

100-11426

**IMPACT ASSESSMENT
WORK GROUP I**

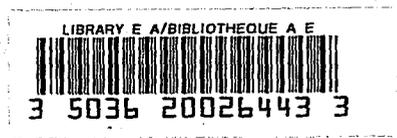
UNITED STATES — CANADA

**MEMORANDUM OF INTENT
ON
TRANSBOUNDARY AIR POLLUTION**

ACCOMPANING MAPS

**FINAL REPORT
JANUARY 1983**

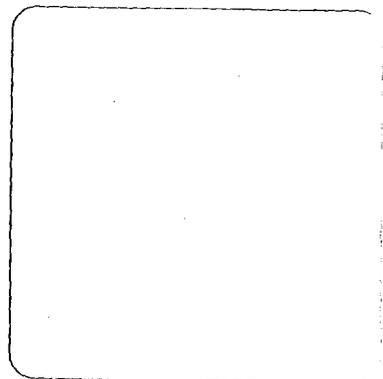
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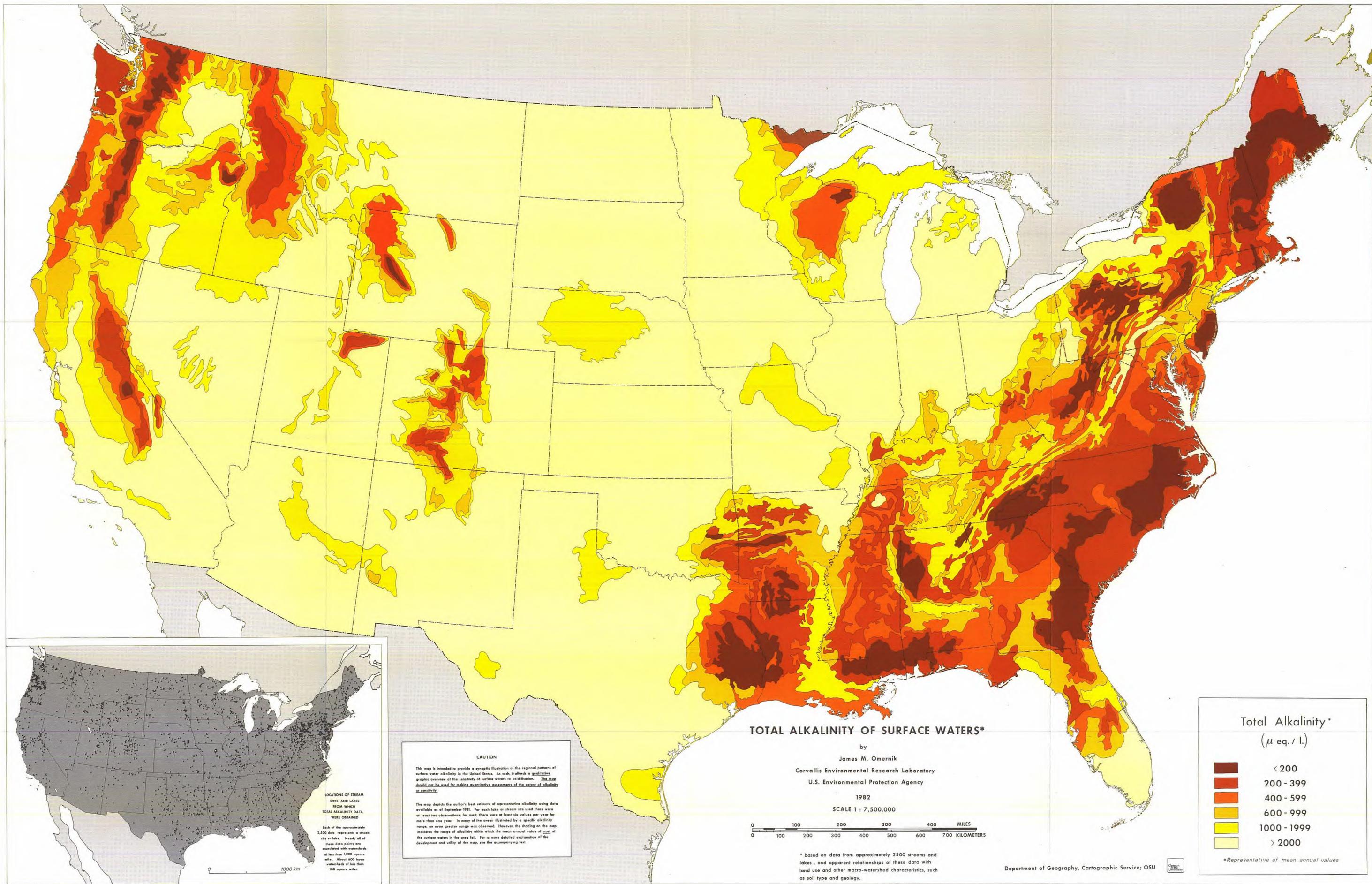


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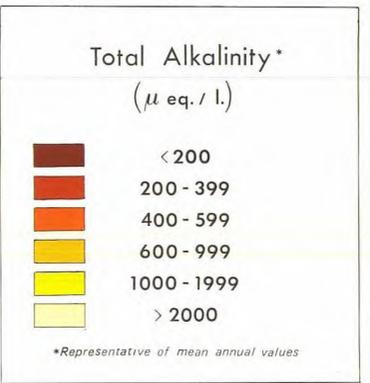
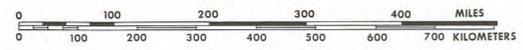


TOTAL ALKALINITY OF SURFACE WATERS*

by
James M. Omernik
Corvallis Environmental Research Laboratory
U.S. Environmental Protection Agency

1982

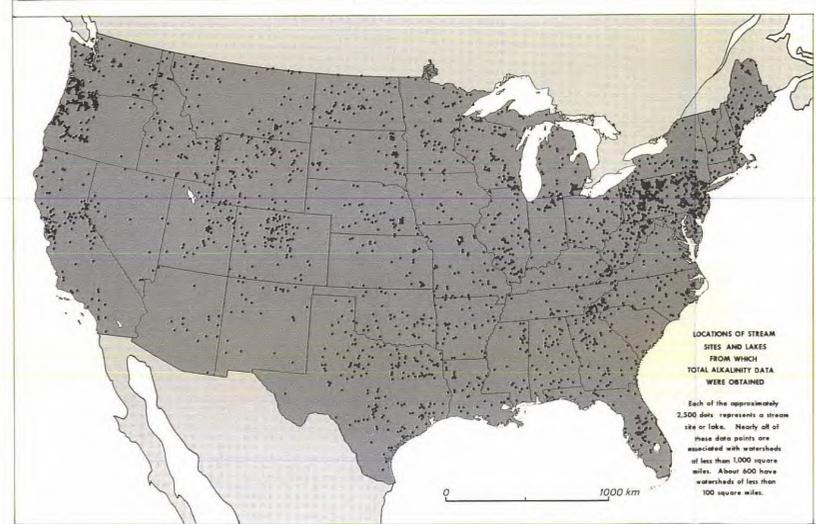
SCALE 1 : 7,500,000



CAUTION

This map is intended to provide a synoptic illustration of the regional patterns of surface water alkalinity in the United States. As such, it affords a qualitative graphic overview of the sensitivity of surface waters to acidification. The map should not be used for making quantitative assessments of the extent of alkalinity or sensitivity.

The map depicts the author's best estimate of representative alkalinity using data available as of September 1981. For each lake or stream site used there were at least two observations; for most, there were at least six values per year for more than one year. In many of the areas illustrated by a specific alkalinity range, an even greater range was observed. However, the shading on the map indicates the range of alkalinity within which the mean annual value of most of the surface waters in the area fall. For a more detailed explanation of the development and utility of the map, see the accompanying text.



* based on data from approximately 2500 streams and lakes, and apparent relationships of these data with land use and other macro-watershed characteristics, such as soil type and geology.

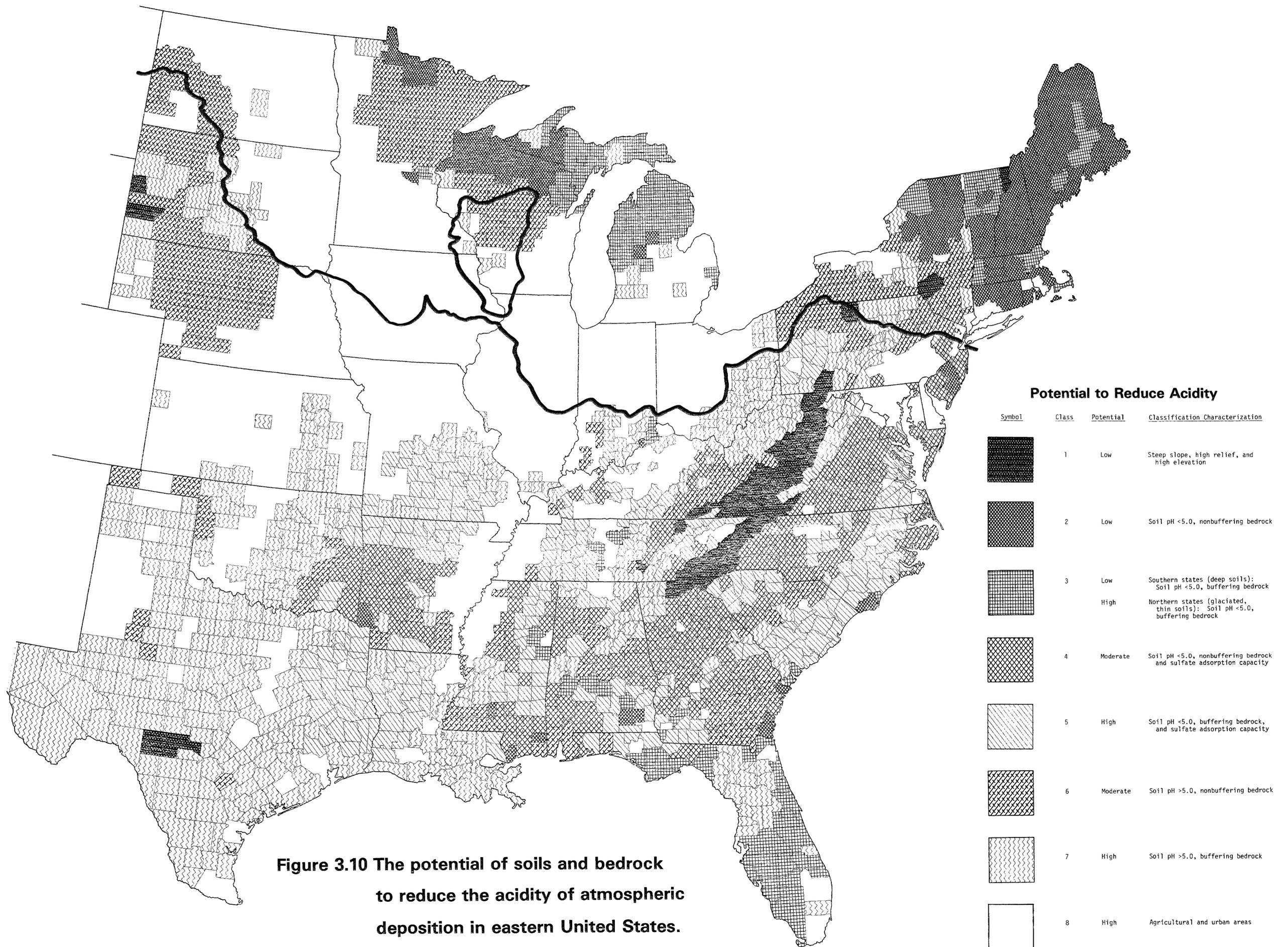
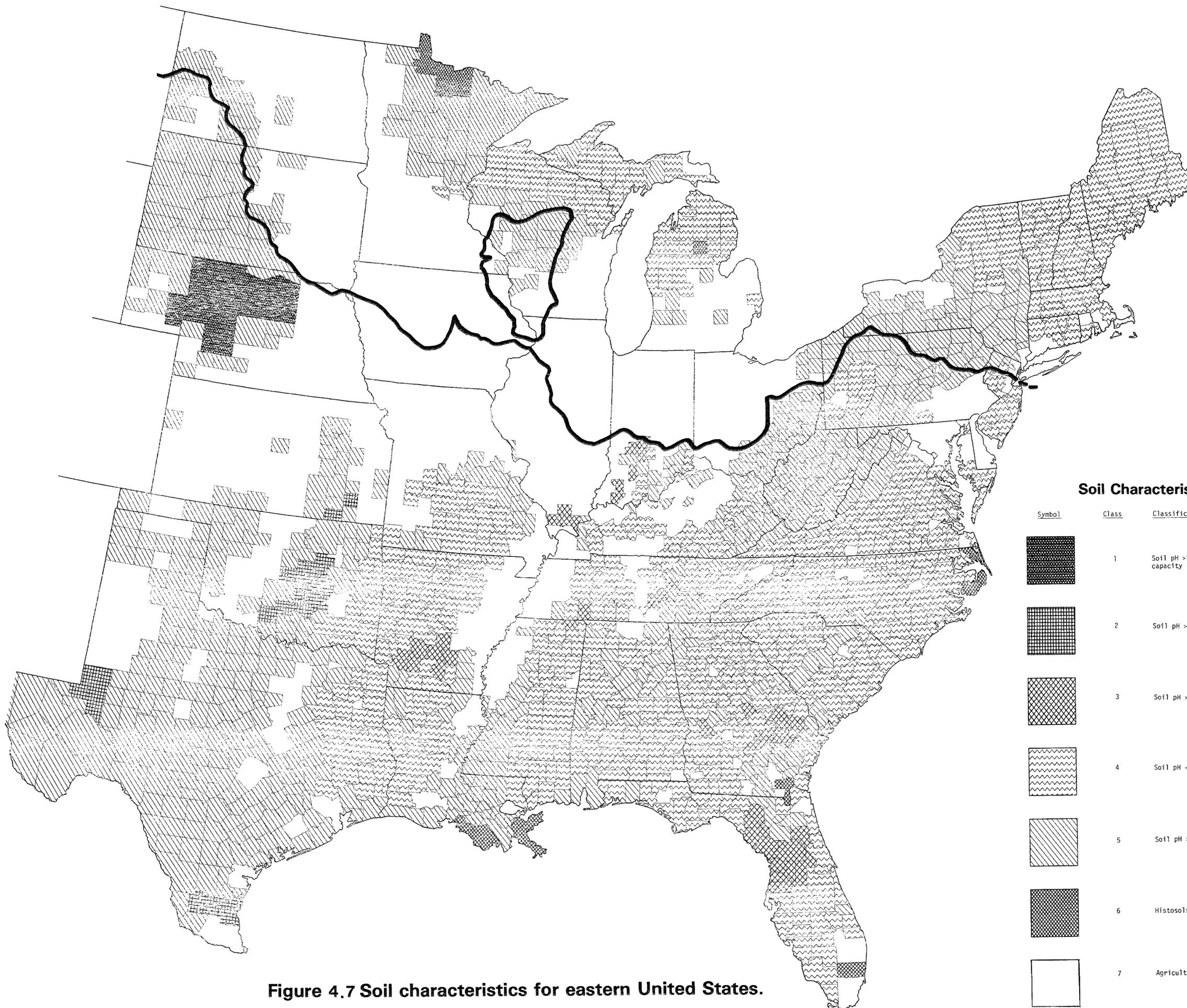


Figure 3.10 The potential of soils and bedrock to reduce the acidity of atmospheric deposition in eastern United States.

Scale 1:5,000,000

Counties are classified according to their dominant (>50%) characteristics. The approximate southern limit of the last glaciation is shown as a heavy solid line.



Soil Characteristics

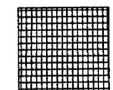
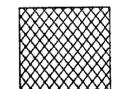
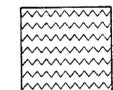
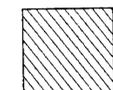
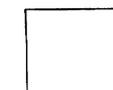
Symbol	Class	Classification Characteristics
	1	Soil pH >5.5, cation exchange capacity (CEC) <6.2
	2	Soil pH >5.5, CEC <9.0
	3	Soil pH >5.0, CEC <9.0
	4	Soil pH <5.0
	5	Soil pH >5.0, CEC >9.0
	6	Histosols
	7	Agricultural and urban areas

Figure 4.7 Soil characteristics for eastern United States.

Scale 1:5,000,000

Counties are classified according to their dominant (>50%) characteristics. The approximate southern limit of the last glaciation is shown as a heavy solid line.