

CHEMICAL SAFETY &



CLIMATE CHANGE RESILIENCY

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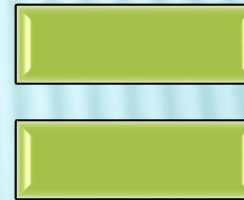
@Mass_OTA

CHEMICAL SAFETY & CLIMATE CHANGE RESILIENCY

Toxics
Use
Reduction



Climate
Change
Resiliency
Planning



Reduced
Risk of
Industrial
Accidents





Rhonda Ragsdale

@profragsdale

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There is a thick smell of oil in the air downtown [#Houston](#)

11:25 AM - Aug 27, 2017

4 54 28



RFH

@rth02

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[@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



REUTERS

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

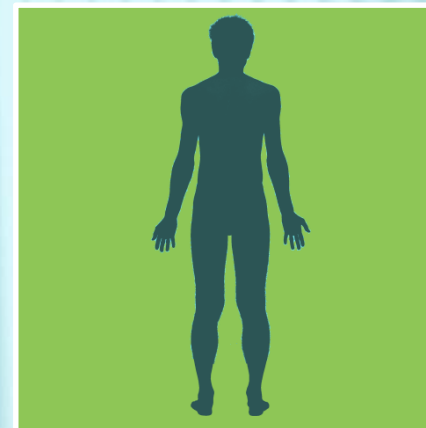
Storms

Power Outages
HVAC Failure
Infrastructure Failure



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

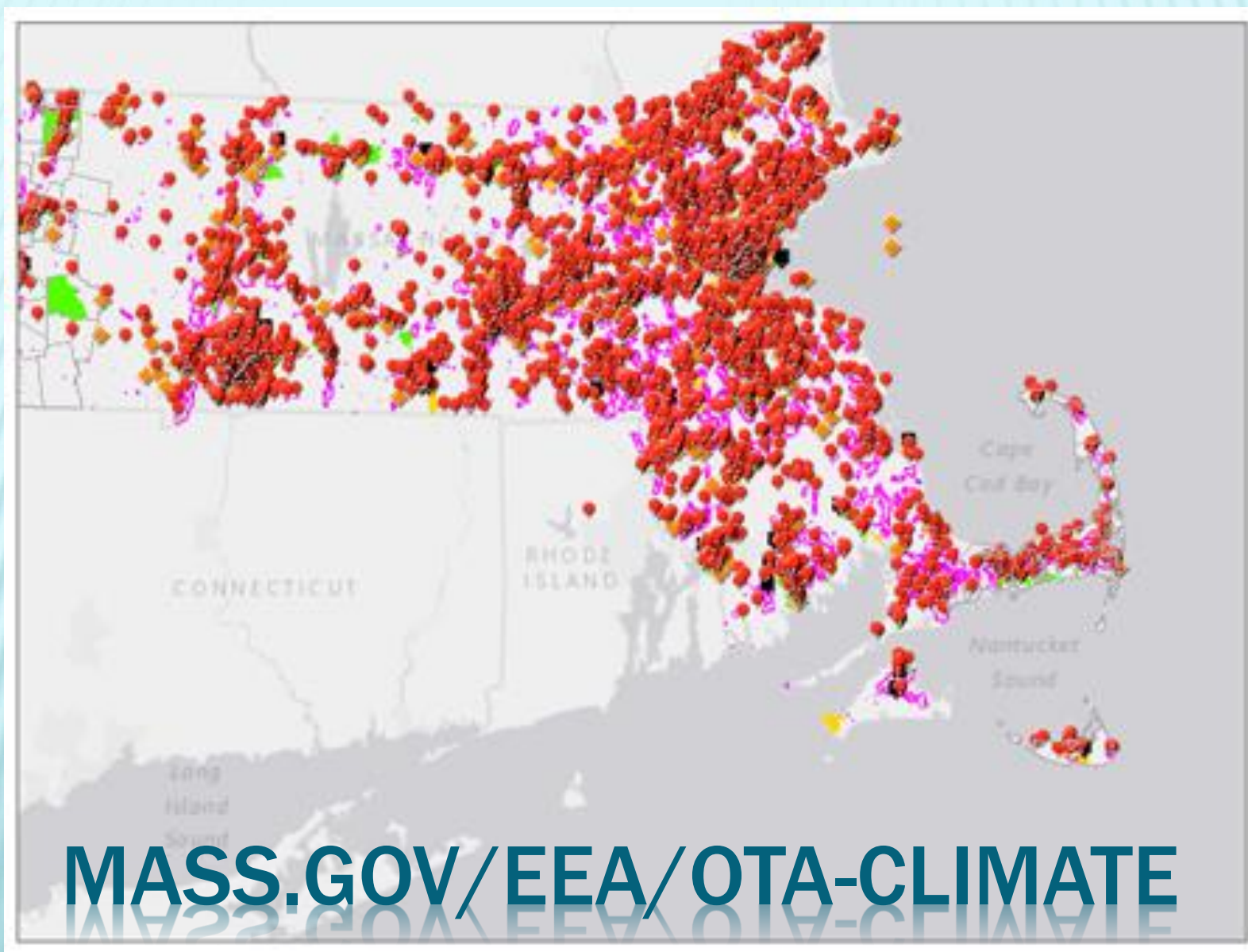


Toxics Use Reduction

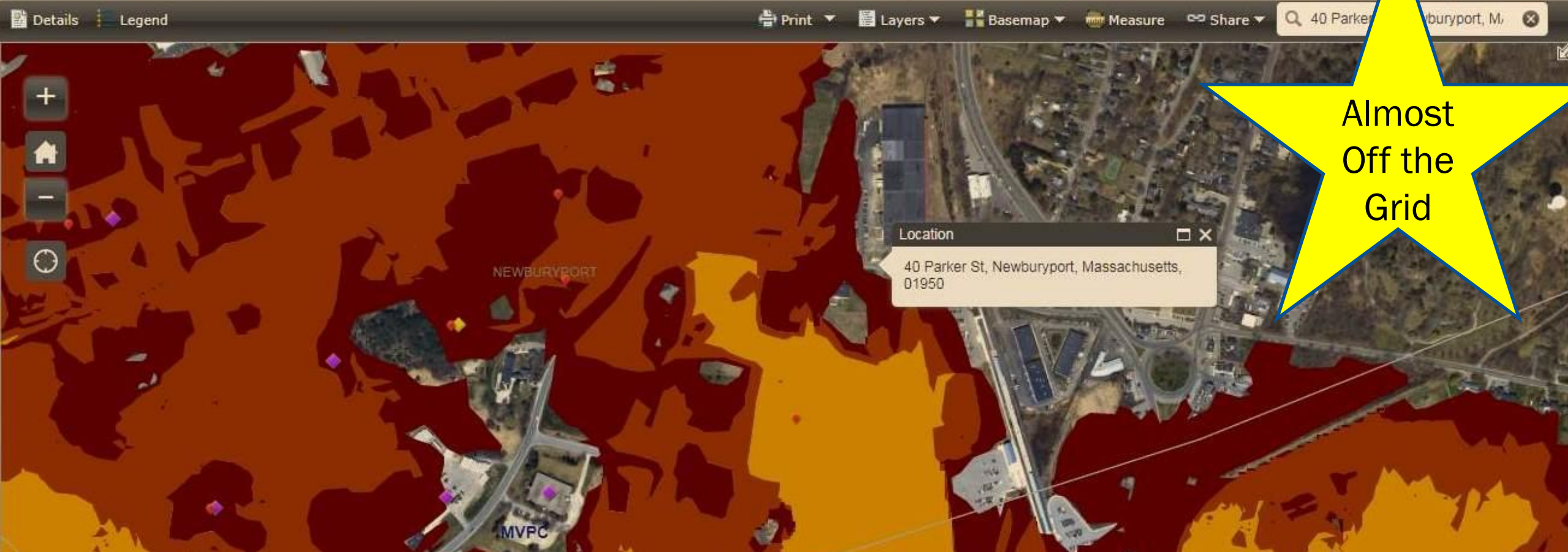
Product Substitution
Reduce Inventory
Engineering

Are You Prepared
For The Worst
Case Scenario?

IDENTIFY YOUR RISKS



Massachusetts Toxics Users and Climate Vulnerability Factors



Mark Richey Woodworking 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

Training Results

Total People Trained

428

Total Municipal Training Attendees

192

Total Business Training Attendees

236

Total Companies Visited by OTA in Relation to
Grant

54

WPI FINDINGS AND RECOMMENDATIONS


- Desire for hands on / mock incident exercises
- Found chemical and climate mapping useful
- Desire for more online tools
- Trainings used as a networking opportunity between companies / first responders
- Trainings available as webinars
- Focus on severe regional weather (winter weatherization / hurricanes / etc.)
- Desire for more specificity in trainings (type of chemical / facility / etc.)

QUOTES FROM PARTICIPANTS

- It is a 'no brainer' to use OTA services.
- OTA is a great resource to have.
- For us (OTA Services) were very beneficial. We've made some terrific contacts, just in terms of knowing people who can get some information.
- Thanks to our OTA connections, we were able to call in state OSHA... And I figure we got probably \$8,000 to \$12,000 worth of free industrial hygiene consulting.

RESILIENT NASHUA, NH

WWW.COURLB.CO/RESILIENT



coUrbanize Explore Projects LOG IN

MAP INFO UPDATES TIMELINE

Resilient Nashua Initiative

NASHUA, NH

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Courtney Brown
Dec 4, 2018

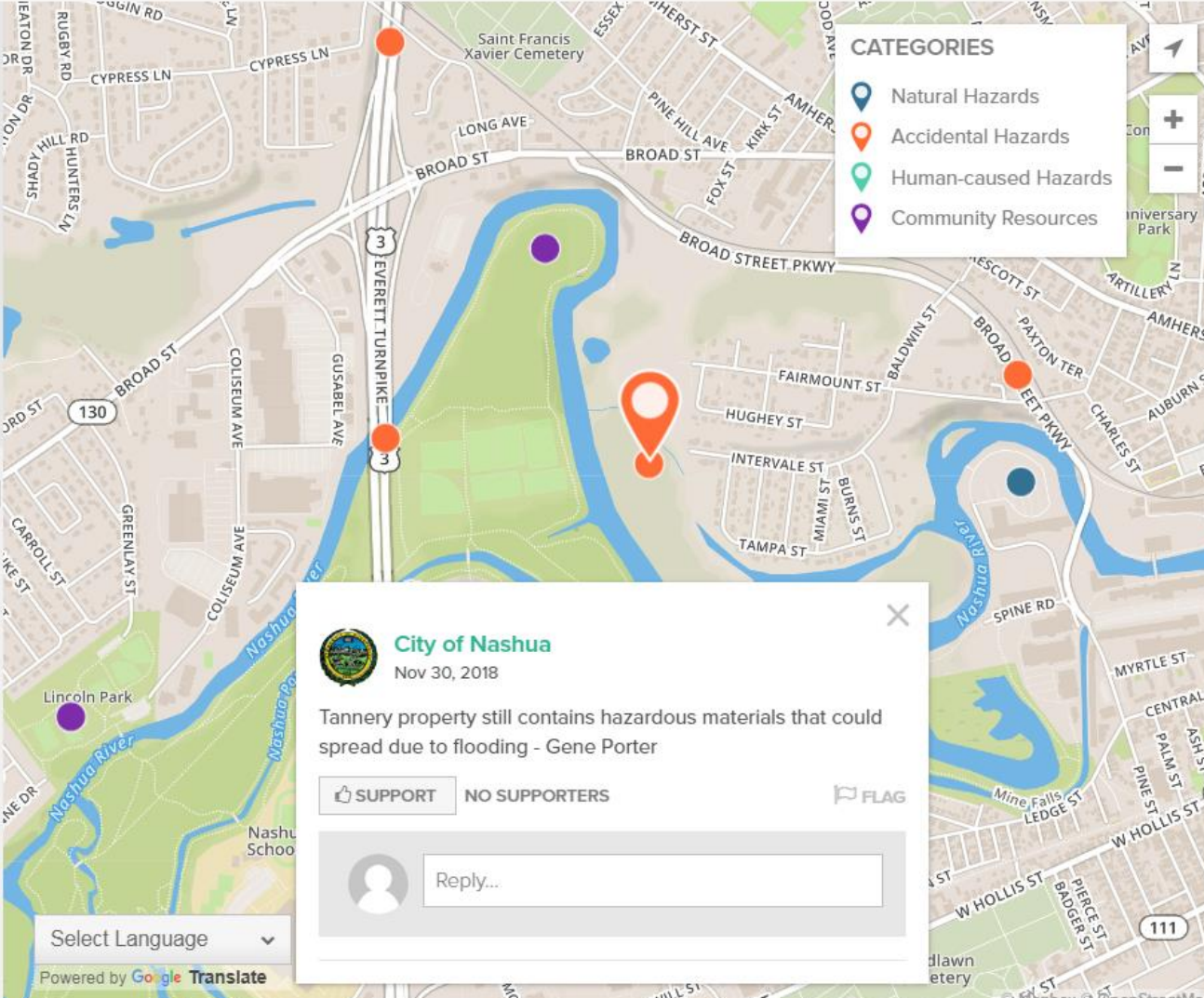
What and where are the community resources (i.e. Greely park, community fire-station) that make Nashua a great place to live?

Mines Falls makes Nashua an amazing place to live. It is great having all of the benefits of living in a city but also having such a large park and trails to stay active and enjoy the outdoors.

👍 SUPPORT


6 SUPPORTERS

🚩 FLAG



CATEGORIES

- Natural Hazards
- Accidental Hazards
- Human-caused Hazards
- Community Resources




City of Nashua
Nov 30, 2018

Tannery property still contains hazardous materials that could spread due to flooding - Gene Porter

👍 SUPPORT

NO SUPPORTERS

🚩 FLAG



Reply...

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RESILIENT NASHUA TOOLKIT

A step-by-step emergency planning guide for schools, childcares, healthcare facilities,
non-profits, businesses, faith-based organizations, & multi-family housing

WELCOME TO THE RESILIENT NASHUA TOOLKIT!

OPPORTUNITIES



INDUSTRY GRANTS PROGRAM

Preference is given to companies that:

- Use listed toxic chemicals
- Have at least 10 full-time
- employees

Projects are of particular interest if:

- They use a chemical designated as a higher hazard substance by the TURA program

TURA Designated Higher Hazard Substances	Effective for Reporting Year
Toluene Diisocyanates	2017
1-Bromopropane (n-Propyl Bromide or nPB)	2016
Hydrogen Fluoride	2016
Cyanide Compounds	2016
Dimethylformamide (DMF)	2016
Methylene Chloride	2014
Hexavalent Chromium	2012
Formaldehyde	2012
Perchloroethylene (PCE or perc)	2009
Trichloroethylene (TCE)	2008
Cadmium and Cadmium Compounds	2008

COMMUNITY GRANTS PROGRAM

Who's eligible:

- Community , regional and statewide organizations
- Municipalities and municipal departments
- Maximum for regional or statewide projects: \$20,000
- Maximum for local projects: \$10,000



CALL FOR PROPOSALS: FY20 GRANTS

- Up to \$30,000 available per project
- Apply on line at: turi.org/grants
- Proposals due June 21, 2019
- Applications evaluated mid- summer
- Projects run August 2019 – June 2020

CONTACT TURI WITH QUESTIONS

- Industry Grants:
 - Joy Onasch
 - joy@turi.org
 - 978-934-4343
- Community Grants:
 - Felice Kincannon
 - felicek@turi.org
 - 978-934-3346

THANK YOU!



FOR MORE INFORMATION:

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