



HS1.1.2

PUBLIC DRINKING WATER ACCESS IN TEXAS (UNITED STATES) COMMUNITIES DURING THE WINTER STORM 2021

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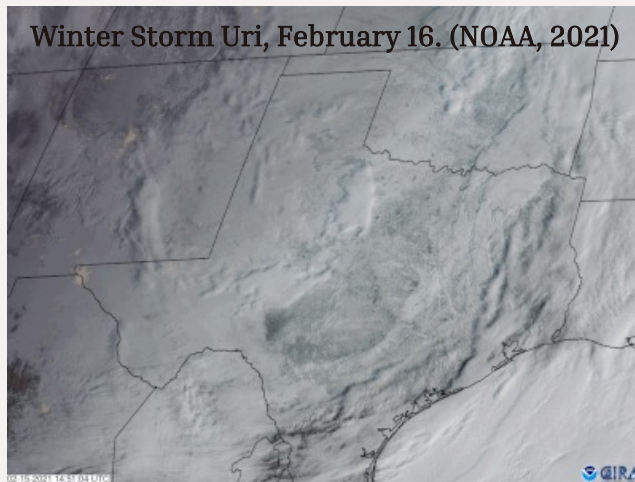
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Key Points

Winter Storm Uri (February 2021): millions of Americans lost power and water during freezing weather and the COVID19 pandemic. In Texas, more than 17 million people on public drinking water systems were placed under boil water advisories for days to more than a month.

We asked:

Where were the longest boil water advisories?
Was advisory length related to the size of the public water system, weather, degree of urbanization, or demographics?
What does this say about the resilience of US drinking water supplies to extreme climate events?

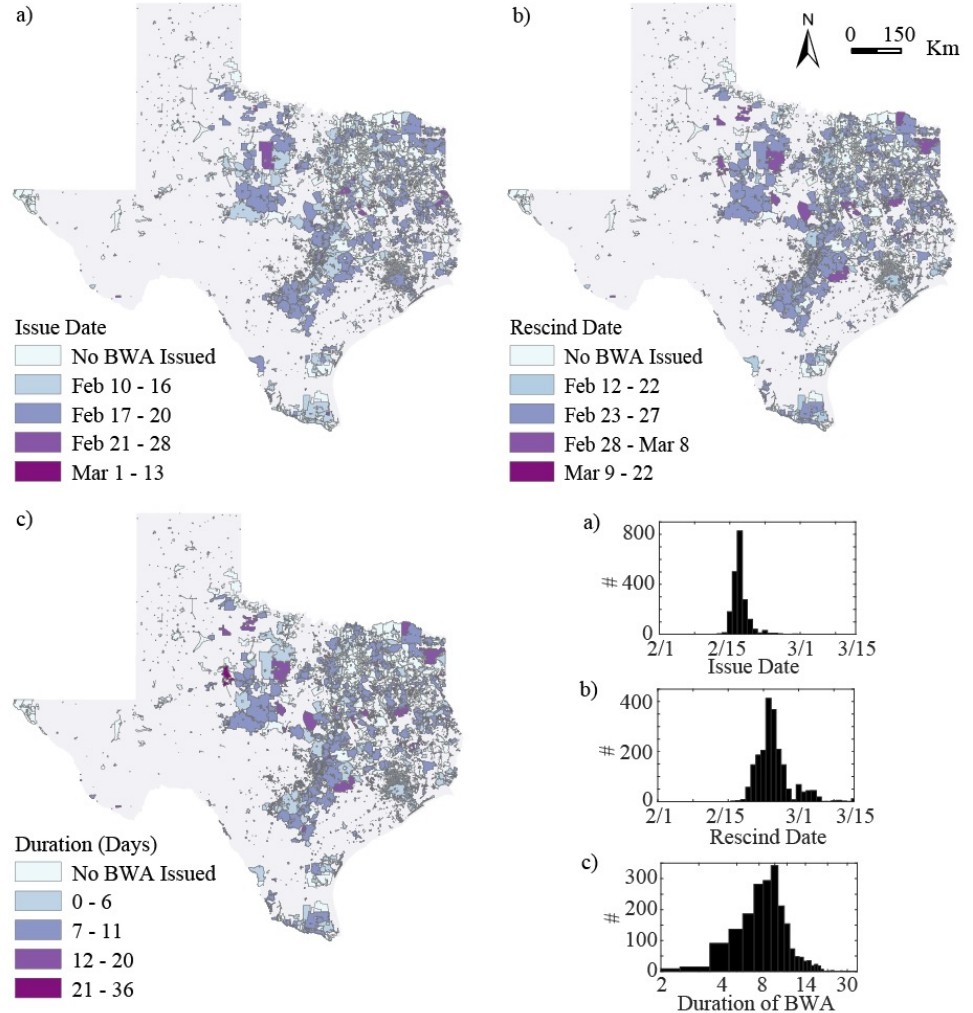


A GIS Analysis: How long were the advisories, and where?

The average date the advisories were issued was February 17th

Boil water advisories range from 1 to 36 days, with a mean duration of 8 days

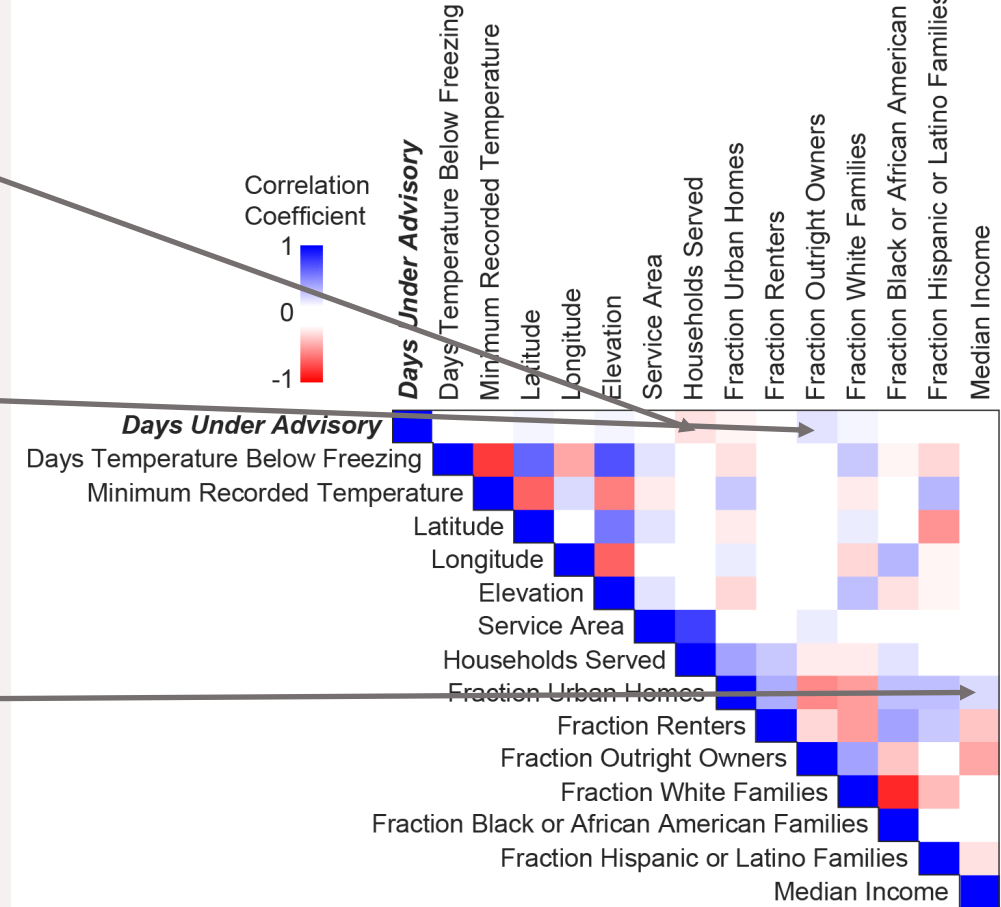
One-third of the public water systems analyzed experienced advisories longer than the mean

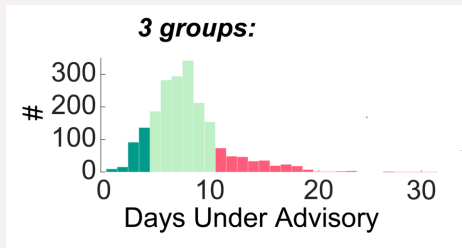


Public water systems that served more homes tended to have shorter advisories

Systems that served a higher portion of outright homeowners tended to have longer advisories

Public water systems that served a higher portion of rural homeowners also tended to serve lower-income households

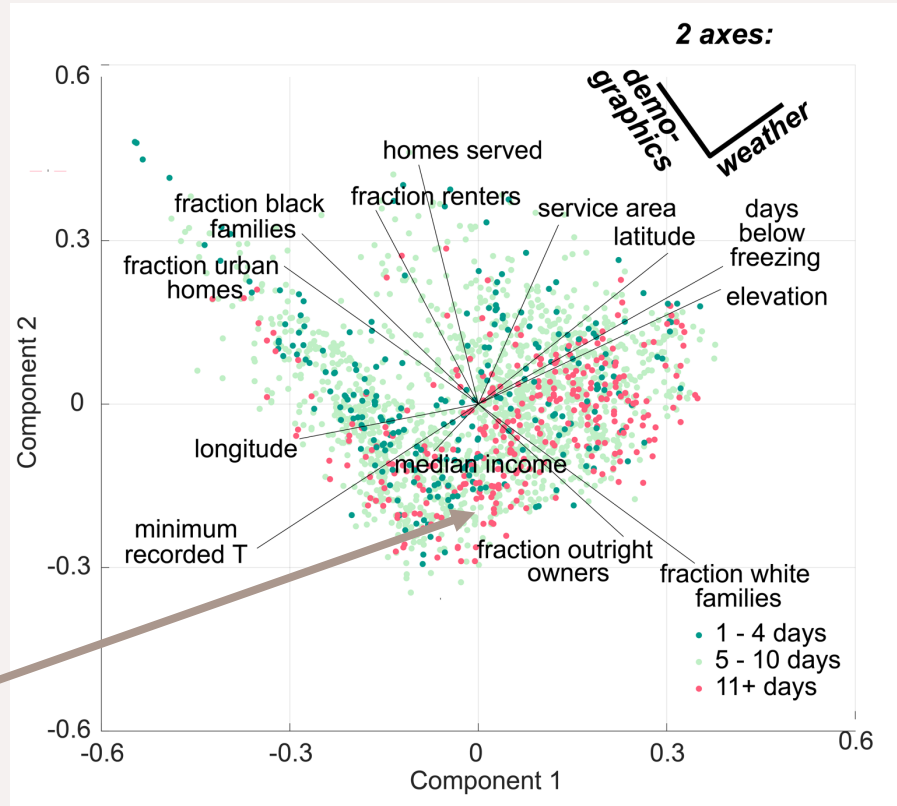




The factors driving the length of the advisory are messy, but...

60% of the variation between water systems can be explained by two principal components

Many of the systems with longer advisories tend to cluster in a direction consistent with systems that serve fewer homes and more white families



Conclusions

Most important factor: Size or scale of the public water system

Longest boil water advisories tended to occur in the smallest systems that might lack resources for quick repairs. They tended to serve whiter, more rural communities

The largest public water systems tended to have ***moderate boil water advisory lengths*** (near the median of 8 days). These large systems tend to serve more diverse, urban communities of greater income



Thank you!

For follow up questions
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