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ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE I INVESTIGATION

Erwin Town Landfill
Village of Painted Post, Steuben County
NYSDEC I.D. No. 851003

Prepared For:

DIVISION OF HAZARDOUS WASTE REMEDIATION
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road
Albany, New York 12233-0001

Prepared By:

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In Association With:

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August 1989

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1.0 EXECUTIVE SUMMARY

The Erwin Town Landfill site is located off Canada Road within the corporate limits of the Village of Painted Post, Steuben County, New York (Figures 1,2 and 3). The location is approximately one mile west of the City of Corning, New York. The landfill was owned and operated by the Town of Erwin from 1966 to 1978, at which time Steuben County took over operations until the facility closed in 1983. The Town of Erwin continued ownership of the site, however, and is the current site owner. During its 17 years of operation, industrial wastes were accepted at the 13 acre facility including foundry sand and various wastes generated by Corning Glass Works which are suspected of containing heavy metals and other hazardous substances.

The site has the potential to impact both human health and the environment. Groundwater contamination is of major concern since the site overlies a principal aquifer which serves the population in the area with its sole source of potable water. Potential surface water contamination of the Cohocton, Tioga and Chemung Rivers, which are all used for recreation, is also of concern.

The Phase I effort involved the compilation of information gathered from several sources, including, but not limited to, the following: the New York State Department of Environmental Conservation (NYSDEC) - Central Office and Region 8, the New York State Department of Health (NYSDOH), and a site inspection conducted by Recra Environmental, Inc. personnel on October 11 and 12, 1988. Photographs taken during this site inspection are presented in Appendix B.

The Erwin Town Landfill site was evaluated and scored in accordance with the Hazard Ranking System (HRS). USEPA uses a hazard ranking system (HRS) to apply uniform technical judgement in evaluating the relative hazards presented by sites being considered for federal superfund remediation. The HRS is sometimes called the MITRE Model because it was developed by the MITRE Corporation under contract to the USEPA. HRS addresses only relative hazard. It does not assess the feasibility, desireability, or degree of cleanup required, and does not address all potential environmental or health impacts.

Under the HRS, three numerical scores are computed for each site to express the relative risk or danger from the site, taking into account: the population at risk; the hazardous potential of substances found at the site; the potential for contamination of drinking water supplies, for direct human contact, and for destruction of sensitive ecological systems; and other appropriate factors. Three scores are:

a. S_M, reflecting the potential for harm to humans or the environment from migration of a hazardous substance from the facility by groundwater, surface water or air. It is a composite of separate scores for each of the three routes.

b. S_{FE}, reflecting the potential for harm for substances that can explode or cause fires.

c. S_{DC}, reflecting the potential for harm from direct contact with hazardous substances at the facility.

Based on information gathered during this investigation of the Erwin Town Landfill site, the following HRS scores were obtained:

S_M = 50.47 (S_{gw} = 86.67, S_{sw} = 10.67, S_a = N.S.)

S_{FE} = 0.00

S_{DC} = 0.00

The data available in several areas of this Phase I Investigation are considered inadequate for a proper site assessment; therefore, additional data gathering and evaluation are suggested. Proposed activities include subsurface investigation using borings and monitoring wells; and groundwater, surface water and soil sampling and analyses.

NEW YORK STATE

SCALE: N.T.S.		
	BY	DATE
DWN.	G.L.S.	4/89
CKD.	[illegible]	[illegible]
APPVD.	[illegible]	5/1/89
REV.		

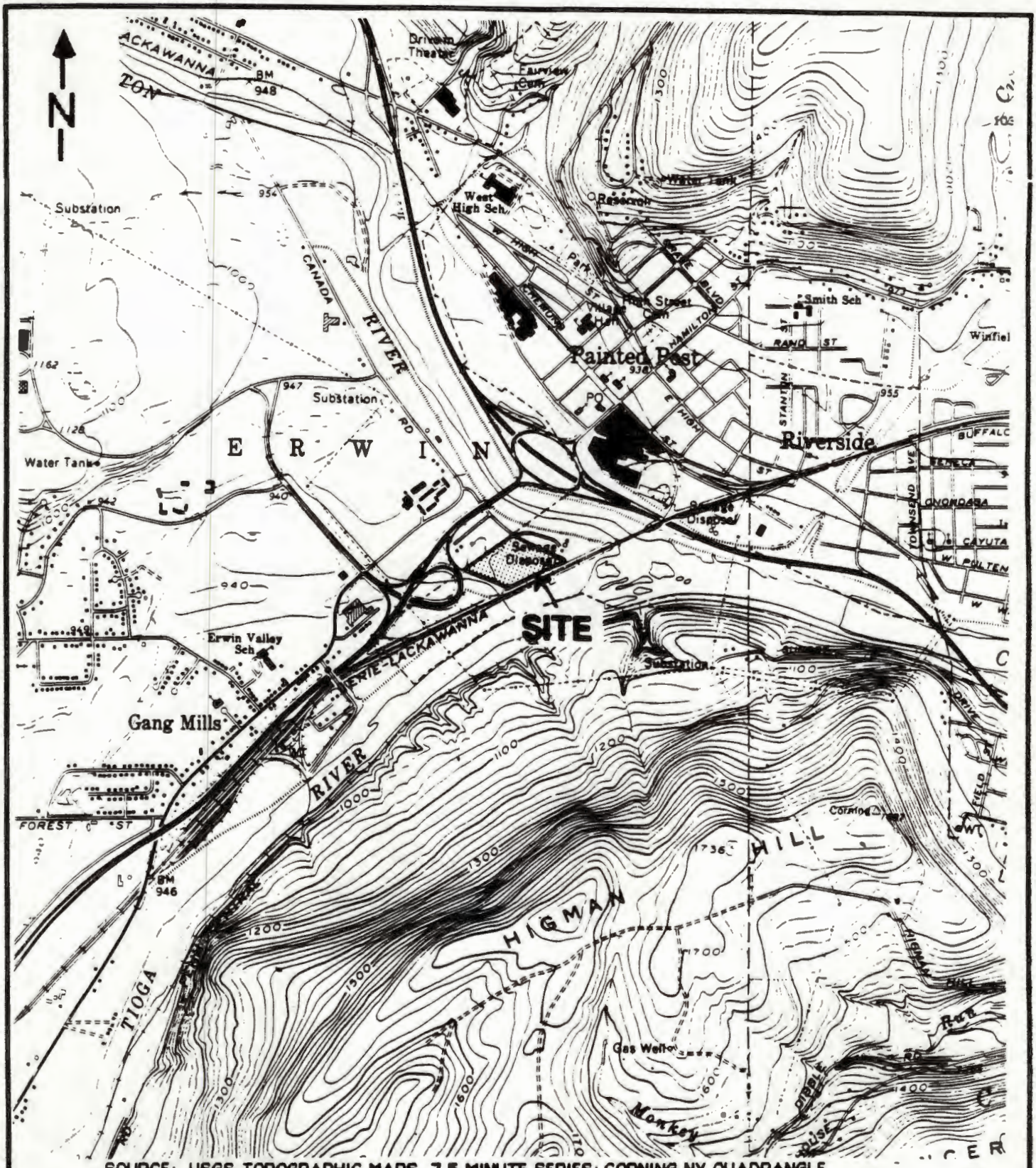
NYSDEC
SUPERFUND PHASE I INVESTIGATION
ERWIN TOWN LANDFILL
SITE NO. 851003

PROJECT NO: 8C1301EE

SITE LOCATION MAP

A

FIGURE 1-1

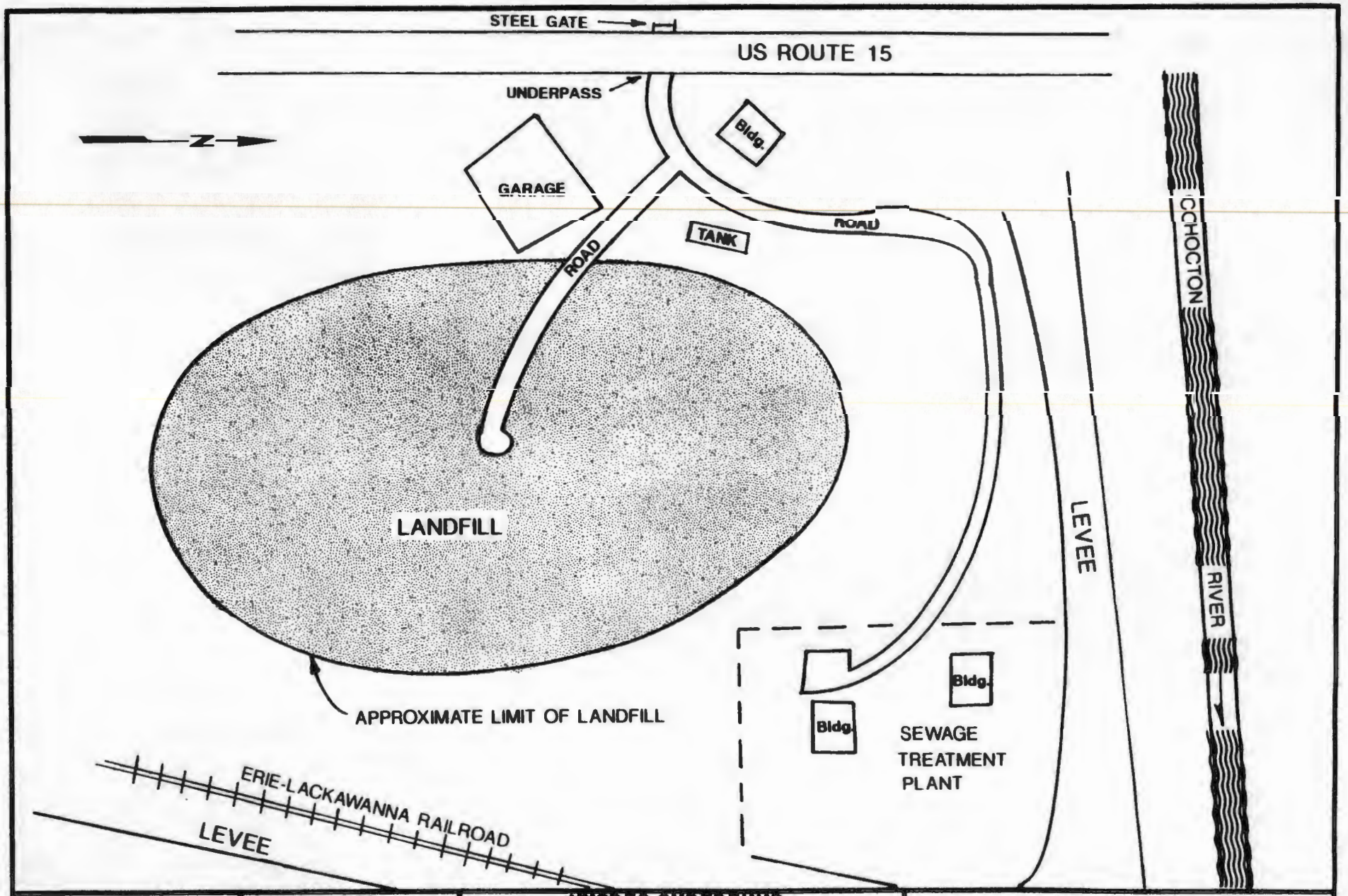


SOURCE: USGS TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES; CORNING NY QUADRANGLE

SITE COORDINATES: 42 09'05"N, 77 05'50"W

SCALE: 1:24000			NYSDEC SUPERFUND PHASE I INVESTIGATION ERWIN TOWN LANDFILL SITE # 851003
	BY	DATE	
DWN.	LMM	8/89	
CKD.			
APPVD.			
REV.			
PROJECT NO. 8C1301EE			A FIGURE 1-2

SITE VICINITY MAP



SCALE: NTS		
	BY	DATE
DWN.	GS	4/89
CKD.	[illegible]	4/89
APPVD.	RAC	5/7/89
REV.		

NYSDEC SUPERFUND
PHASE I INVESTIGATION
ERWIN TOWN LANDFILL
SITE NO. 851003

PROJECT NO: 8C1301EE

SITE SKETCH

A

FIGURE 1-3

2.0 PURPOSE

The purpose of this Phase I Investigation is to provide a preliminary characterization of hazardous substances present at the Erwin Town Landfill site, to estimate pathways by which pollutants might be migrating from the site, to determine if populations or resources might be affected by pollutants from the site, to determine how the disposal area was used or operated, and to gather information regarding responsibility for possible site wastes.

This investigation was conducted with the following objectives:

- Collect and review available site-specific data and prepare a preliminary Hazard Ranking System (HRS) score.
- Conduct a site inspection and air monitoring survey.
- Evaluate existing data for completeness and identify environmental data needed to determine if the site poses a significant threat to the environment.
- Prepare a summary report.

The purpose of developing the Phase I report in this manner is to provide an objective assessment of the site and to determine the potential impact it may pose on human health and the environment.

3.0 SCOPE OF WORK

The scope of work for the Phase I Investigation of the Erwin Town Landfill site included data collection and review, site inspection and air monitoring survey, interviews with individuals who possess knowledge or information pertinent to site activities, development of a preliminary HRS score, and report preparation.

The sources contacted during this Phase I Investigation included federal, state, and local government agencies; site owners and operators; and business and/or individuals with knowledge of the site activities. These sources are listed below:

- NYSDOH - Hornell District Office
  107 Broadway
  Hornell, NY 14843
  (607) 324-5120
  Richard A. Bills, District Director
  August 18, 1988
  - general file information

- NYSDOH - Bureau of Environmental Exposure
  2 University Place, Room 205
  Albany, NY 12203
  (518) 458-6310
  Michael Rivara
  October 3, 1988
  - general file information

- NYSDEC - Central Office
  Division of Hazardous Waste Remediation
  50 Wolf Road
  Albany, NY 12233
  (518) 457-0639
  Michael Komoroske
  October 3-5, 1988
  - general file information

- NY Office of Parks, Recreation and Historical Preservation
  Building 1, Empire State Plaza
  Albany, NY 12233
  (518) 474-3176
  Linda Harvey and Mark Peckham
  October 5, 1988
  - National Register and historical site information

- NYSDEC - Region 8
  Division of Hazardous Waste Remediation
  6274 East Avon - Lima Road
  Avon, NY 14414
  (716) 226-2466
  Manmohan Mehta
  October 11, 1988
  - general file information

- Town of Erwin, New York
  Erwin Town Hall
  Painted Post, NY 14870
  (607) 962-7021
  Lynn Morse, Town Supervisor
  October 11, 12, 31, 1988 and March 15, 1989
  - site history, site inspection, analytical results and source of water information

- Town of Erwin Police Department
  Erwin Town Hall
  Painted Post, NY 14870
  (607) 937-5284
  Roger McCann, Department Sergeant
  October 12, 1988
  - site history

- USEPA - Region II
  Site Investigation Section
  26 Federal Plaza
  New York, NY 10278
  (212) 264-6668
  Jeffrey Gall
  October 28, 1988
  - general file information

- US Army Corps of Engineers - Baltimore Section
  P.O. Box 1715
  Baltimore, MD 21203
  (301) 962-3372
  Davis Ditman, Chief of Dams and Levee Section
  and Rich Zingarelli
  December 27, 1988 and January 20, 1989
  - flood information (including flood insurance maps) and geological information

- Steuben County Soil Conservation Service
  3 East Pulteney Square
  Bath, NY 14810
  (607) 776-9631
  David P. DuPont, District Conservationist
  and Barb Allen
  February 22, 1989 and March 9, 1989
  - irrigation and agricultural land information

- Village of Painted Post, New York
  Box 110
  Painted Post, NY 14870
  (607) 962-8724
  Don Hunt, Village Supervisor
  March 10, 1989
  - source of water information and surface water use

- City of Corning, New York
  City Hall
  Corning, NY 14830
  (607) 962-0721
  Mike Dawson, Assistant Superintendent of Public Works
  March 10, 1989
  - source of water information and surface water use

- Town of Campbell, New York
  8529 Main Street
  Campbell, NY 14821
  (607) 527-8656
  Adeline M. Brown, Town Clerk
  March 14, 1989
  - source of water information

- Town of Corning, New York
  20 South Maple Street
  Corning, NY 14830
  (607) 936-8287
  Dewitt T. Baker, Town Supervisor
  March 14, 1989
  - source of water information

- NYSDEC - Region 9
  Division of Waste Remediation
  580 Delaware Avenue
  Buffalo, NY 14202
  (716) 847-4585
  March 17, 1989
  - Community Right-to-Know information

- University of Buffalo
  Science and Engineering Library
  Amherst Campus
  Amherst, NY 14228
  (716) 636-2946
  March 17 and 23, 1989
  - USGS topographic maps, geological and hydrogeological information

- Gang Mills Fire Department
  4 Mills Avenue
  Painted Post, NY 14870
  (607) 962-1110
  John Ford, Fire Chief
  October 26, 1988 and March 21, 1989
  - fire and explosion threat information and site history

- Buffalo and Erie County Public Library
  Lafayette Square
  Buffalo, NY 14202
  (716) 846-7101
  March 25, 1989
  - geological and hydrogeological information, 1980 Census of Population figures and climatological information

- New York State Museum and Science Service
  Albany, NY
  (518) 474-3505
  - geological maps

Recra conducted an inspection of the site on October 11 and 12, 1988. The inspection was conducted so as to identify the present conditions at the site. An air monitoring survey, utilizing a PID meter, was not conducted due to non-conducive weather conditions (i.e., rain, hail).

4.0 SITE ASSESSMENT

4.1 Site History

The Erwin Town Landfill site is located off Canada Road within the corporate limits of the Village of Painted Post, Steuben County, New York. The landfill was owned and operated as a sanitary landfill by the Town of Erwin from 1966 until 1978. At this time, the 13-acre facility was leased to Steuben County for a period of 99 years, or until it could no longer be used as a landfill. Steuben County continued operations at the landfill until its closure in the fall of 1983, at which time final cover was added to the facility. The Town of Erwin remains the current site owner (Ref. 10, R52-53; 11, R54-57; 28, R118; 29, R119).

A site report prepared by The Standard Engineering Corporation in 1979 indicates that approximately four feet in thickness of foundry sand was deposited on the ground surface of the site (areal extent not determined) in 1966. The foundry sand was generated by the Ingersoll Rand Company and is suspected of containing phenols (Ref. 8, R45). In addition, certain industrial wastes were reportedly accepted at the facility from 1978 until November 1980. These wastes include, but are not limited to, glass batch raw materials suspected of containing lead and other heavy metals. The facility is listed in the Community Right-to-Know Program as having received liquid and solid wastes containing inorganics and heavy metals from the Corning Glass Works (Ref. 8, R45; 9, R50; 10, R52-53). Ceramic logs and cerium oxide (generated by Corning Glass); organic sand, clay binders and refractory washings (generated by Ingersoll Rand); and brush

materials (generated by Steuben County Highway Department) are among the assortment of various other wastes disposed of at the site (Ref. 30, R121-R122).

On September 7, 1980 a fire of unknown origin occurred at the site, in the former disposal area for Corning Glass. Records do not indicate the location of this disposal area within the landfill. Eight firemen suspected of exposure to toxic emissions were treated at a nearby hospital. Reports noted the symptoms in question were possibly the result of smoke inhalation and heat exposure, rather than exposure to toxic fumes (Ref. 30, R121-122).

NUS Corporation conducted a preliminary assessment of the facility for the U.S. Environmental Protection Agency (USEPA) in November 1987. The site was assigned a medium priority with the recommendation that groundwater and surface water sampling be conducted at the site (Ref. 8, R42-43). To date, no on-site sampling has been performed.

4.2 Site Characteristics

4.2.1 Environmental Setting

The Erwin Town Landfill site is located within the southwestern extension of the Village of Painted Post corporate boundary, approximately one mile west of the City of Corning, in Steuben County, New York. The estimated 13-acre facility is located at the southern end of Canada Road, near the interchange of New York State Route 17 and U.S. Route 15. The site is bounded on the north and south by flood-protection levees, on the east by Conrail tracks and another levee, and on the west by the Village of Painted Post and Town of Erwin corporate boundaries (Ref. 11, R54; 20, R85-90; 21, R91-92).

The facility is situated in a predominantly rural area comprised of both residential dwellings and commercial buildings. The urbanized area of Painted Post lies about ¼ mile north of the site. NYSDEC-regulated fresh water wetlands lie approximately ½ mile from the site. State Forest land and a State Game Management Area are located within 2 miles of the site. In addition agricultural land, including prime land, is located in the vicinity (Ref. 20, R85-90; 22, R93; 24, R104).

A garage and shed are located on-site, as well as a number of cinder stockpiles. A large, roughly 10 foot by 30 foot, tank is present on the ground surface. The tank is currently empty and was reportedly empty at the time of acquisition by the Town of Erwin several years ago (Ref. 11, R54-47). The site is partially fenced with a lockable gate, but is considered fairly accessible.

4.2.2 Topography and Drainage

The topography of the site vicinity is relatively flat lying, with the exception of the elevated levee system adjacent to the site. Surface elevation of the site is approximately 935 feet above mean sea level. The grass-covered landfill is mounded, which results in a radial drainage pattern. The only apparent subsequent drainage areas are in the southeastern portion of the site, with flow eastward towards the Tioga River, and a second, but less-pronounced drainage area to the southwest (Ref 23, R94-102). The facility is located just west of the confluence of the Cohocton and Tioga Rivers, where they form the Chemung River. These river bodies are part of the Susquehanna River Basin. The Cohocton River lies approximately 350 feet to the north of the site and the Tioga River lies about 550 feet to the east. Flood protection levees which were constructed

by the U.S. Army Corps of Engineers in 1938 separate both rivers from the site. In 1972 surface waters reportedly overflowed the levee system, thereby flooding the site (Ref. 7, R39-40). The site is zoned as an area of minimal flooding on U.S. Department of Housing and Urban Development flood insurance rate maps (Ref. 31, R125).

4.3 Site Hydrogeology

4.3.1 Geology

The Erwin Town Landfill site lies within the physiographic province of the Appalachian Uplands, within the northern, glaciated portion of the Allegheny Plateau. The area is characterized by flat hilltops and broad, deep, flat-bottomed valleys. These pre-existing valleys were widened and deepened by the advancing glacial ice. During periods of glacial recession, meltwaters deposited glacial drift in the valley areas. Post-glacial streams have reworked these sediments and deposited fine sand and silt (5 to 15 feet thick) and sand and gravel units in these areas (Ref. 1, R8; 32, R127-128).

Regional geologic mapping indicates that bedrock in the area consists of Paleozoic age sedimentary rocks of the West Falls Group. Regional dip of these nearly flat-lying, Upper Devonian shales, siltstones and sandstones is extremely subtle in a southern direction. Bedrock underlying the site is the Gardeau Formation (West Falls Group) which is comprised of inter-bedded shale and siltstone. Depth to bedrock is approximately 60 to 90 feet; although surface mapping indicates bedrock is either exposed or within about 10 feet of ground surface over a large portion of the area surrounding the site. Surficial sediments in the immediate site area are

identified as recent deposits of fine sand and gravel which may be overlain by silt. The sediments are generally confined to floodplains which experience frequent flooding. The glacially derived outwash sand and gravel deposits and overlying post-glacial alluvium collectively range in thickness from 60 to 130 feet. Glacial till, consisting of poorly-sorted, variable-textured deposits which were formed beneath the glacial ice, are also reported in the site vicinity. Typically, the till unit is relatively impermeable and quite variable in thickness (Ref. 1, R10; 33, R130; 34, R134)

4.3.2 Groundwater

The site and surrounding area is underlain by a principal aquifer system which is comprised of highly-permeable sand and gravel deposits. This "Corning-area Aquifer" encompasses approximately 28 square miles and is continuous with the "Elmira-Horseheads-Big Flats-area Aquifer" which lies to the east. These outwash sand and gravel "valley-fill" deposits were formed by the deposition of glacial meltwater drift sediments into glacially scoured, but pre-existing, stream and river valleys. In the site vicinity the outwash sand and gravel unit is frequently 85 to 95 feet thick, with saturated thickness ranging from 5 to over 60 feet (Ref. 1, R4, R12-13). These saturated deposits are reportedly hydraulically connected with the river systems in the area. Groundwater flow is generally in a "down-valley" direction. At the confluence of stream tributaries with the main stream body, groundwater is recharged by the streams, resulting in the formation of fan-shaped groundwater mounds. Underlying the site, the direction of groundwater flow is to the east (Ref. 1, R14-15).

Well yields can exceed 1,000 gallons per minute (gpm) in areas of thick,

permeable, saturated sand and gravel units (and also near streams), as are found at, and downgradient from, the site. The City of Corning, the largest municipal water system utilizing the aquifer, pumps 5.5 M gal/day. Groundwater use in the area is roughly categorized by the following:

- industry - 61%
- community supplies - 34%
- private wells - 5%

An estimated 16,843 persons are served by groundwater wells which are located within a 3-mile radius of the site. This water supply serves as the population's sole source of potable water (Ref. 11, R55-56; 15, R71-72; 16, R73-77; 17, R78; 18, R81; and 19, R83).

4.4 Site Contamination Assessment

4.4.1 Waste Quantity and Type

Prior to the commencement of landfilling operations in 1966, approximately 4 feet in thickness of foundry sand was deposited on the ground surface (areal extent unknown). The foundry sand is suspected of containing phenols (Ref. 8, R44-45). From 1978 until 1980, industrial wastes were reportedly disposed of at the site. These include both solid and liquid wastes generated by Corning Glass Works which contained inorganic compounds and heavy metals. Waste materials generated by Corning Glass include wood and paper products, construction debris, grinding wastes, and ceramic logs. The ceramic logs account for approximately 50% of the total 325 cubic yards per day of Corning Glass waste which was disposed of at the site. The ceramic logs are composed of "Methocel" (among other materials), which upon decomposition and/or incomplete combustion results in a number of hazardous

substances. These substances include, but are not limited to, methanol, methyl formate, acetone, methyl acetaldehyde, 2-furaldehyde (furfural), trans-2-butanal (crotonaldehyde), formaldehyde and acetic acid (Ref. 8, R44-47; 10, R52-53; and 12, R58, 60). The Ingersoll Rand Company disposed of approximately 75 tons per day of foundry sand and other materials during this same period.

4.4.2 Previous Sampling and Analysis

No groundwater, surface water or soil sampling has been conducted at the site. The preliminary air monitoring program, as part of this current investigation, was not able to be performed successfully due to inclement weather conditions encountered during the site inspection.

Analytical results for a water sample collected from a telephone company manhole located in proximity to the base of the landfill indicate the presence of contaminants, including sulphate, zinc and manganese at concentrations of 51.0, 1.96 and 0.7 mg/l, respectively (Ref. 13, R63). These contaminants have not been conclusively attributed to the site, however.

4.4.3 Groundwater Quality

Potential groundwater contamination from the site is of major concern. Municipal community wells and private wells located within a 3-mile radius of the site serve the vast majority of the population in the area with its source of potable water. Municipal wells for the Village of Painted Post and two of the nine wells utilized by the City of Corning are located approximately one mile from the site. All but three of the City of Corning wells are located within three miles of the site (and two of these wells are currently shut down) (Ref. 11, R55-56; 15, R71-72; 16, R73-77; 17,

R78; 18, R81; and 19, R83).

4.4.4 Surface Water Quality

Due to the proximity of the Cohocton, Tioga and Chemung Rivers, these surface water bodies are potentially threatened by site contamination. No surface water sampling has been conducted to date.

A New York State Health Department inspection conducted on April 11, 1986 resulted in the identification of a small leachate seep at the toe of the southeastern portion of the landfill (Ref. 35, pg. R136). This leachate seep was not noted during Recra's October 11, 1988 Phase I site inspection.

Surface water use within 3 miles downstream from the site is limited to recreation. There are no intakes for drinking water or irrigation within this specified distance (Ref. 11, R55-56; 15, R71-72; 16, R73-77; 17, R78; 19, R83; and 22, R93).

4.4.5 Air Quality

During the Phase I inspection of the site (Oct. 11, 12, 1988) unconducive weather conditions (i.e., rain, hail) precluded the conductance of an air monitoring survey.

Insufficient information exists to determine the affect of the Erwin Town Landfill site on air quality. Although the immediate vicinity of the site is not heavily populated, major urban areas (including the Villages of Painted Post and Riverside, and the predominant portion of the City of Corning) lie within a 3-mile radius of the site (Ref. 20, R85-90).

4.4.6 Soil Contamination

There is potential for soil contamination at the site prior to 1983 at which time final cover (approximately 2 feet in thickness) was placed over the landfill. Currently, the site is only partially fenced and is fairly accessible (Ref. 8, R42-48 and 11, R54-55).

5.0 PRELIMINARY APPLICATION OF THE HAZARD RANKING SYSTEM

5.1 Narrative

Erwin Town Landfill
Canada Road
Village of Painted Post, Steuben County, New York

The Erwin Town Landfill site covers approximately 13 acres in the Village of Painted Post, Steuben County, New York. The Town of Erwin, New York, the current site owner, conducted sanitary landfilling operations at the site from 1966 until the mid-1970's, at which time the Town leased the facility to Steuben County. Steuben County continued landfilling operations at the site until the facility's close in 1983, at which time final cover was added to the landfill.

Industrial wastes were accepted at the facility and include both solid and liquid wastes generated by Corning Glass Works which contained inorganic compounds and heavy metals. The presence of several volatile organic compounds is also suspected. In addition, the Ingersoll Rand Company disposed of approximately 55,000 tons of waste which in part includes foundry sand suspected of containing phenol. No groundwater, surface water or soil sampling has been conducted at the site. The site overlies a principal aquifer from which private and municipal community wells serve an estimated 19,601 persons with a potable water supply. In addition, the site lies adjacent to the confluence of the Cohocton and Tioga Rivers, where they form the Chemung River. These surface water bodies are used for recreation adjacent to and downstream from the site.

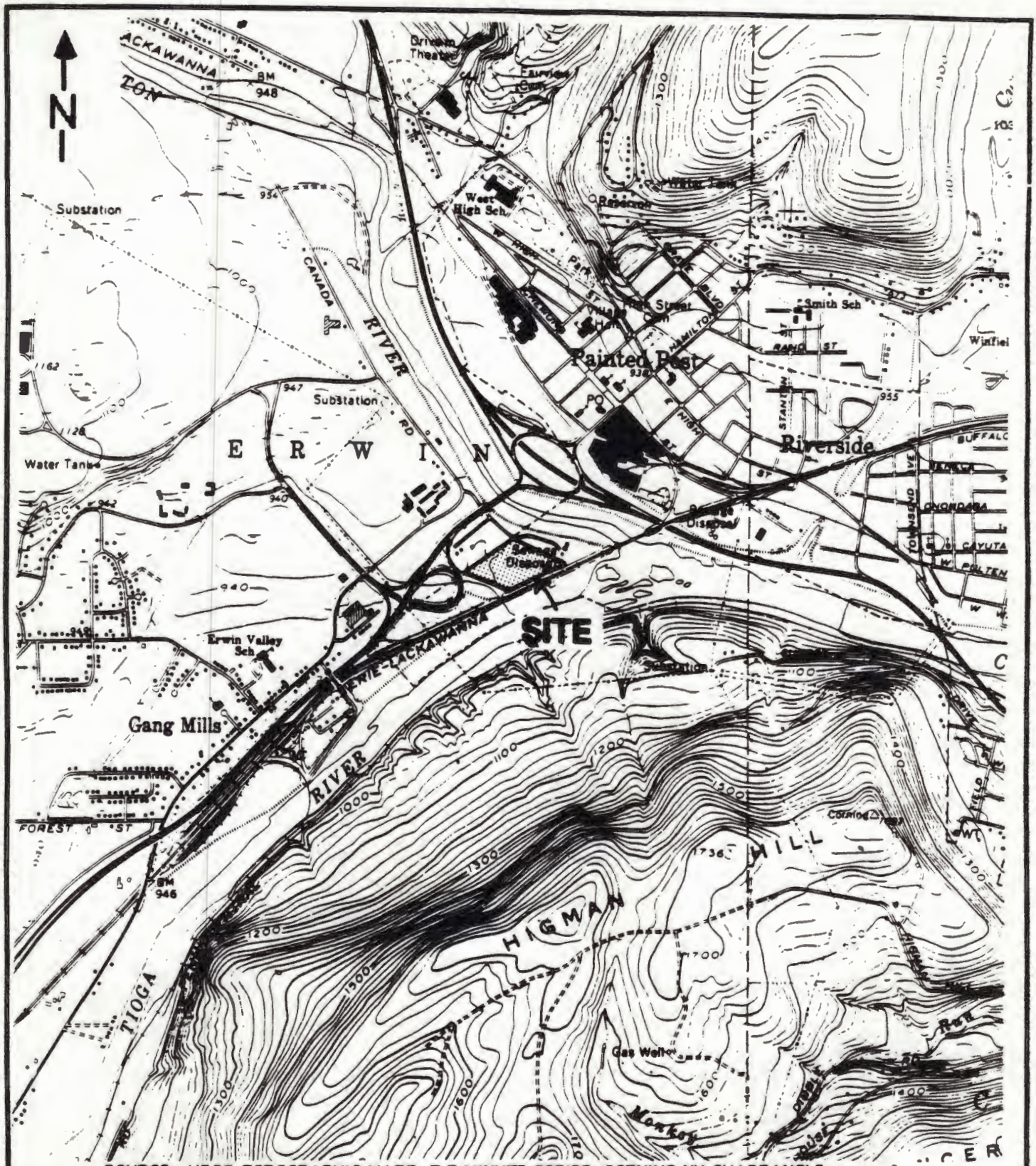
NEW YORK STATE

SCALE: N.T.S.		
	BY	DATE
DWN.	G.L.S.	4/89
CKD.	[illegible]	11/89
APPVD.	RAC	5/11/89
REV.		

NYSDEC
SUPERFUND PHASE I INVESTIGATION
ERWIN TOWN LANDFILL
SITE NO. 851003

SITE LOCATION MAP

PROJECT NO: 8C1301EE | **A** | **FIGURE 1-1**



SOURCE: USGS TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES; CORNING NY QUADRANGLE

SITE COORDINATES: 42 09'05"N, 77 05'30"W

SCALE: 1:24000		
	BY	DATE
DWN.	LMM	6/89
CKD.		
APPVD.		
REV.		

NYSDEC SUPERFUND PHASE I INVESTIGATION ERWIN TOWN LANDFILL SITE # 851003

PROJECT NO. 8C1301EE

SITE VICINITY MAP

A FIGURE 1-2

Facility name: Erwin Town Landfill

Location: Off Canada Road, Painted Post (V), Steuben County, New York

EPA Region: II

Person(s) in charge of the facility: Town of Erwin, NY
Erwin Town Hall
Painted Post, NY 14870

Name of Reviewer: Linda Clark
Kecra Environmental **Date:** 3/28/89

General description of the facility:
(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action; etc.

The approximately 13 acre site operated as a sanitary landfill from 1966 to 1983. Industrial wastes reportedly disposed of at the facility include foundry sand (suspected of containing phenol), ceramic logs (composed of various hazardous substances) and unidentified solid and liquid wastes containing inorganics and heavy metals. Groundwater contamination is of major concern since the site overlies a principal aquifer which is used for a potable water supply.

Scores: S_{M} = 50.47 (S_{gw} = 86.67 S_{sw} = 10.67 S_{a} = N.S.)

S_{FE} = 0.00

S_{DC} = 0.00

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0)	45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4 If observed release is given a score of 0, proceed to line 2						
2 Route Characteristics						3.2
Depth to Aquifer of Concern	0 1 2 (3)		2	6	6	
Net Precipitation	0 1 (2) 3		1	2	3	
Permeability of the Unsaturated Zone	0 1 (2) 3		1	2	3	
Physical State	0 1 2 (3)		1	3	3	
Total Route Characteristics Score				13	15	
3 Containment	0 1 2 (3)		1	3	3	3.3
4 Waste Characteristics						3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)		1	8	8	
Total Waste Characteristics Score				26	26	
5 Targets						3.5
Ground Water Use	0 1 2 (3)		3	9	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 12 16 18 20 24 30 32 35 (40)		1	40	40	
Total Targets Score				49	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				49,686	57,330	
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} =	86.67		

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a score of 45, proceed to line 4 If observed release is given a score of 0, proceed to line 2					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 (2) 3	1	2	3	
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	
Physical State	0 1 2 (3)	1	3	3	
Total Route Characteristics Score			11	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1	8	8	
Total Waste Characteristics Score			26	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	0 (1) 2 3	2	2	6	
Population Served/ Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score			8	55	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			6,864	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	10.67		

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	5.1
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
Total Targets Score				39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100			S_a = N.S.		

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	86.67	7511.69
Surface Water Route Score (S_{sw})	10.67	113.85
Air Route Score (S_a)	0.00	0.00
$S_{gw}^2 + S_{sw}^2 + S_a^2$		7625.54
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		87.32
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M$		50.47

FIGURE 10
WORKSHEET FOR COMPUTING S_M

No documented threat of fire or explosion.

Fire and Explosion Work Sheet

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Containment	1 3	1		3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =	0.00		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45		1	0	45	8.1
If observed release is given a score of 45, proceed to line 4 If observed release is given a score of 0, proceed to line 2						
2 Accessibility	0 1 2 (3)		1	3	3	8.2
3 Containment	(0) 15		1	0	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)		5	15	15	8.4
5 Targets						8.5
Population Within a 1-Mile Radius	0 1 2 3 (4) 5		4	16	20	
Distance to a Critical Habitat	(0) 1 2 3 4 5		4	0	12	
	Total Targets Score			16	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				0	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} =	0.00		

FIGURE 12
DIRECT CONTACT WORK SHEET

5.4 HRS Documentation Records for Hazard Ranking System

INSTRUCTIONS: The purpose of these records is to provide a convenient way to prepare an auditable record of the data and documentation used to apply the Hazard Ranking System to a given facility. As briefly as possible summarize the information you used to assign the score for each factor (eg., "Waste quantity - 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference that will make the document used for a given data point easier to find. Include the location of the document and consider appending a copy of the relevant page(s) for ease in review.

FACILITY NAME: Erwin Town Landfill

LOCATION: off Canada Road

Village of Painted Post, Steuben County, New York

DATA SCORED: March 28, 1989

PERSON SCORING: Linda Clark

PRIMARY SOURCES(S) OF INFORMATION (eg., EPA Region, State, FIT, etc.):

NYSDEC Region 8; USEPA Region II; Town of Erwin; NYSDOH

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION: Air Route was not scored due to inability to conduct air monitoring during the Phase I site reconnaissance.

COMMENTS OR QUALIFICATIONS:

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No groundwater sampling conducted at the site.

Rationale for attributing the contaminants to the facility:

N/A

Assigned Value = 0

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifer(s) of concern:

Groundwater occurs in the highly-permeable outwash sand and gravel deposits which comprise the Corning-area principal aquifer system. Well yields can exceed 1,000 gpm in the area.
(Ref. 1, pg. R6-R9)

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

Known highest level occurs at a depth of less than 10 feet.
(Ref. 2, pg. R22)

Depth from the ground surface to the lowest point of waste disposal/ storage:

Depth of wastes are not known; therefore, allowable depth of 6 feet is assumed.
(Ref. 3, pg. R27)

Assigned Value = 3

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

35.0 inches mean annual precipitation.
(Ref. 4, pg. R28; 5, pg. R30)

Mean annual lake or seasonal evaporation (list months for seasonal):

27.2 inches mean annual lake evaporation.
(Ref. 4, pg. R28; 5, pg. R31)

Net precipitation (subtract the above figures):

7.8 inches

Assigned Value = 2

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Near-surface soils are predominantly Unadilla silt loam (Un) and a lesser amount of Wallington silt loam (Wa). Silty sediments occur at depths of 4-10 feet below surface.
(Ref. 6, pg. R33-R38; 7, pg. R39)

Permeability associated with soil type:

Approximately 10-4 to 10 -5 cm/sec. (Ref. 7, pg. R39)

Assigned Value = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Solid (unstabilized) wastes including foundry sand and "ceramic logs"; Unidentified liquid and solid wastes including inorganics and heavy metals.
(Ref. 2, pg. R18-R19; 8, pg. R44-R47; 9, pg. R50; 10, pg. R52)

Assigned Value = 3

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Wastes disposed of in landfill which has no liner or leachate collection system. Four drums and a large tank were observed on-site; however, non-hazardous substances were reportedly stored in these containers.

(Ref. 8, pg. R42-R44; 11, pg. R54-55; 21, pg. R91)

Method with highest score.

Landfill - no liner, no leachate collection system.

Assigned Value = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Lead, manganese, zinc and phenols are the most hazardous substances suspected at the facility. (Other suspected compounds have high or relatively-high toxicity but low persistence, including: formaldehyde, acetaldehyde, acetone, formic acid, acetic acid, methanol and others).

(Ref. 8, pg. R44-R45; 10, pg. R52; 12, pg. R60; 13, pg. R63)

Compound with highest score:

Lead and manganese.

(Ref. 4, pg. R28; 14, pg. R65-R69)

Compound	Toxicity	Persistence	Matrix Value
Lead	3	3	18
Manganese	3	3	18
Zinc	1	3	12
Phenol	3	1	12
Formaldehyde	3	0	9
Acetaldehyde	3	0	9
Acetone	2	0	6
Formic Acid	3	0	9
Acetic Acid	3	0	9
Methanol	3	0	9

Assigned Value = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum).

Estimated at 173,375 cubic yards.
(Ref. 8, pg. R44; 10, R52)

Basis of estimating and/or computing waste quantity:

Industrial wastes were reportedly accepted at the facility from 1978 to 1980. An estimated 75 tons (75 cubic yard equivalent) per day of foundry wastes (suspected of containing phenols) and 162.5 cubic yards per day of ceramic logs (composed in part of "Methocel" which includes several hazardous substances as a by-product) as well as materials suspected of containing lead and other heavy metals were disposed of at the facility.
(Ref. 8, pg. R44-R45; 9, pg. R50; 10, Pg. R52; 12, pg. R60)

Assigned Value = 8

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Drinking water with no municipal water from an alternate, unthreatened source presently available. Both private and municipal water wells are used within three miles of site, including City of Corning, NY municipal water system and others.
(Ref. 11, pg. R55-R56; 15, pg. R71-R72; 16, pg. R73-R77; 17, pg. R78; 18, pg. R81; 19, pg. R83)

Assigned Value = 3

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

Nearest occupied building not served by municipal water system is a hotel complex located west of the site. Residences using private wells are also located in this area.
(Ref. 11, pg. R54-R55; 20, pg. R85-R90; 21, pg. R91)

Distance to above well or building:

Approximately 1,100 feet to the west
(Ref. 20, pg. R86)

(value = 4)

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Wells	Population
City of Corning	12,953
Morningside	600
Painted Post	2,700
Burroughs Mobile Home Court	20
Hall's Mobile Home Court	435
Rambler Mobile Home Court	60
Resne's Mobile Home Court	60
Striker's Erwin Court	15
	16,843

Corning wells No. 4, 5, and 6 are not utilized.
(Ref. 15, pg. R71-R72; 16, pg. R74)

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

No wells known to be used for irrigation within three miles.
(Ref. 22, pg. R93)

Total population served by ground water within a 3-mile radius:

16,843 people.

(value = 5)

Assigned Value = 40

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

None

Rationale for attributing the contaminants to the facility:

Surface water sampling is limited to one sample taken from ponded water in a manhole located in proximity to base of facility. Contaminants detected include zinc, sulphate and manganese; however, they are not conclusively attributed to the site.

(Ref. 13, pg. R63)

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

The facility is slightly mounded, with an average slope of approximately 1% radially.

(Ref. 20, pg. R85-R90; 21, pg. R91-R92; 23, pg. R94-R102)

Name/description of nearest downslope surface water:

The Tioga River lies approximately 550 feet to the southeast. Although the Conocton River lies approximately 350 feet to the north of the site, it is apparently separated from the site by an area of higher elevation.

(Ref. 20, pg. R85-R90; 21, pg. R91-R92; 23, pg. R94-R102)

Average slope of terrain between facility and above-cited surface water body in percent:

The terrain slopes gently (average 1%) to the east.

(Ref. 20, pg. R85-R90; 21, pg. R91-R92; 23, pg. R94-R102)

Assigned Value = 0

Is the facility located either totally or partially in surface water?

No

(Ref. 20, R85-R90; 21, pg. R91)

Is the facility completely surrounded by areas of higher elevation?

No

(Ref. 20, pg. R85-R90; 21, pg. R91-92; 23, pg. R94-R102)

1-Year 24-Hour Rainfall in Inches

2.3 inches

(Ref. 4, pg. R28)

Assigned Value = 2

Distance to Nearest Downslope Surface Water

The Tioga River lies approximately 550 feet to the east.
(Ref. 20, pg. R85-R90; 21, pg. R91)

Assigned Value = 3

Physical State of Waste

Solid (unstabilized) waste including foundry sand and "ceramic logs"; unidentified liquid and solid wastes including inorganics and heavy metals.
(Ref. 2, pg. R18-R19; 8, pg. R44,R47; 9, pg. R50; 10, pg. R52)

Assigned Value = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Wastes disposed of in landfill which at time of disposal was not covered and no diversion system present. Four drums and a large tank were observed on-site; however, non-hazardous substances were reportedly stored in these containers.
(Ref. 8, pg. R42,R44; 11, pg. R54-R55; 21, pg. R91-R92)

Method with highest score:

Landfill - no cover, no diversion system

Assigned Value = 3

* * *

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Lead, manganese, zinc and phenols are the most hazardous substances suspected at the facility (other suspected compounds have high or relatively-high toxicity but low persistence, including: formaldehyde, acetaldehyde, acetone, formic acid, acetic acid, methanol and others).

(Ref. 8, pg. R44-R45; 10, pg. R52; 12, pg. R60; 13, pg. R63)

Compound with highest score:

Lead and manganese

(Ref. 4, pg. R28; 14, pg. R65-R69)

Compound	Toxicity	Persistence	Matrix Value
Lead	3	3	18
Manganese	3	3	18
Zinc	1	3	12
Phenol	3	1	12
Formaldehyde	3	0	9
Acetaldehyde	3	0	9
Acetone	2	0	6
Formic Acid	3	0	9
Acetic Acid	3	0	9
Methanol	3	0	9

Assigned Value = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Estimated at 173,375 cubic yards.

(Ref. 8, pg. R44; 10, pg. R52)

Basis of estimating and/or computing waste quantity:

Industrial wastes were reportedly accepted at the facility from 1978 to 1980. An estimated 75 tons (75 cubic yard equivalent) per day of foundry wastes (suspected of containing phenols) and 162.5 cubic yards per day of ceramic logs (composed in part of "Methocel" which includes several hazardous substances as a by-product) as well as materials suspected of containing lead and other heavy metals were disposed of at the facility.

(Ref. 8, pg. R44-R45; 10, pg. R52; 12, pg. R60)

Assigned Value = 8

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

The Tioga, Cohocton and Chemung Rivers are used for recreation, primarily fishing and boating (some swimming, although no designated areas). There are no surface water intakes for drinking water or irrigation within 3 miles downstream.
(Ref. 11, pg. R55; 16, pg. R73; 17, pg. R78; 22, pg. R93)

Assigned Value = 2

Is there tidal influence:

No tidal influence on the site.
(Ref. 20, pg. R85-R90)

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

No coastal wetlands within 2 miles.
(Ref. 20, pg. R85-R90)

(value = 0)

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Approximately 2,500 feet to the northwest lies NYSDEC-designated wetland CN-2.
(Ref. 20, pg. R85-R90; 24, pg. R104)

(value = 1)

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 miles or less:

None within one mile. A State game management area is located approximately 1.8 miles west of the site however.
(Ref. 20, pg. R85-R90; 25, pg. R105)

(value = 0)

Assigned Value = 0

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

No surface water intakes within the specified distance downstream from the site.

(Ref. 11, pg. R55; 15, pg. R71-R72; 16, pg. R73; 17, pg. R78)

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

No known irrigation of land by surface water intakes within specified distance.

(Ref. 11, pg. R55; 16, pg. R73; 17, pg. R78; 22, pg. R93)

Total population served:

0 (zero)

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

N/A

Assigned Value = 0

1 OBSERVED RELEASE

Contaminants detected:

No air monitoring data available for the site. Weather conditions during site inspection precluded the reliable use of air monitoring equipment.

Date and location of detection of contaminants:

N/A

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

N/A

Assigned Value = 0

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Acetaldehyde
(Ref. 4, pg. R28; 12, pg. R60; 14, pg. R64-R69)

(value = 2)

Most incompatible pair of compounds:

None known to be present.
(Ref. 4, pg. R28; 8, pg. R43-R45;
10, pg. R52; 12, pg. R60; 14, pg. R64-R69)

(value = 0)

Assigned Value = 2

Most toxic compound:

Furfural (2-Furaldehyde) and crotonaldehyde (trans-2-butanal) are the most toxic by inhalation route.
(Ref. 4, pg. R28; 8, pg. R43-R45; 10, pg. R52; 12, pg. R60; 13, pg. R63; 14, pg. R64-R69)

Assigned Value = 3

Hazardous Waste Quantity

Total quantity of hazardous waste:

Estimated at 173,375 cubic yards.
(Ref. 8, pg. R44; 10, pg. R52)

Basis of estimating and/or computing waste quantity:

Industrial wastes were reportedly accepted at the facility from 1978 to 1980. An estimated 75 tons (75 cubic yard equivalent) per day of foundry wastes (suspected of containing phenols) and 162.5 cubic yards per day of ceramic logs (composed in part of "Methocel" which includes several hazardous substances as a by-product) as well as materials suspected of containing lead and other heavy metals were disposed of at the facility.
(Ref. 8, R44-R45; 9, pg. R50; 10, pg. R52; 12, pg. R60)

Assigned Value = 8

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi | 0 to 1 mi | 0 to 1/2 mi | 0 to 1/4 mi

Both the 0 to 4 mi. and 0 to 1 mi. radii score the highest, with populations of approximately 23,284 and 3,243, respectively. Populations were determined using 1980 census data for the towns/cities located within described radii. Calculations are located in Ref. 26, pg. R107-R110.

Assigned Value = 21

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

No coastal wetlands within 2 miles.
(Ref. 20, pg. R85-R90)

(value = 0)

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Approximately 2,500 feet to the northwest to NYSDEC-regulated wetland CN-2.
(Ref. 24, pg. 104)

(value = 1)

Distance to critical habitat of an endangered species, if 1 mile or less:

None within one mile. (Ref. 24, pg. R105)

(value = 0)

Assigned Value = 1

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Nearest commercial area is approximately 1,100 feet to the west. The large commercial area of the Village of Painted Post lies approximately 1,400 feet to the north.
(Ref. 20, pg. R85-R90; 21, pg. R91)

(value = 3)

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

State Forest land is located approximately 1.3 miles to the north of the site. A State Game Management Area lies about 1.8 miles to the west.
(Ref. 20, pg. R85-R90)

(value = 1)

Distance to residential area, if 2 miles or less.

Residences are located approximately 1,400 feet to the west.

(Ref. 20, pg. R85-R90; 21, pg. R91)

(value = 2)

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Approximately 2,000 feet northwest of the site.
(Ref. 22, pg. R93)

(value = 2)

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Approximately 2,000 feet northwest of the site.
(Ref. 22, pg. R93)

(value = 3)

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

None known to be within view.
(Ref. 21, pg. R91)

(value = 0)

Assigned Value = 3 (based on distances to commercial and prime agricultural land).

1 CONTAINMENT

Hazardous substances present:

No documented fire or explosion threat. (Ref. 27, pg. R111)

Type of containment, if applicable:

No documented fire or explosion threat. (Ref. 27, pg. R111)

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No documented fire or explosion threat. (Ref. 27, pg. R111)

Ignitability

Compound used:

No documented fire or explosion threat. (Ref. 27, pg. R111)

Reactivity

Most reactive compound:

No documented fire or explosion threat. (Ref. 27, pg. R111)

Incompatibility

Most incompatible pair of compounds:

No documented fire or explosion threat. (Ref. 27, pg. R111)

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

No documented fire or explosion threat.
(Ref. 27, pg. R111)

Basis of estimating and/or computing waste quantity:

No documented fire or explosion threat.
(Ref. 27, pg. R111)

* * *

3 TARGETS

Distance to Nearest Population

Sewage treatment plant workers located directly adjacent to site.
(Ref. 21, pg. R91)

Distance to Nearest Building

Buildings located on-site.
(Ref. 21, pg. R91)

Distance to Sensitive Environment

Distance to wetlands:

Approximately 2,500 feet to northwest lies NYSDEC wetland CN-2.
(Ref. 20, pg. R85-R90; 24, pg. R104)

Distance to critical habitat:

None within 1 mile radius.
(Ref. 25, pg. R105)

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Nearest commercial area is approximately 1,100 feet to west of site.
(Ref. 20, pg. R85-R90; 21, pg. R91)

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

State forest land is located approximately 1.3 miles to the north of the site. A State Game Management Area lies about 1.8 miles to the west.

(Ref. 20, pg. R85-90)

Distance to residential area, if 2 miles or less:

1,400 ft. to the west

(Ref. 20, pg. R85-90; 21, pg. R91)

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Approximately 2,000 ft. to the northwest of the site.

(Ref. 22, pg. R93)

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Approximately 2,000 ft. to the northwest of the site.

(Ref. 22, pg. R93)

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

None known to be within view.

(Ref. 21, pg. R91)

Population Within 2-Mile Radius

11,774 people. Population determined from 1980 population census of cities/towns within 2 mile radius.

(Ref. 20, pg. R85-90; 26, pg. R107-110)

Buildings Within 2-Mile Radius

3,170 buildings

(Ref. 20, pg. R85-90; 26, pg. R107-110)

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No known incident.

Assigned Value = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s).

No fence or other artificial or natural barriers completely surround the facility. A partial fence with lockable gate extends along the western boundary of the facility.
(Ref. 11, pg. R54; 21, pg. R91)

Assigned Value = 3

* * *

3 CONTAINMENT

Type of containment, if applicable:

Landfill, with cover depth of two feet.
(Ref. 11, pg. R54)

Assigned Value = 0

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Lead, manganese, zinc, phenols, crotonaldehyde and furfural.
(Ref. 8, pg. R44-R45; 10, pg. R52; 12, pg. R60; 13, pg. R63)

Compound with highest score:

Lead, manganese, zinc, phenols, crotonaldehyde and furfural.
(Ref. 4, pg. R28; 14, pg. R64-69)

Assigned Value = 3

5 TARGETS

Population within one-mile radius

Estimated at 3,243 persons. Populations were determined using 1980 census data for towns/cities located within 1 mile radius of site. Calculations are located in Ref. 26.
(Ref. 20, pg. R85-90; 26, pg. R107-111)

Assigned Value = 4

Distance to critical habitat (of endangered species)

None within one mile
(Ref. 25, pg. R105)

Assigned Value = 0

REFERENCES - DOCUMENTATION RECORDS ONLY

		Page
1.	Atlas of Eleven Selected Aquifers in New York, U.S. Geological Survey, Water Resources Investigations, Open-File Report 82-553, compiled by Roger M. Waller and Anne J. Finch, Albany, New York, 1982.	R1-R17
2.	Initial Evaluation of Industrial and Hazardous Waste Sites Report Town of Erwin Landfill, New York State Department of Environmental Conservation, prepared by Stephen Betts, January 9, 1979.	R18-R25
3.	Superfund National Priorities List Seminar - EPA Region II, The Mitre Corporation, April 2-3, 1986.	R26-R27
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16. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Mike Dawson, Assistant Superintendent of Public Works - City of Corning, NY, March 14, 1989. R73-R77

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18. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Adeline M. Brown, Town Clerk - Town of Campbell, NY, March 20, 1989. R81-R82

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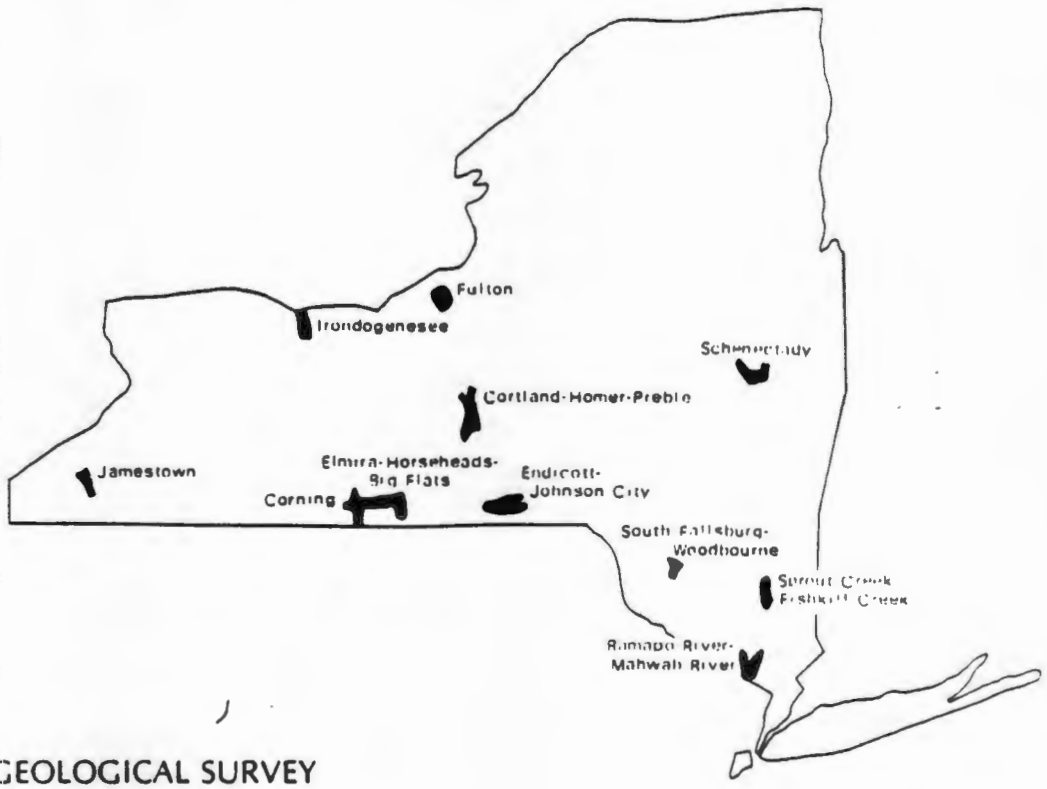
REFERENCE 1

Atlas of Eleven Selected Aquifers in New York



U.S. GEOLOGICAL SURVEY

Water-Resources Investigations
Open-File Report 82-553

Prepared in cooperation with
NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Public Water Supply Protection

ATLAS OF ELEVEN SELECTED AQUIFERS IN NEW YORK

Compiled by Roger M. Waller and Anne J. Finch

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Albany, New York
1982

R2

ATLAS OF ELEVEN SELECTED AQUIFERS IN NEW YORK

Compiled by Roger M. Waller and Anne J. Finch

ABSTRACT

Eleven heavily used surficial-deposit aquifers in New York were mapped in 1981 to provide a basis for their protection from contamination, particularly through underground disposal of wastes. The resulting maps and sections, originally prepared and released by the U.S. Geological Survey at a scale of 1:24,000, are presented herein at a reduced scale and in simplified form. Each illustration is accompanied by a short text describing the major features and hydrologic characteristics of the given aquifer. The areas mapped are Schenectady, Endicott-Johnson City, Ramapo River-Mahwah River, Irondequoit Valley, Jamestown, Elmira-Horseheads-Big Flats, Cortland-Homer-Preble, Corning, Sprout Creek-Fishkill Creek, Fulton, and South Fallsburg-Woodbourne.

The eleven aquifers are typical of the numerous primary aquifer systems in the glaciated part of New York. Preglacial stream and river valleys that were carved in bedrock are now filled with thick deposits of drift that have been partly reworked by postglacial streams. These "valley-fill" deposits contain highly permeable saturated sand and gravel, are hydraulically connected with the main stream or river, generally have a shallow water table, and provide a large reserve of fresh ground water of acceptable quality for drinking. Interspersed within most of these aquifers are isolated bedrock knobs and scattered layers of till, silt, and clay, which are relatively impermeable and retard the movement of water, locally producing confined (artesian) conditions. In some aquifers, the confined areas are extensive.

Of upstate New York's population of 7.9 million (excluding New York City and Long Island), 36 percent, or 2.8 million, use ground water from community water systems. The aquifers described in this report together supply 92 million gallons of ground water per day to 560,000 people — 20 percent of the upstate population dependent on ground water. Wells for public and industrial supply generally yield several hundred gallons per minute.

The two most common problems facing those responsible for the long-term protection of these aquifers are (1) lack of knowledge of the ground-water systems, and (2) local vulnerability of the aquifers to contamination from a variety of sources. The chapters present information on present and potential sources of contamination within each area and the types of data needed for future ground-water management.

Several maps of each aquifer are included; these depict the surficial geology, soil-zone permeability, aquifer dimensions and well yield, ground-water movement, and land use within the area. Also included are tables of ground-water pumpage and population served and a comprehensive list of references for each aquifer.

R3

9 CORNING AREA

A. Location and major geographic features

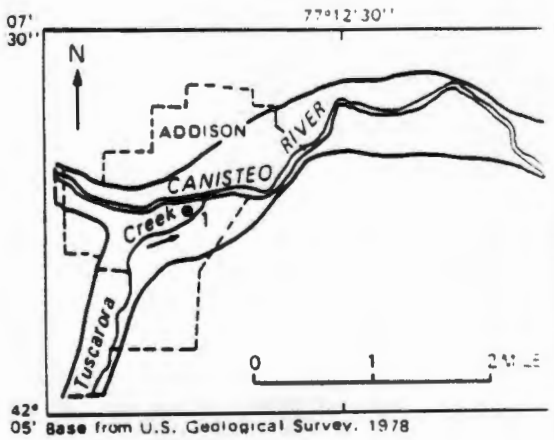
This aquifer underlies four intersecting river valleys

This aquifer forms the valley flat of four convergent river valleys in south-central New York. The City of Corning is the only major urban area. The rivers are tributary to the Susquehanna River basin.

The Corning area is in the southeastern part of Steuben County (fig. 9A). This aquifer underlies the floors of the Canisteo, Tioga, Cohocton, and Chemung Rivers valleys and extends partway upstream into tributary valleys of each. The aquifer underlies approximately 28 square miles of relatively flat valley floor 0.5 to 1.0 mile wide. The aquifer is bordered by steep, rounded hills that rise 800 feet from the valley floor and reach altitudes as high as 1,800 feet.

The Chemung River and its major tributaries — the Canisteo, Tioga, and Cohocton Rivers — drain into the Susquehanna River in Pennsylvania.

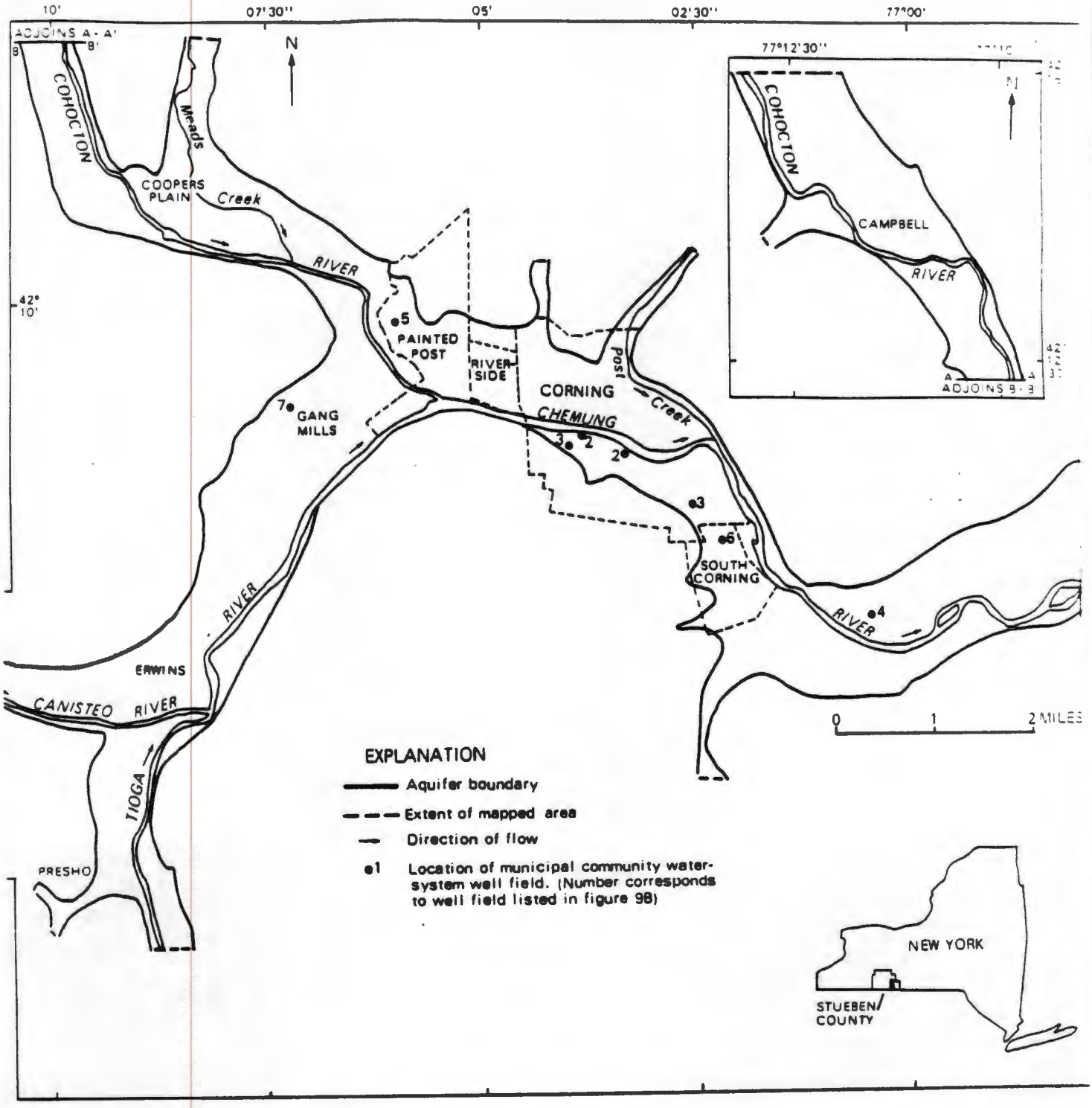
Corning is the area's major industrial center. Several small communities are scattered along the main valleys. On the east, this aquifer is continuous with the aquifer of the Elmira-Horseheads-Big Flats area, discussed in chapter 7.



Base from U.S. Geological Survey, 1978

R4

FIGURE 9A CORNING AREA
Location and major geographic features



R5

9 CORNING AREA
B. Population and ground-water use

This aquifer provides water to about 29,000 people

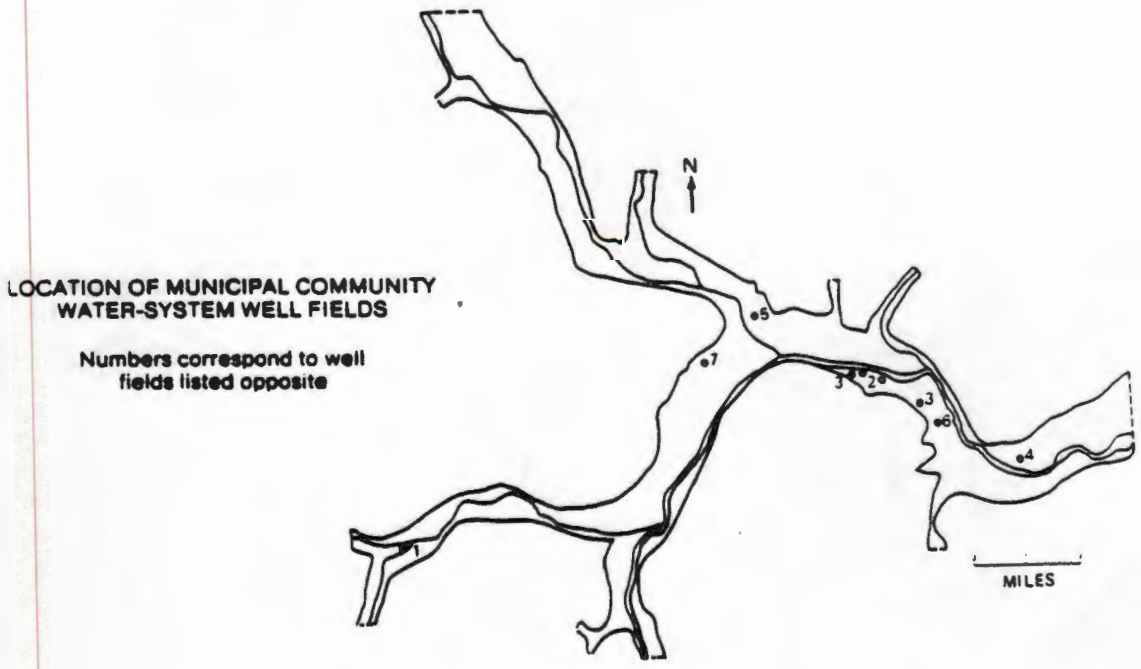
Approximately 16.6 million gallons a day of ground water is pumped from this aquifer. The most extensive withdrawals are in the vicinity of the City of Corning. Of the total water withdrawn, industry uses 61 percent, community supplies use 34 percent, and private individual wells use an estimated 5 percent.

This aquifer provides 16.6 Mgal/d of ground water to a population of approximately 29,000. Municipal community water systems provide 7.5 Mgal/d to 23,000 people; this includes 1.8 Mgal/d to industry. About 6,000 people use a total of 0.8 Mgal/d from individual domestic wells, and six industrial wells pump 9.1 Mgal/d (Southern Tier Central Regional Planning and Development Board, 1976). The most extensive withdrawals are in the vicinity of the City of Corning.

The well field supplying the Corning urban area is the largest municipal water user and pumps 5.5 Mgal/d. The remaining water systems belong to six other villages and 17 trailer parks. A glass company uses 90 percent of the ground water used by industry and is the largest single user in the area.

Average daily per-capita use in the area in 1976 was reported to be 131 Mgal/d, and ground-water pumpage, in Mgal/d, was reported as follows (Southern Tier Central Regional Planning and Development Board, 1976): industry, 10.1 (61 percent); public water supplies, 5.5 (34 percent); and private domestic supplies, about 0.8 (5 percent).

The table opposite lists 1980 pumpage by the various water suppliers. Locations of municipal systems are shown on the map below and in figure 9A.



R6

FIGURE 9B CORNING ARE

Population and pumpage

POPULATION AND PUMPAGE FROM CORNING AREA, 1980

Source	Population served[1]	Average pumpage[2] (Mgal/d)
A. MUNICIPAL COMMUNITY WATER SYSTEMS		
1. Village of Addison	2,100	0.350
2. City of Corning	12,953	5.500
3. Corning Manor Water District	300	0.20
4. Gibson Water District	500	0.35
5. Painted Post	2,700	1.000
Riverside	1,050	–
6. Village of South Corning	1,400	.200
Pinewood Acres	160	–
7. Morningside Heights Water District	600	.175
Subtotal	21,763	7.280
B. OTHER COMMUNITY WATER SYSTEMS		
Trailer parks (17)	1,400	.178
C. PRIVATE WATER SUPPLIES		
Home use of 100 gallons per day per capita is assumed	[3] 6,000	[3] .800
D. INDUSTRY	–	[3] 8.3
Total	29,163	16.558

[1] Revised from New York State Department of Health (1981)

[2] Unpublished data from New York State Department of Health

[3] Southern Tier Central Regional Planning and Development Board (1976)

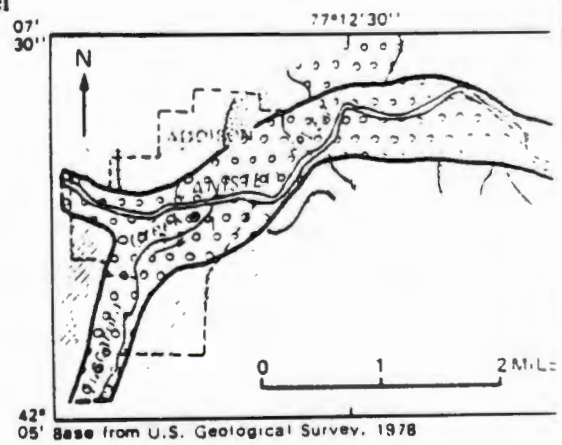
R7

The valley floors contain drift and reworked alluvium

Glaciation scoured the valleys and hilltops and deposited drift almost everywhere. The thickest deposits are in the valleys, where stratified outwash sand and gravel predominate. Postglacial streams have partly reworked the outwash deposits.

The Corning area lies within the northern, glaciated part of the Allegheny Plateau. Bedrock consists of nearly flat-lying shale, siltstone, and sandstone. During periods of glacial advance, ice scoured the preglacial topography and widened and deepened the valleys, oversteepened hillside slopes, and rounded off hilltops. During glacial recession, the melting ice deposited drift within the valleys, partly filling them, and mantled bedrock hills with 5 to 25 feet of till. Figure 9C is a generalized surficial geology map of the Corning area.

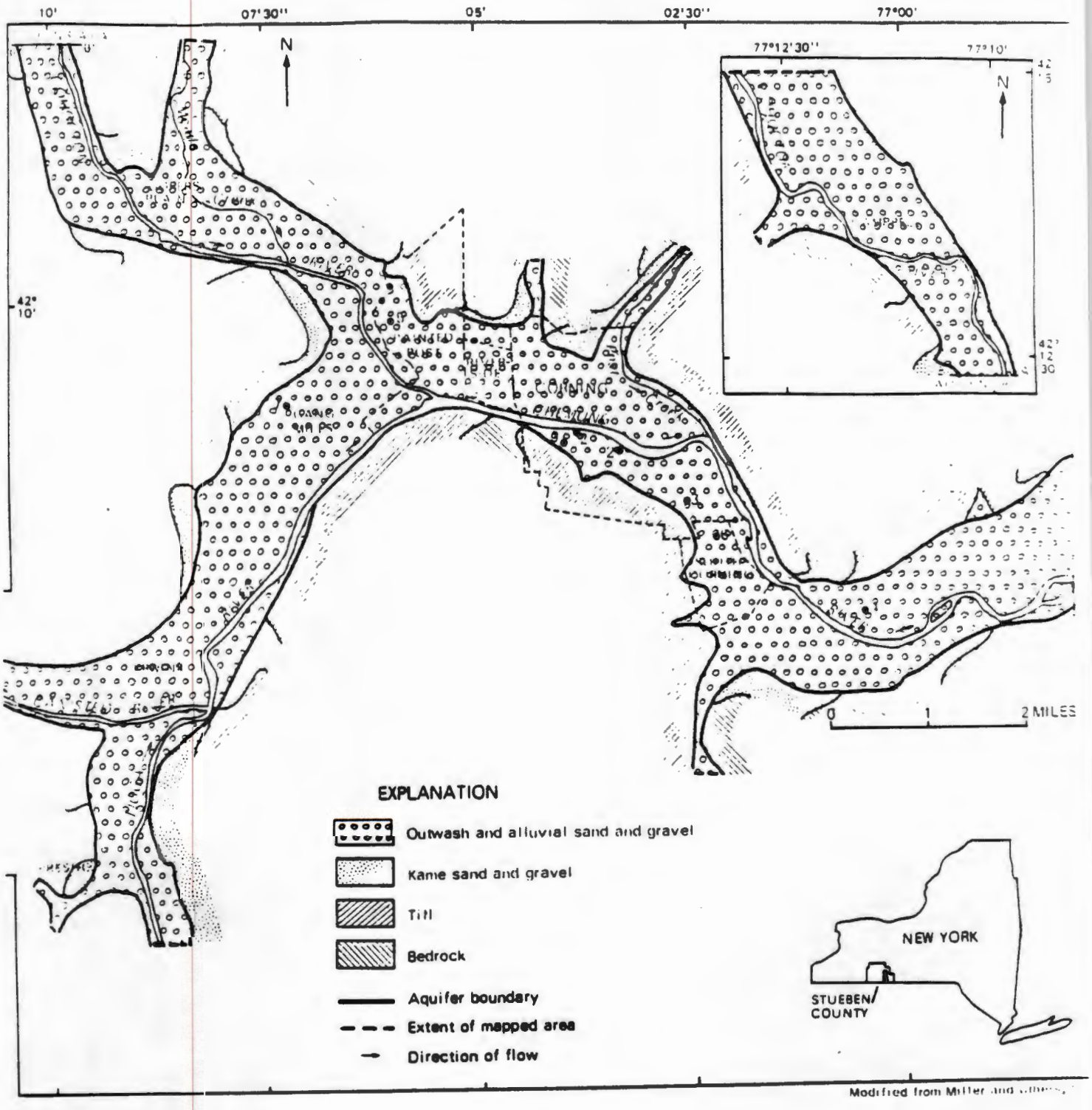
The valleys now contain several kinds of drift. Kame terraces flank the west valley walls of Meads and Post Creeks, the north valley wall of Canisteo River, and the east valley wall of Tioga River. Lateral or end-moraine till covers the lower slopes of hillsides and is in places buried beneath or interbedded with lake deposits and surficial outwash. Layers of lacustrine sand, silt, and clay occur irregularly throughout the drift, and outwash sand and gravel form most of the valley flat. Since the retreat of ice, streams have reworked the sediments and deposited fine sand and silt 5 to 15 feet thick in low areas adjacent to streams and as alluvial fans of sand and gravel where upland streams meet the valley flat.



Base from U.S. Geological Survey, 1978

R8

FIGURE 9C CORNING AREA
Geologic setting



Modified from Miller and ...

R9

This aquifer consists of outwash sand and gravel

The widened and deepened valleys are party filled with drift, lake deposits, and alluvium containing highly permeable sand and gravel outwash. Thickness of valley fill ranges from 60 to 130 feet.

The valleys are partly filled with drift and postglacial alluvium ranging in thickness from 60 to 130 feet, typically 90 feet. The drift consists of sand and gravel (outwash) deposited by meltwater streams flowing from the ice, lacustrine fine sand, silt, and clay that underlies or is interbedded within the outwash, and morainal till that may be buried or at land surface. Generalized sections showing the position of drift deposits are shown in figure 9D. Only saturated sediments coarser than very fine sand are considered to be aquifer material.

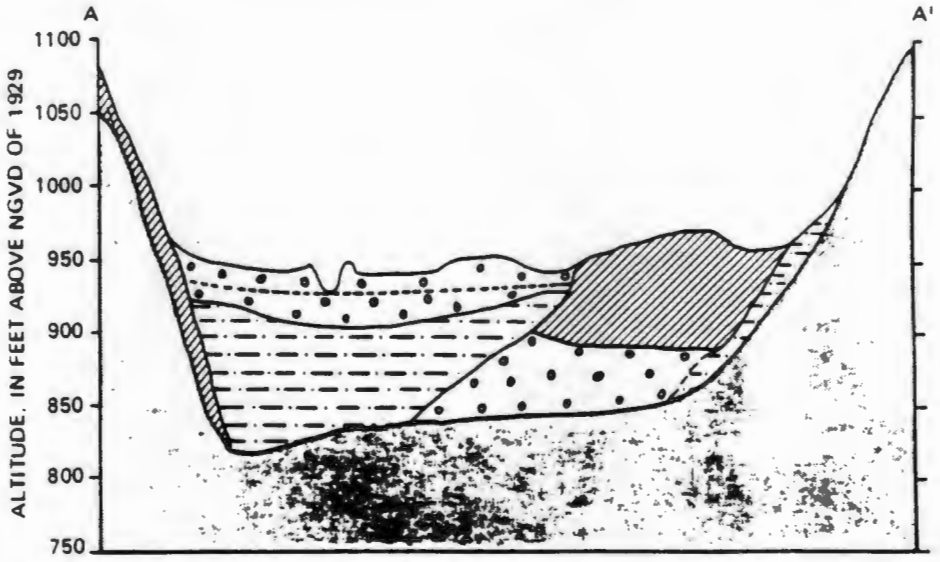
Outwash and kame sand and gravel is widespread. Cohocton valley from Campbell to Coopers Plain has a surficial outwash deposit overlying lake beds or till. Total depth to bedrock here ranges from 90 to 129 feet. The Meads Creek valley also contains surficial outwash or alluvium; one well penetrated a clay layer at 40 feet, but little other information is available.

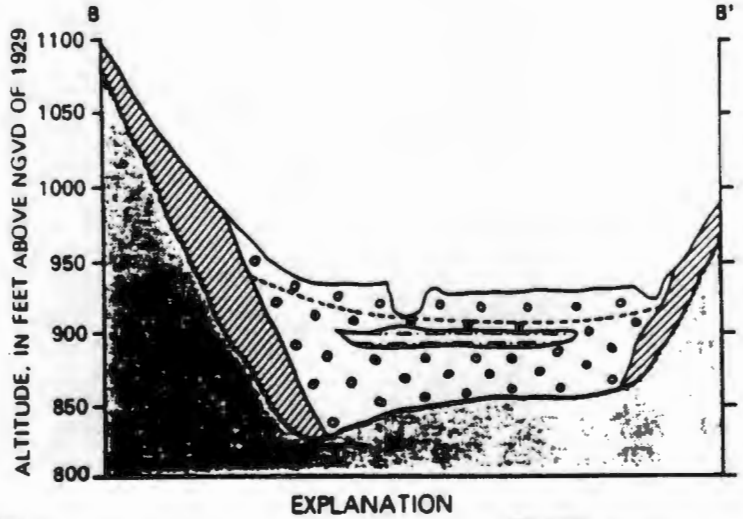
In the Corning-Painted Post-Gang Mills area, borings and well logs near the south wall of the valley penetrate mostly sand and gravel (70 to 90 feet thick), some of it silty and containing some till (MacNish, Randall, and Ku, 1969). In Painted Post is a thick section of lake beds along the west and north sides of the valleys, underlain by more gravel, possibly kames (sec. A-A', fig. 9D). Here depth to bedrock ranges from 63 to 90 feet.

R10

FIGURE 9D CORNING AREA

Geohydrologic





EXPLANATION

- Sand and gravel
- Sand, silt, and clay
- Till
- Bedrock
- Saturated aquifer material
- ------ Water table

0 1 2 MILES

Vertical exaggeration X 20

Location of sections shown in figure 9E

R11

9 CORNING AREA
E. Aquifer thickness

Most deposits are about 40 feet thick; a few exceed 50 feet

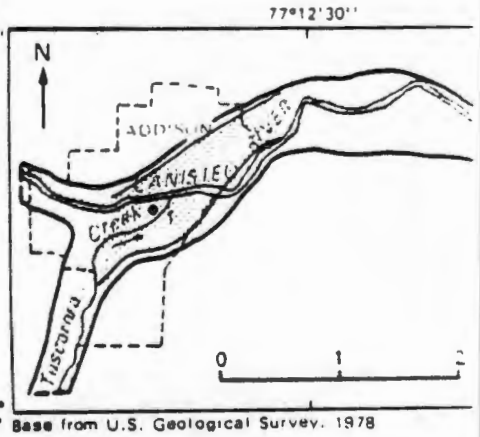
Outwash, kame, and alluvial sand and gravel is extensive within the main valleys and ranges from 5 to 80 feet in saturated thickness. Most deposits are approximately 40 feet thick.

The aquifer-thickness map (fig. 9E) indicates the saturated thickness of unconsolidated sediments coarser than very fine sand. The bottom of the aquifer is regarded as the first extensive impermeable unit — this may be till, lacustrine silt and clay, or bedrock. Because of the irregular occurrence of buried lake deposits, the thickness contours in many areas are only approximate values.

In the reach from Campbell to Coopers Plains, the aquifer is generally 30 to 40 feet thick. In the Meads Creek valley, borings penetrating the upper 50 feet indicate a surficial aquifer approximately 30 feet thick. Little information is available about deeper deposits. From Coopers Plains to the western part of Painted Post, the surficial aquifer thins to 15 to 30 feet.

In the southern part of the Corning-Painted Post area, borings and well logs penetrate a thick (85 to 95 feet) section of mostly sand and gravel. On the north side of Painted Post, a till deposit (probably a lateral moraine) on the inside bend of the valley overlies a buried sand and gravel aquifer 75 feet thick (sec. A-A', fig. 9D).

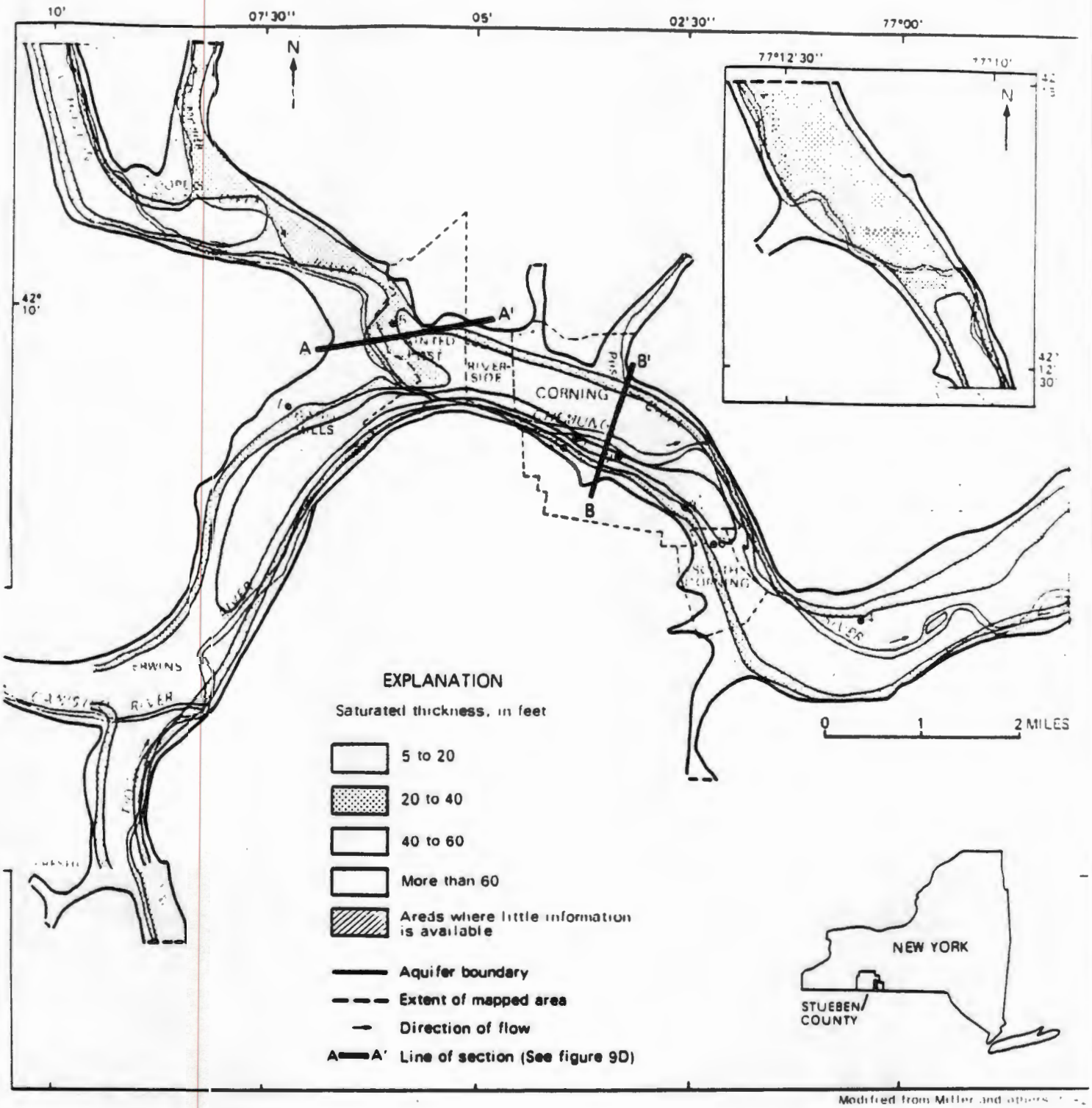
In the Chemung River valley from South Corning to the Chemung-Steuben County border, lake silt and clay lenses and till that are interbedded within the sand and gravel are included in the saturated thickness. In the Gang Mills and Erwin area, the Tioga valley contains a sand and gravel aquifer 40 to 100 feet thick that also has interlayered lake sediments and till.



Base from U.S. Geological Survey, 1978

R12

FIGURE 9E CORNING AREA
Aquifer thickness



Modified from Miller and others

R 13

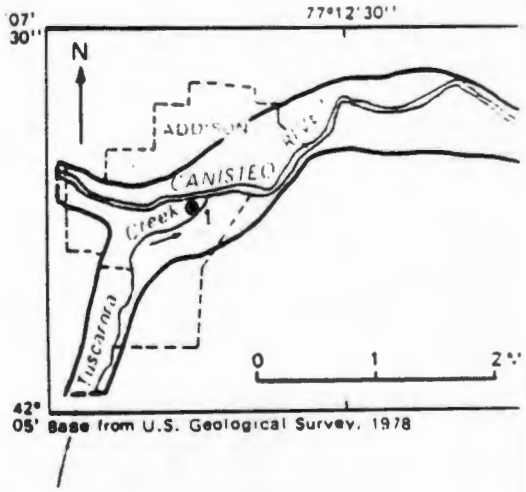
Ground water flows toward streams and southward toward Elmira

Ground-water movement is downvalley except where tributary streams enter the main valley; there water movement is generally transverse to the valley. Discharge is to streams in the valley and also occurs as underflow that leaves the valley east of East Corning.

The potentiometric-surface map[1] (fig. 9F) represents the average altitude of the water table in the surficial sand and gravel aquifer.

Ground water moves generally downvalley and discharges into the streams, except where tributary streams enter the main valley. At such intersections, ground water is recharged by the streams and forms fan-shaped ground-water mounds in which movement is generally transverse to the valley. Ground water also leaves the valley as underflow toward the Elmira area.

Recharge results from rainfall over most of the valley floor, from seepage along some stream reaches, from the underlying bedrock, and through streambanks during periods of high runoff. Where streambeds are above the ground-water level, stream water may recharge the aquifer; this is common where small streams draining uplands flow onto the permeable sand and gravel valley floor.

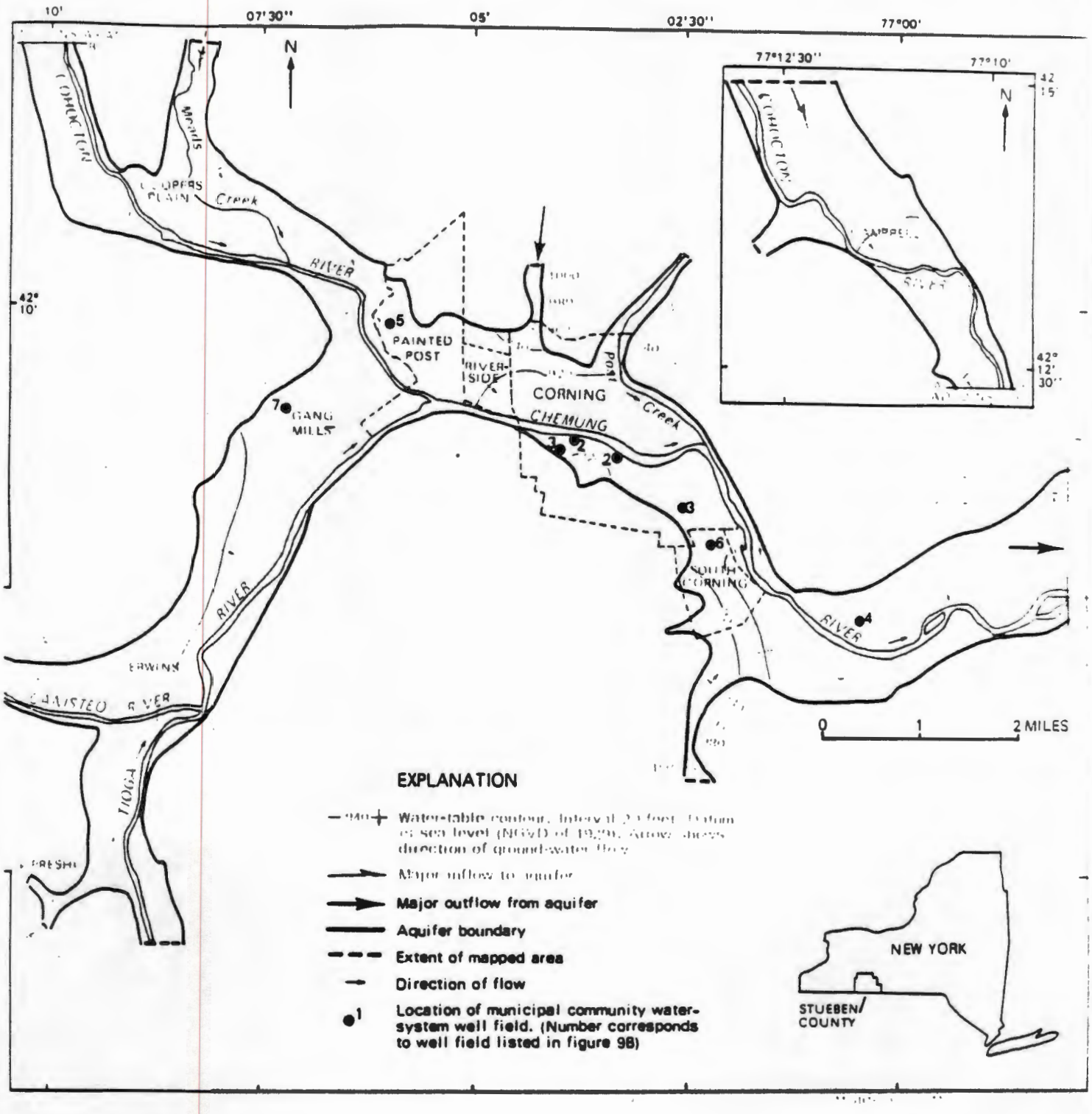


[1] The map was compiled from water-level measurements made by U.S. Geological Survey, well drillers, and engineering consultants from 1932-68; most measurements were made in the later 1950's and early 1960's.

R14

FIGURE 9F CORNING AREA

Ground-water movement



R15

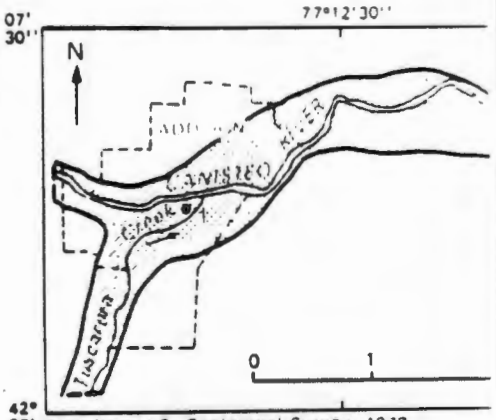
Thick sand and gravel deposits may yield several hundred gallons per minute to wells

Yields of 500 to more than 1,000 gallons per minute can commonly be obtained from wells tapping the thick stratified sand and gravel deposits in the Cohocton and Chemung River valleys. Little information is available on well yields in the Tioga and Canisteo valleys.

Ground water is being used extensively in the Corning area and is of vital interest to growing communities and industries. As water use increases, or replacement sources are needed because of quality deterioration, alternative areas of high yield need to be located. The map in figure 9G indicates the estimated well yield that can be expected from municipal-type wells. Yield information is most reliable in the Corning area (from Painted Post to the City of Corning) but is scant outside the populous areas.

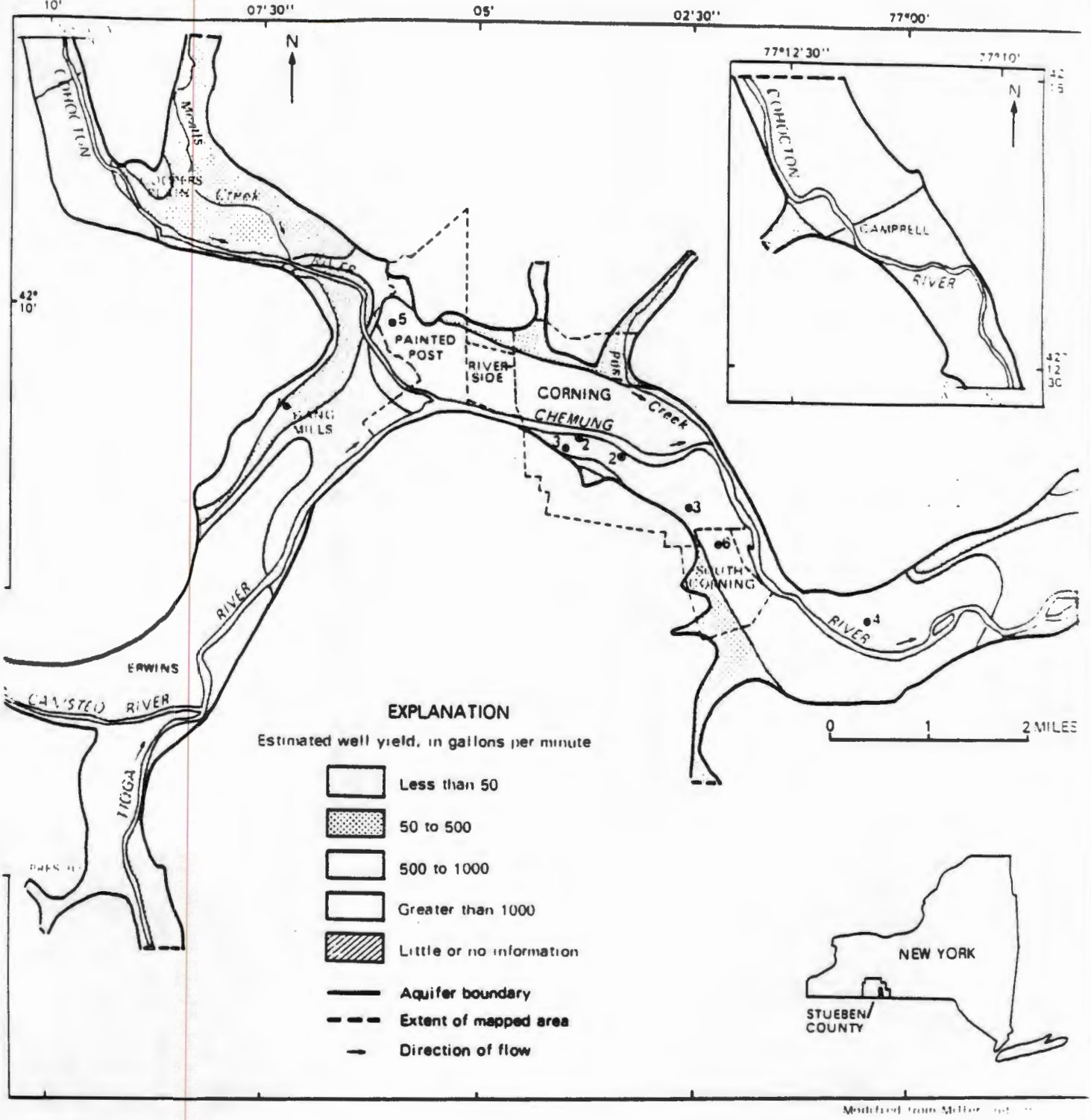
Large water yields to wells (500 to more than 1,000 gal/min) are common where the saturated thickness of permeable sand and gravel exceeds 40 feet and also near streams, where water can be induced to move from the streambed into the aquifer toward the pumping well. Large yields can generally be obtained in most parts of the Cohocton and Chemung River valleys except in the reach between Coopers Plain and Painted Post, where the aquifer is thin. In Corning, large yields are available from the thick deposits (greater than 60 feet) of saturated permeable sand and gravel.

Little information is available on the Canisteo River valley, except that a municipal well in the Village of Addison is reported to yield 350 gal/min. No well-yield information was available on the Tioga River valley south of Erwin.



R16

FIGURE 9G CORNING AREA
Well yields



R17

REFERENCE 2

Priority 2 Site Name Town of Erwin L.F. Region 8

County Steuben

0141

INITIAL EVALUATION OF INDUSTRIAL AND HAZARDOUS WASTE SITES

I. General Site Information

1. Site Location Erwin, N.Y.

2. Current owners ☐ or operators ☒ : Steuben County Highway Dept.

Address Bath, N.Y., 14810

Contact Ervin Stanton Phone 607-776-3391

3. Time during which site was used: _____ to Present

4. Type of Site: Industrial Disposal ☒ Mixed Disposal Area ☐

Drum Storage ☐ Lagoon ☐ Other (specify) ☐ _____

5. Size of Site (approx.) _____ acres, and/or dimensions _____

6. Exposed waste? yes ☐ no ☐

II. Waste Characterization (See Section III for more details.)

1. Generator Ingersoll Rand Waste Types Foundry sand

Composition _____ Total Quantity _____ Bulk ☒ Drum ☐

2. Generator Corning Glass Works Waste Types Cullet

Composition _____ Total Quantity _____ Bulk ☒ Drum ☐

3. Generator Corning Glass Works Waste Types Catalytic Converters

Composition _____ Total Quantity _____ Bulk ☒ Drum ☐

4. Generator _____ Waste Types _____

Composition _____ Total Quantity _____ Bulk ☐ Drum ☐

Report prepared by: Stephen Bates R-8 Phone 716-226-2466

_____ Phone _____

Receives waste from Ingersoll Rand

R18

III. Waste Stream Information

Waste Stream # 1

Generator	Hauler
Name Ingersoll Rand Inc.	Name Same
Address Painted Post, 14830	Address
Contact Jos. Counsey Phone 607-937-2671	Contact Phone

Average Percent Solids _____ % pH range ____ to ____

Physical State: liquid ☐ , slurry ☐ , sludge ☐ , solid ☒ ,

other ☐ specify _____

Annual Volume _____ Total Volume _____ Bulk ☐ Drum ☐

Component	Avg. Concentration (Wet ☐ or Dry ☐ Weight)		
1. Foundry Sand		wt.% ☐	ppm ☐
2.		wt.% ☐	ppm ☐
3.		wt.% ☐	ppm ☐
4.		wt.% ☐	ppm ☐
5.		wt.% ☐	ppm ☐

Waste Stream # 2 & 3

Generator	Hauler
Name Corning Glass Works	Name Same
Address Corning, N.Y.	Address
Contact Graham Madey Phone 607-974-7844	Contact Phone

Average Percent Solids 100 % pH range _____ to _____

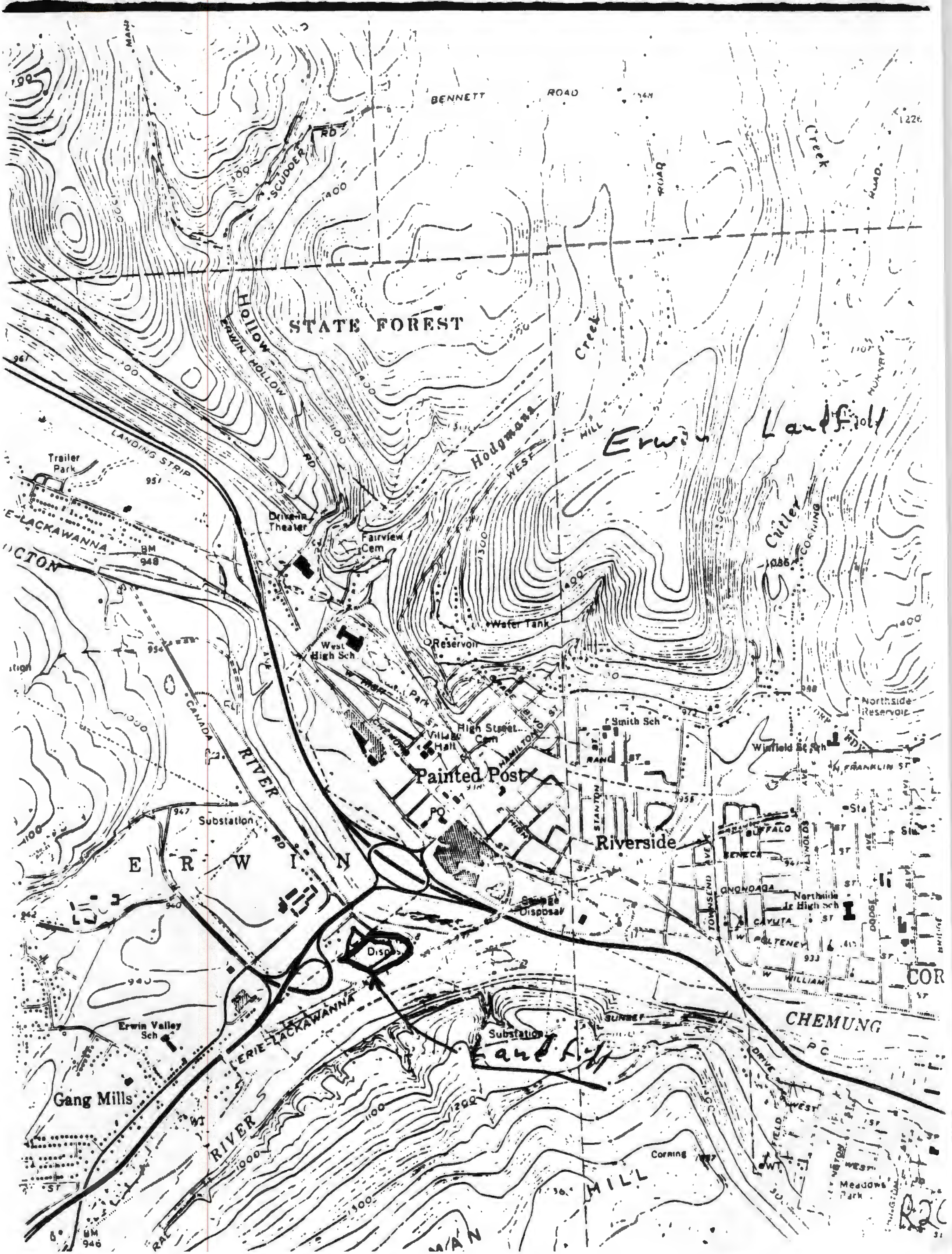
Physical State: liquid ☐ , slurry ☐ , sludge ☐ , solid ☒ ,

other ☐ specify _____

Annual Volume _____ Total Volume _____ Bulk ☒ Drum ☐

Component	Avg. Concentration (Wet ☐ or Dry ☐ Weight)		
1. Cullet		wt.% ☐	ppm ☐
2. Catalytic Converters		wt.% ☐	ppm ☐
3.		wt.% ☐	ppm ☐
4.		wt.% ☐	ppm ☐
5.		wt.% ☐	ppm ☐

R1a


BENNETT ROAD
SCUDDER RD
STATE FOREST
Hollow
ERWIN HOLLOW RD
Hodgmans Creek
WEST HILL
Erwin Landfill
Cutler Creek
CORNING
HUNGRY HOLLOW ROAD
Trailer Park
LANDING STRIP
ERIE-LACKAWANNA
Drive-in Theater
Fairview Cem
Water Tank
Reservoir
West High Sch
Park
Village Hall
High Street Cem
Smith Sch
Northside Reservoir
Winfield St Sch
N FRANKLIN ST
Painted Post
PO
HAMILTON
RIVER
CANADA
Substation
E R W I N
Riverside
BUFFALO
SENECA
ONONDAGA
CAYUTA
PULTENEY
W WILLIAM
TOWNSEND AVE
Northside Jr High Sch
Sewage Disposal
Disps
COR
CHEMUNG
SUNSET
DRIVE
WEST
Substation
Landfill
Erwin Valley Sch
Gang Mills
ERIE-LACKAWANNA
RIVER
HILL
Corning
Meadows Park
BM 946
BM 948

IV. Owners/Operators (Specify) During Use

1. Name TOWN OF ERWIN Time Period _____ to 1975
   Address PAINTED POST N.Y.
   Contact _____ Phone _____
2. Name STUREN CO. Time Period 1974 to PRESENT
   Address BATH, N.Y.
   Contact MYRON CROUCH Phone _____
3. Name _____ Time Period _____ to _____
   Address _____
   Contact _____ Phone _____

V. Sketch of Site

U.S.G.S. Quadrangle [illegible]
42°09'07" Lat. 77°05'52" Long.
(attach photocopy of appropriate area)

See attached U.S.G.S. map

A21

VI. Field Inspection

1. Type of Area in which site is located: Rural ☐, Industrial ☒,
   Residential ☐, Commercial ☐, Agricultural ☐.
2. a. Distance to nearest dwelling (feet) 2000'
   b. Number of dwellings within 500 feet 0
3. a. Distance to nearest water body downgradient from site (feet) 100'
   b. Name of water body TIOGA RIVER
   c. Type of water body RIVER
   d. Classification of water body _____
4. a. Nearest public or private water supplies UKN
   (Indicate on attached map)
   b. Names, addresses, and phone numbers of home owners or water companies if available.

   _____

   _____

   _____
5. Approximate distance to groundwater (feet) 2'10'
6. Is site above or near a known aquifer? yes ☐ no ☑
7. a. Number of drums exposed 0
   (attach appropriate information from any drum labels)
   b. Number or percent of drums filled with liquid _____, sludge _____,
   solids _____, mixed _____.
8. Describe other exposed waste material and estimate volume _____

   _____
9. Leachate (estimate volume, flow direction, receiving watercourse) _____
   NONE

R22

10. Soil Characteristics:

1. Underlying Soil

a) Description _____

b) Soil Classification _____

2. Cover Material

a) Description _____

b) Soil Classification _____

11. a. Topography: Hillside(slope) ☐ , Ravine ☐ , Flat ☒ .

b. Geological Terrain _____

_____

12. Vegetation (note dead vegetation or lack of vegetation)

13. Is access limited (fencing) Yes

14. Nearby industrial discharges (air or water)

_____

SPDES or NPDES Permit yes ☐ no ☒

15. Odors None

16. Eye, nose, or skin irritation during site investigation

No

17. Samples taken: yes ☐ no ☒ (attach protocol)

18. Other field notes _____

_____

_____

Field Inspection Performed By Stephen Bett

Date 1-9-79

Photographs taken _____

_____

_____

R23

VII. Sampling and Monitoring

VIII. Sources of Information (Include interviews, names, addresses, phone numbers)

1. File

IX. Involvement of Other Agencies

R24

X. Other Remarks

UnKnown Ind. wastes

Landfill App. to operate due

3-15-79.

XI. Recommendations

1. Minimum level of sampling to determine the hazards posed by materials at the site.

2. Enforcement action to abate problems at the site.

3. Containment actions to prevent further environmental threats at the site.

4. Comprehensive cleanup, or abatement of hazards posed by materials at the site.

5. Formal determination of Imminent Health Hazard by the State Health Department.

6. Other Recommendations

SITE WILL BE PERMITTED UNDER PART 360

R25

REFERENCE 3

SUPERFUND

NATIONAL PRIORITIES LIST SEMINAR

EPA REGION II

ALBANY, NY

The MITRE Corporation

April 2-3, 1986

Observed Release

The release and the background well must be in the same aquifer at comparable elevations.

Knowledge of flow gradients helps in determining where to look for background versus contamination...but beware of local or seasonal variation. The purpose is to find a nearby well in the aquifer of concern that is not under the influence of the site.

Background well(s) must discriminate out any alternative sources of the contamination.

The attribution of the release to the facility is strengthened if the substances found in the release are documented to have been deposited at the facility.

Depth of the Aquifer of Concern (Page 12)

- Distance between the deepest point of known contamination and the top of the aquifer of concern.

  - Deepest level at which contamination is documented.
  - Highest seasonal level of the saturated zone of the aquifer.

- If depth of deposit is unknown, 6 feet may be assumed.

REFERENCE 4

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

A28

REFERENCE 5

WEATHER ATLAS of the UNITED STATES

Originally titled: CLIMATIC ATLAS OF THE UNITED STATES

U.S. DEPARTMENT OF COMMERCE
C. R. Smith, Secretary

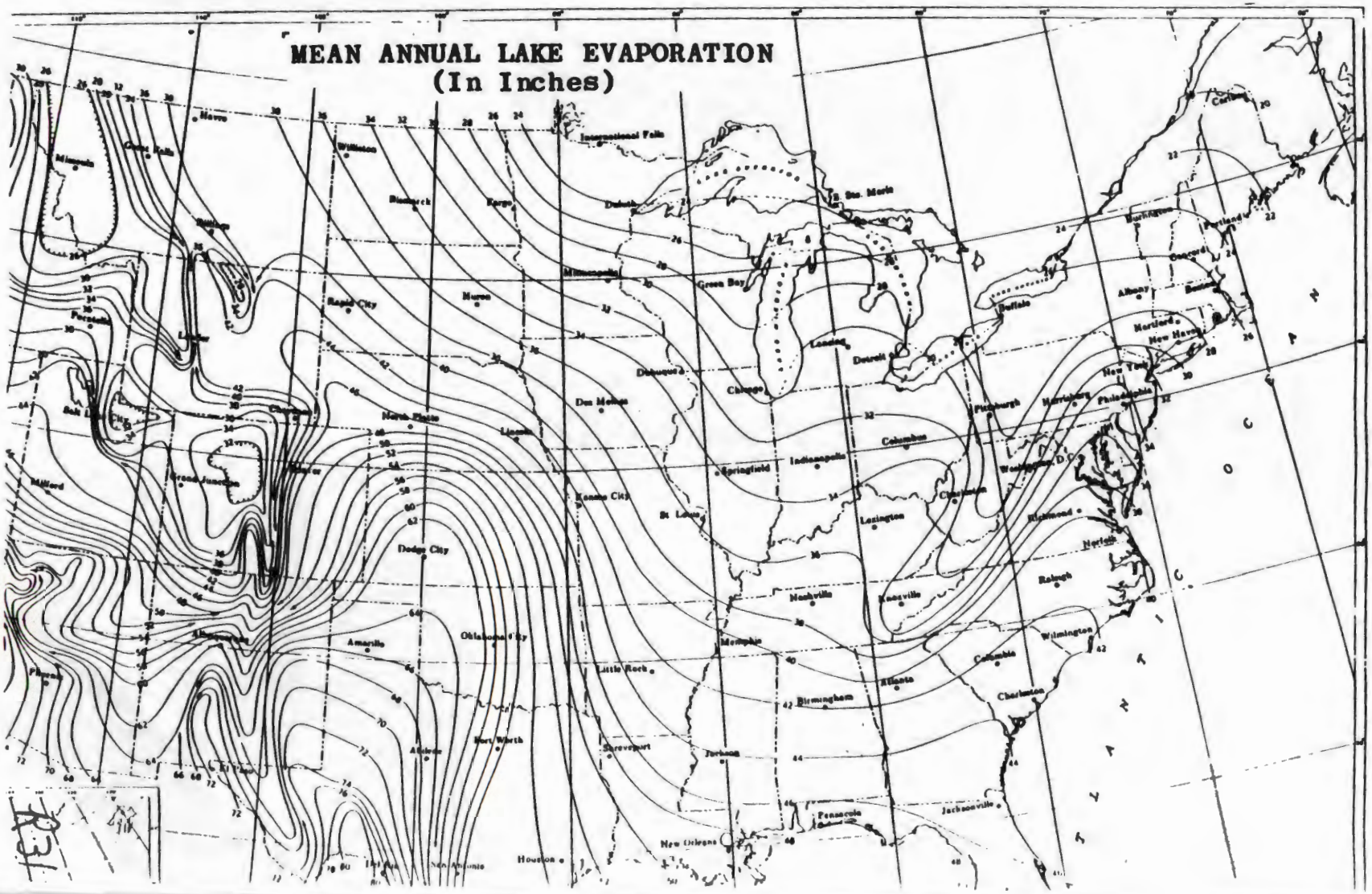
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
Robert M. White, Administrator

ENVIRONMENTAL DATA SERVICE
Woodrow C. Jacobs, Director

JUNE 1968

Reprinted 1975 by
GALE RESEARCH COMPANY
Book Tower, Detroit, Michigan 48226

TOTAL PRECIPITATION (Inches)


MEAN ANNUAL LAKE EVAPORATION
(In Inches)

REFERENCE 6

SOIL SURVEY OF

Steuben County, New York

United States Department of Agriculture
Soil Conservation Service
in cooperation with
Cornell University
Agricultural Experiment Station

In a representative profile the surface layer is dark grayish brown channery silt loam about 6 inches thick. The subsoil is mottled, grayish brown very channery silt loam about 7 inches thick. At a depth of 13 inches the subsoil rests on horizontally bedded sandstone and siltstone rock.

The available water capacity is low. Permeability is slow. A seasonal high water table is perched above the bedrock. The root zone is restricted to depths above the bedrock, but a few roots penetrate the fissures in the bedrock.

Representative profile of Tuller channery silt loam, 0 to 6 percent slopes, in an old pasture lot in the town of Wayne, just east of County Route 94 about 1 mile south of junction of County Route 94 and State Route 54:

Ap—0 to 6 inches; dark grayish brown (10YR 4/2) channery silt loam; weak fine granular structure; friable; many roots; 35 percent coarse fragments; very strongly acid; abrupt smooth boundary.

B2g—6 to 13 inches; grayish brown (10YR 5/2) very channery silt loam; many medium distinct strong brown (7.5YR 5/8) mottles; moderate fine subangular blocky structure; firm; common roots; few fine pores; 40 percent coarse fragments; strongly acid; abrupt smooth boundary.

IIR—13 inches plus; dark grayish brown (10YR 4/2) fractured acid and sandstone and siltstone with gray silt loam in joints.

Depth to bedrock is 10 to 20 inches. The solum is 10 to 20 inches thick and ranges from very channery to channery silt loam. Coarse fragments that are dominantly flat make up 35 to 50 percent of the soil.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 or 3. If the soil is not limed, reaction is very strongly acid or strongly acid.

The B2 horizon has hue of 7.5YR through 2.5Y, value of 4 or 5, and chroma of 2 or 1. Reaction ranges from very strongly acid to medium acid. The underlying bedrock ranges from massive sandstone to interbedded sandstone, siltstone, and shale.

Tuller soils are near Arnot and Volusia soils. They are wetter than Arnot soils and are shallower over rock than Volusia soils.

TuB—Tuller channery silt loam, 0 to 6 percent slopes. This nearly level and gently sloping soil is in depressions and gently sloping areas that receive considerable amounts of runoff from higher adjacent areas. The depressions contain the poorly drained segment of Tuller soils. The rest of the areas are somewhat poorly drained. The areas commonly consist of bands several hundred feet in width that parallel the valley ridges; they are 5 to 40 acres in size. This soil has the profile described as representative of the series.

Included with this soil in mapping were small areas of Arnot, Volusia, Chippewa, and Hornell soils. Also included because of its small acreage was a soil that has a heavier texture and is less than 20 inches thick over shale rock.

This soil is suited to hay, pasture, and trees, but it is better suited to grasses that are tolerant of wet, cold soils. It is not suited to early pasture.

Shallowness to bedrock and extreme wetness and dryness make this soil impractical to cultivate except for renovation of hay or pasture. Seasonal wetness and shallowness to bedrock are major limitations to nonfarm uses. Capability subclass IVw; woodland subclass 5w.

TuC—Tuller channery silt loam, 6 to 12 percent slopes. This sloping, somewhat poorly drained soil is on foot slopes immediately below steeper areas and receives considerable runoff and seepage from these higher areas. The areas of this soil consist of bands several hundred feet wide that are parallel to the valley ridges.

Included with this soil in mapping were small areas of Arnot, Mardin, Volusia, Hornell, and Chippewa soils.

This soil is best suited to hay, pasture, and trees. It is better suited to grasses that are tolerant of wet, cold soils. It is not suited to early pasture.

Shallowness to bedrock and extreme wetness and dryness make this soil impractical to cultivate except for the renovation of hay or pasture. Erosion is a hazard if this soil is tilled and not protected. The shallow depth to bedrock, wetness, and slope are limitations to nonfarm uses. Capability subclass IVw; woodland subclass 5w.

Unadilla Series

The Unadilla series consists of deep, well drained soils that formed in water-laid deposits of silt and very fine sand. These soils are on nearly level terraces in the valleys along rivers and major tributaries throughout the county.

In a representative profile the surface layer is dark grayish brown silt loam about 8 inches thick. The subsoil extends to a depth of 41 inches. In the upper 13 inches it is yellowish brown friable silt loam; in the lower 20 inches it is dark yellowish brown firm silt loam. The underlying material is dark brown loose very gravelly sandy loam to a depth of 60 inches.

The available water capacity is high. Permeability is moderate. The root zone extends to a depth of 40 inches or more. If the soils are not limed, the surface layer is strongly acid.

Representative profile of Unadilla silt loam, in a cultivated area in the town of Canisteo, adjacent to State Route 248 about 3 miles south of village of Canisteo:

Ap—0 to 8 inches; dark grayish brown (10YR 4/2) silt loam; moderate medium granular structure; very friable; many fine coats; strongly acid; abrupt smooth boundary.

B21—8 to 21 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; common roots; many fine pores; medium acid; clear boundary.

B22—21 to 41 inches; dark yellowish brown (10YR 4/4) silt loam; weak very coarse subangular blocky structure; firm; common roots; many fine pores; medium acid; abrupt smooth boundary.

IIC—41 to 60 inches; dark brown (10YR 3/3) very gravelly sandy loam; single grained; loose; few roots; 45 percent coarse fragments; medium acid.

Depth to bedrock is more than 5 feet. The solum is 24 to 50 inches thick. It is typically free of coarse fragments, but it has erratic pebbles and thin layers of gravelly material or sand coarser than very fine sand in a few places. The stone-free silty mantle is commonly underlain by a IIC horizon of gravel or sand at a depth of 40 to 60 inches. Unless the soil is limed, reaction ranges from very strongly acid to medium acid in the solum and from strongly acid to slightly acid in the substratum.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3.

The B horizon has hue of 7.5YR or 10YR, value of 4

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or 5, and chroma of 3 to 6. It is silt loam or very fine sandy loam.

The C horizon is similar to the B horizon in color, but it is silt loam or very fine sandy loam above a depth of 40 inches and ranges from silt loam to very gravelly sand below that depth.

Unadilla soils are near Scio and Tioga soils. They are better drained than Scio soils and they contain more silt than Tioga soils.

Un—**Unadilla silt loam.** This nearly level soil is on races in the main valleys. The areas are long and rrow and conform to the shape of the valley floor; ey are fairly large.

Included with this soil in mapping were small areas well drained Tioga soils and moderately well drained io soils, small areas of similar soils that are neutral the lower part of the subsoil, and spots where the ratified sand and gravel layer is at a depth of 24 40 inches.

This soil is suited to all crops grown in the county, cluding vegetables. Row crops can be grown for sev- al consecutive years if the organic matter and soil ructure are maintained. Much of this soil is already residential or commercial use.

Annual use of crop residue and cover crops or the oc- sional growing of a sod crop help maintain the con- nt of organic matter. Minimum tillage helps preserve il structure. Where this soil is next to a large stream, is subject to streambank erosion. This soil is ex- llent for most nonfarm uses, except for some areas at are flooded on rare occasions. Capability class I; oodland subclass 3o.

Volusia Series

The Volusia series consists of deep, somewhat poorly drained soils that formed in dense glacial till that was derived mainly from sandstone, siltstone, and shale. These soils have long uniform slopes that are on valley sides and broad divides on uplands. A well-defined fragipan at a depth of 10 to 20 inches greatly impedes rooting and the movement of water.

In a representative profile the surface layer is dark grayish brown channery silt loam about 7 inches thick. The upper part of the subsoil is mottled yellowish brown channery silt loam about 5 inches thick. A subsurface or leached layer of mottled gray channery silt loam about 3 inches thick separates the upper layer of subsoil and the fragipan. The underlying firm fragipan is channery silt loam about 31 inches thick; in the upper 16 inches it is brown and in the lower 15 inches it is dark grayish brown. The underlying material to a depth of 62 inches is olive firm channery loam.

The available water capacity is low to moderate. A seasonal high water table is generally perched above the very slowly permeable fragipan. If the soils are not limed, the surface layer is strongly acid. Seasonal wetness and the very slowly permeable fragipan are the main limitations to farm and nonfarm uses.

Representative profile of Volusia channery silt loam, 3 to 8 percent slopes, in a cultivated area in the town of Hornby, just east of County Route 41 about ¾ mile south of hamlet of Hornby:

Ap—0 to 7 inches; dark grayish brown (10YR 4/2) channery silt loam; moderate very fine granular structure; very friable; 20 percent coarse fragments; strongly acid; abrupt smooth boundary.

B2—7 to 12 inches; yellowish brown (10YR 5/4) channery silt loam; few fine distinct gray (10YR 6/1) mottles; weak fine subangular blocky structure; friable; 15 percent coarse fragments; strongly acid; clear smooth boundary.

A'2g—12 to 15 inches; gray (10YR 6/1) channery silt loam; common medium distinct yellowish brown (10YR 5/4) mottles; very weak fine subangular blocky structure; friable; common, fine roots; many fine pores; 15 percent coarse fragments; strongly acid; clear smooth boundary.

B'x1—15 to 31 inches; brown (10YR 5/3) channery silt loam; many medium distinct yellowish brown (10YR 5/8) mottles; strong very coarse prisms coated with gray (10YR 5/1) silt; massive within prisms; firm and brittle; 20 percent coarse fragments; strongly acid; gradual smooth boundary.

B'x2—31 to 46 inches; dark grayish brown (10YR 4/2) channery silt loam; common medium distinct yellowish brown (10YR 5/6) and gray (10YR 5/1) mottles; massive; firm and brittle; 25 percent coarse fragments; strongly acid; gradual wavy boundary.

C—46 to 62 inches; olive (5Y 4/3) channery loam; massive; firm; slightly acid; 30 percent coarse fragments.

The solum is 40 to 60 inches thick. Depth to the fragipan ranges from 10 to 20 inches. Coarse fragments make up 10 to 30 percent of the solum and 15 to 60 percent of the C horizon. If the soil is not limed, reaction is very strongly acid or strongly acid above the fragipan and ranges from strongly acid to mildly alkaline in and below the fragipan.

The Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 or 3.

The B2 and Bx horizons have hue of 10 YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. They range from channery loam to light silty clay loam.

The C horizon is similar to the Bx horizon in color, but it ranges from very channery loam to channery silt loam.

Volusia soils are in a drainage sequence with well drained Bath soils, moderately well drained Mardin soils, and poorly drained Chippewa soils.

VoB—Volusia channery silt loam, 3 to 8 percent slopes. This soil is on undulating hilltops or uniformly gently sloping hillsides. The areas are generally oblong and are 10 to 40 acres or more in size. In many places this soil is adjacent to the higher lying Mardin soils and receives runoff from them. This soil has the profile described as representative of the series.

Included with this soil in mapping were small areas of Mardin and Chippewa soils.

This soil is suited to corn, oats, hay, and pasture if effective drainage is used. It remains cold and wet for long periods in spring; hence, it is not suited to early planting or grazing.

Tile drainage of low wet spots is beneficial. Graded stripcropping, diversions and grassed waterways, minimum tillage, and crop residue management help control erosion. Seasonal wetness and very slow permeability are limitations to many nonfarm uses. Capability subclass IIIw; woodland subclass 3w.

VoC—Volusia channery silt loam, 8 to 15 percent slopes. This sloping soil is in long sloping areas where water accumulates from higher lying areas. The areas are generally 20 acres or more in size. This is the most extensive soil in the county.

Included with this soil in mapping were small areas of Mardin soils on knolls, small seepage spots of Chippewa soils along field drainageways, and small areas of Fremont and Morris soils.

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This soil is suited to cultivated crops, hay, pasture, and trees. Crops that tolerate fairly poor drainage should be selected because the soil remains wet and cold until late in spring. Grazing early in spring is not feasible. In many areas the view adds to the potential for use as homesites.

Use of graded stripcropping and grassed waterways and returning crop residue help reduce the loss of soil and water. Drainage diversions are needed in places to break up long slopes and intercept water from adjacent areas. Tile drainage of wet spots is also desirable. Seasonal wetness, slope, and the very slow permeability are limitations to many nonfarm uses. Capability subclass IIIe; woodland subclass 3w.

VoD—Volusia channery silt loam, 15 to 25 percent slopes. This moderately steep soil is in areas along waterways on hillsides and foot slopes below areas of steeper, better drained soils. The areas generally consist of long narrow bands along the hillsides.

Included with this soil in mapping were small areas of eroded Volusia soils, small areas of Lordstown soils, Mardin soils on knolls, and small seep spots of poorly drained Chippewa soils.

This soil is suited to hay, pasture, and trees. It can be reforested and developed for recreation and wildlife.

Steep slopes restrict the use of this soil for crop production and make the use of farm machinery difficult and hazardous. The soil is wet, and it warms up late in spring. Minimum tillage is necessary to reestablish sod for hay or pasture. Steep slopes, seasonal wetness, and very slow permeability are limitations to most nonfarm uses. Capability subclass IVe; woodland subclass 3r.

Wallington Series

The Wallington series consists of deep, somewhat poorly drained soils that formed in wind- or water-deposited silt and very fine sand. These soils are on nearly level stream terraces, valley bottoms, and in depressions on uplands.

In a representative profile the surface layer is very dark grayish brown silt loam about 3 inches thick. The subsurface layer is mottled, brown silt loam about 9 inches thick. The subsoil is mottled, yellowish brown firm silt loam to a depth of 38 inches. The underlying material to a depth of 62 inches is strong brown and gray firm very fine sandy loam.

The available water capacity is moderate to high. A seasonal high water table is generally perched on the slowly permeable fragipan. The root zone in most places is restricted to depths above the fragipan. If the soils are not limed, the surface layer is strongly acid. Seasonal wetness and slow permeability are the main limitations to farm and nonfarm uses.

Representative profile of Wallington silt loam, in a forest in the town of Howard, about ½ mile south of Demons Pond:

A1—0 to 3 inches; very dark grayish brown (10YR 3/2) silt loam; moderate fine to medium granular structure; friable; many fine roots; medium acid; clear smooth boundary.

A2g—3 to 12 inches; brown (7.5YR 5/2) silt loam; common fine distinct yellowish brown (10YR 5/4) mottles; weak fine subangular blocky structure; friable; many fine roots; strongly acid; clear wavy boundary.

Bxg—12 to 38 inches; yellowish brown (10YR 5/4) silt loam; many coarse distinct grayish brown (2.5Y 5/2) mottles; moderate very coarse prismatic structure; firm; brittle; few fine roots; few fine pores; prism coats are gray (10YR 6/1); strongly acid; gradual wavy boundary.

C—38 to 62 inches; 50 percent strong brown (7.5YR 5/6) and 50 percent gray (10YR 5/1) very fine sandy loam; massive; firm; slightly acid.

Depth to strongly contrasting layers and bedrock is more than 5 feet. The solum is 36 to 50 inches thick.

The Ap or A1 horizons have hue of 10YR or 7.5YR, value of 3 or 4, and chroma of 2 or 3. Reaction ranges from very strongly acid to neutral.

The A2 horizon has hue of 7.5YR to 2.5Y, value of 5, and chroma of 2 or 1. It is silt loam or very fine sandy loam. Reaction ranges from very strongly acid to medium acid.

The Bx horizon has hue of 2.5Y to 7.5YR, value of 4 or 5, and chroma of 1 through 4. It is silt loam or very fine sandy loam. Reaction ranges from strongly acid to slightly acid.

The C horizon is similar to the Bx horizon in color. It has no structure and ranges from very fine sandy loam to stratified silt and very fine sand. Reaction ranges from medium acid to slightly acid.

Wallington soils are in a drainage sequence with well drained Unadilla soils and moderately well drained Scio soils.

Wa—Wallington silt loam. This is a nearly level soil in depressions on stream terraces, valley bottoms, and uplands.

Included with this soil in mapping, near Arkport, are small areas that have been covered with 4 to 6 inches of windblown muck, small areas that are underlain by gravel or till at a depth of 30 inches, and spots of Middlebury soils.

If this soil is artificially drained, it is suited to the crops commonly grown in the county. If this soil is undrained, it is limited to sod crops that tolerate wetness. Drainage is difficult in many areas because of the lack of suitable outlets. Seasonal wetness and slow permeability are limitations to many nonfarm uses. Capability subclass IIIw; woodland subclass 3w.

Warners Series

The Warners series consists of deep, very poorly drained soils that formed in 12 to 20 inches of mineral alluvial deposits that are underlain by marl. These soils are nearly level and are on flood plains.

In a representative profile the surface layer is silt loam about 13 inches thick. In the upper 10 inches it is very dark brown and in the lower 3 inches it is black and very sticky. The substratum to a depth of 60 inches is gray marl.

The available water capacity is moderate to high. Permeability is moderately slow to moderate. The water table is at or near the surface for long periods. If the soils are drained, the root zone extends to a depth of about 24 inches. If the soils are not limed, the surface layer is neutral. Wetness and the hazard of flooding are the principal limitations to farm and nonfarm uses.

Representative profile of Warners silt loam, in a cultivated area in the town of Wayland, just south of the Genesee Expressway about ¼ mile west of State Highway 21:

TABLE 11.—*Estimated engineering properties and classifications*—Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments > 3 inches	Percentage passing sieve number—				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				*Pct*					*Pct*	
Ovid:											
OvB, OvC	0–15	Silt loam	ML, SM, CL	A–4, A–6, A–7	0	90–100	85–100	60–95	40–90	35–45	5–15
	15–34	Silty clay loam, gravelly silt loam.	CL, ML	A–4, A–6	0–5	65–100	65–95	60–95	55–90	25–35	5–15
	34–60	Silty clay loam, gravelly silt loam.	CL, ML, GC	A–4, A–6, A–2	0–5	55–90	50–90	40–85	30–80	20–35	5–15
Palms:											
Pa	0–21	Muck	Pt	A–8							
	21–60	Clay loam, silt loam, fine sandy loam.	CL–ML, CL, SM	A–4, A–6	0	95–100	95–100	70–95	40–80	12–30	6–12
Red Hook:											
Rh	0–6	Silt loam	ML, SM, OL	A–4	0–5	80–95	75–90	65–90	45–80	20–40	2–4
	6–22	Silt loam, loam, gravelly sandy loam.	ML, SM, GM	A–1, A–2, A–4	0–5	60–90	55–90	35–90	20–80	20–30	2–4
	22–60	Gravelly loam, gravelly silt loam, gravelly sandy loam.	GM, ML, SM	A–1, A–2, A–4	5–10	60–90	55–80	35–80	20–70	20–30	2–4
Scio:											
Sc	0–9	Silt loam	ML	A–4	0	100	95–100	90–100	60–90	10–40	2–6
	9–42	Silt loam, very fine sandy loam.	ML	A–4	0	100	95–100	90–100	60–90	10–30	NP–6
	42–60	Stratified very gravelly sand to silt loam.	ML, SM, SP	A–4, A–2, A–1	0	85–100	30–50	15–85	2–80	<25	NP–4
Tioga:											
Tg	0–10	Silt loam	ML, SM	A–4	0	100	95–100	65–95	40–85	<15	NP–4
	10–60	Silt loam, fine sandy loam, loam.	ML, SM	A–4	0	100	95–100	65–95	40–85	<15	NP–2
Tuller:											
TuB, TuC	0–6	Channery silt loam.	GM, SM	A–2, A–4	5–10	55–75	45–55	40–55	35–50	10–30	2–4
	6–13	Very channery silt loam.	GM, SM	A–2, A–4	10–20	50–70	45–55	40–55	35–50	10–30	2–4
	13	Unweathered bedrock.									
Unadilla:											
Un	0–8	Silt loam	ML	A–4	0	100	95–100	90–100	60–90	10–20	2–4
	8–41	Silt loam, very fine sandy loam.	ML	A–4	0	100	95–100	90–100	60–90	10–20	2–4
	41–60	Very gravelly sandy loam, very gravelly sand, silt loam.	GP, GM, ML	A–1, A–2, A–4	0–5	45–100	40–95	20–90	0–70	.....	NP

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TABLE 11.—*Estimated engineering properties and classifications*—Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments > 3 inches	Percentage passing sieve number—				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				*Pct*					*Pct*	
Colusia:											
VoB, VoC, VoD	0–7	Channery silt loam.	GM, ML, CL, GC	A–4	5–10	65–80	60–80	50–80	40–70	30–40	5–10
	7–15	Channery silt loam, channery loam, silty clay loam.	GM, ML, CL, GC	A–4	5–10	60–85	55–85	45–85	35–80	15–25	5–10
	15–46	Channery silt loam, channery loam, silty clay loam.	GM, ML, CL, GC	A–4	5–10	65–90	60–85	50–85	40–80	20–30	5–10
	46–62	Channery loam, very channery loam, channery silt loam.	GM–GC, GC, CL–ML, CL	A–2, A–4	5–25	45–90	35–80	30–80	25–70	20–30	5–10
Wallington:											
Wa	0–3	Silt loam	ML	A–4	0	95–100	90–100	85–100	55–90	20–30	1–4
	3–12	Very fine sandy loam, silt loam.	ML	A–4	0	100	95–100	90–100	65–90	10–20	1–4
	12–38	Very fine sandy loam, silt loam.	ML	A–4	0	100	95–100	90–100	65–90	10–20	1–4
	38–62	Stratified silt to very fine sand, very fine sandy loam.	ML, SM	A–4	0	95–100	90–100	65–95	40–90	<10	NP–4
Warners:											
We	0–13	Silt loam	ML, CL, OL	A–7, A–5	0	95–100	95–100	90–100	70–95	42–50	5–15
	13–60	Marl			0						
Wayland:											
Wn	0–8	Silt loam	ML, CL, OL	A–7, A–5	0	100	95–100	90–100	70–95	40–50	5–15
	8–47	Silt loam, silty clay loam.	ML, CL	A–6, A–4	0	100	95–100	90–100	70–95	20–40	5–15
	47–60	Stratified silt and very fine sand.	ML, CL, SM	A–4	0	100	95–100	70–95	40–90	15–40	NP–10
Wellsboro:											
WoB, WoC, WoD	0–7	Channery silt loam.	ML, CL, SM	A–2, A–4	0–15	70–90	65–75	60–75	30–70		
	7–18	Channery silt loam, channery loam.	ML, CL, SM, SC	A–2, A–4	0–15	70–100	60–75	55–75	30–70	15–25	5–10
	18–60	Channery silt loam, channery loam.	SM, GM, ML, CL	A–2, A–4	0–20	55–90	45–70	35–65	25–60	15–30	NP–10

[1] This mapping unit is made up of two or more dominant kinds of soil. See mapping unit description for the composition and behavior of the whole mapping unit.

R37


(Joins sheet 104)
AlA
Ac
BDE
VoD
MdC
LRE
VoC
C.P.
MdC
VoB
MdB
AlA
MdC
HrB
Un
Un
TIOGA
(Joins sheet 116)
(Joins sheet 126)
15
115
N
1 Mile
5 000 feet
0
0
Scale 1:15 840
1/8
1 000
1/4
2 000
1/2
3 000
3/4
4 000
1
5 000

R35

REFERENCE 7

1/10685

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

January 20, 1989

Mr. Davis Ditman
Chief, Dams and Levee Section
U.S. Army Engineers, Baltimore Section
P.O. Box 1715
Baltimore, MD 21203

Dear Mr. Ditman:

Recra Environmental, Inc. is conducting a Superfund Phase I Investigation for the New York State Department of Environmental Conservation (NYSDEC) of the Erwin Town Landfill, NYS Registry of Inactive Hazardous Waste Disposal Sites I.D. #851003. Please find enclosed our NYSDEC authorization to conduct this investigation.

This letter is to serve as documentation of our telephone conversation of 1/19/89. If you agree with the following summary, please sign in the space indicated and return this letter to me. If any corrections or additions are necessary, please make them on the text of this letter. Attach additional sheets, if necessary.

- The Erwin Town Landfill is located in the floodplain at the confluence of the Cohocton and Tioga Rivers, where they form the Chemung River. Construction of the levee system at the site was completed in 1938 by the Syracuse section of the U.S. Army Corps of Engineers. The flood of ~~1974~~ 1972 overflowed the levee system.

- Based on your experience in river systems of the area, alluvial floodplain sediments similar to those expected to be at the Erwin Town Landfill site consist of the following layers:

Sediment	Depth From Surface	Approx. Range of Hydraulic Conductivity
silty blanket	4-10 feet	10^{-4} to 10^{-5} cm/sec. ✓
gravels	5-15 feet	~~Generally 1 cm/sec, but can range from 1000 to 10^{-4} cm/sec depending on silt content.~~
silts (impervious)	>15 feet	10^{-5} cm/sec or less. ✓

Gravels: Typical Value - $1,000 \times 10^{-4}$ cm/s.
Range from $4,000 \times 10^{-6}$ to 10×10^{-4} cm

R39

Thank you very much for your cooperation. If you have any questions or comments, please feel free to contact me.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Kenneth A. Shisler, Jr.
Staff Geologist

KAS/pb
Enclosure

Davis Ditman 24 JAN 89

Davis Ditman

RECRA ENVIRONMENTAL, INC.

R4C

REFERENCE 8

02-8710-113-PA
REV. 0

PRELIMINARY ASSESSMENT
ERWIN LANDFILL
ERWIN, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8710-113
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

November 23, 1987

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

Michael N. Gentils

MICHAEL N. GENTILS
PROJECT MANAGER

REVIEWED/APPROVED BY

Ronald M Naman

RONALD M. NAMAN
FIT OFFICE MANAGER

R41

NUS CORPORATION
A Halliburton Company

02-8710-113-PA
Rev. No. 0

POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

Erwin Landfill Site Name	NYD000511881 EPA Site ID Number
County Road 107 Erwin, New York Address	02-8710-113 TDD Number

---

Date of Site Visit: November 2, 1987

SITE DESCRIPTION

Erwin Landfill is a 15-acre, county-owned site located in a rural/commercial area in Erwin, Steuben County, New York. The topography is flat, and the site is surrounded by a flood protection dike. The Tioga River is located 200 feet southeast, and the Cohocton River is located 500 feet north of the landfill.

The landfill was active from 1966 to 1983, at which time final cover was added to the landfill. Disposers included Corning Glass Works, Steuben County Highway Department, and Ingersoll Rand. Waste on site includes foundry sand, scrap iron, steel, alloys, and cerium oxide. Seventy-five tons of waste were disposed of daily. There are four drums and one 10- by 30-foot tank on the west side of the landfill. The public water supply for the town of Erwin comes from two public wells, which are located 1.5 miles east of the landfill. The water is held in three storage tanks on Morningside Drive in Erwin.

PRIORITY FOR FURTHER ACTION: High ____ Medium X Low ____

RECOMMENDATIONS

A Site Inspection is recommended. Erwin Landfill contains foundry sand, which may have phenolic compounds present. The potential for surface water and groundwater contamination warrants the sampling of these parameters.

Prepared by: Michael N. Gentils Date: November 23, 1987
of NUS Corporation

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 3CCOS11381

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)
Erwin Landfill

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
County Road 107

03 CITY
Erwin

04 STATE | 05 ZIP CODE | 06 COUNTY | 07 COUNTY CODE | 08 CONG DIST.
NY | 14830 | Steuben | 101 | 34

09 COORDINATES
LATITUDE: 42° 09' 05". N
LONGITUDE: 077° 05' 50". W

10 DIRECTIONS TO SITE (Starting from nearest public road)

Take Rte. 17 West to Gang Mills. Take Gang Mills exit east toward Rte. 15. Follow to Canada Road. Make a right onto Canada Road and follow to landfill.

III. RESPONSIBLE PARTIES

01 OWNER (If known)
Steuben County

02 STREET (Business, mailing, residential)
117 East Steuben Street

03 CITY
Bath

04 STATE | 05 ZIP CODE | 06 TELEPHONE NUMBER
NY | 14810

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE | 11 ZIP CODE | 12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)
___ A. PRIVATE ___ B. FEDERAL: _____ (Agency name) ___ C. STATE X D. COUNTY ___ E. MUNICIPAL
___ F. OTHER: _____ (Specify) ___ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
___ A. RCRA 3001 DATE RECEIVED: / / X B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: 6 / 1 / 81
___ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
X YES DATE: 4 / - / 86
___ NO

BY (Check all that apply)
___ A. EPA ___ B. EPA CONTRACTOR ___ C. STATE ___ D. OTHER CONTRACTOR
X E. LOCAL HEALTH OFFICIAL ___ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
___ A. ACTIVE X B. INACTIVE ___ C. UNKNOWN

03 YEARS OF OPERATION
1966 (BEGINNING) / 1983 (ENDING) ___ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Foundry sand, scrap iron, steel, alloys, and cerium oxide.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The greatest potential hazard to the population would be groundwater contamination. The public water supply comes from two wells, which are 1.5 miles east of the landfill.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

___ A. HIGH (Inspection required promptly) X B. MEDIUM (Inspection required) ___ C. LOW (Inspection on time available basis) ___ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Diana Messina	U.S. EPA Region 2	(201) 321-6776

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Michael N. Gentils	U.S. EPA	Region 2 FIT	(201) 225-6160	11 / 23 / 87

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 3000511981

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- X A. SOLID
- _ B. POWDER, FINES
- _ C. SLUDGE
- _ D. OTHER: _____ (Specify)
- _ E. SLURRY
- _ F. LIQUID
- _ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 75/Day
CUBIC YARDS 325/Day
NO. OF DRUMS 4

03 WASTE CHARACTERISTICS (Check all that apply)

- _ A. TOXIC
- _ B. CORROSIVE
- _ C. RADIOACTIVE
- X D. PERSISTENT
- _ E. SOLUBLE
- _ F. INFECTIOUS
- _ G. FLAMMABLE
- _ H. IGNITABLE
- _ I. HIGHLY VOLATILE
- _ J. EXPLOSIVE
- _ K. REACTIVE
- X L. INCOMPATIBLE
- _ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		There is potential for foundry sand to contain phenols.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	75	Tons/Day	Disposed of by Ingersoll Rand

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	Foundry Sand	999	landfill		
MES	Scrap Iron	999	landfill		

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

Inactive Hazardous Waste Disposal Sites, Volume 8, NYSDEC Region 8
Telecon Note: Conversation between Mr. Canfield, Assistant Water Clerk, Erwin Water Department, and Michael N. Gentils, NUS Corporation, November 18, 1987.
Off-Site Reconnaissance, NUS Corporation Region 2 FIT, Edison, New Jersey, November 2, 1987, TDD No. 02-8710-113.

R44

(T) Erwin Landfill

Waste	Quantity
1. Ingersoll Rand foundry sand, scrap iron, scrap steel, shot blast dust, silica sand, organic sand binders (cornstarch), ferrous and non-ferrous alloys, firebrick, clay binder sand, refractory washed, small amt. of broken concrete	75 tons/day
2. Corning Glass ceramic logs, cullet, wood pallets, wood sawdust, construction debris such as bricks, block. Grinding wastes, i.e. pumice, cerium oxide, sand.	325 cu. yds/day (50% of this is ceramic logs)
3. Steuben Co. Highway Dept. uses for brush, tree stump disposal	?

(Addendum to NUS Report)

R45

EPA Notification of Hazardous Waste Site

United States Environmental Protection Agency Washington DC 20460

This initial notification information is required by Section 103(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and must be mailed by June 9, 1981.

- 8 JUN 1981

Please type or print in ink. If you need additional space, use separate sheets of paper. Indicate the letter of the item which applies

$1/603 NYS 000 001 039

Person Required to Notify:

Enter the name and address of the person or organization required to notify.

Name: Corning Glass Works
Street: Houghton Park, ME-3
City: Corning State: NY Zip Code: 14831

Site Location:

Enter the common name (if known) and actual location of the site.

NYD000511881

Name of Site: Town of Erwin Landfill
Street: COUNTY RD. 107
City: Erwin County: Steuben State: NY Zip Code: 14830

Person to Contact:

Enter the name, title (if applicable), and business telephone number of the person to contact regarding information submitted on this form.

Name (Last, First and Title): Cherill, John, Environmental Control
Phone: (607) 974-6398

Dates of Waste Handling:

Enter the years that you estimate waste treatment, storage, or disposal began and ended at the site.

From (Year): 1978 To (Year): 1980

Waste Type: Choose the option you prefer to complete

Option 1: Select general waste types and source categories. If you do not know the general waste types or sources, you are encouraged to describe the site in Item I—Description of Site.

General Type of Waste:
Place an X in the appropriate boxes. The categories listed overlap. Check each applicable category.

1. ☐ Organics
2. ☒ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☒ Heavy Metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☐ Mixed Municipal Waste
10. ☐ Unknown
11. ☐ Other (Specify)

Source of Waste:
Place an X in the appropriate boxes.

1. ☐ Mining
2. ☐ Construction
3. ☐ Textiles
4. ☐ Fertilizer
5. ☐ Paper/Printing
6. ☐ Leather Tanning
7. ☐ Iron/Steel Foundry
8. ☐ Chemical, General
9. ☐ Plating/Polishing
10. ☐ Military/Ammunition
11. ☐ Electrical Conductors
12. ☐ Transformers
13. ☐ Utility Companies
14. ☐ Sanitary/Refuse
15. ☐ Photofinish
16. ☐ Lab/Hospital
17. ☐ Unknown
18. ☒ Other (Specify)
(Glass Mfg. (SIC Code 3229)) $00

Option 2: This option is available to persons familiar with the Resource Conservation and Recovery Act (RCRA) Section 3001 regulations (40 CFR Part 261).

Specific Type of Waste:
EPA has assigned a four-digit number to each hazardous waste listed in the regulations under Section 3001 of RCRA. Enter the appropriate four-digit number in the boxes provided. A copy of the list of hazardous wastes and codes can be obtained by contacting the EPA Region serving the State in which the site is located.

Form Approved
OMB No. 2000-0138
EPA Form 8900-1

02-87'10-113-PA R46

H Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) ____________

Total Facility Waste Amount

cubic feet Hundreds

gallons ____________

Total Facility Area

square feet ____________

acres Unknown

Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

(This Steuben County operated landfill accepted certain industrial wastes (as approved by New York's Dept. of Environmental Conservation) from 1978 until November 19, 1980. Some of these wastes included OFF-SPEC. Glass Batch Raw Materials which could contain heavy metals such as, but not limited to lead. The site currently limits its wastes to certain non-hazardous industrial items and probably has less than 6 months of useful life left.)

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required ... "Other".

Name Scott S. Somers

Street Same as Above

City ________ State ________ Zip Code ________

Signature S S Somers Date 6/8/81

☐ Owner, Present
☐ Owner, Past
☒ Transporter
☐ Operator, Present
☐ Operator, Past
☒ Other Generator

R47

02-8710-113-PA
Rev. No. 0

NUS CORPORATION AND SUBSIDIARIES — **TELECON NOTE**

CONTROL NO:	DATE:	TIME:
02-8710-113	November 18, 1987	1400

DISTRIBUTION:
PA File

BETWEEN:	OF:	PHONE:
Floyd Canfield	Erwin Water Dept	(607) 962-3483

AND:

DISCUSSION:

Floyd told me that the wells which supply the town of Erwin are located 1 mile North of the Landfill in Woodland Park. There are Three Storage Tanks there. Floyd told me that the population of Erwin is about 2500. Floyd told me that the wells are located on Morningside Drive. The wells are 89 ft and 69 ft and the aquifer of concern flows ~~underneath~~ to the Cohocton River.

ACTION ITEMS:

NUS 087 REVISED 0886

R48

REFERENCE 9

DEC
PUBLICATION

"COMMUNITY RIGHT-TO-KNOW"

VOLUME III

PAST HAZARDOUS WASTE DISPOSAL PRACTICES

January 1952 - December 1981

Appendices I - P

APRIL 1, 1985

New York State/Department of Environmental Conservation

R49

SITE DESCRIPTION: WATERLOO LANDFILL,STEEL RD,WATERLOO NY 13165 SITE CODE: 8-50-502 T

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID
WASTE PAINT FLAMMABLE LIQUIDS	20.00	T	X	-	X	HARTMAN MATERIAL HANDLING SYSTEMS	GXB00345

SITE DESCRIPTION: UNKNOWN SITE CODE: 8-51-000 U

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID
PCB CAPACITORS,RAGS AND OTHER DEBRIS CONTAMINATED W/ PCBS	0.18	T	-	X	X	NEW YORK STATE ELECTRIC & GAS COR	G0813427

SITE DESCRIPTION: EDWARD ALLEN LANDFILL,TOWN OF CORNING,STEUBEN COUNTY SITE CODE: 8-51-001

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID
ELECTROPLATING WASTE TREATMENT SLUDGE	63.00	T	X	-	-	NY WESTINGHOUSE ELECTRIC CORP	G0813338
INORGANICS,SOLVENTS,HEAVY METALS,WASTE OILS			X	X	-	CORNING GLASS WORKS (MAIN PLT)	G0813387
WASTE TREATMENT PLANT SLUDGE W/LEAD PHOSPHATE AND CADMIUM	2,387.00	T	X	-	-	NY WESTINGHOUSE ELECTRIC CORP	G0813338

SITE DESCRIPTION: ERIE-LAKAWANA RR,1 MORRISON-KNUDSEN DR,HORNELL NY 14843 SITE CODE: 8-51-002

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID
OIL SLUDGE,SOLVENTS			X	X	-	MORRISON-KNUDSEN-HORNELL INDUSTRI	GX801152
OILY SLUDGE,PAINT FILTERS,SOLVENTS			X	X	-	MORRISON-KNUDSEN-HORNELL INDUSTRI	GX801152

SITE DESCRIPTION: TOWN OF ERWIN LANDFILL, ERWIN, NY 14830 SITE CODE: 8-51-003

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID
INORGANICS,HEAVY METALS			X	X	-	CORNING GLASS WORKS (MAIN PLT)	G0813387

SITE DESCRIPTION: URBANA LANDFILL,HAMMONDSPORT NY SITE CODE: 8-51-007

WASTE DESCRIPTION	QUANTITY	U	L	S	D	GENERATOR NAME	ID

R50

REFERENCE 10

THE STANDARD ENGINEERING CORPORATION

CONSULTING ENGINEERS

SUPERVISION • REPORTS • INSPECTIONS • ANALYSIS • DESIGN

DEMOLITION DEBRIS DISPOSAL SITE

STEUBEN COUNTY DEPARTMENT OF HIGHWAYS

DIVISION OF SOLID WASTE

REVISED AUGUST 1979

1743 WESTERN AVENUE
ALBANY, NEW YORK 12203
518-456-1994

se

C-11715 R57

PROJECT DESCRIPTION

DEMOLITION DEBRIS DISPOSAL SITE

STEUBEN COUNTY DEPARTMENT OF HIGHWAYS
DIVISION OF SOLID WASTE

The proposed site is located at the confluence of the Tioga and Cohocton Rivers in the Town of Erwin adjacent to the Town's Sewage Treatment Facility. Access to the site is via State Route 17 and U.S. Route 15 to the Gangs Mills Exit, then via Canada Road. The site, owned by the Town of Erwin and leased by Steuben County, comprises approximately fifteen acres and has previously been used as a sanitary landfill and demolition debris disposal site by the Town of Erwin.

Prior to the use of the site as a sanitary landfill in 1966, four feet of foundry sand from the Ingersol Rand Company was placed on original ground as a base. In 1975, in preparation of the "Steuben County Solid Waste Management Study" by Barton, Brown, Clyde & Longuidice, P.C., one soil boring was performed on original ground and the results indicated that ground water was fifteen feet below the surface.

The proposed users of the site are Corning Glass Works, The Ingersol Rand Company and the Steuben County Highway Department. Waste deposited by Steuben County will include small quantities of brush and stumps from County Highway construction. Ingersol Rand's waste is foundry sand which includes: scrap iron, scrap steel, shot blast dust, silica sand, organic sand binders, ferrous and non-ferrous alloys, firebrick, claybinder sand and refractory washes. Occasionally, due to changes in machinery, two or three loads of broken concrete will be deposited in addition to the 75 tons per day maximum of foundry wastes. The NYSDEC, Bureau of Hazardous Waste, lists the binding agent used in Ingersol Rand's processes as being cornstarch. The Corning Glass Works waste will include: ceramic logs, cullet, wood pallets, wood and sawdust, construction debris, including bricks and block, some cardboard and paper, small amounts of grinding wastes composed of pumice and cerium oxide, and small amounts of sand. The total maximum daily wastes estimated by Corning Glass is approximately 325 cubic yards, with 50% of the waste being ceramic logs, and the greater portion of the remainder being construction debris. The quantity of waste is entirely dependent upon production schedules, so the actual daily rate can be expected to be much lower.

A52

On an approximate once-a-week basis, Steuben County will transport to the site either a crawler-loader or crawler-dozer from the Highway Department force and will spread and compact the debris. Large amounts of topsoil are expected to be obtained by Steuben County during construction of a new traffic circle at Painted Post. The topsoil will be stockpiled at the site and once the compacted debris reaches final contours, two feet of topsoil will be spread and seeded for the final cover.

The toe-of-slopes of the fill will be between ten and fifteen feet below the tops of the flood control dikes so contamination of either surface or ground waters is not expected.

R53

REFERENCE 11

1/11157.4

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 16, 1989

Mr. Lynn Morse
Town Supervisor
Erwin Town Hall
Painted Post, NY 14870

Dear Mr. Morse:

As I mentioned during our telephone conversation on March 15, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the Erwin Town Landfill located off Canada Raod, Town of Erwin, New York.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

This is to confirm our telephone conservation wherein you provided the following information:

- The site is bordered on the north by a flood protection dike from the Cohocton River, on the south by the New York State Department of Transportation interchange, on the east by Conrail tracks, and on the west by Interstate 15. A flood protection dike is also located on the east site (Tioga River).
- The approximate size of the landfill is ~~just over~~ 13 acres.
- A partial fence with a lockable gate extends along the western boundary of the landfill. The facility is not completely fenced, however.
- Final cover depth of the landfill is 2 feet.
- The landfill is not lined; there is no leachate collection system present; and, no diversion system for surface water runoff present.
- Four drums which were observed on-site during a previous site inspection (by NUS Corporation in November, 1987) most likely contained highway supplies. The large tank on-site is currently empty, and was empty at the time of acquisition by the Town.
- The landfill had been owned and operated by the Town of Erwin until the mid 1970's (in 1978), ~~at which time~~ the Town leased the facility to the County (Steuben). Steuben County operated the facility until its closure in 1983.

Audubon Business Centre • 10 Hazelwood Drive, Suite No. 106 • Amherst, New York 14150 • (716) 691-2600

R54

- The only known industrial waste disposers include Corning Glass and Ingersoll-Rand. No illegal dumping is known to have occurred.
- Regarding the sampling information which you provided pertaining to the telephone company manhole in proximity to the site, the water sample is not from a groundwater well; rather it is a ponded water sample.
- Regarding the sampling information on the sewage treatment plant well water sample, only bacteria analysis was performed; no chemical analysis for organic compounds or metals was performed to your knowledge.
- The Morningside Heights Water District uses 2 wells, located on the enclosed map, as its source of water. This municipal water system serves the population within the Town of Erwin only, and includes mostly those residences in the Gang Mills area. Within a 3-mile radius of the site, the remainder of the population of the Town of Erwin (outside of the Village of Painted Post and Riverside Corporate limits) use private wells as their source of potable water.
- Within the Town of Erwin, surface water use of the Tioga River consists of recreational purposes, including fishing, boating and swimming, although there are no designated areas for such activities. There are no surface water intakes from the Tioga River for drinking water or irrigation within the Town of Erwin.

We would appreciate if you would review this information, note any necessary corrections and return a signed and dated copy to indicate your concurrence. In addition, we request information indicating the depth (greatest) of waste disposal in the landfill. Your prompt attention to this would be appreciated, as the information is necessary to complete our evaluation of the site. Thank you for your assistance.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Linda J. Clark

Linda J. Clark
Project Geologist

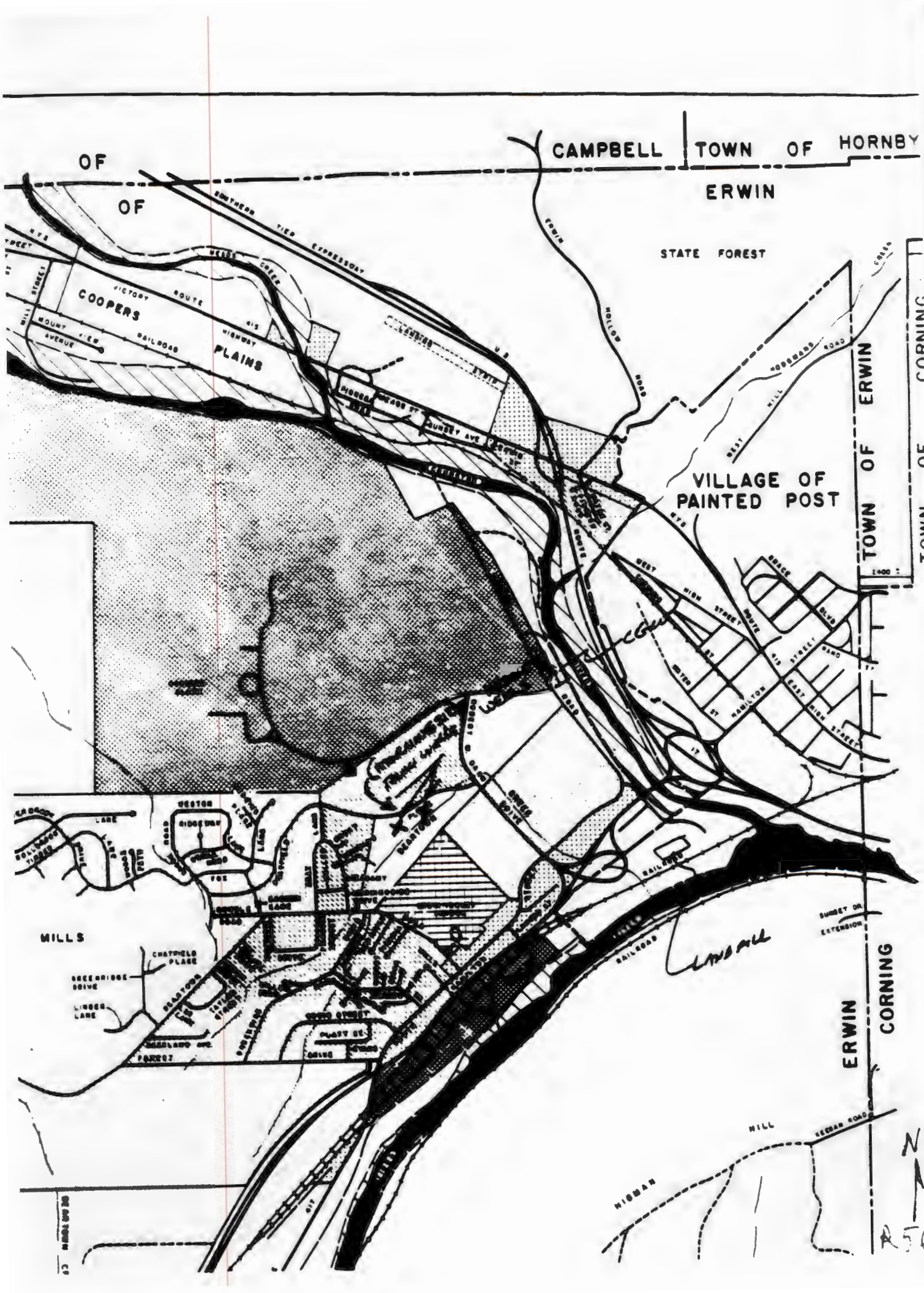
I agree with the information as it is presented.

Lynn Morse

3/22/89
Date

RECRA ENVIRONMENTAL, INC.

R55


CAMPBELL
TOWN OF HORNBY
OF
OF
ERWIN
STATE FOREST
COOPERS
PLAINS
VILLAGE OF
PAINTED POST
TOWN OF ERWIN
TOWN OF CORNING
MILLS
ERWIN
CORNING
N

Town of Erwin

PAINTED POST, N.Y. 14870
LYNN J. MORSE, SUPERVISOR
(607) 962-7021

March 28, 1989

Recra Environmental, Inc.
Audubon Business Centre
10 Hazelwood Drive, Suite No. 106
Amherst, New York 14150

ATTENTION: LINDA CLARK

Dear Ms. Clark:

This letter covers a signed copy of your written sumation of our phone conversation of March 15, 1989 that we received on March 21, 1989. Note that there are two minor corrections.

To the best of our knowledge, the contents of the sumation are correct. Please be advised, however, that from 1978 until it was closed in 1983 the landfill was operated by Steuben County. You might want to contact them for additional information.

Please contact this writer if we can be of further assistance.

Very truly yours,
TOWN OF ERWIN

Lynn J. Morse
Supervisor

ljm/bt.

R58

REFERENCE 12

April 3, 1974

Mr. A. J. Fossa, P.E.
State of New York
Department of Environmental Conservation
P. O. Box 57
Avon, New York 14414

Dear Art:

Enclosed please find a revised application for a "Permit to Construct" for our Bickley Kilns at Erwin Automotive Plant, Erwin, New York.

Because of the novel approach used to control the unexpected air contaminants encountered, the standard AIR 100I and AIR 188I forms do not lend themselves to giving adequate information, and thus, supplemental data are given in the form of notes, tables and graphs. This is done to aid in your understanding of contaminant control mechanism, and thereby expedite the issuance of "Certificates to Operate" in accordance with 6 NYCRR 212.

Section B, Question 45: Emission Point Identification Number

As per your request upon visiting the Erwin Automotive Plant March 15, 1974, this question is left blank; previous applications were made (Mr. A. J. Gallo) for only three kilns, viz. E1538, E1539 and E1540; since then a fourth kiln was deemed necessary and is hereby issued the ESRN of E1550.

Section C, Question 57: Describe Process or Unit

In general, these four (4) Bickley Kilns are an essential step of a process used to manufacture CELCOR (R) ceramic substrates. These substrates are the heart of catalytic converter-types of pollution control devices to be installed on certain 1975 - 1976 automobiles.

Exact composition of the substrates is proprietary, although it can be said that raw materials, such as but not limited to talc, alumina, stearate and Methocel (TM) are present. After several operations, such as mixing, weighing, forming and drying, "unfired logs" are produced.

--continued--

R55

Section C, Question 57: Describe Process or Unit (Continued)

These unfired logs are loaded into one (1) of the four (4) kilns which is at room temperature. The temperature of this kiln will be gradually increased according to a specific, but variable, firing schedule until a predetermined, maximum temperature is reached (it is during the initial stages of temperature increase that the organic constituents decompose; during this period of time, this kiln will be subsequently referred to as the "generating" kiln); the maximum temperature (approximately 1400°C) will be maintained for a specific, but variable, number of hours and then the kiln will be cooled at a specific, but variable, rate until it reaches room temperature once again (it is during the initial stages of temperature decrease that this kiln is used as an afterburner, and will be subsequently referred to as the "receiving" kiln). Thus, kiln operation is variably cyclic in nature, requiring 60 to 72 hours for completion. Scheduling is such that at least one (1) "receiving" kiln will be available to serve as an afterburner during that period of time when the temperature of another kiln is such that it is a "generator". The two systems will remain coupled until such time that no significant plume opacity or downwind odor will result from generating kiln's exhaust.

Section C, Question 58: Total Number of Similar Processes or Units

As defined in AIR 100.1I (4/73), this is a variable; see notes on Section D, Question 59, et. seq. for further details.

Section D, Question 59, et. seq.

There are four (4) fans associated with each kiln, viz.:

a. One (1) main exhaust fan: Garden City, No. 503-900, 125 H.P.

b. One (1) combustion air fan: Not directly applicable to air pollution control systems; and,

c. Two (2) diffusion air fans: North American, No. 2316-41-1-50-D, 50 H.P.

As described in note on Section C, Question 57, the afterburner (Code 10 as per AIR 100.1I) is one or another of the Bickley Kilns (E1538, E1539, E1540 or E1550); efficiency, by weight is estimated at 99% (see note on Section E for calculation details).

Section E: Input, ERP, and Actual Emissions Calculations

Input: Total charge into a kiln is variable; however, it can be reliably stated that a maximum value of "total organics", i.e., Methocel(TM) plus stearates, is less than 2,700 pounds.

ERP's: Carbon Dioxide: Orsat analysis of stack gas indicated 0.5 to 0.8% CO_2 by volume; maximum volumetric flow rate in stack is approximately 60,000 SCFM, therefore:

$$\frac{60{,}000 \text{ std. ft.}^3 \text{ exhaust air}}{\text{min.}} \times \frac{60 \text{ min.}}{\text{hr.}} \times \frac{0.008 \text{ std. ft.}^3 \text{ CO}_2}{\text{std. ft.}^3 \text{ exhaust air}} \times \frac{0.114 \text{ \# CO}_2}{\text{std. ft.}^3 \text{ CO}_2} = 3{,}300 \text{ \# CO}_2 \text{ per hour.}$$

R-9

Section E: Input, ERP, and Actual Emissions Calculations (Continued)

Organics: Organic contaminants result from decomposition and/or incomplete combustion of Methocel (TM) and stearates in unfired logs. Qualitative analysis indicates the following constituents to be present:

NAME	AIR 100.1I (4/73) CODE
Methanol (g)	560
Ethanol (g)	565
Other aliphatic alcohols (g)	580
Formaldehyde (g)	600
Acetaldehyde (g)	605
Acrolein (g)	610
Other aliphatic aldehydes (g)	615
Acetone (g)	620
Other aliphatic keytones (g)	645
Formic acid (g)	650
Acetic acid (g)	655
Other aliphatic acids (g)	660
Other acetates (g)	685

Semi-quantitively, it appears that Methanol, Methyl Formate, and Acetone are the majors; Methyl Acetaldehyde, Furfural, Formaldehyde, and Acetic Acid seem to be present in moderate quantities; and Acetaldehyde, Ethanol, Crotonaldehyde and Acrolein are relatively minor.

Total Hydrocarbon concentration in generating kiln's flue system was monitored by use of a Scott Model 115 Heated Total Hydrocarbon Analyzer. The calibration gas used was propane; thus, all values should be considered to be "total HC concentration as propane". Figures 1 through 5 represent typical generation-decay curves of HC concentrations, as measured. Specific values of HC concentrations will vary considerably with fill weight of organics in kiln, temperature schedules and diffusion air schedules. It is estimated that peak HC concentration will be less than 1,800 parts per million . Volumetric flow rate at this peak concentration will be approximately 10,000 SCFM; therefore, peak ERP for total HC may be calculated as follows:

$$1800 \text{ ppm} \times \frac{M}{385.1 \times 10^6} = \frac{\#}{ft.^3 \text{ (std.)}}$$ Where M = mol. wt. of propane, M = 44.06

$$\frac{1800 \text{ ppm} \times 44.06}{385.1 \times 10^6} = \frac{0.00021 \#}{ft.^3 \text{ (std.)}}$$

$$\frac{0.00021\#}{ft.^3 \text{ (std.)}} \times \frac{10{,}000 \text{ ft.}^3\text{(std.)}}{\text{min.}} \times \frac{60 \text{ min.}}{\text{hr.}} = 124 \text{ pounds per hour}$$

Max

--continued--

RGC

Actual Emissions:

Carbon Dioxide: It is believed that 100% (3,300 pounds per hour) of ERP will be actually emitted.

Organics: Total HC concentrations were measured in receiving kiln's flue. This was accomplished by use of the Scott Model 115 as above; HC concentrations, as measured, range from 2 parts per million to approximately 30 parts per million, depending upon receiving kiln temperature; total "burnout time", i.e. the time duration during which a generating kiln and receiving kiln are coupled, is approximately 9 hours; the time weighted average HC concentration in the receiving kiln's flue for this 9 hour period is less than 5 parts per million; volumetric flow rate will be approximately 40,000 SCFM, therefore actual emissions of total Hydrocarbons, as propane, may be calculated as follows:

Where M = mol. wt. of propane
M = 44.06

$$\frac{< 5 \text{ ppm} \times M}{385.1 \times 10^6} \leq \frac{\#}{\text{ft.}^3 \text{ (std.)}}$$

$$\frac{< 5 \text{ ppm} \times 44.06}{385.1 \times 10^6} \leq \frac{0.0000006\#}{\text{ft.}^3 \text{ (std.)}}$$

$$\frac{< 0.0000006\#}{\text{ft.}^3 \text{ (std.)}} \times \frac{40{,}000 \text{ ft.}^3 \text{ (std.)}}{\text{min.}} \times \frac{60 \text{ min.}}{\text{hr.}}$$

$\leq$ 1.4 pounds per hour

Efficiency: $\frac{124 \text{ pph} - 1.4 \text{ pph}}{124 \text{ pph}} \times 100 \approx 99\%$

Section F, Questions 89, et. seq.:

Contaminant names, ERP's and actual emissions are as given in note on Section E above; we expect these four kilns to operate 24 hours per day, 365 days per year.

Since we believe the discharges of carbon dioxide (g), and total organics (g), as given above, will not result in measurable or observable effects on receptors, nor add to an existing or predictable atmospheric burden of those contaminants which would reasonably be expected to cause adverse effects, we hereby apply for a "D" rating for carbon dioxide and total organic emissions, in accordance with Table 1 of 6 NYCRR 212.

Section G, Questions 179, et. seq.:

Natural gas consumption rate is extremely variable on an hourly basis; one complete 60-hour cycle will require approximately 1.2 million cubic feet, therefore, average natural gas consumption is 200,000 CFH.

R6

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Also enclosed please find, in triplicate, schematics of the kilns, associated ductwork, fans and stacks, as well as plot plans showing surrounding land use.

I trust that all information will be satisfactory and sufficient. If you should have any questions, please do not hesitate to contact me.

Sincerely,

John

John L. Cherill, Engineer
Environmental Control

JLC/jj
Enc.

R62

REFERENCE 13

Protection Agency for the:
Bacteriological examination of Potable Water
Metals by Atomic Absorption
Wet Chemistry; and Dairy Products

... W. Friend Laboratory
and CONSULTING SERVICE
30 LINCOLN STREET • WAVERLY, N.Y. 14892
(607) 565-2064

testing for
Stream Pollution
Water
Sewage
Sludge
Dairy Products
Foods
Salmonella / Stac...

Date Received 2/17/82

SAMPLE SOURCE

Mailing Address
Town of Erwin
Erwin Town Hall
Painted Post, N. Y. 14870

Parameter	[redacted]									
Temperature, °C										
pH	6.3									
Acidity										
Alkalinity, mg / L as $CaCO_3$										
B.O.D. mg / L (5 day)										
C.O.D. mg / L										
Coliform, Total MPN / 100 ml										
Coliform, Fecal MPN / 100 ml										
Dissolved Oxygen										
Chloride, mg / L	43.0		Lo							
Detergents, Anonic, mg / L										
Fluoride, mg / L										
Hardness, Calcium as $CaCO_3$										
Hardness, Magnesium as $CaCO_3$										
Hardness, Total as $CaCO_3$										
Hexachromium, mg / L										
Nitrogen, Ammonia mg / L as N										
Nitrogen, Kjeldahl mg / L as N										
Nitrogen, Nitrate mg / L as N										
Nitrogen, Nitrite mg / L as N										
Nitrogen, Organic mg / L as N										
Oil and Grease, mg / L										
Phenols, mg / L										
Phosphate, Total mg / L										
Phosphate, Ortho mg / L										
Solids (Residue):										
Dissolved Solids, mg / L										
Settleable Solids, mg / L										
Suspended Solids, mg / L										
Total Solids, mg / L										
Volatile Solids, mg / L										
Volatile Dissolved Solids, mg / L										
Volatile Suspended Solids, mg / l										
Sulphate, mg / L	51.0		OK							
Aluminum, mg / L										
Chromium, mg / L	-0.05									
Copper, mg / L	-0.05									
Iron, mg / L										
Nickel, mg / L										
Zinc, mg / L	1.96									
Lead mg/L	-0.05									
Manganese mg/L	0.7									
Sodium mg/L	28									
Arsenic mg/L	-0.0025									
Barium mg/L	-0.5									
Cadmium mg/L	-0.025									
Mercury mg/L	-0.0004									
Total Organic Halogens ug/L	-1.0									
Volatile Hydrocarbons ug/L	-1.0									

RC

D.W. Friend
D. W. Friend

REFERENCE 14

Dangerous Properties of Industrial Materials

Sixth Edition

N. IRVING SAX

Assisted by:

Benjamin Feiner/Joseph J. Fitzgerald/Thomas J. Haley/Elizabeth K. Weisburger

VAN NOSTRAND REINHOLD COMPANY

New York

SYNS:
1-DODECANETHIOL
M-DODECYL MERCAPTAN
1-DODECYL MERCAPTAN
M-LAURYL MERCAPTAN
1-MERCAPTODODECANE
NCI-C60935

TOXICITY DATA:
cyt-rat-ihl 5020 ug/m3/16W

CODEN:
BZARAZ 27,102,74

Reported in EPA TSCA Inventory, 1980.
THR: See mercaptans. MUT data.
Fire Hazard: Low.
To Fight Fire: Alcohol foam.
Disaster Hazard: When heated to decomp it emits tox fumes of SO_x.

LAURYLPYRIDINIUM LAURYLXANTHATE

CAS RN: 14917965 NIOSH #: UU 5775000
mf: $C_{17}H_{30}N \cdot C_{13}H_{28}OS_3$; mw: 509.98

TOXICITY DATA: 2
skn-rbt 500 mg/24H MOD
eye-rbt 20 mg/24H SEV
orl-rat LD50:802 mg/kg

CODEN:
28ZPAK -,174,72
28ZPAK -,174,72
28ZPAK -,174,72

THR: MOD orl. A skn, eye irr.
Disaster Hazard: When heated to decomp it emits very tox fumes of NO_x and SO_x.

LAURYL SULFATE, SODIUM SALT, CONDENSED WITH 3 MOLES OF ETHYLENE OXIDE

NIOSH #: OF 5725000

SYNS:
SODIUM SALT OF SULFATED BROAD-CUT COCONUT ETHOXY(3EO) ALCOHOL
SODIUM SALT OF SULFATED ETHOXYLATE OF BROAD-CUT LAURYL ALCOHOL

TOXICITY DATA: 2
skn-rbt 10 mg MLD
skn-rbt 230 mg/5W open MLD
skn-gpg 115 mg/5W open MLD

CODEN:
JSCCA5 22,411,71
JSCCA5 22,411,71
JSCCA5 22,411,71

THR: A skn irr.
Disaster Hazard: When heated to decomp it emits tox fumes of SO_x.

LAVANDIN OIL

CAS RN: 8022159 NIOSH #: OF 6097500

Main constituent is Linalool; found in plant Lavanoula Hybrida Reverchon; prepared by steam distillation of the flowering stalks of the plant.

SYN: OIL OF LAVANDIN

TOXICITY DATA: 2
skn-rbt 500 mg/24H MLD

CODEN:
FCTXAV 14,443,76

Reported in EPA TSCA Inventory, 1980.
THR: A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVATAR

NIOSH #: OF 6097840

Coal tar distillates in a shampoo base.

TOXICITY DATA:
mma-sat 25 ug/plate

CODEN:
TOLED5 3,325,79

THR: MUT data.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVENDER ABSOLUTE

NIOSH #: OF 6100000

Found in the flowers of Lavandula Officinalis chaix. The main constituent is Linalyl Acetate; prepared from alcoholic extract of a residue, which is extracted from plant material using an organic solvent; a dark green liquid.

TOXICITY DATA: 1
skn-rbt 500 mg/24H MLD
orl-rat LD50:4250 mg/kg

CODEN:
FCTXAV 14,443,76
FCTXAV 14(5),443,76

THR: LOW orl; A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LAVENDER OIL

CAS RN: 8000280 NIOSH #: OF 6110000

Main constituent is linalyl acetate. Found in the plant Lavandulaofficinalif choix (Fam. Labiate). Prepared by steam distillation of the flowering stalks of the plant.

SYNS:
LAVENDEL OEL (GERMAN)
OIL OF LAVENDER

TOXICITY DATA: 1
skn-rbt 500 mg/24H MLD
orl-rat LD50:9040 mg/kg

CODEN:
FCTXAV 14,443,76
PHARAT 14,435,59

Reported in EPA TSCA Inventory, 1980.
THR: LOW orl. A skn irr.
Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

LD-813

CAS RN: 64083052 NIOSH #: OF 6730000

Commercial mixture of aromatic amines containing approx. 40% MOCA

TOXICITY DATA: 3
orl-rat TDLo:37 gm/kg/2Y-C:CARC

CODEN:
TXAPA9 31,159,75

THR: An exper CARC. See also aromatic amines.
Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

LEAD

CAS RN: 7439921 NIOSH #: OF 7525000
mf: Pb; mw: 207.19

Bluish-gray, soft metal. mp: 327.43°, bp: 1740°, d: 11.34 @ 20°/4°. vap. press: 1 mm @ 973°.

SYNS:
C.I. 77575
LEAD FLAKE
LEAD S2
OLOW (POLISH)

RGS

TOXICITY DATA: 3	CODEN:
orl-rat TDLo:790 mg/kg (MGN)	AEHLAU 23,102,71
orl-rat TDLo:1140 mg/kg (14D pre-21D post)	PHMCAA 20,201,78
orl-mus TDLo:1120 mg/kg (MGN)	AEHLAU 23,102,71
orl-mus TDLo:6300 mg/kg (1-21D preg)	EXPEAM 31,1312,75
orl-mus TDLo:12600 mg/kg (1-21D preg)	EXPEAM 31,1312,75
orl-mus TDLo:4800 mg/kg (1-16D preg)	BECTA6 18,271,77
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXPEAM 25,56,69
orl-dom TDLo:662 mg/kg (1-21W preg)	TXAPA9 25,466,73
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXPEAM 25,56,69
orl-wmn TDLo:450 mg/kg/6Y:CNS	JAMAAP 237,2627,77
ipr-rat LDLo:1000 mg/kg	EQSSDX 1,1,75
orl-pgn LDLo:160 mg/kg	HBAMAK 4,1289,35

Carcinogenic Determination: Indefinite IARC** 23, 325,80.

TLV: AIR: 0.15 mg/m3 DT LVS* 4,243,80; *Toxicology Review:* TRBMAV 33(1),85,75; PGMJAO 51(601),783,75; JDSCAE 58(12),1767,75; IRXPAT 12,1,73; CTPHBG 55,147,71; CTOXAO 6(3),377,73; QURBAW 7(1),75,74; RREVAH 54,55,75; JAVMA4 164(3),277,74; AEMBAP 40,239,73; CTOXAO 5(2),151,72; FOREAE 7,313,42; KOTTAM 11(11),1300,75; GEIGAI 20(3),291,73; STEVA8 2(4),341,74; CLCHAU 19,361,73; AJMEAZ 38,409,65; 85DHAX PB,254,72; PDTNBH 6,204,77; AMTODM 3,209,77. OSHA Standard: Air: TWA 200 ug/m3 (SCP-O) FEREAC 39,25540,74. Occupational Exposure to Inorganic Lead recm std: Air: TWA 0.10 mg(Pb)/m3 NTIS**. "NIOSH Manual of Analytical Methods" VOL 1 102,191,195,200,208,214,262, VOL 3 S341. Reported in EPA TSCA Inventory, 1980.

THR: See lead compounds. A hmn CNS. HIGH orl; MOD irr. A common air contaminant. It is a ± CAR of the lungs and kidney and an exper TER.

Fire Hazard: Mod, in the form of dust when exposed to heat or flame. See also powdered metals.

Explosion Hazard: Mod, in the form of dust when exposed to heat or flame.

Incomp: NH_4NO_3, ClF_3, H_2O_2, NaN_3, Na_2C_2, Zr. disodium acetylide; oxidants.

Disaster Hazard: Dangerous; when heated, emits highly tox fumes; can react vigorously with oxidizing materials.

For further information see Vol. 1, No. 1 of *DPIM Report.*

LEAD ACETATE

CAS RN: 301042 NIOSH #: AI 5250000
mf: $C_4H_6O_4 \cdot Pb$; mw: 325.29

Trihydrate, colorless crystals or white granules or powder. Slightly acetic odor; slowly effloresces; d: 2.55; mp: 75° when rapidly heated. Decomp above 200°; very sol in glycerol. Keep well closed.

SYNS:

ACETIC ACID LEAD (2+) SALT
ACETATE DE PLOMB (FRENCH)
BLEIACETAT (GERMAN)
LEAD (2+) ACETATE
LEAD(II) ACETATE
LEAD DIACETATE
LEAD DIBASIC ACETATE
NORMAL LEAD ACETATE
PLUMBOUS ACETATE
SALT OF SATURN
SUGAR OF LEAD

TOXICITY DATA: 3	CODEN:
dns-rat-ipr 50 ug/kg	PSEBAA 143,446,73
spm-mus-par 1 gm/kg	ARTODN 46,159,80
orl-rat TDLo:7854 mg/kg (6-16D preg)	FCTXAV 13,629,75
orl-rat TDLo:1800 mg/kg (1-22D preg/14D post)	TOLED5 7,373,80
orl-rat TDLo:113 gm/kg (70D pre-21D post)	PBBHAU 8,347,78
orl-mus TDLo:3150 mg/kg (1-21D preg)	CRSBAW 170,1319,76
orl-mus TDLo:4800 mg/kg (1-8D preg)	CRSBAW 172,1037,78
orl-mus TDLo:9 gm/kg (7-21D preg)	CRSBAW 170,1319,76
ipr-mus TDLo:35 mg/kg (8D preg)	BIMDB3 30,223,79
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXMPA6 7,208,67
ivn-ham TDLo:50 mg/kg (8D preg)	EXPEAM 25,56,69
ipr-pgn LDLo:150 mg/kg	ARTODN 46,265,80
cyt-hmn:lym 1 mmol/L/24H	TXCYAC 10,67,78
cyt-mus-orl 16800 mg/kg/4W	JTEHD6 2,619,77
cyt-mky-orl 5760 mg/kg/64W	MUREAV 45,77,77
ipr-mus TDLo:15 mg/kg/(8D preg):TER	BIMDB3 30,223,79
ivn-ham TDLo:50 mg/kg/(8D preg):TER	EXMPA6 7,208,67
orl-rat TDLo:250 gm/kg/47W-C:ETA	BJCAAI 16,283,62
ipr-rat LDLo:204 mg/kg	JPETAB 38,161,30
ipr-mus LD50:120 mg/kg	COREAF 256,1043,63
orl-dog LDLo:300 mg/kg	HBAMAK 4,1289,35
scu-dog LDLo:80 mg/kg	HBAMAK 4,1289,35
ivn-dog LDLo:300 mg/kg	EQSSDX 1,1,75
scu-cat LDLo:100 mg/kg	HBAMAK 4,1289,35
scu-rbt LDLo:300 mg/kg	HBAMAK 4,1289,35
ivn-rbt LDLo:50 mg/kg	EQSSDX 1,1,75
scu-frg LDLo:1600 mg/kg	HBAMAK 4,1289,35

Carcinogenic Determination: Animal Positive IARC** 23,325,80; Human Suspected IARC** 23,325,80. *Toxicology Review:* ADTEAS 5,51,72; ENVRAL 13,36,77; 85DHAX Pb,256,72. OSHA Standard: Air: TWA 200 ug(Pb)/m3 (SCP-O) FEREAC 29,23540,74. Occupational Exposure to Inorganic Lead recm std: Air: TWA 0.10 mg(Pb)/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: MUT data. An exper + CARC, TER, ETA. A susp hmn CARC; HIGH ipr, orl, scu, ivn. See also lead compounds. A poison. An insecticide.

Disaster Hazard: When heated to decomp it emits tox fumes of Pb.

Incomp: $KBrO_3$; acids, sol sulfates, citrates, tartrates, chlorides, carbonates, alkalies, tannin phosphates, resorcinol, salicylic acid, phenol, chloral hydrate, sulfites, vegetable infusions, tinctures.

For further information see Vol. 1, No. 4 of *DPIM Report.*

LEAD ACETATE, BASIC

CAS RN: 1335326 NIOSH #: OF 8750000
mf: $C_4H_{10}O_8Pb_3$; mw: 807.71

R66

ivn-mus LD50:32 mg/kg	CSLNX* NX#07576
unk-mus LDLo:8 mg/kg	AIPTAK 3,77,1897
unk-dog LDLo:6500 ug/kg	AIPTAK 3,77,1897
scu-rbt LDLo:6 mg/kg	CRSBAW 96,202,27
unk-rbt LDLo:6500 ug/kg	AIPTAK 3,77,1897
unk-pgn LDLo:80 mg/kg	AIPTAK 3,77,1897
scu-frg LDLo:95 mg/kg	AIPTAK 3,77,1897

Occupational Exposure to Nitriles recm std: Air: TWA 8 mg/m3 NTIS**. Reported in EPA TSCA Inventory, 1980.

THR: HIGH orl, ipr, ivn. See also nitriles. An eye irr. A combustible material.

To Fight Fire: Water, fog, spray, foam.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x and CN^-.

Incomp: Self-explodes; bases.

MALTOSE

CAS RN: 69794 NIOSH #: OO 5250000
mf: $C_{12}H_{22}O_{11}$; mw: 342.31

Colorless needles; d: 1.540 @ 17°; mp: decomp; very sol in water; very slightly sol in cold alc; insol in ether.

SYNS:

4-(ALPHA-D-GLUCOPYRANOSIDO)-ALPHA-GLUCOPYRANOSE	MALTOBIOSE
4-(ALPHA-D-GLUCOSIDO)-D-GLUCOSE	D-MALTOSE
	MALT SUGAR
	ALPHA-MALT SUGAR

TOXICITY DATA: 3	CODEN:
scu-mus TDLo:1750 mg/kg/50W-C:ETA	GANNA2 48,556,57

Reported in EPA TSCA Inventory, 1980.

THR: An exper ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

MALVIDOL

NIOSH #: LK 9840000
mf: $C_{17}H_{15}O_7$; mw: 331.32

SYN: 3',5'-DIMETHOXY-3,4',5,7-TETRAHYDROXYFLAVYLIUM ACID ANION

TOXICITY DATA: 3-2	CODEN:
ipr-rat LD50:2350 mg/kg	CHTPBA 2,33,67
ivn-rat LD50:240 mg/kg	CHTPBA 2,33,67
ipr-mus LD50:4110 mg/kg	CHTPBA 2,33,67
ivn-mus LD50:840 mg/kg	CHTPBA 2,33,67

THR: HIGH ivn. MOD ipr, ivn.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

MANDELIC ACID

CAS RN: 90642 NIOSH #: OO 6300000
mf: $C_8H_8O_3$; mw: 152.16

Large white crystals or powder, faint odor. bp: decomp. d: 1.30, mp: 117°-119°. Sol in water, alc and ether. Darkens and decomp on prolonged exposure to light.

SYNS:

AMYGDALIC ACID	PARAMANDELIC ACID
AMYGDALINIC ACID	PHENYLGLYCOLIC ACID
ALPHA-HYDROXY-ALPHA-TOLUIC ACID	PHENYLHYDROXYACETIC ACID
	RACEMIC MANDELIC ACID
ALPHA-HYDROXYPHENYLACETIC ACID	

TOXICITY DATA: 3-2	CODEN:
orl-rat LDLo:3000 mg/kg	AIPTAK 64,79,40
ims-rat LD50:300 mg/kg	EMSUA8 4,223,46
orl-rbt LDLo:2000 mg/kg	AIPTAK 64,79,40

Reported in EPA TSCA Inventory, 1980.

THR: HIGH ims and MOD oral. Continued absorption can cause kidney irr. Used medicinally. Ingestion of large doses causes nausea, diarrhea and possibly kidney damage.

MANDELIC ACID NITRILE

CAS RN: 532285 NIOSH #: OO 8400000
mf: C_8H_7NO; mw: 133.16

Yellow viscous liquid. mp: −10°; bp: 170° decomp; d: 1.124.

SYNS:

AMYGDALONITRILE	NITRIL KYSELINY MANDLOVE (CZECH)
BENZALDEHYDE CYANOHYDRIN	
BENZALDEHYDKYANHYDRIN (CZECH)	

TOXICITY DATA: 3	CODEN:
eye-rbt 250 ug/24H SEV	28ZPAK -,161,72
mmo-sat 225 nmol/plate	SCIEAS 198,625,77
mma-sat 225 nmol/plate	SCIEAS 198,625,77
scu-mus LDLo:23 mg/kg	AIPTAK 12,447,04
orl-rat LD50:116 mg/kg	28ZPAK -,161,72
ivn-mus LD50:5600 ug/kg	CSLNX* NX#07767
scu-rbt LDLo:6 mg/kg	AIPTAK 5,161,1899
scu-frg LDLo:600 ug/kg	AIPTAK 5,161,1899

Reported in EPA TSCA Inventory, 1980.

THR: MUT data. An eye irr. HIGH scu, orl, ivn. See also nitriles.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x and CN^-.

beta-MANDELOYLOXY-beta-PHENYLETHYL DIMETHYLAMINE

CAS RN: 67465387 NIOSH #: OO 7395000
mf: $C_{18}H_{21}NO_3$; mw: 299.40

TOXICITY DATA: 3-2	CODEN:
scu-mus LDLo:808 mg/kg	AIPTAK 47,96,34
ivn-rbt LDLo:30 mg/kg	AIPTAK 47,96,34

THR: HIGH ivn; MOD scu.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

MANGANESE

CAS RN: 7439965 NIOSH #: OO 9275000
af: Mn; aw: 54.94

Reddish-grey or silvery, brittle, metallic element. mp: 1260°, bp: 1900°, d: 7.20, vap. press: 1 mm @ 1292°.

R67

SYNS:
COLLOIDAL MANGANESE
MANGAN (POLISH)

TOXICITY DATA: 3
ihl-man TCLo:2300 ug/m3
mrc-smc 8 mmol/L/18H
ims-rat TDLo:400 mg/kg/1Y-I:ETA

CODEN:
AIHAAP 27,454,66
MUREAV 42,343,77
NCIUS* PH 43-64-886,SEPT,71

TLV: Air: 5 mg(Mn)/m3 (dust) DTLVS* 4,250,80. *Toxicology Review:* TRBMAV 33(1),85,75; ACLSCP 4, 487,74; ADTEAS 5,51,72; FOREAE 7,313,42; KOTTAM 11(11),1300,75; 85DHAX Mn,1,73; PEXTAR 12,102,69. OSHA Standard: Air: CL 5 mg/m3 (SCP-A) FEREAC 39,23540,74. "NIOSH Manual of Analytical Methods" VOL 2 S5, VOL 5 173#. Reported in EPA TSCA Inventory, 1980.

Human Tox: Occurs by inhal of the dust or fumes. Symptoms: languor, sleepiness, weakness, emotional disturbances, spastic gait, paralysis.

THR: MUT data. An exper ETA. See also manganese compounds.

Fire Hazard: Mod, in the form of dust or powder, when exposed to flame.

Spontaneous Heating: No.

Explosion Hazard: Mod, in the form of dust, when exposed to flame. See also powdered metals. Violent reaction with (Al + air), Cl_2, F_2, H_2O_2, HNO_3, NO_2, P, SO_2.

Disaster Hazard: Mod dangerous; will react with water or steam to produce hydrogen; can react with oxidizing materials.

To Fight Fire: Special dry chemical.

For further information see Vol. 1, No. 2 of *DPIM Report.*

MANGANESE ACETATE

CAS RN: 638380 NIOSH #: AI 5770000
mf: $C_4H_6O_4 \cdot Mn$; mw: 173.04

Pale red crystals, very sol in water and alc.

SYNS:
ACETIC ACID MANGANESE(II) SALT (2:1)
DIACETYLMANGANESE
MANGANESE(2+) ACETATE
MANGANESE(II) ACETATE
MANGANESE DIACETATE
MANGANOUS ACETATE
OCTAN MANGANATY (CZECH)

TOXICITY DATA: 2
orl-rat LD50:2940 mg/kg

CODEN:
MarJV# 29MAR77

Reported in EPA TSCA Inventory, 1980. EPA TSCA 8(a) Preliminary Assessment Information Proposed Rule FERREAC 45,13646,80.

THR: MOD orl. See also manganese.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

MANGANESE ACETATE TETRAHYDRATE

CAS RN: 6156-78-1 NIOSH #: AI 5775000
mf: $C_4H_6O_4 \cdot Mn \cdot 4H_2O$; mw: 245.12

Pale red, transparent monoclinic crystals. d: 1.59. Sol in water.

SYNS:
MANGANESE DIACETATE TETRAHYDRATE
MANGANOUS ACETATE TETRAHYDRATE

TOXICITY DATA: 2
orl-rat LD50:3730 mg/kg

CODEN:
AIHAAP 30,470,69

THR: MOD orl. See also manganese compounds.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

MANGANESE ACETYLACETONATE

CAS RN: 14024589 NIOSH #: OO 9350000
mf: $C_{10}H_{14}O_4Mn$; mw: 253.18

SYN: MANGANOUS ACETYLACETONATE

TOXICITY DATA: 3
ims-rat TDLo:1200 mg/kg/26W-I:NEO
ims-rat TD:1350 mg/kg/21W-I:ETA

CODEN:
JNCIAM 60,1171,78
NCIUS* PH 43-64-886,SEPT,71

Reported in EPA TSCA Inventory, 1980.

THR: An exper NEO, ETA.

Disaster Hazard: When heated to decomp it emits acrid smoke and fumes.

MANGANESE (II)-o-BENZYL BENZOATE COMPOUND WITH NICOTINE TRIHYDRATE

CAS RN: 64092-22-4 NIOSH #: OO 9288500
mf: $C_{46}H_{46}MnN_4O_6 \cdot 3H_2O$; mw: 883.98

TOXICITY DATA: 3
orl-rat LDLo:300 mg/kg
ipr-rat LDLo:300 mg/kg

CODEN:
NCNSA6 5,22,53
NCNSA6 5,22,53

THR: HIGH orl, ipr. See also nicotine, manganese compounds.

Disaster Hazard: When heated to decomp it emits tox fumes of NO_x.

MANGANESE(II) CHLORIDE (1:2)

CAS RN: 7773015 NIOSH #: OO 9625000
mf: Cl_2Mn; mw: 125.84

Cubic, deliquesc, pink crystals. mp: 650°, bp: 1190°, d: 2.977 @ 25°.

SYNS:
MANGANESE DICHLORIDE
MANGANOUS CHLORIDE

TOXICITY DATA: 3
mmo-esc 400 mg/L
cyt-mus:mmr 1 mmol/L/48H
otr-ham:emb 130 umol/L
dnd-ham:emb 130 umol/L
mac-ham:lng 1 mmol/L
mmo-omi 24000 ppm
dnd-omi 4 mmol/L
dnd-mam:lym 5 mmol/L
orl-mus LD50:1715 mg/kg
ipr-mus TDLo:2080 mg/kg/26W-I:CARC
scu-mus TDLo:2080 mg/kg/26W-I:CARC
ims-rat LD50:700 mg/kg
ipr-mus LD50:121 mg/kg

CODEN:
ABBIA4 76,78,58
MUREAV 67,221,79
CNREA8 39,193,79
CNREA8 39,193,79
MUREAV 68,259,79
APMBAY 6,45,58
SCIEAS 198,513,77
SCIEAS 198,513,77
TOLED5 7,221,81
FEPRA7 23,393,64
FEPRA7 23,393,64
RPTOAN 38,221,75
AEPPAE 244,17,62

R68

Z

ZAMIA DEBILIS

NIOSH #: ZG 4600000

Dried, ground-up zamia tubers were used (85CVA2 5,197,70)

TOXICITY DATA: 3	CODEN:
orl-rat TDLo:650 gm/kg/77W-C:ETA	85CVA2 5,197,70

THR: An exper ETA.

ZEARALENONE

CAS RN: 17924924 NIOSH #: DM 2550000
mf: $C_{18}H_{22}O_5$; mw: 318.40

l-form: crystals. mp: 164°-165°. sol in aqu alkali, ether, benzene, alc; almost insol in water. dl-form: crystals. mp: 187°-189°.

SYNS:
6-(10-HYDROXY-6-OXO-TRANS-1-UNDECENYL)-BETA-RESORCYCLIC ACID-N-LACTONE
NCI-C50226

TOXICITY DATA: 3	CODEN:
dnr-bcs 2500 mg/L	IRLCDZ 7,204,79
skn-gpg 50 mg/24H SEV	JANCA2 57,1121,74
mrc-bcs 100 ug/disc	CNREA8 36,445,76
orl-rat TDLo:10 mg/kg (6-15D preg)	BECTA6 15,678,76
orl-rat TDLo:100 mg/kg (6-15D preg)	BECTA6 15,678,76

Currently Tested by NTP for Carcinogenesis by Standard Bioassay Protocol as of December 1980. Reported in EPA TSCA Inventory, 1980.

THR: SEV skn irr in gpg. An exper TER. MUT data. Possible CARC.

ZETAR EMULSION

A shampoo containing coal tar derivatives (TOLED5 3,325,79)

NIOSH #: ZG 7250000

SYN: ZET

TOXICITY DATA:	CODEN:
mma-sat 10 ug/plate	TOLED5 3,325,79

THR: MUT data.

ZINC

CAS RN: 7440-66-6 NIOSH #: ZG 8600000
af: Zn; aw: 65.37

Bluish-white, lustrous metal. mp: 419.8°; bp: 908°; d: 7.14 @ 25°; vap. press: 1 mm @ 487°.

SYNS:

BLUE POWDER	GRANULAR ZINC
C.I. 77945	ZINC DUST
C.I. PIGMENT BLACK 16	ZINC POWDER

SKIN AND EYE IRRITATION DATA: 2	CODEN:
skn-hmn 300 ug/3D-I:MLD	85DKA8 -,127,77

TOXICITY DATA:	CODEN:
ihl-hmn TCLo:124 mg/M³/50M:PUL	AHYGAJ 72,358,10

Toxicology Review: QURBAW 7(1),75,74; ADTEAS 5,51,72; FOREAE 7,313,42; KOTTAM 11(11),1300,7; AMTODM 3,209,77.

"NIOSH Manual of Analytical Methods" VOL 5 173# NIAMAM*. Reported in EPA TSCA Inventory, 1980. Meets Criteria for Proposed OSHA Medical Records Rule FEREAC 47,30420,82.

THR: A hmn skn irr and PUL. See also zinc compounds. Pure zinc powder, dust, fume is relatively non-tox to humans via irr or ihl. The difficulty arises from oxidation of zinc fumes prior to ihal or presence of impurities such as Cd, Sb, As, Pb.

Fire Hazard: Mod, in the form of dust when exposed to heat or flame.

Spontaneous Heating: No.

Explosion Hazard: In the form of dust when reacted with acids.

Incomp: NH_4NO_3; BaO_2; $Ba(NO_3)_2$; Cd; CS_2; chlorates; Cl_2, ClF_3; CrO_3; (ethyl acetoacetate + tribromoneopentyl alcohol); F_2; hydrazine mononitrate; hydroxylamine; $Pb(N_3)_2$; (Mg + $Ba(NO_3)_2$ + BaO_2); $MnCl_2$; HNO_3; performic acid; $KClO_3$; KNO_3; K_2O_2; Se; $NaClO_3$; Na_2O_2; S; Te; H_2O; $(NH_4)_2S$; As_2O_3; CS_2; $CaCl_2$; NaOH; chlorinated rubber; catalytic metals; halocarbons; o-nitroanisole; nitrobenzene; non-metals; oxidants; paint primer base; pentacarbonyliron; transition metal halides; seleninyl bromide.

To Fight Fire: Special mixtures of dry chemical.

For further information see Vol. 1, No. 7 of *DPIM Report.*

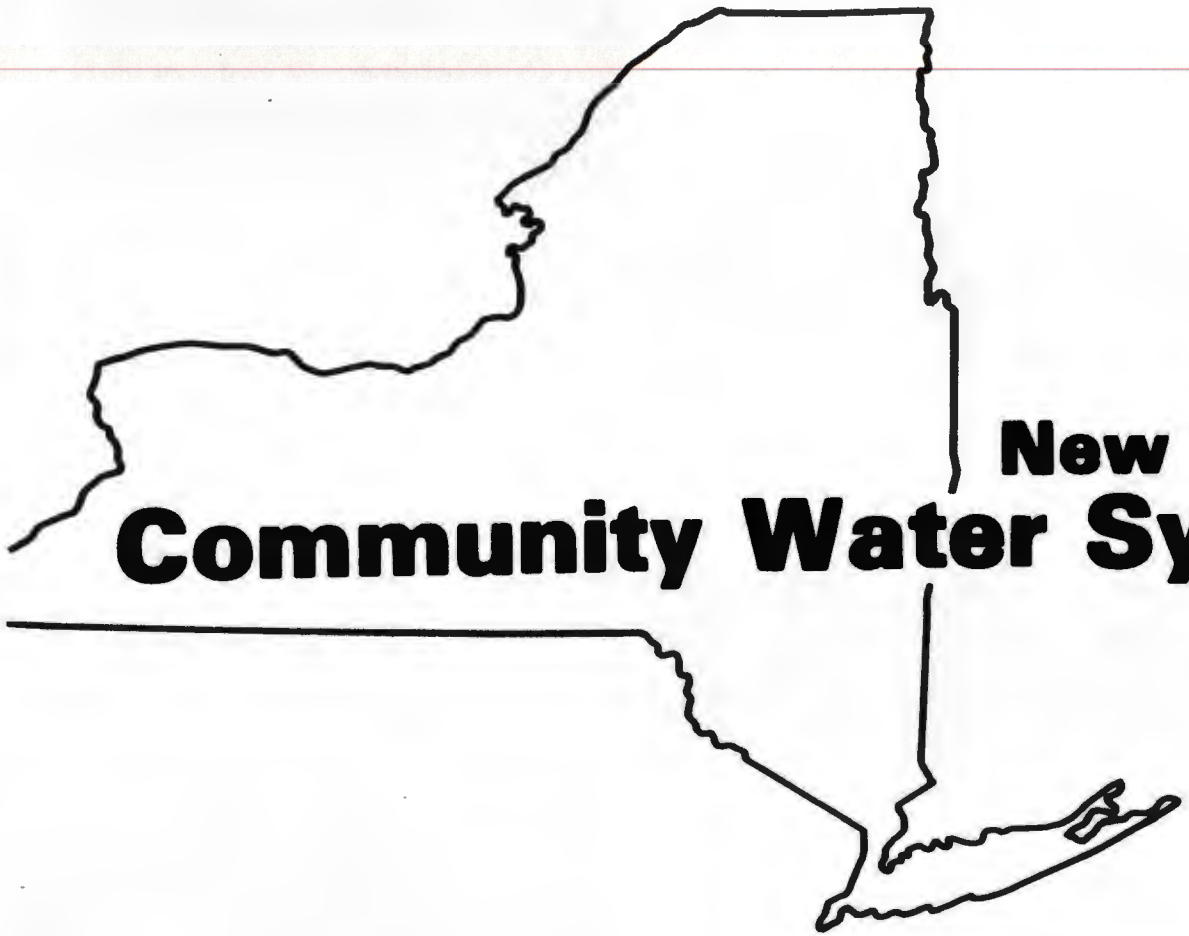
ZINC ACETATE

CAS RN: 557346 NIOSH #: AK 1500000
mf: $C_4H_6O_4 \cdot Zn$; mw: 183.47

Astringent taste, d: 1.735; mp: 237°. Very sol in water; somewhat sol in alc. Crystals.

R69

REFERENCE 15



New York State Atlas of Community Water System Sources 1982

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

R70

STEUBEN COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Municipal Community			
1	Addison Village	2100	Wells
2	Arkport Village	787	Limekiln Creek, Wells
3	Avoca Village	1250	Wells (Springs)
4	Bath Village	6100	Wells
5	Canisteo Village	2730	Wells, Springs
6	Conocton Village	926	Wells
7	Corning City	12953	Wells
8	Corning Manor Water District	300	Wells
9	Dansville Village (Livingston Co, Page 10)		Little Mill Creek Reservoir, Wells
10	Gibson Water District	500	Wells
11	Greenwood Water Company	200	Wells
12	Hammondsport Village	1180	Keuka Lake
13	Hornell City	11150	Seeley Creek Reservoirs, Wells
14	Morningside Heights Water District	600	Wells
15	Naples Village (Ontario Co, Page 12)		Wells
16	North Conocton Water District	225	Wells
17	Painted Post Village	2700	Wells
18	Prattsburg Water District	800	Wells
19	South Corning Village	1400	Wells
20	Troupsburg Water District	200	Wells
21	Wayland Village	2300	Wells
Non-Municipal Community			
22	Ames Trailer Court	18	Wells
23	Bath VA Hospital	1500	Wells
24	Brookside Trailer Court	18	Wells
25	Brookwood Mobile Home Court	54	Wells
26	Burroughs Mobile Home Court	20	Wells
27	Butlers Brown Hollow Mobile Park	81	Wells
28	Campbell Estates Inc	237	Wells
29	Canisteo Trailer Park	30	Wells
30	Carol's Country Court	117	Wells
31	Castle Creek Trailer Park	42	Wells
32	Chamberlain's Trailer Park	87	Wells
33	Clark's Wagon Wheel Mobile Home Court	36	Wells
34	Country Estates Court	72	Wells
35	Erwin Grove Trailer Park	57	Wells
36	Four Fourteen Estates Inc	204	Wells
37	Goff Road Mobile Homes	75	Wells
38	Graham's Trailer Court	30	Wells
39	Green Acres Mobile Home Court #1	200	Wells
40	Green Acres Mobile Home Court #2	18	Wells
41	Green Meadows Acres	120	Wells
42	Hall's Mobile Home Agency Inc	435	Wells
43	Hanwell Village	114	Wells
44	Hidden Forest Homes Inc	333	Wells
45	Hidden Inn Trailer Park	30	Wells
46	Hidden Inn Trailer Court	69	Wells
47	Horton's Mobile Home Court	42	Wells
48	J & M's Green Acres Mobile Court	171	Wells
49	Ken's Mobile Home Park	45	Wells
50	La Petite River Crest Mobile Home Park	60	Wells
51	McIntire Trailer Park	45	Wells
52	Moore Haven Trailer Park	72	Wells
53	Pine Knoll Trailer Park	78	Wells
54	Pleasant Valley Mobile Home Park	66	Wells
55	Port Belinda Recreational Camp Grounds	178	Wells
56	Rambler Mobile Court	60	Wells
57	Resue's Mobile Home Park	60	Wells
58	Rumsey Trailer Court	15	Wells
59	Savona Estates	144	Wells
60	Scura Mobile Home Park	102	Wells
61	Seager's Mobile Home Park	72	Wells
62	Sorber's Trailer Court	60	Wel's
63	Stiker's, Erwin Court	15	Wells
64	Stoke's Trailer Park	48	Wells
65	Terwilliger Trailer Court	18	Wells
66	The Meadows	168	Wells
67	Uram's Trailer Park	36	Wells
68	Whitfords Trailer Court	36	Wells
69	Wildwood Mobile Home Park	33	Wells
70	William Street Motor Court	60	Wells

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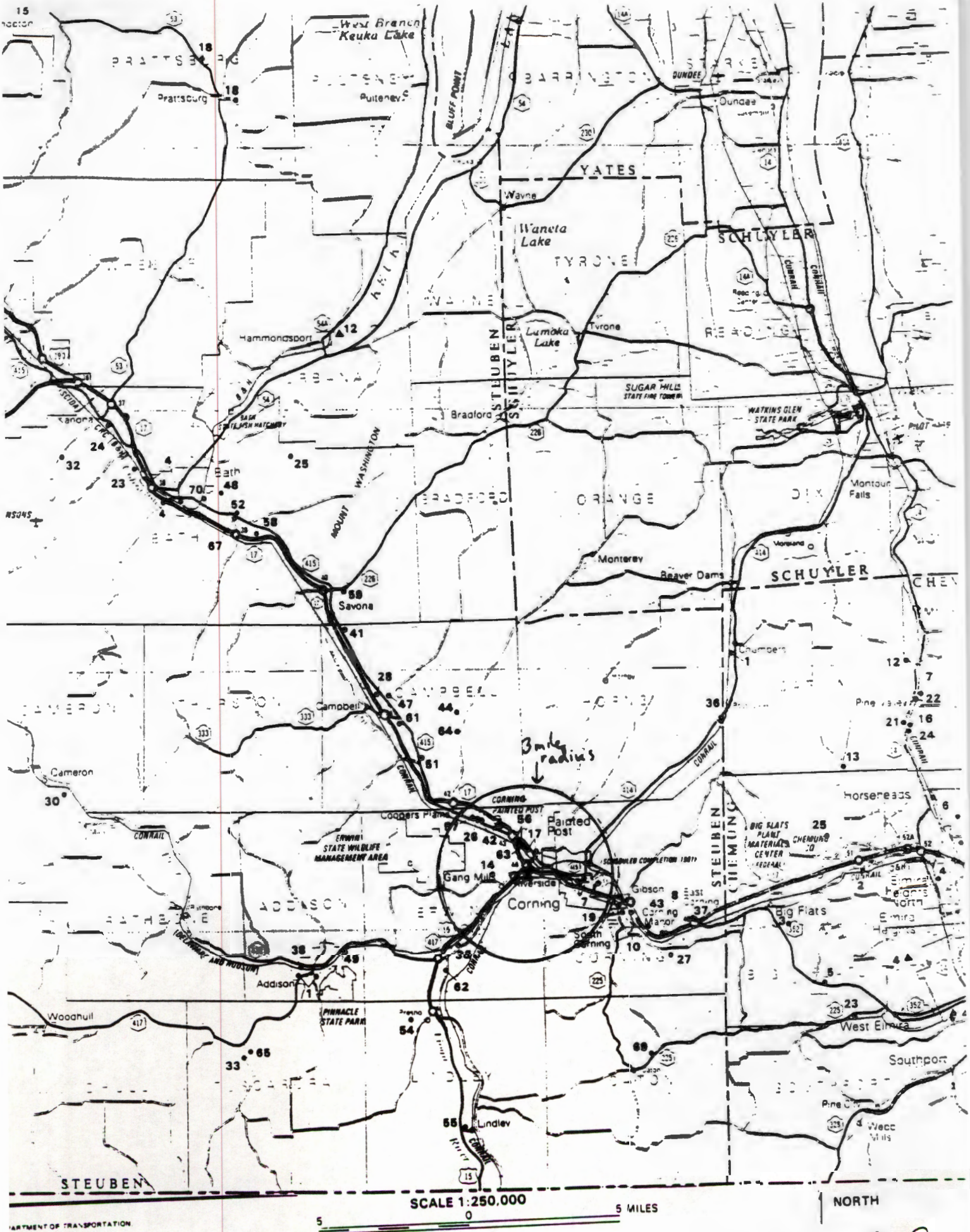

West Branch Keuka Lake
Prattsburg
Pulteney
Dundee
YATES
Wayne
Waneta Lake
Tyrone
Lamoka Lake
SCHUYLER
STEUBEN
Hammondsport
Bradford
SUGAR HILLS STATE FIRE TOWER
WATKINS GLEN STATE PARK
Canaan
Bath
BRADFORD
ORANGE
Montour Falls
Monterey
Beaver Dams
Savona
Campbell
Cameron
Coopers Plains
Painted Post
CORNING PAINTED POST
ERWIN STATE WILDLIFE MANAGEMENT AREA
Gang Mills
Riverside
Corning
Gibson
Corning Manor
South Corning
Big Flats
Horseheads
Addison
PINNACLE STATE PARK
Woodhull
Lindley
West Elmira
Southport
3 mile radius
CONRAIL
SCALE 1:250,000
5 0 5 MILES
NORTH

R12

REFERENCE 16

1/11158.2

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 14, 1989

Mr. Mike Dawson
Assistant Superintendent of Public Works
City Hall
Corning, NY 14830

Dear Mr. Dawson:

As I mentioned during our telephone conversation on March 10, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the the Erwin Town Landfill located off Canada Rd., Town of Erwin, NY.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

This is to confirm our telephone conservation wherein you provided the following information:

- The City of Corning municipal water system uses 9 wells (2 of which are currently shut down) as a source of water.
- Water pumped from these wells is commingled.
- Municipal well depths are approximately 60-70 feet, and are completed in unconsolidated sediments (gravel and boulders).
- The City of Corning municipal water system serves approximately 12,870 people, including the population of the City of Corning and a small portion of the population of the Town of Corning (specifically, a few residences on Winfield Street).
- The City of Corning municipal water system has the capacity to supply water to the Villages of South Corning, Painted Post and Riverside in emergency situations, which are rare.
- Surface water use within a distance of 3 miles downstream from the site includes fishing and boating (Chemung River). There are no intakes for drinking water or irrigation, and no swimming within 3 miles downstream from the site.

We would appreciate if you would review this information, note any necessary corrections, and return a signed and dated copy to indicate your concurrence. In addition, we have enclosed a map locating the site and request that you indicate the approximate location of the City of Corning wells.

Your prompt attention to this would be appreciated, as the information is necessary to complete our evaluation of the site.

Thank you for your assistance.

Sincerely,

Linda J. Clark

Linda J. Clark
Project Geologist

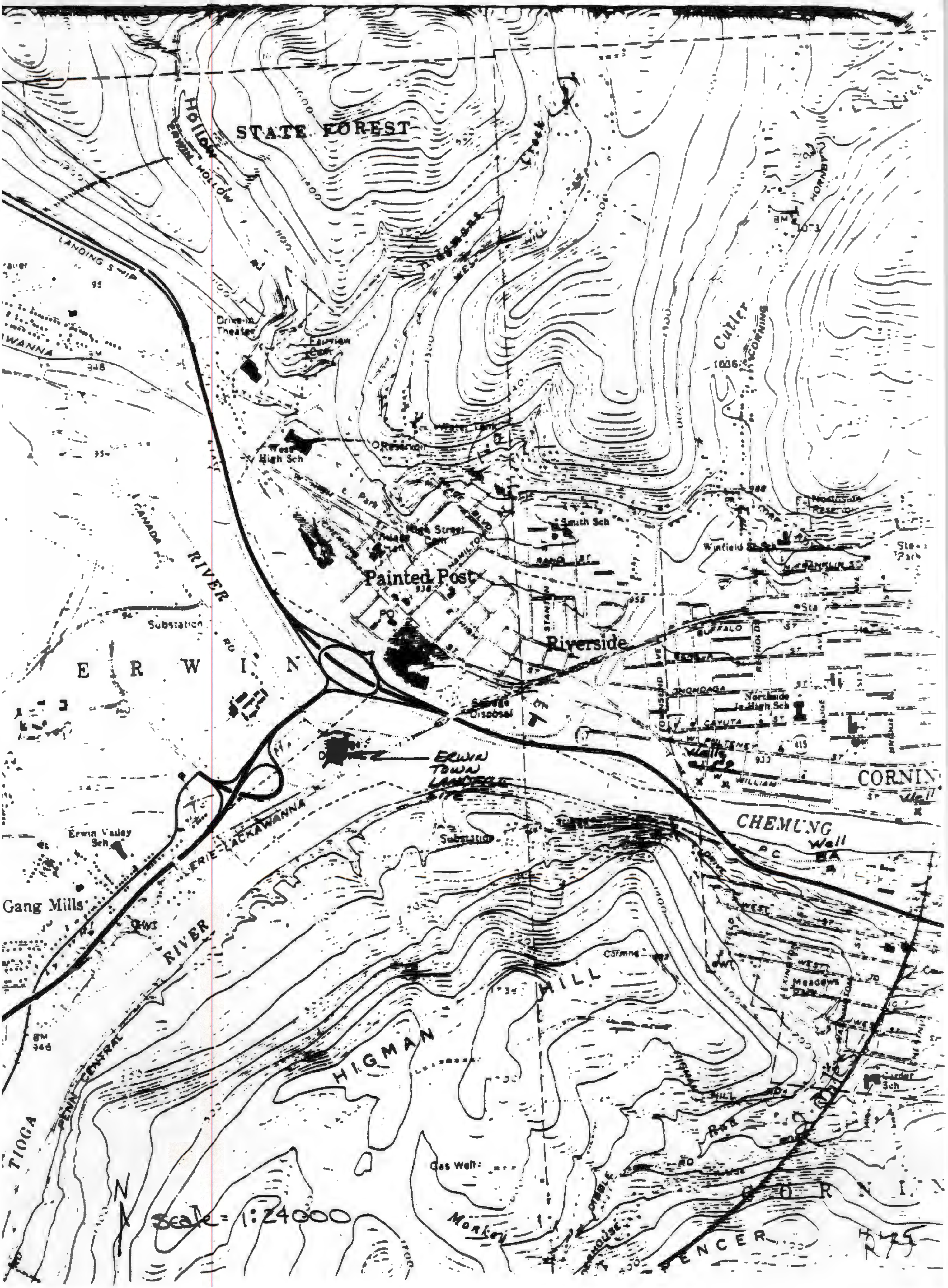
I agree with the information as it is presented. As Noted

Mike Dawson _____ Date _____

Telephone call of 8/28/89 -
Corning Wells #4, 5, and 6 are not utilized. Well #5 is outside of 3 mile radius

RECRA ENVIRONMENTAL, INC.

R74



STATE FOREST
Hollow
Creek
Landing Strip
Drive-in Theater
Fairview Cem
West High Sch
Reservoir
Cutler
Smith Sch
High Street Cem
Painted Post
Winfield St Sch
Riverside
Northside Jr High Sch
Sewage Disposal
ERWIN
RIVER
Substation
ERWIN TOWN LANDFILL SITE
CORNING
CHEMUNG
Well
Erwin Valley Sch
Gang Mills
ERIE-LACKAWANNA
HIGMAN HILL
PENN CENTRAL
TIOGA
Meadows Park
Gas Well
Monkey
SPENCER
N
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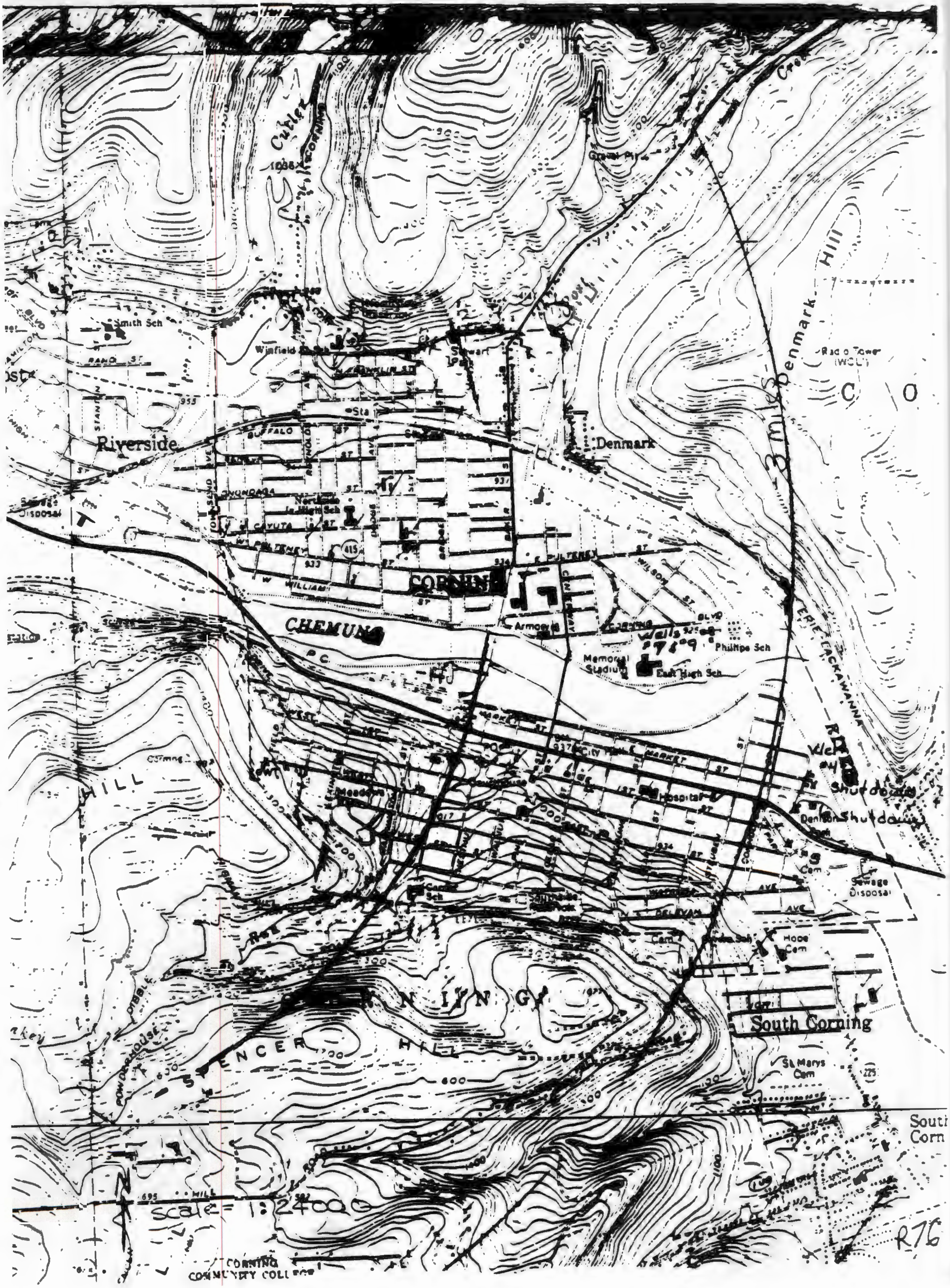

Corning
Chemung
Riverside
Denmark
South Corning
Spencer Hill
Denmark Hill
Erie Lackawanna RR
Radio Tower (WCLI)
Memorial Stadium
East High Sch
Phillips Sch
Armory
Hospital
City Hall
Smith Sch
Winfield Sch
Stewart Park
Northside Jr High Sch
Sewage Disposal
St Marys Cem
Hope Cem
Cutler
Corning Community College
scale = 1:24000
3 miles
Wells
Shutdown
Denison Shutdown
R76

Note: The City of Corning is currently experiencing problems with V.O.C. contamination in some of its wells.

Wells number 6 has been closed down because it showed 300 ppb of TCE.

Number 8A has shown 167 P.P.B. of TCE

Number 1 & 2 have shown 14 PPB of TCE

No site source has been pin pointed although 8A is located in an old Rail Road yard. An Air Stripping tower for wells 8A and 1&2 are in the design stage now.

If during your investigation you find further V.O.C. contamination upstream of Corning we would be interested in knowing so to determine the extent of aquifer contamination.

Thank You

Michael J Dawson
Asst. Supt. of P.W.
607-962-0721

R77

REFERENCE 17

1/11158.3

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 14, 1989

Mr. Don Hunt
Village of Painted Post Supervisor
Box 110
Painted Post, NY 14870

Dear Mr. Hunt:

As I mentioned during our telephone conversation on March 10, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the the Erwin Town Landfill located off Canada Rd., Town of Erwin, NY.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

This is to confirm our telephone conservation wherein you provided the following information:

- The population of the Village of Painted Post is served by the municipal water system which includes 3 wells (2 of which are currently on line).
- The Village of Painted Post municipal water system also serves the Village of Riverside. The only service to the Town of Erwin is to commercial customers which include 2 shopping centers located west of the Village of Painted Post corporate boundary.
- Surface water use for the Cohocton River in the vicinity of the site includes fishing and boating. Some swimming is conducted, but there are no areas designated as such. There are no surface water intakes for drinking water or irrigation.

We would appreciate if you would review this information, note any necessary corrections and return a signed and dated copy to indicate your concurrence. In addition, we have enclosed a map locating the site and request that you indicate the approximate location of the Village of Painted Post wells.

Audubon Business Centre • 10 Hazelwood Drive, Suite No. 106 • Amherst, New York 14150 • (716) 691-2600

R78

Your prompt attention to this would be appreciated, as the information is necessary to complete our evaluation of the site.

Thank you for your assistance.

Sincerely,

Linda J. Clark

Linda J. Clark
Project Geologist

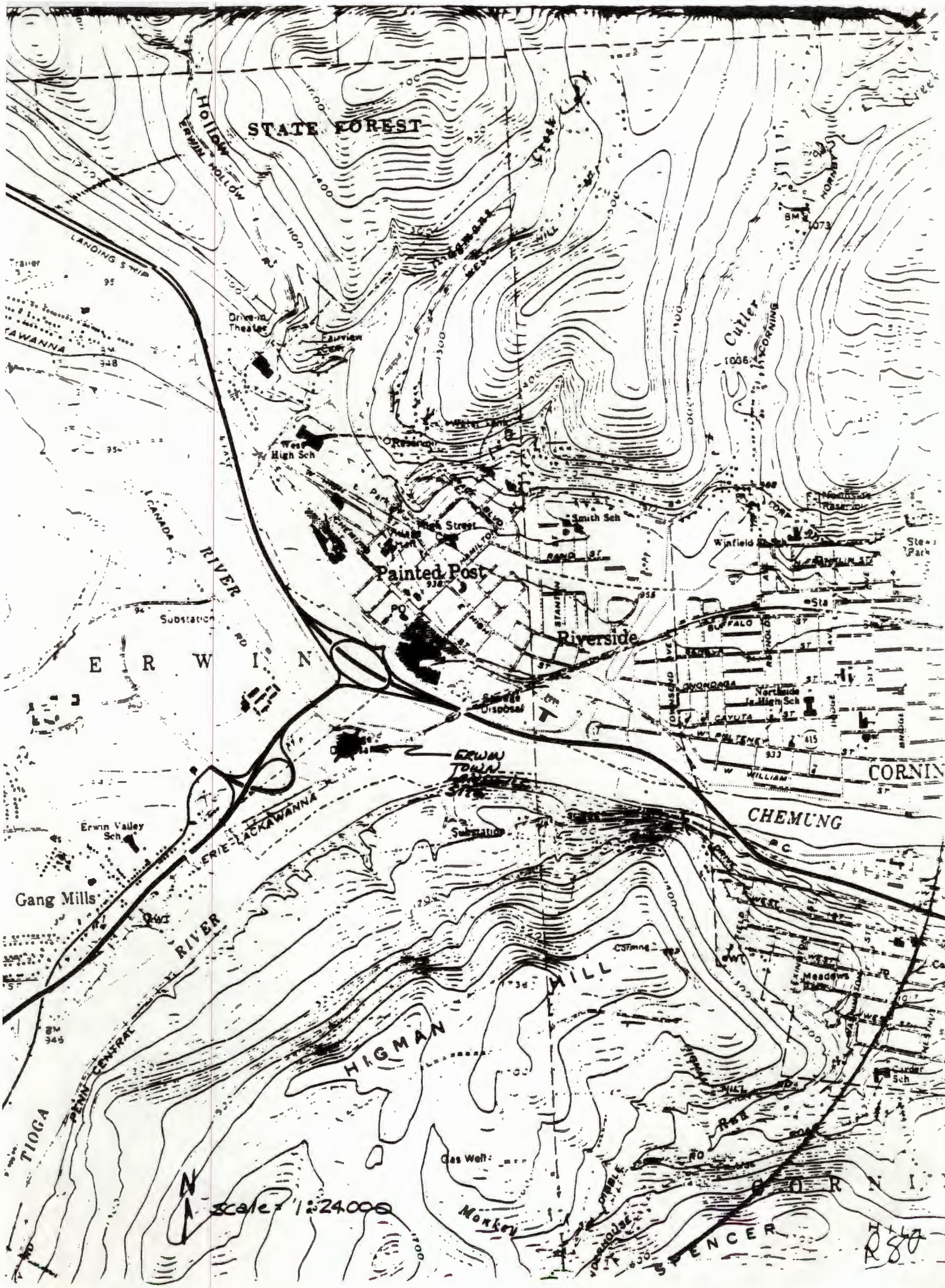
I agree with the information as it is presented.

Don Hunt

Date

RECRA ENVIRONMENTAL, INC.

R79


STATE FOREST
Hollow
ERWIN HOLLOW
Creek
LANDING STRIP
Drive-in Theater
Fairview Cem
West High Sch
High Street
Smith Sch
Painted Post
Riverside
Cutler
Winfield Sch
Substation
ERWIN
RIVER
CANADA
Sewage Disposal
BUFFALO
ONONDAGA
CAYUTA
W PULTENEY
W WILLIAM
Northside Jr High Sch
CORNING
CHEMUNG
ERWIN TOWN LANDFILL SITE
Erwin Valley Sch
ERIE LACKAWANNA
Gang Mills
RIVER
HILL
HIGMAN
Corning
Meadows
PENN CENTRAL
TIOGA
Gas Well
Monkey
SPENCER
N
Scale = 1:24000
R80

REFERENCE 18

1411157.3

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 20, 1989

Ms. Adeline M. Brown
Town Clerk
Town of Campbell
8529 Main Street
Campbell, NY 14821

Dear Ms. Brown:

As I mentioned during our telephone conversation on March 14, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the Erwin Town Landfill located off Canada Road, Town of Erwin, New York.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

This is to confirm our telephone conservation wherein you provided the following information:

- Within a 3-mile radius of the site (see map enclosed) the population of the Town of Campbell use private wells as their source of potable water, with no municipal water system available.

We would appreciate if you would review this information, note any necessary corrections and return a signed and dated copy to indicate your concurrence. Your prompt attention to this would be appreciated, as the information is necessary to complete our evaluation of the site. Thank you for your assistance.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Linda J. Clark

Linda J. Clark
Project Geologist

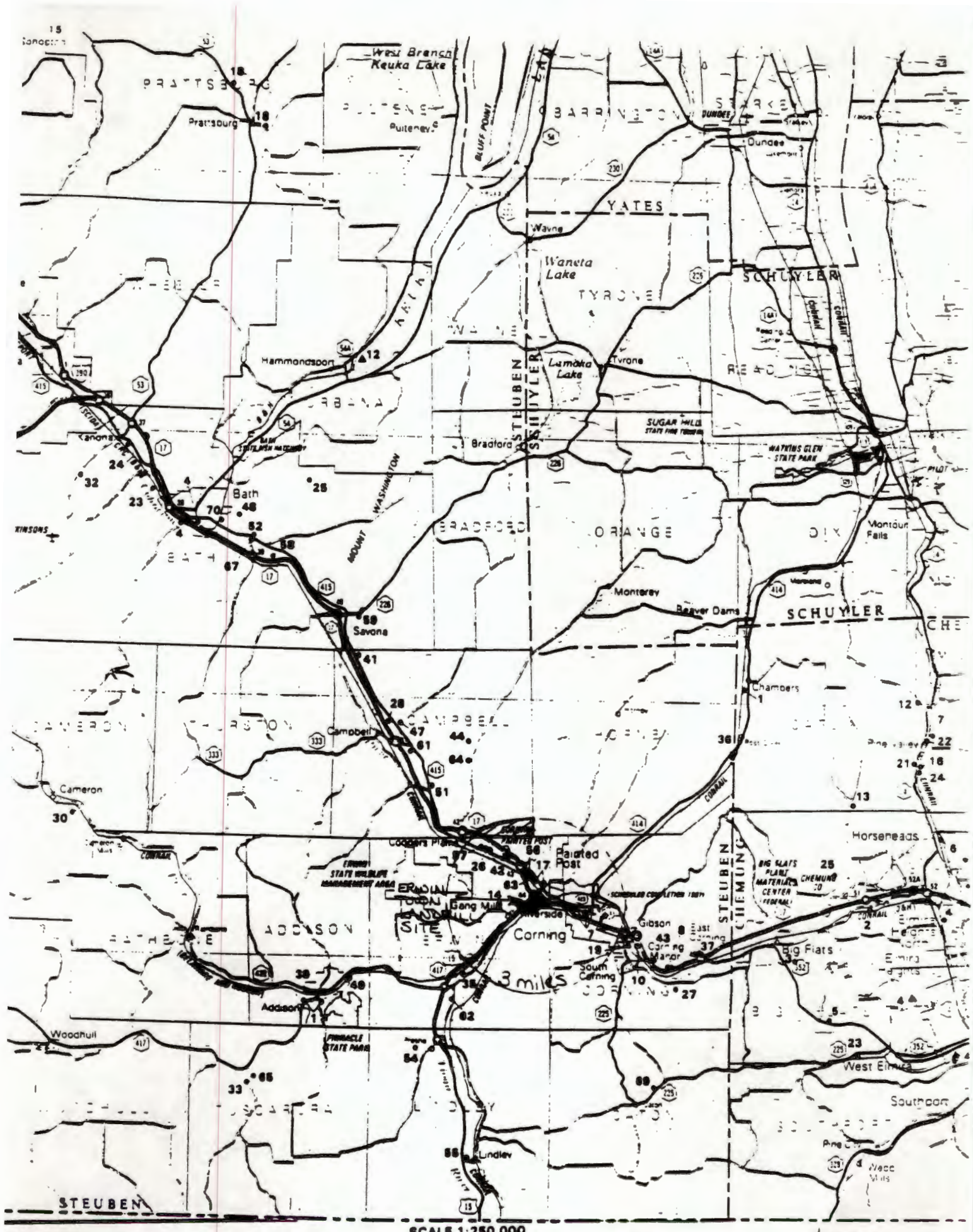
I agree with the information as it is presented.

Adeline M. Brown
Adeline M. Brown

March 21, 1989
Date

Audubon Business Centre • 10 Hazelwood Drive, Suite No. 106 • Amherst, New York 14150 • (716) 691-2600

R8


West Branch Keuka Lake
Pratts
Prattsburg
Pulteney
Bluff Point
Dundee
Yates
Wayne
Waneta Lake
Tyrone
Schuyler
Hammondsport
Urbana
Lamoka Lake
Steuben
Bradford
Sugar Hill State Forest
Watkins Glen State Park
Montour Falls
Bath
Mount Washington
Bradford
Orange
Monterey
Beaver Dams
Savona
Campbell
Chambers
Cameron
Horseheads
Coopers Plains
Painted Post
Erwin
Gang Mills
Riverside
Corning
Gibson
East Corning
Corning Manor
South Corning
Big Flats
Addison
Woodhull
Pinnacle State Park
West Elmira
Southport
Lindley
Steuben
3 miles
SCALE 1:250,000
5 0 5 MILES
NORTH

R82

REFERENCE 19

1/11151.2

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 14, 1989

Mr. Dewitt T. Baker
Town Supervisor
Town of Corning
20 South Maple Street
Corning, NY 14830

Dear Mr. Baker:

As I mentioned during our telephone conversation on March 14, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the Erwin Town Landfill located off Canada Rd., Town of Erwin, New York.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

This is to confirm our telephone conservation wherein you provided the following information:

- Corning Community College, as well as approximately 45 residences located along Spencer Hill Rd. in the area of the college, are served by the Village of South Corning municipal water system.
- Within a 3-mile radius of the site (see map enclosed), the remaining population of the Town of Corning, NY use private wells as their source of potable water, with no municipal water system available.
- Within a 3-mile radius of the site, the population of the Town of Hornby, NY use private wells as their source of potable water, with no municipal system available.

We would appreciate if you would review this information, note any necessary corrections and return a signed and dated copy to indicate your concurrence. Your prompt attention to this would be appreciated, as the information is necessary to complete our evaluation of the site.

Thank you for your assistance.

Sincerely,

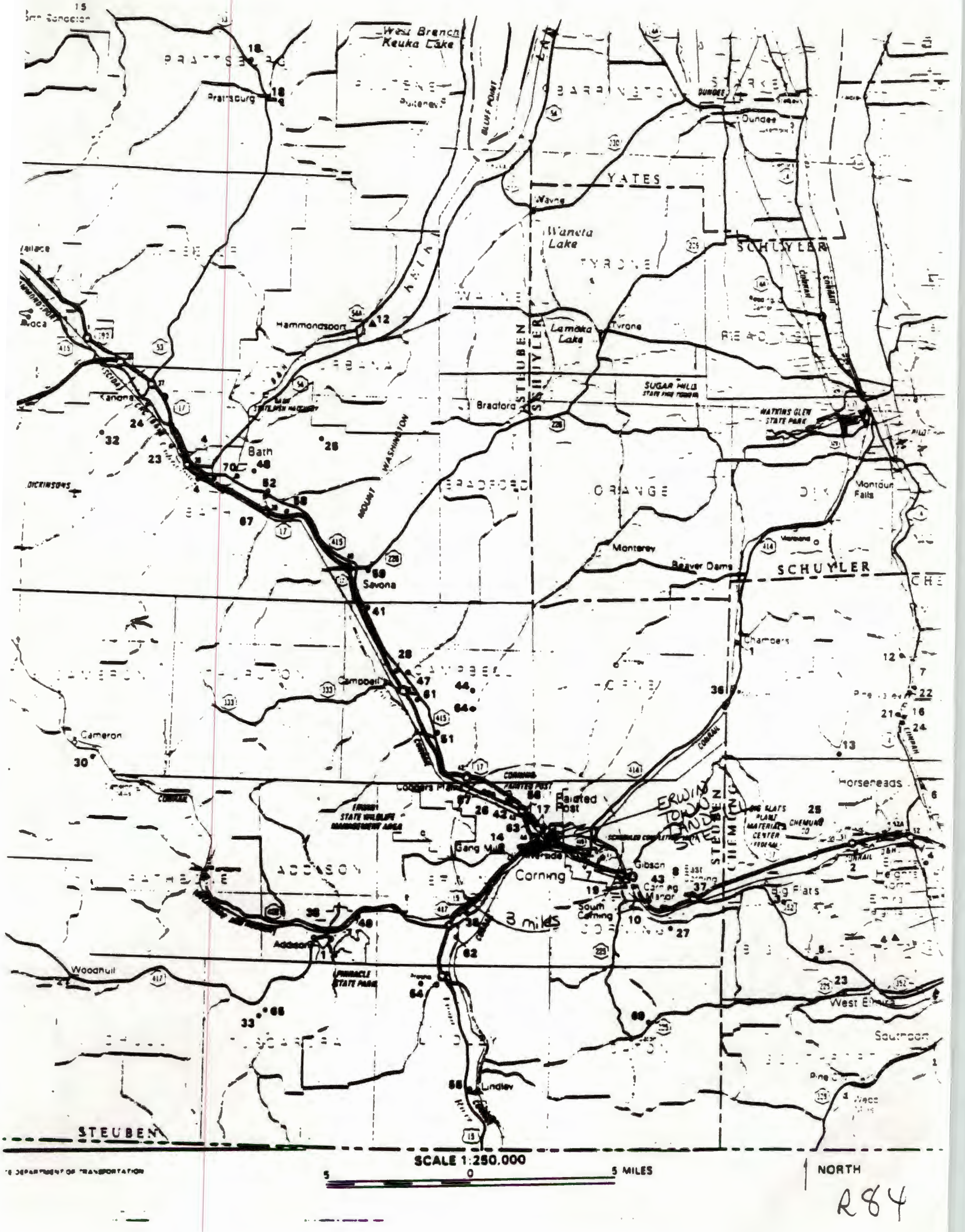
Linda J. Clark

Linda J. Clark
Project Geologist

I agree with the information as it is presented.

DeWitt T Baker
Dewitt T. Baker

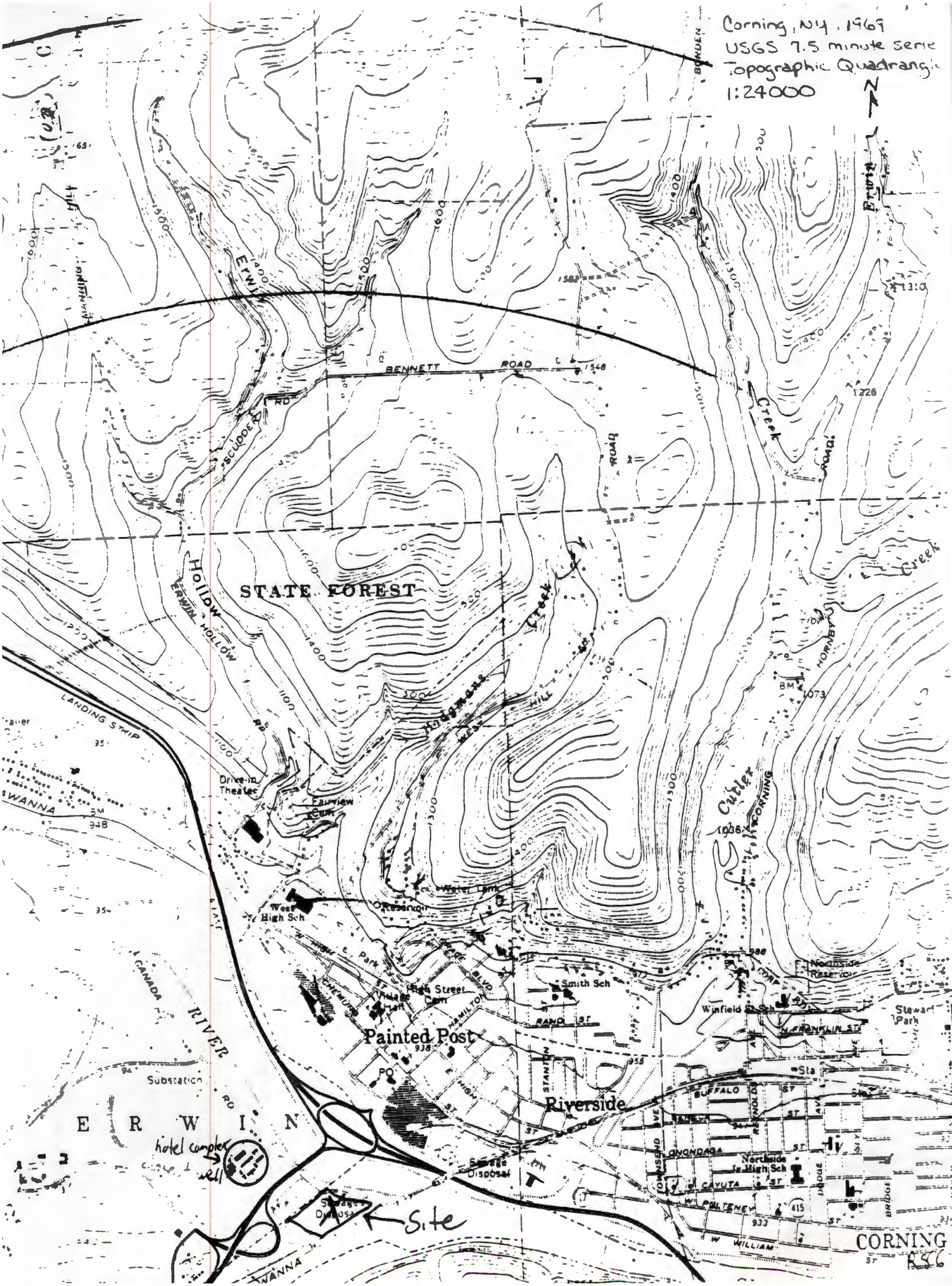
March 16, 1989
Date

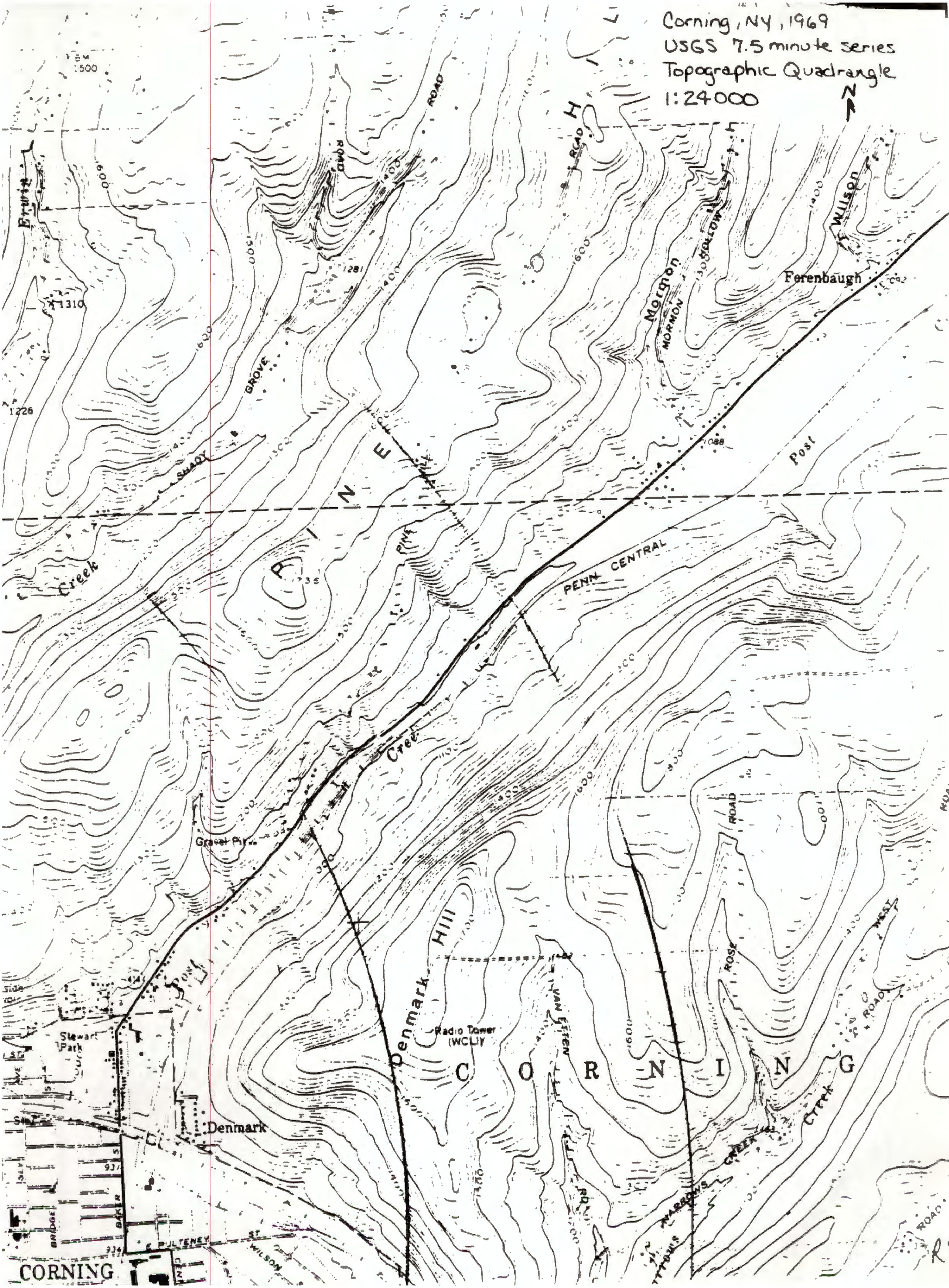


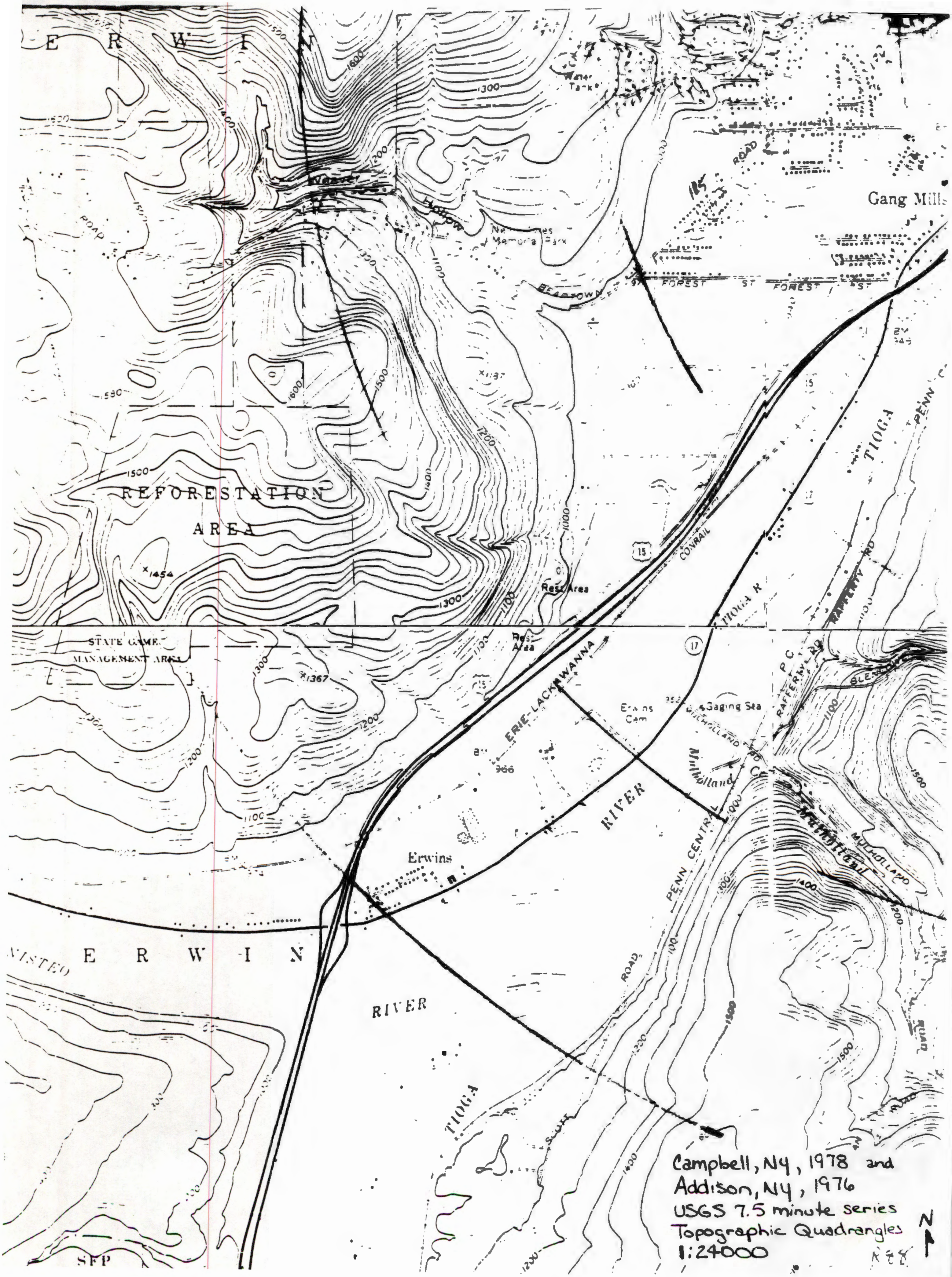
West Branch Keuka Lake
Pratsburg
Hammondsport
Bath
Savona
Campbell
Cameron
Woodhull
Addison
Lindley
Corning
South Corning
Gibson
East Corning
Painted Post
Coopers Plains
Gang Mills
Big Flats
West Elmira
Southport
Pine City
Montour Falls
Monterey
Beaver Dams
Chambers
Horseheads
Bradford
Lamoka Lake
Tyrone
Waneta Lake
Wayne
Dundee
Kanona
Watkins Glen State Park
Sugar Hill State Fire Tower
Erwin State Wildlife Management Area
Pinnacle State Park
Mount Washington
Bluff Point
STEUBEN
SCHUYLER
CHEMUNG
YATES
Campbell
Addison
Bradford
Orange
Tyrone
Wayne
Urbana
Dix
Barrington
Starkey
Reading
Erwin
Lindley
Caton
Big Flats
Horseheads
Southport
Corning
Pulteney
Prattsburg
Bath
Cameron
Thurston
Woodhull
Hornby
Savona
Kanona
Dickinsons
Erwin Town and State
3 miles
SCALE 1:250,000
5 MILES
NORTH
DEPARTMENT OF TRANSPORTATION
R84
15

REFERENCE 20

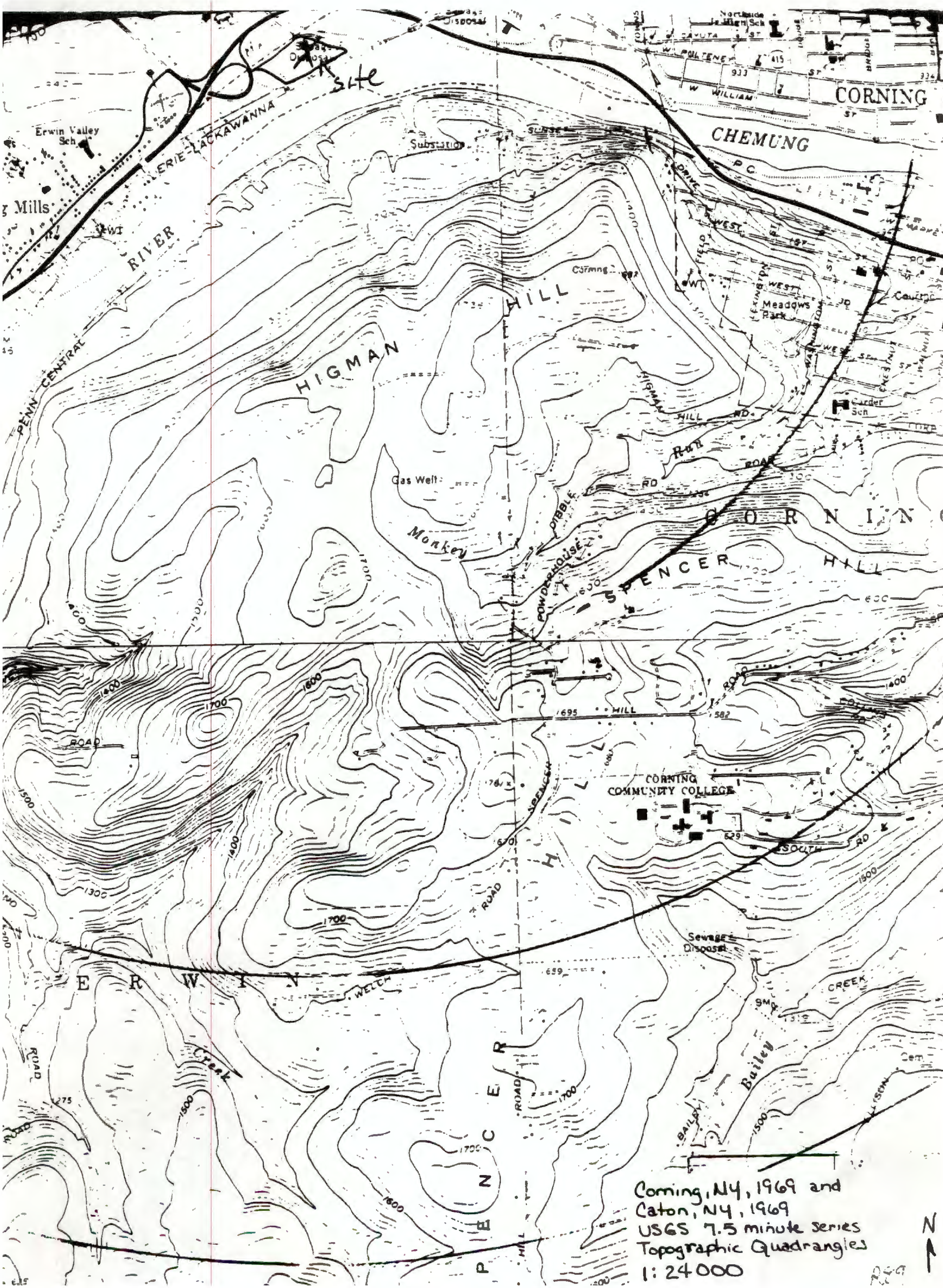

Campbell, NY, 1978
and
Corning, NY, 1969
USGS 7.5 minute series
Topographic Quadrangles
1:24000
N
MEADS
HAMM RD
Trailer Park
Pierce Sch
Coopers Plains
COHOCTON
MEADS CR
CONRAIL
ERIE-LACKAWANNA
COHOCTON
Substation
Water Tank
STATE GAME MANAGEMENT AREA
E R W I N
R85

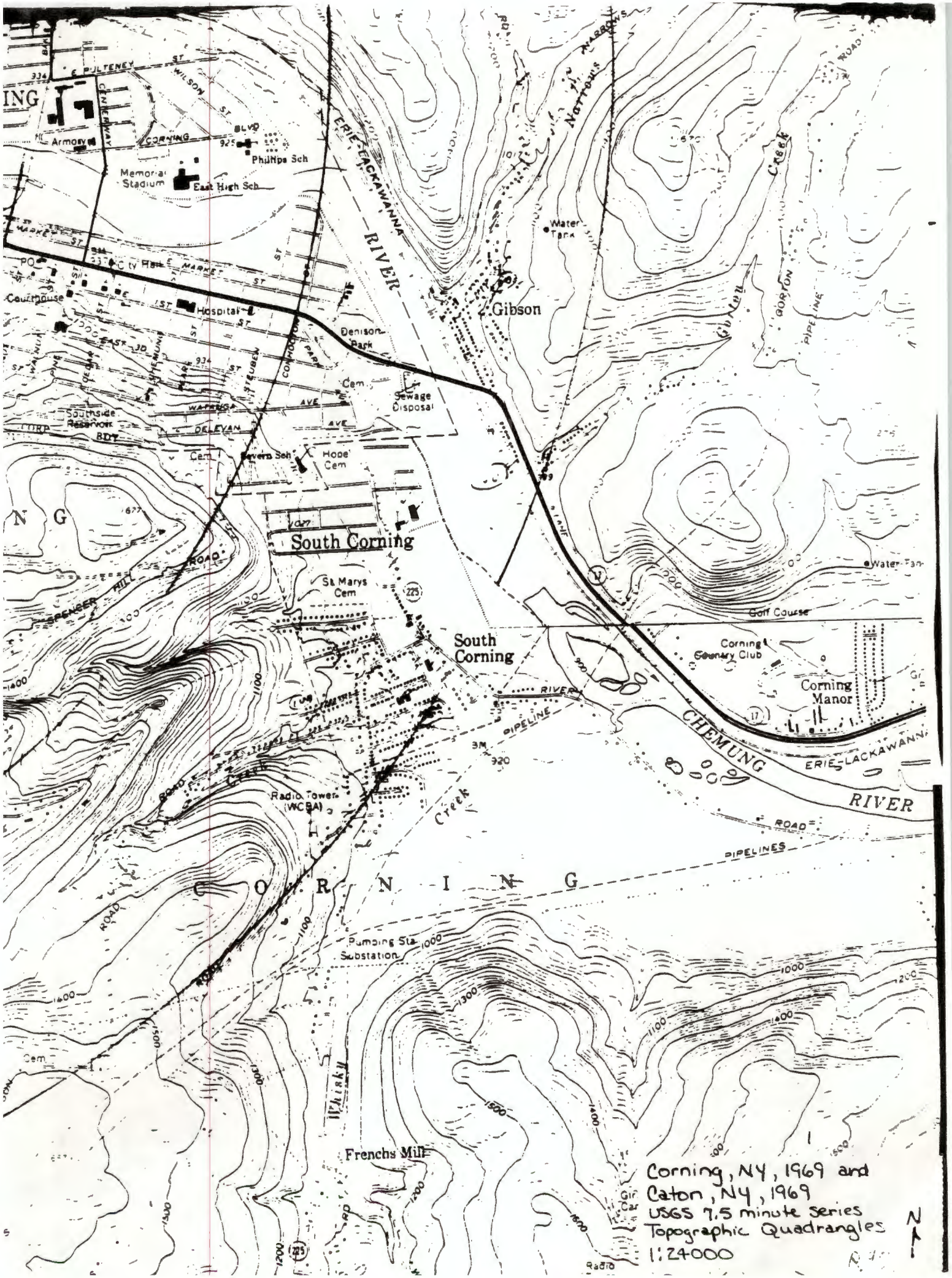

Corning, NY, 1969
USGS 7.5 minute Series
Topographic Quadrangle
1:24000
N
BENNETT ROAD
SCUDDER RD
ERWIN HOLLOW
Hollow
STATE FOREST
Creek
Cutler
CORNING
HORNBY
Erwin
LANDING STRIP
Drive-in Theater
Fairview Cem
West High Sch
Reservoir
Water Tank
High Street Cem
Village Hall
Smith Sch
Winfield St Sch
Northside Reservoir
Steward Park
N FRANKLIN ST
Painted Post
PO
Riverside
BUFFALO ST
ONONDAGA
Northside Jr High Sch
CAYUTA
W PULTENEY
W WILLIAM
RIVER
Substation
E R W I N
hotel complex
well
Sewage Disposal
Site
CORNING
RSG


Corning, NY, 1969
USGS 7.5 minute series
Topographic Quadrangle
1:24000
N
Erwin
Ferenbaugh
Mormon
MORMON
HOLLOW
Wilson
GROVE
ROAD
SHADY
Creek
PINE
PENN CENTRAL
Post
Gravel Pit
Denmark Hill
Radio Tower (WCLIY)
VAN ETTEN
ROSE
ROAD
WEST
NARROWS CREEK
Creek
CORNING
Stewart Park
Denmark
BAKER
BRIDGE
E PULTENEY ST
WILSON
CORNING
R8



Campbell, NY, 1978 and
Addison, NY, 1976
USGS 7.5 minute series
Topographic Quadrangles
1:24000
N


site
CORNING
CHEMUNG
Erwin Valley Sch
ERIE-LACKAWANNA
Substation
RIVER
PENN CENTRAL
HIGMAN
HILL
Meadows Park
Carder Sch
Gas Well
Monkey
DIBBLE
POWDERHOUSE
SPENCER
CORNING
HILL
CORNING COMMUNITY COLLEGE
SOUTH RD
Sewage Disposal
CREEK
Bailey
BAILEY
ERWIN
WELCH
Creek
SPENCER
HILL ROAD
Corning, NY, 1969 and
Caton, NY, 1969
USGS 7.5 minute series
Topographic Quadrangles
1: 24000
N



Corning, NY, 1969 and
Caton, NY, 1969
USGS 7.5 minute series
Topographic Quadrangles
1:24000

REFERENCE 21

PROJECT Erwin Town Land fill

Notebook No. _____

Continued From Page _____

Site Reconnaissance 10/11/88
Ken Shisler - Recra
15:38 Arrived at Erwin Town Hall - proceed to site with Mr. Lynn Morse, Erwin Town Supervisor

Weather Conditions Rain turning to 3-6 min hail
Very Windy 30's to 40's

spoke with Mr. Morse about history of site
- was used many years ago as town dump - refuse was covered with burnt sand from iron foundry across river.
Site was leased to Steuben County for 99 years or until such time as site could no longer be used as a land fill. County assumed any liability associated with site.
Municipal GW wells located ~1 mile from site.
Motel has well on other side of raised expressway embankment. Houses along Canada Rd. have private water wells.
16:48 left site

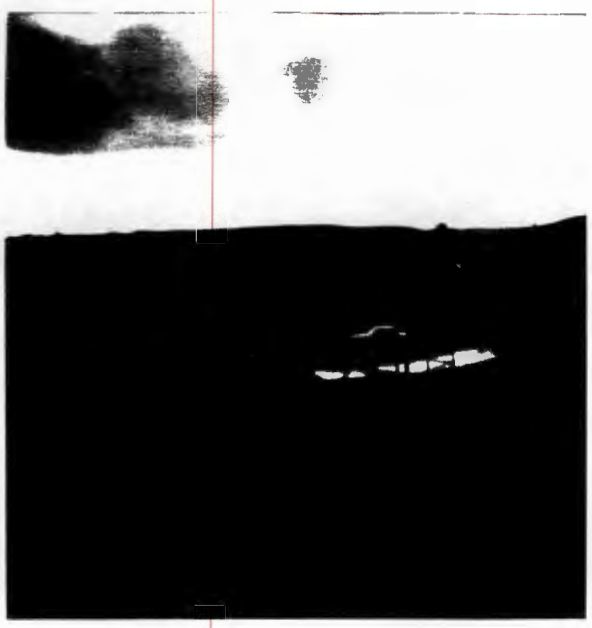
Return to Erwin Town Land fill Site 10/12/88
Ken Shisler - Recra
16:30 Arrive at site
Weather Conditions: Intermittent Clouds, Rain, and Sunshine Temp: high 30's moderate wind
Photos 1 Facing S60°W from spillway control atop levee Sewage treatment plant in foreground
2 " N77°W at utility pole - Sewage Treatment Plant in foreground
3 " N23°E (180° from Photo 1) across Chocton R.
4 " S on Canada Rd.
17:42 leave site + Exit Locked Gate / call Police - Interview Sgt. McCann.

Continued on Page

Read and Understood By

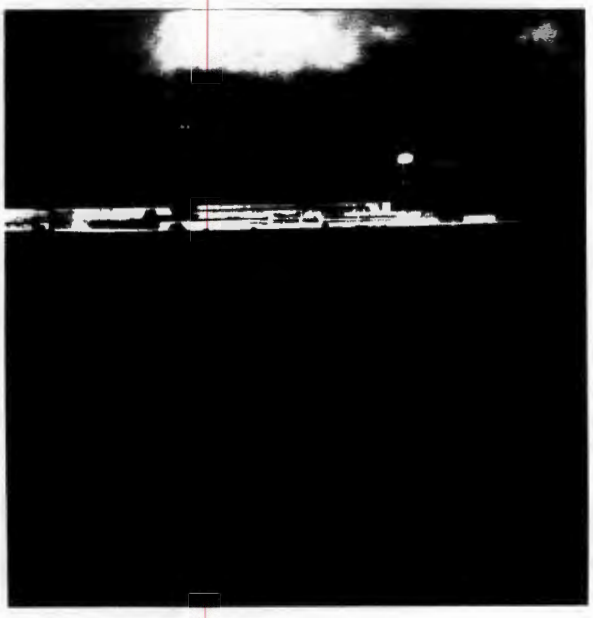
RQ1

Signed Date Signed Date



Facing S60°W from spillway control

Facing N77°W at utility pole



Facing N23°E across Cohocton River

Facing South on Canada Road

ERWIN TOWN LANDFILL SITE
NYSDEC ID #851003
SITE RECONNAISSANCE 10/11/88 and 10/12/88

R92

REFERENCE 22

1157.6

RECRA ENVIRONMENTAL, INC.

MAR 24 1989

Chemical Waste Analysis, Prevention and Control

March 20, 1989

Mr. David DuPont
District Conservationist
Steuben Co. Soil & Water Conservation District
3 Pulteney Square E
Bath, NY 14810

Dear Mr. DuPont:

This letter serves to confirm information which you provided by telephone on March 16, 1989 in response to my written request dated March 9, 1989, regarding our current investigation of the Erwin Town Landfill site. The following information was provided:

- There is no land irrigated by either groundwater wells within a 3-mile radius of the site or surface water intakes within 3 miles downstream (or 1 mile for static water bodies) to the best of your knowledge.

- The distance to agricultural land, and also prime agricultural land, in production within the past 5 years is 2,000 feet (northwest of the site).

We would appreciate if you would review this information, note any necessary corrections and return a signed and dated copy to indicate your concurrence. Again, thank you for your assistance and prompt response.

Sincerely,

RECRA ENVIRONMENTAL, INC.

Linda J. Clark

Linda J. Clark
Project Geologist

I agree with the information as it is presented.

David P. DuPont
David DuPont

3/22/89
Date

REFERENCE 23

Town of Erwin

PAINTED POST, N.Y. 14870
LYNN J. MORSE, SUPERVISOR
(607) 962-7021

March 20, 1989

Recra Environmental, Inc.
Audubon Business Centre
10 Hazelwood Drive, Suite No. 106
Amherst, New York 14150

ATTENTION: LINDA CLARK

Dear Ms. Clark:

This letter covers a print of the Erwin Landfill which we discussed on March 15, 1989.

It is rather primitive. Hopefully you will be able to get the height dimensions you are seeking.

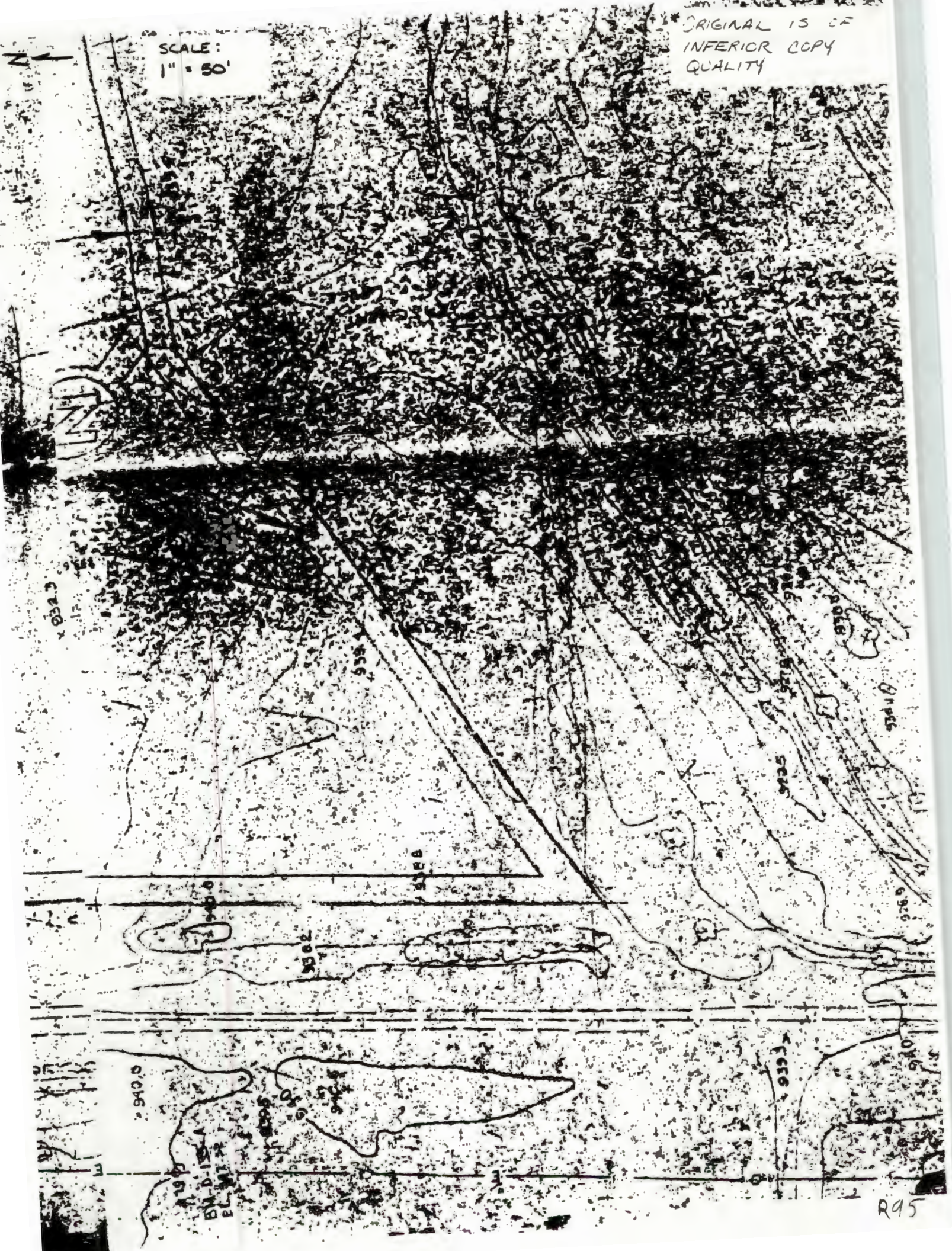
Please advise if we can be of any further assistance.

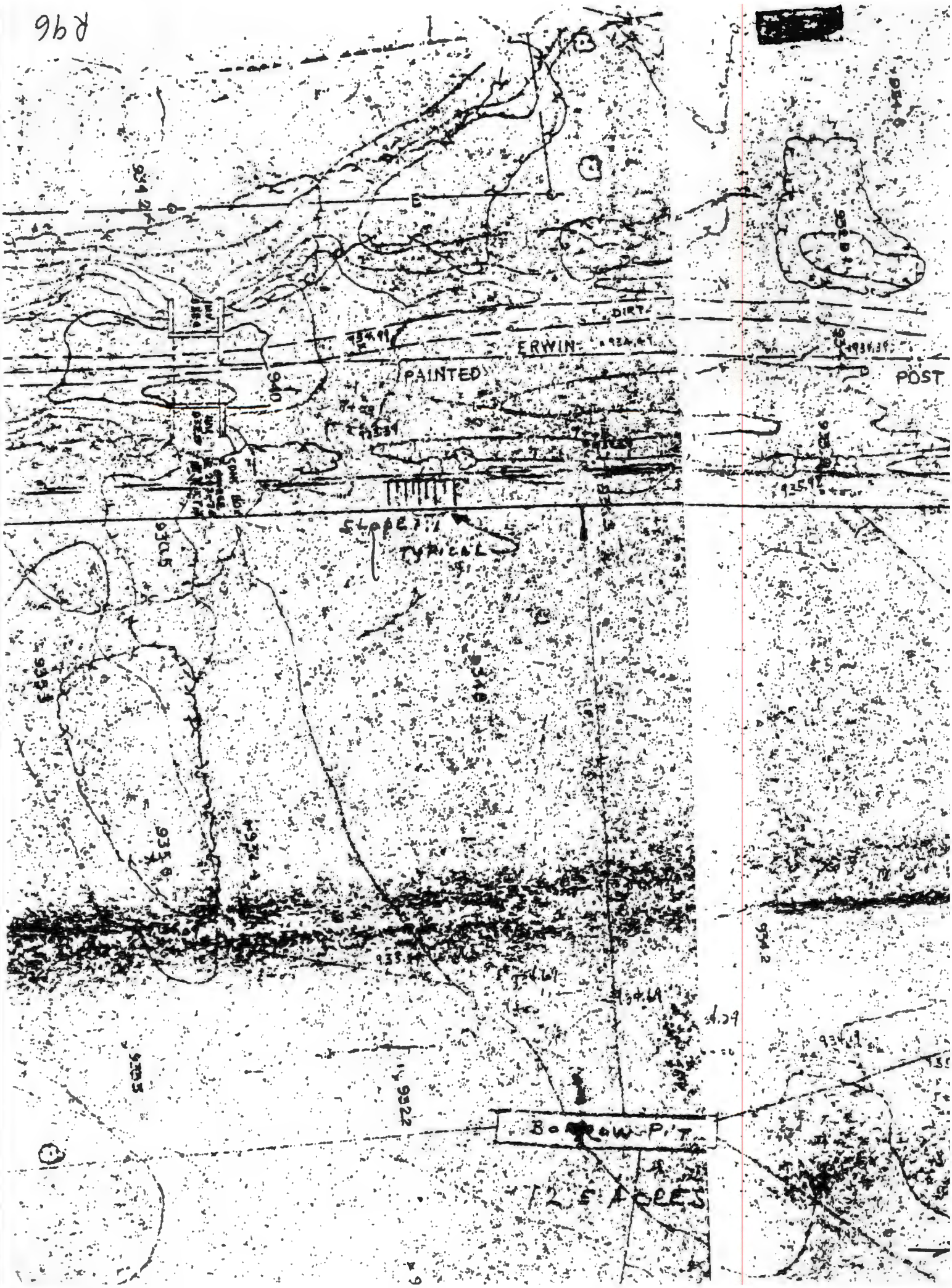
Very truly yours,
TOWN OF ERWIN

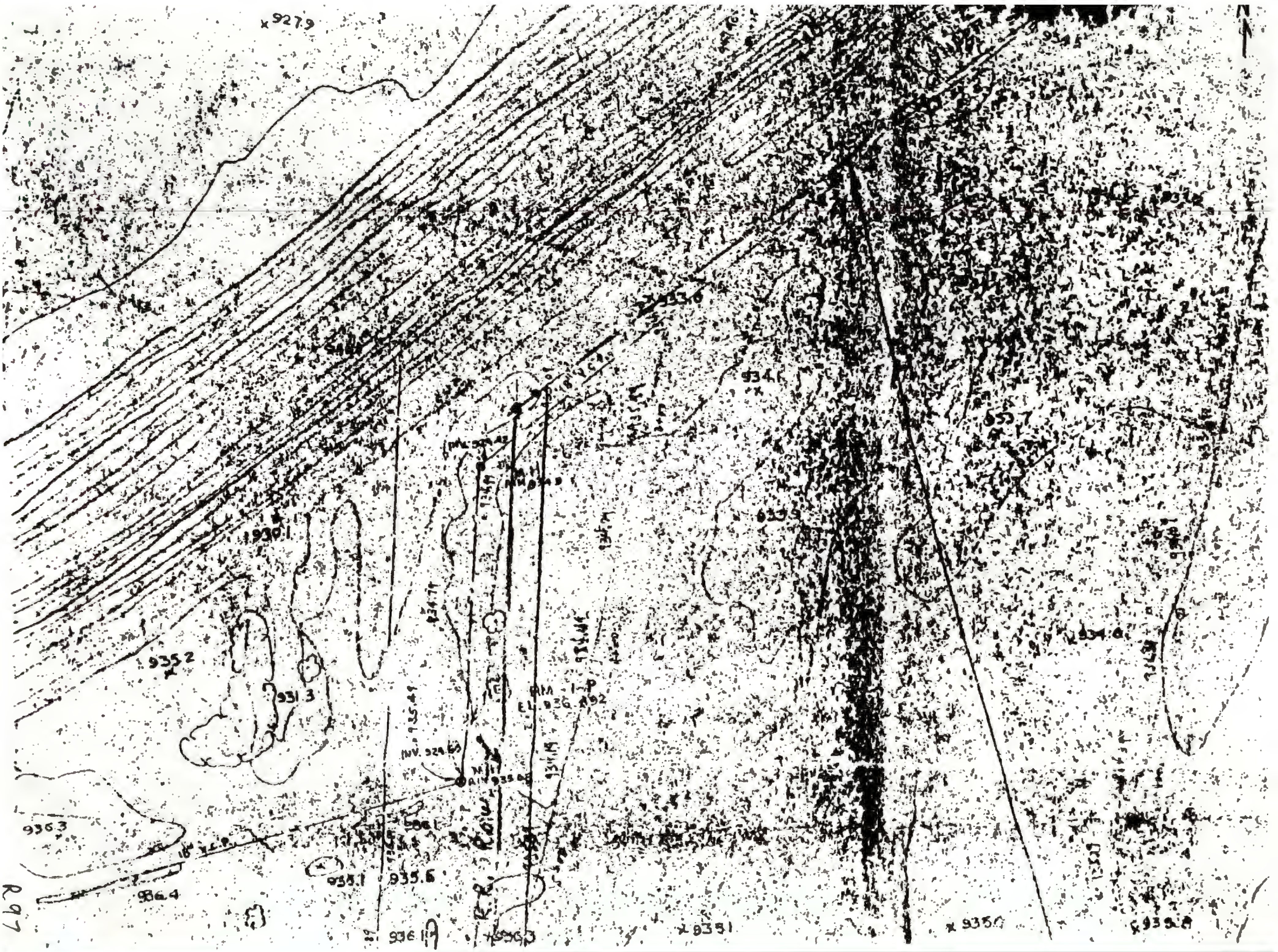
Lynn J. Morse
Supervisor

ljm/bt

R94

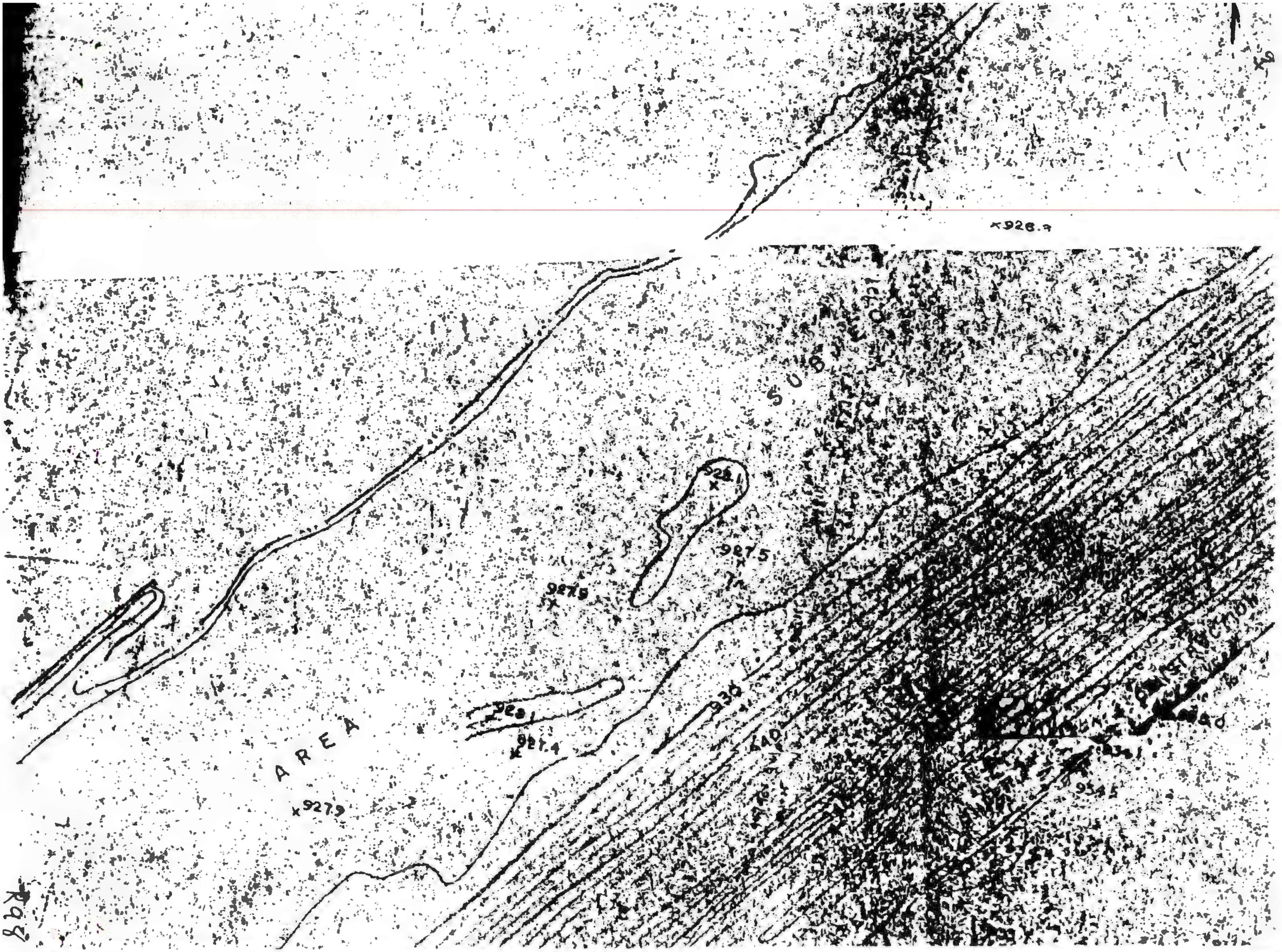

SCALE:
1" = 50'
N
ORIGINAL IS OF INFERIOR COPY QUALITY
R95

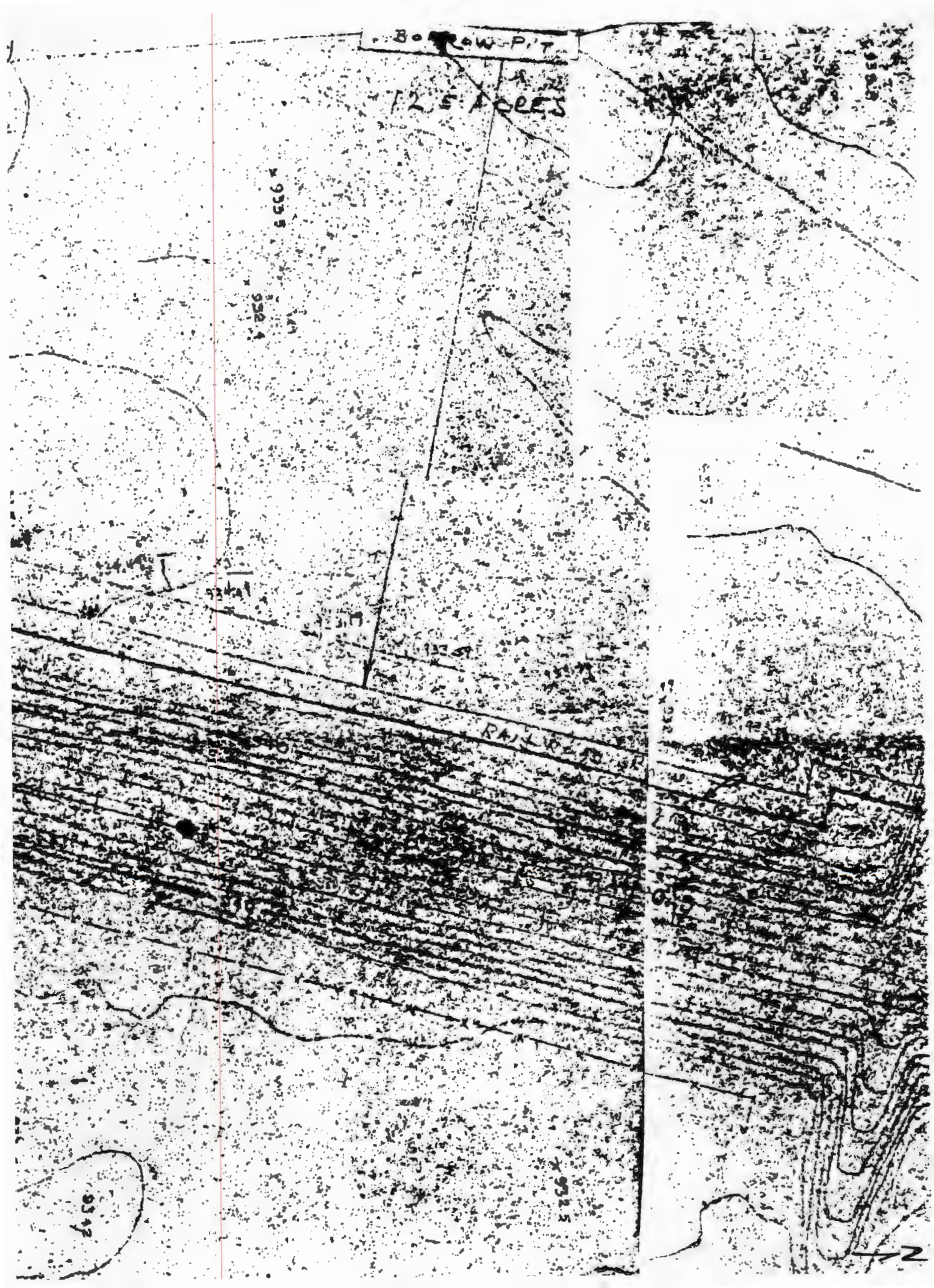

ERWIN
PAINTED
POST
DIRT
SLOPE 1:1
TYPICAL
BORROW PIT
12.5 ACRES

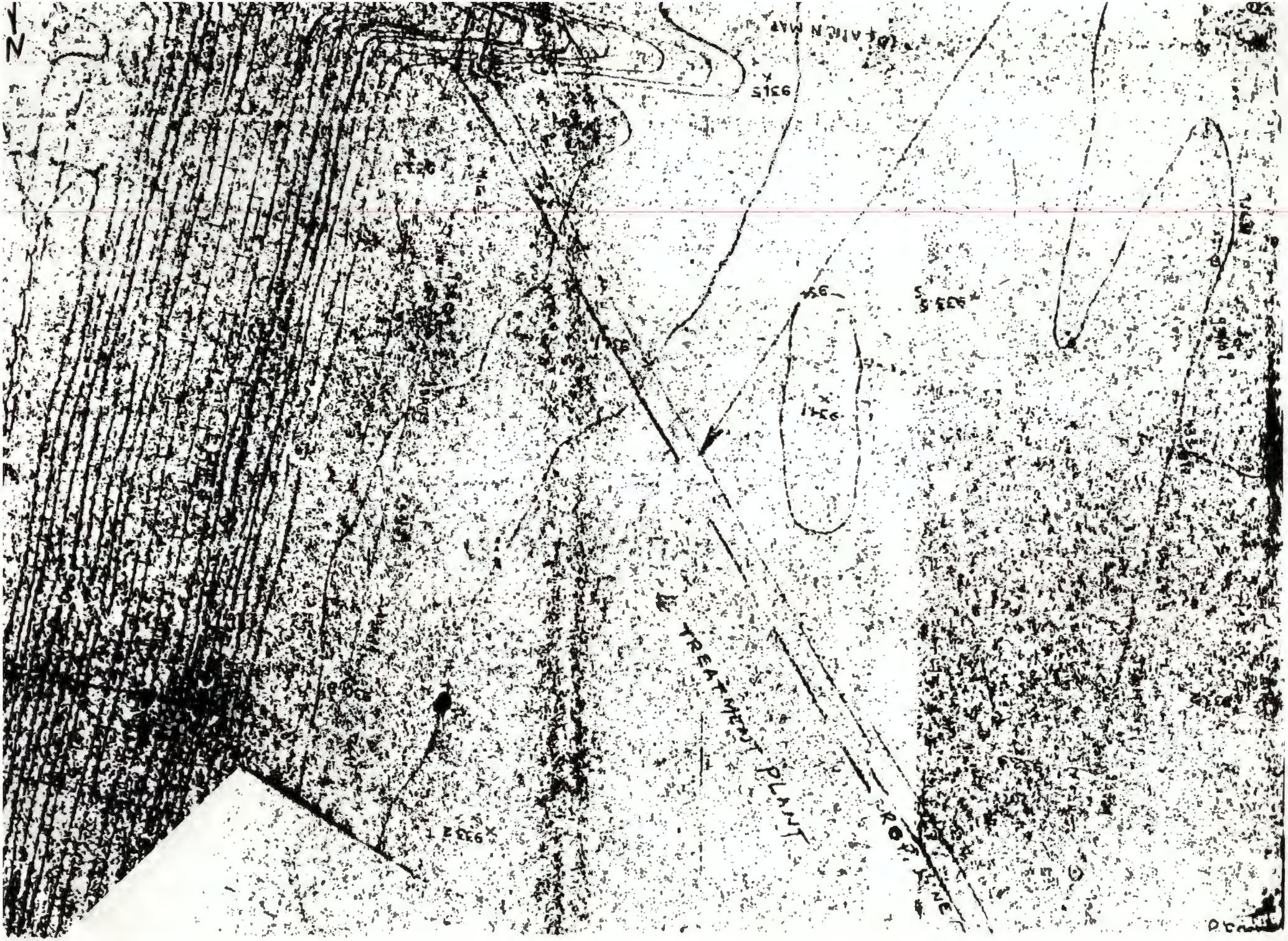


x927.9
933.6
934.6
933.7
930.1
935.2
931.3
BM 1-P
EL. 936.892
934.6
936.3
936.4
935.1
935.6
936.1
x935.1
x935.0
x935.8

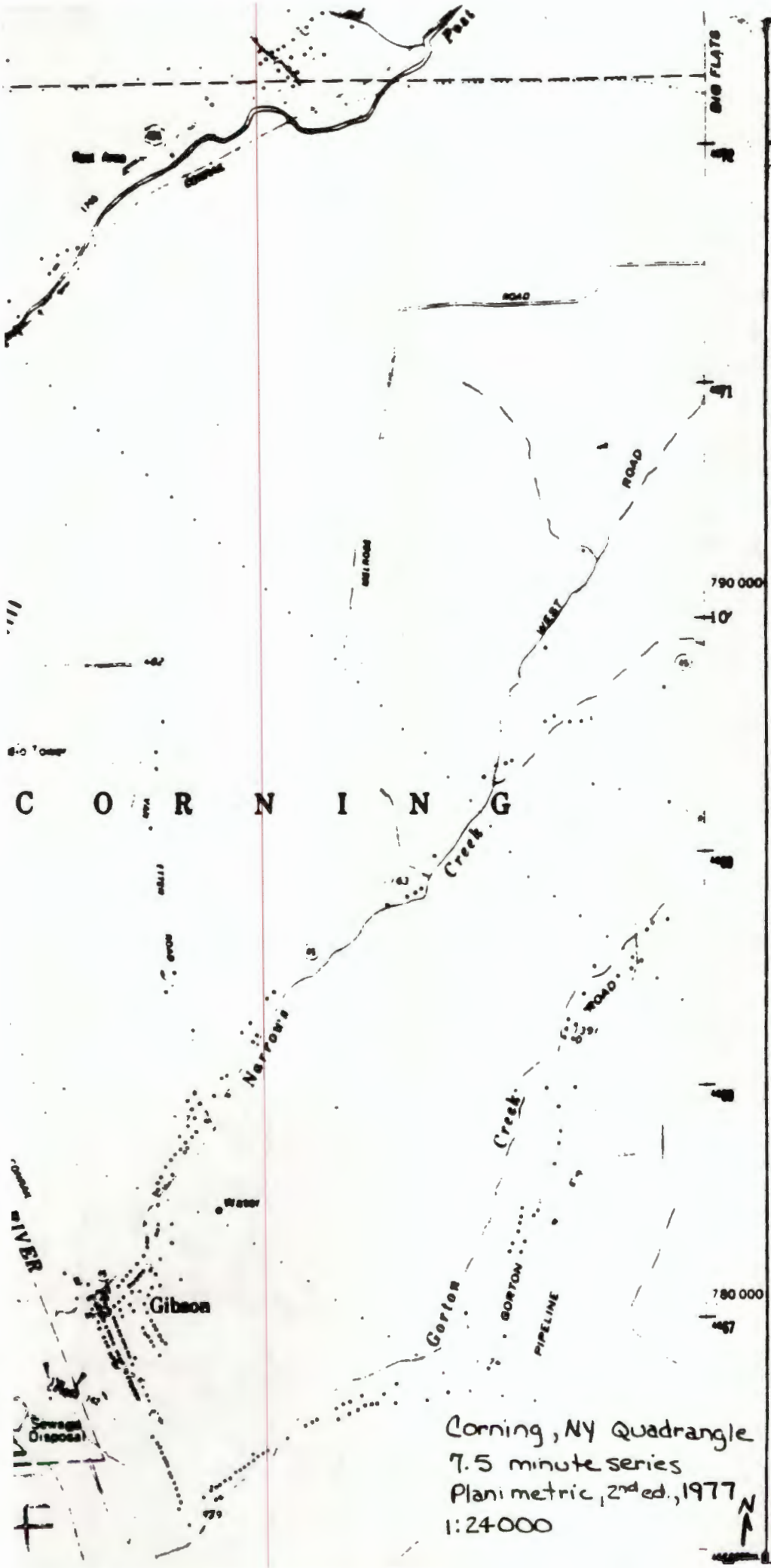
R97


×926.9
SUB
928.1
927.5
927.9
930
923
927.4
AREA
×927.9
934.5
R98


BORROW PIT
125 FEET
RAILROAD


N
TREATMENT PLANT
ROW LINE

REFERENCE 24



[redacted] Wetlands Map

[redacted] County

This map was promulgated, pursuant to Article 24 of the Environmental Conservation Law (The Freshwater Wetlands Act) on [redacted] by the Commissioner of New York State Department of Environmental Conservation.

LEGEND:

- Approximate wetland boundary
- U — Upland inclusion
- AA-00 — Wetland identification code

NOTES:

This map indicates the approximate location of the actual boundaries of wetlands regulated according to the Freshwater Wetlands Act.

Map information other than the wetland boundaries was prepared by the New York State Department of Transportation and the United States Geological Survey. The locational information provided on the map is for reference only. Marsh symbols do not necessarily indicate the location of a regulated wetland.

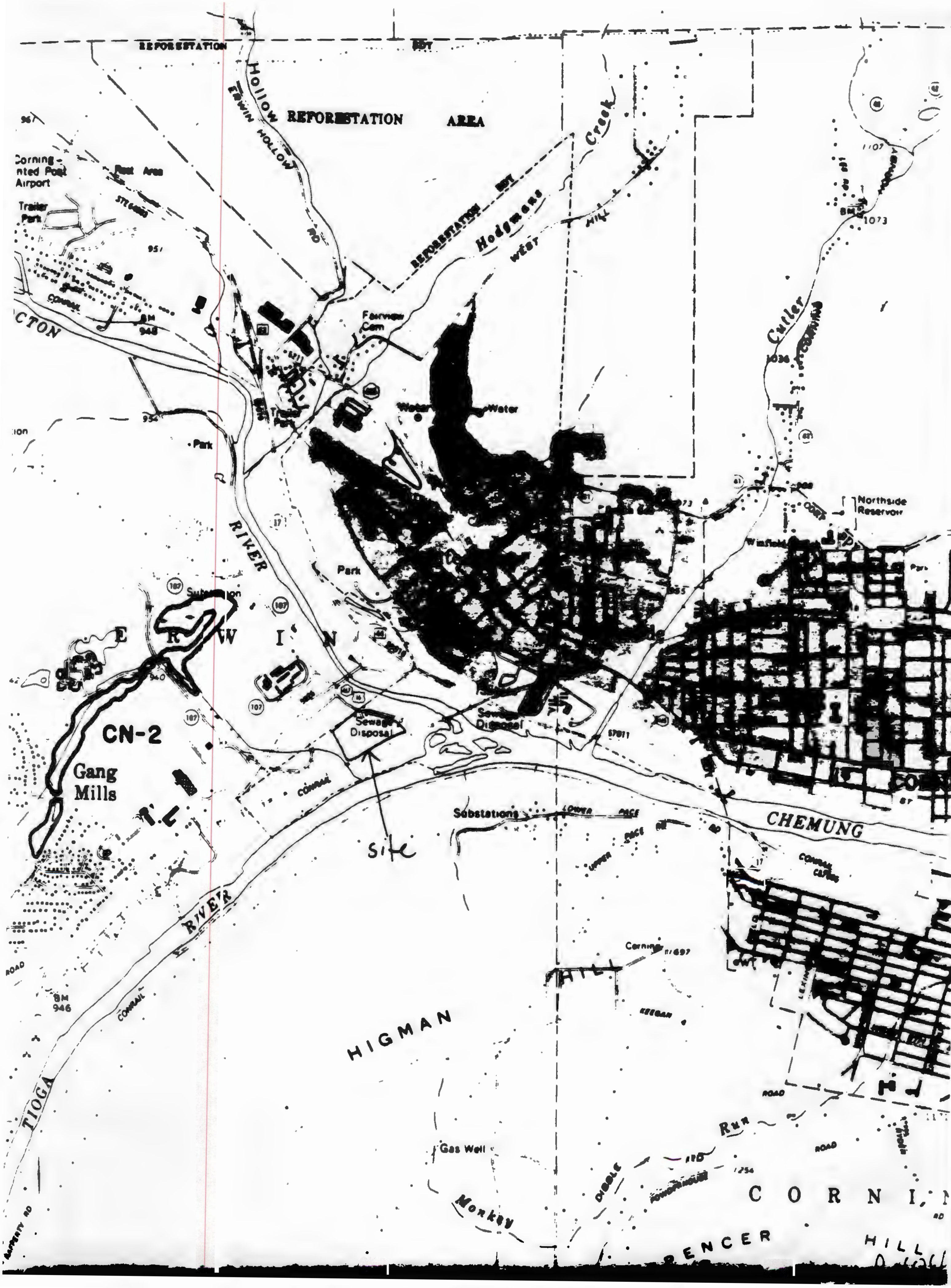
Adjacent areas of the regulated wetlands are those areas within 100 feet of the boundary of the wetland. These areas are subject to regulation pursuant to the Freshwater Wetlands Act but are not delineated on this map. An adjacent area may be extended by special order of the Commissioner of the New York State Department of Environmental Conservation or the local regulatory authority.

Copies of Freshwater Wetlands Maps are available from the regional offices of the Department of Environmental Conservation. Maps are available for inspection at these offices and local government clerk's offices.

REVISIONS

Date	Wetland #	Description of change

R103


REFORESTATION
REFORESTATION AREA
Hollow
ERWIN HOLLOW
Corning-
nted Post
Airport
Rest Area
Trailer
Park
Fairview
Cem
Water
Water
Creek
Hodgmans
WEST
HILL
Culler
Northside
Reservoir
Winfield
Park
RIVER
Park
E R W I N
CN-2
Gang
Mills
Sewage
Disposal
Sewage
Disposal
Substations
CHEMUNG
site
RIVER
TIOGA
HIGMAN
HILL
Gas Well
Monkey
Run
C O R N I
ENCER
HILL
ROAD
CONRAIL

REFERENCE 25

New York State Department of Environmental Conservation
6274 East Avon-Lima Road, Avon, NY 14414
TELEPHONE: (716)226-2466 OR 624-3350

DEC 12 1988

Thomas C. Jorling
Commissioner

Peter J. Bush
Regional Director

December 8, 1988

Jim Stachowski
Recra Environmental, Inc.
Audubon Business Centre
10 Hazelwood Drive, Suite #106
Amherst, NY 14150

Dear Jim:

As per your telephone request, I have provided the information regarding the proximity of Endangered Species and Critical Habitats to the following sites.

Site	Endangered Species	Critical Habitats
Foster Wheeler 826001	1/4 - 1/2 mile	< 1/4 mile
Ontario Co. LF 835004	> 1 mile	> 1 mile
Erwin LF 851003	> 1 mile	> 1 mile

This information is from the Natural Heritage Program, March 1988.

Please contact me should you have any further questions.

Very Truly Yours,

Todd M. Caffoe

Todd M. Caffoe
Division of Hazardous
Waste Remediation

12/11/89 -
Phone conversation with Larry Brown (NYSDEC Fish + Wildlife Resources - 518-439-7486): "Natural Heritage Program" includes Federally designated endangered species and natural wildlife refuges

R105

REFERENCE 26

CHARACTERISTICS OF THE POPULATION

Number of Inhabitants

NEW YORK

Census of Population

U.S. Department of Commerce
BUREAU OF THE CENSUS

Table 5. Population of Places: 1960 to 1980

[For changes in boundaries of incorporated places since 1970, see table 4. For meaning of symbols, see introduction]

Incorporated Places Census Designated Places	Counties	1980	1970	1960
Adams village	Jefferson	1 701	1 951	1 914
Adams Center (CDP)	Jefferson	1 519	...	...
Addison village	Steuben	2 028	2 104	2 185
Afton village	Chenango	982	1 064	956
Akron village	Erie	2 971	2 863	2 841
Albany city	Albany	101 727	115 781	129 726
Albertson (CDP)	Nassau	5 561	6 825	...
Albion village	Orleans	4 897	5 122	5 182
Alden village	Erie	2 488	2 651	2 042
Alexander village	Genesee	483	474	335
Alexandria Bay village	Jefferson	1 265	1 440	1 583
Alfred village	Allegany	4 967	3 804	2 807
Allegany village	Cattaraugus	2 078	2 050	2 064
Almond village	Total	568	658	696
	Allegany (pt. in)	529	627	665
	Steuben (pt. in)	39	31	31
Altamont village	Albany	1 292	1 561	1 365
Altmar village	Oswego	347	448	277
Amagansett (CDP)	Suffolk	2 188	...	...
Amenia (CDP)	Dutchess	1 183	1 157	...
Ames village	Montgomery	224	198	162
Amityville village	Suffolk	9 076	9 794	8 318
Amsterdam city	Montgomery	21 872	25 524	28 772
Andes village	Delaware	372	353	399
Andover village	Allegany	1 120	1 214	1 247
Angelica village	Allegany	982	948	898
Angola village	Erie	2 292	2 676	2 499
Angola on the Lake (CDP)	Erie	1 907	1 573	...
Antwerp village	Jefferson	749	872	881
Apalachin (CDP)	Tioga	1 227	1 233	...
Arcade village	Wyoming	2 052	1 972	1 930
Ardsley village	Westchester	4 183	4 470	3 991
Argyle village	Washington	320	392	355
Arkport village	Steuben	811	984	837
Arlington (CDP)	Dutchess	11 305	11 203	8 317
Armonk (CDP)	Westchester	2 238	...	...
Asharoken village	Suffolk	635	540	253
Athens village	Greene	1 738	1 718	1 754
Atlantic Beach village	Nassau	1 775	1 640	...
Attica village	Total	2 659	2 911	2 758
	Genesee (pt. in)	16	2	–
	Wyoming (pt. in)	2 643	2 909	2 758
Auburn city	Cayuga	32 548	34 599	35 249
Aurora village	Cayuga	926	1 072	834
Averill Park (CDP)	Rensselaer	1 337	1 471	...
Avoca village	Steuben	1 144	1 153	1 086
Avon village	Livingston	3 006	3 260	2 772
Babylon village	Suffolk	12 388	12 897	11 062
Bainbridge village	Chenango	1 603	1 674	1 712
Baldwin (CDP)	Nassau	31 630	34 525	30 204
Baldwinsville village	Onondaga	6 446	6 298	5 985
Ballston Spa village	Saratoga	4 711	4 968	4 991
Balmville (CDP)	Orange	2 919	3 214	1 538
Barker village	Niagara	535	567	528
Barneveld village	Oneida	396	423	363
Batavia city	Genesee	16 703	17 338	18 210
Bath village	Steuben	6 042	6 053	6 166
Baxter Estates village	Nassau	911	1 026	932
Bayberry–Lynnfield Meadows (CDP)	Onondaga	14 813	...	...
Bayport (CDP)	Suffolk	9 282	8 232	...
Bay Shore (CDP)	Suffolk	10 784	11 119	...
Bayville village	Nassau	7 034	6 147	3 962
Beacon city	Dutchess	12 937	13 255	13 922
Beaverdam Lake (CDP)	Orange	1 324	...	...
Bedford (CDP)	Westchester	1 633	...	...
Bellerose village	Nassau	1 187	1 136	1 083
Belle Terre village	Suffolk	826	678	295
Bellmore (CDP)	Nassau	18 106	18 431	12 784
Bellport village	Suffolk	2 809	3 046	2 461
Belmont village	Allegany	1 024	1 102	1 146
Bemus Point village	Chautauqua	444	487	443
Bergen village	Genesee	976	1 018	964
Berkshire (CDP)	Fulton	1 095	...	...
Bethpage (CDP)	Nassau	16 840	18 555	...
Big Flats (CDP)	Chemung	2 892	2 509	...
Billington Heights (CDP)	Erie	1 782	1 278	...
Binghamton city	Broome	55 860	64 123	75 941
Black River village	Jefferson	1 384	1 307	1 237
Blasdell village	Erie	3 288	3 910	3 909
Bloomingburg village	Sullivan	338	323	303
Bloomingdale village	Essex	608	536	490
Bloomingburg Grove (CDP)	Orange	1 151	...	...
Bloomingrun–Hickory Bush (CDP)	Ulster	1 002	...	...
Bohemia (CDP)	Suffolk	9 308	8 926	...
Bolivar village	Allegany	1 345	1 379	1 405
Boonville village	Oneida	2 344	2 488	2 403
Boyden Bay (CDP)	Onondaga	1 160	1 191	...
Brasher Falls–Winthrop (CDP)	St. Lawrence	1 454	...	...
Brentwood (CDP)	Suffolk	44 321	28 327	15 387
Brewerton (CDP)	Total	2 472	1 985	...
	Onondaga (pt. in)	1 586	1 201	...
	Oswego (pt. in)	886	784	...
Brewster village	Putnam	1 650	1 638	1 716
Brewster Heights (CDP)	Putnam	1 054	1 265	...
Brewster Hill (CDP)	Putnam	2 371	1 745	...
Briarcliff Manor village	Westchester	7 115	6 521	5 105
Bridgehampton (CDP)	Suffolk	1 941	...	...
Bridgewater village	Oneida	578	601	373
Brighton (CDP)	Monroe	35 776	...	...
Brightwaters village	Suffolk	3 286	3 308	3 [illegible]
Brinckerhoff (CDP)	Dutchess	3 030	2 294	...
Broadalbin village	Fulton	1 415	1 452	1 438
Brockport village	Monroe	9 776	7 978	5 256
Brockway (CDP)	Dutchess	1 301	...	...
Bracton village	Chautauqua	1 416	1 370	1 [illegible]
Bronxville village	Westchester	6 267	6 674	6 [illegible]
Brookville village	Nassau	3 290	3 212	1 468
Brownville village	Jefferson	1 099	1 187	1 282
Brushton village	Franklin	577	547	553
Buchanan village	Westchester	2 241	2 [illegible]	2 319
Buffalo city	Erie	357 870	462 768	532 759
Burdett village	Schuyler	410	454	420
Burke village	Franklin	226	237	273
Cairo (CDP)	Greene	1 281	...	...
Caledonia village	Livingston	2 188	2 327	1 917
Calverton–Roanoke (CDP)	Suffolk	4 952	...	...
Cambridge village	Washington	1 820	1 769	1 748
Camden village	Oneida	2 667	2 936	2 694
Camillus village	Onondaga	1 298	1 534	1 416
Canajoharie village	Montgomery	2 412	2 586	2 581
Canandaigua city	Ontario	10 419	10 488	9 270
Canaseraga village	Allegany	700	750	730
Canastota village	Madison	4 773	5 033	4 896
Candor village	Tioga	917	939	956
Carnstea village	Steuben	2 679	2 772	2 731
Canton village	St. Lawrence	7 055	6 398	5 046
Cape Vincent village	Jefferson	785	820	770
Carle Place (CDP)	Nassau	5 470	6 326	...
Carthage village	Jefferson	3 643	3 889	4 216
Cassadaga village	Chautauqua	821	905	820
Castile village	Wyoming	1 135	1 330	1 [illegible]
Castleton-on-Hudson village	Rensselaer	1 627	1 730	1 752
Castorland village	Lewis	277	327	321
Cato village	Cayuga	475	601	476
Catskill village	Greene	4 718	5 317	5 825
Cattaraugus village	Cattaraugus	1 200	1 200	1 258
Cayuga village	Cayuga	604	593	621
Cayuga Heights village	Tompkins	3 170	3 130	2 788
Cazenovia village	Madison	2 599	3 031	2 584
Cedarhurst village	Nassau	6 162	6 941	6 954
Celoron village	Chautauqua	1 405	1 456	1 507
Centereach (CDP)	Suffolk	30 136	9 427	3 524
Center Moriches (CDP)	Suffolk	5 703	3 802	2 521
Centerport (CDP)	Suffolk	6 576	...	...
Central Islip (CDP)	Suffolk	19 734	36 391	...
Central Square village	Oswego	1 418	1 298	935
Central Valley (CDP)	Orange	1 705	...	...
Centre Island village	Nassau	378	374	270
Champlain village	Clinton	1 410	1 426	1 549
Champlain Park (CDP)	Clinton	1 051	1 207	...
Chateaugay village	Franklin	869	976	1 097
Chatham village	Columbia	2 001	2 239	2 426
Chaumont village	Jefferson	620	567	523
Cheektowaga (CDP)	Erie	92 145	...	...
Cherry Creek village	Chautauqua	677	658	569
Cherry Valley village	Otsego	684	661	568
Chester village	Orange	1 910	1 627	1 492
Chittenango village	Madison	4 290	3 605	3 [illegible]
Churchville village	Monroe	1 399	1 065	1 303
Clarence Center (CDP)	Erie	1 300	1 332	...
Clark Mills (CDP)	Oneida	1 412	1 206	1 148
Cleverack–Red Mills (CDP)	Columbia	1 217	...	...
Clayton village	Jefferson	1 816	1 970	1 996
Clayville village	Oneida	478	535	586
Cleveland village	Oswego	855	821	732
Clifton Knolls (CDP)	Saratoga	5 636	5 771	...
Clifton Springs village	Ontario	2 039	2 058	1 953
Clinton village	Oneida	2 107	2 271	1 855
Clintondale (CDP)	Ulster	1 193	...	...
Clyde village	Wayne	2 491	2 828	2 593
Cobleskill village	Schoharie	5 272	4 368	3 471
Cohocton village	Steuben	902	897	929
Cohoes city	Albany	18 144	18 653	20 [illegible]
Cold Brook village	Herkimer	402	413	372
Coldenham (CDP)	Orange	1 064	...	...
Colden Hill (CDP)	Orange	1 741	1 688	...
Cold Spring village	Putnam	2 161	2 083	2 083
Cold Spring Harbor (CDP)	Suffolk	5 336	5 450	1 705
Colonie village	Albany	8 869	8 701	6 992
Commack (CDP)	Suffolk	34 719	24 138	9 613
Congers (CDP)	Rockland	7 123	5 928	...
Constableville village	Lewis	330	347	439
Constantia (CDP)	Oswego	1 256	...	...
Cooperstown village	Otsego	2 342	2 403	2 553
Copenhagen village	Lewis	656	734	673
Copiague (CDP)	Suffolk	20 132	19 632	14 081
Coram (CDP)	Suffolk	24 752	...	...
Corfu village	Genesee	689	722	616
Corinth village	Saratoga	2 702	3 267	3 193
Corning city	Steuben	12 953	15 792	17 385
Cornwall on Hudson village	Orange	3 164	3 131	2 785
Cortland city	Cortland	20 138	19 621	19 181
Cortland West (CDP)	Cortland	1 149	...	...

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Table 5. **Population of Places: 1960 to 1980**—Con.

(For changes in boundaries of incorporated places since 1970, see table 4. For meaning of symbols, see introduction)

Incorporated Places Census Designated Places	Counties	1980	1970	1960
Nassau Lake (CDP)	Rensselaer	1 304	...	...
Nelliston village	Montgomery	691	716	729
Nelsonville village	Putnam	567	583	555
Neoconset (CDP)	Suffolk	10 706	10 048	1 964
Newark village	Wayne	10 017	11 644	12 868
Newark Valley village	Tioga	1 190	1 286	1 234
New Berlin village	Chenango	1 392	1 369	1 262
Newburgh city	Orange	23 438	26 219	30 979
Newburgh West (CDP)	Orange	1 381	...	...
New Cassel (CDP)	Nassau	9 635	8 721	...
New City (CDP)	Rockland	35 859	27 344	...
Newfane (CDP)	Niagara	3 120	2 588	1 423
New Hackensack (CDP)	Dutchess	1 532	1 111	...
New Hampton–Dawes (CDP)	Orange	1 385	...	...
New Hartford village	Oneida	2 313	2 433	2 468
New Hyde Park village	Nassau	9 801	10 116	10 808
New Paltz village	Ulster	4 938	6 058	3 041
Newport village	Herkimer	746	908	827
New Rochelle city	Westchester	70 794	75 385	76 812
New Square village	Rockland	1 750	1 156	...
New Windsor (CDP)	Orange	7 812	8 803	4 041
New Windsor West (CDP)	Orange	2 120	...	...
New York city	Total	7 071 639	7895563	7 781 984
	Bronx (pt. in)	1 168 972	1 471 701	1 424 815
	Kings (pt. in)	2 230 936	2 602 012	2 627 319
	New York (pt. in)	1 428 285	1 539 233	1 698 281
	Queens (pt. in)	1 891 325	1987174	1 809 578
	Richmond (pt. in)	352 121	295 443	221 991
New York Mills village	Oneida	3 549	3 805	3 788
Niagara Falls city	Niagara	71 384	85 615	102 394
Niagara Town (CDP)	Niagara	9 648	...	...
Nichols village	Tioga	613	638	663
Niskayuna (CDP)	Schenectady	5 223	6 186	...
Nissequogue village	Suffolk	1 462	1 120	332
Niverville (CDP)	Columbia	1 856	...	...
Norfolk (CDP)	St. Lawrence	1 599	1 379	1 353
North Amityville (CDP)	Suffolk	13 140	11 936	...
North Babylon (CDP)	Suffolk	19 019	39 526	...
North Ballston Spa (CDP)	Saratoga	1 350	1 296	...
North Bay Shore (CDP)	Suffolk	35 020	...	...
North Baldwin (CDP)	Nassau	20 630	22 893	19 639
North Bellport (CDP)	Suffolk	7 432	5 903	...
North Boston (CDP)	Erie	2 743	1 635	...
North Collins village	Erie	1 496	1 675	1 574
North Great River (CDP)	Suffolk	11 416	12 080	...
North Haven village	Suffolk	738	694	450
North Hills village	Nassau	1 587	295	359
North Hornell village	Steuben	813	919	917
North Hudson Falls (CDP)	Washington	2 309	...	...
North Lindenhurst (CDP)	Suffolk	11 511	11 117	...
North Massapequa (CDP)	Nassau	21 385	23 123	...
North Merrick (CDP)	Nassau	12 848	13 650	12 976
North New Hyde Park (CDP)	Nassau	15 114	18 154	17 929
North Patchogue (CDP)	Suffolk	7 126	5 232	...
Northport village	Suffolk	7 651	7 494	5 972
North Sea (CDP)	Suffolk	1 171	...	...
North Syracuse village	Onondaga	7 970	8 687	7 412
North Tarrytown village	Westchester	7 994	8 334	8 818
North Tonawanda city	Niagara	35 760	36 012	34 757
North Valley Stream (CDP)	Nassau	14 530	14 881	17 239
Northville village	Fulton	1 304	1 192	1 156
Northville (CDP)	Suffolk	2 583	...	...
North Wantagh (CDP)	Nassau	12 677	15 053	...
Northwest Harbor (CDP)	Suffolk	2 459	...	...
Norwich city	Chenango	8 082	8 843	9 175
Norwood village	St. Lawrence	1 902	2 098	2 200
Noyack (CDP)	Suffolk	2 657	...	...
Nunda village	Livingston	1 149	1 254	1 224
Nyack village	Rockland	6 488	6 659	6 062
Oakdale (CDP)	Suffolk	8 080	7 334	...
Oakfield village	Genesee	1 791	1 964	2 070
Ocean Beach village	Suffolk	155	109	111
Oceanside (CDP)	Nassau	33 439	35 372	30 488
Odessa village	Schuyler	613	606	573
Ogdensburg city	St. Lawrence	12 375	14 554	16 122
Olcott (CDP)	Niagara	1 571	1 592	1 215
Old Bethpage (CDP)	Nassau	6 215	7 084	...
Old Brookville village	Nassau	1 574	1 785	1 126
Old Field village	Suffolk	829	812	373
Old Forge (CDP)	Herkimer	1 061	...	...
Old Westbury village	Nassau	3 277	2 667	2 064
Olean city	Cattaraugus	18 207	19 149	21 868
Oneida city	Madison	10 810	11 658	11 677
Oneida Castle village	Oneida	751	788	754
Oneonta city	Otsego	14 933	16 030	13 412
Orange Lake (CDP)	Orange	5 120	4 348	...
Orchard Park village	Erie	3 671	3 732	3 278
Oriskany village	Oneida	1 680	1 627	1 580
Oriskany Falls village	Oneida	802	927	972
Ossining village	Westchester	20 196	21 689	18 663
Oswego city	Oswego	19 793	20 913	22 155
Otego village	Otsego	1 089	956	875
Otisville village	Orange	953	933	896
Otto village	Cattaraugus	666	779	789
Owego village	Tioga	4 366	5 153	5 417
Oxford village	Chenango	1 765	1 944	1 871
Oyster Bay (CDP)	Nassau	6 497	6 822	...
Oyster Bay Cove village	Nassau	1 799	1 320	988
Painted Post village	Steuben	2 196	2 496	2 570
Palatine Bridge village	Montgomery	604	601	578
Palmyra village	Wayne	3 729	3 776	3 476
Panama village	Chautauqua	511	489	450
Parish village	Oswego	535	634	567
Patchogue village	Suffolk	11 291	11 582	8 838
Pawling village	Dutchess	1 996	1 914	1 734
Peach Lake (CDP)	Total	1 464	...	...
	Putnam (pt. in)	998	...	...
	Westchester (pt. in)	466	...	...
Pearl River (CDP)	Rockland	15 893	17 146	...
Peconic (CDP)	Suffolk	1 056	...	...
Peekskill city	Westchester	18 236	19 283	18 737
Pelham village	Westchester	6 848	2 076	1 964
Pelham Manor village	Westchester	6 130	6 673	6 114
Penn Yan village	Yates	5 242	5 293	5 770
Perry village	Wyoming	4 198	4 538	4 629
Perrysburg village	Cattaraugus	405	433	434
Peru (CDP)	Clinton	1 716	1 261	...
Phelps village	Ontario	2 004	1 989	1 887
Philadelphia village	Jefferson	855	858	868
Philmont village	Columbia	1 539	1 674	1 750
Phoenix village	Oswego	2 357	2 617	2 408
Piermont village	Rockland	2 269	2 386	1 906
Pike village	Wyoming	367	373	345
Pine Bush (CDP)	Orange	1 255	1 183	1 016
Pine Hill village	Ulster	216	247	180
Pine Plains (CDP)	Dutchess	1 303	...	...
Pitcher Hill (CDP)	Onondaga	6 063	...	...
Pittsford village	Monroe	1 568	1 755	1 749
Plainedge (CDP)	Nassau	9 629	10 759	21 973
Plainview (CDP)	Nassau	28 037	31 695	27 710
Plandome village	Nassau	1 503	1 593	1 379
Plandome Heights village	Nassau	963	1 032	1 025
Plandome Manor village	Nassau	883	835	705
Plattsburgh city	Clinton	21 057	18 715	20 172
Plattsburgh AFB (CDP)	Clinton	5 905	7 078	...
Plattsburgh West (CDP)	Clinton	1 210	...	...
Pleasant Valley (CDP)	Dutchess	1 255	1 372	...
Pleasantville village	Westchester	6 749	7 110	5 877
Poestenkill (CDP)	Rensselaer	1 031	...	...
Poland village	Herkimer	553	629	564
Pomona village	Rockland	2 421	1 792	...
Poquott village	Suffolk	588	427	295
Port Byron village	Cayuga	1 400	1 330	1 201
Port Chester village	Westchester	23 565	25 803	24 960
Port Dickinson village	Broome	1 974	2 132	2 295
Port Ewen (CDP)	Ulster	2 813	2 882	2 622
Port Henry village	Essex	1 450	1 532	1 767
Port Jefferson village	Suffolk	6 731	5 515	...
Port Jefferson Station (CDP)	Suffolk	17 009	7 403	1 041
Port Jervis city	Orange	8 699	8 852	9 268
Port Leyden village	Lewis	740	862	898
Portville village	Cattaraugus	1 136	1 304	1 336
Port Washington (CDP)	Nassau	14 521	15 923	15 657
Port Washington North village	Nassau	3 147	2 883	722
Potsdam village	St. Lawrence	10 635	10 303	7 765
Poughkeepsie city	Dutchess	29 757	32 029	38 330
Prospect village	Oneida	368	392	348
Pulaski village	Oswego	2 415	2 480	2 256
Quaqua village	Suffolk	966	865	692
Randolph village	Cattaraugus	1 398	1 498	1 414
Ransomville (CDP)	Niagara	1 401	1 034	...
Ravena village	Albany	3 091	2 797	2 410
Red Creek village	Wayne	645	626	689
Red Hook village	Dutchess	1 692	1 680	1 719
Red Oaks Mill (CDP)	Dutchess	5 236	3 919	...
Remsen village	Oneida	621	602	567
Remsenburg–Speonk (CDP)	Suffolk	1 868	...	...
Rensselaer city	Rensselaer	9 047	10 136	10 506
Rensselaer Falls village	St. Lawrence	360	332	375
Rhinebeck village	Dutchess	2 542	2 336	2 093
Richburg village	Allegany	494	482	493
Richfield Springs village	Otsego	1 561	1 540	1 630
Richmondville village	Schoharie	792	826	743
Richville village	St. Lawrence	336	334	292
Ridge (CDP)	Suffolk	8 977	...	...
Ripley (CDP)	Chautauqua	1 205	1 173	1 247
Riverhead (CDP)	Suffolk	6 339	7 585	5 830
Riverside village	Steuben	684	911	1 030
Riverside–Reeders (CDP)	Suffolk	5 400	...	...
Rochdale (CDP)	Dutchess	1 825	1 849	1 800
Rochester city	Monroe	241 741	295 011	318 611
Rockville Centre village	Nassau	25 412	27 444	26 355
Rocky Point (CDP)	Suffolk	7 012	...	...
Rensselaerville (CDP)	Albany	11 685	5 351	...
Rome city	Oneida	43 826	50 148	51 646
Urban part		42 205	47 655	...
Roosevelt (CDP)	Nassau	14 109	15 008	12 883
Rosendale Village (CDP)	Ulster	1 134	...	...
Roslyn village	Nassau	2 134	2 607	2 681
Roslyn Estates village	Nassau	1 292	1 420	1 289
Roslyn Harbor village	Nassau	1 129	1 125	925
Roslyn Heights (CDP)	Nassau	6 546	7 242	...
Rotterdam (CDP)	Schenectady	22 933	25 214	16 871
Rotterdam Junction (CDP)	Schenectady	1 010	...	...

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Table 5. **Population of Places: 1960 to 1980**—Con.

(For changes in boundaries of incorporated places since 1970, see table 4. For meaning of symbols, see introduction)

Incorporated Places Census Designated Places	Counties	1980	1970	1960
Round Lake village	Saratoga	791	886	...
Rouses Point village	Clinton	2 266	2 250	2 160
Ruby (CDP)	Ulster	1 059	...	...
Rushville village	Total	548	568	465
	Ontario (pt. in)	148	194	159
	Yates (pt. in)	400	374	306
Russell Gardens village	Nassau	1 263	1 207	1 156
Rye city	Westchester	15 083	15 869	14 225
Sackets Harbor village	Jefferson	1 017	1 202	1 279
Saddle Rock village	Nassau	921	895	1 109
Sag Harbor village	Suffolk	2 581	2 363	2 346
St Bonaventure (CDP)	Cattaraugus	2 587	...	...
St James (CDP)	Suffolk	12 122	10 500	3 524
St Johnsville village	Montgomery	1 974	2 089	2 196
Salamanca city	Cattaraugus	6 890	7 877	8 480
Salem village	Washington	959	1 025	1 076
Saltaire village	Suffolk	35	37	28
Sand Ridge (CDP)	Oswego	1 293	1 109	...
Sands Point village	Nassau	2 742	2 916	2 161
Sandy Creek village	Oswego	765	731	697
Saranac Lake village	Total	5 578	6 086	6 421
	Essex (pt. in)	1 462	1 665	1 780
	Franklin (pt. in)	4 116	4 421	4 641
Saratoga Springs city	Saratoga	23 906	18 845	16 630
Saugerties village	Ulster	3 882	4 190	4 286
Saugerties South (CDP)	Ulster	2 919	3 159	...
Savona village	Steuben	932	933	904
Sayville (CDP)	Suffolk	12 013	11 680	...
Scarsdale village	Westchester	17 650	19 229	17 968
Schaghticoke village	Rensselaer	677	860	720
Schenectady city	Schenectady	67 972	77 958	81 682
Schenevus village	Otsego	625	540	493
Schoharie village	Schoharie	1 016	1 125	1 168
Schuylerville village	Saratoga	1 256	1 402	1 361
Scarsdale (CDP)	Orange	7 352	2 119	...
Scotia village	Schenectady	7 280	7 370	7 625
Scottsville village	Monroe	1 789	1 967	1 863
Sea Cliff village	Nassau	5 344	5 890	5 669
Seaford (CDP)	Nassau	16 117	17 379	16 718
Selden (CDP)	Suffolk	17 259	11 613	1 604
Seneca Falls village	Seneca	7 446	7 794	7 439
Setauket-East Setauket (CDP)	Suffolk	10 176	...	...
Sharon Springs village	Schoharie	514	421	351
Shelter Island (CDP)	Suffolk	1 115	...	...
Sherburne village	Chenango	1 561	1 613	1 647
Sherman village	Chautauqua	775	769	873
Sherrill city	Oneida	2 830	2 986	2 922
Shenorock Hills (CDP)	Suffolk	2 344	...	...
Shirley (CDP)	Suffolk	18 072	16 157	...
Shoreham village	Suffolk	555	524	164
Shortsville village	Ontario	1 669	1 516	1 382
Sidney village	Delaware	4 861	4 789	5 157
Silver Creek village	Chautauqua	3 088	3 182	3 310
Silver Springs village	Wyoming	801	823	726
Sinclairville village	Chautauqua	772	772	726
Skaneateles village	Onondaga	2 789	3 055	2 921
Sloan village	Erie	4 529	5 216	5 803
Sloansburg village	Rockland	3 154	3 134	2 565
Smithtown (CDP)	Suffolk	30 906	...	...
Smyrna village	Chenango	225	247	286
Sodus village	Wayne	1 790	1 813	1 645
Sodus Point village	Wayne	1 334	1 172	868
Solvay village	Onondaga	7 140	8 280	8 732
Sound Beach (CDP)	Suffolk	8 071	...	...
Southampton village	Suffolk	4 000	4 904	4 582
South Corning village	Steuben	1 195	1 414	1 448
South Dayton village	Cattaraugus	661	688	696
South Fallsburg (CDP)	Sullivan	2 196	1 590	1 290
South Farmingdale (CDP)	Nassau	16 439	20 464	16 318
South Floral Park village	Nassau	1 490	1 032	1 090
South Glens Falls village	Saratoga	3 714	4 013	4 129
South Hill (CDP)	Tompkins	5 276	...	...
South Hudson Falls (CDP)	Washington	1 955	2 097	...
South Huntington (CDP)	Suffolk	14 854	9 115	7 084
South Lockport (CDP)	Niagara	3 346	1 341	...
South Nyack village	Rockland	3 602	3 435	3 113
Southold (CDP)	Suffolk	4 770	2 020	...
Southport (CDP)	Chemung	8 329	8 685	6 698
South Valley Stream (CDP)	Nassau	5 462	6 595	...
South Westbury (CDP)	Nassau	9 732	10 978	11 977
Spackenkill (CDP)	Dutchess	4 848	2 725	...
Sparrow Bush (CDP)	Orange	1 049	...	...
Speculator village	Hamilton	408	390	372
Spencer village	Tioga	863	854	767
Spencerport village	Monroe	3 436	2 929	2 461
Spring (CDP)	Suffolk	3 197	...	...
Spring Valley village	Rockland	20 537	18 112	6 538
Springville village	Erie	4 285	4 350	3 852
Spuyten Duyvil (CDP)	Delaware	2 308	1 871	...
Stamford village	Delaware	1 240	1 286	1 166
Stanwood (CDP)	Allegany	1 026	...	...
Star Lake (CDP)	St. Lawrence	1 239	...	...
Stewart (CDP)	Orange	2 797	1 230	...
Stewart Manor village	Nassau	2 373	2 183	2 422
Stillwater village	Saratoga	1 572	1 438	1 398
Stony Brook (CDP)	Suffolk	16 155	6 391	3 548

Incorporated Places Census Designated Places	Counties	1980	1970	1960
Stony Point (CDP)	Rockland	8 686	8 270	3 330
Stottville (CDP)	Columbia	1 387	1 106	1 040
Suffern village	Rockland	10 794	8 273	5 094
Surrey Meadows (CDP)	Orange	1 203	...	...
Sylvan Beach village	Oneida	1 243	...	...
Syosset (CDP)	Nassau	9 818	10 084	...
Syracuse city	Onondaga	170 105	197 297	216 038
Tannersville village	Greene	685	650	580
Tappan (CDP)	Rockland	8 267	7 424	...
Tarrytown village	Westchester	10 648	11 115	11 109
Thereso village	Jefferson	827	985	956
Thomaston village	Nassau	2 684	2 811	2 767
Thornwood (CDP)	Westchester	7 197	6 874	...
Ticonderoga village	Essex	2 938	3 268	3 568
Tillson (CDP)	Ulster	1 529	1 256	...
Tivoli village	Dutchess	711	739	732
Tonawanda city	Erie	18 693	21 898	21 561
Tonawanda (CDP)	Erie	72 795	...	...
Town Line (CDP)	Erie	2 917	2 434	...
Tribes Hill (CDP)	Montgomery	1 202	1 184	...
Troy city	Rensselaer	56 638	62 918	67 492
Trumansburg village	Tompkins	1 722	1 803	1 768
Tuckahoe village	Westchester	6 076	6 236	6 423
Tully village	Onondaga	1 049	899	803
Tupper Lake village	Franklin	4 478	4 854	5 200
Turin village	Lewis	284	293	323
Tuxedo Park village	Orange	809	861	723
Unadilla village	Otsego	1 367	1 489	1 586
Uniondale (CDP)	Nassau	20 016	22 077	20 041
Union Springs village	Cayuga	1 201	1 183	1 066
Unionville village	Orange	574	576	511
Upper Brookville village	Nassau	1 245	1 182	1 045
Upper Nyack village	Rockland	1 906	2 096	1 833
Utica city	Oneida	75 632	91 373	100 410
Vails Gate (CDP)	Orange	3 156	...	...
Valatie village	Columbia	1 492	1 288	1 237
Valley Cottage (CDP)	Rockland	8 214	6 007	...
Valley Falls village	Rensselaer	554	681	589
Valley Stream village	Nassau	35 769	40 413	38 629
Van Etten village	Chemung	559	522	507
Vernon village	Oneida	1 373	1 108	913
Verona (CDP)	Oneida	1 057	...	...
Victor village	Ontario	2 370	2 187	1 180
Victory village	Saratoga	571	718	497
Village of the Branch village	Suffolk	1 707	1 675	886
Viola (CDP)	Rockland	5 340	5 136	...
Voorheesville village	Albany	3 320	2 826	1 228
Waddington village	St. Lawrence	980	955	921
Walden village	Orange	5 659	5 277	4 851
Wallkill (CDP)	Ulster	2 064	1 849	1 215
Walton village	Delaware	3 329	3 744	3 855
Walton Park (CDP)	Orange	1 475	...	...
Wampsville village	Madison	569	586	564
Wantagh (CDP)	Nassau	19 817	21 873	34 172
Wappingers Falls village	Dutchess	5 110	5 607	4 447
Wappingers Falls East (CDP)	Dutchess	1 818	2 017	...
Wappingers Falls North (CDP)	Dutchess	1 799	...	...
Warrensburg (CDP)	Warren	2 834	2 743	2 240
Warsaw village	Wyoming	3 619	3 619	3 653
Warwick village	Orange	4 320	3 604	3 218
Washington Heights (CDP)	Orange	1 233	1 204	1 231
Washingtonville village	Orange	2 380	1 887	1 178
Waterford village	Saratoga	2 405	2 879	2 915
Waterloo village	Seneca	5 303	5 418	5 098
Watertown city	Jefferson	27 861	30 787	33 306
Waterville village	Oneida	1 672	1 808	1 901
Watervliet city	Albany	11 354	12 404	13 917
Watkins Glen village	Schuyler	2 440	2 716	2 813
Waverly village	Tioga	4 738	5 261	5 950
Wayland village	Steuben	1 846	2 022	2 003
Webster village	Monroe	5 499	5 037	3 060
Weedsport village	Cayuga	1 952	1 900	1 731
Wellsburg village	Chemung	647	779	643
Wellsville village	Allegany	5 769	5 815	5 967
West Amityville (CDP)	Nassau	6 623	6 424	...
West Babylon (CDP)	Suffolk	41 699	12 893	...
West Bay Shore (CDP)	Suffolk	5 118	...	...
Westbury village	Nassau	13 871	15 362	14 757
West Carthage village	Jefferson	1 824	2 047	2 167
West Elmira (CDP)	Chemung	5 485	5 901	5 763
West End (CDP)	Otsego	1 715	1 692	1 436
Westfield village	Chautauqua	3 446	3 651	3 878
West Glens Falls (CDP)	Warren	5 331	3 343	2 725
Westhampton (CDP)	Suffolk	2 774	1 156	...
Westhampton Beach village	Suffolk	1 629	1 926	1 440
West Haverstraw village	Rockland	9 181	8 558	5 020
West Hempstead (CDP)	Nassau	18 536	20 375	...
West Hills (CDP)	Suffolk	6 071	...	...
West Hurley (CDP)	Ulster	2 382	...	...
West Islip (CDP)	Suffolk	29 533	17 374	...
Westmere (CDP)	Albany	6 881	6 364	...
West Nyack (CDP)	Rockland	8 553	5 510	...
Westtown Mills (CDP)	Cattaraugus	1 837	...	...
West Point (CDP)	Orange	8 105	...	...
Westport village	Essex	613	673	725
West Seneca (CDP)	Rensselaer	2 153	1 873	...
West Sayville (CDP)	Suffolk	8 185	7 386	...

NUMBER OF INHABITANTS

R109

ERWIN TOWN LANDFILL

Painted Post
Riverside
Corning
So. Corning

POPULATION	# BLDGS.
1 mile = V. of Painted Post - (32 x 3.8)	853 (res) + 37 (other
2196 - 122	
2074 + (95 x 3.8)	
2074 + 361	
= 2435 + V. of Riverside (75%)	
2435 + 513	
= 2948 + 295	
= 3243 persons	890 bldgs
2 miles = V. of P.P. = 2196	3098 (res) + 35 + 37
V. of Riverside = 684	
C. of Corning = (45%) = 5829	
+ (95 x 3.8) + 295 + (634 x 3.8)	
361 + 295 + 2409	
= 3065	
= 11,774 persons	3170 bldgs
3 miles = 11,774 + C. of Corning (50%) = 6,477	
18,251 + 1,520	
19,771 persons	
4 miles = 19,771 + V. of So. Corning (93%) = 1,111 +	
2,402 (other)	
= 23,284 persons	

Reference: Campbell, NY 1978; Corning, NY 1969; Campbell, NY 1978; Addison, NY 1976; Caton, NY 1969 USGS Topographic Maps, 1:24,000 R110

REFERENCE 27

PRESIDENT PETER BIERWILER

SECRETARY RON MOORE

FOREST VIEW GANG MILLS FIRE COMPANY

CHIEF JOHN FORD

ASST. CHIEF LARRY YONKIN
DAN DILLON

PAINTED POST, NEW YORK
R. F. D. #1

April 14, 1989

RECRA ENVIRONMENTAL, INC.
Audubon Business Centre
10 Hazelwood Drive, Sutie No.106
Amherst, New York 14150

ATTN: Linda J. Clark

Dear Ms. Clark:

In responce to your letter, dated March 22, 1989, we the officers of the Forest View Gang Mills Fire Department do not consider the Erwin Town Landfill located off the Canada Road, Town of Erwin, New York a significant threat of fire with the information that you have provided.

Respectfully,

John Ford

John Ford
Fire Chief

APR 21 1989

R110

RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

March 22, 1989

Mr. John Ford
Fire Chief - Gang Mills
4 Mills Avenue
Painted Post, New York 14870

Dear Mr. Ford:

As I mentioned during our telephone conversation on March 21, 1989, Recra Environmental, Inc. is currently conducting a Phase I investigation of the Erwin Town Landfill located off Canada Road, Town of Erwin, New York.

We are performing this investigation for the New York State Department of Environmental Conservation pursuant to the requirements of the New York State Superfund Law (Chapter 857 of the Laws of 1982).

In order to complete a Hazard Ranking System (HRS) evaluation, we request the following:

o Please indicate whether:
(A) the facility currently presents a <u>significant</u> threat of fire or explosion (certified threat)

or

(B) no certification of significant fire or explosion threat at the facility.

We are aware of the major fire which occurred at the facility in 1980. Please be advised that the requested information regarding "significant threat of fire or explosion" pertains to <u>current</u> situations; thus, closure of the facility subsequent to the 1980 fire should be given proper consideration.

Audubon Business Centre • 10 Hazelwood Drive, Suite No. 106 • Amherst, New York 14150 • (716) 691-2600

R112

I have enclosed information concerning potential hazardous substances at the facility, per your request. Your prompt attention to this would be appreciated as the information is necessary to complete our evaluation of the site.

If you have any questions, please contact me at (716) 691-2600. Thank you for your assistance.

Sincerely,

Linda J. Clark

Recra Environmental, Inc.
Linda J. Clark
Project Geologist

LJC/dlf
encl.

RECRA ENVIRONMENTAL, INC.

R113

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 3 REGION: 8 SITE CODE: 851003
EPA ID: NYD000511881

NAME OF SITE : Erwin Town Landfill
STREET ADDRESS: Off Canada Road
TOWN/CITY: COUNTY: ZIP:
Erwin Steuben

SITE TYPE: Open Dump- Structure- Lagoon- Landfill-X Treatment Pond-
ESTIMATED SIZE: 15 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: Steuben County Highway Dept.
CURRENT OWNER ADDRESS.: 117 East Steuben St., Bath, NY
OWNER(S) DURING USE...: Steuben County
OPERATOR DURING USE...:
OPERATOR ADDRESS.....:
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1966 To

SITE DESCRIPTION:
Lat 42 09'07"N Long. 77 05'52"W.
Flat topography - rural commercial area. Nearest waterbody: Tioga River approximately 200 feet SE, Cohocton River approx. 500 feet N
This is presently an active landfill in final stages of closure. They received drums from Corning Glass on 7/30/80, by mistake. The drums were removed in 3 to 4 days; no other incidents are recorded
The past disposers are Corning Glass Works, Steuben Co. Highway Department and Ingersol-Rand.
An inspection was made on 10/14/83, in which final cover was being added to most of site.

HAZARDOUS WASTE DISPOSED: Confirmed-X TYPE	Suspected- QUANTITY (units)
Foundry sand, scrap iron, steel ferrous/nonferrous alloys	75 tons/day
Ceramic logs, cullet, cerium oxide	325 cubic yards per day

R114

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION
01 STATE 02 SITE NUMBER
NY 300051388

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- X A. SOLID
- _ B. POWDER, FINES
- _ C. SLUDGE
- _ D. OTHER: _____ (Specify)
- _ E. SLURRY
- _ F. LIQUID
- _ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS 75/Day
CUBIC YARDS 325/Day
NO. OF DRUMS 4

03 WASTE CHARACTERISTICS (Check all that apply)

- _ A. TOXIC
- _ B. CORROSIVE
- _ C. RADIOACTIVE
- X D. PERSISTENT
- _ E. SOLUBLE
- _ F. INFECTIOUS
- _ G. FLAMMABLE
- _ H. IGNITABLE
- _ I. HIGHLY VOLATILE
- _ J. EXPLOSIVE
- _ K. REACTIVE
- X L. INCOMPATIBLE
- _ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		There is potential for foundry sand to contain phenols.
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASIES			
MES	HEAVY METALS	75	Tons/Day	Disposed of by Ingersoll Rand

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

	CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
*	OCC	Foundry Sand	999	landfill		
	MES	Scrap Iron	999	landfill		

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (See specific references, e.g., state files, sample analysis, reports)

Inactive Hazardous Waste Disposal Sites, Volume 8, NYSDEC Region 8
Telecon Note: Conversation between Mr. Canfield, Assistant Water Clerk, Erwin Water Department, and Michael N. Gentils, NUS Corporation, November 18, 1987.
Off-Site Reconnaissance, NUS Corporation Region 2 FIT, Edison, New Jersey, November 2, 1987, TDD No. 02-8710-113.

R115

(T) Erwin Landfill

Waste	Quantity
1. Ingersoll Rand foundry sand, scrap iron, scrap steel, shot blast dust, silica sand, organic sand binders (cornstarch), ferrous and non-ferrous alloys, firebrick, clay binder sand, refractory washed, small amt. of broken concrete	75 tons/day
2. Corning Glass ceramic logs, cullet, wood pallets, wood sawdust, construction debris such as bricks, block. Grinding wastes, i.e. pumice, cerium oxide, sand.	325 cu. yds/day (50% of this is ceramic logs)
3. Steuben Co. Highway Dept. uses for brush, tree stump disposal	?

R116

Quantity:

Place an X in the appropriate boxes to indicate the facility types found at the site.

In the "total facility waste amount" space give the estimated combined quantity (volume) of hazardous wastes at the site using cubic feet or gallons.

In the "total facility area" space, give the estimated area size which the facilities occupy using square feet or acres.

Facility Type

1. ☐ Piles
2. ☐ Land Treatment
3. ☒ Landfill
4. ☐ Tanks
5. ☐ Impoundment
6. ☐ Underground Injection
7. ☐ Drums, Above Ground
8. ☐ Drums, Below Ground
9. ☐ Other (Specify) _____

Total Facility Waste Amount

cubic feet: Hundreds

gallons: _____

Total Facility Area

square feet: _____

acres: Unknown

G Known, Suspected or Likely Releases to the Environment:

Place an X in the appropriate boxes to indicate any known, suspected, or likely releases of wastes to the environment.

☐ Known ☐ Suspected ☐ Likely ☒ None

Note: Items H and I are optional. Completing these items will assist EPA and State and local governments in locating and assessing hazardous waste sites. Although completing the items is not required, you are encouraged to do so.

H Sketch Map of Site Location: (Optional)

Sketch a map showing streets, highways, routes or other prominent landmarks near the site. Place an X on the map to indicate the site location. Draw an arrow showing the direction north. You may substitute a publishing map showing the site location.

I Description of Site: (Optional)

Describe the history and present conditions of the site. Give directions to the site and describe any nearby wells, springs, lakes, or housing. Include such information as how waste was disposed and where the waste came from. Provide any other information or comments which may help describe the site conditions.

✳ (This Steuben County operated landfill accepted certain industrial wastes (as approved by New York's Dept. of Environmental Conservation) from 1978 until November 19, 1980. Some of these wastes included OFF-SPEC. Glass Batch Raw Materials which could contain heavy metals such as, but not limited to lead. The site currently limits its wastes to certain non-hazardous industrial items and probably has less than 6 months of useful life left.)

J Signature and Title:

The person or authorized representative (such as plant managers, superintendents, trustees or attorneys) of persons required to notify must sign the form and provide a mailing address (if different than address in item A). For other persons providing notification, the signature is optional. Check the boxes which best describe the relationship to the site of the person required to notify. If you are not required

Name: Scott S. Somers

Street: Same as Above

City: _____ State: _____ Zip Code: _____

Signature: S S Somers Date: 6/8/81

☐ Owner, Present
☐ Owner, Past
☒ Transporter
☐ Operator, Presen
☐ Operator, Past
☒ Other Generator

R11b

5.5 USEPA Site Inspection Report (Form 2070-13)

Site Inspection Report

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Erwin Town Landfill	County Road 107 (Canada Rd.)				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Village of Painted Post	NY	14830	Steuben	101	34

09 COORDINATES: LATITUDE 42° 09' 05"N | LONGITUDE 77° 05' 50"W

10 TYPE OF OWNERSHIP (Check one): ☐ A. PRIVATE ☐ B. FEDERAL ____ ☐ C. STATE ☒ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER ____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
10 / 12 / 88 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1966 (BEGINNING YEAR) 1983 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR ____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR Recra Environmental (Name of firm) ☐ G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO
Kenneth A. Shisler, Jr.	Staff Geologist	Recra Environmental	( ) 716 691-2600
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Lynn J. Morse	Town Supervisor	Erwin Town Hall Painted Post, NY 14870	( ) 716 962-7021
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10/11 15:38 10/12 16:30	10/11 Rain, turning to 3-6 mm hail, very windy, Temp 30°F 10/12 Intermittent rain, mixed sun/clouds, Mod Wind, High 30°F

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Robert K. Wyeth	Recra Environmental, Inc.	( ) 716 691-2600

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Linda J. Clark		Recra Environmental, Inc.	(716)691-2600	03 28 89 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: 75
CUBIC YARDS: 162.5
NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [X] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	Unknown		foundry sand-suspected phenols
IOC	INORGANIC CHEMICALS	Unknown		Liquid and solid waste containing
ACD	ACIDS			inorganics and heavy metals are
BAS	BASES			reported
MES	HEAVY METALS	Unknown		

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
	Lead		Landfill	Unknown	
	Manganese		Landfill	Unknown	
	Zinc		Landfill	Unknown	
	Phenol		Landfill	Unknown	
	Formaldehyde		Landfill	Unknown	
	Acetaldehyde		Landfill	Unknown	
	Acetone		Landfill	Unknown	
	Formic Acid		Landfill	Unknown	
	Acetic acid		Landfill	Unknown	
	Methanol		Landfill	Unknown	

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

NYSDEC - Region 8
Town of Erwin, NY

EPA FORM 2070-13(7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D000511881
NYSDEC #851003

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 19,601
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Municipal community wells and private wells provide source of potable water for population in area. Landfill not lined; no leachate collection system present.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 19,771
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

The Cohocton River lies approximately 350 feet to the north. The Tioga River lies approximately 550 feet to the east. Both surface water bodies are used for recreation. Approx. 19,771 persons within 3 miles of site.

01 [ ] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 11,774
02 [X] OBSERVED (DATE: 9/7/80) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

A fire of unknown origin occurred at the facility in 1980. Population figure reflects approximate number of persons within 2 mile radius of site.

01 [X] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 3,243
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

The site is only partially fenced and fairly accessible. Approximate 3,243 persons within 1 mile of site.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 13 (Acres)
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Potential for soil contamination prior to placement of final cover at site in 1983.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 19,601
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Municipal and private wells provide sole source of potable water for population in area.

01 [ ] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None reported. Facility currently inactive.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: 19,771
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Population within a 3 mile radius can potentially be affected. Potential groundwater and surface water contamination.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D000511881
NYSDEC 851003

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 ☐ K. DAMAGE TO FAUNA
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names of species)

None reported.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Soils, Runoff, Standing liquids, Leaking drums)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 19,771
04 NARRATIVE DESCRIPTION

(Approximate population within 3 mile radius.) Wastes disposed of in unlined landfill, no leachate collection system, no diversion system for surface runoff.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None known.

III. TOTAL POPULATION POTENTIALLY AFFECTED: Approx. 19,771 persons within 3 mile radius.

IV. COMMENTS

Municipal community wells and private wells provide source of potable water for population in area. No groundwater sampling data available.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC - Region 8
Town of Erwin, NY
Town and City of Corning, NY
Village of Painted Post, NY
Town of Campbell, NY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☒ G. STATE (Specify) NY				Solid Waste, Part 360 permit
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☒ F. LANDFILL	173,375	cu. yds.
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE

06 AREA OF SITE

13 (Acres)

07 COMMENTS

Industrial wastes reportedly accepted from 1978-1980, including approximately 75 tons/day of foundry wastes and 162.5 cu. yds/day of ceramic logs containing "methocel".

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☒ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Wastes contained in landfill; no liner or leachate collection system present; no diversion system for surface runoff present.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Facility is only partially fenced; however, final cover was added in 1983.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Town of Erwin, NY
NYSDEC Region 8

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881
	NYSDEC 851003

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☒	A. ☐	B. ☐	C. ☐	A. 0.7 (mi)
NON-COMMUNITY	C. ☐	D. ☒	D. ☐	E. ☐	F. ☐	B. 0.2 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
19,601	0.2 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
~10' (ft)	east	~10' (ft)	1,000 gpm (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

The site overlies a principal aquifer which is comprised of outwash sand and gravel deposits approx. 85-95 feet thick.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS	☐ YES ☐ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Tioga River	☐	0.1 (mi)
Conocton River	☐	0.07 (mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 3,243 NO. OF PERSONS	B. 11,774 NO. OF PERSONS	C. 19,771 NO. OF PERSONS	0.2 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
3,170	0.02 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The site is located in a predominantly rural, commercial and residential area. The urbanized area of Painted Post lies approx. 1/4 mile north of the site. The heavily populated City of Corning is about 1 mile to the east.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☒ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
0-90 (ft)	(ft)	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
7.8 (in)	2.3 (in)	0-1 %	West	0-1 %

09 FLOOD POTENTIAL
Site was flooded in 1972.
SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. _____ (mi)
OTHER: B. 0.5 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

_____ (mi)
ENDANGERED SPECIES: None within one mile.

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0.2 (mi)	B. 0.3 (mi)	C. 0.4 (mi)	D. 0.4 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The grass-covered site is slightly mounded. The topography of the surrounding area is relatively flat lying with the exception of the elevated levee system adjacent to the site.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- US Army Engineers, Baltimore Section, Mr. Davis Ditman, Chief, Dams & Levee Section+ Telecon. 1/20/89
- Climatic Atlas of the United States,1979, U.S. Dept. of Commerce
- USGS 7.5 minute series topographic maps (Campbell, NY 1978); Corning, NY, 1969; Canton, NY, 1969; Addison, NY, 1976 Quadrangles)

- NYS Museum and Science Service - map and chart series 15 and 40
- Steuben County Soil Conservation Service
- Atlas of 11 Selected Aquifers in NY, USGS open file report 82-553

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		No additional sampling performed	
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Recra Environmental, inc.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Recra Environmental, Inc. - 10 Hazelwood Drive, Suite 106, Amherst, NY 14150

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection - 10/11-12/88

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYDEC #851003

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Town of Erwin		Erwin Town Hall		Painted Post	NY	14870

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC - Region 8
Town of Erwin, NY

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881
	NYSDEC #851003

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Facility Inactive	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
Steuben County	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
117 East Steuben St.	

05 CITY	06 STATE	07 ZIP CODE
Bath,	NY	14810

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1978-1983	Town of Erwin

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER
Town of Erwin	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Erwin Town Hall	

05 CITY	06 STATE	07 ZIP CODE
Painted Post	NY	14870

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1966-1978	Town of Erwin

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC Region 8 files
USEPA Region II files - NUS Report 02-8710-113-PA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Corning Glass Works		Steuben County Highway Dept.	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Houghton Park, ME-3		117 East Steuben St.	
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
Corning / NY / 14830		Bath / NY / 14810	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Ingersoll Rand Co.		Town of Erwin	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC - Region 8
USEPA Region II files - NUS Report 02-8710-113-PA

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION

01 STATE: NY | 02 SITE NUMBER: D000511881

NYSDEC #851003

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION
01 STATE: NY | 02 SITE NUMBER: D000511881
NYSDEC #851003

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☒ S. CAPPING/COVERING — 02 DATE 1983 — 03 AGENCY _____
04 DESCRIPTION
Approximately 2 feet of final cover was added to the facility in 1983.

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NYSDEC - Region 8
Town of Erwin, NY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NY	D000511881

NYSDEC #851003

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

Consent order filed in 1978 by State of New York (details not available).

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

NYSDEC - Region 8

EPA FORM 2070-13 (7-81)

6.0 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

6.1 Assessment of Data Adequacy

Data collected during the Phase I Investigation of the Erwin Town Landfill site, which were used to develop the Hazard Ranking System (HRS) scores for the site, are considered inadquate in the following areas:

- o Observed Release:
  - No groundwater sampling has been performed at, or in the vicinity of, the site. Therefore, additional information is necessary to determine site-specific groundwater flow patterns and the extent, if any, of contaminant migration off-site.
  - Surface water sampling and analyses in the vicinity of the site are limited to one sample collected from a manhole located in proximity to the base of the landfill. Although contaminants were detected, they can not conclusively be attributed to the site. Therefore, limited information is presently available to assess the impact of the site on this route.
  - A complete air monitoring program has not been conducted at the site; thus, additional information is necessary to determine the extent of any air releases which may be occurring at the site.
- o Waste Characteristics:
  - Some information already exists on waste materials disposed of at the site; however, no soil or waste sampling data is presently available. Although additional data would not

alter the final scores under toxicity/persistence or hazardous waste quantity (both factors have already scored the maximum of 18 and 8, respectively), further definition of waste characteristics at the site is needed.

6.2 Recommendations

Several data inadequacies exist, as delineated in Section 6.1, which prohibit the computation and support of a final, defensible HRS score. The following work plan does not necessarily represent a recommendation to proceed with a Phase II Investigation, but rather outlines the activities which should be performed in order to achieve a final HRS score. The final decision concerning the need for a Phase II study depends not only upon the availability and adequacy of hard data, but also upon the preliminary (Phase I) HRS score, as well as agency policy and public perception regarding the site.

The following activities have been identified for the Phase II Investigation:

- Air Monitoring
- Geophysical Investigation
- Subsurface Investigation
- Monitoring Well Installation
- Sampling and Analysis

6.2.1 Air Monitoring

Air monitoring was not conducted during the Phase I site visit due to unconducive weather conditions. An air monitoring program should be conducted at the site to determine if contaminants are actually migrating from the site via the air route and to assist in the development of a future Health and Safety Plan for field activities.

An initial site perimeter screening should be conducted using an Organic Vapor Analyzer (OVA) and/or an HNu photoionizer.

6.2.2 Geophysical Investigation

After initial assessment of the ambient air quality at the site, a geophysical terrain conductivity investigation should be performed to characterize the electrical conductivity of the site, determine outer limits of fill material and to determine possible presence of conductive groundwater contaminant plumes. The geophysical information obtained should be used to minimize the number of drill sites, assist in determining the location of monitoring wells, and reduce the risk associated with drilling into unknown terrain and waste.

6.2.3 Subsurface Investigation

In order to obtain additional information concerning possible groundwater contamination originating from the Erwin Landfill site, a subsurface investigation consisting of 4 test borings should be conducted (Figure 6-1). Borings should be terminated in the upper water bearing zone (overburden) (approx. 10-15 feet). Drilling, identification and decontamination operations should be conducted in accordance with NYSDEC proto-

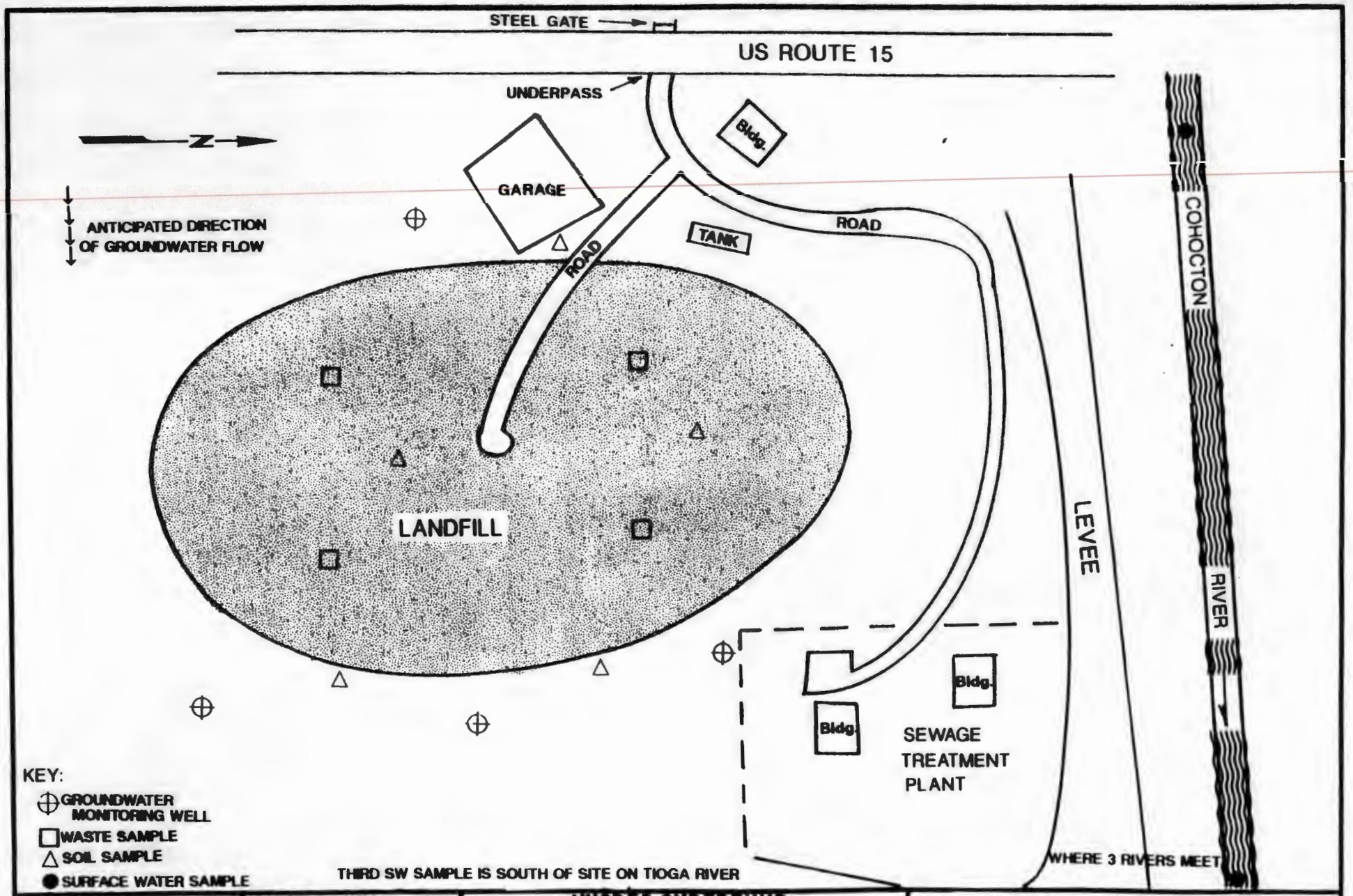
col for Phase II investigations.

6.2.4 Monitoring Well Installation

It is proposed that unconsolidated monitoring wells be installed within the new test boring holes. A field determination should be made as to the placement of the well screens. This determination will be based on the information obtained from soil samples and water level measurements. Well construction and development should be conducted according to NYSDEC protocol for Phase II Investigations.

6.2.5 Sampling and Analysis

As identified in Figure 6-1 it is proposed that several environmental samples be secured to determine the possible existance of contamination. Sampling and analysis should be conducted according to NYSDEC protocol for Phase II investigations. Table 6-1 identifies the proposed analytical parameters for each sample type.



SCALE: NTS		
	BY	DATE
DWN.	GS	4/89
CKD.	RJC	4/89
APPVD.	RAC	5/1/89
REV.		

NYSDEC SUPERFUND
PHASE I INVESTIGATION
ERWIN TOWN LANDFILL
SITE NO. 851003

PROJECT NO: 8C1301EE

PROPOSED MONITORING WELL & SAMPLE LOCATIONS

A

FIGURE 6-1

TABLE 6-1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
PHASE II INVESTIGATIONS
RECOMMENDED CHEMICAL ANALYSES

Site Name and I.D.: Erwin Landfill Site

Type of Sample	Class									No. of Samples
	1	2	3	4	5	6	7	8	9	
Groundwater	X	X							X	4
Waste Materials	X	X			X		X			4
Soil	X	X			X					5
Surface Water	X	X							X	3

1) Hazardous Substance List organics, volatile and base/neutral/acid fractions, in accordance with Contract Laboratory Protocol
2) Hazardous Substance List metals in accordance with Contract Laboratory Protocol
3) Ammonia
4) Dioxin
5) PCB
6) Priority Pollutant Polynuclear Aromatic Hydrocarbons (PNAs, Method 8310)
7) E.P. Toxicity
8) Sulfate
9) Specific Conductance

APPENDIX A

Revised NYSDEC Inactive Hazardous Waste Disposal Site Report

1/A11304.1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

CLASSIFICATION CODE: ____ REGION: 8 SITE CODE: 851003
EPA ID: NYD000511881

NAME OF SITE: Erwin Town Landfill
STREET ADDRESS: off Canada Road
TOWN/CITY: Village of Painted Post COUNTY: Steuben ZIP: 14830

SITE TYPE: Open Dump _ Structure _ Lagoon _ Landfill X Treatment Pond _
ESTIMATED SIZE: 13 Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME: Town of Erwin, NY
CURRENT OWNER ADDRESS: Erwin Town Hall, Painted Post, NY 14870
OWNER(S) DURING USE: Town of Erwin, NY
OPERATOR DURING USE: Steuben County
OPERATOR ADDRESS 117 East Steuben St.
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1966 To 1983

SITE DESCRIPTION:

The site is the location of an inactive landfill located approximately one mile west of the City of Corning, NY, near the interchange of NYS Route 17 and US Route 15. The Cohocton River lies approximately 350 feet to the north of the site and the Tioga River lies about 550 feet to the east. Wastes disposed of at the facility include foundry sand suspected of containing phenols (from the Ingersol Rand Company), various liquid and solid wastes containing organic and inorganic compounds as well as heavy metals (from Corning Glass Works), and brush (from the Steuben Co. Highway Dept.). No sampling has been conducted at the site. The site overlies a principal aquifer from which private and municipal community wells serve the area population with a potable water supply. Final cover was added to the facility in 1983. A Phase I Investigation was conducted at this Site in 1988-89.

HAZARDOUS WASTE DISPOSED: Confirmed _ Suspected X

TYPE	QUANTITY (units)
foundry sand	75 tons/day
ceramic logs	162.5 cu.yds/day

SITE CODE: 851003

ANALYTICAL DATA AVAILABLE:

Air _ Surface Water _ Groundwater _ Soil _ Sediment _ None X

CONTRAVENTION OF STANDARDS:

Groundwater _ Drinking Water _ Surface Water _ Air _

LEGAL ACTION:

TYPE: Consent Order State X Federal _
STATUS: In Progress _ Completed X

REMEDIAL ACTION:

Proposed _ Under Design _ In Progress _ Completed X
NATURE OF ACTION: Closure of facility

GEOTECHNICAL INFORMATION:
SOIL TYPE: Predominantly Unadilla silt loam (Un) and some Wallington silt loam (Wa).
GROUNDWATER DEPTH: approximately 10 feet

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Site has potential to impact groundwater and surface water (including Cohocton, Tioga and Chemung Rivers)

ASSESSMENT OF HEALTH PROBLEMS:

Medium	Contaminants Available	Migration Potential	Potentially Exposed Population	Need For Investigation
Air				
Surface Soil				
Groundwater				
Surface Water				

Health Department Site Inspection Date: _____

Municipal Waste ID: _____

ICS ID: _____

SPEDES ID: _____

APPENDIX B

Data Sources and References (References 27-33)

APPENDIX B

DATA SOURCES AND REFERENCES

DATA SOURCES AND REFERENCES (cont.d)

13. Chemical Analytical Results, W. Friend Laboratory, Waverly, New York, February 17, 1982. R63

14. Dangerous Properties of Industrial Materials - 6th edition, N. Irving Sax, Van Nostrand Reinhold Company, New York, 1984. R64-R69

15. New York State Atlas of Community Water System Sources, New York State Department of Health - Division of Environmental Protection, Bureau of Public Water Supply Protection, 1982. R70-R72

16. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Mike Dawson, Assistant Superintendent of Public Works - City of Corning, NY, March 14, 1989. R73-R77

17. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Don Hunt, Village Supervisor - Village of Painted Post, NY, March 14, 1989. R78-R80

18. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Adeline M. Brown, Town Clerk - Town of Campbell, NY, March 20, 1989. R81-R82

19. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to Dewitt T. Baker, Town Supervisor - Town of Corning, NY, March 14, 1989. R83-R84

20. U.S.G.S. Topographic Maps - 7.5 minute series: Campbell, NY Quadrangle, 1978; Corning, NY Quadrangle, 1969; Caton, NY Quadrangle, 1969; Addison, NY Quadrangle, 1976. R85-R90

21. Site Inspection Notes and Photographs by K. Shisler, Recra Environmental, Inc., October 11, 12, 1988. R91-R92

22. Linda J. Clark, Project Geologist - Recra Environmental, Inc. letter to David DuPont, District Conservationist - Steuben County Soil and Water Conservation District, March 20, 1989. R93

23. Lynn J. Morse, Town Supervisor - Town of Erwin, NY letter to Linda J. Clark, Project Geologist - Recra Environmental, Inc., March 20, 1989. R94-R102

24. New York State Freshwater Wetlands Map No. 25 - Corning, NY Quadrangle, 7.5 Minute Series (Planimetric), New York State Department of Environmental Conservation and New York State Department of Transportation, 1977. R103-R104

25. Todd M. Caffoe - New York State Department of Environmental Conservation letter to Jim Stachowski - Recra Environmental, Inc., December 8, 1988. R105

DATA SOURCES AND REFERENCES (cont'd)

26.	1980 Census of Population - Number of Inhabitants, New York, U.S. Department of Commerce, Bureau of the Census.	R106-R110
27.	John Ford, Fire Chief - Forest View/Gang Mills Fire Company letter to Linda J. Clark, project Geologist - Recra Environmental, Inc., April 14, 1989.	R111-R117
28.	Lynn J. Morse, Town Supervisor - Town of Erwin, NY letter to Eric Seiffer, Regional Director - New York State Department of Environmental Conservation, June 30, 1987.	R118
29.	Eric A. Seiffer, Regional Director - New York State Department of Environmental Conservation letter to Lynn J. Morse, Town Supervisor - Town of Erwin, NY, July 28, 1987.	R119-R120
30.	Carol Herington - New York State Department of Environmental Conservation Report Summary to Paul Schmied and Frank Shattuck, New York State Department of Environmental Conservation, January 2, 1981.	R121-R122
31.	Flood Insurance Rate Map - Village of Painted Post, New York (Community Panel No. 3607790001D), U.S. Department of Housing and Urban Development, revised February 2, 1979.	R123-R125
32.	Geology of New York: A Short Account - Educational Leaflet No. 20, The University of the State of New York, The State Education Department, New York State Museum and Science Service, Albany, New York, 1966.	R126-R128
33.	Surficial Geologic Map of New York - Finger Lakes Sheet, compiled and edited by Ernest H. Muller and Donald H. Cadwell, 1986.	R129-R132
34.	Geologic Map of New York - Finger Lakes Sheet, Lawrence V. Richard and Donald W. Fisher, 1970.	R133-R135
35.	State of New York Department of Health correspondence dated June 13, 1989.	R136

REFERENCE 28

Town Ship - Paul S. Please respond FMS
10 days.

Town of Erwin

PAINTED POST, N.Y. 14870
LYNN J. MORSE, SUPERVISOR
(607) 962-7021

June 30, 1987

Mr. Eric Seiffer
Regional Director
NYS Department of
Environmental Conservation
6274 East Avon-Lima Road
Avon, NY 14414

Dear Eric:

This letter is in reference to the former industrial landfill, southeast of the Painted Post Traffic Circle in the Town of Erwin.

You may recall that this site was leased to Steuben County by the Town for 99 years, or until such time as it could no longer be used as a landfill. The landfill is closed and we are in the process of terminating the lease.

We have been approached by a party interested in establishing a heliport with associated recreational development on the top of the "mound." The Town Board has informally endorsed the concept. Their thinking is (1) such an operation could turn the site from a liability to a functional asset, and (2) it might help to reverse the image that many people have about landfills.

At your earliest convenience, would you please advise us of procedures and/or instructions that DEC might have for such a facility.

We appreciate your assistance.

Sincerely,

Lynn J. Morse
Town Supervisor

mk

R118

REFERENCE 29

New York State Department of Environmental Conservation
6274 East Avon-Lima Road, Avon, New York 14414
TELEPHONE: 716/226-2466

Thomas C. Jorling
Commissioner

Eric A. Seiffer
Regional Director

July 28, 1987

Mr. Lynn J. Morse
Town Supervisor
Town of Erwin
Painted Post, New York 14870

Dear Mr. Morse:

Thank you for your letter of June 30, 1987 regarding the former industrial landfill located in the Town of Erwin. I understand that you have been approached by an interested party for establishing a heliport and associated recreational development at this site. I appreciate your intent in entertaining such a proposal.

Our records indicate that this landfill was closed during the fall of 1983. Further, the site was listed in the registry of inactive hazardous waste disposal sites in New York State at about the same time. The December 1986 publication of the registry lists this site under classification code "3" indicating that the site "Does not present a significant threat to the public health or environment - action may be deferred". The site, therefore, is considered a lower priority for further investigations under the State Superfund.

Based on this information, in order to change the use of this site substantially, as in this case, the Town is required to comply with Section 375.9 of 6NYCRR Part 375 regulations. I am enclosing a copy of 6NYCRR Part 375 for your use. Moreover, the Department would not advise construction of any residential facilities in the landfill area. Please refer to item (r) on Page 3 of the enclosure. I hope this answers your main concerns regarding turning the landfill into a functional asset.

R119

If you have any further questions or need assistance, please call me or Messrs. Mehta or Shattuck of my staff.

Sincerely,

SIG: ERIC A. SEIFFER
Eric A. Seiffer

MM:aeo
Enclosure

R12C

REFERENCE 30

Copy To: Carol Herington

Paul Schmied
Frank Shattuck
RDA Fire, Town of Erwin, Steuben County

January 2, 1981

This report summarizes the Department's findings regarding the September 7, 1980 fire at the subject site. This episode was of particular concern because eight firemen with the Gang Mill Fire Department had to be treated at Corning Hospital for what was suspected to be toxic emissions.

Materials currently being disposed of at the site include:

CORNING GLASS

1. Ceramic logs, pumice and cerium oxide
2. Cardboard and paper
3. Pallets, cullets, wood and sawdust
4. Demolition debris
5. Plastic bags (polyvinyl chloride)

INGERSOLL RAND

1. Foundry sand
2. Silica sand
3. Organic sand and clay binders
4. Refractory washings

STEUBEN COUNTY HIGHWAY DEPARTMENT

1. Brush, shrubs, tree stumps, etc.

The fire was located in the area where Corning Glass disposes of their waste. According to Fire Chief Barto's report, the ceramic logs originally suspected of liberating "toxic fumes", were not burned in the fire. Most of the material consumed consisted of cardboard and wood including pallets. According to a representative of Corning Glass, the pallets were not treated with a wood preservative (penta chlorophenal). There is also a possibility that the combustion of plastic bags may have liberated hydrogen chloride. The small amount of residue in the bag was determined to be relatively inert.

Neither the Fire Department or the County Landfill Supervisor were able to determine the cause of the fire. Chief Barto's report lists the cause of the fire as suspicious. (Attached are copies).

A 121

Carol Herington contacted the emergency room physician, Dr. Chaim Ben Dashan, at Corning Hospital, who treated the eight firemen that were overcome with smoke and what was originally believed to be toxic fumes. Dr. Ben Dashan described the major symptoms as headache and abdominal cramps. Other symptoms included nausea and skin rash which were gone within a few hours. Blood tests were taken from all eight men, but showed nothing unusual. We also contacted Dr. John Mieczkowski who completed follow-up examinations on three of the firemen. Dr. Mieczkowski also reported that the examinations did not reveal anything unusual.

This matter was discussed with our resident fire department expert, Tom Pearson. Tom indicated that the symptoms reported are common in firemen suffering from smoke inhalation. The rash could be due to heat - chemical rashes usually persist for longer periods.

Based upon reports submitted by the county officials, the fire chief and the attending physicians, we are unable to draw any conclusions as to the origin of the fire or whether the firemen were subjected to "toxic fumes."

As per your September 23, 1980 note to Mr. Clark, I am submitting this report directly to you and assume that you will be forwarding a copy to Myron Crouch and Mr. Seiffer. I suggest that copies also be sent to: John Cherill, Corning Glass; Tom Barto, Fire Chief, Gang Mill; John Stover, Chairman, Highway Commission; and Lynn J. Morse, Supervisor, Town of Erwin.

FES:jmm

cc: Steve Betts
Carol Herington

R122/

REFERENCE 31

ON

oad spur at private road southwest from inter-
ung Street.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620, or (800) 424-8872.

APPROXIMATE SCALE

600 0 600 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

VILLAGE OF
PAINTED POST,
NEW YORK
STEUBEN COUNTY

ONLY PANEL PRINTED

COMMUNITY-PANEL NUMBER
360779 0001 D

MAP REVISED
FEBRUARY 2,1979

U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

R123

KEY TO MAP

500-Year Flood Boundary ——————

100-Year Flood Boundary ——————

Zone Designations* With Date of Identification e.g., 12/2/74

100-Year Flood Boundary ——————

500-Year Flood Boundary ——————

ZONE B

ZONE B

Base Flood Elevation Line With Elevation In Feet** ——— 513 ———

Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)

Elevation Reference Mark RM7x

River Mile •M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

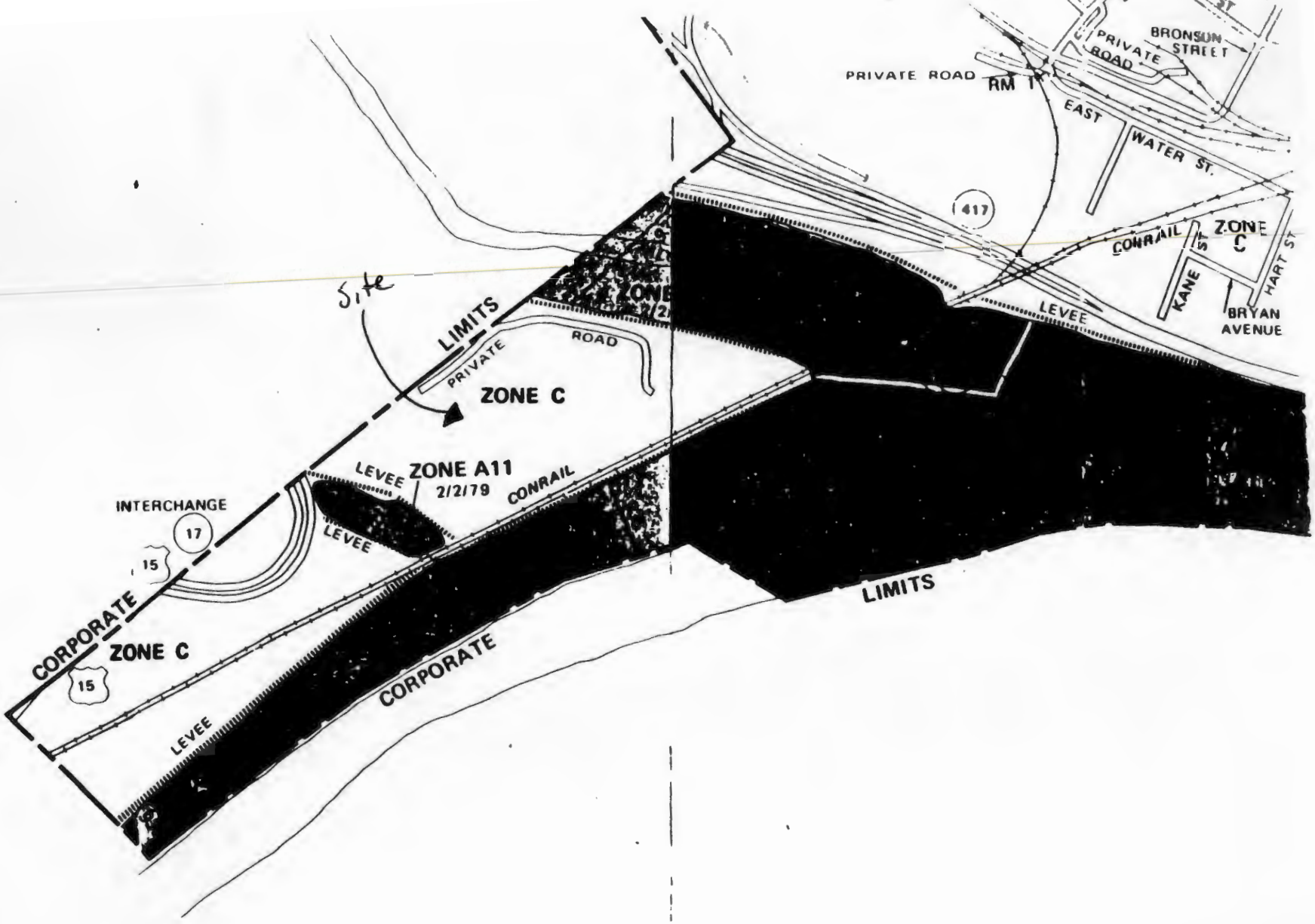
ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

R12⁴



ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD 1929)*	DESCRIPTION OF LOCATION
RM 1	935.73	Standard disc is south head wall of ...

R125

REFERENCE 32

Geology of New York:

a short account

Adapted from the text of "Geologic Map of New York State"
by J. G. Broughton, D. W. Fisher, Y. W. Isachsen, and L. V. Rickard

EDUCATIONAL LEAFLET NO. 20

The University of the State of New York/The State Education Department
New York State Museum and Science Service/Albany 1966

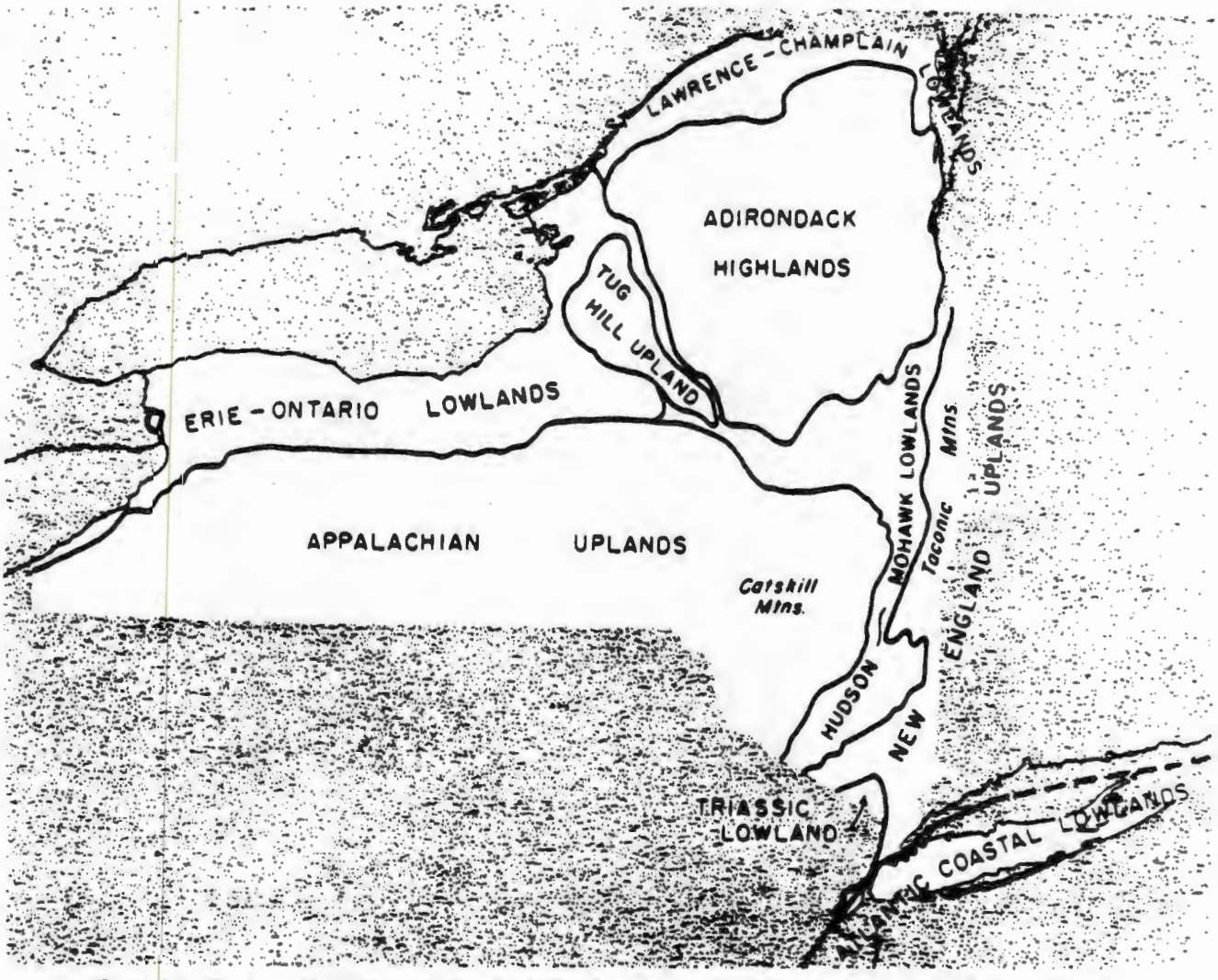


FIGURE 19. Physiographic provinces of New York, based on relief and geology (Modified after G. B. Cressey, 1952)

Cenozoic Era

PHYSIOGRAPHIC PROVINCES AND TERTIARY HISTORY

The physiographic provinces of New York are shown in figure 19. Modern landscapes of the State were shaped largely during the Cenozoic Era, the most recent 65 million years of geologic history. Although the overall features later would be modified and blurred by glaciation, the broad outlines of modern mountain, valley, and plain first were carved by the unrelenting rush of water to the earlier Cenozoic seas.

The long sequence of erosion presumably began with the arching of the Jurassic Fall Zone erosion surface in mid-Cretaceous time. As its eastern flank dipped beneath the encroaching Atlantic Ocean to receive Coastal Plain deposits, the axis domed sufficiently to initiate the sculpture of the Appalachians and Adirondacks. Few, if any of today's land forms can be traced so far back, however. Most researchers believe that all the exposed remnants of the dissected Fall Zone surface were obliterated by subsequent erosion.

South of New York, at least a partial record of Tertiary geology persists in the Coastal Plain deposits. In addition to a sedimentary record, datable igneous intrusions cut rocks of varying degrees of deformation in the western states. But in New York, no such tangible evidence of Cenozoic events exists. The Coastal Plains sediments derived from the long-continued degradation of New York and New England now rest on the Continental

R127

Appalachian Uplands

The Appalachian Uplands (the northern extreme of the Appalachian Plateau) were formed by dissection of the uplifted but flat lying sandstones and shales of the Middle and Upper Devonian Catskill Delta (figure 17). The southeastern border of the province, between Kingston and Port Jervis, is formed by the Silurian Shawangunk Conglomerate. Relief is high to moderate. Maximum dissection is in the Catskill Mountain area, where only the mountain peaks approximate the original plateau surface. (Slide Mountain, at 4,202 feet, is the highest peak.) Farther west, the plateau surface is represented by flat-topped divides. Except for Cattaraugus Creek, the Genesee River, the Finger Lakes, and minor streams along the Catskill front, drainage generally is southwest into the Allegheny, Susquehanna, and Delaware River systems.

The northern edge of the province is cut by the Finger Lake troughs, which are glacially modified valleys of preglacial rivers (figure 20). At least two of the lakes (Cayuga and Seneca) have bedrock floors below sea level. Glacial cover generally is thin, although deposits in some north-south valleys are so thick that they are completely buried. The major eastwest drainage divide of central New York, the Valley Heads Moraine, is a recessional moraine south of the present Finger Lakes. Only the Allegany State Park area has escaped glaciation (figure 21).

New England Uplands

Another diverse and geologically complex province is the New England Uplands. To the south it includes the Hudson Highlands and the area underlain by the New York City Group; farther north it encompasses the hilly country (Taconic Mountains) between the Hudson River and the Connecticut, Massachusetts, and Vermont borders. Rocks in the New England Uplands are either metamorphic or igneous, and land forms are closely related to their durability.

Maximum relief is in the Hudson Highlands, where elevations range from 800 feet below sea level (bedrock of the Hudson River Valley) to more than 1,500 feet. Strong topographic linearity characterizes the Hudson Highlands; most of the ridges and valleys follow the northeast-southwest strike of the metamorphosed rocks.

Although the rocks of the New York City Group do not show a similar regularity of trend, here, too, the geology and topography are closely related.

The general north-south trend of the Taconic Mountains depends on the strike of the schist (which forms the hills) and the limestone in the valleys. The Rensselaer Plateau, which is held up by the resistant Rensselaer Graywacke, is an exception. Its rolling surface, with a relief of about 500 feet, is approximately 20 miles long (north-south) by 9 miles wide (east-west). The Taconic Mountains generally are considered to be bounded on the west by the Chatham thrust and on the east by the limestone valley lying just west of the Green Mountains and the Berkshires.

The entire province has been glaciated.

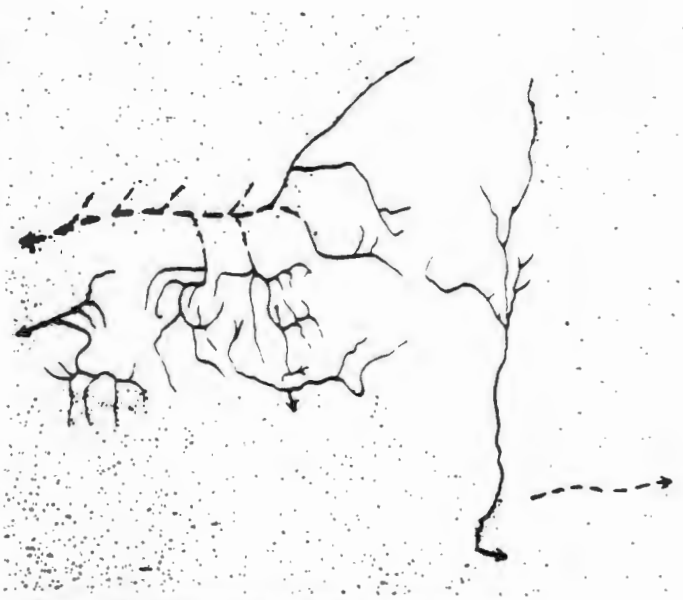


FIGURE 20. Hypothetical Tertiary drainage systems

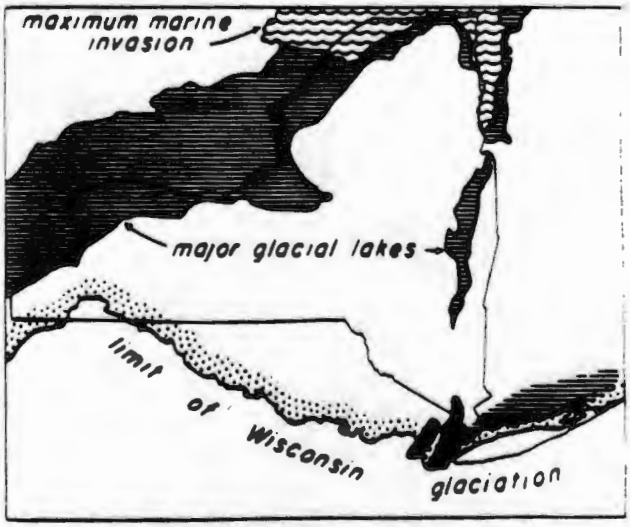
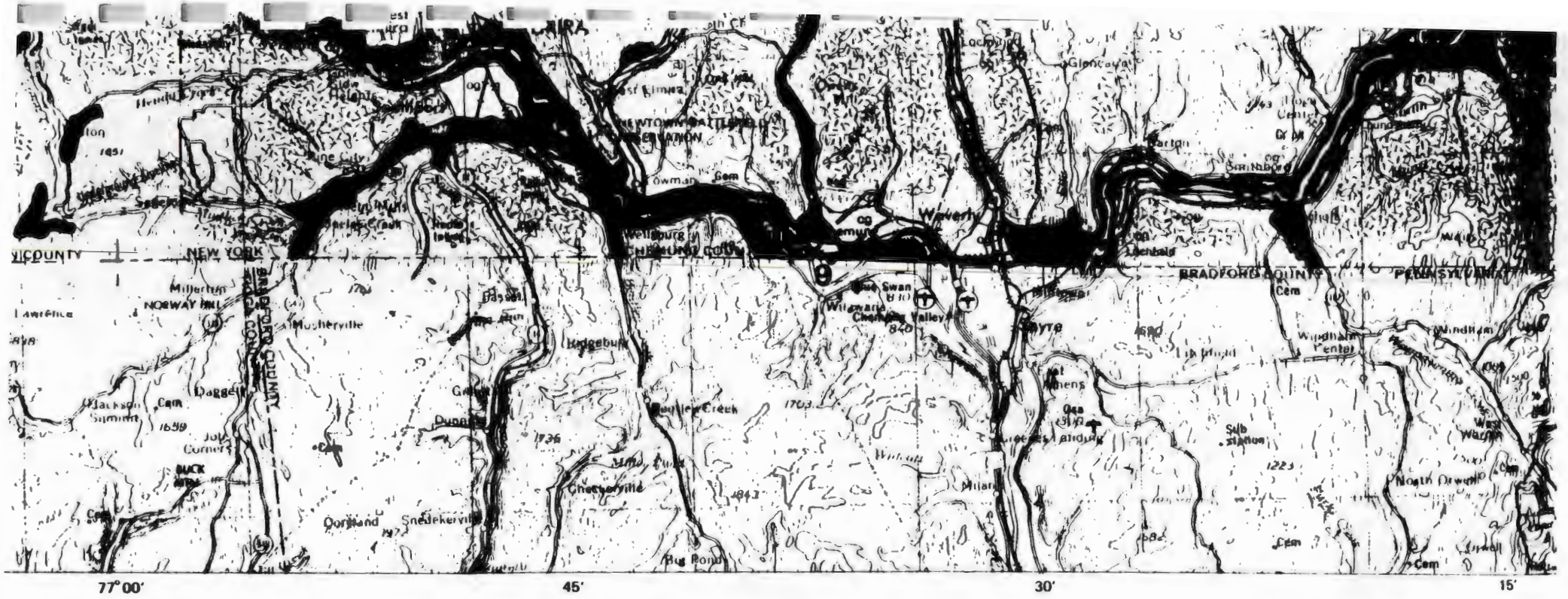


FIGURE 21. Pleistocene features, including maximum extent of Wisconsin glaciation, areas inundated by major lakes and by marine invasions

R125

REFERENCE 33



SURFICIAL GEOLOGIC MAP OF NEW YORK

FINGER LAKES SHEET

Compiled and Edited by: Ernest H. Muller, Donald H. Cadwell

Reconnaissance field review (1985) by: G. Gordon Connally, Richard A. Young

1986

1:250,000


STATE FOREST
STATE FOREST
STATE FOREST
STATE FOREST
CHEMUNG COUNTY
STEUBEN COUNTY
NEW YORK
PENNSYLVANIA
TIOGA COUNTY
BRADFORD COUNTY
Corning
Painted Post
Lawrenceville
Tioga
Elkland
Osceola
Knoxville
Wellsville Addison and Galeton R.R.
Pumping station
Gas
Radio tower
Lookout tower
Cem.
15'
77°00'
N
1:250,000

75° 30′
43° 30′

15′

43° 00′

EXPLANATION

al - **Recent deposits**
Generally confined to floodplains within a valley,
oxidized, non-calcareous, fine sand to gravel,
in larger valleys may be overlain by silt,
subject to frequent flooding, thickness 1-10 meters.

alf - **alluvial fan**

pm - **Swamp deposits**
Peat-muck, organic silt and sand in poorly drained areas,
unoxidized,
may be overlying marl and lake silts,
potential land instability,
thickness generally 2-20 meters.

d - **Dunes**
Fine to medium sand,
well-sorted, stratified,
non-calcareous, unconsolidated,
generally wind-reworked lake sediments,
permeable, well-drained,
thickness variable (1-10 meters).

lb - **Lacustrine beach**
Generally well-sorted sand and gravel,
stratified, permeable and well-drained,
deposited at a lake shoreline,
generally non-calcareous,
wave-winnowed lag gravel in isolated drumlin localities,
thickness variable (2-10 meters).

ld - **Lacustrine delta**
Coarse to fine gravel and sand,
stratified, generally well-sorted,
deposited at a lake shoreline,
thickness variable (3-15 meters).

lsc - **Lacustrine silt and clay**
Generally laminated clay and silt
deposited in proglacial lakes,
generally calcareous,
potential land instability,
thickness variable (up to 50 meters).

ls - **Lacustrine sand**
Sand deposits associated with large bodies of water,
generally a near-shore deposit or near a sand source,
well-sorted, stratified,
generally quartz sand,
thickness variable (2-20 meters).

og - **Outwash sand and gravel**
Coarse to fine gravel with sand,
proglacial fluvial deposition,
well-rounded and stratified,
generally finer texture away from ice border,
thickness variable (2-20 meters).

k - **Kame deposits**
Includes kames, eskers, kame terraces, kame deltas,
coarse to fine gravel and/or sand,
deposition adjacent to ice,
lateral variability in sorting, coarseness and thickness,
locally firmly cemented with calcareous cement.

R 13!

thickness variable (2-20 meters).

k - **Kame deposits**
Includes kames, eskers, kame terraces, kame deltas,
coarse to fine gravel and/or sand,
deposition adjacent to ice,
lateral variability in sorting, coarseness and thickness,
locally firmly cemented with calcareous cement,
thickness variable (10-30 meters).

km - **Kame moraine**
Variable texture (size and sorting) from boulders to sand,
deposition at an ice margin during deglaciation,
locally cemented with calcareous cement,
thickness variable (10-30 meters).

tm - **Till moraine**
Much like till, but more variable in sorting,
generally more permeable than till,
deposition adjacent to ice,
more variably drained,
may be ablation till,
thickness variable (10-30 meters).

t - **Till**
Variable texture (e.g. clay, silt-clay, boulder clay),
usually poorly sorted diamict,
deposition beneath glacier ice,
generally calcareous in northern part of map,
relatively impermeable (loamy matrix),
variable clast content – ranging from abundant well-rounded diverse lithologies in valley tills to relatively angular, more limited lithologies in upland tills,
potential land instability on steep slopes,
thickness variable (1-50 meters).

r - **Bedrock**
Exposed or within 1 meter of surface,
the following types of rock may be exposed:
Paleozoic limestone, sandstone, shale.

Bedrock stipple overprint
bedrock may be within 1-3 meters of surface,
may sporadically crop out,
variable mantle of rock debris and glacial till.

MAP SYMBOLS

Contact

Esker

Glacial meltwater channel

2 • Dated radiocarbon locality

GEOMORPHIC HISTORY OF CENTRAL NEW YORK

The Finger Lakes Sheet includes part of two physiographic provinces — the Appalachian Uplands and the Erie-Ontario Lowlands. The Tug Hill Upland in the northeast corner of the sheet is an outlier of the Appalachian Uplands, similar in structure and topography, though isolated from them by the

R132

REFERENCE 34

HAMILTON GROUP
600-1500 ft. (180-460 m.)

Dhmo Moscow Formation—In west: Windom and Kashong Shales, Menteth Limestone Members; in east: Cooperstown Shale Member, Portland Point Limestone Member.

Dhld Ludlowville Formation—In west: Deep Run Shale, Tichenor Limestone, Wanakah and Ledyard Shale Members, Centerfield Limestone Member. In east: King Ferry Shale and other members, Stone Mill Sandstone Member.

Dhsk Skaneateles Formation—In west: Levanna Shale and Stafford Limestone Members; in east: Butternut, Pompey, and Delphi Station Shale Members, Mottville Sandstone Member.

Dhmr Marcellus Formation—In west: Oatka Creek Shale Member; in east: Cardiff and Chittenango Shale Members, Cherry Valley Limestone and Union Springs Shale Members.

Dhpm Panther Mountain Formation—shale, siltstone, sandstone.

ONONDAGA LIMESTONE AND ORISKANY SANDSTONE
75-150 ft. (23-45 m.)

Don Onondaga Limestone—Seneca, Moorehouse (cherty) and Nedrow Limestone Members, Edgecliff cherty Limestone Member, local bioherms.

Do Oriskany Sandstone.

GEOLOGIC MAP OF NEW YORK

1970

Finger Lakes Sheet

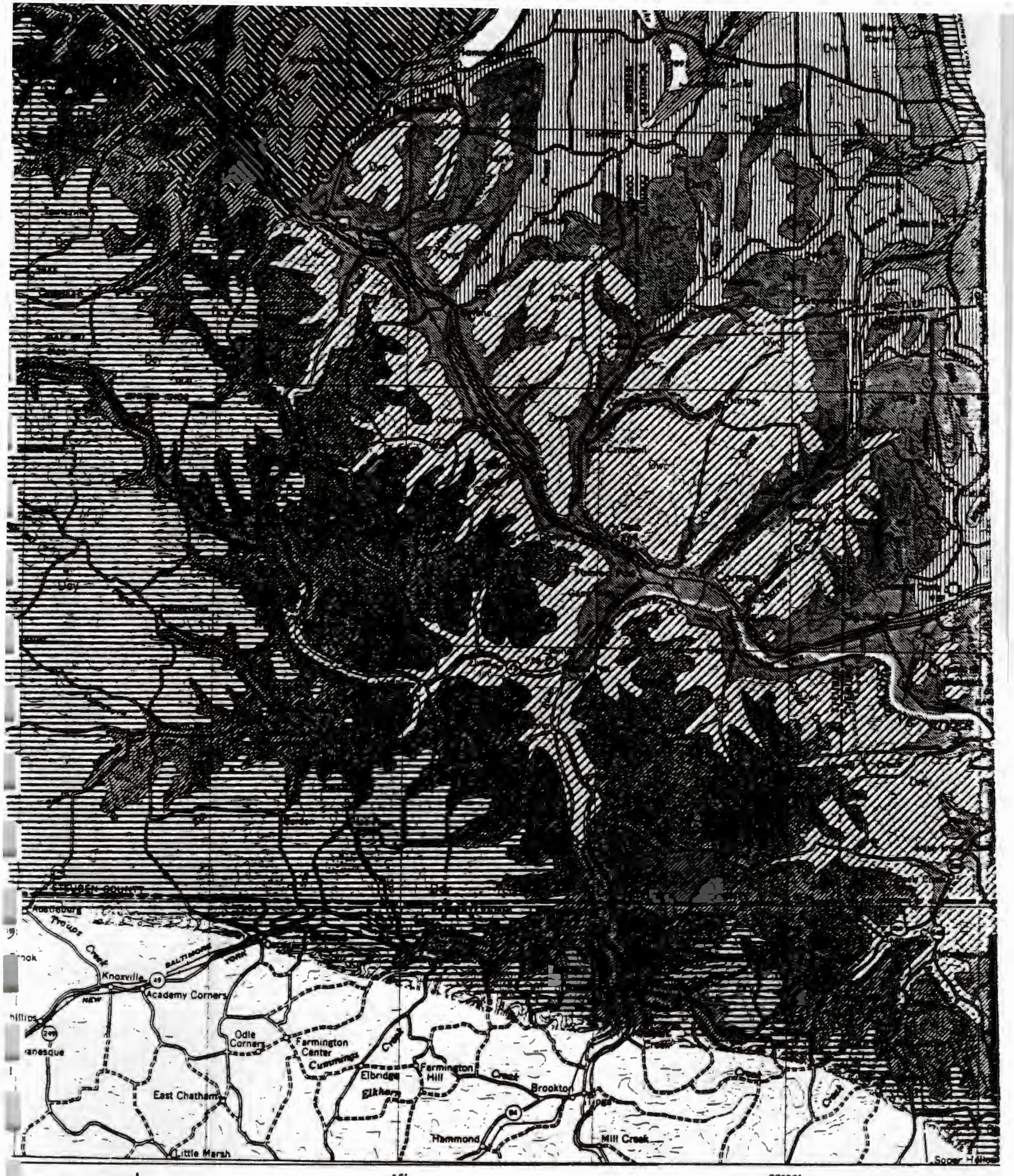
Scale 1:250,000

5 0 5 10 15 Statute Miles 20

5 0 5 10 15 20 25 Kilometers 30

CONTOUR INTERVAL 100 FEET

R133


STEUBEN COUNTY
Austinburg
Troups Creek
Knoxville
BALTIMORE
YORK
NEW
Academy Corners
Odle Corners
Farmington Center
Cummings Creek
Elbridge
Farmington Hill
Elkhorn
Brookton
East Chatham
Hammond
Mill Creek
Little Marsh
15'
77°00'
N

R134

GE

43°00'

45'

PALEOZOIC

Upper Devonian

Middle Devonian

ian

800-1200 ft. (240-370 m.)

Dcy **Machias Formation**—shale, siltstone; Rushford Sandstone; Caneadea, Canisteo, and Hume Shales; Canaseraga Sandstone; South Wales and Dunkirk Shales; In Pennsylvania: Towanda Formation—shale, sandstone.

JAVA GROUP
300-700 ft. (90-210 m.)

Dj **Wiscoy Formation**—sandstone, shale; Hanover and Pipe Creek Shales.

WEST FALLS GROUP
1100-1600 ft. (340-490 m.)

Dwn **Nunda Formation**—sandstone, shale.

Dwg **West Hill and Gardeau Formations**—shale, siltstone; Roricks Glen Shale; upper Beers Hill Shale; Grimes Siltstone.

Dwr lower Beers Hill Shale; Dunn Hill, Millport, and Moreland Shales.

Dwc Nunda Formation—sandstone, shale; West Hill Formation—shale, siltstone; Corning Shale.

Dwnm "New Milford" Formation—sandstone, shale.

Dwrg Gardeau Formation—shale,, siltstone; Roricks Glen Shale.

Dws Slide Mountain Formation—sandstone, shale, conglomerate.

Dwm Beers Hill Shale; Grimes Siltstone; Dunn Hill, Millport, and Moreland Shales

SONYEA GROUP
200-1000 ft. (60-300 m.)

Ds In west: Cashaqua and Middlesex Shales.
In east: Rye Point Shale; Rock Stream ("Enfield") Siltstone; Pulteney, Sawmill Creek, Johns Creek, and Montour Shales.

GENESEE GROUP AND TULLY LIMESTONE
200-1000 ft. (60-300 m.)

Dg **West River Shale**; Genundewa Limestone; Penn Yan and Geneseo Shales; all except Geneseo replaced eastwardly by Ithaca Formation—shale, siltstone and Sherburne Siltstone.

Dgo Oneonta Formation—shale, sandstone.

Dgu Unadilla Formation—shale, siltstone.

Dt Tully Limestone.

HAMILTON GROUP
600-1500 ft. (180-460 m.)

Dhmo **Moscow Formation**—In west: Windom and Kashong Shales, Menteth Limestone Members; In east: Cooperstown Shale Member, Portland Point Limestone Member.

Dhld **Ludlowville Formation**—In west: Deep Run Shale, Tichenor Limestone, Wanakah and Ledyard Shale Members, Centerfield Limestone Member. In east: King Ferry Shale and other members, Stone Mill Sandstone Member.

Dhsk **Skaneateles Formation**—In west: Levanna Shale and Stafford Limestone Members; In east: Butternut, Pompey, and Delphi Station Shale Members, Mottville Sandstone Member.

Dhmr **Marcellus Formation**—In west: Oakta Creek Shale Member; In east: Cardiff and Chittenango Shale Members, Cherry Valley Limestone and Union Springs Shale Members.

Dhpm **Panther Mountain Formation**—shale, siltstone, sandstone.

ONONDAGA LIMESTONE AND ORISKANY SANDSTONE
75-150 ft. (23-45 m.)

Don **Onondaga Limestone**—Seneca, Morehouse (cherty) and Nedrow Limestone Members, Edgecliff cherty Limestone Member, local bioherms.

Do **Oriskany Sandstone**.

R13c

REFERENCE 35

STATE OF NEW YORK
DEPARTMENT OF HEALTH
Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, New York 12237

David Axelrod, M.D.
Commissioner

MCB

June 13, 1989

RECEIVED

JUN 19 1989

BUREAU OF
HAZARDOUS SITE CONTROL
DIVISION OF HAZARDOUS
WASTE REMEDIATION

Mr. Michael Komoroske
Assistant Sanitary Engineer
Bureau of Hazardous Site Control
NYS Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233

RE: Erwin Town Landfill, ID #851003 - FILE
(V) Painted Post, Steuben County

Dear Mr. Komoroske:

I have reviewed the Draft Phase I Report for the Erwin Town Landfill and have the following comment.

The Health Department inspection report dated April 11, 1986 indicates that a small leachate seep was noted at the toe of the southeastern portion of the landfill at that time. The draft Phase I report does not mention the presence of seepage at the time of the consultant's site visit in October 1988. The existence of the seepage identified in 1986 should be reflected in the report and it should be verified if this condition no longer exists.

Attached is the draft report. If you have questions, please call me at 458-6305.

Sincerely,

Dennis R. Weiss

Dennis Weiss, P.E.
Senior Sanitary Engineer
Bureau of Environmental Exposure
Investigation

tjl:91600781

ATTACHMENT

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