

Pollution Sensitivity of Near-Surface Materials

By Roberta Adams

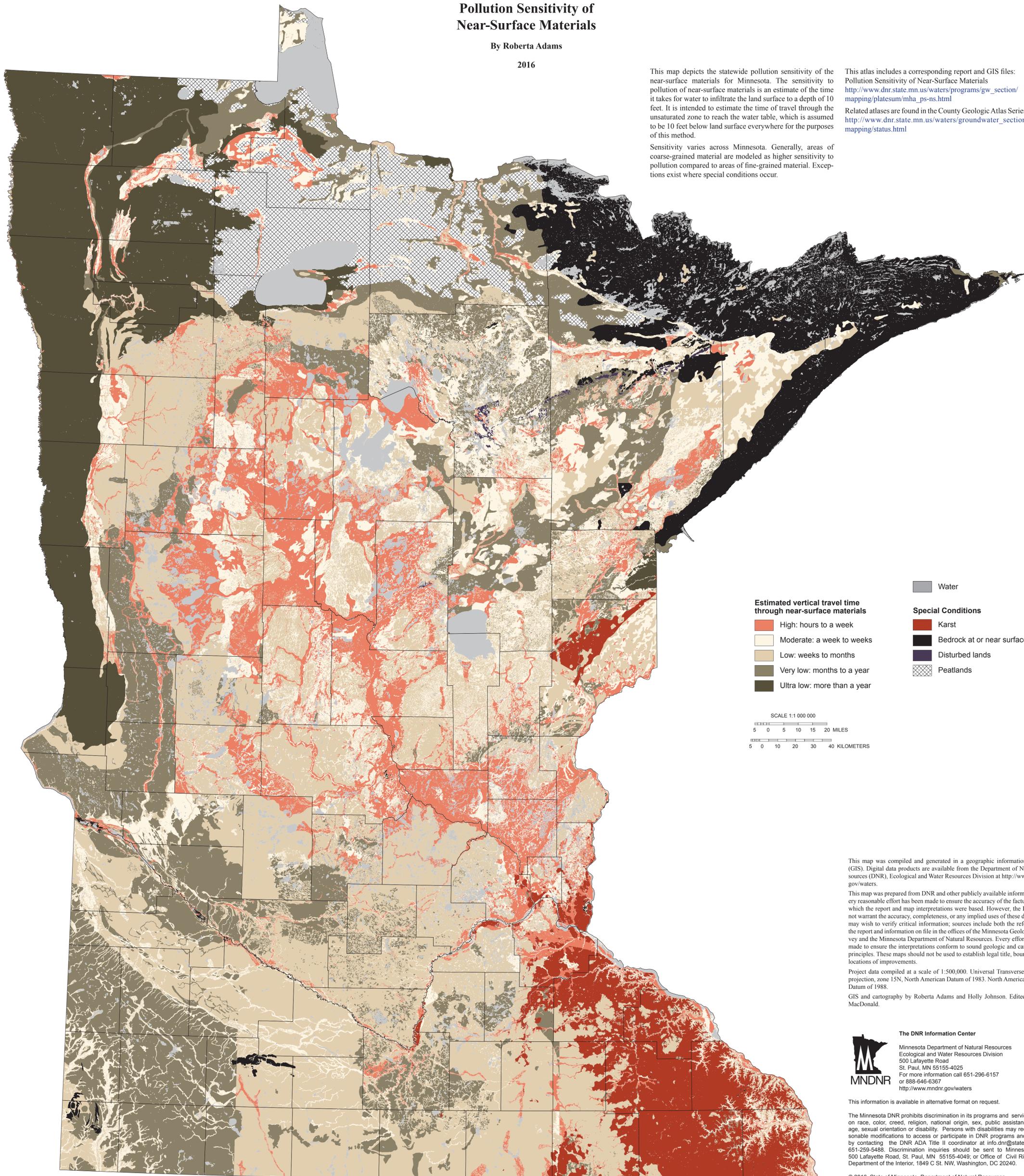
2016

This map depicts the statewide pollution sensitivity of the near-surface materials for Minnesota. The sensitivity to pollution of near-surface materials is an estimate of the time it takes for water to infiltrate the land surface to a depth of 10 feet. It is intended to estimate the time of travel through the unsaturated zone to reach the water table, which is assumed to be 10 feet below land surface everywhere for the purposes of this method.

Sensitivity varies across Minnesota. Generally, areas of coarse-grained material are modeled as higher sensitivity to pollution compared to areas of fine-grained material. Exceptions exist where special conditions occur.

This atlas includes a corresponding report and GIS files:
Pollution Sensitivity of Near-Surface Materials
http://www.dnr.state.mn.us/waters/programs/gw_section/mapping/platesum/mha_ps-ns.html

Related atlases are found in the County Geologic Atlas Series:
http://www.dnr.state.mn.us/waters/groundwater_section/mapping/status.html



Estimated vertical travel time through near-surface materials

- High: hours to a week
- Moderate: a week to weeks
- Low: weeks to months
- Very low: months to a year
- Ultra low: more than a year

Special Conditions

- Karst
- Bedrock at or near surface
- Disturbed lands
- Peatlands

SCALE 1:1 000 000

5 0 5 10 15 20 MILES

5 0 10 20 30 40 KILOMETERS

This map was compiled and generated in a geographic information system (GIS). Digital data products are available from the Department of Natural Resources (DNR), Ecological and Water Resources Division at <http://www.mndnr.gov/waters>.

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Project data compiled at a scale of 1:500,000. Universal Transverse Mercator projection, zone 15N, North American Datum of 1983. North American Vertical Datum of 1988.

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