



<https://www.ecowatch.com/arkema-explosion-lawsuit-2482932174.html>

Explosion at Arkema Chemical Plant near Houston, Texas in August 2017 after Hurricane Harvey flooded the property and cut off power to the refrigeration system which was stabilizing hazardous chemicals.

Project Goal

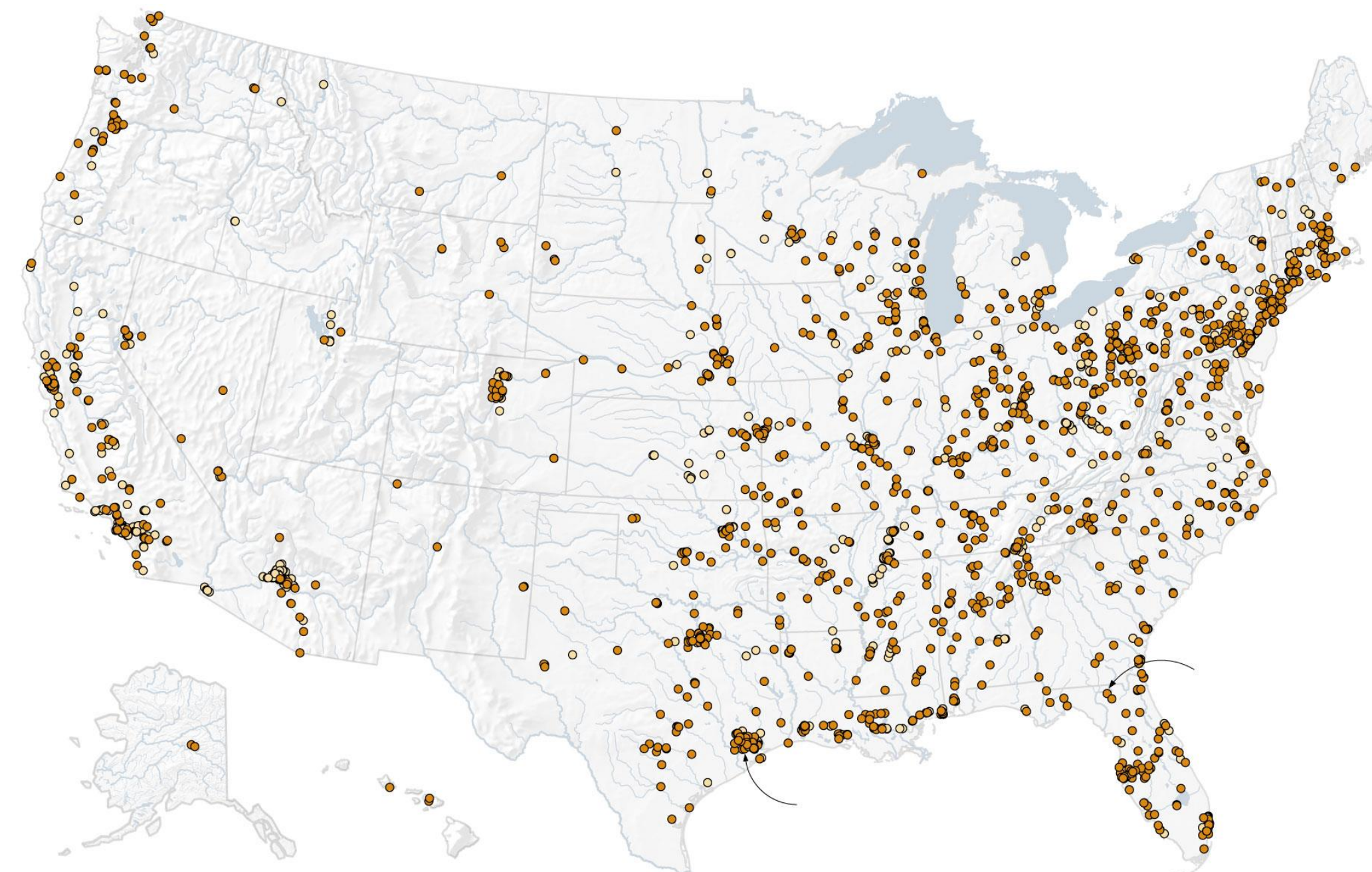
To assess the effectiveness of the Office of Technical Assistance and Technology's chemical safety and climate change resiliency program, including trainings and site visits, and provide recommendations for improvements.

Objectives

1. Develop criteria for determining program effectiveness
2. Interview training and site visit participants to evaluate program based on identified criteria
3. Develop and deliver recommendations to the OTA for improving the program

The Social Problem

- Severe weather patterns cause flooding and can include spikes in wind gusts and heat
- Weather damage may induce power outages or other unsafe conditions at facilities using and storing toxic chemicals
- Major risks to toxic chemical using facilities
- Resulting disasters put entire communities in harm's way
- Toxics Use Reduction aims to reduce amounts of toxic chemicals on-site to increase safety

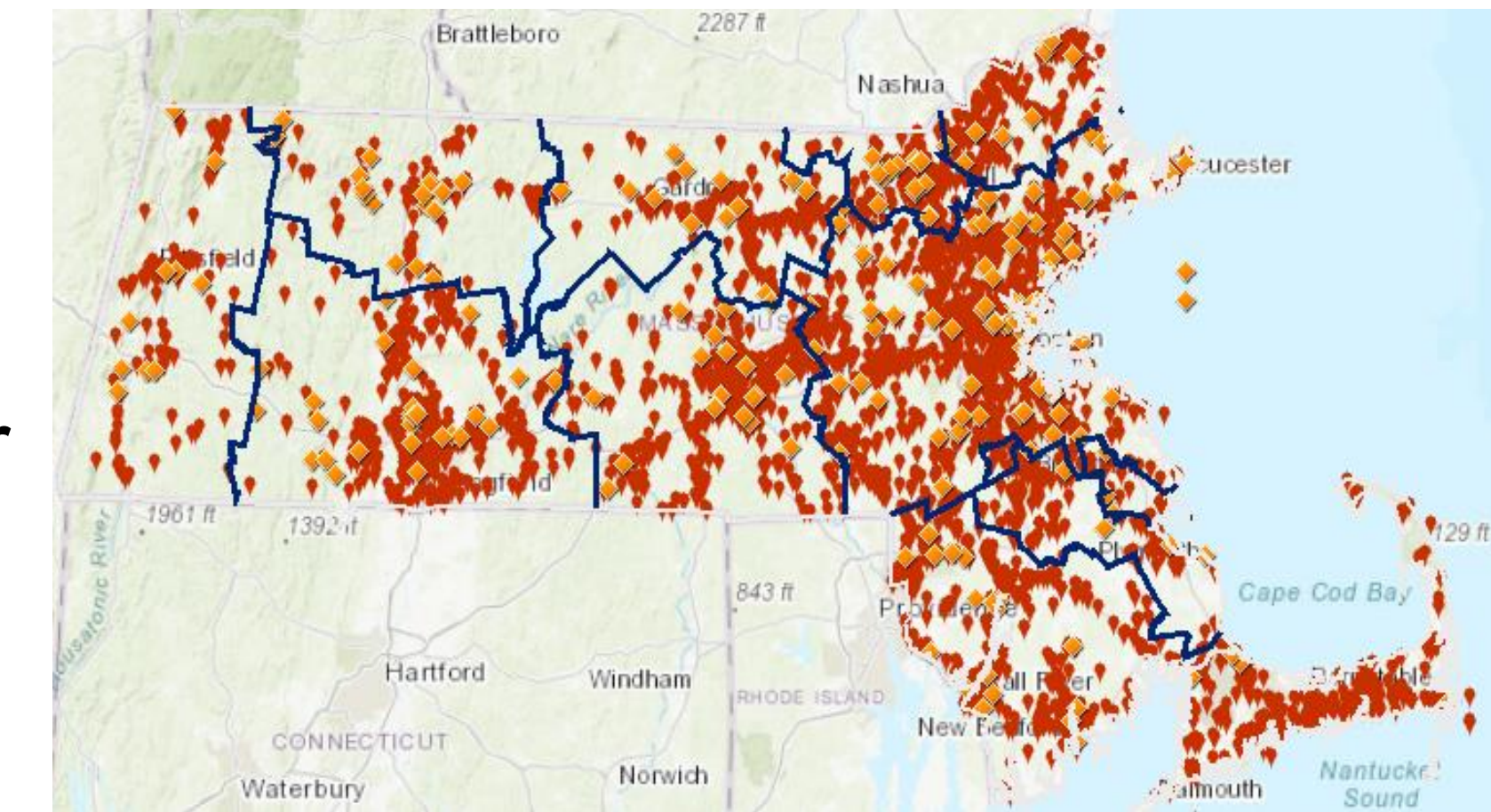


<https://static01.nyt.com/newsgraphics/2017/12/19/2017-12-toxic-sites-national/1e71c23d7238e5edce02d95e13751e2b0f2a3fb2/us-1g.jpg>

A map of the toxic facilities that are vulnerable to flooding in the United States. Yellow indicates the facility is at moderate risk of flooding, while orange indicates the facility is at high risk of flooding.

The Massachusetts Office of Technical Assistance and Technology

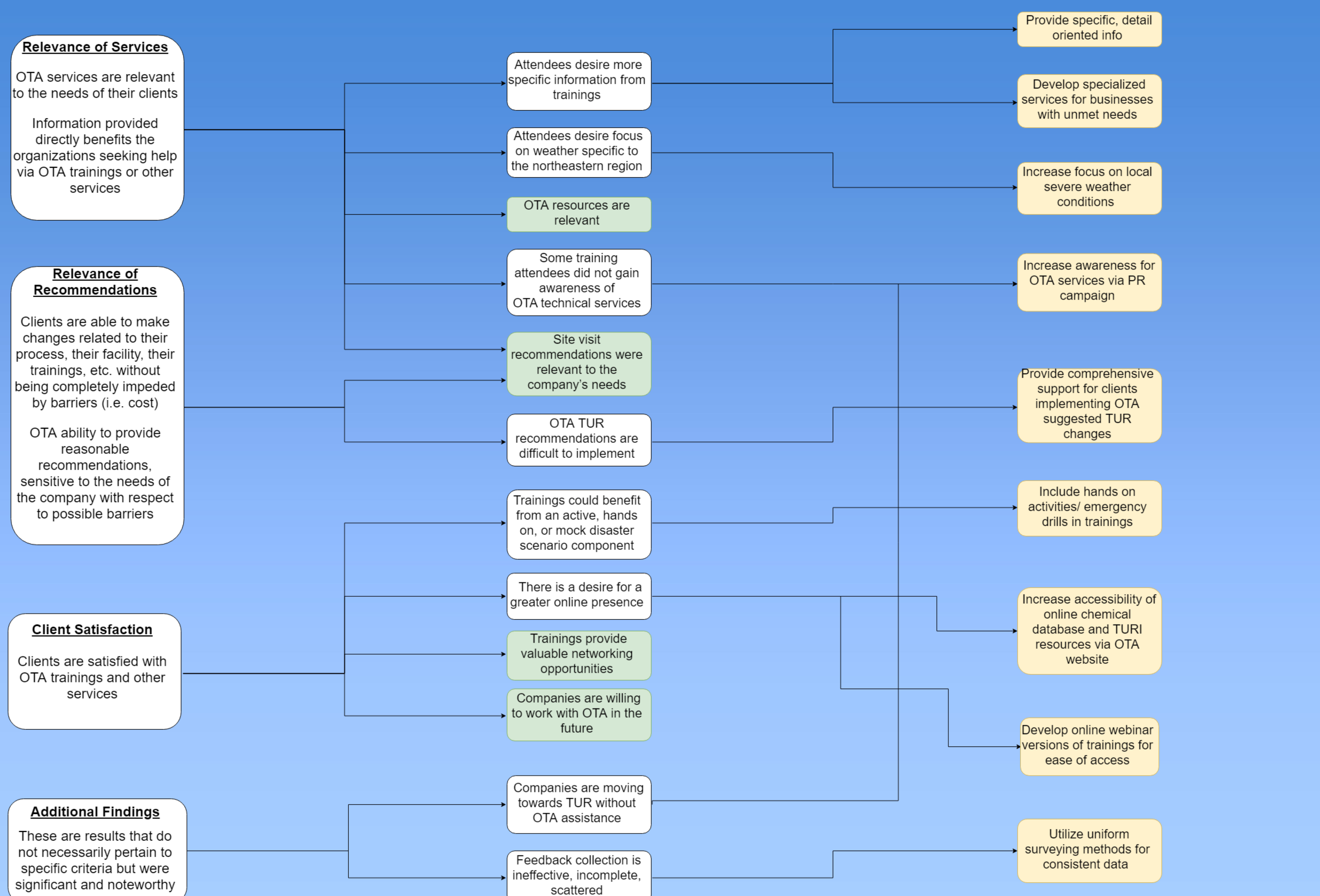
- Provides free, confidential technical assistance for Massachusetts companies which use hazardous chemicals
- An Environmental Protection Agency grant allowed the OTA to partner with Regional Planning Agencies to offer statewide trainings on chemical safety and climate change resiliency
- First responders and municipal workers who attended were trained to identify chemical risk in their communities
- Toxics users were trained to identify vulnerabilities to climate change and severe weather in their companies



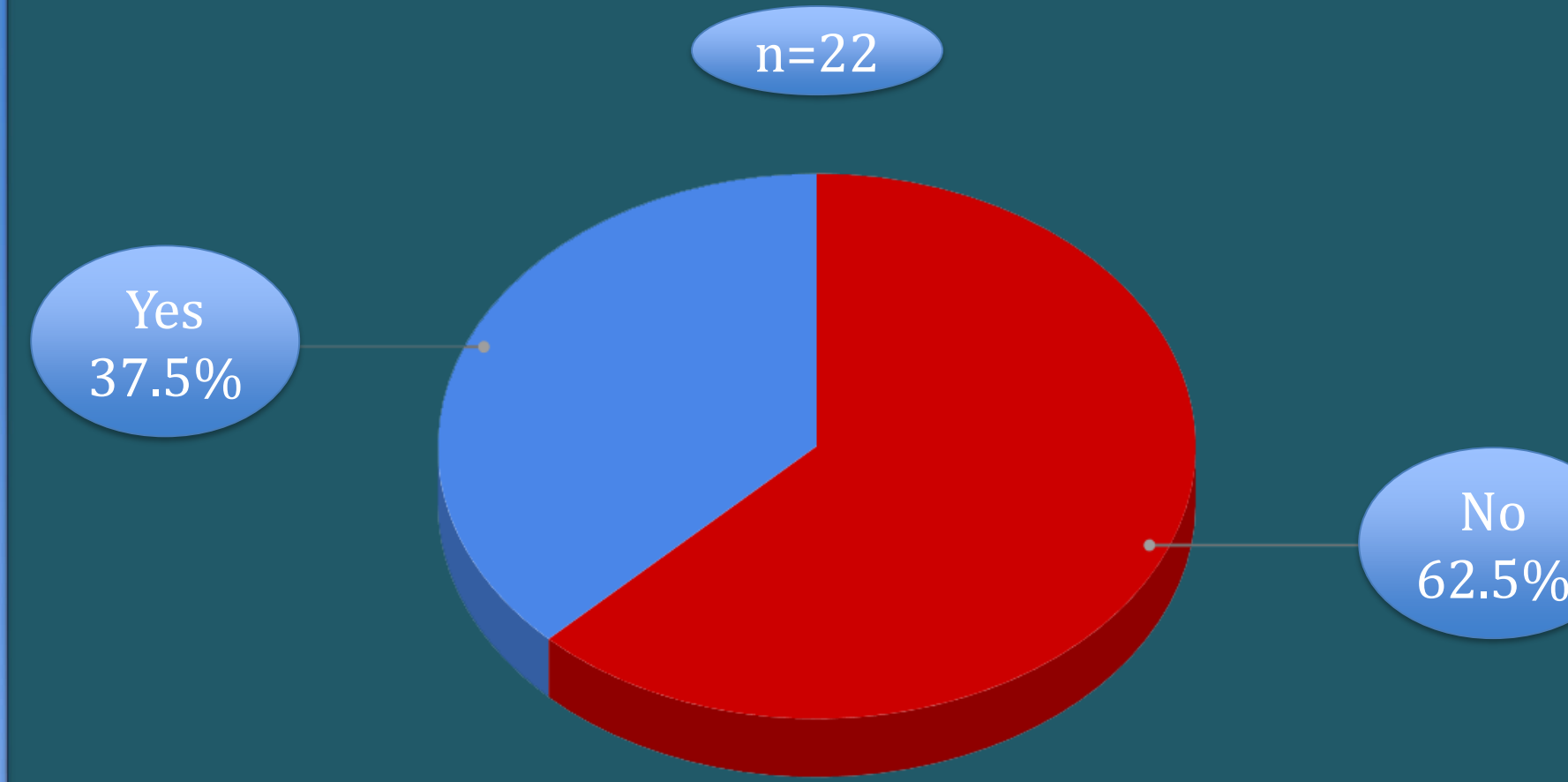
<https://mass-eoeea.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=36d72b75ad554544fb8a9c1af809fa92a>

A map of toxics use sites in MA. Orange markers indicate National Pollutant Discharge Elimination (NPDE) discharge sites and red markers indicate EPA-marked Tier 2 sites.

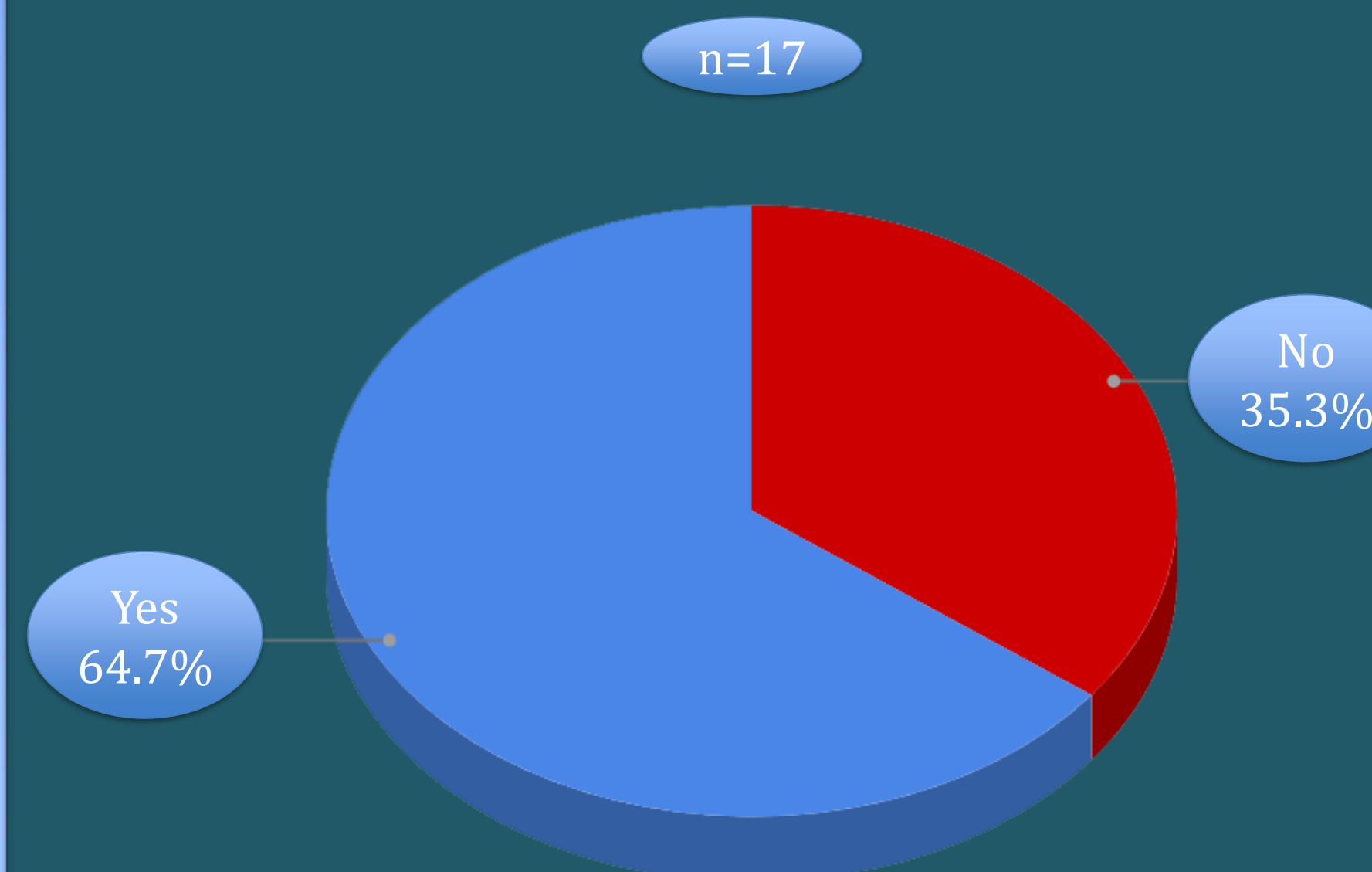
Criteria Findings Recommendations for Improvement



Have you implemented any changes or practices based upon what you learned at the OTA training?



Would you ever invite the OTA back or use any of their services again?



Quotes from Program Participants

- "OTA, TURA... are a win-win for companies"
- "OTA is a great resource to have"
- "One of the best kept secrets in Massachusetts"
- "For anybody not to take up some of their services... it's a no brainer"
- "For us, [OTA services were] very beneficial. We've made some terrific contacts, just in terms of knowing people who can get the information"
- "Thanks to our OTA connections, we were able to call in state OSHA... and I figure we probably got probably \$8,000 to \$12,000 worth of free industrial hygiene consulting"

Acknowledgements

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