

OTA RESOURCES &



CLIMATE CHANGE PREPAREDNESS

Tiffany Skogstrom, MPH
Outreach & Policy, Massachusetts Office of Technical Assistance (OTA)
tiffany.skogstrom@state.ma.us, 617-626-1086



OTA'S ROLE

- × Non-Regulatory Agency
- × Work with MA Toxics Users
- × Free & Confidential Technical Assistance
- × 50% of companies we have visited invite us back

We will not tell any enforcement agencies what we see at a facility unless it's an emergency.

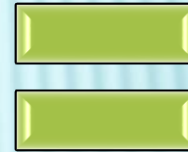
We never have!

CHEMICAL SAFETY & CLIMATE CHANGE RESILIENCY

Toxics
Use
Reduction



Climate
Change
Resiliency
Planning



Reduced
Risk of
Industrial
Accidents





Rhonda Ragsdale

@profragsdale

Follow

There is a thick smell of oil in the air downtown #Houston

11:25 AM - Aug 27, 2017



4



54



28



RFH

@rth02

Follow

[@DisasterPIO](#) There is a widespread gas smell in Houston's East End. Any info?

12:52 PM - Aug 27, 2017



3



34



13



Raquel de Anda

@deAndaAnda

Follow

Rancid chemical smell near Houston [@ValeroEnergy](#) refinery. What's going on? Why all the flaring? Folks Can't Breathe #HurricaneHarvery

2:20 PM - Aug 27, 2017



1



33



39



First responders file suit against Arkema over 'serious bodily injuries' in Houston chemical plant fire after Hurricane Harvey

- First responders filed a lawsuit in Harris County court alleging [Arkema](#) failed to take adequate safety steps to secure dangerous chemicals ahead of [Hurricane Harvey](#)
- The lawsuit filed by seven police, fire and emergency service workers seeks at least \$1 million

Published 11:22 PM ET Thu, 7 Sept 2017

What Are The Risks?

Floods

Chemical Releases & Spills
Emergency Shutdowns

Extreme Heat

Chemical Temperature
Explosion Risks
Drought (Cooling / Fire
Suppression)

Climate Change
& Chemical
Releases

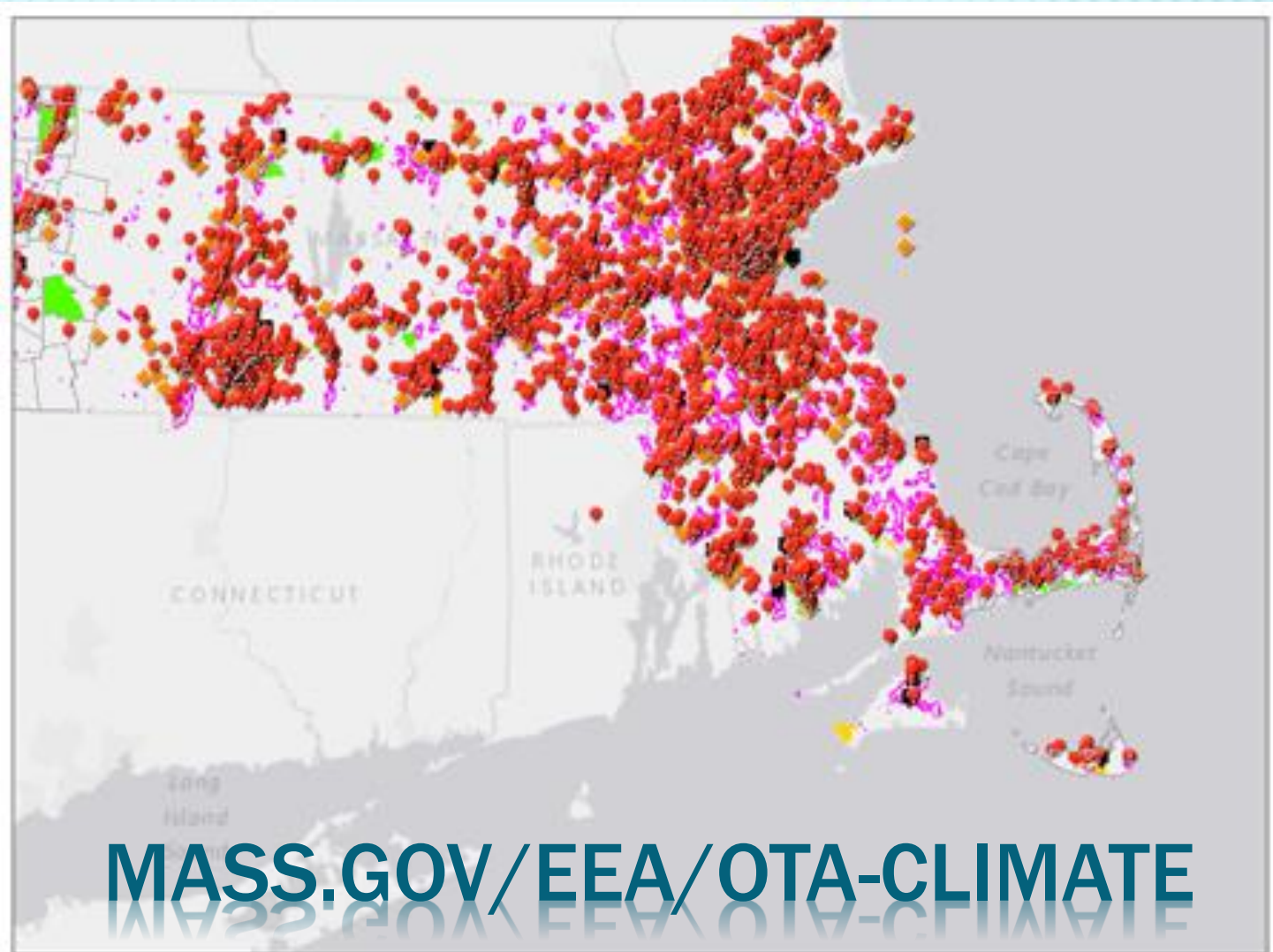
Extreme Cold

Power Outages
Frozen pipes
HVAC Failure

Storms

Power Outages
HVAC Failure
Infrastructure Failure

WHAT ARE YOUR RISKS?



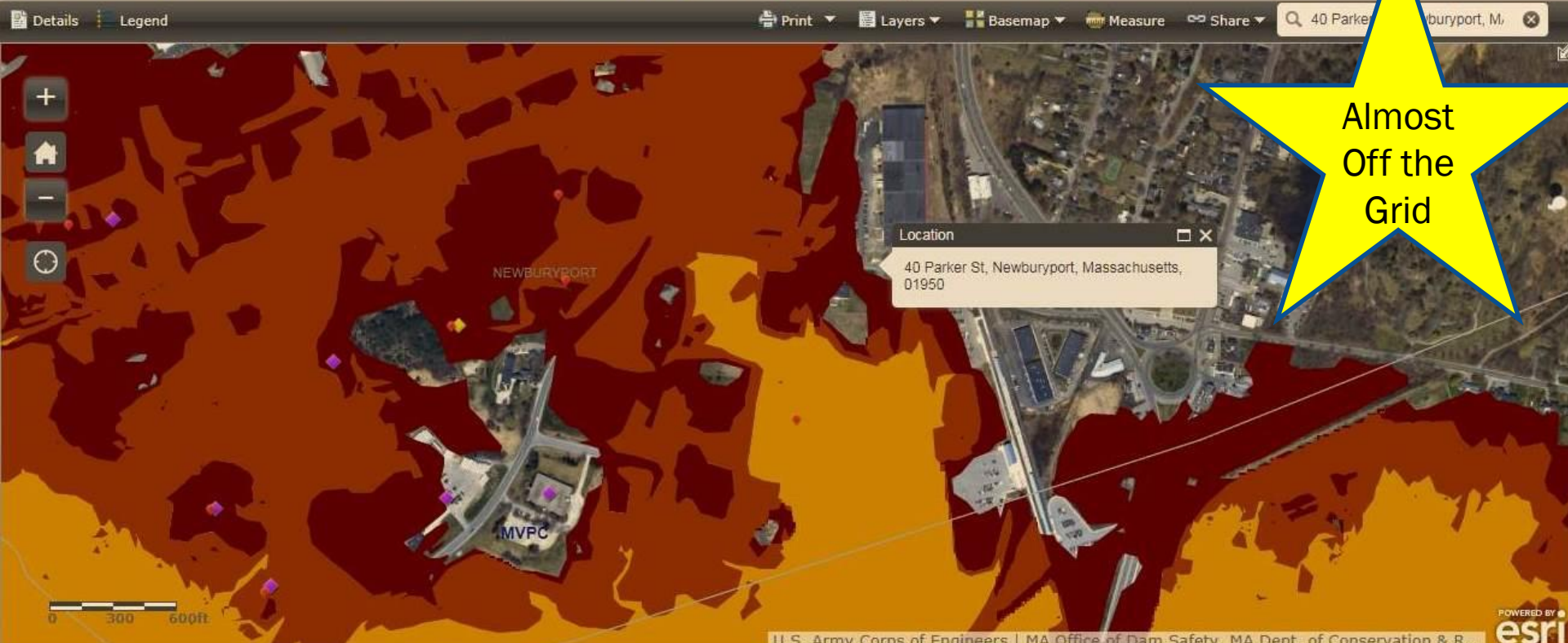
[MASS.GOV/EEA/OTA-CLIMATE](https://www.mass.gov/eea/ota-climate)

**Are You Prepared
For The Worst
Case Scenario?**

OTA Case Studies

MARK RICHEY WOODWORKING – ENERGY EFFICIENCY AND TOXICS USE / WASTE REDUCTION

Massachusetts Toxics Users and Climate Vulnerability Factors



Almost
Off the
Grid

Reductions:



120 gallons lacquer thinner / acetone / other chemicals per year

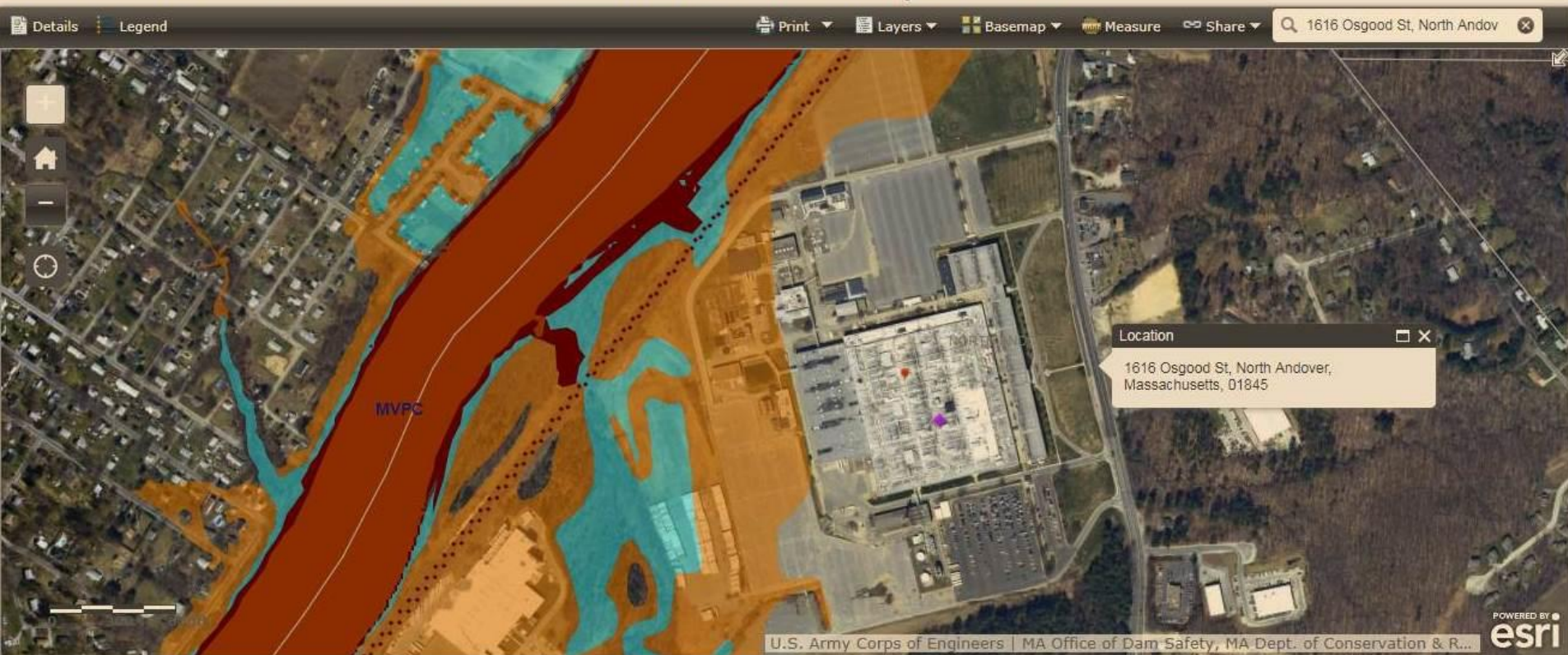
1,200 gallons denatured alcohol per year

12 tons VOCs per year

Savings of \$16,435

OPHIR OPTICS – TOXICS USE REDUCTION THROUGH LEAN MANUFACTURING & SIX SIGMA

Massachusetts Toxics Users and Climate Vulnerability Factors



Reductions:



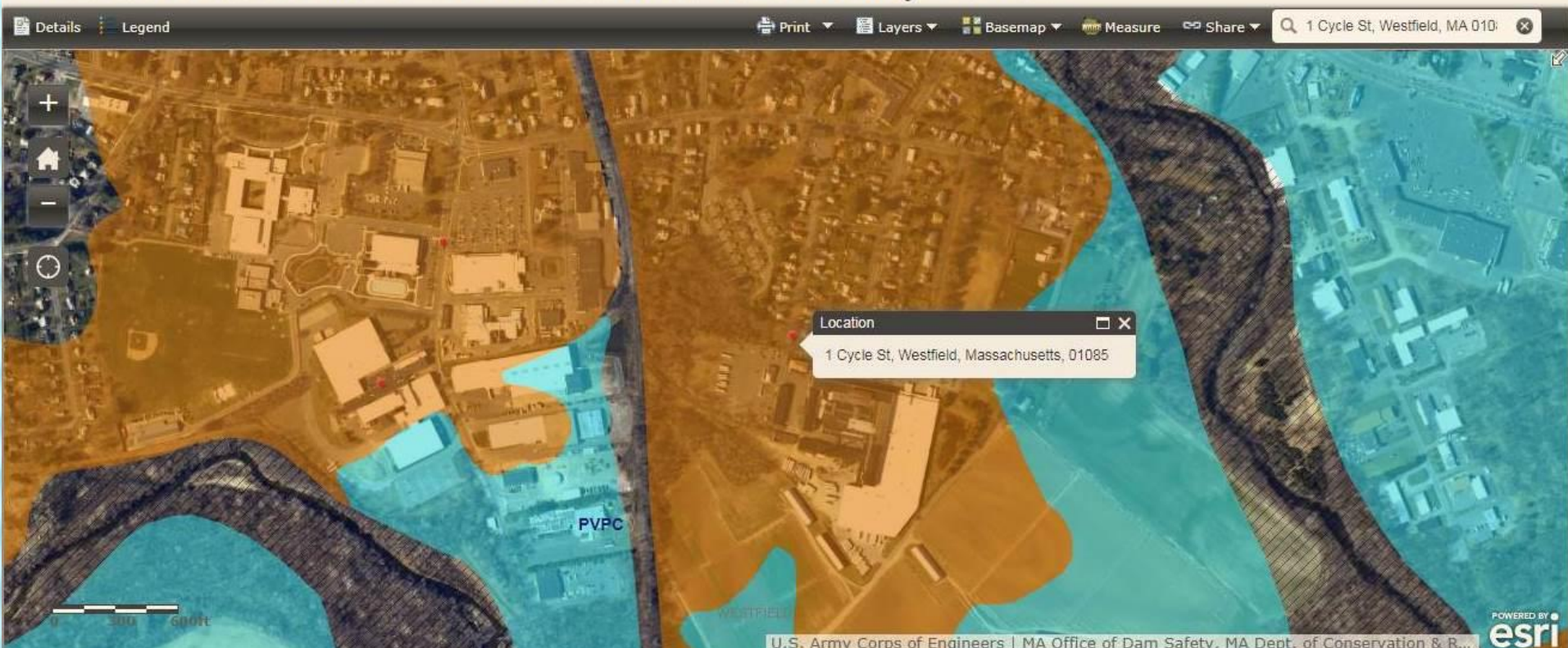
3,870 lbs mineral spirits per year

Went from Large Quantity Generator (LQG) to Small Quantity Generator (SQG)

Savings of \$1,000,000 in efficiency improvements, \$100,000 in scrap reductions, and \$60,000 in hazardous waste reductions

COLUMBIA MANUFACTURING – ZERO WASTEWATER DISCHARGE & HAZARDOUS WASTE REDUCTION

Massachusetts Toxics Users and Climate Vulnerability Factors



Reductions:

147,000 lbs of water per day in plating operations

Recovered 98% of plating chemistry (nickel and chromic acid), saving 600 lbs per week

Exempt from air / water discharge & hazardous waste treatment permits

Savings of \$3,000,000 in water / sewer fees, \$3,850,000 nickel purchases, \$8,000,000 chrome purchases





Dangerous
Chemical?

Human /
Environmental
Contact?



Potential for
Hazard?

EVALUATE RISKS



Chemical Properties

Toxic
Flammable
Combustible



Weather Risks

Flood
Hurricane
Freezing
Heat



Chemical Storage

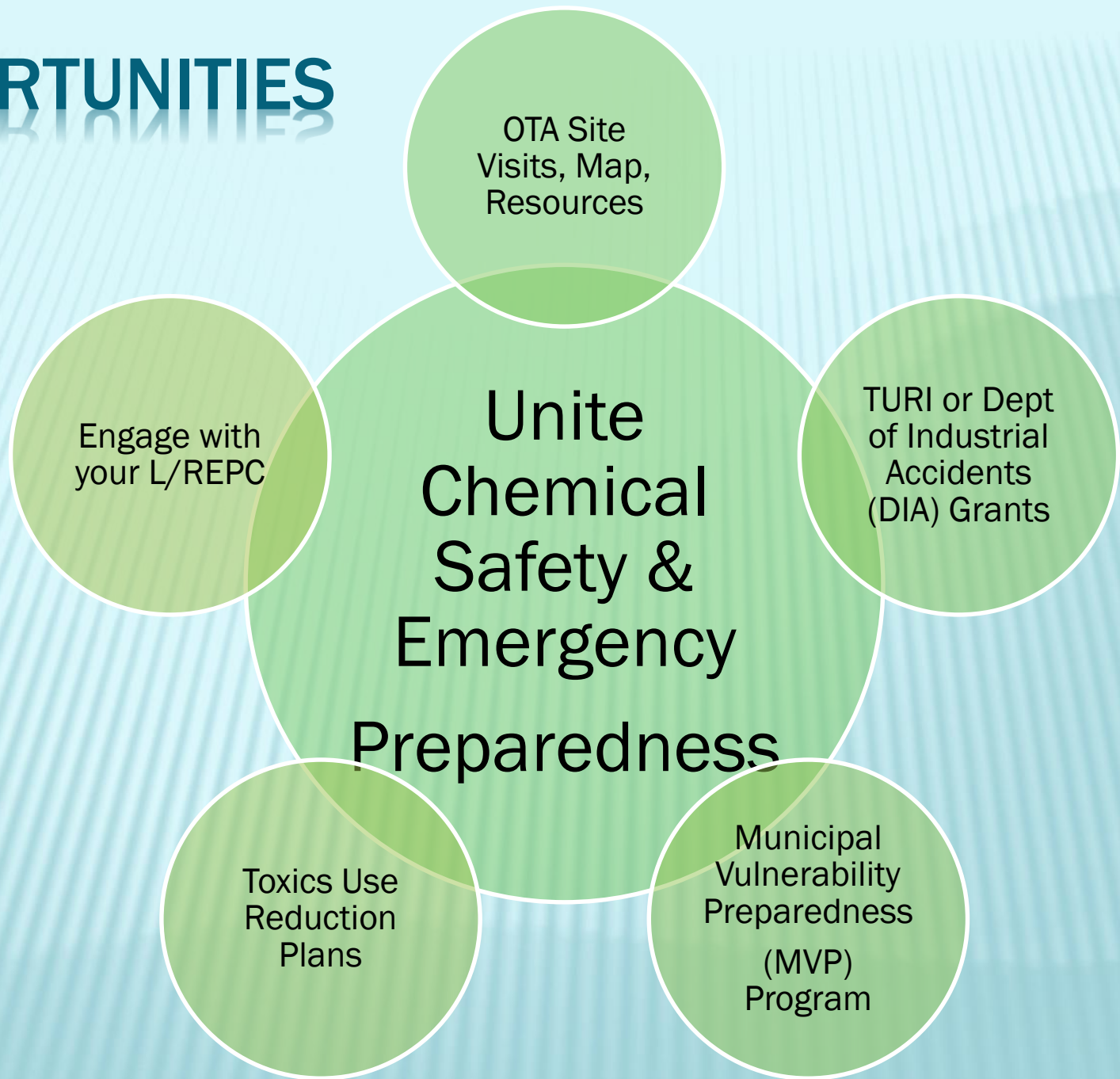
Secondary Containment
Compatibility



Toxics Use Reduction

Product Substitution
Reduce Inventory
Engineering

OPPORTUNITIES



THANK YOU!



FOR MORE INFORMATION:

Tiffany Skogstrom

tiffany.skogstrom@state.ma.us, 617-626-1086

