO02	TORRIFLUVENTIC
			TO04	TORRIORTHENTIC
			TO06	TORRIPSAMMENTIC
			TO10	TORROXIC
			TR	TROPAQUODIC

Format Values and Labels for Code Variables in I07

Variable	Codefmt	Type	Value	Label
SGRP_C	$SGRP_F	C	TR02	TROPEPTIC
			TR04	TROPIC
			UD	UDERTIC
			UD01	UDALFIC
			UD02	UDIC
			UD03	UDOLLIC
			UD05	UDORTHENTIC
			UD10	UDOXIC
			UL	ULTIC
			UM	UMBREPTIC
			UM02	UMBRIC
			US	USTALFIC
			US02	USTERTIC
			US04	USTIC
			US06	USTOCHREPTIC
			US08	USTOLLIC
			US12	USTOXIC
			VE	VERMIC
			VE02	VERTIC
			XE	XERALFIC
			XE02	XERERTIC
			XE04	XERIC
			XE08	XEROLLIC
SLOPE_C	$SLOPE_F	C	A	LEVEL
			B	NEARLY LEVEL
			C	GENTLY SLOPING
			D	SLOPING
			E	MODERATELY SLOPING
			F	STEEP
			G	MODERATELY STEEP
			H	VERY STEEP
WGRP_C	$WGRP_F	C	1	LOW
			2	MODERATE
			3	HIGH

SUMMARY STATISTICS FOR I07

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_1	296	40	14.28	6.84	2.10	27.30
ACID_2	296	40	14.76	7.72	1.31	43.40
ACID_3	296	40	11.89	6.10	1.17	50.33
ACID_4	296	40	13.88	7.67	1.17	50.33
AREA_P	335	1	41.40	14.73	10.00	75.00
BSATN_1	299	37	64.16	68.60	13.82	336.75
BSATN_2	299	37	66.04	74.04	9.74	340.33
BSATN_3	299	37	79.07	86.31	17.43	394.61
BSATN_4	299	37	70.51	81.86	9.74	394.61
BSATS_1	296	40	35.21	25.55	6.41	96.04
BSATS_2	296	40	33.47	27.40	4.80	97.54
BSATS_3	296	40	35.96	26.47	3.99	97.50
BSATS_4	296	40	34.38	26.93	4.80	97.50
CEC_1	299	37	16.11	9.34	2.43	120.00
CEC_2	299	37	15.35	10.90	5.40	120.00
CEC_3	299	37	12.82	11.91	3.96	120.00
CEC_4	299	37	14.55	12.13	3.96	120.00
CLAY_1	301	35	14.74	7.53	0.90	60.00
CLAY_2	301	35	15.19	8.29	1.46	60.00
CLAY_3	301	35	14.78	8.42	1.01	60.00
CLAY_4	301	35	14.68	8.05	1.46	60.00
DPTH_B_L	334	2	127.76	49.60	0.00	152.40
DPTH_B_U	334	2	124.11	55.39	0.00	152.40
DPTH_P_L	334	2	100.87	56.37	0.00	165.10
DPTH_P_U	334	2	74.40	58.57	0.00	152.40
DPTH_R_L	334	2	107.14	55.87	0.00	152.40
DPTH_R_U	334	2	89.36	59.53	0.00	152.40
ORG_1	301	35	3.47	1.99	1.22	16.00
ORG_2	301	35	2.82	2.21	0.80	18.92
ORG_3	301	35	2.17	2.24	0.59	21.63
ORG_4	301	35	2.70	2.45	0.59	21.63
PHCACL_1	300	36	4.70	0.95	3.35	7.20
PHCACL_2	300	36	4.92	0.94	3.67	7.35
PHCACL_3	300	36	5.09	0.94	3.77	7.50
PHCACL_4	300	36	4.91	0.91	3.77	7.50
PHH2O_1	301	35	5.26	0.83	3.80	7.70
PHH2O_2	301	35	5.48	0.84	3.92	7.82
PHH2O_3	301	35	5.67	0.83	3.97	7.92
PHH2O_4	301	35	5.49	0.80	3.97	7.92
SUMBSE_1	298	38	9.65	10.41	0.89	61.60
SUMBSE_2	298	38	8.69	10.73	0.65	61.45
SUMBSE_3	298	38	8.74	10.82	0.48	68.47
SUMBSE_4	298	38	8.94	11.17	0.65	68.47
SUMCAT_1	296	40	23.58	9.24	8.67	63.00
SUMCAT_2	296	40	23.14	9.72	8.31	104.85
SUMCAT_3	296	40	20.33	10.82	6.25	118.80
SUMCAT_4	296	40	22.49	10.98	6.25	118.80

AWD Contents for Data Set: I08 - NATIONAL WETLANDS INVENTORY COVER TYPES

Year(s): 1984
Geocoverage: Adirondacks
Number of Records: 3435
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): D.J. Bogucki

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 7
Data Set Type: Multiple
Update dates:

Description:

This data set describes the wetlands occurring in watersheds using the National Wetlands Inventory Cover Types found within a watershed. It includes the area of each type in each watershed, the length of contact between wetland and lake, or the distance from wetland to lake as determined from 1984 National Wetlands Inventory maps (scale 1:24000).

Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
POND_NO	POND NUMBER		CHAR	7		
WCONT_C	WETLANDS CONTACT	CODE	NUM	2	F1.	WCONT_F
WTLND_A	WETLAND AREA	HA	NUM	4	F7.1	
WTLND_C	NATIONAL WETLANDS INVENTORY COVER TYPE		CHAR	10		
WTLND_D	WETLAND DISTANCE FROM POND	M	NUM	4	F7.1	
WTLND_L	CONTACT LENGTH BETW. WETLAND/POND	M	NUM	4	F7.1	
WTLND_NO	WETLAND NUMBER AT A POND		NUM	2	F2.	

Format Values and Labels for Code Variables in I08

Variable	Codefmt	Type	Value	Label
WCONT_C WETLANDS	WCONT_F	N	0	NO
			1	CONTACT
			2	NO CONTACT

SUMMARY STATISTICS FOR I08

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
WTLND_A	3435	0	3.10	5.75	0.00	115.20
WTLND_D	3435	0	724.61	1138.87	0.00	10958.00
WTLND_L	3435	0	87.86	212.71	0.00	2060.00
WTLND_NO	3435	0	11.01	12.87	0.00	79.00

AWD Contents for Data Set: I09 - WETLANDS - ACIDIFICATION CLASSES

Year(s): 1985
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): D.J. Bogucki

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains the area of each wetland in each of four acidification classes: very acid, moderately acid, nonacid, and other. It also gives the contact length between wetland and pond for each of the four classes. It is an aggregation of I08.

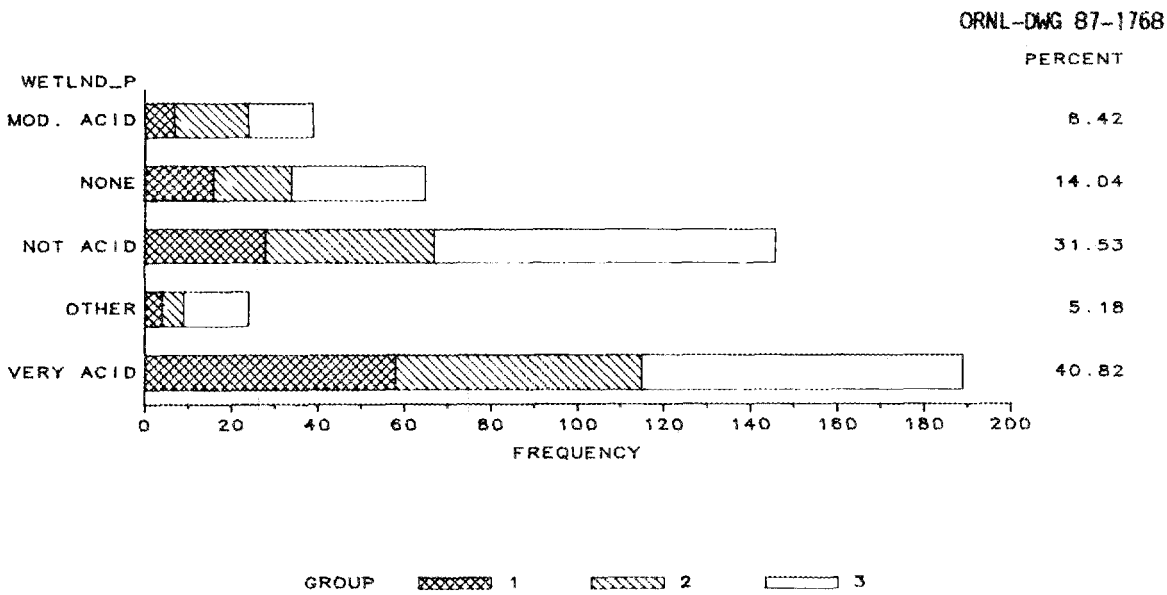
Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
MACID_A	MODERATELY ACID WETLAND AREA	HA	NUM	8	F7.1	
MACID_L	MOD. ACID WETLAND CONTACT LENGTH	M	NUM	8	F7.1	
NACID_A	NON-ACID WETLAND AREA	HA	NUM	8	F7.1	
NACID_L	NON-ACID WETLAND CONTACT LENGTH	M	NUM	8	F7.1	
OTHER_A	OTHER WETLAND AREA	HA	NUM	8	F7.1	
OTHER_L	OTHER WETLAND CONTACT LENGTH	M	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		
VACID_A	VERY ACID WETLAND AREA	HA	NUM	8	F7.1	
VACID_L	VERY ACID WETLAND CONTACT LENGTH	M	NUM	8	F7.1	
WTLND_A	WETLAND AREA	HA	NUM	8	F7.1	
WTLND_L	CONTACT LENGTH BETW. WETLAND/POND	M	NUM	8	F7.1	

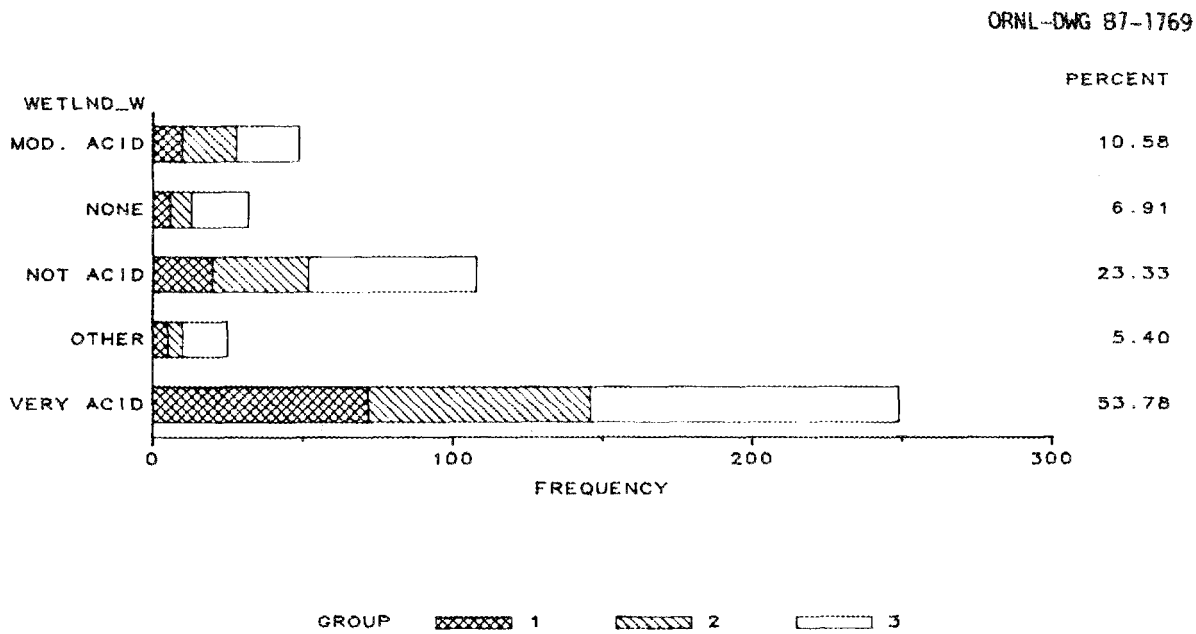
SUMMARY STATISTICS FOR I09

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
MACID_A	463	0	3.44	13.93	0.00	194.90
MACID_L	463	0	60.25	240.15	0.00	3400.70
NACID_A	463	0	4.22	9.00	0.00	125.40
NACID_L	463	0	171.70	312.28	0.00	2822.00
OTHER_A	463	0	1.42	4.57	0.00	49.70
OTHER_L	463	0	28.49	143.31	0.00	2413.40
VACID_A	463	0	13.91	30.50	0.00	321.50
VACID_L	463	0	390.49	632.00	0.00	4241.70
WTLND_A	463	0	22.98	44.68	0.00	434.30
WTLND_L	463	0	650.92	739.55	0.00	4400.40



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I09.1. Frequency distribution of wetland type as percentage of the shoreline for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I09.2. Frequency distribution of wetland type as a percentage of the terrestrial watershed for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I10 - WETLANDS - DESCRIPTION OF NWI CODES

Year(s): 1979
Geocoverage: U.S.
Number of Records: 100
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution:
Variables per Record: 9
Data Set Type: Dictionary
Update dates:

Description:

This data set describes the National Wetlands Inventory codes used in data set I08. Each NWI cover type is broken down into class, subclass, system, subsystem, etc.

Reference(s):

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-79/31. Office of Biological Services, U.S. Fish and Wildlife Service. Washington, D.C.

Variable	Label	Type	Len.	Format	Codefmt.
ACID_C	ACIDIFICATION CLASS - SUNY/P CODE	CHAR	1		$ACID_F
NWI_CLS	NATIONAL WETLANDS INVENTORY CLASS	CHAR	25		
NWI_LEV	LEVEL NUMBER OF CLASSES AND SUBCLASSES	CHAR	1		
NWI_MOD	NWI SPECIAL MODIFIERS	CHAR	25		
NWI_REGM	NWI WATER REGIME	CHAR	35		
NWI_SCLS	NWI SUBCLASS	CHAR	23		
NWI_SSYS	NWI SUBSYSTEM	CHAR	15		
NWI_SYS	NWI SYSTEM	CHAR	10		
WTLND_C	NATIONAL WETLANDS INVENTORY COVER TYPE	CHAR	10		

Format Values and Labels for Code Variables in I10

Variable	Codefmt	Type	Value	Label
ACID_C	$ACID_F	C	0	NON ACID
			1	MODERATELY ACID
			2	VERY ACID
			3	OTHER

AWD Contents for Data Set: III - BEAVERS - DAMS AND LODGES

Year(s): 1948-1981
Geocoverage: Adirondacks
Number of Records: 2797
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): E. Allen

Temporal Resolution: Annual
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Multiple
Update dates:

Description:

This data set contains the number of beaver dams and lodges on each inlet and outlet at a lake as determined from aerial photographs for years 1948, 1956-58, 1968, 1978, and 1981.

Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Variable	Label		Type	Len.	Format	Codefmt.
DAMS_BRC	NO. OF BREACHED BEAVER DAMS		NUM	2	F2.	
DAMS_BVR	NO. OF BEAVER DAMS		NUM	2	F2.	
DAMS_DST	DISTANCE FROM POND TO NEAREST DAM	KM	NUM	4	F3.1	
DAMS_MAN	NO. OF MANMADE DAMS		NUM	2	F2.	
DAMS_UNB	NO. OF UNBREACHED BEAVER DAMS		NUM	2	F2.	
INLET	INLET NUMBER		NUM	2	F2.	
LODGES	NO. OF BEAVER LODGES		NUM	2	F2.	
OUTLET	OUTLET NUMBER		NUM	2	F2.	
POND_NO	POND NUMBER		CHAR	7		
REC_NO	RECORD NO: 1-9 INLETS, 11-19 OUTLETS		NUM	8	F2.	
YEAR	YEAR OF IMAGERY USED TO LOCATE DAMS		NUM	3	F4.	

SUMMARY STATISTICS FOR III

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
DAMS_BRC	2650	147	1.81	2.71	0.00	34.00
DAMS_BVR	2656	141	2.89	3.49	0.00	40.00
DAMS_DST	2272	525	0.24	0.42	0.00	4.60
DAMS_MAN	473	2324	0.15	0.61	0.00	7.00
DAMS_UNB	2650	147	1.09	1.73	0.00	16.00
LODGES	2656	141	1.05	1.75	0.00	23.00

AWD Contents for Data Set: I12 - BEAVERS - AGGREGATED BY WATERSHED

Year(s): 1968, 1978
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): S.W. Christensen, N. Lambert

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 22
Data Set Type: Single
Update dates:

Description:

This data set contains beaver data aggregated by watershed. It includes a beaver index, which is an index calculated as the number of dams on inlets and outlets for 1968 and 1978 divided by lake area (BVRINDEX). Data for 1978 were weighted by a factor of two.

Reference(s):

Gruendling, G.K., D.J. Bogucki, and K.B. Adams. 1985. Data collection for testing alternative hypotheses to increased acidification and fish population declines in Adirondack surface waters. Final report to Oak Ridge National Laboratory, for Subcontract No. 19X-89684. State University of New York, Plattsburgh.

Hunsaker, C.T., R.J. Olson, S.W. Christensen, R.S. Turner, J.J. Beauchamp. 1986. Empirical relationships between watershed attributes and aquatic resources in the Adirondack Region. ORNL/TM-9838. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Lambert, N. J., C. T. Hunsaker, S. W. Christensen, and G. K. Gruendling. In preparation. The effect of beaver on water chemistry and fish populations in the Adirondacks.

Variable	Label	Type	Len.	Format	Codefmt.
BVRINDEX	(INL+INLL+OUT+OUTL)/LAKE_A, 68 & 78 DATA	NUM	8	F4.1	
INL	NO. DAMS UPSTREAM, 68 & 78 DATA	NUM	8	F2.	
INLL	NO. DAMS ON LAKE AT INLET, 68 & 78 DATA	NUM	8	F2.	
INL68	NO. DAMS UPSTREAM, 68 DATA	NUM	8	F2.	
INL68L	NO. DAMS ON LAKE AT INLET, 68 DATA	NUM	8	F2.	
INL78	NO. DAMS UPSTREAM, 78 DATA	NUM	8	F2.	
INL78L	NO. DAMS ON LAKE AT INLET, 78 DATA	NUM	8	F2.	
I68	ORIGINAL DATA: # DAMS UPSTREAM IN 68	NUM	8	F2.	
I68L	ORIGINAL DATA: # DAMS ON LAKE @INLET-68	NUM	8	F2.	
I78	ORIGINAL DATA: # DAMS UPSTREAM IN 78	NUM	8	F2.	
I78L	ORIGINAL DATA: # DAMS ON LAKE @INLET-78	NUM	8	F2.	
OUT	NO. DAMS DOWNSTREAM, 68 & 78 DATA	NUM	8	F2.	
OUTL	NO. DAMS ON LAKE @OUTLET, 68 & 78 DATA	NUM	8	F2.	
OUT68	NO. DAMS DOWNSTREAM, 68 DATA	NUM	8	F2.	
OUT68L	NO. DAMS ON LAKE AT OUTLET, 68 DATA	NUM	8	F2.	
OUT78	NO. DAMS DOWNSTREAM, 78 DATA	NUM	8	F2.	
OUT78L	NO. DAMS ON LAKE AT OUTLET, 78 DATA	NUM	8	F2.	
O68	ORIGINAL DATA: # DAMS DOWNSTREAM IN 68	NUM	8	F2.	
O68L	ORIGINAL DATA: # DAMS ON LAKE @OUTLET-68	NUM	8	F2.	
O78	ORIGINAL DATA: # DAMS DOWNSTREAM IN 78	NUM	8	F2.	
O78L	ORIGINAL DATA: # DAMS ON LAKE @OUTLET-78	NUM	8	F2.	
POND_NO	POND NUMBER	CHAR	7		

SUMMARY STATISTICS FOR I12

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
BVRINDEX	463	0	0.71	1.03	0.00	9.20
INL	463	0	2.27	4.67	0.00	37.33
INLL	463	0	0.10	0.33	0.00	3.00
INL68	463	0	1.90	3.97	0.00	36.00
INL68L	463	0	0.09	0.31	0.00	3.00
INL78	463	0	2.45	5.11	0.00	40.00
INL78L	463	0	0.11	0.35	0.00	3.00
I68	462	1	1.91	3.97	0.00	36.00
I68L	462	1	0.09	0.31	0.00	3.00
I78	398	65	2.48	5.34	0.00	40.00
I78L	398	65	0.11	0.35	0.00	3.00
OUT	463	0	2.60	3.32	0.00	19.33
OUTL	463	0	0.24	0.42	0.00	1.00
OUT68	463	0	2.45	3.21	0.00	17.00
OUT68L	463	0	0.22	0.41	0.00	1.00
OUT78	463	0	2.68	3.43	0.00	21.00
OUT78L	463	0	0.25	0.43	0.00	1.00
O68	461	2	2.44	3.21	0.00	17.00
O68L	461	2	0.21	0.41	0.00	1.00
O78	401	62	2.70	3.51	0.00	21.00
O78L	401	62	0.26	0.44	0.00	1.00

AWD Contents for Data Set: I13 - WATERSHED AREA BY SLOPE CLASS

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 49
Data Set Type: Single
Update dates:

Description:
This data set contains the area of the watershed in each of 46 one-degree slope classes.

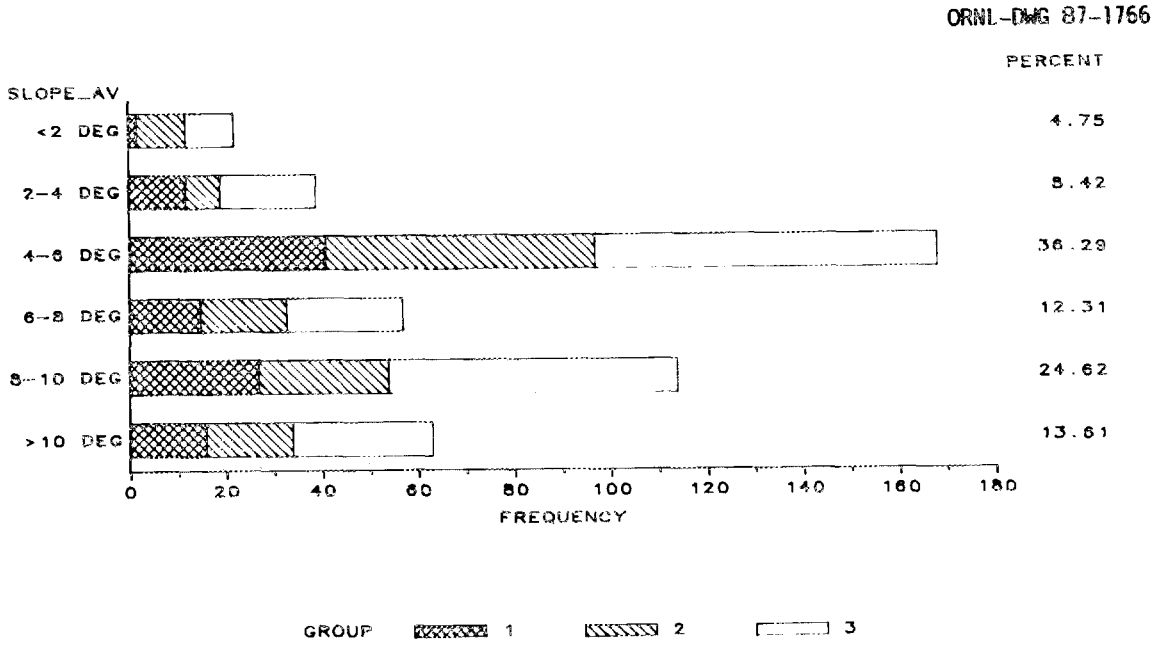
Reference(s):
Defense Mapping Agency

Variable	Label		Type	Len.	Format	Codefmt.
POND_NO	POND NUMBER		CHAR	7		
SLOPE_AV	AVERAGE SLOPE	DEG	NUM	8	F2.	
SLOPE_MX	MAXIMUM SLOPE	DEG	NUM	8	F2.	
S1	AREA IN 0-1 DEGREE SLOPE	HA	NUM	4	F7.1	
S2	AREA IN 1-2 DEGREE SLOPE	HA	NUM	4	F7.1	
S3	AREA IN 2-3 DEGREE SLOPE	HA	NUM	4	F7.1	
S4	AREA IN 3-4 DEGREE SLOPE	HA	NUM	4	F7.1	
S5	AREA IN 4-5 DEGREE SLOPE	HA	NUM	4	F7.1	
S6	AREA IN 5-6 DEGREE SLOPE	HA	NUM	4	F7.1	
S7	AREA IN 6-7 DEGREE SLOPE	HA	NUM	4	F7.1	
S8	AREA IN 7-8 DEGREE SLOPE	HA	NUM	4	F7.1	
S9	AREA IN 8-9 DEGREE SLOPE	HA	NUM	4	F7.1	
S10	AREA IN 9-10 DEGREE SLOPE	HA	NUM	4	F7.1	
S11	AREA IN 10-11 DEGREE SLOPE	HA	NUM	4	F7.1	
S12	AREA IN 11-12 DEGREE SLOPE	HA	NUM	4	F7.1	
S13	AREA IN 12-13 DEGREE SLOPE	HA	NUM	4	F7.1	
S14	AREA IN 13-14 DEGREE SLOPE	HA	NUM	4	F7.1	
S15	AREA IN 14-15 DEGREE SLOPE	HA	NUM	4	F7.1	
S16	AREA IN 15-16 DEGREE SLOPE	HA	NUM	4	F7.1	
S17	AREA IN 16-17 DEGREE SLOPE	HA	NUM	4	F7.1	
S18	AREA IN 17-18 DEGREE SLOPE	HA	NUM	4	F7.1	
S19	AREA IN 18-19 DEGREE SLOPE	HA	NUM	4	F7.1	
S20	AREA IN 19-20 DEGREE SLOPE	HA	NUM	4	F7.1	
S21	AREA IN 20-21 DEGREE SLOPE	HA	NUM	4	F7.1	
S22	AREA IN 21-22 DEGREE SLOPE	HA	NUM	4	F7.1	
S23	AREA IN 22-23 DEGREE SLOPE	HA	NUM	4	F7.1	
S24	AREA IN 23-24 DEGREE SLOPE	HA	NUM	4	F7.1	
S25	AREA IN 24-25 DEGREE SLOPE	HA	NUM	4	F7.1	
S26	AREA IN 25-26 DEGREE SLOPE	HA	NUM	4	F7.1	
S27	AREA IN 26-27 DEGREE SLOPE	HA	NUM	4	F7.1	
S28	AREA IN 27-28 DEGREE SLOPE	HA	NUM	4	F7.1	

Variable	Label	Type	Len.	Format	Codefmt.
S29	AREA IN 28-29 DEGREE SLOPE	HA NUM	4	F7.1	
S30	AREA IN 29-30 DEGREE SLOPE	HA NUM	4	F7.1	
S31	AREA IN 30-31 DEGREE SLOPE	HA NUM	4	F7.1	
S32	AREA IN 31-32 DEGREE SLOPE	HA NUM	4	F7.1	
S33	AREA IN 32-33 DEGREE SLOPE	HA NUM	4	F7.1	
S34	AREA IN 33-34 DEGREE SLOPE	HA NUM	4	F7.1	
S35	AREA IN 34-35 DEGREE SLOPE	HA NUM	4	F7.1	
S36	AREA IN 35-36 DEGREE SLOPE	HA NUM	4	F7.1	
S37	AREA IN 36-37 DEGREE SLOPE	HA NUM	4	F7.1	
S38	AREA IN 37-38 DEGREE SLOPE	HA NUM	4	F7.1	
S39	AREA IN 38-39 DEGREE SLOPE	HA NUM	4	F7.1	
S40	AREA IN 39-40 DEGREE SLOPE	HA NUM	4	F7.1	
S41	AREA IN 40-41 DEGREE SLOPE	HA NUM	4	F7.1	
S42	AREA IN 41-42 DEGREE SLOPE	HA NUM	4	F7.1	
S43	AREA IN 42-43 DEGREE SLOPE	HA NUM	4	F7.1	
S44	AREA IN 43-44 DEGREE SLOPE	HA NUM	4	F7.1	
S45	AREA IN 44-45 DEGREE SLOPE	HA NUM	4	F7.1	
S46	AREA IN SLOPE > 45 DEGREES	HA NUM	4	F7.1	

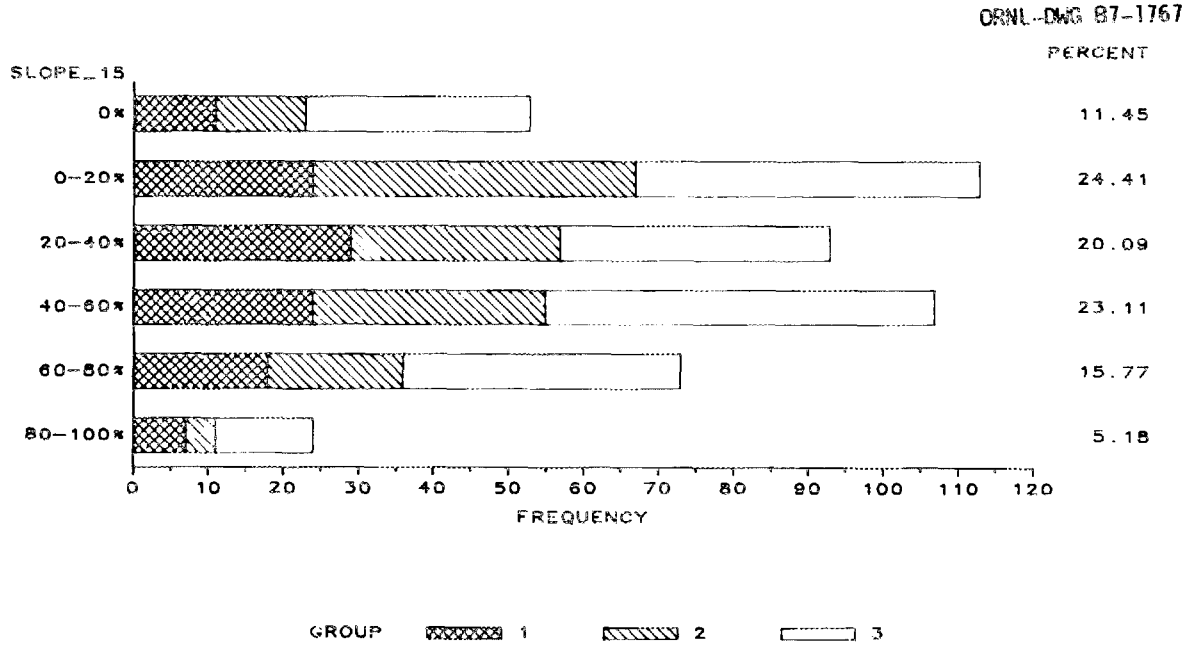
SUMMARY STATISTICS FOR I13

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
SLOPE_AV	463	0	6.99	3.41	1.00	22.00
SLOPE_MX	463	0	17.06	8.57	2.00	46.00
S1	463	0	5.06	22.00	0.00	343.12
S2	463	0	26.91	61.18	0.00	532.10
S3	463	0	25.56	41.95	0.00	407.83
S4	463	0	20.49	30.96	0.00	364.76
S5	463	0	17.18	26.54	0.00	294.71
S6	463	0	15.09	25.77	0.00	282.65
S7	463	0	14.06	26.90	0.00	311.41
S8	463	0	12.71	25.08	0.00	253.22
S9	463	0	12.02	25.44	0.00	275.14
S10	463	0	11.25	25.22	0.00	314.63
S11	463	0	10.17	24.05	0.00	296.56
S12	463	0	9.27	23.41	0.00	301.67
S13	463	0	8.44	21.97	0.00	257.90
S14	463	0	7.60	22.00	0.00	251.13
S15	463	0	6.39	19.75	0.00	223.31
S16	463	0	5.39	17.19	0.00	190.99
S17	463	0	4.40	14.86	0.00	169.63
S18	463	0	3.77	13.79	0.00	159.71
S19	463	0	3.03	12.95	0.00	160.57
S20	463	0	2.35	10.19	0.00	118.97
S21	463	0	1.78	9.05	0.00	129.83
S22	463	0	1.51	8.39	0.00	115.50
S23	463	0	1.19	6.51	0.00	90.51
S24	463	0	0.94	5.35	0.00	75.63
S25	463	0	0.80	5.25	0.00	85.05
S26	463	0	0.64	4.21	0.00	70.41
S27	463	0	0.50	3.51	0.00	59.60
S28	463	0	0.41	2.88	0.00	50.28
S29	463	0	0.34	2.54	0.00	44.60
S30	463	0	0.25	1.98	0.00	35.62
S31	463	0	0.22	1.74	0.00	29.61
S32	463	0	0.17	1.38	0.00	25.33
S33	463	0	0.16	1.77	0.00	36.95
S34	463	0	0.10	0.98	0.00	18.86
S35	463	0	0.09	1.02	0.00	21.05
S36	463	0	0.09	0.92	0.00	18.87
S37	463	0	0.06	0.67	0.00	13.74
S38	463	0	0.06	0.72	0.00	14.99
S39	463	0	0.05	0.67	0.00	14.20
S40	463	0	0.03	0.37	0.00	6.89
S41	463	0	0.04	0.49	0.00	10.31
S42	463	0	0.03	0.49	0.00	10.31
S43	463	0	0.03	0.43	0.00	9.02
S44	463	0	0.03	0.41	0.00	8.15
S45	463	0	0.02	0.36	0.00	7.69
S46	463	0	0.07	1.11	0.00	21.49



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I13.1. Frequency distribution of average slope (degrees) for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I13.2. Frequency distribution of percentage of the watershed with slopes greater than 8 degrees (15%) for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I14 - WATERSHED AREA BY ASPECT CLASS

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 10
Data Set Type: Single
Update dates:

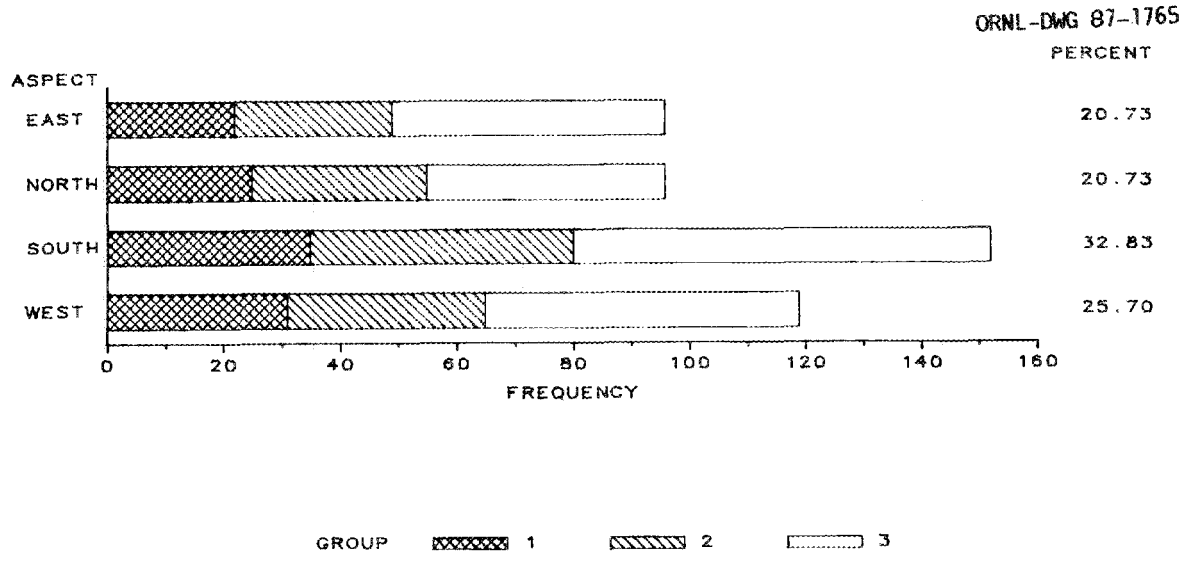
Description:
This data set contains the area of the watershed in each of eight aspect classes.

Reference(s):
Defense Mapping Agency

Variable	Label	Type	Len.	Format	Codefmt.
ASPECT	DOMINANT ASPECT-NORTH, SOUTH, EAST, WEST	CHAR	5		
A1	AREA IN NORTH ASPECT	HA NUM	4	F7.1	
A2	AREA IN NORTHEAST ASPECT	HA NUM	4	F7.1	
A3	AREA IN EAST ASPECT	HA NUM	4	F7.1	
A4	AREA IN SOUTHEAST ASPECT	HA NUM	4	F7.1	
A5	AREA IN SOUTH ASPECT	HA NUM	4	F7.1	
A6	AREA IN SOUTHWEST ASPECT	HA NUM	4	F7.1	
A7	AREA IN WEST ASPECT	HA NUM	4	F7.1	
A8	AREA IN NORTHWEST ASPECT	HA NUM	4	F7.1	
POND_NO	POND NUMBER	CHAR	7		

SUMMARY STATISTICS FOR I14

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
A1	463	0	24.87	55.64	0.00	507.31
A2	463	0	20.95	54.45	0.00	468.51
A3	463	0	27.86	78.80	0.00	786.20
A4	463	0	35.38	89.75	0.00	1096.44
A5	463	0	31.72	72.88	0.00	1146.00
A6	463	0	28.66	68.59	0.00	950.59
A7	463	0	27.45	61.35	0.00	634.94
A8	463	0	33.84	85.04	0.00	990.91



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I14.1. Frequency distribution of dominant aspect for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I15 - WATERSHED AREA BY ELEVATION CLASS

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 105
Data Set Type: Single
Update dates:

Description:
This data set contains the area of the watershed in each of 100 50-ft elevation classes.

Reference(s):
Defense Mapping Agency

Variable	Label	Type	Len.	Format	Codefmt.
ELEV_AVE	AVERAGE WATERSHED ELEVATION	M	NUM	4	F7.1
ELEV_MAX	MAXIMUM WATERSHED ELEVATION	M	NUM	4	F7.1
ELEV_MIN	MINIMUM WATERSHED ELEVATION	M	NUM	4	F7.1
E1	0-50 FT	HA	NUM	4	F7.1
E2	50-100 FT	HA	NUM	4	F7.1
E3	100-150 FT	HA	NUM	4	F7.1
E4	150-200 FT	HA	NUM	4	F7.1
E5	200-250 FT	HA	NUM	4	F7.1
E6	250-300 FT	HA	NUM	4	F7.1
E7	300-350 FT	HA	NUM	4	F7.1
E8	350-400 FT	HA	NUM	4	F7.1
E9	400-450 FT	HA	NUM	4	F7.1
E10	450-500 FT	HA	NUM	4	F7.1
E11	500-550 FT	HA	NUM	4	F7.1
E12	550-600 FT	HA	NUM	4	F7.1
E13	600-650 FT	HA	NUM	4	F7.1
E14	650-700 FT	HA	NUM	4	F7.1
E15	700-750 FT	HA	NUM	4	F7.1
E16	750-800 FT	HA	NUM	4	F7.1
E17	800-850 FT	HA	NUM	4	F7.1
E18	850-900 FT	HA	NUM	4	F7.1
E19	900-950 FT	HA	NUM	4	F7.1
E20	950-1000 FT	HA	NUM	4	F7.1
E21	1000-1050 FT	HA	NUM	4	F7.1
E22	1050-1100 FT	HA	NUM	4	F7.1
E23	1100-1150 FT	HA	NUM	4	F7.1
E24	1150-1200 FT	HA	NUM	4	F7.1
E25	1200-1250 FT	HA	NUM	4	F7.1
E26	1250-1300 FT	HA	NUM	4	F7.1
E27	1300-1350 FT	HA	NUM	4	F7.1
E28	1350-1400 FT	HA	NUM	4	F7.1

Variable	Label	Type	Len.	Format	Codefmt.
E29	1400-1450 FT	HA NUM	4	F7.1	
E30	1450-1500 FT	HA NUM	4	F7.1	
E31	1500-1550 FT	HA NUM	4	F7.1	
E32	1550-1600 FT	HA NUM	4	F7.1	
E33	1600-1650 FT	HA NUM	4	F7.1	
E34	1650-1700 FT	HA NUM	4	F7.1	
E35	1700-1750 FT	HA NUM	4	F7.1	
E36	1750-1800 FT	HA NUM	4	F7.1	
E37	1800-1850 FT	HA NUM	4	F7.1	
E38	1850-1900 FT	HA NUM	4	F7.1	
E39	1900-1950 FT	HA NUM	4	F7.1	
E40	1950-2000 FT	HA NUM	4	F7.1	
E41	2000-2050 FT	HA NUM	4	F7.1	
E42	2050-2100 FT	HA NUM	4	F7.1	
E43	2100-2150 FT	HA NUM	4	F7.1	
E44	2150-2200 FT	HA NUM	4	F7.1	
E45	2200-2250 FT	HA NUM	4	F7.1	
E46	2250-2300 FT	HA NUM	4	F7.1	
E47	2300-2350 FT	HA NUM	4	F7.1	
E48	2350-2400 FT	HA NUM	4	F7.1	
E49	2400-2450 FT	HA NUM	4	F7.1	
E50	2450-2500 FT	HA NUM	4	F7.1	
E51	2500-2550 FT	HA NUM	4	F7.1	
E52	2550-2600 FT	HA NUM	4	F7.1	
E53	2600-2650 FT	HA NUM	4	F7.1	
E54	2650-2700 FT	HA NUM	4	F7.1	
E55	2700-2750 FT	HA NUM	4	F7.1	
E56	2750-2800 FT	HA NUM	4	F7.1	
E57	2800-2850 FT	HA NUM	4	F7.1	
E58	2850-2900 FT	HA NUM	4	F7.1	
E59	2900-2950 FT	HA NUM	4	F7.1	
E60	2950-3000 FT	HA NUM	4	F7.1	
E61	3000-3050 FT	HA NUM	4	F7.1	
E62	3050-3100 FT	HA NUM	4	F7.1	
E63	3100-3150 FT	HA NUM	4	F7.1	
E64	3150-3200 FT	HA NUM	4	F7.1	
E65	3200-3250 FT	HA NUM	4	F7.1	
E66	3250-3300 FT	HA NUM	4	F7.1	
E67	3300-3350 FT	HA NUM	4	F7.1	
E68	3350-3400 FT	HA NUM	4	F7.1	
E69	3400-3450 FT	HA NUM	4	F7.1	
E70	3450-3500 FT	HA NUM	4	F7.1	
E71	3500-3550 FT	HA NUM	4	F7.1	
E72	3550-3600 FT	HA NUM	4	F7.1	
E73	3600-3650 FT	HA NUM	4	F7.1	
E74	3650-3700 FT	HA NUM	4	F7.1	
E75	3700-3750 FT	HA NUM	4	F7.1	
E76	3750-3800 FT	HA NUM	4	F7.1	
E77	3800-3850 FT	HA NUM	4	F7.1	
E78	3850-3900 FT	HA NUM	4	F7.1	
E79	3900-3950 FT	HA NUM	4	F7.1	

Variable	Label	Type	Len.	Format	Codefmt.
E80	3950-4000 FT	HA NUM	4	F7.1	
E81	4000-4050 FT	HA NUM	4	F7.1	
E82	4050-4100 FT	HA NUM	4	F7.1	
E83	4100-4150 FT	HA NUM	4	F7.1	
E84	4150-4200 FT	HA NUM	4	F7.1	
E85	4200-4250 FT	HA NUM	4	F7.1	
E86	4250-4300 FT	HA NUM	4	F7.1	
E87	4300-4350 FT	HA NUM	4	F7.1	
E88	4350-4400 FT	HA NUM	4	F7.1	
E89	4400-4450 FT	HA NUM	4	F7.1	
E90	4450-4500 FT	HA NUM	4	F7.1	
E91	4500-4550 FT	HA NUM	4	F7.1	
E92	4550-4600 FT	HA NUM	4	F7.1	
E93	4600-4650 FT	HA NUM	4	F7.1	
E94	4650-4700 FT	HA NUM	4	F7.1	
E95	4700-4750 FT	HA NUM	4	F7.1	
E96	4750-4800 FT	HA NUM	4	F7.1	
E97	4800-4850 FT	HA NUM	4	F7.1	
E98	4850-4900 FT	HA NUM	4	F7.1	
E99	4900-4950 FT	HA NUM	4	F7.1	
E100	4950-5000 FT	HA NUM	4	F7.1	
E101	> 5000 FT	HA NUM	4	F7.1	
POND_NO	POND NUMBER	CHAR	7		

SUMMARY STATISTICS FOR I15

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ELEV_AVE	463	0	679.50	130.22	288.10	1331.60
ELEV_MAX	463	0	791.26	180.17	336.20	1648.20
ELEV_MIN	463	0	625.56	122.91	188.60	1057.80
E1	463	0	0.00	0.00	0.00	0.00
E2	463	0	0.00	0.00	0.00	0.00
E3	463	0	0.00	0.00	0.00	0.00
E4	463	0	0.00	0.00	0.00	0.00
E5	463	0	0.00	0.00	0.00	0.00
E6	463	0	0.00	0.00	0.00	0.00
E7	463	0	0.00	0.00	0.00	0.00
E8	463	0	0.00	0.00	0.00	0.00
E9	463	0	0.00	0.00	0.00	0.00
E10	463	0	0.00	0.00	0.00	0.00
E11	463	0	0.00	0.00	0.00	0.00
E12	463	0	0.08	1.65	0.00	35.53
E13	463	0	0.18	3.94	0.00	84.70
E14	463	0	0.22	4.64	0.00	99.78
E15	463	0	0.12	2.17	0.00	45.78
E16	463	0	0.24	3.07	0.00	48.81
E17	463	0	0.29	3.62	0.00	54.24
E18	463	0	0.51	5.13	0.00	66.18
E19	463	0	0.32	3.48	0.00	62.79
E20	463	0	0.40	5.33	0.00	107.89
E21	463	0	0.41	5.13	0.00	104.52
E22	463	0	0.48	4.54	0.00	60.17
E23	463	0	0.43	3.92	0.00	53.73
E24	463	0	0.55	5.36	0.00	85.11
E25	463	0	0.56	4.59	0.00	72.26
E26	463	0	1.41	10.80	0.00	168.27
E27	463	0	1.71	15.03	0.00	291.70
E28	463	0	1.69	12.60	0.00	223.02
E29	463	0	1.73	13.48	0.00	256.53
E30	463	0	2.06	16.10	0.00	310.44
E31	463	0	2.84	19.33	0.00	308.73
E32	463	0	4.41	26.69	0.00	419.00
E33	463	0	5.51	23.74	0.00	269.25
E34	463	0	9.25	35.49	0.00	429.77
E35	463	0	9.57	39.50	0.00	522.01
E36	463	0	14.52	47.45	0.00	553.03
E37	463	0	14.01	43.16	0.00	517.95
E38	463	0	15.22	56.07	0.00	1036.38
E39	463	0	12.47	34.48	0.00	543.95
E40	463	0	12.62	30.44	0.00	375.76
E41	463	0	11.31	27.30	0.00	317.82
E42	463	0	11.93	24.32	0.00	249.54
E43	463	0	9.68	18.75	0.00	180.79

SUMMARY STATISTICS FOR I15 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
E44	463	0	8.73	18.05	0.00	152.40
E45	463	0	7.75	16.84	0.00	155.55
E46	463	0	6.49	15.40	0.00	144.02
E47	463	0	5.90	14.62	0.00	169.05
E48	463	0	6.19	18.55	0.00	192.57
E49	463	0	5.69	16.40	0.00	199.89
E50	463	0	5.32	15.52	0.00	179.51
E51	463	0	5.11	14.64	0.00	162.34
E52	463	0	3.62	12.11	0.00	147.79
E53	463	0	3.28	10.96	0.00	119.03
E54	463	0	2.85	10.45	0.00	118.85
E55	463	0	2.42	10.09	0.00	120.76
E56	463	0	1.98	8.95	0.00	99.14
E57	463	0	1.84	7.97	0.00	86.59
E58	463	0	1.65	6.84	0.00	70.41
E59	463	0	1.51	6.60	0.00	74.40
E60	463	0	1.50	6.79	0.00	74.40
E61	463	0	1.39	6.64	0.00	71.83
E62	463	0	1.08	5.74	0.00	67.26
E63	463	0	1.01	5.36	0.00	73.40
E64	463	0	0.95	5.20	0.00	63.14
E65	463	0	0.82	4.68	0.00	57.67
E66	463	0	0.72	4.51	0.00	62.14
E67	463	0	0.61	4.01	0.00	61.87
E68	463	0	0.53	3.73	0.00	58.87
E69	463	0	0.50	3.81	0.00	58.77
E70	463	0	0.43	3.43	0.00	59.67
E71	463	0	0.45	3.84	0.00	63.14
E72	463	0	0.29	2.56	0.00	38.64
E73	463	0	0.27	2.39	0.00	34.58
E74	463	0	0.22	2.09	0.00	34.96
E75	463	0	0.26	2.45	0.00	40.34
E76	463	0	0.22	2.32	0.00	35.87
E77	463	0	0.22	2.12	0.00	31.78
E78	463	0	0.19	1.93	0.00	26.17
E79	463	0	0.20	1.82	0.00	23.68
E80	463	0	0.21	2.11	0.00	30.55
E81	463	0	0.20	2.00	0.00	25.73
E82	463	0	0.18	1.86	0.00	30.89
E83	463	0	0.13	1.30	0.00	18.04
E84	463	0	0.12	1.24	0.00	15.87
E85	463	0	0.14	1.33	0.00	17.93
E86	463	0	0.11	1.13	0.00	16.17
E87	463	0	0.08	0.83	0.00	12.86
E88	463	0	0.11	1.19	0.00	20.20
E89	463	0	0.11	1.49	0.00	30.04
E90	463	0	0.09	1.37	0.00	28.73

SUMMARY STATISTICS FOR I15 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
E91	463	0	0.08	1.34	0.00	28.37
E92	463	0	0.07	1.16	0.00	24.46
E93	463	0	0.05	0.93	0.00	19.76
E94	463	0	0.02	0.40	0.00	8.60
E95	463	0	0.03	0.66	0.00	14.16
E96	463	0	0.02	0.44	0.00	9.40
E97	463	0	0.01	0.24	0.00	5.14
E98	463	0	0.02	0.42	0.00	9.03
E99	463	0	0.01	0.12	0.00	2.57
E100	463	0	0.01	0.26	0.00	5.56
E101	463	0	0.05	1.04	0.00	22.32

AWD Contents for Data Set: I16 - ANNUAL WET DEPOSITION - H+, NO3, SO4

Year(s): 1980-1982
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): R.J. Olson, P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 11
Data Set Type: Single
Update dates:

Description:

This data set contains annual wet deposition for H+, NO3, SO4, and precipitation for each watershed as estimated from 1980-1982 deposition monitoring and 1951-1980 precipitation norms.

Reference(s):

Watson, C.R. and A.R. Olsen. 1984. Acid Deposition System (ADS) for Statistical Reporting: System Design and User's Code Manual. EPA-600/8-84-023. U.S. Environmental Protection Agency, Raleigh, NC.

Variable	Label		Type	Len.	Format	Codefmt.
H_CONC	H+ ANNUAL WET CONCENTRATION	MG/L	NUM	4	F5.3	
H_DEP	H+ ANNUAL WET DEPOSITION	G/M2	NUM	4	F5.3	
H_WET	H+ ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.3	
NO3_CONC	NO3 ANNUAL WEIGHTED MEAN CONC.	MG/L	NUM	4	F5.2	
NO3_DEP	NO3 ANNUAL WET DEPOSITION	G/M2	NUM	4	F5.2	
NO3_WET	NO3 ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.2	
POND_NO	POND NUMBER		CHAR	7		
PPT	TOTAL PRECIPITATION	CM	NUM	4	F5.1	
SO4_CONC	SO4 ANNUAL WEIGHTED MEAN CONC.	MG/L	NUM	4	F5.2	
SO4_DEP	SO4 ANNUAL WET DEPOSITION	G/M2	NUM	4	F5.2	
SO4_WET	SO4 ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.2	

SUMMARY STATISTICS FOR I16

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
H_CONC	463	0	0.06	0.01	0.05	0.07
H_DEP	463	0	0.05	0.01	0.04	0.06
H_WET	463	0	0.06	0.02	0.04	0.09
NO3_CONC	463	0	1.61	0.22	1.29	1.93
NO3_DEP	463	0	1.51	0.26	1.17	1.92
NO3_WET	463	0	1.85	0.47	1.10	2.69
PPT	463	0	113.20	18.14	77.37	164.14
SO4_CONC	463	0	2.51	0.21	2.14	2.89
SO4_DEP	463	0	2.34	0.22	1.98	2.66
SO4_WET	463	0	2.88	0.67	1.85	4.49

AWD Contents for Data Set: I17 - WATERSHED AREA BY BEDROCK CLASS

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): D. Wilson

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 5
Data Set Type: Single
Update dates:

Description:

This data set contains the area of the watershed in each of four bedrock classes.

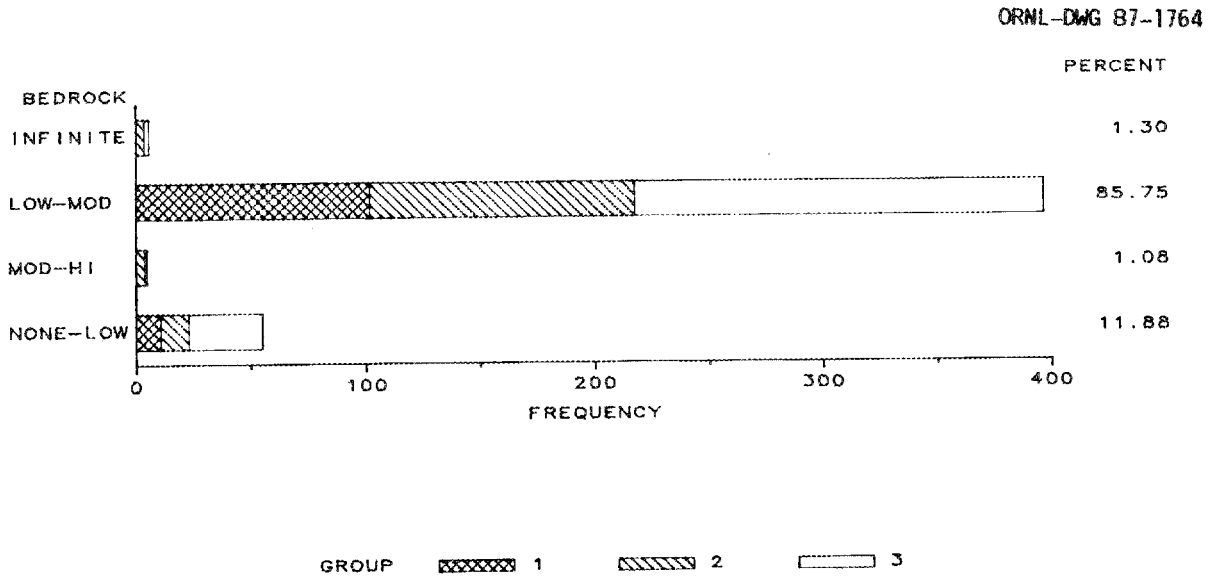
Reference(s):

Norton, S.A., J.J. Akielaszek, T.A. Haines, K.L. Stromberg, and J.R. Longcore. 1982. Bedrock geologic control of sensitivity of acidic ecosystems in the United States to acidic deposition. National Atmospheric Deposition Program.

Variable	Label		Type	Len.	Format	Codefmt.
POND_NO	POND NUMBER		CHAR	7		
ROCK1_A	LOW TO NO ACID NEUTRAL. CAPACITY	HA	NUM	8	F7.1	
ROCK2_A	MED. TO LOW ACID NEUTRAL. CAPACITY	HA	NUM	8	F7.1	
ROCK3_A	HIGH TO MED. ACID NEUTRAL. CAPACITY	HA	NUM	8	F7.1	
ROCK4_A	INFINITE ACID NEUTRAL. CAPACITY	HA	NUM	8	F7.1	

SUMMARY STATISTICS FOR I17

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ROCK1_A	463	0	42.53	175.29	0.00	1701.53
ROCK2_A	463	0	185.22	374.34	0.00	4159.25
ROCK3_A	463	0	1.41	15.51	0.00	264.06
ROCK4_A	463	0	1.57	12.27	0.00	152.13



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I17.1. Frequency distribution of bedrock buffering capacity for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I18 - WATER CHEMISTRY - SCHOFIELD LAKES

Year(s): 1975
Geocoverage: Adirondacks
Number of Records: 121
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): R.J. Olson

Temporal Resolution: Point
Spatial Resolution: Lake
Variables per Record: 20
Data Set Type: Single
Update dates:

Description:

This data set contains water chemistry data from FIN for the lakes that were sampled by Schofield that are also in the AWDB.

Reference(s):

Baker, J.P., T.B. Harvey, and J.P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern United States susceptible to acidic deposition. Final report to the U.S. Environmental Protection Agency for NAPAP Project E3-24. North Carolina State University, Raleigh, NC. (in press).

Variable	Label	Type	Len.	Format	Codefmt.
AL	DISSOLVED ALUMINUM AS AL	UG/L NUM	4	F6.1	
ALK	TOTAL ALKALINITY	UEQ/L NUM	8	F6.1	
ALK_C	ALKALINITY METHOD	CODE NUM	8	F1.	ALK_F
CA	DISSOLVED CALCIUM	UEQ/L NUM	8	F6.1	
CL	DISSOLVED CHLORIDE	UEQ/L NUM	4	F6.1	
COND	CONDUCTIVITY AT 25 DEG C	UMHOS/CM NUM	8	F6.1	
DO	DISSOLVED OXYGEN	MG/L NUM	8	F6.1	
FE	DISSOLVED IRON AS FE	UG/L NUM	4	F6.1	
HCO3	DISSOLVED BICARBONATE	UEQ/L NUM	4	F6.1	
K	DISSOLVED POTASSIUM	UEQ/L NUM	4	F6.1	
MG	DISSOLVED MAGNESIUM	UEQ/L NUM	4	F6.1	
MN	DISSOLVED MANGANESE AS MN	UG/L NUM	4	F6.1	
NA	DISSOLVED SODIUM	UEQ/L NUM	4	F6.1	
NO3	DISSOLVED NO3	UEQ/L NUM	4	F6.1	
PH	PH	STANDARD UNITS NUM	8	F6.2	
PH_C	PH METHOD	CODE NUM	8	F1.	PH_F
POND_NO	POND NUMBER	CHAR	7		
SO4	DISSOLVED SULFATE	UEQ/L NUM	4	F6.1	
TEMP	WATER TEMPERATURE	DEG C NUM	8	F6.1	
ZN	DISSOLVED ZINC AS ZN	UG/L NUM	4	F6.1	

Format Values and Labels for Code Variables in I18

Variable	Codefmt	Type	Value	Label
ALK_C	ALK_F	N	5	GRAN'S PLOT/LAB
PH_C	PH_F	N	7	LABORATORY METER (AIR EQUILIBRIUM)
			8	METER-FIELD OR LAB UNKNOWN

SUMMARY STATISTICS FOR I18

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
AL	121	0	223.70	224.95	0.00	1400.00
ALK	120	1	18.20	47.18	-51.00	224.00
CA	120	1	107.47	53.55	45.00	469.00
CL	120	1	14.72	18.85	1.00	132.00
COND	118	3	28.90	7.53	3.40	85.70
DO	16	105	6.48	2.54	0.00	11.00
FE	121	0	68.68	163.97	10.00	1760.00
HCO3	0	121				
K	121	0	6.95	4.73	2.00	41.00
MG	121	0	34.33	23.24	15.00	247.00
MN	121	0	38.33	25.38	0.00	132.00
NA	120	1	28.33	35.79	10.00	313.00
NO3	121	0	16.57	14.62	0.00	51.00
PH	120	1	5.35	0.77	4.30	7.31
SO4	121	0	145.64	70.66	-27.00	792.00
TEMP	16	105	17.59	3.93	11.10	23.90
ZN	121	0	19.38	10.38	0.00	51.00

AWD Contents for Data Set: I19 - WATER CHEMISTRY - FIN LAKES

Year(s): 1975-1984
Geocoverage: Adirondacks
Number of Records: 256
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): R.J. Olson

Temporal Resolution: Annual Mean
Spatial Resolution: Lake
Variables per Record: 28
Data Set Type: Single
Update dates:

Description:

This data set contains mean water chemistry data calculated from FIN for those lakes in the AWDB.

Reference(s):

Baker, J.P., T.B. Harvey, and J.P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern United States susceptible to acidic deposition. Final report to the U.S. Environmental Protection Agency for NAPAP Project E3-24. North Carolina State University, Raleigh, NC. (in press).

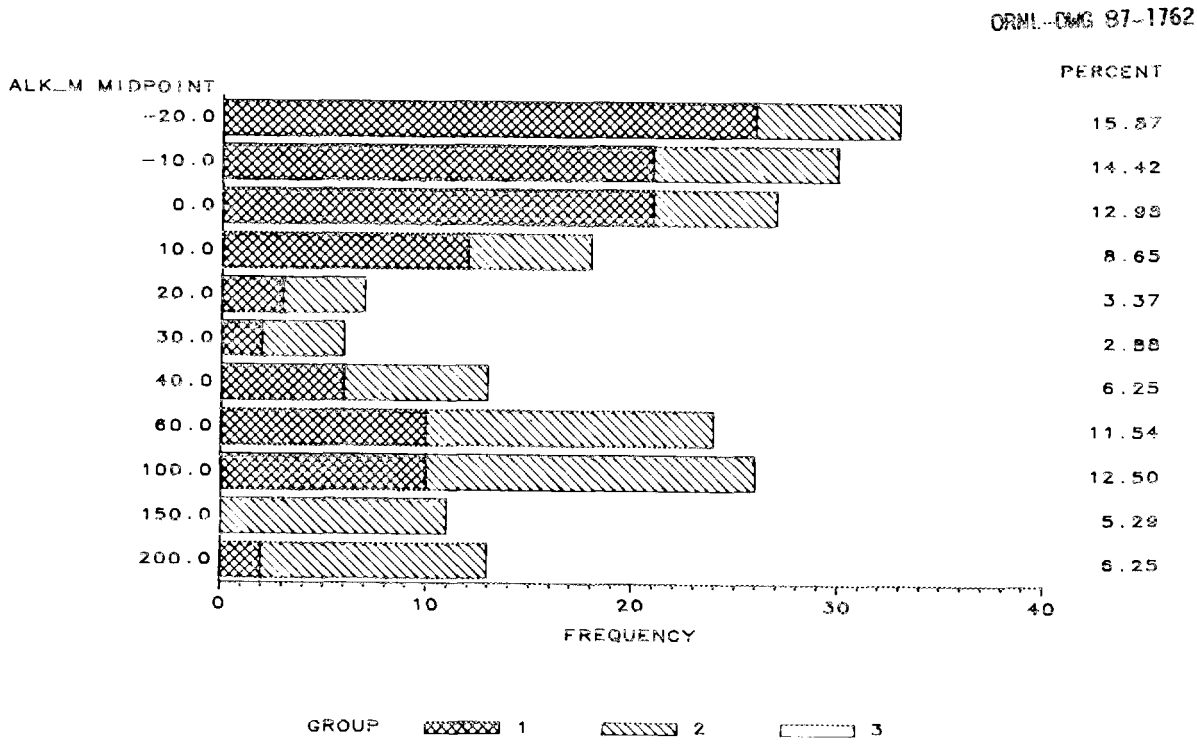
Variable	Label		Type	Len.	Format	Codefmt.
ALK_M	MEAN TOTAL ALK. (74-83 SUMMER)	UEQ/L	NUM	8	F6.1	
ALK_N	NO. OF OBSERVATIONS IN ALK_M		NUM	8	F2.	
CA_M	MEAN DISSOLVED CA (74-83 SUMMER)	UEQ/L	NUM	8	F6.1	
CA_N	NO. OF OBSERVATIONS IN CA_M		NUM	8	F2.	
COMST_C	FISH COMMUNITY STATUS	CODE	NUM	4	F1.	COMST_F
COMTYP_C	FISH COMMUNITY TYPE	CODE	NUM	4	F1.	COMTYP_F
COND_M	MEAN COND. - 25C (74-83 SUMMER)	UMHOS/CM	NUM	8	F6.1	
COND_N	NO. OF OBSERVATIONS IN COND_M		NUM	8	F2.	
DO_M	MEAN DISSOLVED O2 (74-83 SUMMER)	MG/L	NUM	8	F6.1	
DO_N	NO. OF OBSERVATIONS IN DO_M		NUM	8	F2.	
MEANCOLR	MEAN VISUAL COLOR (1960-PRESENT) - FIN		NUM	4	F6.1	
MEANPHC	MEAN SURFACE PH (1974-83) - FIN		NUM	4	F6.2	
MEANSMC	MEAN SUMMER SURFACE PH (1974-83) - FIN		NUM	4	F6.2	
MEAN5YR	MEAN SURF. PH-2 YR EA SIDE LAST SRVY-FIN		NUM	4	F6.2	
PH_M	MEAN PH (1974-83 SUMMER)		NUM	8	F6.2	
PH_N	NO. OF OBSERVATIONS IN PH_M		NUM	8	F2.	
POND_NO	POND NUMBER		CHAR	7		
SLOPE	SLOPE OF PH AGAINST TIME	PH/DECADE	NUM	4	F6.1	
SLOPE_N	NO. OF OBSERVATIONS IN SLOPE		NUM	4	F2.	
SLOPE_Y	YEARS BETWEEN FIRST AND LAST SAMPLE		NUM	4	F2.	
SLSTAT_C	STAT. SIGNIFICANCE OF SLOPE	CODE	NUM	4	F1.	SLSTAT_F
STDECLIN	BROOK TROUT DECLINING, SCALE 0-9, LOW-HI		NUM	4	F1.	
STLOST	BROOK TROUT LOST, SCALE 0-9, LOW-HI		NUM	4	F1.	
STOK	BROOK TROUT HEALTHY, SCALE 0-9, LOW-HI		NUM	4	F1.	
STPROB_C	BROOK TROUT LOST, PROB. ACID RAIN	CODE	NUM	4	F1.	PROB_F
STSTCK_C	BROOK TROUT STOCKING CODE	CODE	NUM	4	F1.	STCK_F
TEMP_M	MEAN WATER TEMP. (74-83 SUMMER)	DEG C	NUM	8	F6.1	
TEMP_N	NO. OF OBSERVATIONS IN TEMP_M		NUM	8	F2.	

Format Values and Labels for Code Variables in I19

Variable	Codefmt	Type	Value	Label
COMST_C	COMST_F	N	0	HEALTHY
			1	1-2 SPECIES DECLINE/LOST, NOT FROM ACID.
			2	1-2 SPECIES DECLINE/LOST, MAY BE ACID.
			3	SEVERAL SPECIES LOST, PROBABLY ACID.
			4	MOST/ALL SPECIES LOST, PROBABLY ACID.
			5	ALL SPECIES LOST, PROBABLY ACID.
			6	LAKE RECLAIMED, STATUS UNCLEAR
			7	LAKE SURVEYED ONCE, 0-1 SPECIES CAUGHT
			8	LAKE SURVEYED ONCE, 1-2 SPECIES CAUGHT
			9	LAKE SURVEYED ONCE, NO FISH CAUGHT
COMTYP_C	COMTYP_F	N	3	BROOK TROUT
			4	COLD WATER
			5	WARM WATER
			6	TWO-STORY
SLSTAT_C	SLSTAT_F	N	0	NOT SIGNIFICANT AT .05, N>=5
			1	SIGNIFICANT AT .05, N>=5
			2	NOT SIGNIFICANT AT .05, N<5
			3	SIGNIFICANT AT .05, N<5
STPROB_C	PROB_F	N	0-3	NOT DUE TO ACIDIFICATION
			4-5	POSSIBLY DUE TO ACIDIFICATION
			6-9	PROBABLY DUE TO ACIDIFICATION
STSTCK_C	STCK_F	N	1	NO STOCKING, SPECIES SELF-SUSTAINING
			2	STOCKING SUPPLEMENTS POPULATION
			3	STOCKING SUPPLEMENTS OR MAINTAINS POP.
			4	STOCKING MAINTAINS POPULATION
			9	STOCKING/POPULATION RELAIONSHIP UNCLEAR

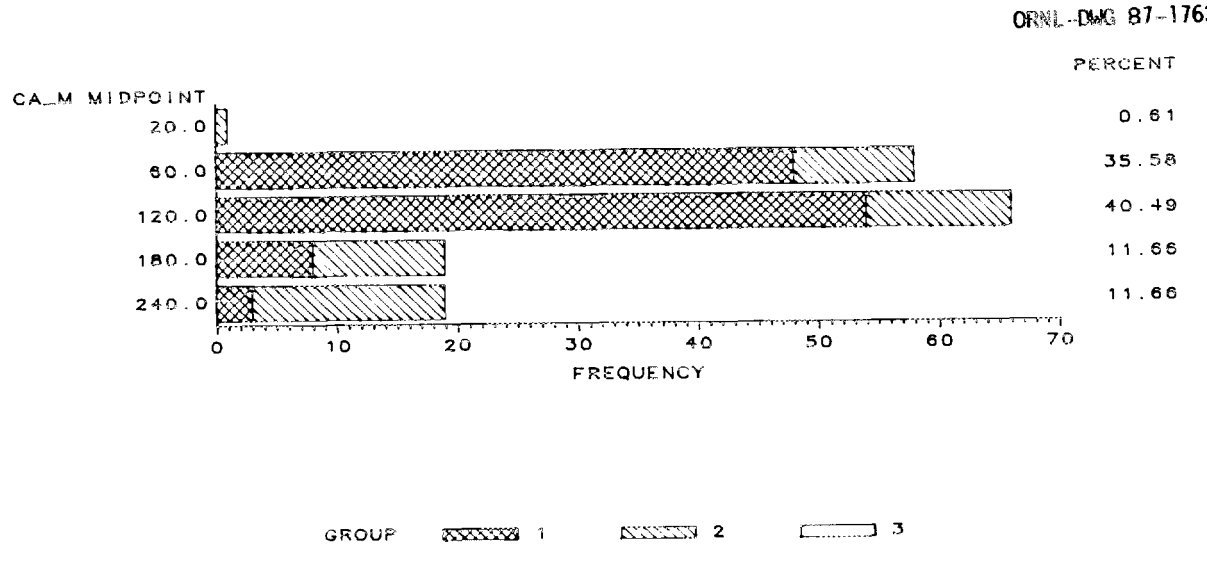
SUMMARY STATISTICS FOR I19

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ALK_M	213	43	44.90	79.77	-46.50	492.00
ALK_N	256	0	1.47	1.52	0.00	8.00
CA_M	169	87	137.54	147.98	27.00	1393.00
CA_N	256	0	0.78	0.66	0.00	4.00
COND_M	209	47	29.40	9.29	3.40	85.70
COND_N	256	0	1.46	1.52	0.00	8.00
DO_M	72	184	8.78	4.70	4.00	46.40
DO_N	256	0	0.36	0.79	0.00	8.00
MEANCOLR	101	155	1.95	1.12	1.00	4.00
MEANPHC	220	36	5.71	0.91	4.26	7.55
MEANSMC	214	42	5.75	0.97	4.30	7.60
MEAN5YR	114	142	5.54	0.86	4.00	7.50
PH_M	241	15	5.78	0.91	4.31	7.55
PH_N	256	0	1.25	0.64	0.00	4.00
SLOPE	147	109	-0.03	0.28	-1.27	0.62
SLOPE_N	147	109	3.55	1.68	2.00	9.00
SLOPE_Y	147	109	28.61	11.86	10.00	50.00
STDECLIN	150	106	1.47	2.11	0.00	9.00
STLOST	150	106	1.17	1.83	0.00	9.00
STOK	150	106	4.90	3.45	0.00	9.00
TEMP_M	82	174	21.87	2.53	13.90	27.20
TEMP_N	256	0	0.38	0.61	0.00	3.00



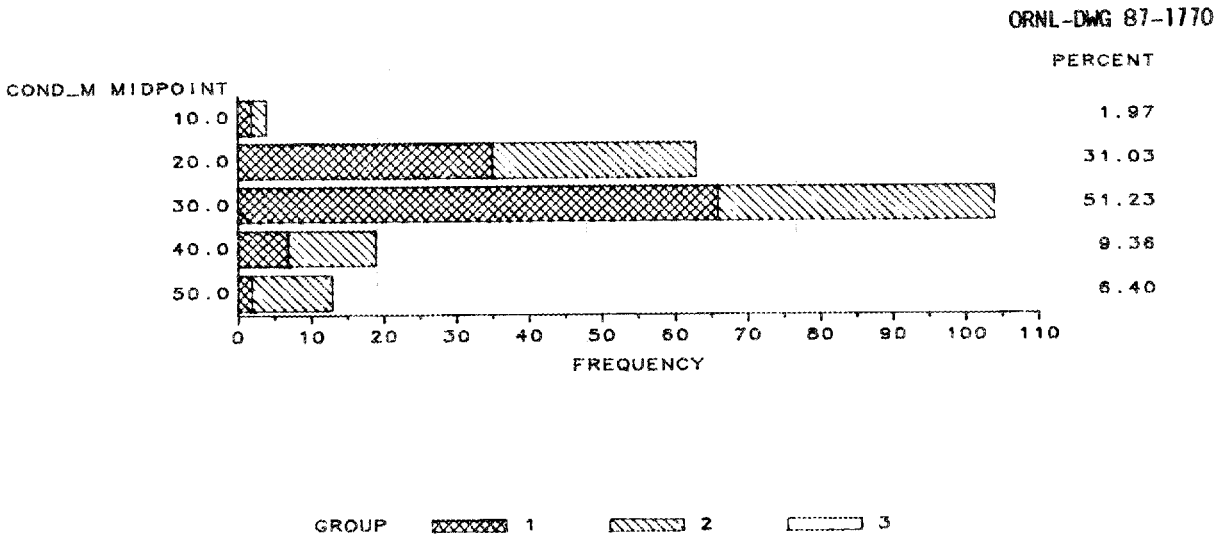
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.1. Frequency distribution of alkalinity (μeq/L) (1974-1983 means) for selected headwater lakes in the Adirondack region.



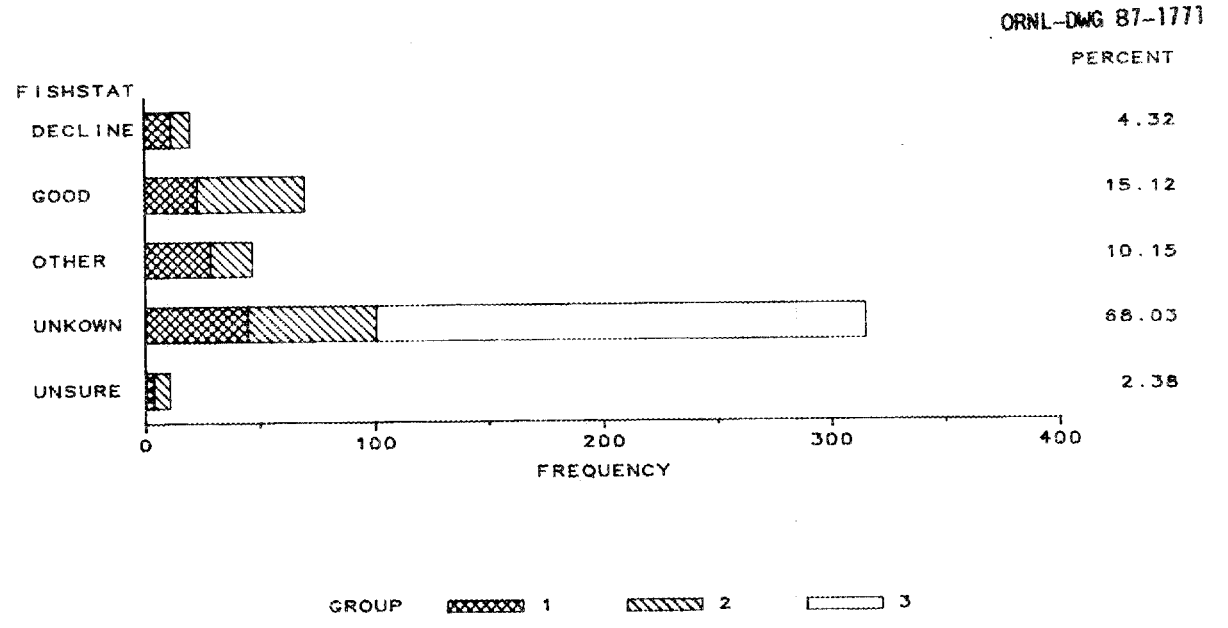
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.2. Frequency distribution of calcium (μeq/L) (1974-1983) for selected headwater lakes in the Adirondack region



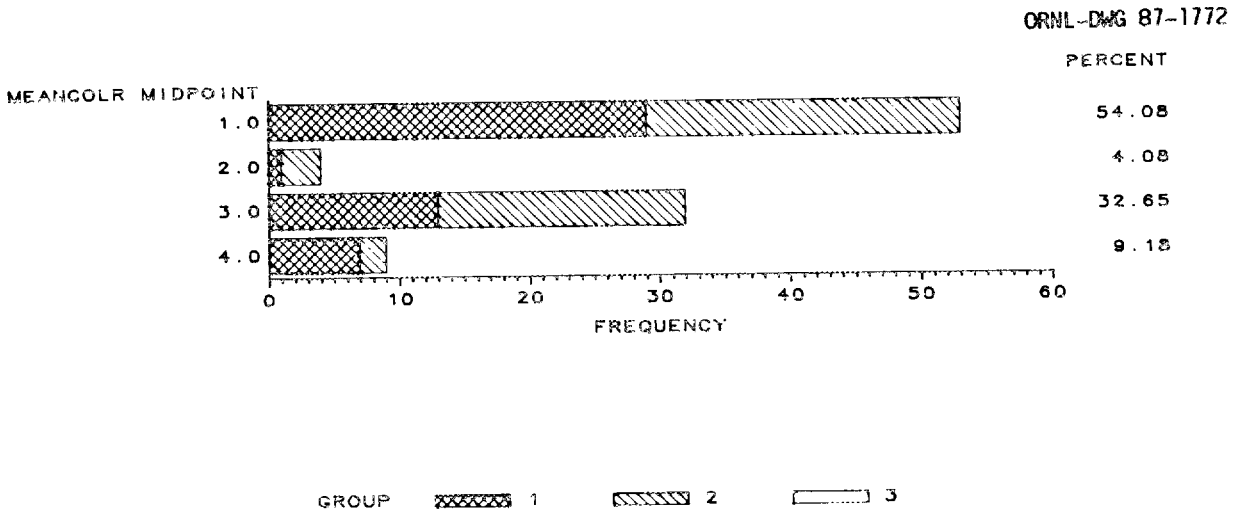
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.3. Frequency distribution of conductivity (μS) (1974-1983 means) for selected headwater lakes in the Adirondack region.



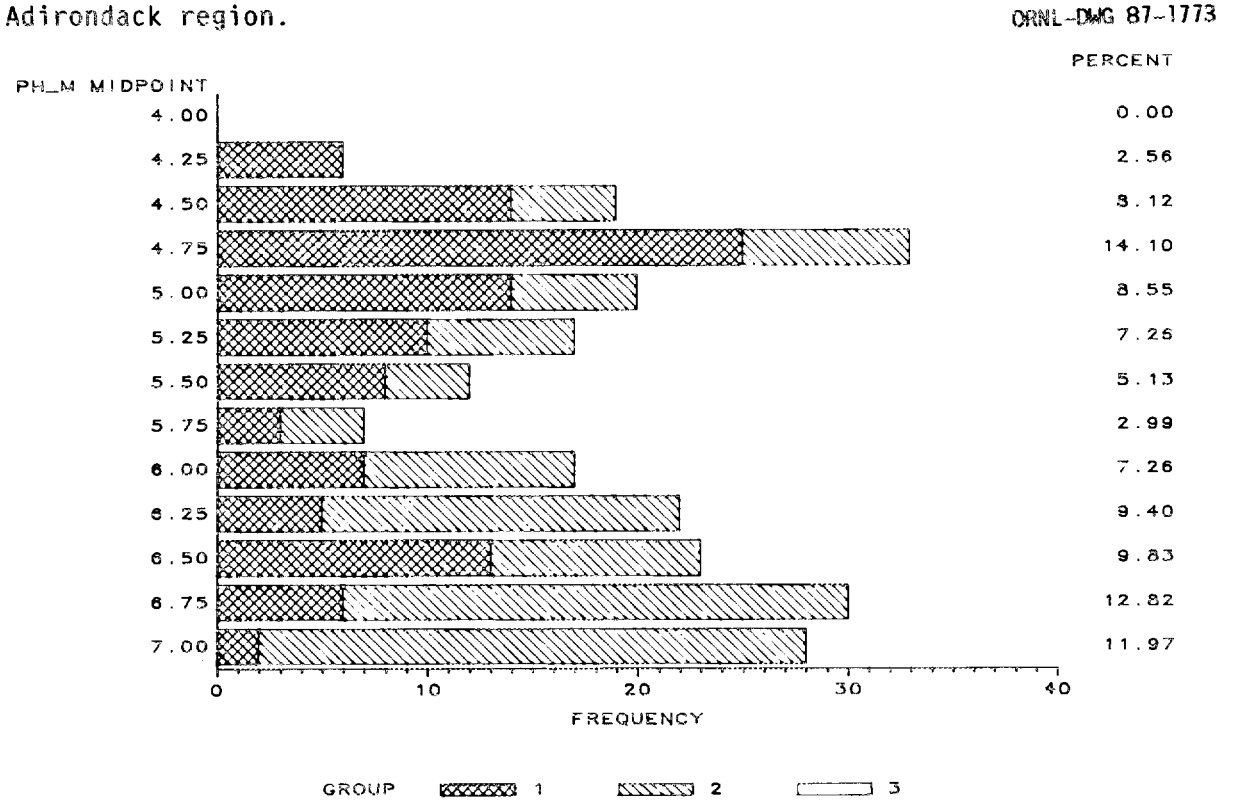
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.4. Frequency distribution of fish community status for selected watersheds in the Adirondack region.



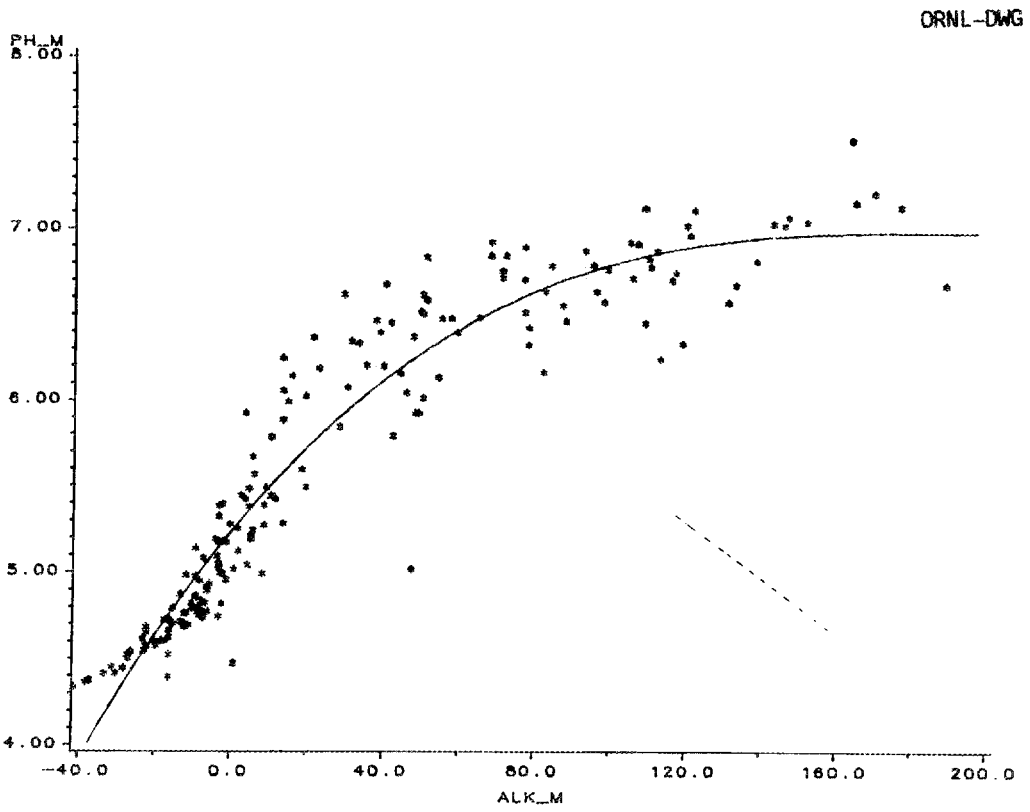
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.5. Frequency distribution of visual color (1 = clear to 4 = brown) (1974-1983 means) for selected headwater lakes in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.6. Frequency distribution of pH (1974-1983 means) for selected headwater lakes in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I19.7. Mean (1974-1983) surface water pH versus alkalinity (μeq/L) for selected headwater lakes in the Adirondack region.

AWD Contents for Data Set: I20 - WATER CHEMISTRY - NSWS LAKES

Year(s): 1984
Geocoverage: Adirondacks
Number of Records: 49
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): P. Kanciruk

Temporal Resolution: Point
Spatial Resolution: Lake
Variables per Record: 37
Data Set Type: Single
Update dates:

Description:

This data set contains water chemistry data from the National Surface Water Survey.

Reference(s):

Linthurst, R.A., D.H. Landers, J.M. Eilers, D.F. Brakke, W.S. Overton, E.P. Meier, and R.E. Crowe. 1986. Characteristics of lakes in the Eastern United States. Volume I: Population descriptions and physico-chemical relationships. EPA-600/4-86-007A, U.S. Environmental Protection Agency, Washington, D.C.

Overton, W.S., P. Kanciruk, L.A. Hook, J.M. Eilers, D.H. Landers, D.J. Blick, Jr., D.F. Brakke, R.A. Linthurst, and M.D. DeHaan. 1986. Characteristics of lakes in the Eastern United States. Volume II: Lakes sampled and descriptive statistics for physical and chemical variables. EPA-600/4-86-007B, U.S. Environmental Protection Agency, Washington, D.C.

Kanciruk, P., J.M. Eilers, R.A. McCord, D.H. Landers, D.F. Brakke, and R.A. Linthurst. 1986. Characteristics of lakes in the Eastern United States. Volume III: Data compendium of site characteristics and chemical variables. EPA-600/4-86-007C, U.S. Environmental Protection Agency, Washington, D.C.

Variable	Label		Type	Len.	Format	Codefmt.
ALEX11	EXT. ALUMINUM	UG/L	NUM	8	F6.1	
ALKA11	ALKALINITY	UEQ/L	NUM	8	F6.1	
ALTL11	TOTAL ALUMINUM	UG/L	NUM	8	F6.1	
CA16	CALCIUM	UEQ/L	NUM	8	F6.1	
CL16	CHLORIDE	UEQ/L	NUM	8	F6.1	
COLVAL	COLOR	PCU	NUM	8	F6.1	
CON_60	CONDUCTIVITY AT .6*DEPTH	US	NUM	8	F6.1	
CO316	CARBONATE ALKALINITY	UEQ/L	NUM	8	F6.1	
DOC11	DOC-ANAL LAB	MG/L	NUM	8	F6.2	
FE11	IRON	UG/L	NUM	8	F6.1	
FTL16	FLUORIDE	UEQ/L	NUM	8	F6.1	
HCO316	HCO3	UEQ/L	NUM	8	F6.1	
H16	HYDROGEN FROM PHAC	UEQ/L	NUM	8	F6.1	
INLET_N	NUMBER OF INLETS		NUM	8	F2.	

Variable	Label		Type	Len.	Format	Codefmt.
K16	POTASSIUM	UEQ/L	NUM	8	F6.1	
LAKE_ELV	LAKE ELEVATION	M	NUM	8	F7.1	
LAKE_ID	LAKE ID		CHAR	7		
LAKE_SIZ	LAKE SURFACE AREA	HA	NUM	4	F7.1	
LAKE_VOL	CALC LAKE VOL	10**6 M3	NUM	8	F7.1	
MG16	MAGNESIUM	UEQ/L	NUM	8	F6.1	
MN11	MANGANESE	UG/L	NUM	8	F6.1	
NA11	SODIUM	MG/L	NUM	8	F6.1	
NH416	AMMONIUM	UEQ/L	NUM	8	F6.1	
NO316	NITRATE	UEQ/L	NUM	8	F6.1	
OUTLET_N	NUMBER OF OUTLETS		NUM	8	F2.	
PH_TOP	PH AT SURFACE (1.5M)		NUM	8	F6.2	
PHEQ11	PH-AIR EQUILIBRATED		NUM	8	F6.2	
PHSTVL	PH - FIELD LAB		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
PTL11	TOTAL PHOSPHORUS	UG/L	NUM	8	F6.1	
REG_SPC	REG SPEC LTM NRC DEW DER SAMPLE CLASS		CHAR	16		
RT	RESIDENCE TIME	YR	NUM	8	F6.2	
SIO211	SILICA	MG/L	NUM	8	F6.2	
SO416	SULFATE	UEQ/L	NUM	8	F6.1	
TMPTOP	TEMPERATURE AT SURFACE (1.5M)	DEG C	NUM	8	F6.1	
TURVAL	TURBIDITY - FIELD LAB	NTU	NUM	8	F6.1	
WALA	WATERSHED AREA/LAKE AREA		NUM	8	F7.1	

SUMMARY STATISTICS FOR I20

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ALEX11	49	0	81.03	96.06	0.00	324.50
ALKA11	49	0	47.66	92.86	-29.00	522.25
ALTL11	49	0	211.61	173.23	11.90	753.50
CA16	49	0	108.86	102.29	25.30	703.59
CL16	49	0	43.63	174.68	5.13	1206.70
COLVAL	49	0	22.24	14.65	10.00	80.00
CON_60	3	46	26.67	7.37	21.00	35.00
CO316	49	0	0.08	0.35	0.00	2.41
DOC11	49	0	3.67	1.72	0.09	7.57
FE11	49	0	59.61	56.67	0.00	259.00
FTL16	49	0	2.96	1.61	0.62	8.00
HCO316	49	0	43.84	81.96	0.49	475.20
H16	49	0	6.38	8.86	0.02	38.90
INLET_N	12	37	1.25	0.75	0.00	3.00
K16	49	0	6.52	2.63	1.56	13.22
LAKE_ELV	49	0	583.53	104.72	328.00	812.00
LAKE_SIZ	49	0	19.82	15.67	1.70	77.80
LAKE_VOL	49	0	0.58	0.65	0.00	2.92
MG16	49	0	38.39	44.21	13.24	312.59
MN11	49	0	27.13	19.33	0.00	79.00
NA11	49	0	1.23	3.05	0.36	21.11
NH416	49	0	2.31	2.37	0.05	14.91
NO316	49	0	2.58	3.90	0.00	18.03
OUTLET_N	22	27	1.00	0.44	0.00	2.00
PH_TOP	49	0	5.52	0.86	4.18	7.40
PHEQ11	49	0	6.00	1.02	4.46	7.97
PHSTVL	49	0	5.74	0.82	4.48	7.17
PTL11	49	0	4.59	7.49	0.00	49.80
RT	47	2	0.50	0.61	0.01	3.65
SIO211	49	0	2.11	1.43	0.09	7.04
SO416	49	0	121.40	15.52	78.28	156.61
TMPTOP	49	0	11.95	0.99	9.40	13.90
TURVAL	49	0	0.46	0.32	0.00	1.60
WALA	49	0	13.20	10.18	2.32	46.00

AWD Contents for Data Set: I21 - CROSS-REFERENCE FILE TO OTHER DATA BASES

Year(s):
Geocoverage: Adirondacks
Number of Records: 5053
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution: Lake
Variables per Record: 7
Data Set Type: Multiple
Update dates:

Description:
This data set is a cross-reference file to other studies or data bases that contain information for a given lake. Wherever possible, the unique identifier for the cross-referenced source is given.

Variable	Label	Type	Len.	Format	Codefmt.
COMMENTS	COMMENTS	CHAR	40		
LAKE_NM	LAKE NAME	CHAR	40		
POND_NO	POND NUMBER	CHAR	7		
SOURCE	SOURCE OF INFORMATION FOR THE LAKE	CHAR	11		
SOURCEID	UNIQUE IDENTIFIER FOR THE SOURCE	CHAR	10		
YEAR1	BEGINNING YEAR OF DATA	NUM	4	F4.	
YEAR2	ENDING YEAR OF DATA	NUM	4	F4.	

AWD Contents for Data Set: I22 - COMMENTS ON LAKE HISTORY

Year(s):
Geocoverage: Adirondacks
Number of Records: 1981
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution: Lake
Variables per Record: 5
Data Set Type: Multiple
Update dates:

Description:

This data set contains comments on a lake's management history for those lakes from FIN.

Reference(s):

Baker, J.P., T.B. Harvey, and J.P. Nicolette. 1984. Compilation of available data on the status of fish populations in regions of the northeastern United States susceptible to acidic deposition. Final report to the U.S. Environmental Protection Agency for NAPAP Project E3-24. North Carolina State University, Raleigh, NC. (in press).

Variable	Label	Type	Len.	Format	Codefmt.
COMMENTM	COMMENTS ON MANAGEMENT	CHAR	60		
DATEM	DATE ON WHICH MANAGEMENT WAS EMPLOYED	NUM	4	DATE7.	
LINE	LINE NUMBER OF THE COMMENT	NUM	4	F1.	
MGMT_C	MANAGEMENT CODE	NUM	4	F1.	MGMT_F
POND_NO	POND NUMBER	CHAR	7		

Format Values and Labels for Code Variables in I22

Variable	Codefmt	Type	Value	Label
MGMT_C	MGMT_F	N	1	RECLAIMED
			2	LIMED

AWD Contents for Data Set: I23 - INTEGRATED ANALYSIS FILE

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): A.E. Rosen

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 224
Data Set Type: Single
Update dates:

Description:

This data set is the analysis data set used by Hunsaker et al. (1986). It was created by integrating variables from other data sets in the AWDB. All of the variables in the I23 data set were either copied from another data set or calculated using variables from other data sets. Table I23 lists all of the variables in I23, the data set from which it came, and the calculation, if any, used to create the variable. If no calculation is given for a variable, then the variable was copied from the source data set. A calculated variable, in most cases, was calculated using variables from two different data sets. For example, CONFR2_P was calculated using CONFR_A from I03 and WTRSHD_A from I01.

Reference(s):

Hunsaker, C.T., R.J. Olson, S.W. Christensen, R.S. Turner, J.J. Beauchamp. 1986. Empirical relationships between watershed attributes and aquatic resources in the Adirondack Region. ORNL/TM-9838. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Variable	Label		Type	Len.	Format	Codefmt.
ACID_EX	MEAN EXTRACTABLE ACIDITY	MEQ/100 G	NUM	8	F6.1	
ACID_P	EXTRACT. ACIDITY > 20 MEQ/100G	%T.WTRSHD	NUM	8	F6.1	
AL	DISSOLVED ALUMINUM AS AL	UG/L	NUM	4	F6.1	
ALEX11	EXT. ALUMINUM	UG/L	NUM	8	F6.1	
ALK	TOTAL ALKALINITY	UEQ/L	NUM	8	F6.1	
ALK_C	ALKALINITY METHOD	CODE	NUM	8	F1.	ALK_F
ALK_M	MEAN TOTAL ALK. (74-83 SUMMER)	UEQ/L	NUM	8	F6.1	
ALK_N	NO. OF OBSERVATIONS IN ALK_M		NUM	8	F2.	
ALKAL1	ALKALINITY	UEQ/L	NUM	8	F6.1	
ALTL11	TOTAL ALUMINUM	UG/L	NUM	8	F6.1	
ASPECT	DOMINANT ASPECT-NORTH, SOUTH, EAST, WEST		CHAR	5		
ASPECT_N	NORTHERN ASPECT	%WTRSHD	NUM	8	F6.1	
ASPECT_S	SOUTHERN ASPECT	%WTRSHD	NUM	8	F6.1	
AWD1	1 = DATA FROM FIN - SCHOFIELD LAKES		NUM	8	F1.	
AWD2	1 = DATA FROM FIN		NUM	8	F1.	
AWD3	1 = DATA FROM NSWS		NUM	8	F1.	
BSA_L_P	BASE SAT. (NH4OAC) <= 20%	%T.WTRSHD	NUM	8	F6.1	
BSA_M_P	BASE SAT. (NH4OAC) 20-60%	%T.WTRSHD	NUM	8	F6.1	
BSAT_N	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G	NUM	8	F6.1	

Variable	Label		Type	Len.	Format	Codefmt.
BSAT_S	MEAN BASE SATURATION (SUM)	MEQ/100 G	NUM	8	F6.1	
BSC_L_P	BASE SAT. (SUM) <= 20%	%T.WTRSHD	NUM	8	F6.1	
BSC_M_P	BASE SAT. (SUM) 20-60%	%T.WTRSHD	NUM	8	F6.1	
BURNED_P	BURNED AREA	%T.WTRSHD	NUM	8	F6.1	
BVRINDEX	(INL+INLL+OUT+OUTL)/LAKE_A, 68 & 78 DATA		NUM	8	F4.1	
CA	DISSOLVED CALCIUM	UEQ/L	NUM	8	F6.1	
CA_M	MEAN DISSOLVED CA (74-83 SUMMER)	UEQ/L	NUM	8	F6.1	
CA_N	NO. OF OBSERVATIONS IN CA_M		NUM	8	F2.	
CABIN_45	NO. OF CABINS, 1945/54 DATA		NUM	4	F3.	
CABIN_78	NO. OF CABINS, 1978 DATA		NUM	4	F3.	
CABN78_R	CABIN_78 TO LAKE AREA RATIO		NUM	8	F6.1	
CA16	CALCIUM	UEQ/L	NUM	8	F6.1	
CEC	MEAN CATION EXCHANGE CAPACITY	MEQ/100 G	NUM	8	F6.1	
CEC_L_P	CATION EXC. CAP. <=10 MEQ/100G	%T.WTRSHD	NUM	8	F6.1	
CECS_L_P	SUM OF CATIONS <=20 MEQ/100G	%T.WTRSHD	NUM	8	F6.1	
CL	DISSOLVED CHLORIDE	UEQ/L	NUM	4	F6.1	
CLAY	MEAN CLAY CONTENT	%HORIZON	NUM	8	F6.1	
CL16	CHLORIDE	UEQ/L	NUM	8	F6.1	
COLVAL	COLOR	PCU	NUM	8	F6.1	
COMST_C	FISH COMMUNITY STATUS	CODE	NUM	4	F1.	COMST_F
COMTYP_C	FISH COMMUNITY TYPE	CODE	NUM	4	F1.	COMTYP_F
CON_60	CONDUCTIVITY AT .6*DEPTH	US	NUM	8	F6.1	
COND	CONDUCTIVITY AT 25 DEG C	UMHOS/CM	NUM	8	F6.1	
COND_M	MEAN COND. - 25C (74-83 SUMMER)	UMHOS/CM	NUM	8	F6.1	
COND_N	NO. OF OBSERVATIONS IN COND_M		NUM	8	F2.	
CONFR2_P	CONIFER AREA	%T.WTRSHD	NUM	8	F6.1	
COUNTY	FIPS COUNTY NUMBER		NUM	3	Z3.	
CO316	CARBONATE ALKALINITY	UEQ/L	NUM	8	F6.1	
DENUDE_P	DENUDED AREA	%T.WTRSHD	NUM	8	F6.1	
DISTR8_P	LOGGED, BURNED, DENUDED	%T.WTRSHD	NUM	8	F6.1	
DO	DISSOLVED OXYGEN	MG/L	NUM	8	F6.1	
DO_M	MEAN DISSOLVED O2 (74-83 SUMMER)	MG/L	NUM	8	F6.1	
DO_N	NO. OF OBSERVATIONS IN DO_M		NUM	8	F2.	
DOC11	DOC-ANAL LAB	MG/L	NUM	8	F6.2	
DPTH_B_L	MEAN DEPTH TO BEDROCK - LOWER	CM	NUM	8	F6.	
DPTH_B_U	MEAN DEPTH TO BEDROCK - UPPER	CM	NUM	8	F6.	
DPTH_P_L	MEAN DEPTH TO LOW PERM. LAYER - LOWER	CM	NUM	8	F6.	
DPTH_P_U	MEAN DEPTH TO LOW PERM. LAYER - UPPER	CM	NUM	8	F6.	
DPTH_R_L	MEAN DEPTH TO ROOT RES. LAYER - LOWER	CM	NUM	8	F6.	
DPTH_R_U	MEAN DEPTH TO ROOT RES. LAYER - UPPER	CM	NUM	8	F6.	
DRAIN_A	DRAINAGE AREA	HA	NUM	8	F7.1	
EBS_L_P	EXC. BASES <=3 MEQ/100G	%T.WTRSHD	NUM	8	F6.1	
ELEV_AVE	AVERAGE WATERSHED ELEVATION	M	NUM	4	F7.1	
ELEV_600	ELEVATION > 600 METERS,	%T.WTRSHD	NUM	8	F6.1	
FE	DISSOLVED IRON AS FE	UG/L	NUM	4	F6.1	
FE11	IRON	UG/L	NUM	8	F6.1	
FTL16	FLUORIDE	UEQ/L	NUM	8	F6.1	
G_TMBR_P	GREEN TIMBER AREA	%T.WTRSHD	NUM	8	F6.1	
H_CONC	H+ ANNUAL WET CONCENTRATION	MG/L	NUM	4	F5.3	
H_WET	H+ ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.3	
HCO3	DISSOLVED BICARBONATE	UEQ/L	NUM	4	F6.1	

Variable	Label		Type	Len.	Format	Codefmt.
HCO316	HCO3	UEQ/L	NUM	8	F6.1	
HRDWD2_P	HARDWOOD AREA	%T.WTRSHD	NUM	8	F6.1	
HYD_C	LAKE HYDROLOGIC TYPE	CODE	NUM	8	F1.	HYD_F
HYDRO_A	HIGH INFILTRAION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_B	MOD. INFILTRATION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_C	SLOW INFILTRATION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_D	VERY SLOW INFILTRATION	%WTRSHD	NUM	8	F6.1	
HYDTYP1	1 = "SEEPAGE", NO INLETS OR OUTLETS		NUM	8	F1.	
HYDTYP2	1 = "SPRING", OUTLETS, NO INLETS		NUM	8	F1.	
HYDTYP3	1 = "DRAINAGE", INLETS AND OUTLETS		NUM	8	F1.	
H16	HYDROGEN FROM PHAC	UEQ/L	NUM	8	F6.1	
INL	NO. DAMS UPSTREAM, 68 & 78 DATA		NUM	8	F2.	
INLET_N	NUMBER OF INLETS		NUM	8	F2.	
INLETS	NO. OF INFLOWS DEFINED BY USGS TOPO MAP		NUM	4	F1.	
INLL	NO. DAMS ON LAKE AT INLET, 68 & 78 DATA		NUM	8	F2.	
K	DISSOLVED POTASSIUM	UEQ/L	NUM	4	F6.1	
K16	POTASSIUM	UEQ/L	NUM	8	F6.1	
LAKE_A	LAKE AREA	HA	NUM	4	F7.1	
LAKE_DEV	LAKE DEVELOPMENT RATIO - PERIM/CIRCLE		NUM	8	F7.1	
LAKE_E	LAKE ELEVATION ABOVE M.S.L.	M	NUM	4	F7.1	
LAKE_ELV	LAKE ELEVATION	M	NUM	8	F7.1	
LAKE_ID	LAKE ID		CHAR	7		
LAKE_NM	LAKE NAME		CHAR	30		
LAKE_SIZ	LAKE SURFACE AREA	HA	NUM	4	F7.1	
LAKE_V	LAKE VOLUME CALC. FROM FIN	10**6 M3	NUM	8	F7.1	
LAKE_VOL	CALC LAKE VOL	10**6 M3	NUM	8	F7.1	
LAT_DEC	LATITUDE FROM ORNL	DD.DDDD	NUM	8	F8.4	
LAT_DMS	LATITUDE FROM ORNL	DD MM SS	CHAR	10		
LIME1	FIRST YEAR THAT LAKE WAS LIMED		NUM	8	F4.	
LIME2	MOST RECENT YEAR LAKE WAS LIMED		NUM	8	F4.	
LKCHN_C	NOTICEABLE LAKE SURFACE CHANGE	CODE	CHAR	1		$LKCHN_F
LOG_AL_P	LOGGED & DENUDED AREA	%T.WTRSHD	NUM	8	F6.1	
LOG_S_P	LOGGED SOFTWOOD AREA	%T.WTRSHD	NUM	8	F6.1	
LOG_SH_P	LOGGED SFTWD & HRDWD	%T.WTRSHD	NUM	8	F6.1	
LON_DEC	LONGITUDE FROM ORNL	DDD.DDDD	NUM	8	F8.4	
LON_DMS	LONGITUDE FROM ORNL	DDD MM SS	CHAR	11		
MACID_PL	MOD. ACID WETLAND AREA	%LAKE AREA	NUM	8	F6.1	
MACID_PP	MOD. ACID WETLAND AREA	%LAKE PERIM.	NUM	8	F6.1	
MACID_PW	MOD. ACID WETLAND AREA	%T.WTRSHD	NUM	8	F6.1	
MAXDPTH	MAX. DEPTH OF LAKE FROM FIN	M	NUM	8	F8.1	
MEANCOLR	MEAN VISUAL COLOR (1960-PRESENT) - FIN		NUM	4	F6.1	
MEANDPTH	MEAN DEPTH OF LAKE FROM FIN	M	NUM	4	F8.1	
MEANPHC	MEAN SURFACE PH (1974-83) - FIN		NUM	4	F6.2	
MEANSMC	MEAN SUMMER SURFACE PH (1974-83) - FIN		NUM	4	F6.2	
MEAN5YR	MEAN SURF. PH-2 YR EA SIDE LAST SRVY-FIN		NUM	4	F6.2	
MG	DISSOLVED MAGNESIUM	UEQ/L	NUM	4	F6.1	
MG16	MAGNESIUM	UEQ/L	NUM	8	F6.1	
MIXED2_P	MIXED AREA	%T.WTRSHD	NUM	8	F6.1	
MN	DISSOLVED MANGANESE AS MN	UG/L	NUM	4	F6.1	
MN11	MANGANESE	UG/L	NUM	8	F6.1	
NA	DISSOLVED SODIUM	UEQ/L	NUM	4	F6.1	

Variable	Label		Type	Len.	Format	Codefmt.
NACID_PL	NON-ACID WETLAND AREA	%LAKE AREA	NUM	8	F6.1	
NACID_PP	NON-ACID WETLAND AREA	%LAKE PERIM.	NUM	8	F6.1	
NACID_PW	NON-ACID WETLAND AREA	%T.WTRSHD	NUM	8	F6.1	
NA11	SODIUM	MG/L	NUM	8	F6.1	
NH416	AMMONIUM	UEQ/L	NUM	8	F6.1	
NONFR2_P	NONFORESTED AREA	%T.WTRSHD	NUM	8	F6.1	
NO3	DISSOLVED NO3	UEQ/L	NUM	4	F6.1	
NO3_CONC	NO3 ANNUAL WEIGHTED MEAN CONC.	MG/L	NUM	4	F5.2	
NO3_WET	NO3 ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.2	
NO316	NITRATE	UEQ/L	NUM	8	F6.1	
OM_H_P	ORG. MATTER CONTENT => 2%	%T.WTRSHD	NUM	8	F6.1	
OPEN_P	OPEN AREA	%T.WTRSHD	NUM	8	F6.1	
ORG_MAT	MEAN ORG. MATTER CONTENT	%HORIZON	NUM	8	F6.1	
OTHER_PL	OTHER WETLAND AREA	%LAKE AREA	NUM	8	F6.1	
OTHER_PP	OTHER WETLAND AREA	%LAKE PERIM.	NUM	8	F6.1	
OTHER_PW	OTHER WETLAND AREA	%T.WTRSHD	NUM	8	F6.1	
OUT	NO. DAMS DOWNSTREAM, 68 & 78 DATA		NUM	8	F2.	
OUTL	NO. DAMS ON LAKE @OUTLET, 68 & 78 DATA		NUM	8	F2.	
OUTLET_N	NUMBER OF OUTLETS		NUM	8	F2.	
OUTLETS	NO. OF OUTFLOWS DEFINED BY USGS TOPO MAP		NUM	4	F1.	
PERIMETR	SHORELINE PERIMETER PLUS ISLANDS	M	NUM	8	F7.1	
PH	PH	STANDARD UNITS	NUM	8	F6.2	
PH_C	PH METHOD	CODE	NUM	8	F1.	PH_F
PH_CACL	MEAN SOIL PH (CACL2)		NUM	8	F6.2	
PH_H2O	MEAN SOIL PH (H2O)		NUM	8	F6.2	
PH_L_P	SOIL PH (H2O) <= 5.0	%T.WTRSHD	NUM	8	F6.1	
PH_M	MEAN PH (1974-83 SUMMER)		NUM	8	F6.2	
PH_N	NO. OF OBSERVATIONS IN PH_M		NUM	8	F2.	
PH_TOP	PH AT SURFACE (1.5M)		NUM	8	F6.2	
PH_VL_P	SOIL PH (H2O) <= 4.5	%T.WTRSHD	NUM	8	F6.1	
PHC_L_P	SOIL PH (CACL2) <= 5.0	%T.WTRSHD	NUM	8	F6.1	
PHC_VL_P	SOIL PH (CACL2) <= 4.5	%T.WTRSHD	NUM	8	F6.1	
PHEQ11	PH-AIR EQUILIBRATED		NUM	8	F6.2	
PHSTVL	PH - FIELD LAB		NUM	8	F6.2	
POND_NO	POND NUMBER		CHAR	7		
PPT	TOTAL PRECIPITATION	CM	NUM	4	F5.1	
PTL11	TOTAL PHOSPHORUS	UG/L	NUM	8	F6.1	
QUAD	QUADRANGLE WHERE LAKE IS LOCATED		CHAR	4		
RCLM1	FIRST YEAR OF RECLAMATION		NUM	8	F4.	
RCLM2	MOST RECENT YEAR OF RECLAMATION		NUM	8	F4.	
REG_SPC	REG SPEC LTM NRC DEW DER SAMPLE CLASS		CHAR	16		
RELIEF	RELIEF, MAX ELEV. - LAKE ELEV.	M	NUM	8	F7.1	
RELIEF_R	RELIEF TO SQRT(WTRSHD_A) RATIO		NUM	8	F7.1	
ROCK_P	ROCK OUTCROPS	%WTRSHD	NUM	8	F6.1	
ROCK1_P	LOW TO NO ACID NEUTRAL. CAP.	%WTRSHD	NUM	8	F6.1	
ROCK12_P	MED. TO NO ACID NEUTRAL. CAP.	%WTRSHD	NUM	8	F6.1	
ROCK2_P	MED. TO LOW ACID NEUTRAL. CAP.	%WTRSHD	NUM	8	F6.1	
ROCK3_P	HIGH TO MED. ACID NEUTRAL. CAP.	%WTRSHD	NUM	8	F6.1	
ROCK4_P	INFINITE ACID NEUTRAL. CAP.	%WTRSHD	NUM	8	F6.1	
RT	RESIDENCE TIME	YR	NUM	8	F6.2	
RUNOFF	ANNUAL RUNOFF	CM	NUM	4	F5.1	
SERIES_A	WATERSHED AREA (-WATER,MARSH)	HA	NUM	8	F7.1	

Variable	Label		Type	Len.	Format	Codefmt.
SHL1_B_P	DEPTH TO BEDROCK <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_P_P	DEPTH TO LOW PERM. <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_R_P	DEPTH TO RESTR. <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_Z_P	SHALLOW SOILS <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL2_B_P	DEPTH TO BEDROCK <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_P_P	DEPTH TO LOW PERM. <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_R_P	DEPTH TO ROOT RESTR. <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_Z_P	SHALLOW SOILS <= 100 CM	%WTRSHD	NUM	8	F6.1	
SIO2T1	SILICA	MG/L	NUM	8	F6.2	
SLOPE	SLOPE OF PH AGAINST TIME	PH/DECADE	NUM	4	F6.1	
SLOPE_AV	AVERAGE SLOPE	DEG	NUM	8	F2.	
SLOPE_MX	MAXIMUM SLOPE	DEG	NUM	8	F2.	
SLOPE_N	NO. OF OBSERVATIONS IN SLOPE		NUM	4	F2.	
SLOPE_Y	YEARS BETWEEN FIRST AND LAST SAMPLE		NUM	4	F2.	
SLOPE_15	SLOPE GREATER THAN 15%	%WTRSHD	NUM	8	F6.1	
SLOPE_25	SLOPE GREATER THAN 25%	%WTRSHD	NUM	8	F6.1	
SLSTAT_C	STAT. SIGNIFICANCE OF SLOPE	CODE	NUM	4	F1.	SLSTAT_F
SO4	DISSOLVED SULFATE	UEQ/L	NUM	4	F6.1	
SO4_CONC	SO4 ANNUAL WEIGHTED MEAN CONC.	MG/L	NUM	4	F5.2	
SO4_NO3	SULFATE-NITRATE WET DEPOS.	MEQ	NUM	8	F5.2	
SO4_WET	SO4 ANNUAL WET ADJ DEPOSITION	G/M2	NUM	4	F5.2	
SO4T6	SULFATE	UEQ/L	NUM	8	F6.1	
STATE	FIPS STATE NUMBER		NUM	2	Z2.	
STDECLIN	BROOK TROUT DECLINING, SCALE 0-9, LOW-HI		NUM	4	F1.	
STEEPM_P	MODERATELY STEEP SOILS	%WTRSHD	NUM	8	F6.1	
STEEPV_P	VERY STEEP SOILS	%WTRSHD	NUM	8	F6.1	
STLOST	BROOK TROUT LOST, SCALE 0-9, LOW-HI		NUM	4	F1.	
STOK	BROOK TROUT HEALTHY, SCALE 0-9, LOW-HI		NUM	4	F1.	
STONEY_P	STONEY SOILS	%WTRSHD	NUM	8	F6.1	
STPROB_C	BROOK TROUT LOST, PROB. ACID RAIN	CODE	NUM	4	F1.	PROB_F
STSTCK_C	BROOK TROUT STOCKING CODE	CODE	NUM	4	F1.	STCK_F
SUBSET	TO RANDOMLY SUBSET LAKES FOR ANALYSES		NUM	8		
SUMBSE	MEAN SUM OF BASES	MEQ/100 G	NUM	8	F6.1	
SUMCAT	MEAN SUM OF CATIONS	MEQ/100 G	NUM	8	F6.1	
TEMP	WATER TEMPERATURE	DEG C	NUM	8	F6.1	
TEMP_M	MEAN WATER TEMP. (74-83 SUMMER)	DEG C	NUM	8	F6.1	
TEMP_N	NO. OF OBSERVATIONS IN TEMP_M		NUM	8	F2.	
TMPTOP	TEMPERATURE AT SURFACE (1.5M)	DEG C	NUM	8	F6.1	
TURVAL	TURBIDITY - FIELD LAB	NTU	NUM	8	F6.1	
VACID_PL	VERY ACID WETLAND AREA	%LAKE AREA	NUM	8	F6.1	
VACID_PP	VERY ACID WETLAND AREA	%LAKE PERIM.	NUM	8	F6.1	
VACID_PW	VERY ACID WETLAND AREA	%T.WTRSHD	NUM	8	F6.1	
WALA	WATERSHED AREA/LAKE AREA		NUM	8	F7.1	
WATERSHD	WATERSHED CODE		NUM	4	F1.	
WTLND_PL	TOTAL WETLAND AREA	%LAKE AREA	NUM	8	F6.1	
WTLND_PP	TOTAL WETLAND AREA	%LAKE PERIM.	NUM	8	F6.1	
WTLND_PW	TOTAL WETLAND AREA	%T.WTRSHD	NUM	8	F6.1	
WTRSHD_A	TERRESTRIAL WATERSHED AREA	HA	NUM	8	F7.1	
WTRSHD_E	WATERSHED MAX. ELEV ABOVE M.S.L.	M	NUM	4	F7.1	
WTRSHD_R	DRAINAGE AREA TO LAKE AREA RATIO		NUM	8	F7.1	
ZN	DISSOLVED ZINC AS ZN	UG/L	NUM	4	F6.1	

Format Values and Labels for Code Variables in I23

Variable	Codefmt	Type	Value	Label
ALK_C	ALK_F	N	5	GRAN'S PLOT/LAB
COMST_C	COMST_F	N	0	HEALTHY
			1	1-2 SPECIES DECLINE/LOST, NOT FROM ACID.
			2	1-2 SPECIES DECLINE/LOST, MAY BE ACID.
			3	SEVERAL SPECIES LOST, PROBABLY ACID.
			4	MOST/ALL SPECIES LOST, PROBABLY ACID.
			5	ALL SPECIES LOST, PROBABLY ACID.
			6	LAKE RECLAIMED, STATUS UNCLEAR
			7	LAKE SURVEYED ONCE, 0-1 SPECIES CAUGHT
			8	LAKE SURVEYED ONCE, 1-2 SPECIES CAUGHT
			9	LAKE SURVEYED ONCE, NO FISH CAUGHT
COMTYP_C	COMTYP_F	N	3	BROOK TROUT
			4	COLD WATER
			5	WARM WATER
			6	TWO-STORY
HYD_C	HYD_F	N	1	SEEPAGE : NO INLETS OR OUTLETS
			2	SPRING : OUTLETS, NO INLETS
			3	INFLOW : INLETS, NO OUTLETS
			4	DRAINAGE: INLETS AND OUTLETS
LKCHN_C	$LKCHN_F	C	0	NO NOTICEABLE CHANGE
			1	NOTICEABLE CHANGE
PH_C	PH_F	N	7	LABORATORY METER (AIR EQUILIBRIUM)
			8	METER-FIELD OR LAB UNKNOWN
SLSTAT_C	SLSTAT_F	N	0	NOT SIGNIFICANT AT .05, N>=5
			1	SIGNIFICANT AT .05, N>=5
			2	NOT SIGNIFICANT AT .05, N<5
			3	SIGNIFICANT AT .05, N<5
STPROB_C	PROB_F	N	0-3	NOT DUE TO ACIDIFICATION
			4-5	POSSIBLY DUE TO ACIDIFICATION
			6-9	PROBABLY DUE TO ACIDIFICATION
STSTCK_C	STCK_F	N	1	NO STOCKING, SPECIES SELF-SUSTAINING
			2	STOCKING SUPPLEMENTS POPULATION
			3	STOCKING SUPPLEMENTS OR MAINTAINS POP.
			4	STOCKING MAINTAINS POPULATION
			9	STOCKING/POPULATION RELAIONSHIP UNCLEAR

SUMMARY STATISTICS FOR I23

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
ACID_EX	463	0	22.24	3.39	9.90	28.36
ACID_P	463	0	32.95	22.40	0.00	100.00
AL	113	350	225.58	227.03	0.00	1400.00
ALEX11	46	417	84.95	97.84	0.00	324.50
ALK	113	350	18.06	47.85	-51.00	224.00
ALK_M	208	255	45.79	80.45	-46.50	492.00
ALK_N	249	214	1.45	1.47	0.00	8.00
ALKA11	46	417	49.39	95.58	-29.00	522.25
ALTL11	46	417	214.38	178.25	11.90	753.50
ASPECT_N	463	0	33.08	28.54	0.00	100.00
ASPECT_S	463	0	45.05	29.96	0.00	100.00
AWD1	463	0	0.24	0.43	0.00	1.00
AWD2	463	0	0.54	0.50	0.00	1.00
AWD3	463	0	0.10	0.30	0.00	1.00
BSA_L_P	463	0	68.50	19.24	0.00	100.00
BSA_M_P	463	0	10.93	18.29	0.00	100.00
BSAT_N	463	0	21.86	11.70	14.70	128.37
BSAT_S	463	0	11.74	6.48	4.80	52.88
BSC_L_P	463	0	74.10	18.02	0.00	100.00
BSC_M_P	463	0	5.08	12.91	0.00	100.00
BURNED_P	463	0	7.67	23.78	0.00	100.00
BVRINDEX	463	0	0.71	1.03	0.00	9.20
CA	113	350	105.87	53.69	45.00	469.00
CA_M	163	300	138.19	150.54	27.00	1393.00
CA_N	249	214	0.77	0.67	0.00	4.00
CABIN_45	463	0	1.36	14.07	0.00	293.00
CABIN_78	463	0	3.81	20.71	0.00	273.00
CABN78_R	463	0	0.32	2.93	0.00	39.60
CA16	46	417	111.27	105.12	25.30	703.59
CEC	463	0	18.56	6.98	11.10	75.31
CEC_L_P	463	0	1.69	5.67	0.00	43.00
CECS_L_P	463	0	16.94	22.11	0.00	100.00
CL	112	351	15.03	19.45	1.00	132.00
CLAY	463	0	12.65	4.23	4.16	41.20
CL16	46	417	45.90	180.17	5.13	1206.70
COLVAL	46	417	22.93	14.85	10.00	80.00
CON_60	3	460	26.67	7.37	21.00	35.00
COND	111	352	28.92	7.71	3.40	85.70
COND_M	203	260	29.49	9.40	3.40	85.70
COND_N	249	214	1.45	1.48	0.00	8.00
CONFR2_P	463	0	22.68	16.68	1.00	89.90
CO316	46	417	0.09	0.36	0.00	2.41
DENUDE_P	463	0	3.16	14.73	0.00	100.00
DISTRB_P	463	0	31.27	41.90	0.00	100.00

SUMMARY STATISTICS FOR I23 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
DO	14	449	6.12	2.49	0.00	11.00
DO_M	71	392	8.79	4.73	4.00	46.40
DO_N	249	214	0.36	0.80	0.00	8.00
DOC11	46	417	3.76	1.74	0.09	7.57
DPTH_B_L	463	0	94.88	36.36	21.43	152.40
DPTH_B_U	463	0	87.78	40.26	10.72	152.40
DPTH_P_L	463	0	89.47	33.68	21.43	152.40
DPTH_P_U	463	0	50.82	26.42	10.72	152.40
DPTH_R_L	463	0	90.66	34.66	21.43	152.40
DPTH_R_U	463	0	71.57	36.58	10.72	152.40
DRAIN_A	463	0	230.74	454.56	11.50	5082.00
EBS_L_P	463	0	68.91	19.55	0.00	100.00
ELEV_AVE	463	0	679.50	130.22	288.10	1331.60
ELEV_600	463	0	59.88	42.50	0.00	100.00
FE	113	350	69.91	169.36	10.00	1760.00
FE11	46	417	59.46	55.20	0.00	259.00
FTL16	46	417	3.03	1.64	0.62	8.00
G_TMBR_P	463	0	67.64	42.04	0.00	100.00
H_CONC	463	0	0.06	0.01	0.05	0.07
H_MET	463	0	0.06	0.02	0.04	0.09
HCO3	0	463				
HCO316	46	417	45.43	84.32	0.49	475.20
HRDMD2_P	463	0	53.20	20.54	0.00	90.40
HYD_C	463	0	2.39	0.91	1.00	4.00
HYDRO_A	463	0	6.57	16.30	0.00	100.00
HYDRO_B	463	0	3.40	12.13	0.00	79.00
HYDRO_C	463	0	66.48	23.12	0.00	100.00
HYDRO_D	463	0	2.32	5.87	0.00	43.00
HYDTYP1	463	0	0.07	0.25	0.00	1.00
HYDTYP2	463	0	0.70	0.46	0.00	1.00
HYDTYP3	463	0	0.22	0.42	0.00	1.00
H16	46	417	6.68	9.05	0.02	38.90
INL	463	0	2.27	4.67	0.00	37.33
INLET_N	12	451	1.25	0.75	0.00	3.00
INLETS	463	0	0.29	0.61	0.00	5.00
INLL	463	0	0.10	0.33	0.00	3.00
K	113	350	6.96	4.87	2.00	41.00
K16	46	417	6.48	2.60	1.56	13.22
LAKE_A	463	0	17.51	45.97	2.50	788.80
LAKE_DEV	463	0	1.41	0.46	1.00	6.13
LAKE_E	463	0	587.04	115.66	173.74	1129.28
LAKE_ELV	46	417	581.12	104.94	328.00	812.00
LAKE_EMX	463	0	756.96	171.59	338.33	1628.85
LAKE_SIZ	46	417	19.17	15.41	1.70	77.80
LAKE_V	235	228	1.49	8.37	0.01	125.42
LAKE_VOL	46	417	0.55	0.64	0.00	2.92

SUMMARY STATISTICS FOR I23 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
LAT_DEC	463	0	43.85	0.31	43.18	44.47
LIME1	12	451	1973.08	6.88	1953.00	1979.00
LIME2	12	451	1975.33	7.91	1953.00	1982.00
LOG_AL_P	463	0	23.59	37.94	0.00	100.00
LOG_S_P	463	0	16.84	34.00	0.00	100.00
LOG_SH_P	463	0	3.59	16.25	0.00	100.00
LON_DEC	463	0	74.45	0.40	73.51	75.16
MACID_PL	463	0	24.19	89.01	0.00	1149.00
MACID_PP	463	0	2.44	8.60	0.00	88.20
MACID_PW	463	0	1.06	2.35	0.00	16.20
MAXDPTH	234	229	8.14	5.90	0.60	46.00
MEANCOLR	98	365	1.98	1.13	1.00	4.00
MEANDPTH	72	391	3.87	2.83	0.30	15.90
MEANPHC	214	249	5.71	0.92	4.26	7.55
MEAN5MC	208	255	5.76	0.98	4.30	7.60
MEAN5YR	110	353	5.55	0.86	4.00	7.50
MG	113	350	34.53	24.02	15.00	247.00
MG16	46	417	38.94	45.53	13.24	312.59
MIXED2_P	463	0	23.96	15.40	0.00	81.70
MN	113	350	37.49	24.40	0.00	132.00
MN11	46	417	27.95	19.31	0.00	79.00
NA	112	351	29.05	36.94	10.00	313.00
NACID_PL	463	0	43.25	80.01	0.00	716.70
NACID_PP	463	0	12.22	20.97	0.00	100.00
NACID_PW	463	0	2.30	3.40	0.00	22.20
NA11	46	417	1.28	3.14	0.36	21.11
NH416	46	417	2.36	2.44	0.05	14.91
NONFR2_P	463	0	0.15	0.71	0.00	9.10
NO3	113	350	15.70	14.50	0.00	51.00
NO3_CONC	463	0	1.61	0.22	1.29	1.93
NO3_WET	463	0	1.85	0.47	1.10	2.69
NO316	46	417	2.64	4.01	0.00	18.03
OM_H_P	463	0	71.07	21.99	0.00	100.00
OPEN_P	463	0	1.09	7.05	0.00	80.40
ORG_MAT	463	0	3.52	1.05	1.87	11.01
OTHER_PL	463	0	16.61	76.53	0.00	1313.30
OTHER_PP	463	0	2.36	11.17	0.00	97.50
OTHER_PW	463	0	0.62	1.70	0.00	18.30
OUT	463	0	2.60	3.32	0.00	19.33
OUTL	463	0	0.24	0.42	0.00	1.00
OUTLET_N	21	442	1.00	0.45	0.00	2.00
OUTLETS	463	0	0.93	0.28	0.00	2.00
PERIMETR	463	0	1839.82	2080.52	254.00	31607.16
PH	113	350	5.35	0.76	4.30	7.31

SUMMARY STATISTICS FOR I23 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
PH_CACL	463	0	4.16	0.20	3.85	5.15
PH_H2O	463	0	4.74	0.21	4.40	5.72
PH_L_P	463	0	61.86	23.14	0.00	100.00
PH_M	234	229	5.79	0.92	4.31	7.55
PH_N	249	214	1.24	0.64	0.00	4.00
PH_TOP	46	417	5.50	0.88	4.18	7.40
PH_VL_P	463	0	28.21	17.66	0.00	62.00
PHC_L_P	463	0	75.98	17.51	0.00	100.00
PHC_VL_P	462	1	69.47	19.26	8.90	100.00
PHEQ11	46	417	5.98	1.05	4.46	7.97
PHSTVL	46	417	5.73	0.84	4.48	7.17
PPT	463	0	113.20	18.14	77.37	164.14
PTL11	46	417	4.50	7.55	0.00	49.80
RCLM1	53	410	1960.98	10.18	1930.00	1984.00
RCLM2	53	410	1963.62	10.67	1930.00	1984.00
RELIEF	463	0	169.92	137.94	18.29	1021.99
RELIEF_R	463	0	14.72	7.17	2.74	50.93
ROCK_P	463	0	19.11	14.90	0.00	57.80
ROCK1_P	463	0	12.47	31.61	0.00	100.00
ROCK12_P	463	0	97.81	13.09	0.00	100.00
ROCK2_P	463	0	85.34	33.83	0.00	100.00
ROCK3_P	463	0	0.89	8.16	0.00	100.00
ROCK4_P	463	0	1.30	9.81	0.00	100.00
RT	44	419	0.48	0.60	0.01	3.65
RUNOFF	463	0	60.70	13.02	25.40	76.20
SERIES_A	463	0	212.55	421.95	9.00	4293.20
SHL1_B_P	463	0	47.06	29.04	0.00	100.00
SHL1_P_P	463	0	53.79	26.97	0.00	100.00
SHL1_R_P	463	0	51.89	28.29	0.00	100.00
SHL1_Z_P	463	0	53.79	26.97	0.00	100.00
SHL2_B_P	463	0	47.06	29.04	0.00	100.00
SHL2_P_P	463	0	90.01	20.78	0.00	100.00
SHL2_R_P	463	0	63.42	27.46	0.00	100.00
SHL2_Z_P	463	0	90.01	20.78	0.00	100.00
SIO211	46	417	2.10	1.47	0.09	7.04
SLOPE	142	321	-0.04	0.28	-1.27	0.62
SLOPE_AV	463	0	6.99	3.41	1.00	22.00
SLOPE_MX	463	0	17.06	8.57	2.00	46.00
SLOPE_N	142	321	3.46	1.56	2.00	8.00
SLOPE_Y	142	321	28.68	12.01	10.00	50.00
SLOPE_15	463	0	35.20	27.05	0.00	98.10
SLOPE_25	463	0	11.14	16.13	0.00	84.00
SO4	113	350	145.81	72.99	-27.00	792.00
SO4_CONC	463	0	2.51	0.21	2.14	2.89

SUMMARY STATISTICS FOR I23 (continued)

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
SO4_NO3	463	0	0.09	0.02	0.06	0.14
SO4_WET	463	0	2.88	0.67	1.85	4.49
SO416	46	417	121.23	15.73	78.28	156.61
STDECLIN	145	318	1.48	2.12	0.00	9.00
STEEPM_P	463	0	54.11	27.17	0.00	100.00
STEEPV_P	463	0	11.68	17.97	0.00	87.70
STLOST	145	318	1.18	1.84	0.00	9.00
STOK	145	318	4.88	3.45	0.00	9.00
STONEY_P	463	0	50.84	33.42	0.00	100.00
SUBSET	463	0	4.73	2.32	1.00	9.00
SUMBSE	463	0	2.91	2.14	1.28	17.76
SUMCAT	463	0	25.15	2.98	16.37	30.86
TEMP	14	449	16.83	3.56	11.10	22.77
TEMP_M	80	383	21.81	2.54	13.90	27.20
TEMP_N	249	214	0.39	0.61	0.00	3.00
TMPTOP	46	417	11.92	0.98	9.40	13.90
TURVAL	46	417	0.47	0.33	0.00	1.60
VACID_PL	463	0	126.66	261.51	0.00	2672.00
VACID_PP	463	0	22.68	31.69	0.00	100.00
VACID_PW	463	0	7.77	10.22	0.00	63.60
WALA	46	417	13.65	10.35	2.32	46.00
WTLND_PL	463	0	210.72	366.39	0.00	3248.00
WTLND_PP	463	0	39.70	33.20	0.00	100.00
WTLND_PW	463	0	11.75	10.97	0.00	63.60
WTRSHD_A	463	0	213.23	423.45	9.00	4293.20
WTRSHD_R	463	0	20.18	32.77	3.00	459.40
ZN	113	350	19.25	10.56	0.00	51.00

SOURCE DATA SETS FOR I23

Variable	Source data set	Calculation
ACID_EX	I05D	
ACID_P	I06D,I01	ACID_A*100/WTRSHD_A
AL	I18	
ALEX11	I20	
ALK	I18	
ALK_C	I18	
ALK_M	I19	
ALK_N	I19	
ALKA11	I20	
ALTL11	I20	
ASPECT	I14	
ASPECT_N	I14,I01	SUM(A1,A2,A8)*100/DRAIN_A
ASPECT_S	I14,I01	SUM(OF A4-A6)*100/DRAIN_A
AWD1	I18	set to 1 to indicate pond contained in I18
AWD2	I19	set to 1 to indicate pond contained in I19
AWD3	I20	set to 1 to indicate pond contained in I20
BSA_L_P	I06D,I01	BSA_L_A*100/WTRSHD_A
BSA_M_P	I06D,I01	BSA_M_A*100/WTRSHD_A
BSAT_N	I05D	
BSAT_S	I05D	
BSC_L_P	I06D,I01	BSC_L_A*100/WTRSHD_A
BSC_M_P	I06D,I01	BSC_M_A*100/WTRSHD_A
BURNED_P	I02B,I01	BURNED_A*100/WTRSHD_A
BVRINDEX	I12	
CA	I18	
CA_M	I19	
CA_N	I19	
CABIN_45	I02C	
CABIN_78	I02C	
CABN78_R	I02C,I01	CABIN_78/LAKE_A
CA16	I20	
CEC	I05D	
CEC_L_P	I06D,I01	CEC_L_A*100/WTRSHD_A
CECS_L_P	I06D,I01	CECS_L_A*100/WTRSHD_A
CL	I18	
CLAY	I05D	
CL16	I20	
COLVAL	I20	
COMST_C	I19	
COMTYP_C	I19	
CON_60	I20	
COND	I18	
COND_M	I19	
COND_N	I19	
CONFR2_P	I03,I01	CONFR_A*100/WTRSHD_A
COUNTY	I01	

SOURCE DATA SETS FOR I23 (continued)

Variable	Source data set	Calculation
CO316	I20	
DENUDE_P	I02B,I01	DENUDE_A*100/WTRSHD_A
DISTRB_P	I02B,I01	DISTRB_A*100/WTRSHD_A
DO	I18	
DO_M	I19	
DO_N	I19	
DOC11	I20	
DPTH_B_L	I24	
DPTH_B_U	I24	
DPTH_P_L	I24	
DPTH_P_U	I24	
DPTH_R_L	I24	
DPTH_R_U	I24	
DRAIN_A	I01	
EBS_L_P	I06D,I01	EBS_L_A*100/WTRSHD_A
ELEV_AVE	I15	
ELEV_600	I15,I01	SUM(OF E40-E101)*100/DRAIN_A
FE	I18	
FE11	I20	
FTL16	I20	
G_TMBR_P	I02B,I01	G_TMBR_A*100/WTRSHD_A
H_CONC	I16	
H_WET	I16	
HCO3	I18	
HCO316	I20	
HRDWD2_P	I03,I01	HRDWD_A*100/WTRSHD_A
HYD_C	I23	
HYDRO_A	I24	
HYDRO_B	I24	
HYDRO_C	I24	
HYDRO_D	I24	
HYDTYP1	I23	
HYDTYP2	I23	
HYDTYP3	I23	
H16	I20	
INL	I12	
INLET_N	I20	
INLETS	I01	
INLL	I12	
K	I18	
K16	I20	
LAKE_A	I01	
LAKE_DEV	I01	
LAKE_E	I01	
LAKE_ELV	I20	
LAKE_ID	I20	

SOURCE DATA SETS FOR I23 (continued)

Variable	Source data set	Calculation
LAKE_NM	I01	
LAKE_SIZ	I20	
LAKE_V	I01	
LAKE_VOL	I20	
LAT_DEC	I01	
LAT_DMS	I01	
LIME1	I01	
LIME2	I01	
LKCHN_C	I01	
LOG_AL_P	I02B,I01	LOG_AL_A*100/WTRSHD_A
LOG_S_P	I02B,I01	LOG_S_A*100/WTRSHD_A
LOG_SH_P	I02B,I01	LOG_SH_A*100/WTRSHD-A
LON_DEC	I01	
LON_DMS	I01	
MACID_PL	I09,I01	MACID_A*100/LAKE_A
MACID_PP	I09,I01	MACID_A*100/PERIMETR*
MACID_PW	I09,I01	MACID_A*100/WTRSHD_A
MAXDPTH	I01	
MEANCOLR	I19	
MEANDPTH	I01	
MEANPHC	I19	
MEANSMC	I19	
MEANSYR	I19	
MG	I18	
MG16	I20	
MIXED2_P	I03,I01	MIXED_A*100/WTRSHD_A
MN	I18	
MN11	I20	
NA	I18	
NACID_PL	I09,I01	NACID_A*100/LAKE_A
NACID_PP	I09,I01	NACID_A*100/PERIMETR*
NACID_PW	I09,I01	NACID_A*100/WTRSHD_A
NA11	I20	
NH416	I20	
NONFR2_P	I03,I01	NONFR_A*100/WTRSHD_A
NO3	I18	
NO3_CONC	I16	
NO3_WET	I16	
NO316	I20	
OM_H_P	I06D,I01	OM_H_A*100/WTRSHD_A
OPEN_P	I02B,I01	OPEN_A*100/WTRSHD_A
ORG_MAT	I05D	
OTHER_PL	I09,I01	OTHER_A*100/LAKE_A
OTHER_PP	I09,I01	OTHER_A*100/PERIMETR*
OTHER_PW	I09,I01	OTHER_A*100/WTRSHD_A
OUT	I12	

SOURCE DATA SETS FOR I23 (continued)

Variable	Source data set	Calculation
OUTL	I12	
OUTLET_N	I20	
OUTLETS	I01	
PERIMETR	I01	
PH	I18	
PH_C	I18	
PH_CACL	I05D	
PH_H2O	I05D	
PH_L_P	I06D,I01	PH_L_A*100/WTRSHD_A
PH_M	I19	
PH_N	I19	
PH_TOP	I20	
PH_VL_P	I06D,I01	PH_VL_A*100/WTRSHD_A
PHC_L_P	I06D,I01	PHC_L_A*100/WTRSHD_A
PHC_VL_P	I06D,I01	PHC_VL_A*100/WTRSHD_A
PHEQ11	I20	
PHSTVL	I20	
POND_NO	all	
PPT	I16	
PTL11	I20	
QUAD	I01	
RCLM1	I01	
RCLM2	I01	
REG_SPC	I20	
RELIEF	I01	
RELIEF_R	I01	
ROCK_P	I24	
ROCK1_P	I17,I01	ROCK1_A*100/DRAIN_A
ROCK12_P	I17,I01	SUM(ROCK1_A,ROCK2_A)*100/DRAIN_A
ROCK2_P	I17,I01	ROCK2_A*100/DRAIN_A
ROCK3_P	I17,I01	ROCK3_A*100/DRAIN_A
ROCK4_P	I17,I01	ROCK4_A*100/DRAIN_A
RT	I20	
RUNOFF	I25	
SERIES_A	I24	
SHL1_B_P	I24	
SHL1_P_P	I24	
SHL1_R_P	I24	
SHL1_Z_P	I24	
SHL2_B_P	I24	
SHL2_P_P	I24	
SHL2_R_P	I24	
SHL2_Z_P	I24	
SI0211	I20	
SLOPE	I19	

SOURCE DATA SETS FOR I23 (continued)

Variable	Source data set	Calculation
SLOPE_AV	I13	
SLOPE_MX	I13	
SLOPE_N	I19	
SLOPE_Y	I19	
SLOPE_15	I13,I01	SUM(OF S8-S46)*100/DRAIN_A
SLOPE_25	I13,I01	SUM(OF S14-S46)*100/DRAIN_A
SLSTAT_C	I19	
SO4	I18	
SO4_CONC	I16	
SO4_NO3	I16	SO4_WET/48 + NO3_WET/62
SO4_WET	I16	
SO416	I20	
STATE	I01	
STDECLIN	I19	
STEEPM_P	I24	
STEEPV_P	I24	
STLOST	I19	
STOK	I19	
STONEY_P	I24	
STPROB_C	I19	
STSTCK_C	I19	
SUBSET	I23	
SUMBSE	I05D	
SUMCAT	I05D	
TEMP	I18	
TEMP_M	I19	
TEMP_N	I19	
TMPTOP	I20	
TURVAL	I20	
VACID_PL	I09,I01	VACID_A*100/LAKE_A
VACID_PP	I09,I01	VACID_A*100/PERIMETR*
VACID_PW	I09,I01	VACID_A*100/WTRSHD_A
WALA	I20	
WATERSHD	I01	
WTLND_PL	I09,I01	WTLND_A*100/LAKE_A
WTLND_PP	I09,I01	WTLND_A*100/PERIMETR*
WTLND_PW	I09,I01	WTLND_A*100/WTRSHD_A
WTRSHD_A	I01	
WTRSHD_E	I01	
WTRSHD_R	I01	
ZN	I18	

*For 33 ponds, WTLND_L (contact length between wetland and pond) from I09 was used instead of PERIMETR (lake perimeter) because WTLND_L was greater than PERIMETR due to differences in scale.

AWD Contents for Data Set: I24 - SOIL-RELATED WATERSHED CHARACTERISTICS

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): C.C. Brandt, R.S. Turner

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 26
Data Set Type: Single
Update dates:

Description:

This data set contains soil-related watershed characteristics derived from the SCS Soils-5 file and the soil mapping unit areas file (I04).

Reference(s):

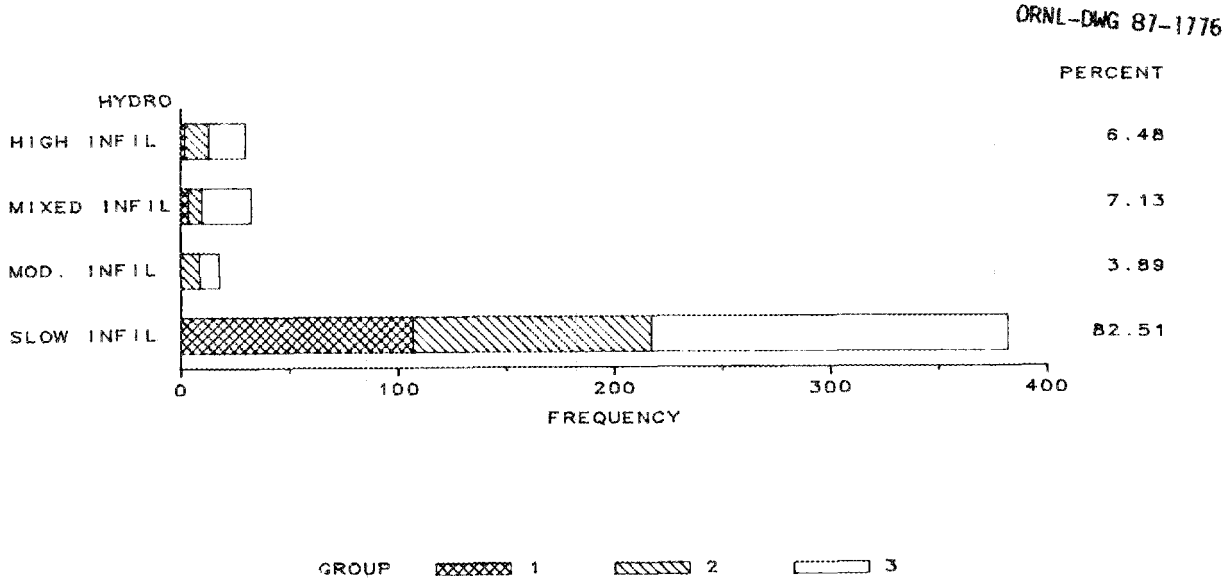
Turner, R.S., R.J. Olson, and C.C. Brandt. 1986. Areas having soil characteristics that may indicate sensitivity to acidic deposition under alternative forest damage hypotheses. ORNL/TM-9917. Oak Ridge National Laboratory, Oak Ridge, Tenn.

Brandt, C.C., R.S. Turner, and R.J. Olson. An integrated soils and land use/cover data base for the Eastern United States: Attribute and mapping information for regional acidic deposition studies. ORNL/TM-10215. Oak Ridge National Laboratory, Oak Ridge, Tenn. (in prep.).

Variable	Label		Type	Len.	Format	Codefmt.
DPTH_B_L	MEAN DEPTH TO BEDROCK - LOWER	CM	NUM	8	F6.	
DPTH_B_U	MEAN DEPTH TO BEDROCK - UPPER	CM	NUM	8	F6.	
DPTH_P_L	MEAN DEPTH TO LOW PERM. LAYER - LOWER	CM	NUM	8	F6.	
DPTH_P_U	MEAN DEPTH TO LOW PERM. LAYER - UPPER	CM	NUM	8	F6.	
DPTH_R_L	MEAN DEPTH TO ROOT RES. LAYER - LOWER	CM	NUM	8	F6.	
DPTH_R_U	MEAN DEPTH TO ROOT RES. LAYER - UPPER	CM	NUM	8	F6.	
HYDRO_A	HIGH INFILTRAION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_B	MOD. INFILTRATION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_C	SLOW INFILTRATION RATE	%WTRSHD	NUM	8	F6.1	
HYDRO_D	VERY SLOW INFILTRATION	%WTRSHD	NUM	8	F6.1	
MARSH_A	MARSH AREA	HA	NUM	8	F7.1	
POND_NO	POND NUMBER		CHAR	7		
ROCK_P	ROCK OUTCROPS	%WTRSHD	NUM	8	F6.1	
SERIES_A	WATERSHED AREA (-WATER,MARSH)	HA	NUM	8	F7.1	
SERIES_N	NUMBER OF SOIL SERIES		NUM	8	F2.	
SHL1_B_P	DEPTH TO BEDROCK <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_P_P	DEPTH TO LOW PERM. <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_R_P	DEPTH TO RESTR. <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL1_Z_P	SHALLOW SOILS <= 50 CM	%WTRSHD	NUM	8	F6.1	
SHL2_B_P	DEPTH TO BEDROCK <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_P_P	DEPTH TO LOW PERM. <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_R_P	DEPTH TO ROOT RESTR. <= 100 CM	%WTRSHD	NUM	8	F6.1	
SHL2_Z_P	SHALLOW SOILS <= 100 CM	%WTRSHD	NUM	8	F6.1	
STEEPM_P	MODERATELY STEEP SOILS	%WTRSHD	NUM	8	F6.1	
STEEPV_P	VERY STEEP SOILS	%WTRSHD	NUM	8	F6.1	
STONEY_P	STONEY SOILS	%WTRSHD	NUM	8	F6.1	

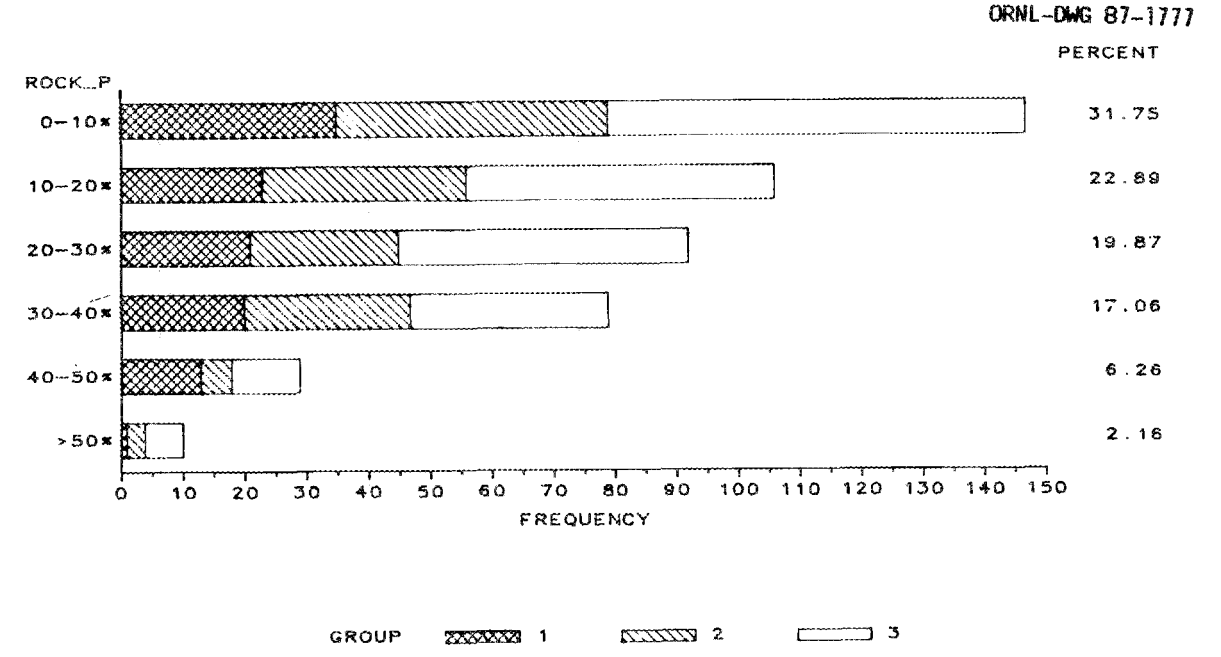
SUMMARY STATISTICS FOR I24

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
DPTH_B_L	463	0	94.88	36.36	21.43	152.40
DPTH_B_U	463	0	87.78	40.26	10.72	152.40
DPTH_P_L	463	0	89.47	33.68	21.43	152.40
DPTH_P_U	463	0	50.82	26.42	10.72	152.40
DPTH_R_L	463	0	90.66	34.66	21.43	152.40
DPTH_R_U	463	0	71.57	36.58	10.72	152.40
HYDRO_A	463	0	6.57	16.30	0.00	100.00
HYDRO_B	463	0	3.40	12.13	0.00	79.00
HYDRO_C	463	0	66.48	23.12	0.00	100.00
HYDRO_D	463	0	2.32	5.87	0.00	43.00
MARSH_A	4	459	77.92	83.72	16.19	200.93
ROCK_P	463	0	19.11	14.90	0.00	57.80
SERIES_A	463	0	212.55	421.95	9.00	4293.20
SERIES_N	463	0	7.57	4.24	1.00	39.00
SHL1_B_P	463	0	47.06	29.04	0.00	100.00
SHL1_P_P	463	0	53.79	26.97	0.00	100.00
SHL1_R_P	463	0	51.89	28.29	0.00	100.00
SHL1_Z_P	463	0	53.79	26.97	0.00	100.00
SHL2_B_P	463	0	47.06	29.04	0.00	100.00
SHL2_P_P	463	0	90.01	20.78	0.00	100.00
SHL2_R_P	463	0	63.42	27.46	0.00	100.00
SHL2_Z_P	463	0	90.01	20.78	0.00	100.00
STEEPM_P	463	0	54.11	27.17	0.00	100.00
STEEPV_P	463	0	11.68	17.97	0.00	87.70
STONEY_P	463	0	50.84	33.42	0.00	100.00



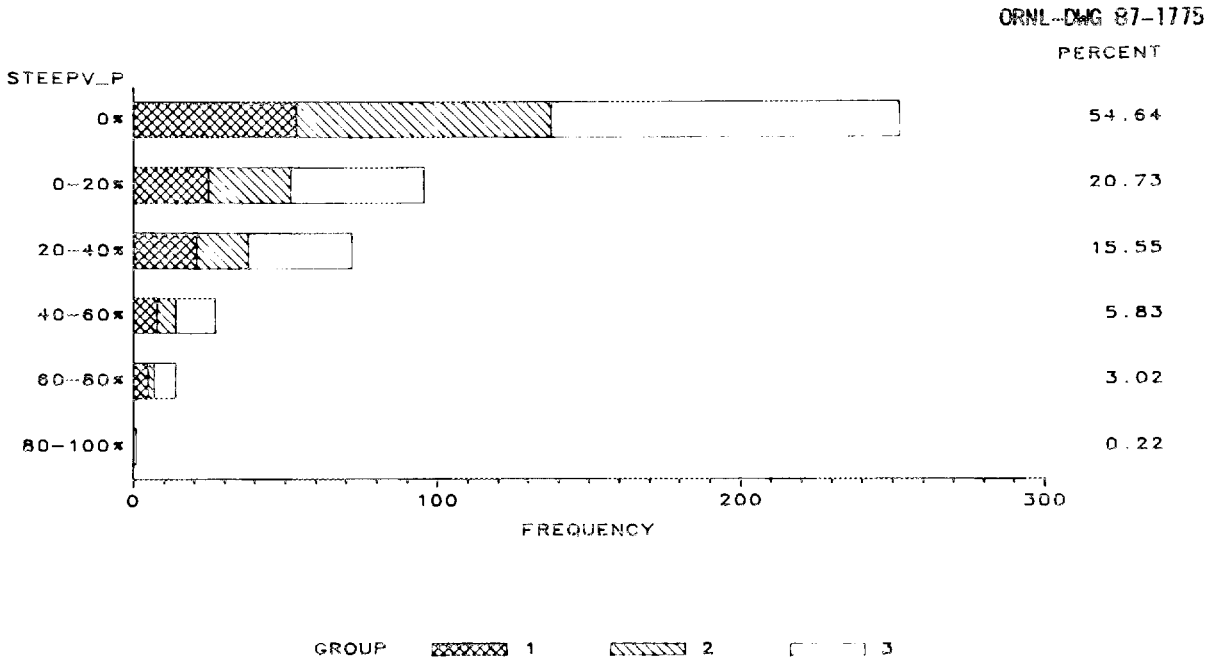
1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I24.1. Frequency distribution of hydrologic group for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I24.2. Frequency distribution of percentage of the watershed in rock outcrops for selected watersheds in the Adirondack region.



1 - Lakes (121) measured in 1975 (Schofield 1976b) and possibly afterwards
2 - Lakes (135) measured between 1975 and 1984 one or more times
3 - Lakes (207) without water chemistry measurements

Fig. I24.3. Frequency distribution of percentage of the watershed in soils with very steep slopes for selected watersheds in the Adirondack region.

AWD Contents for Data Set: I25 - ANNUAL RUNOFF

Year(s):
Geocoverage: Adirondacks
Number of Records: 463
Created/Updated: 01MAR86
Date Released: 01MAY86
Compiler(s): P.R. Coleman

Temporal Resolution:
Spatial Resolution: Watershed
Variables per Record: 2
Data Set Type: Single
Update dates:

Description:
This data set contains annual runoff for each watershed.

Reference(s):
Busby, M.W. 1966. Annual runoff in the conterminous United States. IN: Hydrologic Investigations, Atlas HA-212. Geological Survey, U.S. Dept. of Interior, Reston, VA.

Variable	Label		Type	Len.	Format	Codefmt.
POND_NO	POND NUMBER		CHAR	7		
RUNOFF	ANNUAL RUNOFF	CM	NUM	4	F5.1	

SUMMARY STATISTICS FOR I25

Variable	N	Missing	Mean	Std. Dev.	Minimum	Maximum
RUNOFF	463	0	60.70	13.02	25.40	76.20

APPENDIX B

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
ACID_A	I06A	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA
ACID_A	I06B	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA
ACID_A	I06C	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA
ACID_A	I06D	EXTRACT. ACIDITY > 20 MEQ/100G, AREA	HA
ACID_C	I10	ACIDIFICATION CLASS - SUNY/P	CODE
ACID_EX	I05A	MEAN EXTRACTABLE ACIDITY	MEQ/100 G
ACID_EX	I05B	MEAN EXTRACTABLE ACIDITY	MEQ/100 G
ACID_EX	I05C	MEAN EXTRACTABLE ACIDITY	MEQ/100 G
ACID_EX	I05D	MEAN EXTRACTABLE ACIDITY	MEQ/100 G
ACID_EX	I23	MEAN EXTRACTABLE ACIDITY	MEQ/100 G
ACID_P	I23	EXTRACT. ACIDITY > 20 MEQ/100G	%T.WTRSHD
ACID_1	I07	EXTRACT. ACIDITY - HYPOTH 1	MEQ/100 G
ACID_2	I07	EXTRACT. ACIDITY - HYPOTH 2	MEQ/100 G
ACID_3	I07	EXTRACT. ACIDITY - HYPOTH 3	MEQ/100 G
ACID_4	I07	EXTRACT. ACIDITY - HYPOTH 4	MEQ/100 G
AL	I18	DISSOLVED ALUMINUM AS AL	UG/L
AL	I23	DISSOLVED ALUMINUM AS AL	UG/L
ALEX11	I20	EXT. ALUMINUM	UG/L
ALEX11	I23	EXT. ALUMINUM	UG/L
ALK	I18	TOTAL ALKALINITY	UEQ/L
ALK	I23	TOTAL ALKALINITY	UEQ/L
ALK_C	I18	ALKALINITY METHOD	CODE
ALK_C	I23	ALKALINITY METHOD	CODE
ALK_M	I19	MEAN TOTAL ALK. (74-83 SUMMER)	UEQ/L
ALK_M	I23	MEAN TOTAL ALK. (74-83 SUMMER)	UEQ/L
ALK_N	I19	NO. OF OBSERVATIONS IN ALK_M	
ALK_N	I23	NO. OF OBSERVATIONS IN ALK_M	
ALKA11	I20	ALKALINITY	UEQ/L
ALKA11	I23	ALKALINITY	UEQ/L
ALTL11	I20	TOTAL ALUMINUM	UG/L
ALTL11	I23	TOTAL ALUMINUM	UG/L
AREA_P	I07	SOIL SERIES AREA	%MAPPING UNIT
ASPECT	I14	DOMINANT ASPECT-NORTH, SOUTH, EAST, WEST	
ASPECT	I23	DOMINANT ASPECT-NORTH, SOUTH, EAST, WEST	
ASPECT_N	I23	NORTHERN ASPECT	%WTRSHD
ASPECT_S	I23	SOUTHERN ASPECT	%WTRSHD
ASPEN_A	I02A	ASPEN-GRAY BIRCH AREA	HA
AVAIL_C	I02A	DATA AVAILABILITY	CODE
AWD1	I23	1 = DATA FROM FIN - SCHOFIELD LAKES	
AWD2	I23	1 = DATA FROM FIN	
AWD3	I23	1 = DATA FROM NSWS	
A1	I14	AREA IN NORTH ASPECT	HA
A2	I14	AREA IN NORTHEAST ASPECT	HA
A3	I14	AREA IN EAST ASPECT	HA
A4	I14	AREA IN SOUTHEAST ASPECT	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
A5	I14	AREA IN SOUTH ASPECT	HA
A6	I14	AREA IN SOUTHWEST ASPECT	HA
A7	I14	AREA IN WEST ASPECT	HA
A8	I14	AREA IN NORTHWEST ASPECT	HA
BARREN_A	I03	BARREN AREA	HA
BIRCH_A	I02A	WHITE BIRCH AREA	HA
BRUSH_A	I03	BRUSH AREA	HA
BSA_L_A	I06A	BASE SAT. (NH4OAC) <= 20%, AREA	HA
BSA_L_A	I06B	BASE SAT. (NH4OAC) <= 20%, AREA	HA
BSA_L_A	I06C	BASE SAT. (NH4OAC) <= 20%, AREA	HA
BSA_L_A	I06D	BASE SAT. (NH4OAC) <= 20%, AREA	HA
BSA_L_P	I23	BASE SAT. (NH4OAC) <= 20%	%T.WTRSHD
BSA_M_A	I06A	BASE SAT. (NH4OAC) 20-60%, AREA	HA
BSA_M_A	I06B	BASE SAT. (NH4OAC) 20-60%, AREA	HA
BSA_M_A	I06C	BASE SAT. (NH4OAC) 20-60%, AREA	HA
BSA_M_A	I06D	BASE SAT. (NH4OAC) 20-60%, AREA	HA
BSA_M_P	I23	BASE SAT. (NH4OAC) 20-60%	%T.WTRSHD
BSAT_N	I05A	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G
BSAT_N	I05B	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G
BSAT_N	I05C	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G
BSAT_N	I05D	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G
BSAT_N	I23	MEAN BASE SATURATION (NH4OAC)	MEQ/100 G
BSAT_S	I05A	MEAN BASE SATURATION (SUM)	MEQ/100 G
BSAT_S	I05B	MEAN BASE SATURATION (SUM)	MEQ/100 G
BSAT_S	I05C	MEAN BASE SATURATION (SUM)	MEQ/100 G
BSAT_S	I05D	MEAN BASE SATURATION (SUM)	MEQ/100 G
BSAT_S	I23	MEAN BASE SATURATION (SUM)	MEQ/100 G
BSATN_1	I07	BASE SAT. (NH4OAC) - HYPOTH 1	MEQ/100 G
BSATN_2	I07	BASE SAT. (NH4OAC) - HYPOTH 2	MEQ/100 G
BSATN_3	I07	BASE SAT. (NH4OAC) - HYPOTH 3	MEQ/100 G
BSATN_4	I07	BASE SAT. (NH4OAC) - HYPOTH 4	MEQ/100 G
BSATS_1	I07	BASE SAT. (SUM) - HYPOTH 1	MEQ/100 G
BSATS_2	I07	BASE SAT. (SUM) - HYPOTH 2	MEQ/100 G
BSATS_3	I07	BASE SAT. (SUM) - HYPOTH 3	MEQ/100 G
BSATS_4	I07	BASE SAT. (SUM) - HYPOTH 4	MEQ/100 G
BSC_L_A	I06A	BASE SAT. (SUM) <= 20%, AREA	HA
BSC_L_A	I06B	BASE SAT. (SUM) <= 20%, AREA	HA
BSC_L_A	I06C	BASE SAT. (SUM) <= 20%, AREA	HA
BSC_L_A	I06D	BASE SAT. (SUM) <= 20%, AREA	HA
BSC_L_P	I23	BASE SAT. (SUM) <= 20%	%T.WTRSHD
BSC_M_A	I06A	BASE SAT. (SUM) 20-60%, AREA	HA
BSC_M_A	I06B	BASE SAT. (SUM) 20-60%, AREA	HA
BSC_M_A	I06C	BASE SAT. (SUM) 20-60%, AREA	HA
BSC_M_A	I06D	BASE SAT. (SUM) 20-60%, AREA	HA
BSC_M_P	I23	BASE SAT. (SUM) 20-60%	%T.WTRSHD
BURNED_A	I02B	BURNED AREA	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label
BURNED_P	I23	BURNED AREA %T.WTRSHD
BURNED_Y	I02B	BURNED YEAR
BVRINDEX	I12	(INL+INLL+OUT+OUTL)/LAKE_A, 68 & 78 DATA
BVRINDEX	I23	(INL+INLL+OUT+OUTL)/LAKE_A, 68 & 78 DATA
CA	I18	DISSOLVED CALCIUM UEQ/L
CA	I23	DISSOLVED CALCIUM UEQ/L
CA_M	I19	MEAN DISSOLVED CA (74-83 SUMMER) UEQ/L
CA_M	I23	MEAN DISSOLVED CA (74-83 SUMMER) UEQ/L
CA_N	I19	NO. OF OBSERVATIONS IN CA_M
CA_N	I23	NO. OF OBSERVATIONS IN CA_M
CABIN_45	I02C	NO. OF CABINS, 1945/54 DATA
CABIN_45	I23	NO. OF CABINS, 1945/54 DATA
CABIN_78	I02C	NO. OF CABINS, 1978 DATA
CABIN_78	I23	NO. OF CABINS, 1978 DATA
CABN78_R	I23	CABIN_78 TO LAKE AREA RATIO
CA16	I20	CALCIUM UEQ/L
CA16	I23	CALCIUM UEQ/L
CEC	I05A	MEAN CATION EXCHANGE CAPACITY MEQ/100 G
CEC	I05B	MEAN CATION EXCHANGE CAPACITY MEQ/100 G
CEC	I05C	MEAN CATION EXCHANGE CAPACITY MEQ/100 G
CEC	I05D	MEAN CATION EXCHANGE CAPACITY MEQ/100 G
CEC	I23	MEAN CATION EXCHANGE CAPACITY MEQ/100 G
CEC_L_A	I06A	CATION EXC. CAP. <= 10 MEQ/100G, AREA HA
CEC_L_A	I06B	CATION EXC. CAP. <= 10 MEQ/100G, AREA HA
CEC_L_A	I06C	CATION EXC. CAP. <= 10 MEQ/100G, AREA HA
CEC_L_A	I06D	CATION EXC. CAP. <= 10 MEQ/100G, AREA HA
CEC_L_P	I23	CATION EXC. CAP. <=10 MEQ/100G %T.WTRSHD
CEC_1	I07	CATION EXC. CAP. - HYPOTH 1 MEQ/100 G
CEC_2	I07	CATION EXC. CAP. - HYPOTH 2 MEQ/100 G
CEC_3	I07	CATION EXC. CAP. - HYPOTH 3 MEQ/100 G
CEC_4	I07	CATION EXC. CAP. - HYPOTH 4 MEQ/100 G
CECS_L_A	I06A	SUM OF CATIONS <= 20 MEQ/100G, AREA HA
CECS_L_A	I06B	SUM OF CATIONS <= 20 MEQ/100G, AREA HA
CECS_L_A	I06C	SUM OF CATIONS <= 20 MEQ/100G, AREA HA
CECS_L_A	I06D	SUM OF CATIONS <= 20 MEQ/100G, AREA HA
CECS_L_P	I23	SUM OF CATIONS <=20 MEQ/100G %T.WTRSHD
CI	I00	CONFIDENCE INDEX
CL	I18	DISSOLVED CHLORIDE UEQ/L
CL	I23	DISSOLVED CHLORIDE UEQ/L
CLAY	I05A	MEAN CLAY CONTENT %HORIZON
CLAY	I05B	MEAN CLAY CONTENT %HORIZON
CLAY	I05C	MEAN CLAY CONTENT %HORIZON
CLAY	I05D	MEAN CLAY CONTENT %HORIZON
CLAY	I23	MEAN CLAY CONTENT %HORIZON
CLAY_1	I07	CLAY CONTENT - HYPOTH 1 %HORIZON
CLAY_2	I07	CLAY CONTENT - HYPOTH 2 %HORIZON

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
CLAY_3	I07	CLAY CONTENT - HYPOTH 3	%HORIZON
CLAY_4	I07	CLAY CONTENT - HYPOTH 4	%HORIZON
CL16	I20	CHLORIDE	UEQ/L
CL16	I23	CHLORIDE	UEQ/L
CODEFMT	G02	FORMAT USED WITH CODE VARIABLES	
CODEFMT	G03	FORMAT NAME	
COLVAL	I20	COLOR	PCU
COLVAL	I23	COLOR	PCU
COMMENTM	I22	COMMENTS ON MANAGEMENT	
COMMENTS	I21	COMMENTS	
COMPILER	G01	DATA COMPILER(S)	
COMST_C	I19	FISH COMMUNITY STATUS	CODE
COMST_C	I23	FISH COMMUNITY STATUS	CODE
COMTYP_C	I19	FISH COMMUNITY TYPE	CODE
COMTYP_C	I23	FISH COMMUNITY TYPE	CODE
CON_60	I20	CONDUCTIVITY AT .6*DEPTH	US
CON_60	I23	CONDUCTIVITY AT .6*DEPTH	US
COND	I18	CONDUCTIVITY AT 25 DEG C	UMHOS/CM
COND	I23	CONDUCTIVITY AT 25 DEG C	UMHOS/CM
COND_M	I19	MEAN COND. - 25C (74-83 SUMMER)	UMHOS/CM
COND_M	I23	MEAN COND. - 25C (74-83 SUMMER)	UMHOS/CM
COND_N	I19	NO. OF OBSERVATIONS IN COND_M	
COND_N	I23	NO. OF OBSERVATIONS IN COND_M	
CONFR_A	I03	CONIFER AREA	HA
CONFR2_P	I23	CONIFER AREA	%T.WTRSHD
COUNTY	I00	FIPS COUNTY NUMBER	
COUNTY	I01	FIPS COUNTY NUMBER	
COUNTY	I23	FIPS COUNTY NUMBER	
CO316	I20	CARBONATE ALKALINITY	UEQ/L
CO316	I23	CARBONATE ALKALINITY	UEQ/L
CREATED	G01	DATE CREATED	
CRSE_C	I07	COARSENESS CLASS	CODE
DAMS_BRC	I11	NO. OF BREACHED BEAVER DAMS	
DAMS_BVR	I11	NO. OF BEAVER DAMS	
DAMS_DST	I11	DISTANCE FROM POND TO NEAREST DAM	KM
DAMS_MAN	I11	NO. OF MANMADE DAMS	
DAMS_UNB	I11	NO. OF UNBREACHED BEAVER DAMS	
DATEM	I22	DATE ON WHICH MANAGEMENT WAS EMPLOYED	
DEC_ID	I00	DEC ID NUMBER ASSIGNED BY ORNL	
DENUDE_A	I02B	WASTE/DENUDED AREA	HA
DENUDE_P	I23	DENUDED AREA	%T.WTRSHD
DENUDE_Y	I02B	WASTE/DENUDED YEAR	
DISTRB_P	I23	LOGGED, BURNED, DENUDED	%T.WTRSHD
DO	I18	DISSOLVED OXYGEN	MG/L
DO	I23	DISSOLVED OXYGEN	MG/L
DO_M	I19	MEAN DISSOLVED O2 (74-83 SUMMER)	MG/L

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
DO_M	I23	MEAN DISSOLVED O2 (74-83 SUMMER)	MG/L
DO_N	I19	NO. OF OBSERVATIONS IN DO_M	
DO_N	I23	NO. OF OBSERVATIONS IN DO_M	
DOC11	I20	DOC-ANAL LAB	MG/L
DOC11	I23	DOC-ANAL LAB	MG/L
DPTH_B_L	I07	DEPTH TO BEDROCK - LOWER	CM
DPTH_B_L	I23	MEAN DEPTH TO BEDROCK - LOWER	CM
DPTH_B_L	I24	MEAN DEPTH TO BEDROCK - LOWER	CM
DPTH_B_U	I07	DEPTH TO BEDROCK - UPPER	CM
DPTH_B_U	I23	MEAN DEPTH TO BEDROCK - UPPER	CM
DPTH_B_U	I24	MEAN DEPTH TO BEDROCK - UPPER	CM
DPTH_P_L	I07	DEPTH TO LOW PERM. LAYER - LOWER	CM
DPTH_P_L	I23	MEAN DEPTH TO LOW PERM. LAYER - LOWER	CM
DPTH_P_L	I24	MEAN DEPTH TO LOW PERM. LAYER - LOWER	CM
DPTH_P_U	I07	DEPTH TO LOW PERM. LAYER - UPPER	CM
DPTH_P_U	I23	MEAN DEPTH TO LOW PERM. LAYER - UPPER	CM
DPTH_P_U	I24	MEAN DEPTH TO LOW PERM. LAYER - UPPER	CM
DPTH_R_L	I07	DEPTH TO ROOT RES. LAYER - LOWER	CM
DPTH_R_L	I23	MEAN DEPTH TO ROOT RES. LAYER - LOWER	CM
DPTH_R_L	I24	MEAN DEPTH TO ROOT RES. LAYER - LOWER	CM
DPTH_R_U	I07	DEPTH TO ROOT RES. LAYER - UPPER	CM
DPTH_R_U	I23	MEAN DEPTH TO ROOT RES. LAYER - UPPER	CM
DPTH_R_U	I24	MEAN DEPTH TO ROOT RES. LAYER - UPPER	CM
DRAIN_A	I01	DRAINAGE AREA	HA
DRAIN_A	I23	DRAINAGE AREA	HA
DS_NAME	G01	FULL DATASET NAME	
DSN	G01	DATA SET NUMBER	
DSN	G02	DATA SET NUMBER (MEMBER NAME)	
EBS_L_A	I06A	EXC. BASES <= 3 MEQ/100G, AREA	HA
EBS_L_A	I06B	EXC. BASES <= 3 MEQ/100G, AREA	HA
EBS_L_A	I06C	EXC. BASES <= 3 MEQ/100G, AREA	HA
EBS_L_A	I06D	EXC. BASES <= 3 MEQ/100G, AREA	HA
EBS_L_P	I23	EXC. BASES <=3 MEQ/100G	%T.WTRSHD
ELEV_AVE	I15	AVERAGE WATERSHED ELEVATION	M
ELEV_AVE	I23	AVERAGE WATERSHED ELEVATION	M
ELEV_MAX	I15	MAXIMUM WATERSHED ELEVATION	M
ELEV_MIN	I15	MINIMUM WATERSHED ELEVATION	M
ELEV_600	I23	ELEVATION > 600 METERS,	%WTRSHD
E1	I15	0-50 FT	HA
E2	I15	50-100 FT	HA
E3	I15	100-150 FT	HA
E4	I15	150-200 FT	HA
E5	I15	200-250 FT	HA
E6	I15	250-300 FT	HA
E7	I15	300-350 FT	HA
E8	I15	350-400 FT	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
E9	I15	400-450 FT	HA
E10	I15	450-500 FT	HA
E11	I15	500-550 FT	HA
E12	I15	550-600 FT	HA
E13	I15	600-650 FT	HA
E14	I15	650-700 FT	HA
E15	I15	700-750 FT	HA
E16	I15	750-800 FT	HA
E17	I15	800-850 FT	HA
E18	I15	850-900 FT	HA
E19	I15	900-950 FT	HA
E20	I15	950-1000 FT	HA
E21	I15	1000-1050 FT	HA
E22	I15	1050-1100 FT	HA
E23	I15	1100-1150 FT	HA
E24	I15	1150-1200 FT	HA
E25	I15	1200-1250 FT	HA
E26	I15	1250-1300 FT	HA
E27	I15	1300-1350 FT	HA
E28	I15	1350-1400 FT	HA
E29	I15	1400-1450 FT	HA
E30	I15	1450-1500 FT	HA
E31	I15	1500-1550 FT	HA
E32	I15	1550-1600 FT	HA
E33	I15	1600-1650 FT	HA
E34	I15	1650-1700 FT	HA
E35	I15	1700-1750 FT	HA
E36	I15	1750-1800 FT	HA
E37	I15	1800-1850 FT	HA
E38	I15	1850-1900 FT	HA
E39	I15	1900-1950 FT	HA
E40	I15	1950-2000 FT	HA
E41	I15	2000-2050 FT	HA
E42	I15	2050-2100 FT	HA
E43	I15	2100-2150 FT	HA
E44	I15	2150-2200 FT	HA
E45	I15	2200-2250 FT	HA
E46	I15	2250-2300 FT	HA
E47	I15	2300-2350 FT	HA
E48	I15	2350-2400 FT	HA
E49	I15	2400-2450 FT	HA
E50	I15	2450-2500 FT	HA
E51	I15	2500-2550 FT	HA
E52	I15	2550-2600 FT	HA
E53	I15	2600-2650 FT	HA
E54	I15	2650-2700 FT	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
E55	I15	2700-2750 FT	HA
E56	I15	2750-2800 FT	HA
E57	I15	2800-2850 FT	HA
E58	I15	2850-2900 FT	HA
E59	I15	2900-2950 FT	HA
E60	I15	2950-3000 FT	HA
E61	I15	3000-3050 FT	HA
E62	I15	3050-3100 FT	HA
E63	I15	3100-3150 FT	HA
E64	I15	3150-3200 FT	HA
E65	I15	3200-3250 FT	HA
E66	I15	3250-3300 FT	HA
E67	I15	3300-3350 FT	HA
E68	I15	3350-3400 FT	HA
E69	I15	3400-3450 FT	HA
E70	I15	3450-3500 FT	HA
E71	I15	3500-3550 FT	HA
E72	I15	3550-3600 FT	HA
E73	I15	3600-3650 FT	HA
E74	I15	3650-3700 FT	HA
E75	I15	3700-3750 FT	HA
E76	I15	3750-3800 FT	HA
E77	I15	3800-3850 FT	HA
E78	I15	3850-3900 FT	HA
E79	I15	3900-3950 FT	HA
E80	I15	3950-4000 FT	HA
E81	I15	4000-4050 FT	HA
E82	I15	4050-4100 FT	HA
E83	I15	4100-4150 FT	HA
E84	I15	4150-4200 FT	HA
E85	I15	4200-4250 FT	HA
E86	I15	4250-4300 FT	HA
E87	I15	4300-4350 FT	HA
E88	I15	4350-4400 FT	HA
E89	I15	4400-4450 FT	HA
E90	I15	4450-4500 FT	HA
E91	I15	4500-4550 FT	HA
E92	I15	4550-4600 FT	HA
E93	I15	4600-4650 FT	HA
E94	I15	4650-4700 FT	HA
E95	I15	4700-4750 FT	HA
E96	I15	4750-4800 FT	HA
E97	I15	4800-4850 FT	HA
E98	I15	4850-4900 FT	HA
E99	I15	4900-4950 FT	HA
E100	I15	4950-5000 FT	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
E101	I15	> 5000 FT	HA
FE	I18	DISSOLVED IRON AS FE	UG/L
FE	I23	DISSOLVED IRON AS FE	UG/L
FE11	I20	IRON	UG/L
FE11	I23	IRON	UG/L
FMNRL_C	I07	FAMILY MINERALOGY	CODE
FORMAT	G02	FORMAT OF VARIABLE	
FOTHR_C	I07	FAMILY OTHER CHARACTERISTICS	CODE
FPS_C	I07	FAMILY PARTICLE SIZE	CODE
FRCTN_C	I07	FAMILY REACTION	CODE
FTEMP_C	I07	FAMILY TEMPERATURE	CODE
FTL16	I20	FLUORIDE	UEQ/L
FTL16	I23	FLUORIDE	UEQ/L
G_TMBR_A	I02B	GREEN TIMBER AREA	HA
G_TMBR_P	I23	GREEN TIMBER AREA	%T.WTRSHD
G_TMBR_Y	I02B	GREEN TIMBER YEAR	
GEOCOVER	G01	GEOGRAPHIC COVERAGE	
GEOUNIT	G01	SPATIAL RESOLUTION	
GGRP_C	I07	GREAT GROUP	CODE
GNIS_ID	I00	GNIS ID NUMBER ASSIGNED BY ORNL	
GRASS_A	I03	GRASS AREA	HA
H_CONC	I16	H+ ANNUAL WET CONCENTRATION	MG/L
H_CONC	I23	H+ ANNUAL WET CONCENTRATION	MG/L
H_DEP	I16	H+ ANNUAL WET DEPOSITION	G/M2
H_WET	I16	H+ ANNUAL WET ADJ DEPOSITION	G/M2
H_WET	I23	H+ ANNUAL WET ADJ DEPOSITION	G/M2
HCO3	I18	DISSOLVED BICARBONATE	UEQ/L
HCO3	I23	DISSOLVED BICARBONATE	UEQ/L
HCO316	I20	HCO3	UEQ/L
HCO316	I23	HCO3	UEQ/L
HEMLCK_A	I02A	HEMLOCK AREA	HA
HGRP_C	I07	HYDROLOGIC GROUP-RUNOFF POTENTIAL	CODE
HRDWD_A	I03	HARDWOOD AREA	HA
HRDWD2_P	I23	HARDWOOD AREA	%T.WTRSHD
HYD_C	I23	LAKE HYDROLOGIC TYPE	CODE
HYDRO_A	I23	HIGH INFILTRAION RATE	%WTRSHD
HYDRO_A	I24	HIGH INFILTRAION RATE	%WTRSHD
HYDRO_B	I23	MOD. INFILTRATION RATE	%WTRSHD
HYDRO_B	I24	MOD. INFILTRATION RATE	%WTRSHD
HYDRO_C	I23	SLOW INFILTRATION RATE	%WTRSHD
HYDRO_C	I24	SLOW INFILTRATION RATE	%WTRSHD
HYDRO_D	I23	VERY SLOW INFILTRATION	%WTRSHD
HYDRO_D	I24	VERY SLOW INFILTRATION	%WTRSHD
HYDTYP1	I23	1 = "SEEPAGE", NO INLETS OR OUTLETS	
HYDTYP2	I23	1 = "SPRING", OUTLETS, NO INLETS	
HYDTYP3	I23	1 = "DRAINAGE", INLETS AND OUTLETS	

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
H16	I20	HYDROGEN FROM PHAC	UEQ/L
H16	I23	HYDROGEN FROM PHAC	UEQ/L
INFORMAT	G02	INFORMAT OF VARIABLE	
INL	I12	NO. DAMS UPSTREAM, 68 & 78 DATA	
INL	I23	NO. DAMS UPSTREAM, 68 & 78 DATA	
INLET	I11	INLET NUMBER	
INLET_N	I20	NUMBER OF INLETS	
INLET_N	I23	NUMBER OF INLETS	
INLETS	I01	NO. OF INFLOWS DEFINED BY USGS TOPO MAP	
INLETS	I23	NO. OF INFLOWS DEFINED BY USGS TOPO MAP	
INLL	I12	NO. DAMS ON LAKE AT INLET, 68 & 78 DATA	
INLL	I23	NO. DAMS ON LAKE AT INLET, 68 & 78 DATA	
INL68	I12	NO. DAMS UPSTREAM, 68 DATA	
INL68L	I12	NO. DAMS ON LAKE AT INLET, 68 DATA	
INL78	I12	NO. DAMS UPSTREAM, 78 DATA	
INL78L	I12	NO. DAMS ON LAKE AT INLET, 78 DATA	
ITEMS	G01	NUMBER OF VARIABLES	
I68	I12	ORIGINAL DATA: # DAMS UPSTREAM IN 68	
I68L	I12	ORIGINAL DATA: # DAMS ON LAKE @INLET-68	
I78	I12	ORIGINAL DATA: # DAMS UPSTREAM IN 78	
I78L	I12	ORIGINAL DATA: # DAMS ON LAKE @INLET-78	
K	I18	DISSOLVED POTASSIUM	UEQ/L
K	I23	DISSOLVED POTASSIUM	UEQ/L
K16	I20	POTASSIUM	UEQ/L
K16	I23	POTASSIUM	UEQ/L
LABEL	G02	LABEL OF VARIABLE	
LABEL	G03	FORMAT VALUE LABEL	
LAKE_A	I00	LAKE SURFACE AREA	HA
LAKE_A	I01	LAKE AREA	HA
LAKE_A	I23	LAKE AREA	HA
LAKE_AF	I00	AREA FLAG	
LAKE_AS	I00	SOURCE FOR AREA	
LAKE_DEV	I01	LAKE DEVELOPMENT RATIO - PERIM/CIRCLE	
LAKE_DEV	I23	LAKE DEVELOPMENT RATIO - PERIM/CIRCLE	
LAKE_E	I00	LAKE ELEVATION ABOVE M.S.L.	M
LAKE_E	I01	LAKE ELEVATION ABOVE M.S.L.	M
LAKE_E	I23	LAKE ELEVATION ABOVE M.S.L.	M
LAKE_EF	I00	ELEVATION FLAG	
LAKE_ELV	I20	LAKE ELEVATION	M
LAKE_ELV	I23	LAKE ELEVATION	M
LAKE_ES	I00	SOURCE FOR ELEVATION	
LAKE_ID	I20	LAKE ID	
LAKE_ID	I23	LAKE ID	
LAKE_NM	I00	LAKE NAME	
LAKE_NM	I01	LAKE NAME	

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
LAKE_NM	I21	LAKE NAME	
LAKE_NM	I23	LAKE NAME	
LAKE_SIZ	I20	LAKE SURFACE AREA	HA
LAKE_SIZ	I23	LAKE SURFACE AREA	HA
LAKE_V	I01	LAKE VOLUME CALC. FROM FIN	10**6 M3
LAKE_V	I23	LAKE VOLUME CALC. FROM FIN	10**6 M3
LAKE_VOL	I20	CALC LAKE VOL	10**6 M3
LAKE_VOL	I23	CALC LAKE VOL	10**6 M3
LARCH_A	I02A	LARCH-CEDAR-BLACK SPRUCE AREA	HA
LAT_DEC	I00	LATITUDE	DD.DDDD
LAT_DEC	I01	LATITUDE FROM ORNL	DD.DDDD
LAT_DEC	I23	LATITUDE FROM ORNL	DD.DDDD
LAT_DMS	I01	LATITUDE FROM ORNL	DD MM SS
LAT_DMS	I23	LATITUDE FROM ORNL	DD MM SS
LAT_FIN	I01	LATITUDE FROM FIN	DD.DDDD
LATLON_F	I00	LAT/LONG FLAG	
LATLON_S	I00	SOURCE FOR LAT/LONG	
LENGTH	G02	LENGTH OF VARIABLE	
LIME1	I01	FIRST YEAR THAT LAKE WAS LIMED	
LIME1	I23	FIRST YEAR THAT LAKE WAS LIMED	
LIME2	I01	MOST RECENT YEAR LAKE WAS LIMED	
LIME2	I23	MOST RECENT YEAR LAKE WAS LIMED	
LINE	I22	LINE NUMBER OF THE COMMENT	
LKCHN_C	I01	NOTICEABLE LAKE SURFACE CHANGE	CODE
LKCHN_C	I23	NOTICEABLE LAKE SURFACE CHANGE	CODE
LODGES	I11	NO. OF BEAVER LODGES	
LOG_AL_P	I23	LOGGED & DENUDED AREA	%T.WTRSHD
LOG_S_A	I02B	LOGGED SOFTWOOD AREA	HA
LOG_S_P	I23	LOGGED SOFTWOOD AREA	%T.WTRSHD
LOG_S_Y	I02B	LOGGED SOFTWOOD YEAR	
LOG_SH_A	I02B	LOGGED SOFTWOOD AND HARDWOOD AREA	HA
LOG_SH_P	I23	LOGGED SFTWD & HRDWD	%T.WTRSHD
LOG_SH_Y	I02B	LOGGED SOFTWOOD AND HARDWOOD YEAR	
LON_DEC	I00	LONGITUDE	DDD.DDDD
LON_DEC	I01	LONGITUDE FROM ORNL	DDD.DDDD
LON_DEC	I23	LONGITUDE FROM ORNL	DDD.DDDD
LON_DMS	I01	LONGITUDE FROM ORNL	DDD MM SS
LON_DMS	I23	LONGITUDE FROM ORNL	DDD MM SS
LON_FIN	I01	LONGITUDE FROM FIN	DDD.DDDD
MACID_A	I09	MODERATELY ACID WETLAND AREA	HA
MACID_L	I09	MOD. ACID WETLAND CONTACT LENGTH	M
MACID_PL	I23	MOD. ACID WETLAND AREA	%LAKE AREA
MACID_PP	I23	MOD. ACID WETLAND AREA	%LAKE PERIM.
MACID_PW	I23	MOD. ACID WETLAND AREA	%T.WTRSHD
MARSH_A	I24	MARSH AREA	HA
MAXDPTH	I01	MAX. DEPTH OF LAKE FROM FIN	M

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
MAXDPTH	I23	MAX. DEPTH OF LAKE FROM FIN	M
MEANCOLR	I19	MEAN VISUAL COLOR (1960-PRESENT) - FIN	
MEANCOLR	I23	MEAN VISUAL COLOR (1960-PRESENT) - FIN	
MEANDPTH	I01	MEAN DEPTH OF LAKE FROM FIN	M
MEANDPTH	I23	MEAN DEPTH OF LAKE FROM FIN	M
MEANPHC	I19	MEAN SURFACE PH (1974-83) - FIN	
MEANPHC	I23	MEAN SURFACE PH (1974-83) - FIN	
MEANSMC	I19	MEAN SUMMER SURFACE PH (1974-83) - FIN	
MEANSMC	I23	MEAN SUMMER SURFACE PH (1974-83) - FIN	
MEANSYR	I19	MEAN SURF. PH-2 YR EA SIDE LAST SRVY-FIN	
MEANSYR	I23	MEAN SURF. PH-2 YR EA SIDE LAST SRVY-FIN	
MG	I18	DISSOLVED MAGNESIUM	UEQ/L
MG	I23	DISSOLVED MAGNESIUM	UEQ/L
MGMT_C	I22	MANAGEMENT	CODE
MG16	I20	MAGNESIUM	UEQ/L
MG16	I23	MAGNESIUM	UEQ/L
MISC_F_A	I02A	MISCELLANEOUS AREA	HA
MIXED_A	I03	MIXED AREA	HA
MIXED2_P	I23	MIXED AREA	%T.WTRSHD
MN	I18	DISSOLVED MANGANESE AS MN	UG/L
MN	I23	DISSOLVED MANGANESE AS MN	UG/L
MN11	I20	MANGANESE	UG/L
MN11	I23	MANGANESE	UG/L
N_HRD_A	I02A	NORTHERN HARDWOOD AREA	HA
NA	I18	DISSOLVED SODIUM	UEQ/L
NA	I23	DISSOLVED SODIUM	UEQ/L
NACID_A	I09	NON-ACID WETLAND AREA	HA
NACID_L	I09	NON-ACID WETLAND CONTACT LENGTH	M
NACID_PL	I23	NON-ACID WETLAND AREA	%LAKE AREA
NACID_PP	I23	NON-ACID WETLAND AREA	%LAKE PERIM.
NACID_PW	I23	NON-ACID WETLAND AREA	%T.WTRSHD
NA11	I20	SODIUM	MG/L
NA11	I23	SODIUM	MG/L
NH416	I20	AMMONIUM	UEQ/L
NH416	I23	AMMONIUM	UEQ/L
NONFOR_A	I02A	NON-FORESTED AREA	HA
NONFR2_P	I23	NONFORESTED AREA	%T.WTRSHD
NO3	I18	DISSOLVED NO3	UEQ/L
NO3	I23	DISSOLVED NO3	UEQ/L
NO3_CONC	I16	NO3 ANNUAL WEIGHTED MEAN CONC.	MG/L
NO3_CONC	I23	NO3 ANNUAL WEIGHTED MEAN CONC.	MG/L
NO3_DEP	I16	NO3 ANNUAL WET DEPOSITION	G/M2
NO3_WET	I16	NO3 ANNUAL WET ADJ DEPOSITION	G/M2
NO3_WET	I23	NO3 ANNUAL WET ADJ DEPOSITION	G/M2
NO316	I20	NITRATE	UEQ/L
NO316	I23	NITRATE	UEQ/L

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label
NWI_CLS	I10	NATIONAL WETLANDS INVENTORY CLASS
NWI_LEV	I10	LEVEL NUMBER OF CLASSES AND SUBCLASSES
NWI_MOD	I10	NWI SPECIAL MODIFIERS
NWI_REGM	I10	NWI WATER REGIME
NWI_SCLS	I10	NWI SUBCLASS
NWI_SSYS	I10	NWI SUBSYSTEM
NWI_SYS	I10	NWI SYSTEM
OM_H_A	I06A	ORG. MATTER CONTENT => 2%, AREA HA
OM_H_A	I06B	ORG. MATTER CONTENT => 2%, AREA HA
OM_H_A	I06C	ORG. MATTER CONTENT => 2%, AREA HA
OM_H_A	I06D	ORG. MATTER CONTENT => 2%, AREA HA
OM_H_P	I23	ORG. MATTER CONTENT => 2% %T.WTRSHD
OPEN_A	I02B	OPEN AREA HA
OPEN_P	I23	OPEN AREA %T.WTRSHD
OPEN_Y	I02B	OPEN YEAR
ORG_MAT	I05A	MEAN ORG. MATTER CONTENT %HORIZON
ORG_MAT	I05B	MEAN ORG. MATTER CONTENT %HORIZON
ORG_MAT	I05C	MEAN ORG. MATTER CONTENT %HORIZON
ORG_MAT	I05D	MEAN ORG. MATTER CONTENT %HORIZON
ORG_MAT	I23	MEAN ORG. MATTER CONTENT %HORIZON
ORG_1	I07	ORG. MATTER CONTENT - HYPOTH 1 %HORIZON
ORG_2	I07	ORG. MATTER CONTENT - HYPOTH 2 %HORIZON
ORG_3	I07	ORG. MATTER CONTENT - HYPOTH 3 %HORIZON
ORG_4	I07	ORG. MATTER CONTENT - HYPOTH 4 %HORIZON
OTHER_A	I02B	OTHER AREA HA
OTHER_A	I09	OTHER WETLAND AREA HA
OTHER_L	I09	OTHER WETLAND CONTACT LENGTH M
OTHER_PL	I23	OTHER WETLAND AREA %LAKE AREA
OTHER_PP	I23	OTHER WETLAND AREA %LAKE PERIM.
OTHER_PW	I23	OTHER WETLAND AREA %T.WTRSHD
OTHER_Y	I02B	OTHER YEAR
OUT	I12	NO. DAMS DOWNSTREAM, 68 & 78 DATA
OUT	I23	NO. DAMS DOWNSTREAM, 68 & 78 DATA
OUTL	I12	NO. DAMS ON LAKE @OUTLET, 68 & 78 DATA
OUTL	I23	NO. DAMS ON LAKE @OUTLET, 68 & 78 DATA
OUTLET	I11	OUTLET NUMBER
OUTLET_N	I20	NUMBER OF OUTLETS
OUTLET_N	I23	NUMBER OF OUTLETS
OUTLETS	I01	NO. OF OUTFLOWS DEFINED BY USGS TOPO MAP
OUTLETS	I23	NO. OF OUTFLOWS DEFINED BY USGS TOPO MAP
OUT68	I12	NO. DAMS DOWNSTREAM, 68 DATA
OUT68L	I12	NO. DAMS ON LAKE AT OUTLET, 68 DATA
OUT78	I12	NO. DAMS DOWNSTREAM, 78 DATA
OUT78L	I12	NO. DAMS ON LAKE AT OUTLET, 78 DATA
O68	I12	ORIGINAL DATA: # DAMS DOWNSTREAM IN 68
O68L	I12	ORIGINAL DATA: # DAMS ON LAKE @OUTLET-68

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label
O78	I12	ORIGINAL DATA: # DAMS DOWNSTREAM IN 78
O78L	I12	ORIGINAL DATA: # DAMS ON LAKE @OUTLET-78
PERIMETR	I01	SHORELINE PERIMETER PLUS ISLANDS M
PERIMETR	I23	SHORELINE PERIMETER PLUS ISLANDS M
PH	I18	PH STANDARD UNITS
PH	I23	PH STANDARD UNITS
PH_C	I18	PH METHOD CODE
PH_C	I23	PH METHOD CODE
PH_CACL	I05A	MEAN SOIL PH (CACL2)
PH_CACL	I05B	MEAN SOIL PH (CACL2)
PH_CACL	I05C	MEAN SOIL PH (CACL2)
PH_CACL	I05D	MEAN SOIL PH (CACL2)
PH_CACL	I23	MEAN SOIL PH (CACL2)
PH_H2O	I05A	MEAN SOIL PH (H2O)
PH_H2O	I05B	MEAN SOIL PH (H2O)
PH_H2O	I05C	MEAN SOIL PH (H2O)
PH_H2O	I05D	MEAN SOIL PH (H2O)
PH_H2O	I23	MEAN SOIL PH (H2O)
PH_L_A	I06A	SOIL PH (H2O) <= 5.0, AREA HA
PH_L_A	I06B	SOIL PH (H2O) <= 5.0, AREA HA
PH_L_A	I06C	SOIL PH (H2O) <= 5.0, AREA HA
PH_L_A	I06D	SOIL PH (H2O) <= 5.0, AREA HA
PH_L_P	I23	SOIL PH (H2O) <= 5.0 %T.WTRSHD
PH_M	I19	MEAN PH (1974-83 SUMMER)
PH_M	I23	MEAN PH (1974-83 SUMMER)
PH_N	I19	NO. OF OBSERVATIONS IN PH_M
PH_N	I23	NO. OF OBSERVATIONS IN PH_M
PH_TOP	I20	PH AT SURFACE (1.5M)
PH_TOP	I23	PH AT SURFACE (1.5M)
PH_VL_A	I06A	SOIL PH (H2O) <= 4.5, AREA HA
PH_VL_A	I06B	SOIL PH (H2O) <= 4.5, AREA HA
PH_VL_A	I06C	SOIL PH (H2O) <= 4.5, AREA HA
PH_VL_A	I06D	SOIL PH (H2O) <= 4.5, AREA HA
PH_VL_P	I23	SOIL PH (H2O) <= 4.5 %T.WTRSHD
PHC_L_A	I06A	SOIL PH (CACL2) <= 5.0, AREA HA
PHC_L_A	I06B	SOIL PH (CACL2) <= 5.0, AREA HA
PHC_L_A	I06C	SOIL PH (CACL2) <= 5.0, AREA HA
PHC_L_A	I06D	SOIL PH (CACL2) <= 5.0, AREA HA
PHC_L_P	I23	SOIL PH (CACL2) <= 5.0 %T.WTRSHD
PHC_VL_A	I06A	SOIL PH (CACL2) <= 4.5, AREA HA
PHC_VL_A	I06B	SOIL PH (CACL2) <= 4.5, AREA HA
PHC_VL_A	I06C	SOIL PH (CACL2) <= 4.5, AREA HA
PHC_VL_A	I06D	SOIL PH (CACL2) <= 4.5, AREA HA
PHC_VL_P	I23	SOIL PH (CACL2) <= 4.5 %T.WTRSHD
PHCACL_1	I07	SOIL PH (CACL2) - HYPOTH 1
PHCACL_2	I07	SOIL PH (CACL2) - HYPOTH 2

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
PHCACL_3	I07	SOIL PH (CACL2) - HYPOTH 3	
PHCACL_4	I07	SOIL PH (CACL2) - HYPOTH 4	
PHEQ11	I20	PH-AIR EQUILIBRATED	
PHEQ11	I23	PH-AIR EQUILIBRATED	
PHH2O_1	I07	SOIL PH (H2O) - HYPOTH 1	
PHH2O_2	I07	SOIL PH (H2O) - HYPOTH 2	
PHH2O_3	I07	SOIL PH (H2O) - HYPOTH 3	
PHH2O_4	I07	SOIL PH (H2O) - HYPOTH 4	
PHSTVL	I20	PH - FIELD LAB	
PHSTVL	I23	PH - FIELD LAB	
POND_NO	I00	POND NUMBER	
POND_NO	I01	POND NUMBER	
POND_NO	I02A	POND NUMBER	
POND_NO	I02B	POND NUMBER	
POND_NO	I02C	POND NUMBER	
POND_NO	I03	POND NUMBER	
POND_NO	I04	POND NUMBER	
POND_NO	I05A	POND NUMBER	
POND_NO	I05B	POND NUMBER	
POND_NO	I05C	POND NUMBER	
POND_NO	I05D	POND NUMBER	
POND_NO	I06A	POND NUMBER	
POND_NO	I06B	POND NUMBER	
POND_NO	I06C	POND NUMBER	
POND_NO	I06D	POND NUMBER	
POND_NO	I08	POND NUMBER	
POND_NO	I09	POND NUMBER	
POND_NO	I11	POND NUMBER	
POND_NO	I12	POND NUMBER	
POND_NO	I13	POND NUMBER	
POND_NO	I14	POND NUMBER	
POND_NO	I15	POND NUMBER	
POND_NO	I16	POND NUMBER	
POND_NO	I17	POND NUMBER	
POND_NO	I18	POND NUMBER	
POND_NO	I19	POND NUMBER	
POND_NO	I20	POND NUMBER	
POND_NO	I21	POND NUMBER	
POND_NO	I22	POND NUMBER	
POND_NO	I23	POND NUMBER	
POND_NO	I24	POND NUMBER	
POND_NO	I25	POND NUMBER	
PPT	I16	TOTAL PRECIPITATION	CM
PPT	I23	TOTAL PRECIPITATION	CM
PTL11	I20	TOTAL PHOSPHORUS	UG/L
PTL11	I23	TOTAL PHOSPHORUS	UG/L

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
QUAD	I01	QUADRANGLE WHERE LAKE IS LOCATED	
QUAD	I23	QUADRANGLE WHERE LAKE IS LOCATED	
RCLM1	I01	FIRST YEAR OF RECLAMATION	
RCLM1	I23	FIRST YEAR OF RECLAMATION	
RCLM2	I01	MOST RECENT YEAR OF RECLAMATION	
RCLM2	I23	MOST RECENT YEAR OF RECLAMATION	
REC_NO	I11	RECORD NO: 1-9 INLETS, 11-19 OUTLETS	
RECORDS	G01	NUMBER OF RECORDS	
REF1	G01	REFERENCE FOR DATA, LINE 1	
REF2	G01	REFERENCE FOR DATA, LINE 2	
REF3	G01	REFERENCE FOR DATA, LINE 3	
REF4	G01	REFERENCE FOR DATA, LINE 4	
REF5	G01	REFERENCE FOR DATA, LINE 5	
REF6	G01	REFERENCE FOR DATA, LINE 6	
REF7	G01	REFERENCE FOR DATA, LINE 7	
REF8	G01	REFERENCE FOR DATA, LINE 8	
REF9	G01	REFERENCE FOR DATA, LINE 9	
REF10	G01	REFERENCE FOR DATA, LINE 10	
REF11	G01	REFERENCE FOR DATA, LINE 11	
REF12	G01	REFERENCE FOR DATA, LINE 12	
REF13	G01	REFERENCE FOR DATA, LINE 13	
REF14	G01	REFERENCE FOR DATA, LINE 14	
REF15	G01	REFERENCE FOR DATA, LINE 15	
REF16	G01	REFERENCE FOR DATA, LINE 16	
REF17	G01	REFERENCE FOR DATA, LINE 17	
REF18	G01	REFERENCE FOR DATA, LINE 18	
REF19	G01	REFERENCE FOR DATA, LINE 19	
REF20	G01	REFERENCE FOR DATA, LINE 20	
REG_SPC	I20	REG SPEC LTM NRC DEW DER SAMPLE CLASS	
REG_SPC	I23	REG SPEC LTM NRC DEW DER SAMPLE CLASS	
RELEASED	G01	DATE RELEASED/DISTRIBUTED	
RELIEF	I01	RELIEF, MAX ELEV. - LAKE ELEV.	M
RELIEF	I23	RELIEF, MAX ELEV. - LAKE ELEV.	M
RELIEF_R	I01	RELIEF TO SQRT(WTRSHD_A) RATIO	
RELIEF_R	I23	RELIEF TO SQRT(WTRSHD_A) RATIO	
ROCK_P	I23	ROCK OUTCROPS	%WTRSHD
ROCK_P	I24	ROCK OUTCROPS	%WTRSHD
ROCK1_A	I17	LOW TO NO ACID NEUTRAL. CAPACITY	HA
ROCK1_P	I23	LOW TO NO ACID NEUTRAL. CAP.	%WTRSHD
ROCK12_P	I23	MED. TO NO ACID NEUTRAL. CAP.	%WTRSHD
ROCK2_A	I17	MED. TO LOW ACID NEUTRAL. CAPACITY	HA
ROCK2_P	I23	MED. TO LOW ACID NEUTRAL. CAP.	%WTRSHD
ROCK3_A	I17	HIGH TO MED. ACID NEUTRAL. CAPACITY	HA
ROCK3_P	I23	HIGH TO MED. ACID NEUTRAL. CAP.	%WTRSHD
ROCK4_A	I17	INFINITE ACID NEUTRAL. CAPACITY	HA
ROCK4_P	I23	INFINITE ACID NEUTRAL. CAP.	%WTRSHD

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
RT	I20	RESIDENCE TIME	YR
RT	I23	RESIDENCE TIME	YR
RUNOFF	I23	ANNUAL RUNOFF	CM
RUNOFF	I25	ANNUAL RUNOFF	CM
S_FIR_A	I02A	SPRUCE-FIR AREA	HA
SECTOR	G01	SECTOR CODE LETTER	
SER_NM	I07	SOIL SERIES NAME	
SERIES_A	I23	WATERSHED AREA (-WATER,MARSH)	HA
SERIES_A	I24	WATERSHED AREA (-WATER,MARSH)	HA
SERIES_N	I24	NUMBER OF SOIL SERIES	
SF_HRD_A	I02A	SPRUCE-FIR-HARDWOOD AREA	HA
SGRP_C	I07	SUB GROUP MODIFIER	CODE
SHL1_B_P	I23	DEPTH TO BEDROCK <= 50 CM	%WTRSHD
SHL1_B_P	I24	DEPTH TO BEDROCK <= 50 CM	%WTRSHD
SHL1_P_P	I23	DEPTH TO LOW PERM. <= 50 CM	%WTRSHD
SHL1_P_P	I24	DEPTH TO LOW PERM. <= 50 CM	%WTRSHD
SHL1_R_P	I23	DEPTH TO RESTR. <= 50 CM	%WTRSHD
SHL1_R_P	I24	DEPTH TO RESTR. <= 50 CM	%WTRSHD
SHL1_Z_P	I23	SHALLOW SOILS <= 50 CM	%WTRSHD
SHL1_Z_P	I24	SHALLOW SOILS <= 50 CM	%WTRSHD
SHL2_B_P	I23	DEPTH TO BEDROCK <= 100 CM	%WTRSHD
SHL2_B_P	I24	DEPTH TO BEDROCK <= 100 CM	%WTRSHD
SHL2_P_P	I23	DEPTH TO LOW PERM. <= 100 CM	%WTRSHD
SHL2_P_P	I24	DEPTH TO LOW PERM. <= 100 CM	%WTRSHD
SHL2_R_P	I23	DEPTH TO ROOT RESTR. <= 100 CM	%WTRSHD
SHL2_R_P	I24	DEPTH TO ROOT RESTR. <= 100 CM	%WTRSHD
SHL2_Z_P	I23	SHALLOW SOILS <= 100 CM	%WTRSHD
SHL2_Z_P	I24	SHALLOW SOILS <= 100 CM	%WTRSHD
SIO211	I20	SILICA	MG/L
SIO211	I23	SILICA	MG/L
SLOPE	I19	SLOPE OF PH AGAINST TIME	PH/DECADE
SLOPE	I23	SLOPE OF PH AGAINST TIME	PH/DECADE
SLOPE_AV	I13	AVERAGE SLOPE	DEG
SLOPE_AV	I23	AVERAGE SLOPE	DEG
SLOPE_C	I07	SLOPE CLASS OF MAPPING UNIT	CODE
SLOPE_MX	I13	MAXIMUM SLOPE	DEG
SLOPE_MX	I23	MAXIMUM SLOPE	DEG
SLOPE_N	I19	NO. OF OBSERVATIONS IN SLOPE	
SLOPE_N	I23	NO. OF OBSERVATIONS IN SLOPE	
SLOPE_Y	I19	YEARS BETWEEN FIRST AND LAST SAMPLE	
SLOPE_Y	I23	YEARS BETWEEN FIRST AND LAST SAMPLE	
SLOPE_15	I23	SLOPE GREATER THAN 15%	%WTRSHD
SLOPE_25	I23	SLOPE GREATER THAN 25%	%WTRSHD
SLSTAT_C	I19	STAT. SIGNIFICANCE OF SLOPE	CODE
SLSTAT_C	I23	STAT. SIGNIFICANCE OF SLOPE	CODE
SOIL_A	I04	AREA OF SOIL MAPPING UNIT IN WTRSHD	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
SOIL_C	I04	SOIL MAPPING UNIT IDENTIFIER	CODE
SOIL_C	I07	SOIL MAPPING UNIT IDENTIFIER	CODE
SOIL_D	I07	SOIL TAXONOMIC DESCRIPTION	
SOIL_NM	I07	SOIL MAPPING UNIT NAME	
SORTID	G02	ALLOWS VARIABLE TO PRINT IN PROPER ORDER	
SOURCE	G01	SOURCE OF DATA	
SOURCE	I21	SOURCE OF INFORMATION FOR THE LAKE	
SOURCEID	I21	UNIQUE IDENTIFIER FOR THE SOURCE	
SO4	I18	DISSOLVED SULFATE	UEQ/L
SO4	I23	DISSOLVED SULFATE	UEQ/L
SO4_CONC	I16	SO4 ANNUAL WEIGHTED MEAN CONC.	MG/L
SO4_CONC	I23	SO4 ANNUAL WEIGHTED MEAN CONC.	MG/L
SO4_DEP	I16	SO4 ANNUAL WET DEPOSITION	G/M2
SO4_NO3	I23	SULFATE-NITRATE WET DEPOS,	MEQ
SO4_WET	I16	SO4 ANNUAL WET ADJ DEPOSITION	G/M2
SO4_WET	I23	SO4 ANNUAL WET ADJ DEPOSITION	G/M2
SO416	I20	SULFATE	UEQ/L
SO416	I23	SULFATE	UEQ/L
STATE	I00	FIPS STATE NUMBER	
STATE	I01	FIPS STATE NUMBER	
STATE	I23	FIPS STATE NUMBER	
STATUS	G01	DATA SET STATUS	
STDECLIN	I19	BROOK TROUT DECLINING, SCALE 0-9, LOW-HI	
STDECLIN	I23	BROOK TROUT DECLINING, SCALE 0-9, LOW-HI	
STEEPM_P	I23	MODERATELY STEEP SOILS	%WTRSHD
STEEPM_P	I24	MODERATELY STEEP SOILS	%WTRSHD
STEEPV_P	I23	VERY STEEP SOILS	%WTRSHD
STEEPV_P	I24	VERY STEEP SOILS	%WTRSHD
STLOST	I19	BROOK TROUT LOST, SCALE 0-9, LOW-HI	
STLOST	I23	BROOK TROUT LOST, SCALE 0-9, LOW-HI	
STOK	I19	BROOK TROUT HEALTHY, SCALE 0-9, LOW-HI	
STOK	I23	BROOK TROUT HEALTHY, SCALE 0-9, LOW-HI	
STONEY_P	I23	STONEY SOILS	%WTRSHD
STONEY_P	I24	STONEY SOILS	%WTRSHD
STPROB_C	I19	BROOK TROUT LOST, PROB. ACID RAIN	CODE
STPROB_C	I23	BROOK TROUT LOST, PROB. ACID RAIN	CODE
STSTCK_C	I19	BROOK TROUT STOCKING CODE	CODE
STSTCK_C	I23	BROOK TROUT STOCKING CODE	CODE
SUBSET	I23	TO RANDOMLY SUBSET LAKES FOR ANALYSES	
SUMBSE	I05A	MEAN SUM OF BASES	MEQ/100 G
SUMBSE	I05B	MEAN SUM OF BASES	MEQ/100 G
SUMBSE	I05C	MEAN SUM OF BASES	MEQ/100 G
SUMBSE	I05D	MEAN SUM OF BASES	MEQ/100 G
SUMBSE	I23	MEAN SUM OF BASES	MEQ/100 G
SUMBSE_1	I07	SUM OF BASES - HYPOTH 1	MEQ/100 G
SUMBSE_2	I07	SUM OF BASES - HYPOTH 2	MEQ/100 G

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
SUMBSE_3	I07	SUM OF BASES - HYPOTH 3	MEQ/100 G
SUMBSE_4	I07	SUM OF BASES - HYPOTH 4	MEQ/100 G
SUMCAT	I05A	MEAN SUM OF CATIONS	MEQ/100 G
SUMCAT	I05B	MEAN SUM OF CATIONS	MEQ/100 G
SUMCAT	I05C	MEAN SUM OF CATIONS	MEQ/100 G
SUMCAT	I05D	MEAN SUM OF CATIONS	MEQ/100 G
SUMCAT	I23	MEAN SUM OF CATIONS	MEQ/100 G
SUMCAT_1	I07	SUM OF CATIONS - HYPOTH 1	MEQ/100 G
SUMCAT_2	I07	SUM OF CATIONS - HYPOTH 2	MEQ/100 G
SUMCAT_3	I07	SUM OF CATIONS - HYPOTH 3	MEQ/100 G
SUMCAT_4	I07	SUM OF CATIONS - HYPOTH 4	MEQ/100 G
S1	I13	AREA IN 0-1 DEGREE SLOPE	HA
S2	I13	AREA IN 1-2 DEGREE SLOPE	HA
S3	I13	AREA IN 2-3 DEGREE SLOPE	HA
S4	I13	AREA IN 3-4 DEGREE SLOPE	HA
S5	I13	AREA IN 4-5 DEGREE SLOPE	HA
S6	I13	AREA IN 5-6 DEGREE SLOPE	HA
S7	I13	AREA IN 6-7 DEGREE SLOPE	HA
S8	I13	AREA IN 7-8 DEGREE SLOPE	HA
S9	I13	AREA IN 8-9 DEGREE SLOPE	HA
S10	I13	AREA IN 9-10 DEGREE SLOPE	HA
S11	I13	AREA IN 10-11 DEGREE SLOPE	HA
S12	I13	AREA IN 11-12 DEGREE SLOPE	HA
S13	I13	AREA IN 12-13 DEGREE SLOPE	HA
S14	I13	AREA IN 13-14 DEGREE SLOPE	HA
S15	I13	AREA IN 14-15 DEGREE SLOPE	HA
S16	I13	AREA IN 15-16 DEGREE SLOPE	HA
S17	I13	AREA IN 16-17 DEGREE SLOPE	HA
S18	I13	AREA IN 17-18 DEGREE SLOPE	HA
S19	I13	AREA IN 18-19 DEGREE SLOPE	HA
S20	I13	AREA IN 19-20 DEGREE SLOPE	HA
S21	I13	AREA IN 20-21 DEGREE SLOPE	HA
S22	I13	AREA IN 21-22 DEGREE SLOPE	HA
S23	I13	AREA IN 22-23 DEGREE SLOPE	HA
S24	I13	AREA IN 23-24 DEGREE SLOPE	HA
S25	I13	AREA IN 24-25 DEGREE SLOPE	HA
S26	I13	AREA IN 25-26 DEGREE SLOPE	HA
S27	I13	AREA IN 26-27 DEGREE SLOPE	HA
S28	I13	AREA IN 27-28 DEGREE SLOPE	HA
S29	I13	AREA IN 28-29 DEGREE SLOPE	HA
S30	I13	AREA IN 29-30 DEGREE SLOPE	HA
S31	I13	AREA IN 30-31 DEGREE SLOPE	HA
S32	I13	AREA IN 31-32 DEGREE SLOPE	HA
S33	I13	AREA IN 32-33 DEGREE SLOPE	HA
S34	I13	AREA IN 33-34 DEGREE SLOPE	HA
S35	I13	AREA IN 34-35 DEGREE SLOPE	HA

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
S36	I13	AREA IN 35-36 DEGREE SLOPE	HA
S37	I13	AREA IN 36-37 DEGREE SLOPE	HA
S38	I13	AREA IN 37-38 DEGREE SLOPE	HA
S39	I13	AREA IN 38-39 DEGREE SLOPE	HA
S40	I13	AREA IN 39-40 DEGREE SLOPE	HA
S41	I13	AREA IN 40-41 DEGREE SLOPE	HA
S42	I13	AREA IN 41-42 DEGREE SLOPE	HA
S43	I13	AREA IN 42-43 DEGREE SLOPE	HA
S44	I13	AREA IN 43-44 DEGREE SLOPE	HA
S45	I13	AREA IN 44-45 DEGREE SLOPE	HA
S46	I13	AREA IN SLOPE > 45 DEGREES	HA
TEMP	I18	WATER TEMPERATURE	DEG C
TEMP	I23	WATER TEMPERATURE	DEG C
TEMP_M	I19	MEAN WATER TEMP. (74-83 SUMMER)	DEG C
TEMP_M	I23	MEAN WATER TEMP. (74-83 SUMMER)	DEG C
TEMP_N	I19	NO. OF OBSERVATIONS IN TEMP_M	
TEMP_N	I23	NO. OF OBSERVATIONS IN TEMP_M	
TEMPORAL	G01	TEMPORAL RESOLUTION	
TEXT1	G01	DESCRIPTIVE TEXT, LINE 1	
TEXT2	G01	DESCRIPTIVE TEXT, LINE 2	
TEXT3	G01	DESCRIPTIVE TEXT, LINE 3	
TEXT4	G01	DESCRIPTIVE TEXT, LINE 4	
TEXT5	G01	DESCRIPTIVE TEXT, LINE 5	
TEXT6	G01	DESCRIPTIVE TEXT, LINE 6	
TEXT7	G01	DESCRIPTIVE TEXT, LINE 7	
TEXT8	G01	DESCRIPTIVE TEXT, LINE 8	
TEXT9	G01	DESCRIPTIVE TEXT, LINE 9	
TEXT10	G01	DESCRIPTIVE TEXT, LINE 10	
THEME	G01	THEMATIC SECTOR TITLE	
TITLE	G01	DATA SET TITLE	
TMPTOP	I20	TEMPERATURE AT SURFACE (1.5M)	DEG C
TMPTOP	I23	TEMPERATURE AT SURFACE (1.5M)	DEG C
TURVAL	I20	TURBIDITY - FIELD LAB	NTU
TURVAL	I23	TURBIDITY - FIELD LAB	NTU
TYPE	G01	DATA SET TYPE	
TYPE	G02	TYPE OF VARIABLE	
TYPE	G03	TYPE OF FORMAT	
UPDATES	G01	ANTICIPATED UPDATE INTERVAL	
VACID_A	I09	VERY ACID WETLAND AREA	HA
VACID_L	I09	VERY ACID WETLAND CONTACT LENGTH	M
VACID_PL	I23	VERY ACID WETLAND AREA	% LAKE AREA
VACID_PP	I23	VERY ACID WETLAND AREA	% LAKE PERIM.
VACID_PW	I23	VERY ACID WETLAND AREA	%T.WTRSHD
VALUE	G03	VALUE FOR FORMAT	
VARIABLE	G02	NAME OF VARIABLE	
VOLUME	G01	LOCATION OF VOLUME	

Alphabetic List of Variables in the Adirondack Watershed Data Base

Variable	Data set	Label	
WALA	I20	WATERSHED AREA/LAKE AREA	
WALA	I23	WATERSHED AREA/LAKE AREA	
WATERSHD	I01	WATERSHED CODE	
WATERSHD	I23	WATERSHED CODE	
WCONT_C	I08	WETLANDS CONTACT	CODE
WGRP_C	I07	WEATHERING GROUP	CODE
WP_HRD_A	I02A	WHITE PINE-HARDWOOD AREA	HA
WPINE_A	I02A	WHITE PINE AREA	HA
WTLND_A	I08	WETLAND AREA	HA
WTLND_A	I09	WETLAND AREA	HA
WTLND_C	I08	NATIONAL WETLANDS INVENTORY COVER TYPE	
WTLND_C	I10	NATIONAL WETLANDS INVENTORY COVER TYPE	
WTLND_D	I08	WETLAND DISTANCE FROM POND	M
WTLND_L	I08	CONTACT LENGTH BETW. WETLAND/POND	M
WTLND_L	I09	CONTACT LENGTH BETW. WETLAND/POND	M
WTLND_NO	I08	WETLAND NUMBER AT A POND	
WTLND_PL	I23	TOTAL WETLAND AREA	% LAKE AREA
WTLND_PP	I23	TOTAL WETLAND AREA	% LAKE PERIM.
WTLND_PW	I23	TOTAL WETLAND AREA	%T.WTRSHD
WTRSHD_A	I01	TERRESTRIAL WATERSHED AREA	HA
WTRSHD_A	I23	TERRESTRIAL WATERSHED AREA	HA
WTRSHD_E	I01	WATERSHED MAX. ELEV ABOVE M.S.L.	M
WTRSHD_E	I23	WATERSHED MAX. ELEV ABOVE M.S.L.	M
WTRSHD_R	I01	DRAINAGE AREA TO LAKE AREA RATIO	
WTRSHD_R	I23	DRAINAGE AREA TO LAKE AREA RATIO	
YEAR	I11	YEAR OF IMAGERY USED TO LOCATE DAMS	
YEARS	G01	REFERENCE YEAR(S) OF THE DATA	
YEAR1	I21	BEGINNING YEAR OF DATA	
YEAR2	I21	ENDING YEAR OF DATA	
ZN	I18	DISSOLVED ZINC AS ZN	UG/L
ZN	I23	DISSOLVED ZINC AS ZN	UG/L

APPENDIX C

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
020075	CRANBERRY POND	44 28'04"N	73 54'03"W	15.0	513.3
020083	MOOSE POND	44 21'57"N	74 02'13"W	60.5	471.8
020088	MCKENZIE POND	44 19'50"N	74 04'19"W	101.0	506.0
020096	ALFORD POND	44 15'40"N	74 02'17"W	15.0	595.6
020098	BIG PINE POND	44 15'52"N	74 08'46"W	20.2	475.5
020101	LITTLE PINE POND	44 15'34"N	74 08'59"W	2.5	478.5
020107	MCCAULEY POND	44 21'11"N	74 12'01"W	33.0	476.4
020108	LILYPAD POND	44 19'15"N	74 12'22"W	5.0	484.6
020143	MIDDLE POND	44 20'31"N	74 22'47"W	25.0	483.7
020144	UNNAMED	44 20'26"N	74 23'40"W	5.0	484.6
020155	LEDGE POND	44 21'47"N	74 25'22"W	17.6	509.0
020162	SUMMIT POND	44 22'02"N	74 21'08"W	2.5	502.9
020173	WEST PINE POND	44 20'12"N	74 26'22"W	27.7	484.0
020180	WHEY POND	44 18'28"N	74 23'34"W	42.8	480.7
020182	MUD POND	44 15'44"N	74 23'47"W	2.5	496.8
020193	BONE POND	44 21'42"N	74 18'15"W	5.0	490.7
020206	PORKCHOP POND	44 17'20"N	74 18'03"W	2.5	490.7
020208	LITTLE WELLER	44 17'11"N	74 15'39"W	5.0	472.4
020214	CLARK POND	44 27'42"N	73 31'37"W	5.0	265.2
020227B	NEWBERRY POND	44 27'18"N	73 49'34"W	15.1	381.0
020229	MORGAN (COPPER) HILL POND	44 25'26"N	73 51'08"W	2.5	911.3
020232	WARREN POND	44 20'05"N	73 54'55"W	2.5	563.9
020234	COPPERAS POND	44 19'46"N	73 54'03"W	8.0	545.6
020236	WINCH POND	44 20'01"N	73 53'02"W	2.5	588.3
020238	MARSH POND	44 19'54"N	73 52'05"W	5.0	557.8
020241	BIG CHERRYPATCH POND	44 17'11"N	73 57'13"W	5.0	502.9
020242	TOM PEEK POND	44 18'32"N	73 57'01"W	2.5	521.2
020247	MALCOLM (HOLCOMB) POND	44 17'32"N	73 55'08"W	10.1	514.2
020251	MUD POND (ECHO LAKE)	44 17'58"N	73 57'43"W	5.0	576.1
020254	LAKE PLACID	44 19'55"N	73 58'07"W	788.8	566.3
020255	BARTLETT POND	44 19'55"N	74 01'26"W	2.5	850.4
020258	ROUND LAKE	44 14'05"N	73 53'29"W	17.6	634.6
020263	UNNAMED	44 08'44"N	74 02'51"W	2.5	947.9
020264	HEART LAKE	44 10'57"N	73 58'10"W	13.0	661.4
020265	MARCY DAM POND	44 08'28"N	73 56'60"W	2.5	716.3
020268	CLEMENTS POND	44 18'52"N	73 45'42"W	2.5	496.8
020272	LOST POND	44 15'36"N	73 42'37"W	5.0	862.6
020277	UPPER AUSABLE LAKE	44 04'06"N	73 53'43"W	68.0	606.9
020286	FRANCES LAKE	44 21'07"N	73 31'01"W	13.0	228.6
020301	CLEAR POND	44 23'07"N	73 36'18"W	5.0	313.9
020306	TROUT POND	44 25'08"N	73 33'58"W	10.0	261.5
020309A	LOST POND	44 25'11"N	73 36'17"W	2.5	234.7
020314	NICHOLS POND	44 09'32"N	73 31'03"W	33.0	472.4
020322	WINDSOR POND	44 15'25"N	73 37'15"W	5.0	173.7
020326	LITTLE POND	44 11'04"N	73 34'32"W	15.1	327.7
020339	MUD POND	44 07'22"N	73 30'35"W	3.0	484.6
020343	PARCH POND	44 02'31"N	73 36'18"W	8.0	460.3
020346	BIG LOCK POND	44 00'48"N	73 35'21"W	2.5	442.0
030127	RIVER POND	44 20'21"N	74 28'46"W	8.0	492.9
030128A	OTTER POND	44 21'36"N	74 25'50"W	5.0	515.1
030129	WINDFALL POND	44 21'49"N	74 26'26"W	40.3	496.8
030133	EAST POND	44 22'43"N	74 25'37"W	27.7	527.3
030139	CAT POND	44 24'35"N	74 23'22"W	17.6	502.9
030141	LITTLE LONG POND	44 23'24"N	74 22'57"W	13.0	486.5
030142	KIT FOX POND	44 23'10"N	74 22'52"W	5.0	496.8
030150	SKY POND	44 23'57"N	74 22'54"W	5.0	545.6
030153	CLAMSHELL POND	44 22'46"N	74 22'08"W	15.1	509.9
030156	GRASS POND	44 22'46"N	74 21'06"W	10.1	503.2
030156A	SAINT REGIS POND	44 22'45"N	74 19'15"W	161.3	492.6
030157	GREEN POND	44 22'55"N	74 17'58"W	8.0	493.2

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
030198	MOUNTAIN POND	44 28'26"N	74 16'12"W	17.6	498.0
030257	LONG POND	44 26'57"N	74 17'03"W	5.0	496.8
030267	LITTLE LONG POND	44 23'35"N	74 17'53"W	32.8	498.0
030271	BEAR POND	44 23'55"N	74 17'28"W	23.0	499.3
030271A	BOG POND	44 23'47"N	74 17'32"W	2.5	509.0
040185	TWIN PONDS	43 57'14"N	75 02'45"W	10.1	594.4
040186	LOON HOLLOW POND	43 57'48"N	75 02'36"W	5.0	606.5
040195	MUSKRAT POND	43 56'28"N	75 02'06"W	8.0	594.4
040197	DIANA POND	43 57'04"N	75 00'10"W	13.0	600.5
040200	UPPER SOUTH POND	43 59'27"N	75 01'35"W	5.0	579.1
040201	UNNAMED	43 58'02"N	74 59'48"W	5.0	632.5
040203	UNNAMED	43 57'52"N	74 59'03"W	10.1	625.4
040205	UNNAMED	43 59'12"N	74 57'38"W	8.0	623.0
040208	UNNAMED	43 59'06"N	74 57'17"W	2.5	618.7
040209	UNNAMED	43 59'03"N	74 57'35"W	2.5	618.7
040210	WILLYS LAKE	43 57'58"N	74 57'22"W	25.0	630.9
040214	WALKER POND	43 58'04"N	74 56'40"W	15.1	635.8
040245	JAKES POND	43 58'28"N	75 07'25"W	8.0	496.8
040315	UNNAMED OR DONUT POND	44 09'44"N	74 44'27"W	5.0	557.8
040317	UNNAMED LITTLE DOG POND	44 09'49"N	74 43'14"W	2.5	563.9
040321	JOHN POND	44 06'42"N	74 45'47"W	5.0	545.6
040322	SCOTT POND	44 06'34"N	74 45'38"W	5.0	576.1
040324	SHALLOW LAKE	44 07'04"N	74 44'35"W	2.5	661.4
040327	COWHORN POND	44 05'18"N	74 50'30"W	5.0	527.3
040329	CAT MOUNTAIN POND	44 05'44"N	74 51'56"W	3.0	527.3
040353	STREETER FISH POND	44 00'60"N	74 58'21"W	5.0	594.4
040360	BIG DEER POND	44 03'58"N	74 50'12"W	25.2	533.1
040367	HYDE POND	44 00'58"N	74 53'49"W	2.5	618.7
040369	TOAD POND	44 01'08"N	74 56'16"W	5.0	582.2
040372	LITTLE CROOKED LAKE	44 00'16"N	74 56'45"W	3.0	637.0
040374	COVEY POND	43 59'21"N	74 55'55"W	2.5	679.7
040375	CRACKER POND	44 02'05"N	74 53'26"W	7.6	600.5
040377	GULL LAKE	44 00'52"N	74 53'19"W	30.2	619.0
040378	LITTLE DUCK POND	44 00'58"N	74 52'53"W	2.5	612.6
040436	SAND POND	43 56'35"N	75 09'32"W	30.0	497.7
040443	PEPPERBOX POND	43 56'11"N	75 05'30"W	10.1	568.1
040459	UNNAMED	43 54'46"N	75 07'34"W	8.0	481.0
040492	DUCK POND	43 56'40"N	75 05'02"W	5.0	588.3
040497	UNNAMED	43 56'19"N	75 00'52"W	5.0	624.8
040498	LYON LAKE	43 56'51"N	75 01'03"W	33.0	612.6
040499	SLIM POND	43 55'27"N	75 01'02"W	5.0	612.6
040504	HAWK POND	43 57'30"N	74 57'19"W	15.0	645.3
040505	HIDDEN LAKE OR HANKS POND	43 55'16"N	74 59'43"W	5.0	549.5
040509	UNNAMED	43 55'46"N	75 00'41"W	2.5	630.9
040511	SODA POND	43 56'08"N	75 00'35"W	8.0	649.2
040512	UNNAMED	43 56'41"N	74 58'35"W	2.5	612.6
040515	DISMAL POND	43 57'24"N	74 58'33"W	23.0	620.9
040520	UNNAMED	43 57'03"N	74 54'45"W	2.5	563.9
040526	UNNAMED	43 59'04"N	74 56'13"W	3.0	649.2
040527	SUMMIT POND	43 59'37"N	74 55'26"W	5.0	630.0
040531	WILDER POND	43 59'07"N	74 51'33"W	5.0	591.0
040538	ROCK LAKE	43 58'08"N	74 51'57"W	81.0	545.6
040540	BUCK POND	43 57'53"N	74 50'57"W	3.0	563.9
040546	UNNAMED	44 01'51"N	74 43'46"W	10.1	570.0
040550	FRANK POND	43 58'60"N	74 41'15"W	10.1	541.3
040554A	NEW POND	43 56'44"N	74 37'48"W	22.7	562.4
040555	SLY POND	43 57'35"N	74 38'03"W	5.0	630.9
040556	ROB POND	43 57'23"N	74 37'13"W	8.0	629.7
040557	UNNAMED	43 56'12"N	74 39'43"W	5.0	673.6
040560	EAST POND	43 55'53"N	74 40'58"W	22.7	598.0
040561	DEER POND	43 55'41"N	74 47'02"W	18.0	600.8
040570	TERROR LAKE	43 53'20"N	74 49'43"W	27.7	617.8

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
040573	RAZORBACK POND	43 50'57"N	74 55'09"W	5.0	667.5
040575	CRANBERRY POND	43 52'02"N	74 58'22"W	5.0	589.5
040576	WOODS LAKE	43 52'24"N	74 56'59"W	22.7	606.5
040577	LITTLE BUCK POND	43 50'17"N	74 56'25"W	3.0	588.3
040578	BUCK POND	43 49'19"N	74 55'45"W	8.0	614.5
040580	SILVER LAKE	43 50'41"N	74 54'57"W	22.7	640.7
040581	POCKET POND	43 49'59"N	74 52'46"W	3.0	679.7
040583	JOCK POND	43 51'08"N	74 51'25"W	2.5	649.2
040585	OSWEGO POND	43 51'18"N	74 54'15"W	2.5	653.8
040635	FIFTH CREEK POND	43 50'28"N	75 04'23"W	10.1	523.3
040639	HITCHCOCK LAKE	43 51'01"N	75 02'32"W	15.1	566.9
040641	HITCHCOCK POND	43 47'02"N	75 05'11"W	10.1	529.4
040642	GRASS POND	43 47'33"N	75 04'15"W	8.0	536.4
040643	MOOSE POND	43 47'03"N	75 03'53"W	5.0	533.4
040646	UNNAMED	43 45'16"N	75 01'04"W	5.0	606.5
040648	LYONS MARSH (UNNAMED)	43 48'36"N	74 58'41"W	3.0	624.8
040651	LITTLE DIAMOND POND	43 48'19"N	74 55'58"W	5.0	610.5
040678	EAST POND	43 44'32"N	75 02'56"W	13.0	554.7
040679	UNNAMED	43 45'45"N	75 01'09"W	5.0	606.5
040704	MIDDLE SETTLEMENT POND	43 41'08"N	75 05'36"W	8.0	526.1
040706	GRASS POND	43 41'39"N	75 03'27"W	5.0	545.6
040710	COPPER LAKE	43 39'44"N	75 08'42"W	25.0	477.6
040717	GULL LAKE	43 38'41"N	75 05'31"W	15.1	539.5
040733	BIG DIAMOND POND	43 47'19"N	74 57'23"W	2.5	612.6
040738	THIRSTY POND	43 49'29"N	74 54'16"W	15.1	647.4
040747	CASCADE LAKE	43 47'33"N	74 47'15"W	40.0	553.2
040749	SIS LAKE	43 45'55"N	74 52'04"W	10.0	555.0
040750A	WINDFALL POND	43 48'16"N	74 49'37"W	3.0	594.4
040751	TOWNSEND POND	43 48'54"N	74 50'14"W	2.5	563.9
040756	MERRIAM LAKE	43 51'28"N	74 50'45"W	8.0	655.0
040758	GULL LAKE SOUTH	43 51'25"N	74 49'15"W	13.0	593.8
040760	OTTER POND	43 51'22"N	74 43'07"W	5.0	649.2
040762	GULL LAKE NORTH OR UPPER	43 51'38"N	74 49'45"W	13.0	597.7
040772	SOUTH POND	43 53'10"N	74 44'22"W	18.0	609.9
040774	RUSSIAN LAKE	43 50'37"N	74 47'29"W	15.1	565.4
040775A	PUG HOLE	43 49'25"N	74 47'60"W	5.0	600.5
040776	BIG CHIEF POND	43 49'49"N	74 49'39"W	2.5	600.5
040778	CHUB LAKE	43 49'44"N	74 46'36"W	18.0	604.1
040779	PIGEON LAKE	43 50'53"N	74 45'47"W	15.1	632.8
040788	EAGLES NEST LAKE	43 45'56"N	74 43'34"W	5.0	588.6
040789	BUG LAKE	43 46'07"N	74 43'53"W	33.0	607.2
040790	EIGHTH LAKE FULTON CHAIN LAKE	43 46'53"N	74 41'33"W	123.0	545.9
040796	MOUNTAIN POND	43 42'19"N	74 52'37"W	5.0	637.0
040803	BLOODSUCKER POND	43 38'44"N	75 01'57"W	2.5	527.3
040809	PANTHER LAKE	43 40'42"N	74 55'23"W	18.0	557.2
040822	DOE POND	43 40'55"N	74 49'58"W	3.0	557.8
040827	FAWN LAKE	43 42'53"N	74 45'33"W	8.0	593.8
040828	HORSESHOE POND	43 39'33"N	74 53'03"W	5.0	637.0
040831	HALL POND	43 39'34"N	74 50'42"W	5.0	685.8
040850	SQUAW LAKE	43 37'53"N	74 44'05"W	38.0	644.6
040854	HORN LAKE	43 35'56"N	74 48'54"W	18.0	701.3
040855	MOUNTAIN LAKE	43 34'34"N	74 48'16"W	5.0	771.1
040858	UNNAMED	43 34'43"N	74 47'43"W	5.0	765.0
040863	UNNAMED POND	43 34'48"N	74 43'25"W	5.0	771.1
040864	UNNAMED	43 36'32"N	74 42'22"W	5.0	734.6
040866	DEEP LAKE	43 37'15"N	74 39'41"W	13.0	788.8
040871	UNNAMED	43 36'56"N	74 41'48"W	5.0	752.9
040873	WOLF LAKE	43 37'44"N	74 38'36"W	5.0	789.4
040874	BROOK TROUT LAKE	43 36'15"N	74 39'39"W	30.0	722.1
040875	NORTHRUP LAKE	43 34'37"N	74 40'58"W	5.0	771.1
040880	BEAR POND	43 42'39"N	74 41'52"W	10.1	636.1
040885	FALLS POND	43 37'42"N	74 40'54"W	15.0	758.9

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
040886	JIMMY POND	43 37'58"N	74 37'31"W	3.0	844.3
040887	LOST POND	43 38'36"N	74 33'07"W	5.0	722.4
040888	SLY POND	43 40'08"N	74 35'29"W	10.0	875.4
040889	CELLAR POND	43 43'46"N	74 31'43"W	3.0	874.8
040967	BREWER LAKE	43 35'30"N	75 05'18"W	8.0	539.5
040968	BEAR LAKE	43 36'19"N	75 02'22"W	20.0	490.7
040969	GULL LAKE	43 33'07"N	75 03'10"W	55.0	540.4
040984	BLOODSUCKER POND	43 35'52"N	75 01'31"W	3.0	582.2
040992	NORTH BRANCH LAKE	43 26'30"N	74 57'39"W	3.0	554.7
040995	BURP LAKE	43 27'47"N	74 54'07"W	5.0	645.3
040996	BLACK CREEK LAKE	43 27'19"N	74 53'50"W	30.0	580.6
041000	TWIN LAKES RESERVOIR	43 28'49"N	74 55'49"W	27.7	591.9
041001	MINK LAKE	43 28'47"N	75 01'13"W	5.0	507.8
041003	LITTLE SALMON LAKE	43 29'26"N	74 50'24"W	15.1	678.5
041010	GOOSENECK LAKE	43 34'07"N	74 51'16"W	3.0	716.3
041012	MONUMENT LAKE	43 34'35"N	74 49'24"W	5.0	758.9
041017	UNNAMED	43 32'53"N	74 54'06"W	3.0	600.5
050157	GRANT LAKE	43 17'10"N	74 17'59"W	3.0	454.1
050159	LOWER THREE PONDS	43 17'53"N	74 22'19"W	3.0	789.4
050169	HOLMES LAKE	43 11'28"N	74 26'11"W	7.6	562.0
050182	BENNETT LAKE	43 19'18"N	74 12'20"W	15.1	354.2
050184	MIDDLE LAKE	43 19'43"N	74 12'40"W	12.6	454.1
050186	TENANT LAKE	43 22'02"N	74 05'16"W	30.0	506.9
050187	NEW LAKE	43 25'25"N	74 08'38"W	10.1	541.0
050188	WILCOX LAKE	43 24'12"N	74 08'58"W	55.4	440.4
050190	BULLHEAD POND	43 22'19"N	74 03'41"W	5.0	698.0
050192	ST JOHN LAKE	43 26'30"N	74 03'39"W	13.0	672.7
050197	LIZARD POND	43 30'55"N	74 02'42"W	10.1	529.4
050207	RICE POND	43 18'54"N	74 07'15"W	10.0	496.8
050210	SAND LAKE	43 20'52"N	74 03'32"W	20.0	527.9
050212	LIVINGSTON LAKE	43 22'33"N	74 02'44"W	96.0	563.9
050213	MURPHY LAKE	43 20'17"N	74 13'04"W	15.1	449.0
050215	WILLIS LAKE	43 22'12"N	74 14'26"W	15.1	397.5
050218	BUCK POND	43 23'06"N	74 24'16"W	2.5	765.0
050219	LAKE CHARTREUSE	43 24'48"N	74 23'05"W	5.0	595.9
050220	HAMILTON LAKE	43 26'01"N	74 22'39"W	58.0	565.1
050240	WARNER LAKE	43 25'49"N	74 33'53"W	2.5	667.5
050251	FIDDLER'S LAKE	43 25'13"N	74 28'28"W	15.0	551.7
050254	LILLY LAKE	43 26'39"N	74 26'52"W	13.0	526.4
050259	JOCKEY BUSH LAKE	43 18'02"N	74 35'43"W	18.0	598.6
050267	CANARY POND	43 18'19"N	74 26'60"W	5.0	611.7
050269	UNNAMED	43 17'17"N	74 26'17"W	2.5	618.7
050270	SILVER LAKE	43 17'42"N	74 25'16"W	27.7	631.5
050271	WHITE LAKE	43 15'53"N	74 27'16"W	5.0	606.5
050272	EASTMAN LAKE	43 12'27"N	74 28'10"W	12.0	710.2
050274	COUNTY LINE LAKE	43 14'01"N	74 25'54"W	9.0	740.7
050276	MECO LAKE	43 17'07"N	74 25'24"W	5.0	641.9
050281	GILMAN LAKE	43 28'34"N	74 19'13"W	20.2	509.9
050284	BUCKHORN PONDS	43 30'57"N	74 12'52"W	2.5	752.9
050286	COD POND	43 30'39"N	74 08'45"W	17.6	462.1
050288	FISH POND (UPPER)	43 33'24"N	74 02'44"W	10.0	485.5
050291	KIBBY POND	43 34'05"N	74 04'31"W	18.0	637.9
050293	SIAMESE POND UPPER	43 37'25"N	74 11'31"W	10.1	648.9
050295	UPPER TWIN POND	43 40'17"N	74 10'60"W	5.0	637.6
050298	SECOND POND	43 39'49"N	74 04'18"W	15.1	683.1
050299	THE VLY POND	43 41'40"N	74 04'02"W	8.0	618.7
050300	BOTHERATION POND	43 41'20"N	74 05'30"W	8.0	613.9
050301	JOHNSONS VLY POND	43 29'22"N	74 17'13"W	2.5	624.8
050302	HAYES FLOW POND	43 31'54"N	74 13'37"W	5.0	576.1
050306	UPPER PINE LAKE	43 36'17"N	74 19'11"W	3.0	618.7
050308	OWL POND	43 36'06"N	74 19'51"W	27.7	589.5
050309	ROCK POND	43 38'04"N	74 18'13"W	15.1	570.0

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
050310	LONG POND	43 38'25"N	74 17'26"W	15.0	563.9
050312	SOUTH POND	43 36'13"N	74 12'42"W	2.5	704.1
050332	LENS LAKE	43 24'21"N	74 01'13"W	37.8	559.9
050378	PAT POND	43 47'08"N	73 52'11"W	3.0	429.8
050383	BIG SHERMAN POND	43 49'38"N	73 58'32"W	10.1	600.5
050385	OLIVER POND	43 49'37"N	73 54'22"W	18.0	455.1
050386	BARNES POND	43 51'17"N	73 58'10"W	5.0	563.9
050388	HEWITT POND	43 52'00"N	73 58'28"W	68.0	516.9
050392	UNNAMED POND	43 54'54"N	73 55'54"W	2.5	533.4
050395	BIGSBY POND	43 50'16"N	73 54'35"W	20.2	474.3
050397	BAILEY POND	43 53'12"N	73 54'12"W	8.0	504.8
050398	MARION POND	43 52'51"N	73 54'56"W	5.0	704.1
050402	THURMAN POND	43 48'40"N	73 48'33"W	35.0	271.3
050403	HORSESHOE POND	43 49'54"N	73 48'55"W	18.0	381.0
050404	BULLET POND	43 50'39"N	73 48'58"W	13.0	385.0
050405	NORTH POND	43 52'05"N	73 48'49"W	10.1	381.0
050406	BIG ROGER'S POND	43 52'15"N	73 49'45"W	25.0	390.4
050455	LITTLE MARSH POND	43 59'00"N	73 47'02"W	2.5	484.6
050457	SAND POND	43 56'43"N	73 54'07"W	25.0	558.4
050460A	DIX POND	44 03'56"N	73 47'41"W	8.0	679.7
050472	HOWARD POND	44 01'06"N	73 38'29"W	5.0	374.0
050476	EAGLES NEST POND	44 01'12"N	73 35'40"W	3.0	448.1
050486	MUNSON POND	44 01'23"N	73 38'51"W	8.0	368.8
050487	TRIANGLE POND	44 02'18"N	73 39'15"W	2.5	368.8
050488	BULLPOUT POND	44 03'10"N	73 38'25"W	2.5	405.4
050490	MORIAH POND	44 02'59"N	73 36'11"W	5.0	423.7
050491	GUI POND	44 04'05"N	73 40'56"W	8.0	313.9
050493	JOE POND	44 03'18"N	73 38'37"W	3.0	442.0
050494A	SECRET POND	44 06'05"N	73 38'38"W	2.5	411.5
050495	BIRCH POND	44 05'59"N	73 38'14"W	3.0	399.3
050496	LOST POND	44 06'32"N	73 38'07"W	2.5	417.6
050499	MOSS POND (SOUTHERN)	44 04'35"N	73 41'33"W	5.0	387.1
050501	NEW POND	44 06'19"N	73 39'25"W	38.0	387.1
050504	FEEDER POND	44 05'26"N	73 36'18"W	10.1	399.3
050506	HATCHING POND	44 06'16"N	73 35'04"W	5.0	484.6
050507	CROWFOOT POND	44 03'31"N	73 35'14"W	15.1	496.8
050529	CHATIEMAC LAKE	43 38'40"N	74 03'23"W	10.1	698.3
050529A	ROSS LAKE (WINDOVER LAKE)	43 36'39"N	74 02'29"W	37.8	460.3
050539	BROWN POND	43 44'46"N	74 06'49"W	2.5	618.7
050541	HOUR POND	43 42'24"N	74 10'03"W	15.0	638.9
050542	PEAKED MOUNTAIN POND	43 43'29"N	74 09'16"W	7.6	685.8
050549	BULLHEAD POND	43 49'35"N	74 01'14"W	10.1	570.6
050552	FISH POND	43 51'56"N	74 05'25"W	5.0	655.3
050557	STONY POND	43 50'23"N	73 58'38"W	22.7	633.4
050559	CENTER POND	43 50'11"N	73 57'48"W	5.0	637.0
050566	WHITE LILY POND	44 02'53"N	73 55'44"W	8.0	643.7
050568	WHORTLEBERRY POND	43 48'07"N	74 09'19"W	8.0	509.0
050569	ROSS POND	43 47'27"N	74 08'47"W	10.1	533.4
050572	PINE MOUNTAIN POND	43 48'37"N	74 10'02"W	5.0	501.7
050580	SQUIRREL POND	43 49'06"N	74 10'34"W	3.0	466.3
050581	DUNK POND	43 50'04"N	74 10'21"W	8.0	472.4
050589	PUFFER POND	43 40'40"N	74 11'32"W	15.0	665.7
050594	CLEAR POND	43 44'21"N	74 11'57"W	7.6	588.3
050596	JOHN POND	43 43'53"N	74 12'09"W	7.6	557.2
050598	CROTCHED POND	43 40'39"N	74 17'21"W	25.0	554.7
050599	JOHN MACK POND	43 39'03"N	74 17'54"W	13.0	533.4
050602	UPPER DUG MOUNTAIN POND	43 36'02"N	74 20'47"W	5.0	545.6
050603	WHITAKER LAKE	43 34'04"N	74 21'58"W	60.5	538.0
050607	LITTLE MOOSE POND	43 34'01"N	74 31'56"W	10.0	692.8
050608	OTTER LAKE	43 33'10"N	74 34'11"W	10.1	687.0
050609B	LEACH POND	43 30'13"N	74 33'39"W	5.0	661.4
050612	PANTHER MOUNTAIN POND	43 36'10"N	74 24'37"W	3.0	527.3

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
050613	MASON LAKE	43 35'56"N	74 25'19"W	42.8	547.4
050617	FRANK POND	43 51'45"N	74 09'58"W	10.1	516.6
050619	LONESOME POND	43 52'40"N	74 08'35"W	2.5	515.1
050623	UNNAMED POND	43 51'36"N	74 11'60"W	3.0	490.7
050628	LITTLE GRASSY POND	43 51'52"N	74 17'55"W	2.5	502.9
050633	EIGHTH LAKE	43 52'35"N	74 13'04"W	8.0	487.4
050634	JACKSON POND	43 52'14"N	74 13'52"W	13.0	490.7
050640	WOLF POND	43 53'40"N	74 20'50"W	15.0	721.5
050641	TIRREL POND	43 53'12"N	74 22'48"W	58.0	584.6
050642	UNNAMED POND	43 48'27"N	74 23'22"W	2.5	624.8
050643	STEPHEN'S POND	43 49'15"N	74 24'56"W	25.0	595.0
050644	CASCADE POND	43 48'43"N	74 26'50"W	8.0	652.0
050653	WILSON POND	43 48'46"N	74 27'56"W	2.5	655.3
050654	CRYSTAL LAKE	43 50'43"N	74 27'38"W	10.1	570.0
050658	UNKNOWN POND	43 48'32"N	74 18'28"W	15.0	496.8
050658A	UNNAMED	43 48'23"N	74 17'15"W	10.1	545.6
050662	SPRAGUE POND	43 48'00"N	74 22'34"W	27.7	560.8
050672	CHENEY POND	43 52'41"N	74 09'19"W	10.1	502.9
050673	ZACK POND	43 55'52"N	74 11'02"W	38.0	565.7
050674	OTTER POND	43 54'25"N	74 12'51"W	10.0	496.8
050676	GOODNOW POND	43 56'37"N	74 15'11"W	20.2	533.4
050686	CORNER POND	44 01'46"N	74 18'40"W	25.0	527.3
050688	WOLF POND	44 01'28"N	74 12'51"W	55.4	555.6
050691	PICKWACKET POND	44 00'41"N	74 18'21"W	68.0	546.2
050695	WARD POND	44 01'40"N	74 09'27"W	5.0	557.8
050696	BLACK POND	44 02'36"N	74 09'27"W	2.5	758.9
050698	LAKE ANDREW	44 03'01"N	74 06'15"W	8.0	716.3
050700	UNNAMED POND	44 02'18"N	74 05'29"W	3.0	576.1
050701	HYSLOP POND	43 56'05"N	74 04'26"W	3.0	515.1
050707	AVALANCHE LAKE	44 07'59"N	73 57'49"W	5.0	872.6
050708A	UNNAMED	44 05'20"N	73 57'12"W	2.5	1029.3
050711	CHENEY POND	44 02'58"N	74 05'22"W	5.0	621.2
050712	LAKE SALLY	44 04'09"N	74 02'10"W	8.0	563.9
050713	LAKE JIMMY	44 04'44"N	74 02'20"W	13.0	531.0
050716	HARKNESS LAKE	44 03'34"N	74 05'08"W	8.0	594.4
050717	BRADLEY POND	44 05'44"N	74 07'00"W	5.0	880.9
050719	UPPER WALLFACE POND	44 08'57"N	74 03'43"W	5.0	972.3
050720	MIDDLE WALLFACE POND	44 08'35"N	74 03'41"W	2.5	966.2
060053	MOUNTAIN POND	44 19'29"N	74 28'37"W	7.6	527.3
060080	EAGLE CRAG LAKE	44 10'28"N	74 36'53"W	60.0	513.3
060083	MT ARAB LAKE	44 11'22"N	74 35'49"W	50.0	505.7
060084	PINE POND	44 08'47"N	74 39'38"W	5.0	521.2
060088	MINNOW POND	44 11'31"N	74 31'57"W	8.0	490.7
060113	LONG POND (HEAVENS LAKE)	44 08'11"N	74 25'34"W	10.1	601.1
060117	BEAR POND	44 03'60"N	74 39'57"W	60.5	568.8
060123	HANDSOME POND	44 03'24"N	74 26'26"W	55.4	541.3
060125	SPERRY POND	44 05'51"N	74 29'29"W	47.9	535.2
060126	ANTEDILUVIAN POND	43 59'57"N	74 37'13"W	5.0	527.3
060127	DOCTOR'S POND	44 00'13"N	74 35'53"W	10.1	551.7
060131	BOTTLE POND	43 57'48"N	74 36'22"W	22.7	570.3
060135	EAST CHARLEY POND	44 02'50"N	74 41'00"W	10.1	582.2
060136	LITTLE CHARLEY POND	44 02'45"N	74 42'05"W	10.0	558.7
060142	LOON POND	44 04'14"N	74 38'13"W	42.8	582.2
060143	HORSESHOE LAKE	44 08'06"N	74 36'14"W	161.3	526.4
060146	TROUT POND	44 05'48"N	74 38'10"W	65.5	542.5
060147	HIGH POND	44 05'07"N	74 38'60"W	15.1	576.1
060149	BRADFORD POND	44 06'16"N	74 42'07"W	5.0	545.6
060167	PANTHER POND	44 08'11"N	74 42'32"W	15.0	638.6
060170	HALFMOON POND	44 05'07"N	74 49'44"W	2.5	557.8
060172	HIGH POND	44 04'53"N	74 50'10"W	5.0	612.6
060182	LITTLE SIMON POND	44 09'01"N	74 27'22"W	60.5	545.3
060183	MOODY POND	44 12'23"N	74 25'25"W	5.0	490.7

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
060184	MORETTE POND	44 15'35"N	74 24'23"W	3.0	496.8
060186	FOLLENSBY POND	44 09'47"N	74 23'03"W	390.6	471.2
060196	ROCK POND	44 11'13"N	74 18'25"W	10.0	486.2
060197	BLUEBERRY POND	44 11'14"N	74 13'01"W	8.0	599.5
060201	WHITE LILY POND	44 13'12"N	74 12'36"W	8.0	570.0
060204	BEAVER POND	44 12'42"N	74 09'49"W	5.0	594.4
060207	PALMER POND	44 10'40"N	74 18'19"W	5.0	521.2
060212	UPPER MOOSE POND	44 04'01"N	74 24'18"W	15.0	557.8
060218	UPPER BRUEYER POND	44 08'52"N	74 17'56"W	5.0	527.3
060222	SHAW POND	44 02'45"N	74 10'51"W	3.0	563.9
060223	LATHAM POND	44 06'11"N	74 15'15"W	3.0	527.3
060226	UNNAMED POND	44 06'31"N	74 10'54"W	5.0	582.2
060230	MOUNTAIN POND	44 08'40"N	74 08'27"W	10.1	652.9
060231	ROCK POND	44 07'33"N	74 08'10"W	3.0	710.2
060232	UNNAMED	44 10'39"N	74 08'20"W	2.5	947.9
060234	BLACK POND	44 11'54"N	74 04'28"W	3.0	740.7
060237	LOST POND	44 09'42"N	74 02'03"W	5.0	1129.3
060239	UPPER PRESTON POND	44 07'25"N	74 04'55"W	27.7	685.8
060247	SALMON POND	43 54'54"N	74 20'26"W	33.0	630.9
060247A	OWLS HEAD POND	43 56'44"N	74 30'18"W	5.0	563.9
060248	LAKE EATON	43 58'38"N	74 28'30"W	234.4	524.6
060252	ROCK (MCRORIE) LAKE	44 02'28"N	74 24'59"W	158.8	522.4
060256	MOONSHINE POND	44 02'50"N	74 30'34"W	8.0	612.6
060257	MOHEGAN LAKE	44 03'26"N	74 29'21"W	50.4	537.4
060261	SAND POND	44 00'21"N	74 33'26"W	13.0	533.4
060263	ROBINSON POND	44 00'43"N	74 34'41"W	5.0	588.3
060274	THIRD ANTHONY POND	44 03'56"N	74 23'16"W	13.0	570.0
060275	HEDGEHOG POND	44 04'51"N	74 23'09"W	5.0	557.8
060278	PILGRIM POND	43 55'46"N	74 39'51"W	5.0	753.8
060281	HIGH POND	43 55'32"N	74 38'10"W	22.7	544.7
060285	PEAR POND	43 57'03"N	74 36'52"W	8.0	571.5
060289	CORNER POND	43 58'12"N	74 32'32"W	2.5	551.7
060302	SLIM POND	43 48'20"N	74 33'48"W	2.5	648.0
060303	BEAR POND	43 48'07"N	74 33'39"W	2.5	624.8
060309	PINE POND	43 51'50"N	74 30'30"W	3.0	637.0
060311	MINNOW POND	43 52'60"N	74 25'37"W	43.0	612.0
060315	ALUMINUM POND	43 46'36"N	74 31'02"W	3.0	740.7
060323	UNNAMED	43 50'56"N	74 43'42"W	2.5	655.3
060325	PELCHER POND	43 49'35"N	74 42'40"W	18.0	552.6
060330	UNNAMED	43 49'18"N	74 46'24"W	3.0	637.0
070708	KLONDIKE RESERVOIR	43 14'10"N	74 46'39"W	48.0	533.4
070719	NINE CORNER LAKE	43 11'47"N	74 33'07"W	42.8	570.0
070720	BROOMSTICK LAKE	43 12'35"N	74 32'43"W	5.0	582.2
070722	STONER LAKE WEST	43 13'24"N	74 32'18"W	27.7	502.9
070725	INDIAN LAKE	43 11'31"N	74 28'04"W	8.0	612.6
070733	PRAIRIE LAKE	43 10'48"N	74 28'35"W	2.5	570.0
070745	PLEASANT LAKE	43 11'46"N	74 35'53"W	98.3	496.8
070746	AYERS LAKE	43 12'17"N	74 36'25"W	30.2	509.0
070768	LITTLE METCALF POND	43 16'28"N	74 43'22"W	3.0	624.8
070775	BOWEN L (DEER P)	43 17'18"N	74 41'60"W	5.0	679.7
070776	BILLS POND	43 18'12"N	74 42'22"W	2.5	667.5
070778	FERRIS VLY	43 19'55"N	74 37'12"W	5.0	557.8
070779	IRON LAKE	43 18'46"N	74 35'44"W	10.0	612.6
070780	BLACK CAT LAKE	43 19'32"N	74 36'23"W	13.0	543.8
070784	CHRISTIAN LAKE	43 20'50"N	74 38'03"W	5.0	563.9
070787	BARTO LAKE	43 22'33"N	74 41'45"W	10.0	685.8
070788	MUD POND	43 22'29"N	74 40'29"W	5.0	667.5
070793	TROUT LAKE	43 20'55"N	74 42'31"W	18.0	651.0
070794	BLIND MANS VLY	43 20'07"N	74 41'53"W	2.5	630.9
070814	MOUNTS CREEK LAKE	43 19'33"N	74 50'15"W	5.0	552.3
070823	LONG LAKE	43 18'45"N	74 43'01"W	22.7	667.5
070846	DEBRAINE LAKE	43 21'43"N	74 43'02"W	5.0	615.7

SIMPLE PONDS IN THE ADIRONDACK WATERSHED DATA BASE

Pond Number	Lake Name	Latitude	Longitude	Area (ha)	ELEVATION (m)
070850	WILMURT LAKE	43 25'56"N	74 43'29"W	42.8	751.9
0708538	JONES LAKE	43 22'03"N	74 38'33"W	8.0	698.0
070855	LITTLE PINE LAKE	43 24'26"N	74 38'43"W	5.0	652.9
070856	TWIN LAKE (SOUTH)	43 26'38"N	74 35'36"W	8.0	789.4
070859	G LAKE	43 24'56"N	74 37'25"W	37.8	618.7
070861	NOTCH (BUCK) POND	43 27'43"N	74 39'21"W	5.0	746.8
070863	UNNAMED POND	43 27'07"N	74 34'37"W	3.0	752.9
070864	BUCK POND	43 28'50"N	74 34'37"W	3.0	679.7
070865	WHITE BIRCH LAKE	43 28'43"N	74 34'10"W	3.0	783.3
070867	BUCK POND	43 28'43"N	74 36'20"W	5.0	667.5
070869	GID LAKE	43 25'33"N	74 45'58"W	2.5	728.5
070881	BEAR POND	43 28'26"N	74 42'30"W	5.0	698.0
070882	SNAG LAKE	43 26'47"N	74 43'11"W	5.0	717.2
070883	BIG ROCK LAKE	43 26'33"N	74 41'57"W	32.8	705.9
070890	PEA POND	43 29'02"N	74 41'00"W	2.5	740.7
070895	MISERY POND	43 28'20"N	74 40'27"W	5.0	704.1
070901	TWIN (SPLIT) ROCK LAKE	43 29'38"N	74 41'37"W	5.0	661.4
070907	AMOS LAKE	43 30'02"N	74 37'08"W	5.0	704.1
070909	BALSAM LAKE	43 32'27"N	74 35'42"W	15.0	734.9
070913	GOOSE LAKE	43 33'35"N	74 43'19"W	5.0	722.4
070915	BEAVER POND	43 33'24"N	74 41'40"W	3.0	673.6
070916	UNNAMED	43 34'25"N	74 40'33"W	2.5	765.0
070917	UNNAMED	43 34'23"N	74 40'15"W	2.5	752.9
070919	POOR LAKE	43 33'45"N	74 42'23"W	8.0	728.5
070926	SAMPSON LAKE	43 34'47"N	74 34'39"W	25.0	728.5
070927	BULLHEAD POND	43 34'40"N	74 32'31"W	3.0	752.9
070930	SOUTH LAKE (W CANADA LK)	43 34'53"N	74 38'45"W	35.3	714.8
070931	WEST LAKE (CANADA LAKE)	43 35'55"N	74 38'09"W	98.3	721.8
070934	UNNAMED	43 37'10"N	74 37'06"W	8.0	812.0
070937	PUDDLE HOLE POND	43 35'33"N	74 32'60"W	3.0	758.9
070938	PILLSBURY POND	43 35'41"N	74 31'38"W	32.8	759.9

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