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New York State
Low - Level
Radioactive Waste
Siting Commission



JAY D. DUNKLEBERGER • Executive Director

ANGELO F. ORAZIO • Chairman
DR. STANLEY J. GOLDSMITH
DR. H. DAVID MAILLIE
MARJORY B. RINALDO-LEE
RICHARD M. WOOD

The New York State Low-Level Radioactive Waste Siting Commission was given the responsibility by State law to identify the site(s) and method(s) for disposal of low-level radioactive waste generated in New York. Enclosed please find a copy of the Executive Summary of the results of the Statewide Exclusionary Screening report which has been prepared by the Siting Commission.

If you would like a full copy of this document, please contact the Siting Commission.

Information on this report will be available at the series of public meetings that the Commission has scheduled in October at the following locations:

October 3 - Buffalo, NY - Marriott at Amherst, 1340 Millersport Highway - 7:00 p.m.

October 4 - Syracuse, NY - Holiday Inn Downtown, 701 Genesee Street - 7:00 p.m.

October 6 - White Plains, NY - Westchester County Airport, Building 1-Joint News Center - 7:00 p.m.

October 11 - Potsdam, NY - Potsdam College, College Union Hall - 7:00 p.m.

October 12 - Albany, NY - College of St. Rose, St. Joseph's Hall, 432 Western Avenue - 7:00 p.m.

October 14 - Binghamton, NY - Holiday Inn, Arena; 2-8 Hawley Street - 7:00 p.m.

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If you have any questions, please feel free to contact the
Siting Commission.

Sincerely,


Jay D. Dunkleberger
Executive Director

JDD/SCC/crh

Enclosure

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**STATEWIDE EXCLUSIONARY
SCREENING REPORT**

EXECUTIVE SUMMARY

September 1988

**Prepared by the
New York State Low-Level
Radioactive Waste Siting Commission
and
Roy F. Weston, Inc.**

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**STATEWIDE EXCLUSIONARY
SCREENING REPORT**

EXECUTIVE SUMMARY

September 1988

**New York State Low-Level Radioactive
Waste Siting Commission
1215 Western Avenue, Suite 306
Albany, NY 12203
Telephone (518) 438-6130**

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Dr. Stanley J. Goldsmith
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Executive Director

Jay D. Dunkleberger

EXECUTIVE SUMMARY

INTRODUCTION

This statewide exclusionary screening report presents the results of the first step in the site selection process mandated in the New York Low-Level Radioactive Waste Management (Act). The Act created the Low-Level Radioactive Waste Siting Commission and gave it the responsibility for selecting one or more sites for a low-level radioactive waste disposal facility and a disposal method(s) to be used at the site(s). Upon selection of a preferred site and disposal method, the Siting Commission is to apply for certification from the New York State Department of Environmental Conservation (DEC). Once the certification is granted, the New York State Energy Research and Development Authority will assume responsibility for seeking a license and constructing and operating the disposal facility.

THE SITE SELECTION PROCESS

The Siting Commission is using a two-phased approach to select a preferred site for disposal of low-level radioactive waste in New York. First, a series of steps are being taken to identify four candidate sites that are expected to be potentially suitable for low-level radioactive waste disposal. These steps will use existing data and limited reconnaissance studies. The four sites will then undergo detailed studies in the second phase to characterize their existing conditions and provide information to select a preferred site for certification. Further information on this process can be found in the Siting Commission's "Plan for Selecting Sites For Disposal of Low-Level Radioactive Wastes" (Siting Commission 1988).

As illustrated in Figure S-1, a systematic process of stepwise screening to focus on successively smaller and fewer land units to identify candidate sites is being used. This process involves the following four steps:

- o Step 1 - Statewide exclusionary screening to eliminate large areas prohibited by law or regulation for low-level radioactive waste disposal.
- o Step 2 - Screening of the remaining areas to identify approximately ten candidate areas with the greatest potential for suitable sites.

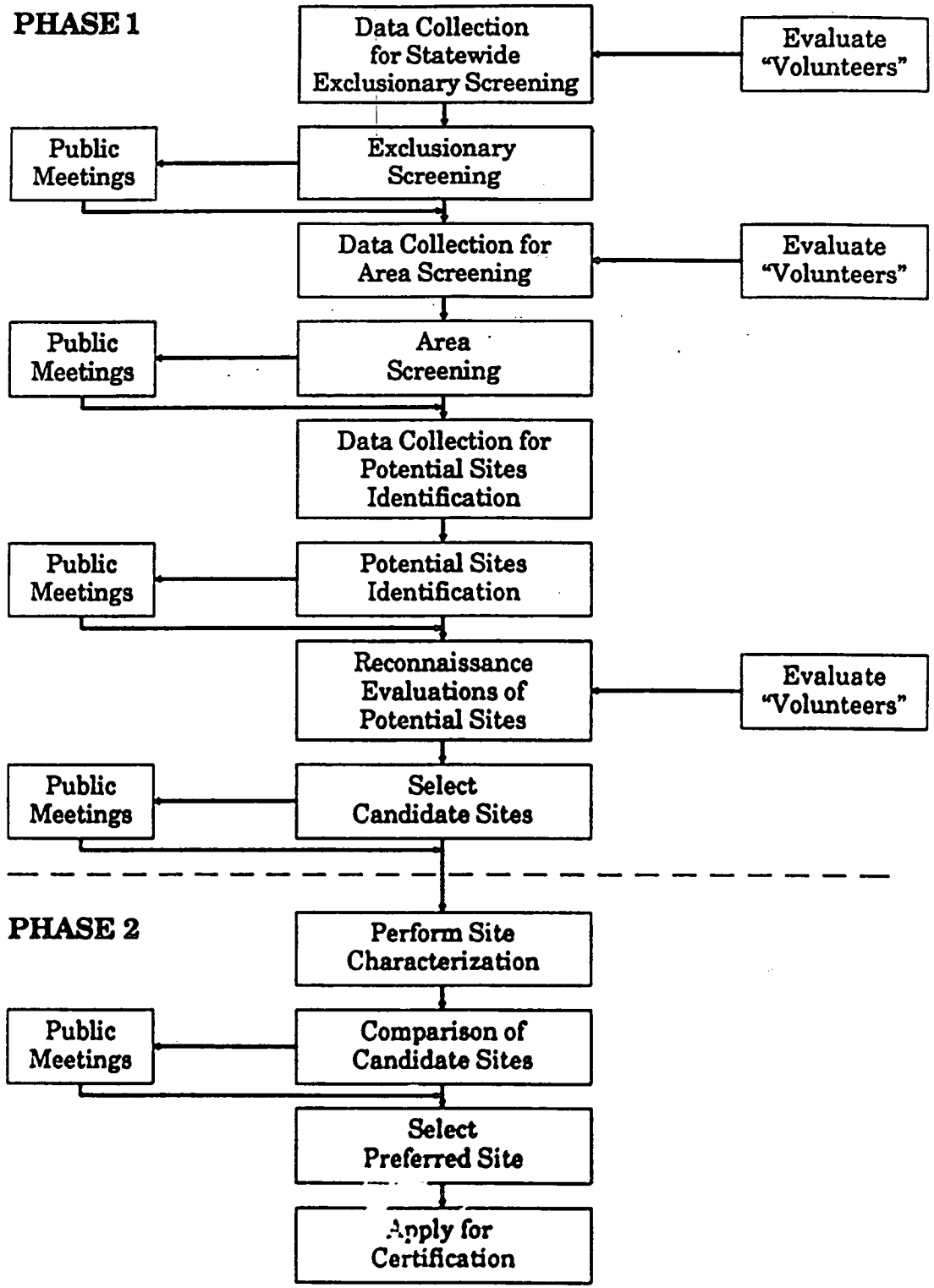


Figure S-1 Process of Identifying Sites for Low-Level Radioactive Waste Disposal

- o Step 3 - Detailed screening of the candidate areas, limited on-site observation, and comparative evaluations to identify approximately eight potential sites.
- o Step 4 - Limited on-site studies of the potential sites to eliminate any sites having apparent "fatal flaws" that could preclude site certification. Selection of four candidate sites for detailed site characterization.

To facilitate the site selection process, the Siting Commission defined a set of objective criteria on which to base its decision making (Siting Commission 1988). A review of the regulatory requirements and guidance for low-level radioactive waste disposal site selection identified a number of siting factors (e.g., geology, groundwater hydrology, demography) for which criteria were developed. Criterion statements were drafted for each siting factor to address specific elements of the legal and regulatory requirements and other guidance documents. Criterion statements are either exclusionary or preference. Exclusionary criterion statements address legal or regulatory prohibitions on low-level radioactive waste disposal facility development. Preference criterion statements identify conditions that are favorable for a disposal facility.

STATEWIDE EXCLUSIONARY SCREENING

The purpose of this document is to describe the process and present the results of Step 1, statewide exclusionary screening. This step has included only selected exclusionary criteria; other exclusionary as well as preference criteria will be applied at subsequent steps. In selecting the criteria to be used for statewide exclusionary screening, the following guiding principles have been applied:

- o The exclusionary criteria to be applied at this stage must address conditions that are clearly prohibited in law or regulation. There can be no allowance for compensating factors.
- o The criteria must address only clearly defined areas with legally established boundaries. There can be no dispute or question about the data used in defining those boundaries.
- o The criteria must contain no qualifiers that require interpretation of the law or regulations. Such interpretation would require regulatory concurrence, which is contrary to the overall philosophy of this step that the criteria and results should be clear and not subject to any debate.

- o The criteria should address conditions for which data are available for all areas of the State. No new data collection should be necessary because this is not believed to be timely or cost effective at this point in the screening process.
- o The criteria should address areas that are generally large enough to appear as areas rather than points on the map and will therefore be more meaningful by reducing the area to be considered in subsequent steps.

Thus, the objective of this step was to screen the entire State using a set of exclusionary criteria addressing conditions that, based on legal and regulatory restrictions, prohibit development of a low-level radioactive waste disposal facility. It was designed to eliminate significant portions of the State and, thereby, reduce quickly and efficiently the number of areas and the amount of data to be considered in the remaining steps.

The following exclusionary criteria listed by siting factor have been used during this initial statewide exclusionary screening step:

Groundwater Hydrology

- o Primary Aquifers: Exclude all areas immediately above the Long Island aquifer or any primary public water supply aquifer designated by the Departments of Environmental Conservation and Health.

Demography

- o Population Density: Exclude all towns and cities, as defined in the 1980 decennial census, that have an average population density of more than 1,000 persons per square mile.

Land Use

- o Federal Protected Lands: Exclude all lands protected by the Federal government, including units of the following:
 - The National Wilderness Preservation System
 - National Wildlife Refuge System
 - National Park System
- o State Protected Lands: Exclude all lands protected by New York State, including components of the following:
 - State parks
 - Adirondack Park
 - Catskill Park

- o Land Ownership: Exclude all Indian reservations.

DATA COLLECTION AND PROCESSING

Wherever possible, existing computerized data for the statewide exclusionary screening have been utilized. Data processing has been performed using a geographic information system (GIS) that uses computers to create, edit, and update overlay maps. Areas addressed by each of the exclusionary criteria were compiled at a map scale of 1:250,000, where available, and entered into the GIS. Data that existed at other map scales were also entered into the GIS. Edit plots were created for all siting criteria to verify that associated land units or features were properly represented. Maps were plotted to display the areas throughout the State associated with each exclusionary criterion. A map depicting all exclusionary criteria together was also produced.

RESULTS SUMMARY

The statewide exclusionary screening is the first of a series of steps that will be undertaken as part of the candidate site identification process. It must be remembered that the exclusionary criteria employed in this first step do not constitute all that will be used to identify candidate sites. Additional exclusionary criteria, as well as criteria defining preferred conditions, will be used in subsequent screening steps.

Figure S-2 shows the areas of the State that have been excluded in this initial step. A total of 9,669,561 acres or approximately 30 percent of the State has been excluded from further consideration. As shown in Figure S-2, the largest concentrations of excluded lands are located in the southern part of the State (the New York City metropolitan area), the east-central and northeastern parts of the State (Catskill Park and Adirondack Park, respectively), as well as a number of smaller areas in western New York.

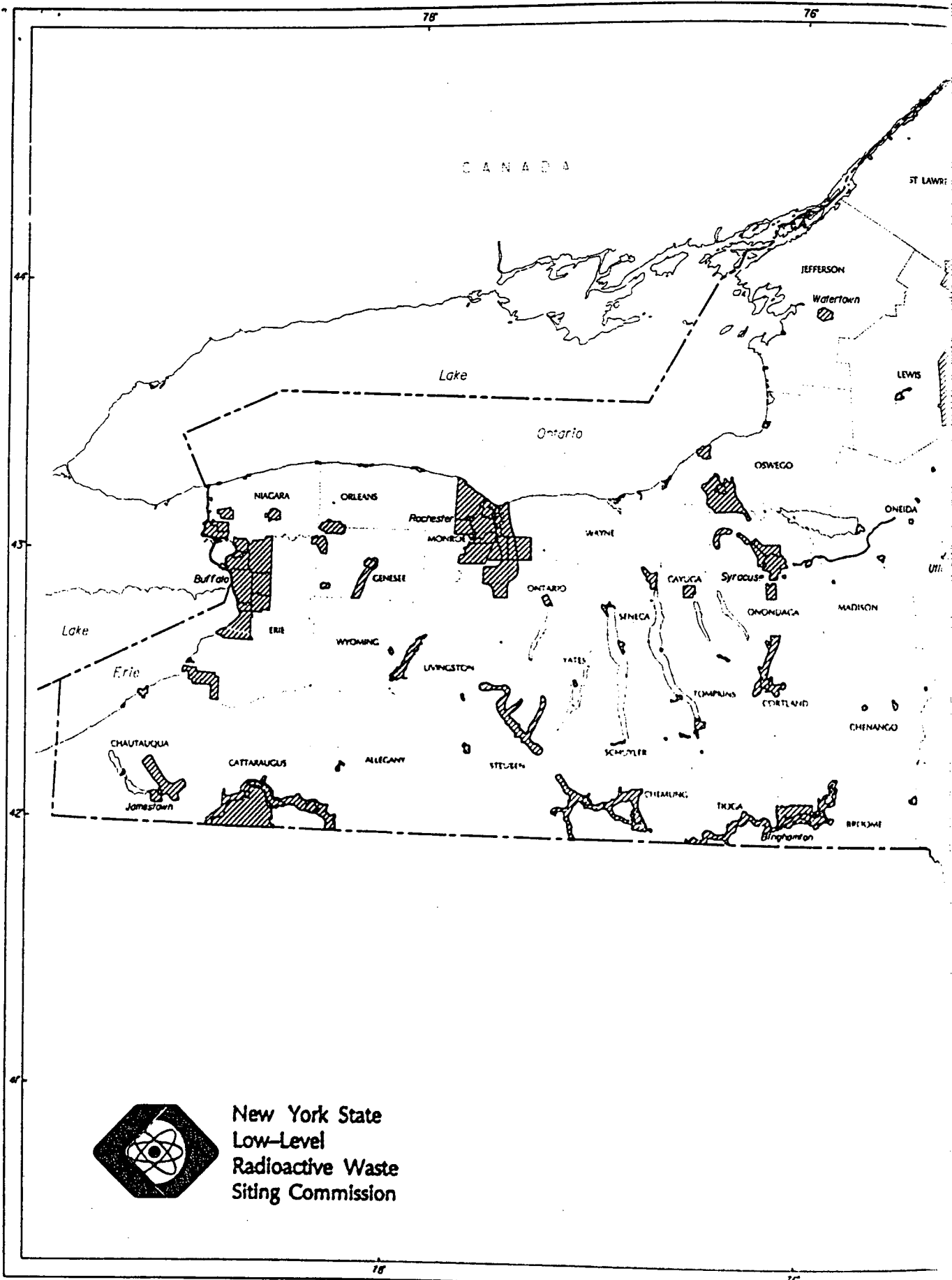
Table S-1 identifies the number of acres excluded by each siting factor. Exclusion of State protected lands clearly eliminates the greatest amount of land area. Most of this is due to two very large parks: the Adirondack Park (5,815,785 acres) and the Catskill Park (694,212 acres).

The Long Island aquifer constitutes over 60 percent of the total area excluded by the groundwater hydrology siting factor. The acreage excluded by demography is the second largest total, with over 1.5 million acres of land area having an average population density greater than 1,000 persons per square mile. Among areas meeting this density criterion are the metropolitan areas of New York City, Albany, Binghamton, Buffalo, Rochester, and Syracuse.

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Federal protected lands and Indian reservations contribute a relatively small amount of additional area to the total excluded. Both categories include numerous features that are located on Long Island.

NYEXCL/SECEX



New York State
 Low-Level
 Radioactive Waste
 Siting Commission

Step 1 Analysis: Statewide Exclusionary Screening

Composite

 Excluded Area

Includes Primary Aquifers, Population Density, Federal Protected Lands, State Protected Lands, and Indian Reservations.

Additional categories of excluded areas will be analyzed in subsequent steps of the siting process.

Scale 1:2,000,000

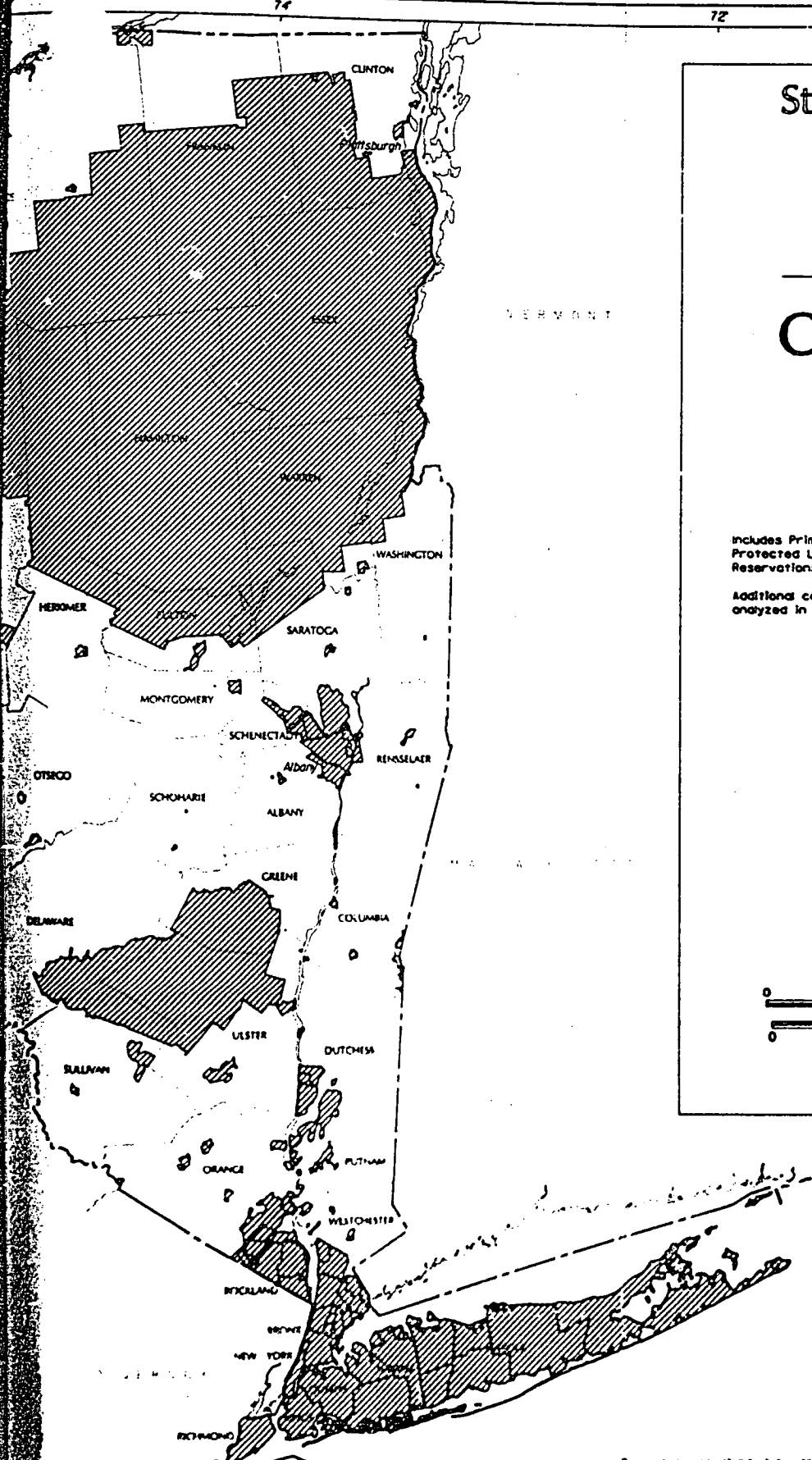
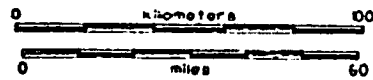


Figure S-2

TABLE S-1
 AREA EXCLUDED BY STATEWIDE
 EXCLUSIONARY SCREENING PROCESS

Siting Factor	Acres Excluded
Groundwater Hydrology	1,264,219
Demography	1,563,142
Land Use	
o Federal protected lands	17,250*
o State protected lands	6,737,539*
o Indian reservations	87,395*
Total (Approx. % of State)	9,669,561 (30)

*This acreage value does not include the acreage for features that are encompassed within areas already excluded because of groundwater hydrology or demography. This value is the amount of excluded land that is in addition to that excluded by those two factors.

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