
PROJECT PLAN: GEOGRAPHIC DIFFERENCES IN BOIL WATER ORDERS AND ADVISORIES IN KANSAS

ABSTRACT

The Kansas Department of Health and Environment (KDHE) issues boil water orders and advisories for communities at risk for water contamination. This project collects and processes this data and pairs it with KDHE Consumer Confidence Reports (CCRs) to assess geographic differences in reported water contaminants.

1 INTRODUCTION

The Kansas Department of Health and Environment (KDHE) issues a boil water advisory (BWA) or boil water order (BWO) when a public water supply system notifies KDHE that the presence of contaminants may pose a threat to public health. If the presence of contamination is confirmed, KDHE will issue a BWO. If the potential for contamination is present (but not confirmed), either KDHE or the public water supply system can issue a BWA.

KDHE publishes their BWAs and BWOs on its website. Their website includes separate notices for when the order or advisory is issued and rescinded. The goal of this project is to scrape and collect information related to these notices, including the start and end dates, affected area, precautions advised, and the contaminants prompting the notice.

2 BASELINE OR INITIAL ANALYSIS

Checking consistency

ACR report between KDHE boil water advisory archive.

The main dataset will be created by parsing HTML code from the KDHE website. Each boil order or advisory issued is associated with a unique URL and ID. This will be used to scrape the appropriate fields from both the main bulletin page, along with the individual web page for each notice. The Internet Archive will be used to collect historical notices not available on the KDHE website.

After compiling the dataset, geospatial analysis will be conducted to identify the geographic extent of each notice. The resulting spatial analysis will be joined with KDHE Consumer Confidence Reports (CCRs) to track patterns in contaminant levels across communities.

3 FINAL ANALYSIS

4 FINAL GOALS & EVALUATION

- a. *Scrape and clean BWA and BWO data from the KDHE website*
- b. *Define geographic boundaries for affected areas*
- c. *Visualize patterns across communities and notice type*

5 RELATED WORK

*KDHE Disruption in Water Service: <https://www.kdhe.ks.gov/468/Disruption-in-Water-Service>
Boil Water Bulletin: <https://www.kdhe.ks.gov/CivicAlerts.aspx?CID=29>
Consumer Confidence Reports: <https://www.kdhe.ks.gov/531/Consumer-Confidence-Reports>*

6 DATA & TECHNICAL REQUIREMENTS

Familiarity with a programming language, such as R or Python, will be necessary for web scraping. Consumer Confidence Reports are provided for the years 2019 to 2025.