COUNTY OF ERIE
DEPARTMENT OF ENVIRONMENT & PLANNING
DIVISION OF ENVIRONMENTAL CONTROL

MEMORANDUM

FROM Donald Campbell, P.E. **DATE** March 13, 1981

TO Peter Buechi, NYSDEC

SUBJECT Abandoned Landfill Survey - Pfohl Brothers Landfill - T. of Cheektowaga

Please find the attached report concerning the Pfohl site. The approach used in the preparation of this report could be useful in the evaluation of other abandoned sites in Erie County.

As we have indicated in past conversation our office places this site high on its priority list for further study based on our belief that it may pose a hazard or contain hazardous materials.

DC:RDK:aj
Attach.

FOIL
Releasable ✓
Non-Releasable

f:915043

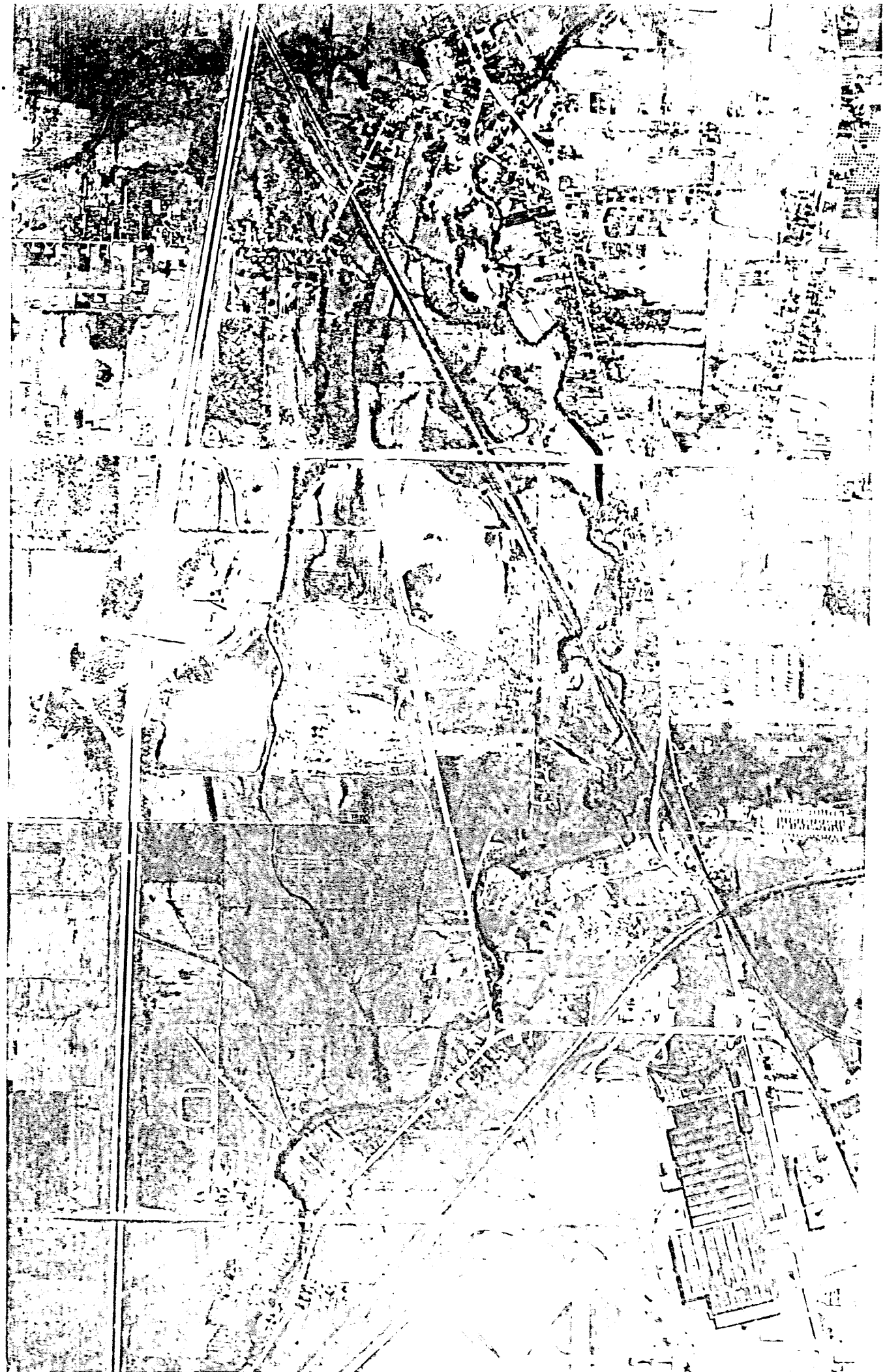
Peter Bruchi, NYSDEC

SUMMARY OF DATA

PFOHL BROTHERS LANDFILL

TOWN OF CHEEKTOWAGA

Ronald D. Koczaja
March 9, 1981



The area known as the Pfohl Brothers Landfill was researched to gain a better insight into the activities which occurred and the character of the surrounding land. Aerial photos were used to place time and size reference frames around the operation. Surface soil data was available through the Soil Conservation Service in East Aurora. Sub-surface soil information was difficult to obtain. Various sources were used with sewer construction contract documents providing the best information.

GENERAL:

Centered on Aero Drive adjacent to Transit Road, the site covers an area of approximately 120 acres. Active landfilling was performed during an approximate twenty-five (25) year period which spanned the 1950s and 60s. Since the active days, vegetation has established itself over the site. Soil cover is generally good but visible evidence of past dumping can be detected.

Topography is flat in the vicinity of the site with few outstanding terrain features. The landfilling operation has raised the site above the surrounding elevation. Adjacent to the landfill is a man-made lake, approximately 40 acres in size, which was created when material was excavated for use as fill. This lake is reported to be spring fed with a maximum depth of approximately twenty (20) feet. The outlet of the lake is the intermittent stream which borders the north edge of the landfill.

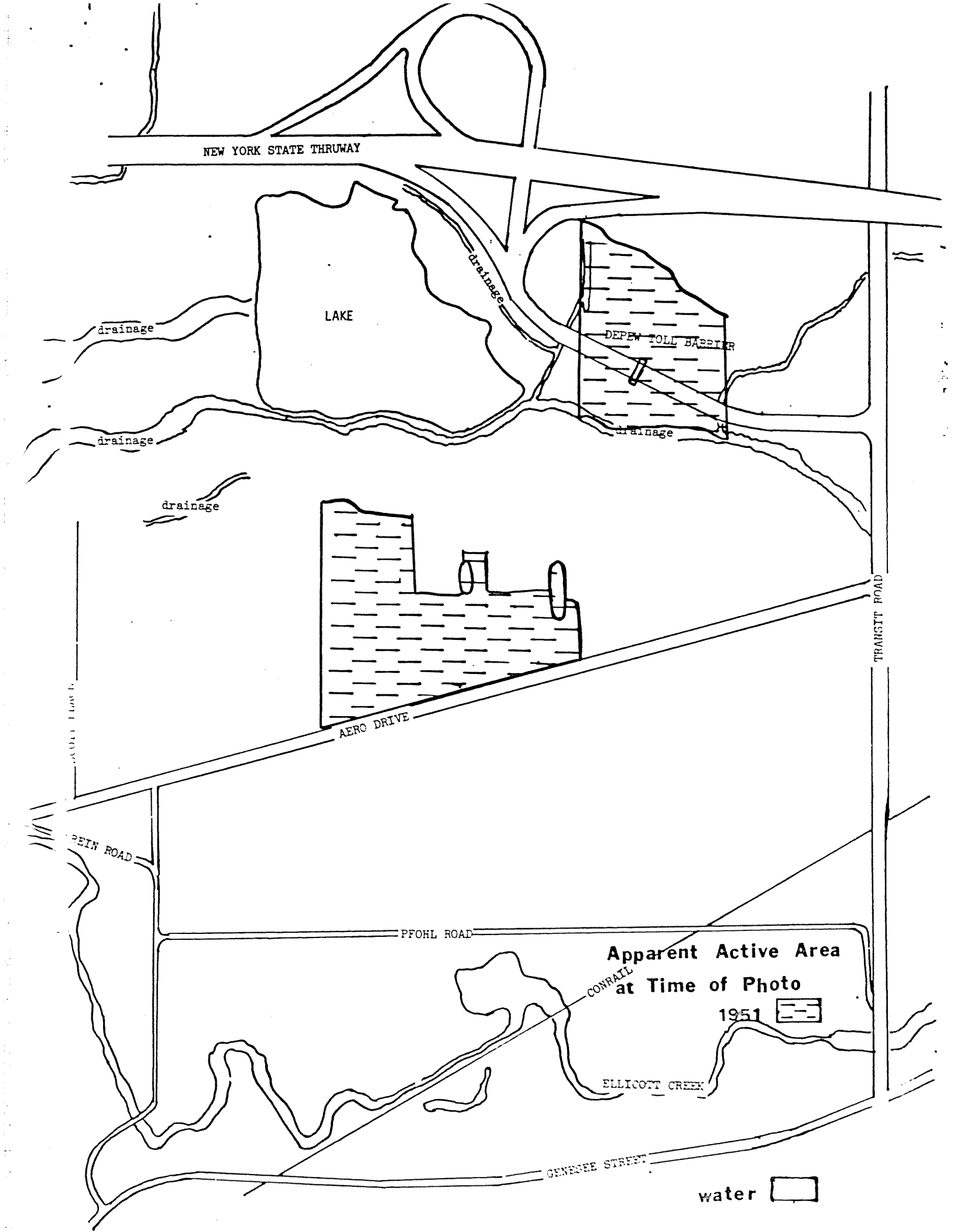
Surface drainage from the site is tributary to Ellicott Creek. In addition to the intermittent stream north of the landfill, ditches along Transit Road, Aero Drive and the Conrail tracks lead to the creek. The entire site north of Aero Drive and approximately half of the area south of Aero Drive is within the 100 year flood plain of Ellicott Creek.

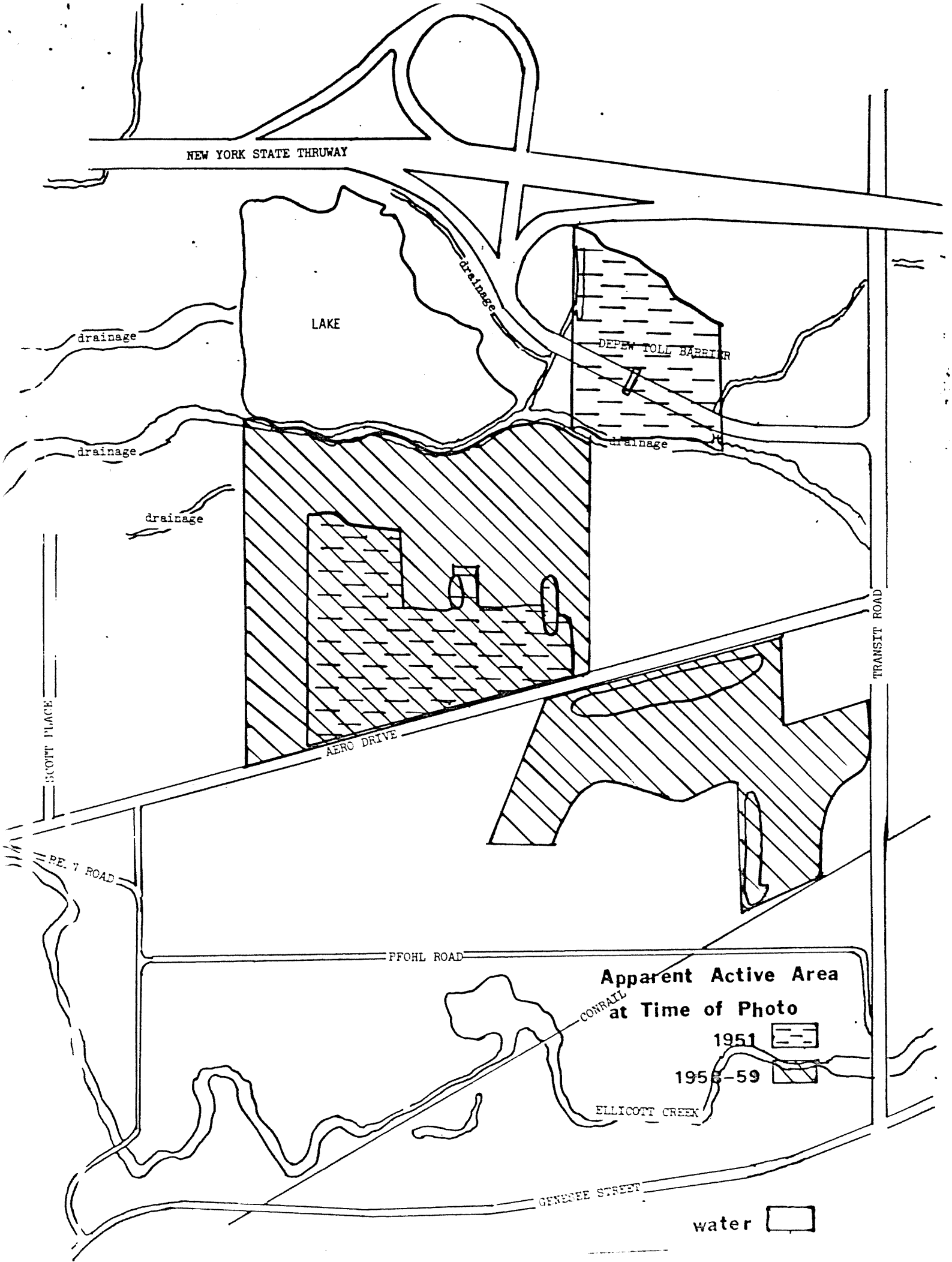
LANDFILL ACTIVITY

Aerial photographs were reviewed for the years 1927, 1951, 1958, 1959, 1960, 1965 and 1969-72. Evaluation of these photos gave an indication of the growth and landfilling practices employed. Vigorous activity occurred during the early and mid-sixties with most of the operation taking place south of Aero Drive. It appears that the use of the site diminished after that time and drew to a close in the early 1970s.

Attempts to determine the landfill practices employed at the site were hampered by the limited availability of suitable photographs. It was concluded however, the the extensive use of excavation and fill did not occur north of Aero Drive. Excavation and fill was used south of Aero Drive with dumping into the ponds created following excavation. This was evident in the photographs.

In addition to domestic and commercial wastes,this site is suspected to have received sizeable amounts of industrial wastes. The 1979 Interagency Task Force Report on Hazardous Wastes found evidence


NEW YORK STATE THRUWAY
LAKE
drainage
drainage
drainage
drainage
drainage
DEPEW TOLL BARRIER
TRANSIT ROAD
AERO DRIVE
PFOHL ROAD
CONRAIL
ELLICOTT CREEK
GENESEE STREET
Apparent Active Area
at Time of Photo
1951
water


NEW YORK STATE THRUWAY
LAKE
drainage
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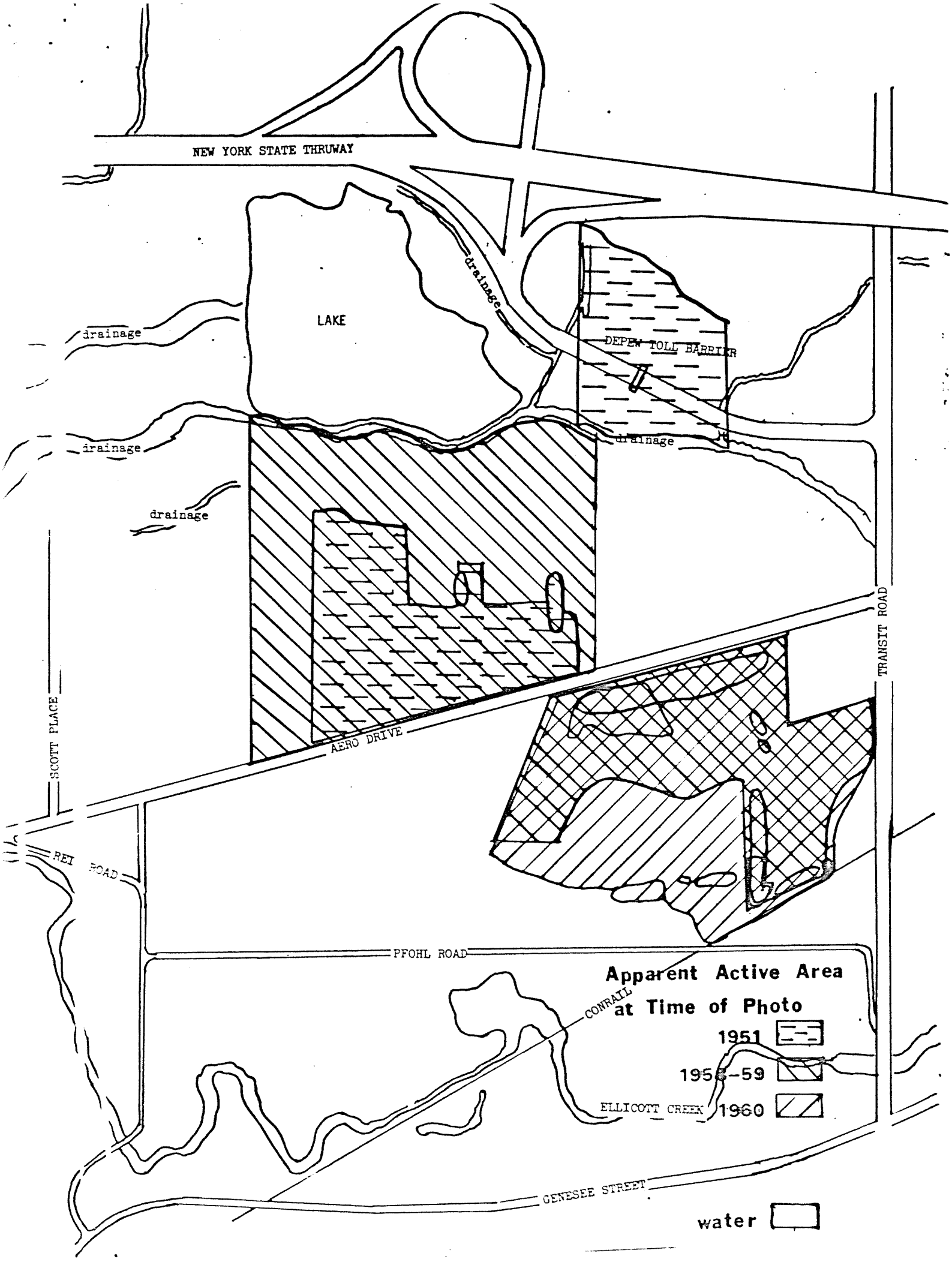
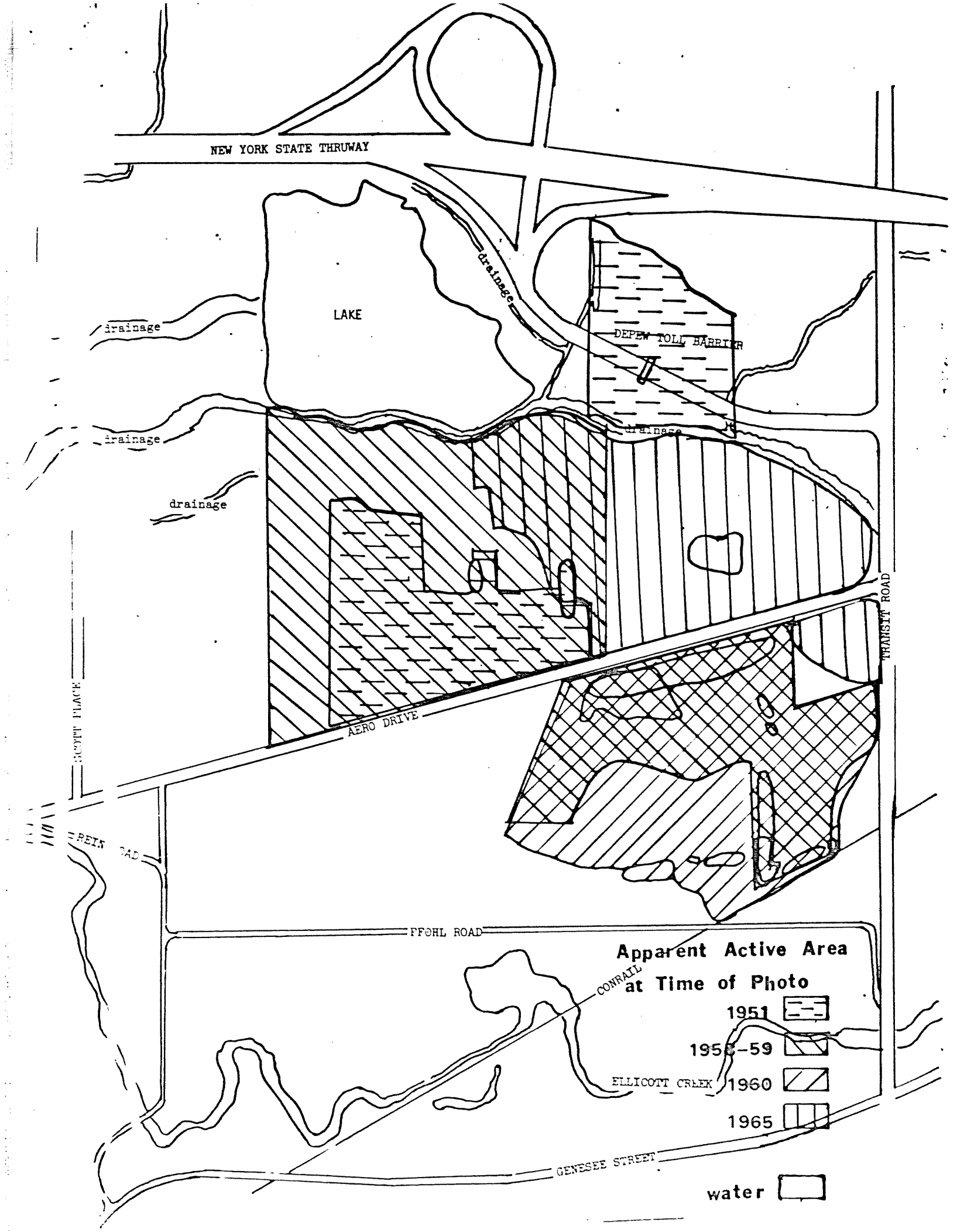
drainage
DEPEW TOLL BARRIER
SCOTT PLACE
AERO DRIVE
TRANSIT ROAD
PE. 7 ROAD
PFOHL ROAD
CONRAIL
ELLICOTT CREEK
GENESEE STREET
Apparent Active Area
at Time of Photo
1951
1958-59
water


NEW YORK STATE THRUWAY
LAKE
drainage
drainage
drainage
drainage
drainage
DEPEW TOLL BARRIER
SCOTT PLACE
AERO DRIVE
TRANSIT ROAD
REI ROAD
PFOHL ROAD
CONRAIL
ELLICOTT CREEK
GENESEE STREET
Apparent Active Area
at Time of Photo
1951
1958-59
1960
water


NEW YORK STATE THRUWAY
LAKE
drainage
drainage
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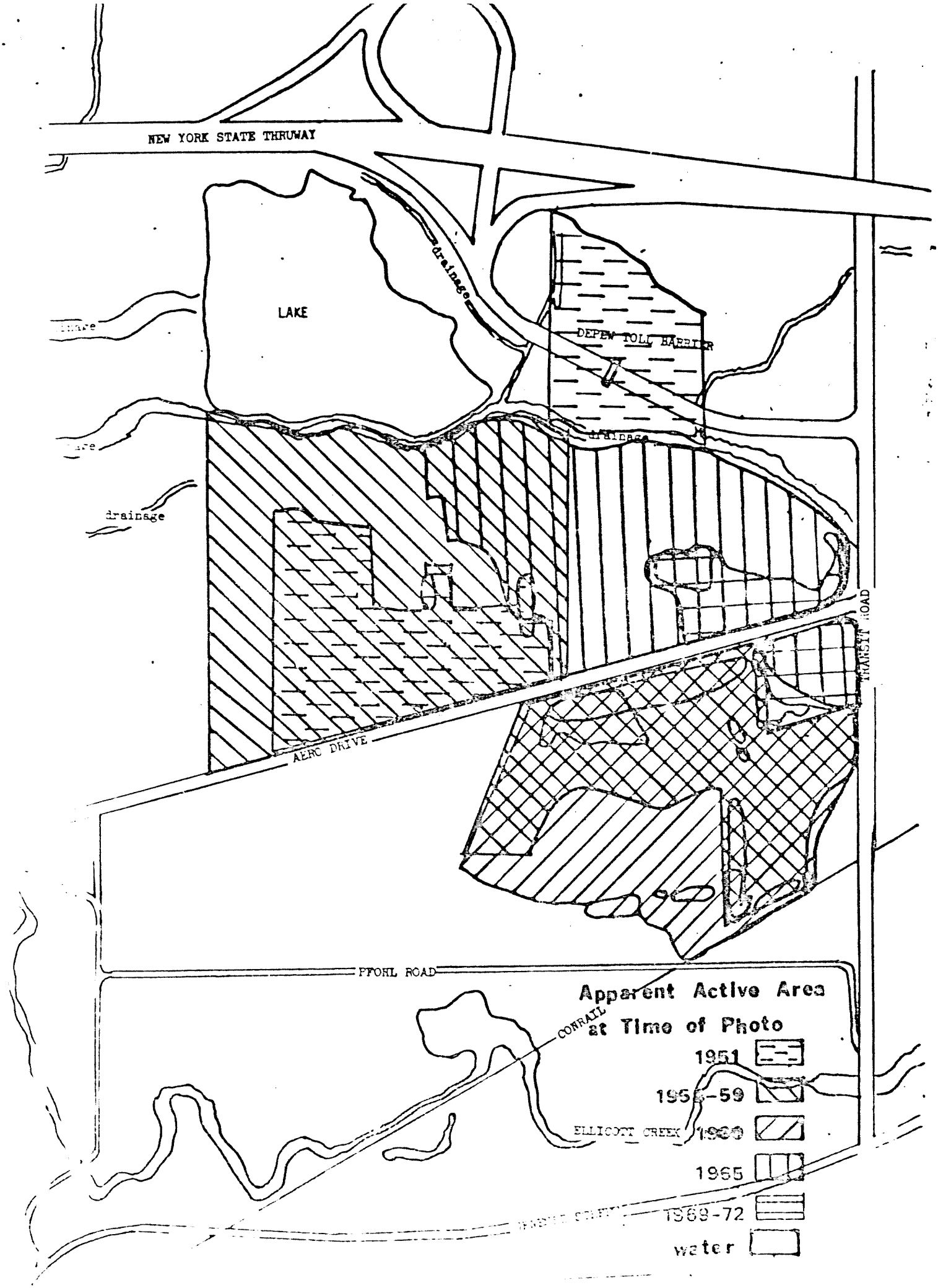
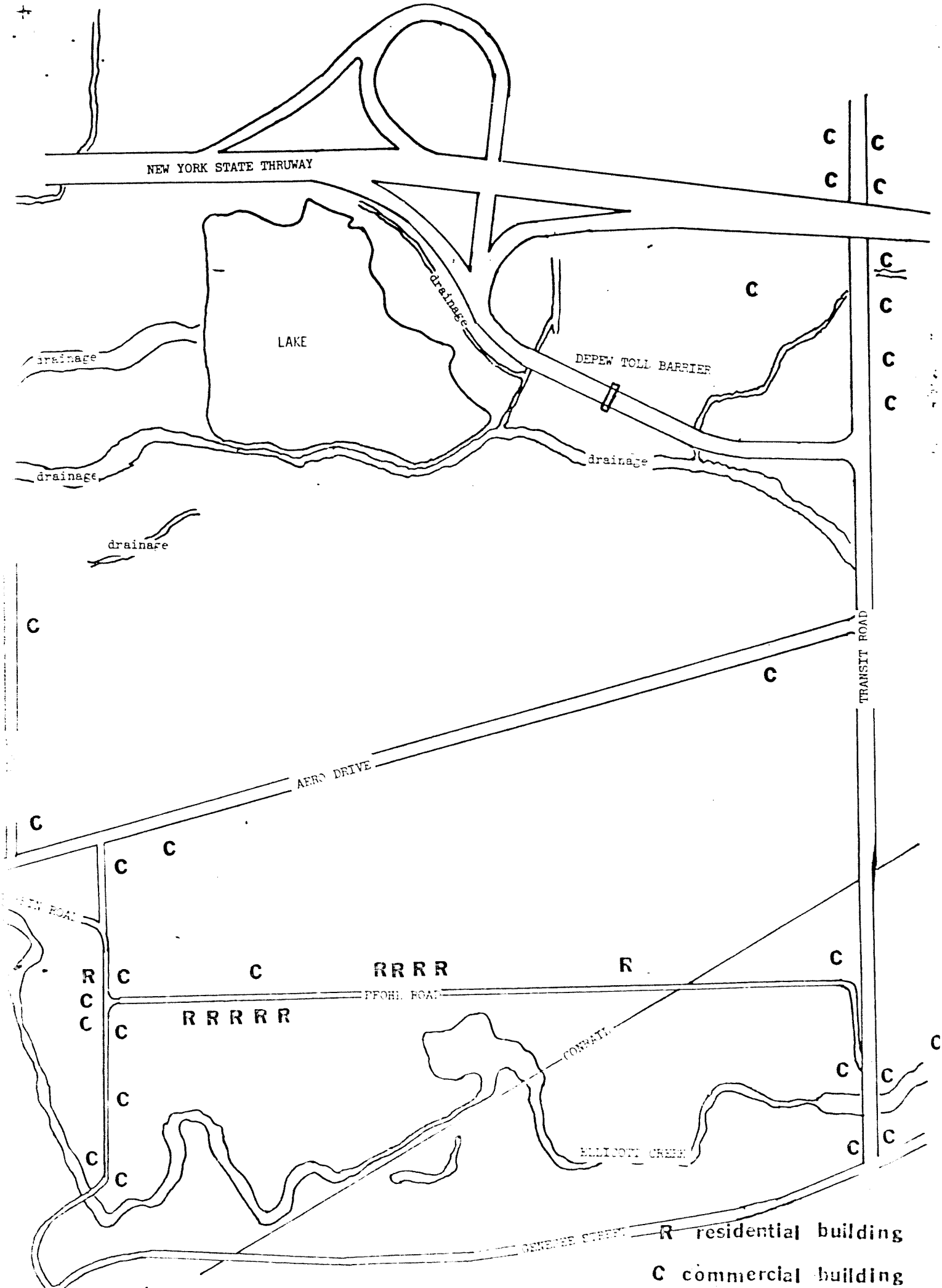
drainage
drainage
DEPEW TOLL BARRIER
TRANSIT ROAD
AERO DRIVE
SCOTT PLACE
PFOHL ROAD
CONRAIL
ELLICOTT CREEK
GENESEE STREET
Apparent Active Area
at Time of Photo
1951
1958-59
1960
1965
water


NEW YORK STATE THRUWAY
LAKE
drainage
DEPEW TOLL BARRIER
drainage
drainage
AERC DRIVE
HARLEM ROAD
PFOHL ROAD
CONRAIL
ELLICOTT CREEK
Apparent Active Area
at Time of Photo
1951
1955-59
1965
1968-72
water

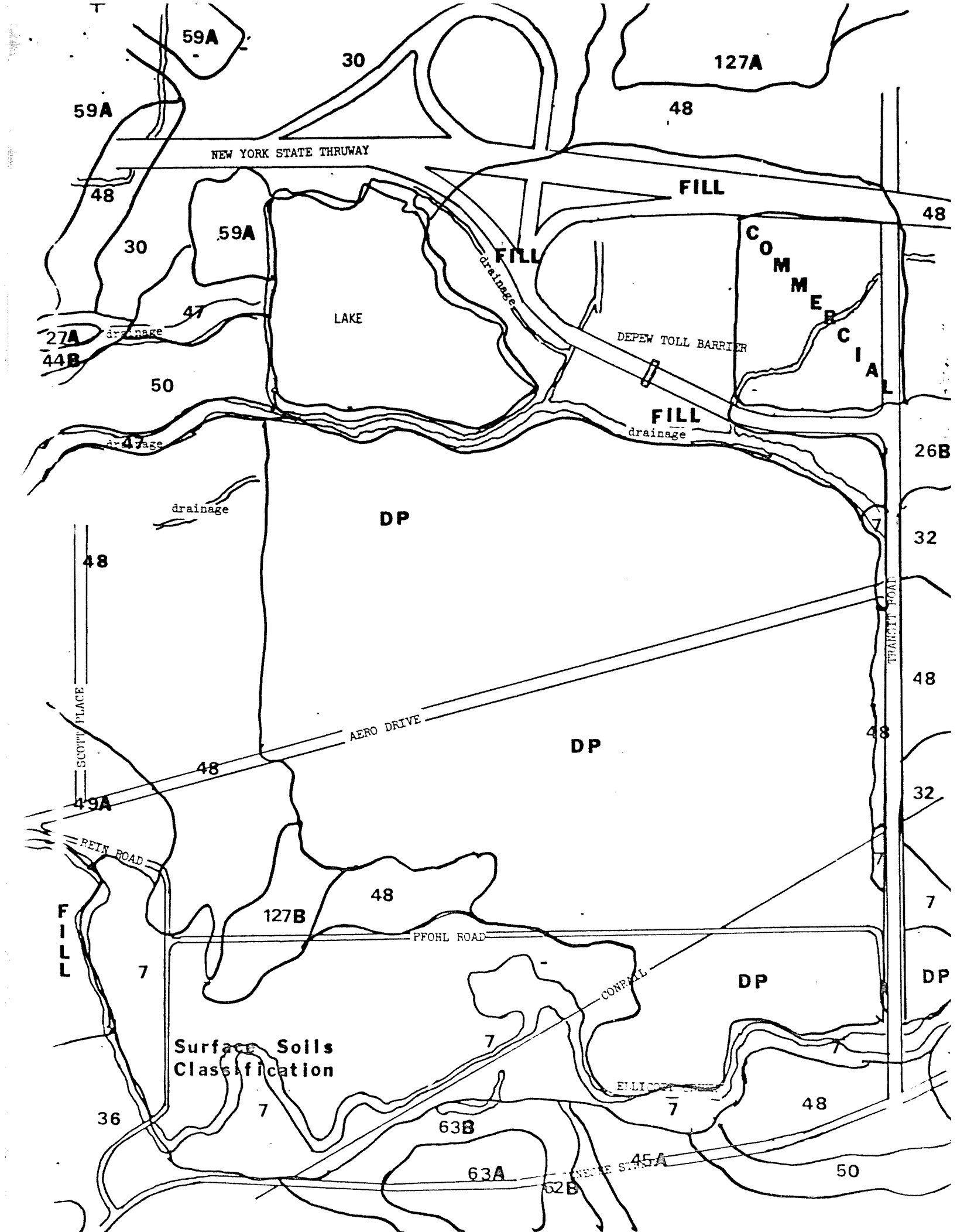

NEW YORK STATE THRUWAY
LAKE
drainage
drainage
drainage
drainage
drainage
DEPEW TOLL BARRIER
TRANSIT ROAD
AERO DRIVE
PFOHL ROAD
CONRAIL
R residential building
C commercial building

that industrial wastes were indeed taken to the Pfohl Landfill. Firms reported to have had their wastes taken to the landfill include: American Optical, Amax Specialty Metals, Dresser Industries, DuPont, Durez Division of Hooker Chemical, Mobil Oil, New York State Electric and Gas, Hanna Furnace, Ramco Steel and Westinghouse. The report also listed haulers who provided service to industry and utilized the Pfohl Landfill. Those listed were: Joe Ball Sanitation, Clinton Disposal Service, Rapid Disposal Service and Downing Container Service. While these haulers served numerous industries, it is not known what, if any, industrial wastes were taken to the site.

Field inspections of that portion of the landfill north of Aero Drive during the Spring of 1979 found evidence that drummed materials had been disposed of at the site. Photo interpretation also located areas of suspected drummed disposal.

SURFACE SOILS AND BEDROCK

Surface soil data was readily available through the Soil Conservation Service Office. The soils classification over the entire site is listed as "Dump" which was to be expected. From the soil classifications surrounding the site it has been concluded that the soils underlying the landfill are likely to be of the Cosad fine sandy soil, Canadaigua silt loam, or Wayland Silt Loan type. The Soil Conservation Service's"Dump" classification extended beyond the landfill boundaries as determined through the aerial photographs.


59A
30
127A
59A
48
NEW YORK STATE THRUWAY
48
FILL
48
59A
30
FILL
drainage
COMMERCIAL
47
LAKE
27A
drainage
44B
DEPEW TOLL BARRIER
50
FILL
drainage
47
drainage
26B
drainage
DP
7
32
48
TRANSIT POWL
48
AERO DRIVE
DP
48
48
32
49A
SCOTT PLACE
REIN ROAD
48
127B
7
FILL
PFOHL ROAD
DP
DP
CONRAIL
7
Surface Soils
Classification
7
7
36
7
63B
48
45A
63A
50
62B

SOIL CLASSIFICATION AREAS ADJACENT TO PFOHL BROTHERS LANDFILL

SOURCE: Soil Conservation Service

7 - Wayland Silt Loam

Deep nearly level poorly to very poorly drained, medium lime, silt loam soil formed stream deposits. Available water capacity is high, permeability is moderately slow in the surface soils and generally slow in underlying layers.

26B - Colonie Loamy Fine Sand - 3-8% Slope

Deep, gently sloping will to excessively drained low lime, sandy soil formed in lacustrine or windblown deposits dominated by fine sand, permeability is generally rapid, available water capacity low.

30 - Ilion Silt Loam

Deep, nearly level poorly drained, high lime, silt loam soils formed in fine loomy glacial till. Available water capacity is moderate to high, permeability is generally slow or very slow.

32 - Canadaigua Silt Loam

Deep, nearly level, poorly drained and very poorly drained, high lime, silt loam soil formed in silty lake sediments. The available water capacity is high. Permeability is moderately slow.

47 - Lakemont Mucky Silt Loam

Deep, nearly level, very poorly drained, high lime, silty and clay soil formed in clay lake sediments. The available water capacity is high, permeability is very slow.

48 - Cosad Fine Sandy Soil

Deep, nearly level, somewhat poorly drained, high lime, sandy soil formed in sandy lake deposits and underlaid by clay lake sediments. The available water capacity is generally low, permeability is generally rapid in the sandy part and slow to very slow in the underlying clay sediments.

50 - Cheektowaga Very Fine Sandy Loam

Deep nearly level, poorly and very poorly drained, high lime, very fine sandy loam soil formed in sandy surface deposits and underlaid by clay lake sediments at depths of 20"-40". The available water capacity is generally low, permeability is slow or very slow in underlying clay lake sediments.

59A - Ovid Silt Loam - 0-3% Slope

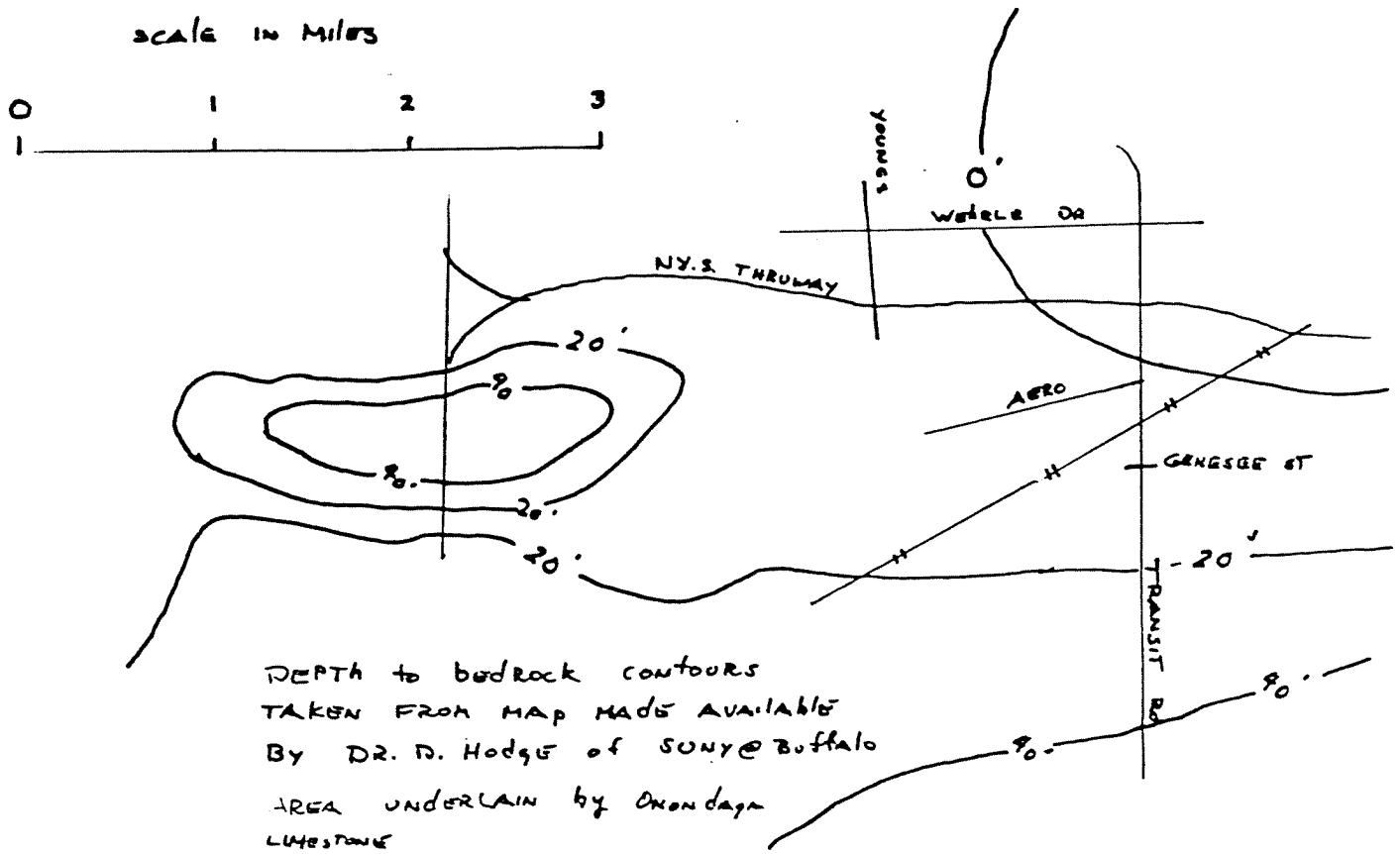
Deep, nearly level, somewhat poorly drained, high lime, silt loam soils formed in fine loamy gladial till and reworked lake sediments. The available water capacity is moderate to high, permeability is slow.

127 - Claverack Fine Sandy Loam (A: 0-3% Slope - B: 3-8% slope)

Deep moderately well drained, medium lime sandy soil formed mainly in fine sand and underlaid by clay lake sediments. The available water capacity is low to moderate, permeability is rapid in the sandy part and very slow in the underlying slay and silt.

An area suspected as being a part of the landfill during our review of photos was classified as a "Fill" site by the Soil Conservation Service. The exact nature of the activity in that area remains questionable. It is possible that the area received only fill material or that a thick layer of fill was placed over previously deposited waste during the construction of the Thruway.

Bedrock data was difficult to obtain. Documents associated with sewer construction projects proved to provide greatest source of information. Bedrock depth along the Thruway, which lies approximately 1000 feet to the north of the landfill, and along Wehrle Drive, approximately 2500 feet north of the landfill, was found near the surface. When referenced to the USGS typographic datum the bedrock north of the site was found at elevations in the range of 690' - 695'. Surface elevations on this area are near 696'. Soil borings performed for the ECSD #4 along Transit Road from the Thruway crossing south to Ellicott Creek showed that bedrock was found at an elevation of 687.8' just south of the Thruway but was not encountered at elevations to 678.8 at boring sites located farther south along Transit Road. Surface elevations of bore sites were generally in the 696-698' range. Soil boring data available for sewer construction along Rein Road, Genesee Street, Pfohl Road, Scott Place, and Aero Drive provided by the Town of Cheektowaga also indicated that depth to bedrock increased to the south and west of the site. Bedrock was encountered at an elevation of 683.7', 13.5 feet below the surface, on Pfohl Road



DEPTH to bedrock contours
TAKEN FROM MAP MADE AVAILABLE
BY DR. D. Hodge of SUNY@Buffalo

AREA UNDERLAIN by Onondaga
LIMESTONE

approximately 900 feet east of Rein Road. With the exception of this one location the remainder of the Cheektowaga data did not indicate bedrock at depths ranging between seven (7) and twenty-four (24) feet below surface grade. The sudden "loss" of bedrock as one traveled to the south, east and west of the site appeared puzzling but a depth to bedrock contour map made available by Dr. Hodge of the SUNY at Buffalo confirmed that depth to bedrock increases to the south, east and west of the landfill. Bedrock in the vicinity of the landfill is classified as Onondagua Limestone.

Information concerning the depth to groundwater was very limited and confusing. No attempt was mde to draw conclusions from the groundwater or bedrock data due to the nature of the information and lack of in-house expertise in these fields.

CONCLUSIONS AND RECOMMENDATIONS

After review and consideration of the data available the following inclusions were drawn:

1. Available information has shown the Pfohl Brothers Landfill received substantial quantities of waste between 1950 and 1970.

2. Some of the wastes disposed were of industrial origin. The quantities and chemical characteristics of the industrial wastes received are largely unknown at this time.

3. The effect of past waste disposal has upon the surface and groundwater quality in this area is unknown.

4. Leachate emanating from the site is an indication that the potential exists for serious surface water contamination.

5. Without investigation we cannot be certain that the groundwater is not similarly affected, although the potential for contamination certainly exists.

6. It has been concluded from the information reviewed that further study of the site is warranted.

With a realization of the constraints imposed upon any departmental investigation due to limited funds, time, and equipment the following recommendations are made:

1. To study the hazard potential of this site it is recommended that a thorough field investigation of the entire area be performed prior to any water sample analysis. The field investigation may reveal obvious pockets of industrial waste which could be sampled directly and/or provide additional insight into the character of wastes disposed of at the landfill. The assistance and cooperation of Mr. Pfohl should be encouraged and solicited during this phase of the study.

2. Upon completion of the field investigation a leachate sampling program should be undertaken. Based upon the results of the field investigation and a knowledge of suspected industrial users and wastes a list of potential contaminants and desirable sampling sites can be prepared. This list would provide a protocal for the requested analysis of samples of leachate leaving the site. Based on the results of the leachate analysis a determination can be made regarding the character of the leachate leaving the site. Following this determination the potential effect on the groundwater resource can be estimated and the need for groundwater sampling assessed.

3. Should groundwater analysis be required the area would be surveyed for private wells suitable for sampling. Desirable analytical tests for groundwater samples will have been further defined by the results of the leachate analysis to reduce the cost and time demands placed upon the Erie County Laboratory.

This study and the County's interests in the hazard potential of the Pfohl site has been discussed with Mr. Buechi of the DEC and attorneys with the Compliance Group. Any further investigations of this site should be performed with the cooperation of both the DEC, the Compliance Group and the Erie County Health Department. Prior to establishing a sampling and analysis program the Erie County Laboratory must be consulted to coordinate our sampling efforts with available laboratory resources.

RDK:jk