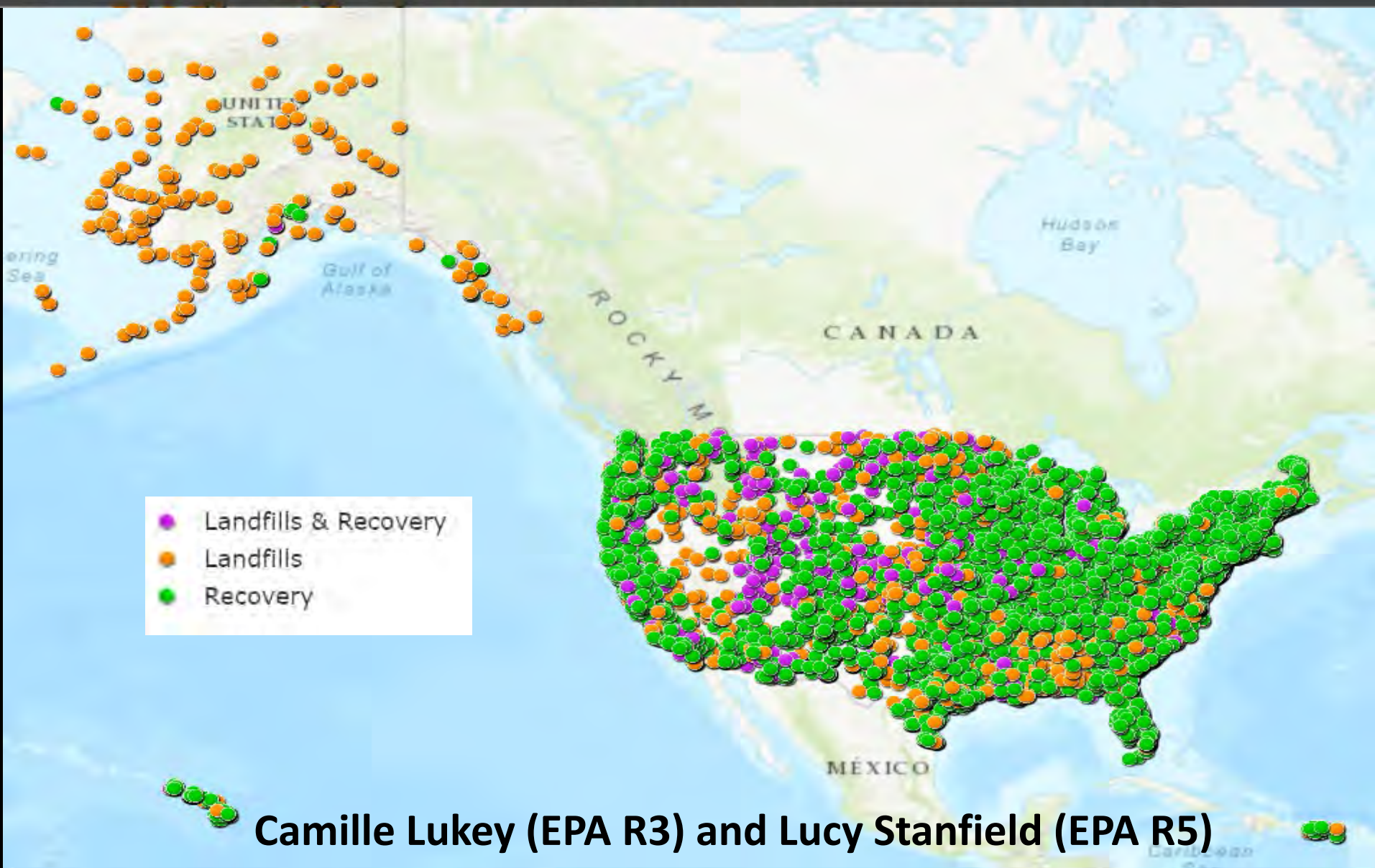
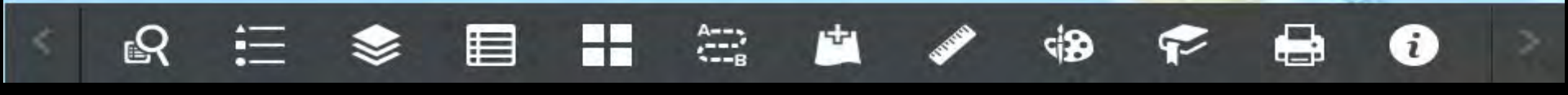


U.S. EPA Disaster Debris Recovery Tool



Camille Lukey (EPA R3) and Lucy Stanfield (EPA R5)





Outline

- What is the Disaster Debris Recovery Tool?
 - A national dataset for disaster planning & emergency response, and sustainable materials management
 - A collaboration of EPA Regions and National Program Offices
- Who are the data partners?
- Who are the tool users?



Purpose of the tool

- The tool enables planners and responders to safely manage disaster debris
- Advances multiple environmental objectives:
 - Diversion from landfills
 - More recycling opportunities
 - More resilience and faster recovery for impacted communities.

management units or closed units that are reopened have appropriate siting restrictions and controls in place.

After the amounts and types of debris are forecasted, planners should assess the area's capacity to manage the anticipated debris. Waste management facilities, including reuse, recycling, combustion, and disposal facilities, should be inventoried, along with their daily and overall capacities for each debris stream they are permitted to receive. Each facility's ability to manage additional debris beyond their normal or permitted daily load should be evaluated. Planners should keep in mind that a waste management facility may be impacted by a disaster, as well, which could affect its ability to manage debris.



Planners are also encouraged to check the compliance histories of potential facilities with their state, local, or tribal officials or use EPA's Enforcement and Compliance History Online (ECHO) national database to search compliance and enforcement information for regulated facilities (<https://echo.epa.gov/>). Communities generally should avoid sending disaster debris to



PLANNING FOR NATURAL DISASTER DEBRIS

After the amounts and types of debris are forecasted, planners should assess the area's capacity to manage the anticipated debris. Waste management facilities, including reuse, recycling, combustion, and disposal facilities, should be inventoried, along with their daily and overall capacities for each debris stream they are permitted to receive.



April 2019
EPA 530-F-19-003

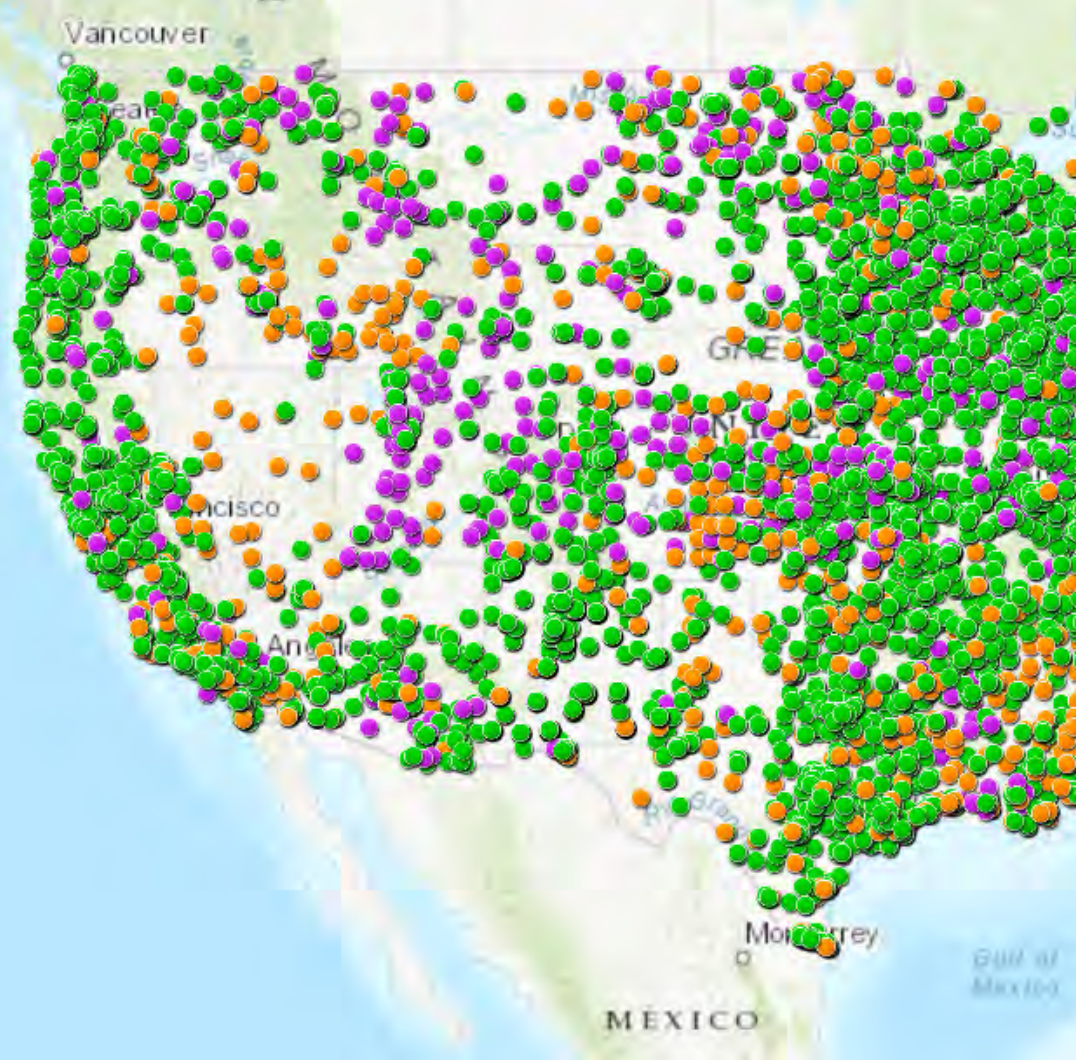


To help planners determine debris management options, I-WASTE provides a searchable list of treatment and disposal facilities, which was largely compiled using data from EPA and publicly available sources, a downloadable KMZ file with the same geolocated facilities suitable for incorporation into GIS visualization and analysis, and useful resources on recycling various materials. The facilities contained within I-WASTE include:





U.S. EPA Disaster Debris Recovery Tool



Layer List

- Operational layers
- Disaster Debris Recovery Tool
 - Landfills - Construction & Demolition Debris
 - Landfills - Municipal Solid Waste
 - Landfills - Hazardous Waste
 - Recycler - Construction & Demolition Debris
 - Recycler - Electronics
 - Recycler - Household Hazardous Waste
 - Recycler - Metals
 - Recycler - Tires
 - Recycler - Vehicles
 - Composters
 - Demolition Contractors
 - Transfer Stations



Related Topics: [Large-Scale Residential Demolition](#)

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Disaster Debris Recovery Tool

Disaster Debris Recovery Tool

EPA has developed this interactive mapping tool of 12 types of recyclers and landfills that manage disaster debris. This tool provides information and locations of over 20,000 facilities capable of managing different materials which may be found in disaster debris. The Region 5 in 2011 and has expanded to include data for all 50 states, Puer Islands.

The tool can be used by disaster response, recovery and planning experts to advance the recovery, recycling, and disposal of disaster debris. It is expanding coverage of states to support sustainable disaster debris management.

Disaster Debris Recovery Tool - June 2020

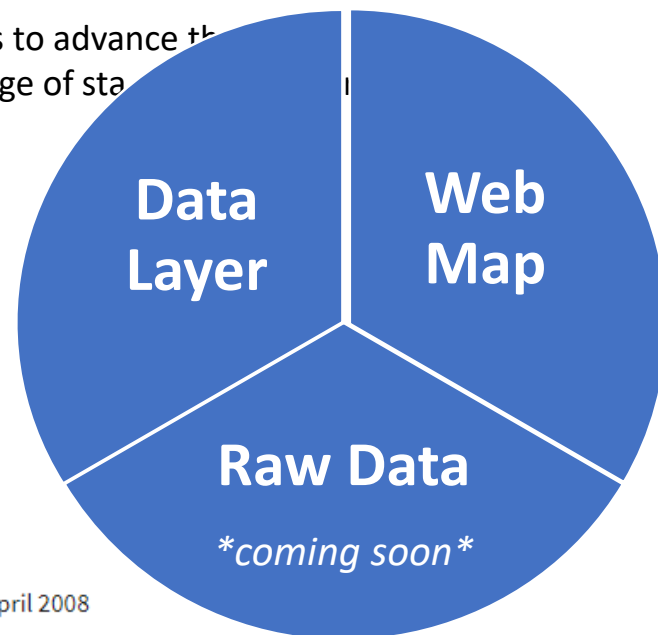
Web map (tools & downloadable data)

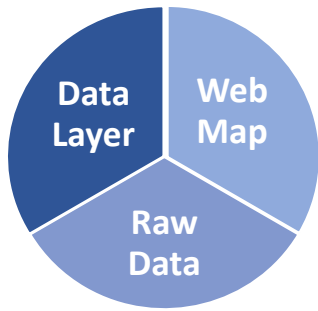
Interactive data layer in ArcGIS Online (account required)

Examples of state plans and guidance

- [Illinois Disaster Recovery Plan \(PDF\)](#) (4 pp, 13 K, [About PDF](#)) September 2011
- [Indiana Disaster Mitigation and Recovery](#)
- [Michigan Disaster Debris Management Plan \(PDF\)](#) (209 pp, 3.4 MB, [About PDF](#)) April 2008
- and [Michigan Local Disaster Debris Management Planning Handbook \(PDF\)](#) (248pp, 2.9MB, [About PDF](#)) April 2008
- Minnesota Debris Plan Guidebook (PDF) (22 pp, 361 K, [About PDF](#)) December 2014
- [Ohio Debris Management](#)
- [Wisconsin - Coping with Cleanup](#)

The data is available:





ArcGIS Online

aka EPA GeoPlatform

<https://epa.maps.arcgis.com>

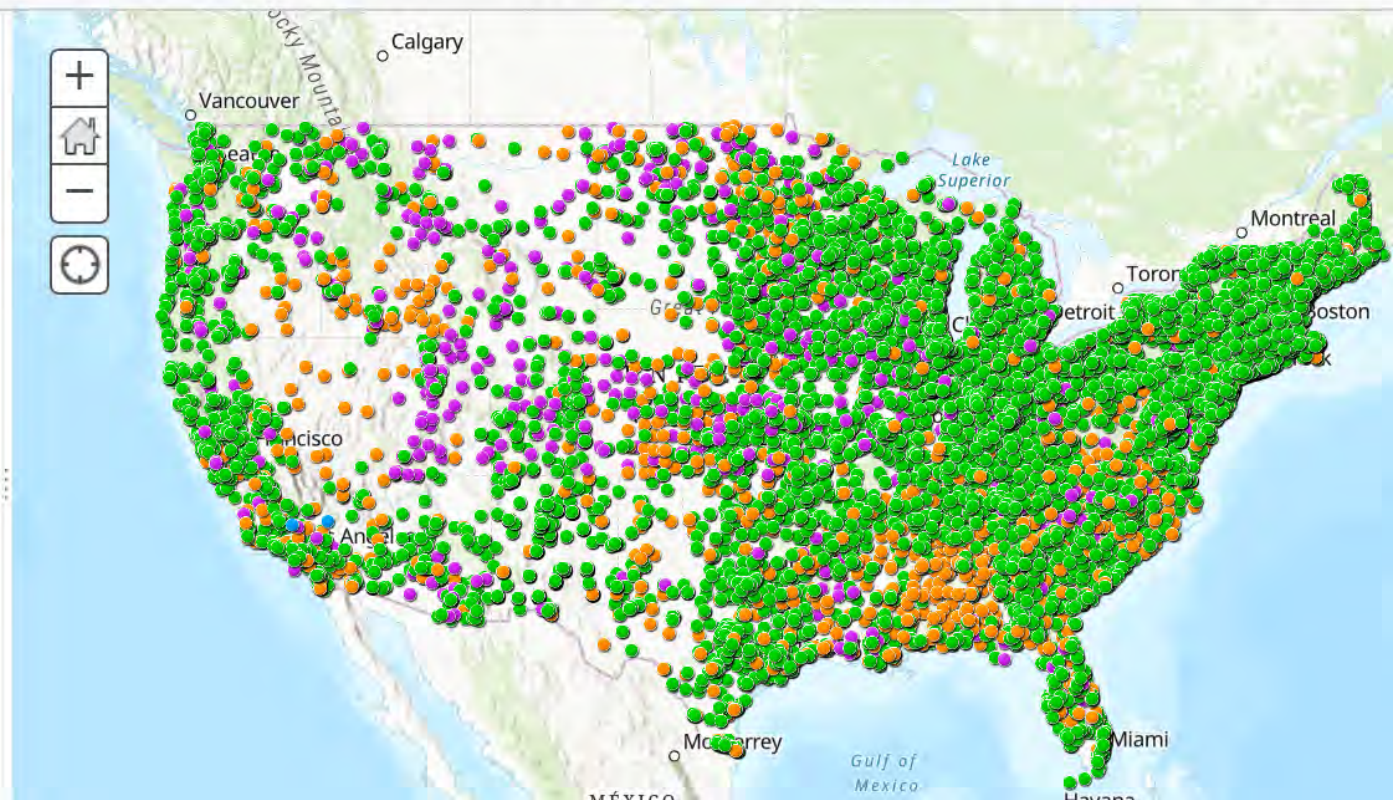
Home ▾ EPA National Disaster Debris Recovery Data

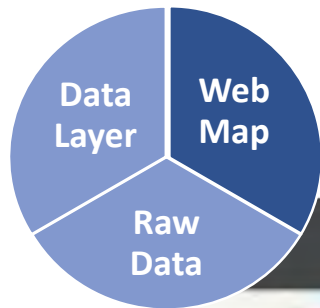
Details | Add ▾ | Basemap | Analysis | Save ▾ | Share | Print ▾ | Directions | Measure | Bookmarks | Find address

Legend

EPA National Disaster Debris Recovery Data

- Landfills & Recyclers
- Landfills
- Recyclers





Web Map

Disaster Debris Recovery Tool

Find a

Search [Close]

Search Results

← Search by Category or Location

All States

EPA Region

All Regions

All Recovery facilities

All Landfills

Construction and Demolition Recycling

Apply

Map showing the United States with numerous colored pins (green, orange, purple) indicating recovery sites. Labels include CANADA, MEXICO, Hudson Bay, Rocky M., and Caribbean Sea.

[Navigation icons: Home, Layers, Full Screen, etc.]

Search for C&D Recyclers by location

Disaster Debris Recovery Tool

Find address or place

Search

Search Results

C&D Recyclers in Michigan

Displayed features: 30/30

Great American Disposal Co

Address: 1005 East Blvd
Kingsford, MI 49802

Phone #: 906-774-9006

Latitude: 45.80

Longitude: -88.08

Landfill: (No)

- Construction & Demolition No
- Municipal Solid Waste No
- Hazardous Waste No

Recycle/Recovery: (Yes)

- Construction & Demolition Yes
- Household Hazardous Waste Yes
- Metal Yes
- Tires Yes

Bell's Building Supply Inc

Address: 14789 30th Ave
Marion, MI 49665

Phone #: 231-743-5546

Latitude: 44.03

Longitude: -85.15

Landfill: (No)

- Construction & Demolition No
- Municipal Solid Waste No
- Hazardous Waste No

Recycle/Recovery: (Yes)

- Construction & Demolition Yes
- Household Hazardous Waste No
- Metal No
- Tires No
- Vehicles No

Zoom to

60mi Cedar Rapids

Davenport

Chicago

Waukegan

Racine

Green Bay

Sheboygan

Manistee National Forest

Grand Rapids

Portage

Windsor

Ann Arbor

Chatham

Esri, HERE, Garmin, FAO

Draw and search in a buffer zone

Disaster Debris Recovery Tool

midland, mi

Show search results for

Search **Results**

Facilities within 25 miles of river flooding

Displayed features: 52/52

PEOPLES LANDFILL INC

Address: 4143 E RATHBUN ROAD
BIRCH RUN, MI 48415

Phone #: 810-639-3328

Latitude: 43.28

Longitude: -83.87

Landfill: (Yes)

- Construction & Demolition	No
- Municipal Solid Waste	Yes
- Hazardous Waste	No

Recycle/Recovery: (No)

- Construction & Demolition	No
- Household Hazardous Waste	No
- Metal	No
- Tires	No

The screenshot displays a web-based application titled "Disaster Debris Recovery Tool". The main interface features a map of the Midland, Michigan area, overlaid with a large, semi-transparent blue circular buffer zone. Numerous blue circular markers are scattered across the map, representing various facilities. A search results panel is open on the left side, showing details for a facility named "PEOPLES LANDFILL INC". The panel includes the facility's address, phone number, latitude, and longitude. It also lists the types of waste accepted at the facility, categorized under "Landfill" and "Recycle/Recovery". The "Landfill" section indicates that the facility accepts Municipal Solid Waste (Yes) but does not accept Construction & Demolition or Hazardous Waste. The "Recycle/Recovery" section indicates that the facility does not accept Construction & Demolition, Household Hazardous Waste, Metal, or Tires. The map shows geographical features such as the Chippewa River, Saginaw River, and various towns including Gladwin, Bay City, and Saginaw. The search bar at the top right contains the text "midland, mi". The bottom of the screen shows a navigation toolbar with various icons, including a search icon highlighted with a red circle.

Create driving directions

Disaster Debris Recovery Tool

midland, mi
Show search

Directions

1 Midland, Michigan

2 1311 N Niagara St, Saginaw, Michigan

ADD

Driving Time

LEAVE NOW ▾ OPTIONS

GET DIRECTIONS

CLEAR

00:33
hr min

34 min typically
31.16 miles

Location

1311 N Niagara St, Saginaw, Michigan, 48602

Zoom to

Account for road blocks and barriers

Disaster Debris Recovery Tool

midland, mi

Show search r

Directions

1 4622 Isabella St, Midland, Michigan, 4

2 1101-1313 N Niagara St, Saginaw, Mic

ADD

Driving Time

LEAVE NOW

OPTIONS

GET DIRECTIONS

CLEAR

00:44

44 min typically

31.78 miles

00:44
hr min

46 W Monroe Rd St Louis

46 Hemlock

State St Saginaw

Midland

Freeland

Midland

Chipewewa River

Pine River

North Branch Kawkawin River

Wixom Lake

Wixom Lake

Ross Lake

Add data to the map

The screenshot displays the 'Disaster Debris Recovery Tool' interface. At the top, a dark header contains the tool's logo and title. The main area is a map of the United States, densely populated with small, multi-colored circular markers (green, orange, purple) representing data points. A 'Pacific Ocean' label is visible on the left side of the map.

Overlaid on the left side of the map is a 'Add Data' panel. The panel has a dark header with a plus icon and the text 'Add Data'. Below the header, there are three tabs: 'Search' (selected), 'URL', and 'File'. Under the 'Search' tab, there is a dropdown menu set to 'ArcGIS Online' and a search input field containing the text 'FEMA flood'. A search icon is to the right of the input field. Below the search bar is a toggle switch labeled 'Within map...' which is currently turned on. There are two dropdown menus for 'Type' and 'Relevance'. The panel lists several search results, each with a thumbnail, title, and source information:

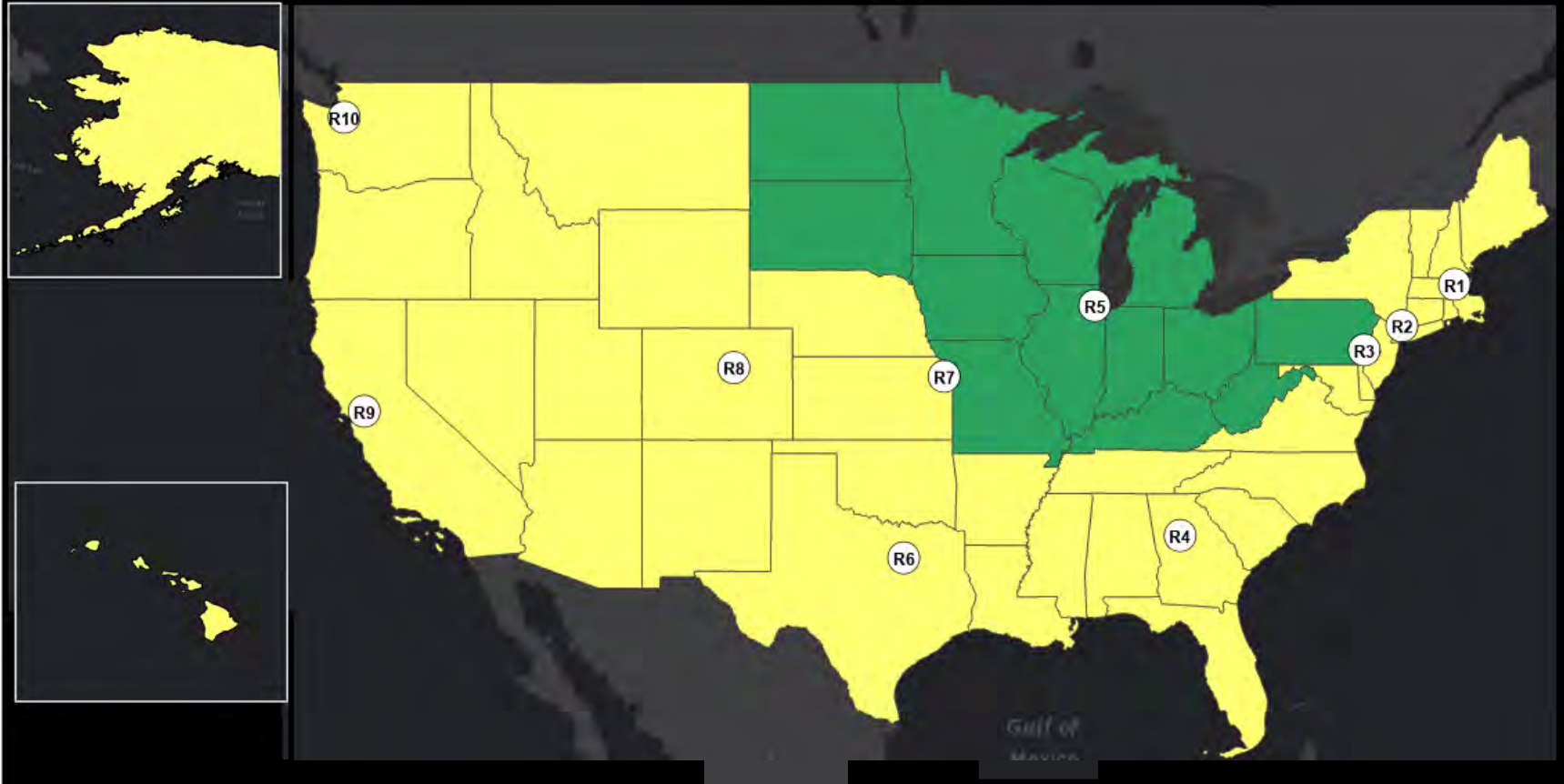
- National Flood Hazard Layer**
Map Service by FEMA_MAC
Buttons: [ADD](#) [DETAILS](#)
- FEMA Flood Hazard Zones**
Map Service by CityOfBallGround
Buttons: [ADD](#) [DETAILS](#)
- Virginia Beach, VA Official 1-pe...**
Map Service by FEMA_Region3_Mitigation
Buttons: [ADD](#) [DETAILS](#)
- FEMA - National Flood Hazard L...**

At the bottom of the panel, there are navigation arrows, a page indicator '1', and the text '767 Items'. A 'LAYERS' button is located at the bottom right of the panel.

At the bottom of the entire interface is a dark toolbar with various icons. The icon for adding data (a plus sign inside a square) is circled in red.

US EPA Disaster Debris Recovery Tool Data Collection Plan through March 2020

Original DDRT
2018-2020 Expansion



Data Sources

State environmental agencies



National associations



Federal databases



RCRAInfo



and Tribal facilities



DDRT connects to E-Enterprise work



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- 1
- 2
- 3
- 4

E-ENTERPRISE
for the environment
Modernizing the business of environmental protection

DDRT will harness Shared Services

Some states have online geospatial data



Most feds have online geospatial data



EPA has ECHO Enforcement, Greenhouse Gas Reporting, Excess Food Opportunities online data



How is it being used?

EPA Region 5 IMT Exercise – Operations Dashboard & Viewer - May 2018

Cylinders

73

Last update: 3 hours ago

Batteries

85

Last update: 3 hours ago

Containers < 30 gal

333

Last update: 3 hours ago

Containers > 30 gal

164

Last update: 3 hours ago

E-Waste

67

Last update: 3 hours ago

Other

15

Last update: 3 hours ago

Assessed - NFA

32

Last update: 3 hours ago

Cleanup Completed

27

Last update: 3 hours ago

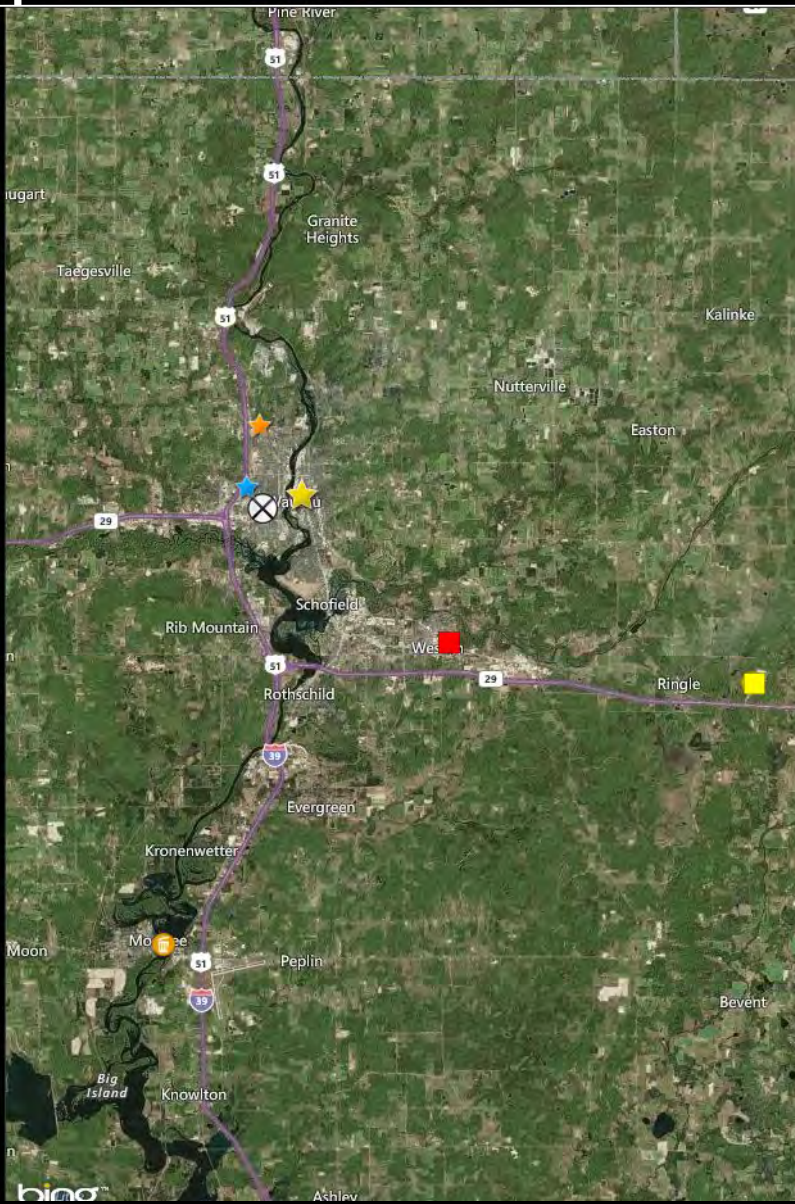
Cleanup Pending

31

Last update: 3 hours ago

Asbestos Present

28



Staging Areas

- ★ Equipment
- ★ Waste

Disposal Facilities

- Asbestos
- HHW
- HHW, E-Waste and Asbestos

Landfills (within 50 miles)



EOC



IC-MCP



Mille Lacs Band of Ojibwe



EMERGENCY OPERATIONS PLAN

October 2018

Prepared by:
Monte Fronk, Coordinator
Mille Lacs Tribal Police Dept.
Tribal Emergency Management
(320)532-3430

Annex J	Debris Clearance	J-1
	Purpose	J-1
	Responsibilities	J-1
	Policies and Procedures	J-1
	Supporting Documents	J-3

G. Final Disposal Sites within 50 miles:

Household hazardous waste collector, C&D landfill, MSW landfill	East Central Solid Waste Commission	1756 180 th Ave Mora, MN 55051	320-444-6818
Tire recycler	John's Used Tire	11708 180 th St Milaca, MN 56353	320-362-0642
Vehicle recycler	Bud Jones & Sons Auto Salvage	31787 US Hwy 169 Onamia, MN 56359	320-532-3552
Electronics recycler	Mercury Technologies of Minnesota Inc.	1110 Holstein Dr. NE Pine City, MN 55063	320-629-7888
Composter	Morrison County Compost Sites	W River Rd Little Falls, MN 56345	320-631-2862
Demolition Contractor	Waste Management of Minnesota, Inc.	7968 Industrial Park Rd Baxter, MN 56425	630-572-2448



EPA DDRT Bay Area Pilot

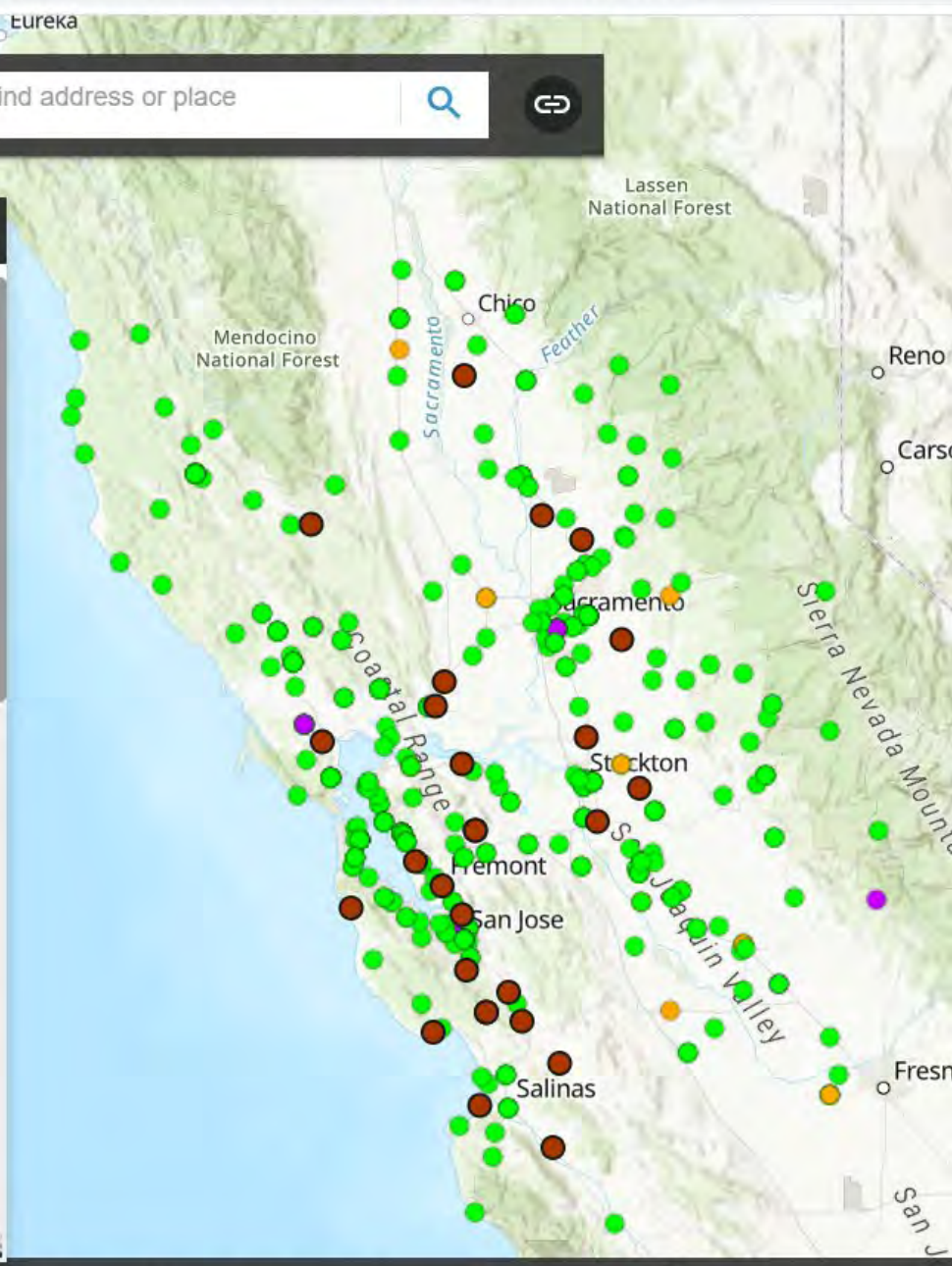
Region 9



Layer List

Layers

- Landfill Construction Demolition Debris
 -
- DDRT Bay Area
 - Landfills & Recovery
 - Landfill only
 - Recovery only
- Recycler Construction Demolition Debris
 - ◆
- Landfills Municipal Solid Waste
- Landfills Hazardous Waste
- Recycler Electronics
- Recycler Household Hazardous Waste



-119.0

60mi



Data/Tool users:



Illinois Environmental Protection Agency



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY



The tool is used for more than disaster debris management

- Waste Management technical assistance
- Green Remediation



U.S. EPA Disaster Debris Recovery Tool

www.epa.gov/debris-recovery-map

