

Thesis Project Portfolio

Jackson Cleaners Environmental Remediation

(Technical Report)

Rallying for Remediation:

**The Struggle for Safe Groundwater in Warren County, North Carolina
and Environmental Justice Legacy**

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

Stephen Branch

Spring, 2024

Department of Civil and Environmental Engineering

Table of Contents

Sociotechnical Synthesis

Jackson Cleaners Environmental Remediation

Rallying for Remediation: The Struggle for Safe Groundwater in Warren County, North Carolina
and Environmental Justice Legacy

Prospectus

Sociotechnical Synthesis

The burdens of environmental health hazards are inequitably distributed. The inequities are due to imbalances of power that leave some communities powerless and consequently vulnerable. Successful remediation efforts therefore require not just site cleanup but also community empowerment.

The capstone team comparatively assessed means of remediating groundwater contamination at the site of a former dry cleaning business in Ypsilanti, Michigan. In the surface-level systems at the site, hazards to humans (who may use it for recreation) and to animals may be severe.

The origins of the environmental justice movement lie in a struggle in Warren County, North Carolina, in the early 1980s. There, organizers took inspiration from the then-recent civil rights movement to associate environmental health with human rights.