

# LMOP Partner Webinar

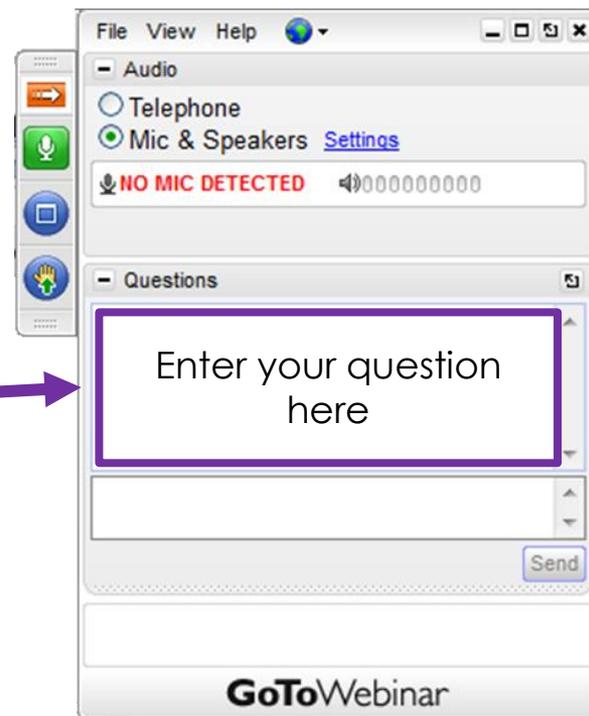
Update on LMOP Resources &  
Introduction to Electronic  
Reporting

**May 31, 2018**



# Reminders

- All participants (except speakers) are in listen-only mode
- Questions submitted during the webinar will be reviewed at the end of the webinar
  - Type a question here
- If you are experiencing technical difficulties, please let us know using the Questions pane on the right side or contact Jay Gallo at 203-687-9432



# Welcome and Presentation Overview

- Webinar Purpose
- Agenda
  - LMOP Program update - LMOP Partners and projects
  - LMOP Program Resources
  - Electronic reporting of voluntary LMOP data
- Slides will be emailed to all participants

# Status of LMOP

## More than 1,100 Partners

Industry Partners	<b>773</b>
Community Partners	<b>145</b>
Energy Partners	<b>110</b>
Endorsers	<b>39</b>
State Partners	<b>39</b>

## U.S. EPA's Landfill Methane Outreach Program (LMOP):

- Established in 1994
- Voluntary program that creates partnerships among landfill owners and operators, states, municipalities, energy users and providers, and the LFG industry and communities

***Mission: To work cooperatively with industry and stakeholders to reduce or avoid methane emissions from landfills by encouraging the recovery and beneficial use of biogas generated from organic municipal solid waste.***

# U.S. LFG Energy Project Types

**469**

Electricity

**117**

Direct-use

**40**

High Btu

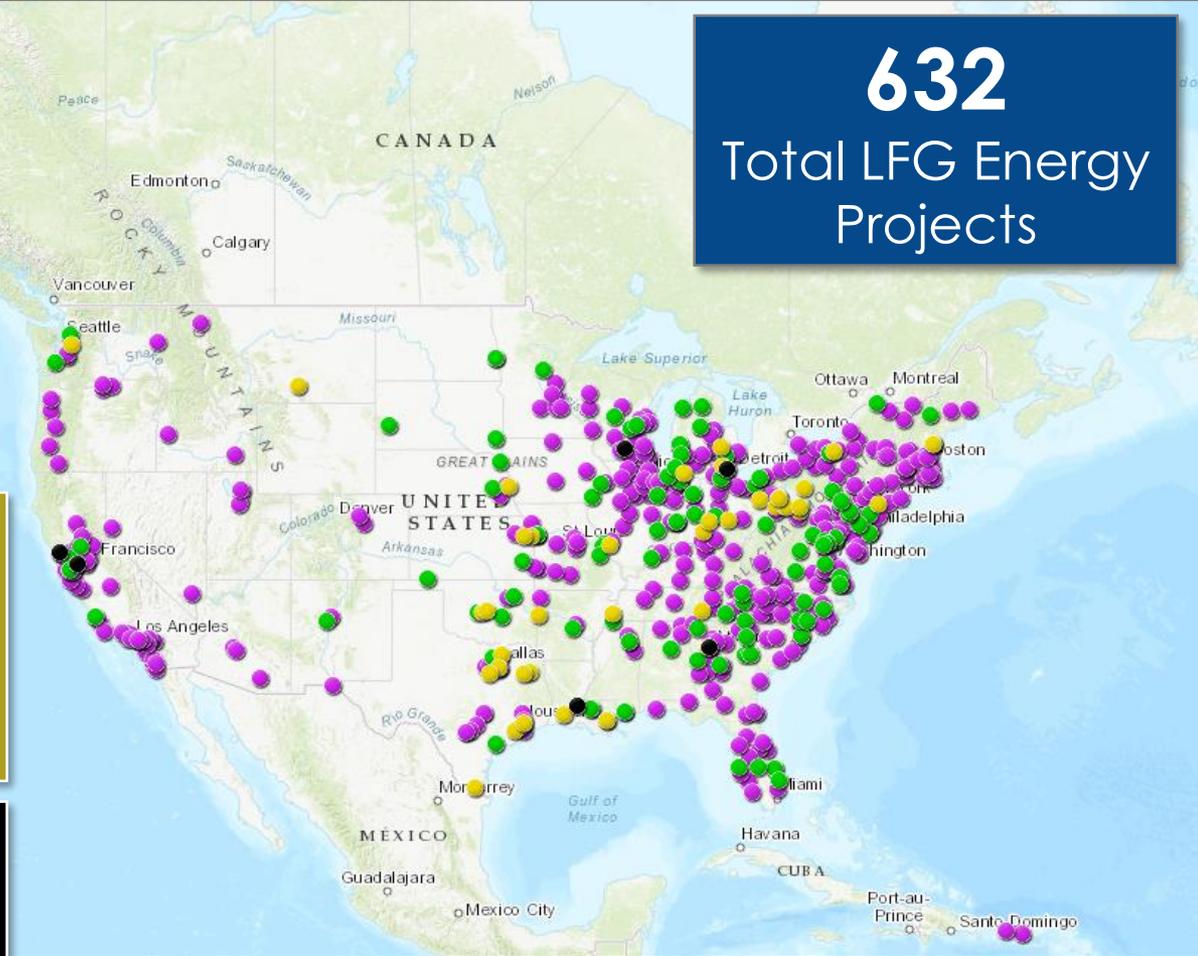
*(Includes pipeline injection-to-vehicle fuel)*

**6**

Vehicle Fuel

*(Onsite or local use only)*

**632**  
Total LFG Energy  
Projects



\*LFG energy project count from LMOP's Landfill and Landfill Gas Energy Database as of February 2018



# Update on LMOP Tools and Resources

Benefits Calculator

LFG Cost

Landfill and LFG Energy Database

National Map

# Updated Tools and Resources in 2017

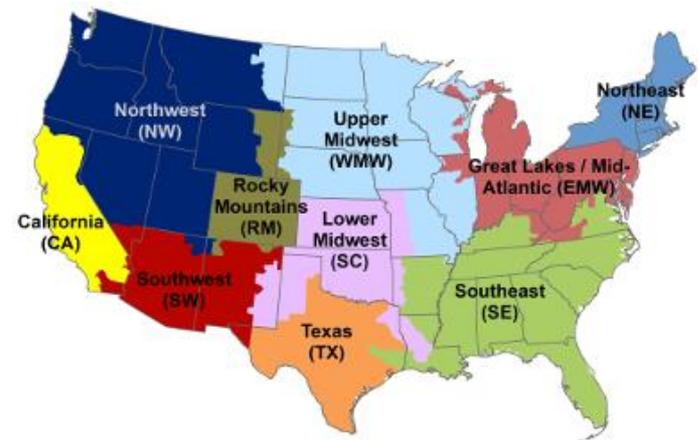
- **Benefits Calculator**

- Updates: added capability to estimate avoided emissions for electricity generating projects based on their regional location

- **LFGcost-Web**

- Evaluate the initial economic feasibility of an LFG energy project
- 12 LFG energy project options
- Updated to Version 3.2 in 2017

Map of 10 AVERT Regions



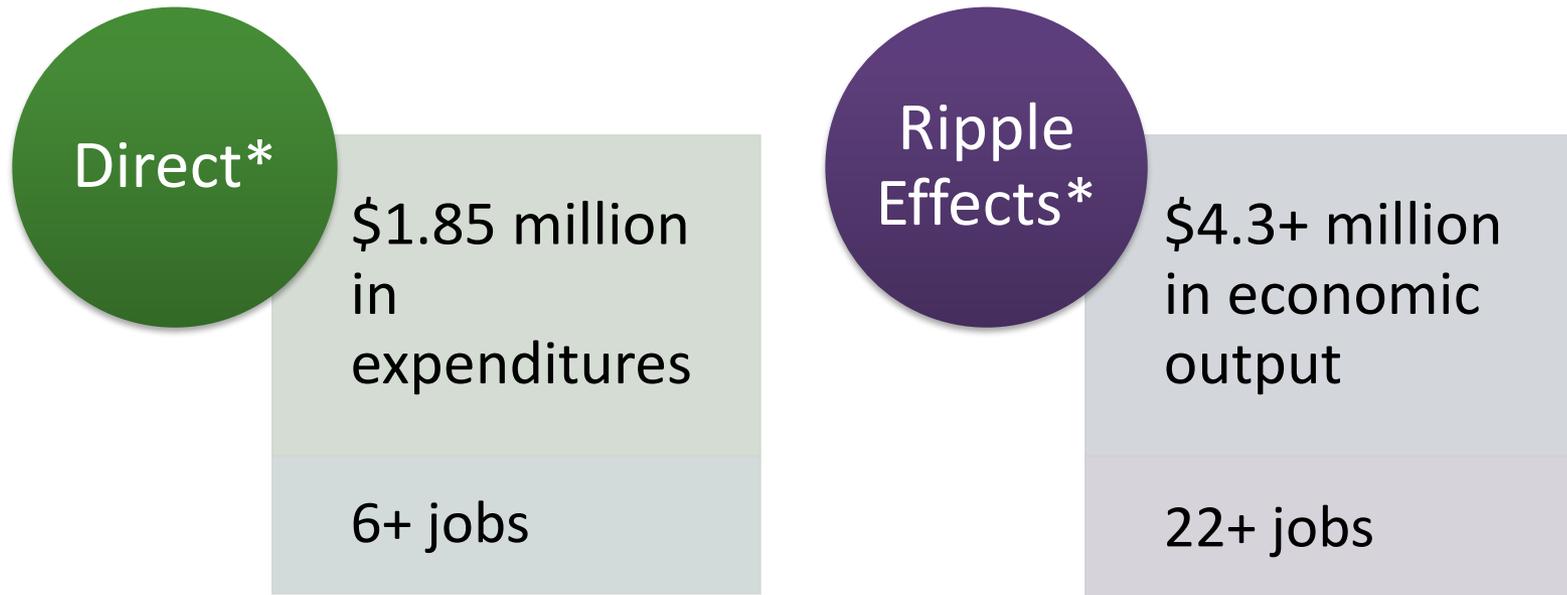
# LFGcost-Web V3.2 – Recent Updates

- Estimate job creation and regional economic ripple effects for engine or direct-use projects
- Enter defined project size (LFG flow rate) without entering landfill waste data
- Estimate/lookup electricity revenue and avoided CO<sub>2</sub> emissions based on regional grids



# Example *LFGcost-Web* Analysis

- Example: State-wide Economic Impacts of Constructing a 3-MW Engine Project

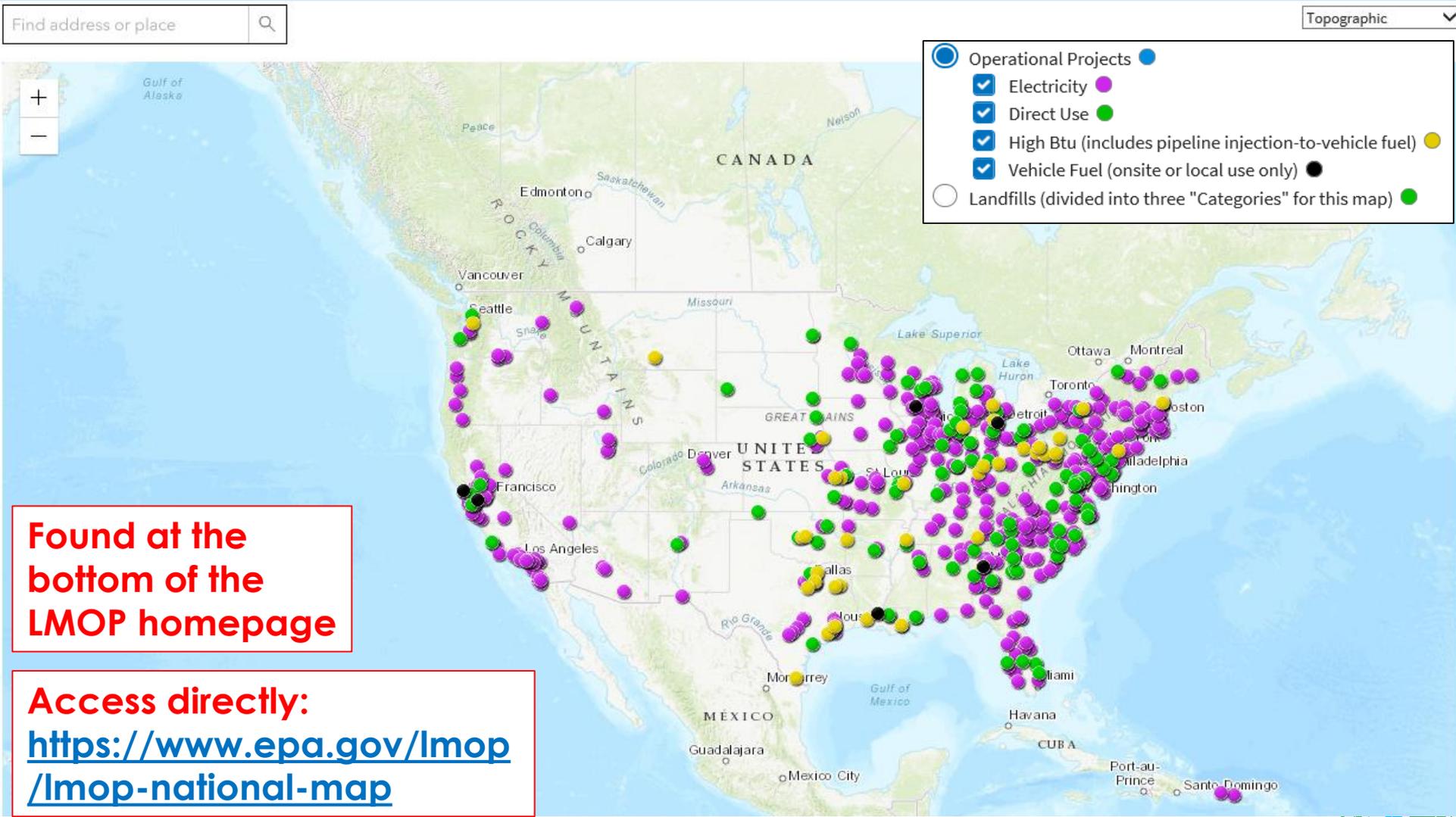


**\*Source:** *LFGcost-Web*, Version 3.2. U.S. EPA LMOP. [epa.gov/lmop/lfgcost-web-landfill-gas-energy-cost-model](http://epa.gov/lmop/lfgcost-web-landfill-gas-energy-cost-model). **Analyses performed using *LFGcost-Web* are considered estimates and should be used for guidance only.**

# Background: LMOP Database

- LMOP Database is the only one of its kind
  - Information on 2,400+ MSW landfills and 630+ operational LFGE projects
  - Data is a key resource for the U.S. GHG Inventory
- Available to download in Excel files:
  - State specific files
  - LFGE project data
  - Landfill data
  - Candidate landfills
- Updated files published to the website 2-3 times per year

# LMOP National Map – New in Dec. 2017



# LMOP National Map

[Show map in browser](#)

# Introduction to Electronic Reporting

Voluntary data collection

What data elements we collect

What is e-GGRT

What happens next

# LMOP Partner Reporting

- LMOP updates landfill and LFG energy project data through communication with Partners\*
  - Traditionally, LMOP has requested information from Partners via email with Excel spreadsheets
    - Spreadsheets are populated with data from LMOP Database
    - Partners review the data and email back updates
- Data collected is used to update LMOP's Database

OMB Control No. 2060-0446  
Approval expires 03/31/16

Landfill ID #	128	Partner	County of Orange - OC Waste & Recycling, CA
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Field Name	Data	Units of Measure / Format
Landfill Name	Coyote Canyon SLF	
Landfill City	Newport Beach	
Landfill County	Orange	
Landfill State	CA	2-letter abbreviation
Landfill Owner	County of Orange - OC Waste & Recycling, CA	
Owner Type	Public	Public or Private
Year Landfill Opened	Reported to GHGRP	yyyy
Landfill Closure Year	Reported to GHGRP	yyyy
Designated Landfill Area	Reported to GHGRP	acres
Current Landfill Area	Reported to GHGRP	acres
Designated Landfill Depth	Reported to GHGRP	feet
Current Landfill Depth	Reported to GHGRP	feet
Design Capacity	Reported to GHGRP	short tons
Amount of Waste In Place	Reported to GHGRP	short tons
Year Waste In Place Represents	Reported to GHGRP	yyyy
Annual Waste Acceptance Rate	Reported to GHGRP	short tons/year
Year Annual Waste Acceptance Rate Represents	Reported to GHGRP	yyyy
Is landfill currently required by New Source Performance Standards or Emissions Guidelines (NSPS/EG) to combust landfill gas? If yes or no yet, by what date?	Yes 3/12/1996	Yes/No/Unknown mm/dd/yyyy
How much landfill gas is generated? Is a collection system in place?	Reported to GHGRP	mmstdc (million standard cubic feet per day) Yes/No/Unknown
If yes, how much gas is collected? Are there flares in place?	Reported to GHGRP	mmstdc (million standard cubic feet per day) Yes/No/Unknown
How much gas is flared?	Reported to GHGRP	mmstdc (million standard cubic feet per day)

Project ID #	164	Project Name	Project #1
Expansion ID #	0		

How is the recovered landfill gas used or intended to be used? For example, is the landfill gas burned directly in a boiler or heater, used as fuel for a turbine generating electricity that is sold, etc.

- Project Type: Steam Turbine  
- LFG Use Details: Burn boiler supplying a steam turbine driving a 27.5 MW generator

What is the status of the LFG energy project? On what date did or will the project become operational? If the project is shutdown, on what date did it shut down?

Shutdown  
1/1/1999  
10/21/2006

Operational, Construction, Planned, Candidate, Potential, Shutdown, Other

mm/dd/yyyy or just yyyy if that is all that is known  
mm/dd/yyyy or just yyyy if that is all that is known

How much energy is or will be recovered? For direct-use projects, provide the LFG flow. For electricity projects, provide both MW capacity and LFG flow, if known.

LFG flow to project: 7 mmstdc (million standard cubic feet per day)  
Capacity: 21 MW (megawatts)  
Capacity Type: Unknown Estimated, Other, Unknown

Capacity Description for Capacity Type of "Other" (e.g., nameplate, rated, actual)

Who developed/is developing the project? Gas Recovery Systems, LLC

Who is or will be the end user of the LFG energy? San Diego Gas & Electric Company

EPA Form No. 5900-162

\*Authorized by ICR No. 1849.07, OMB Control No. 2060-0446



# Data Collection Improvements

- In 2018, LMOP will transition to electronic reporting of voluntary data using e-GGRT
  - e-GGRT is a web-based system for annual reporting to the Greenhouse Gas Reporting Program (GHGRP; 40 CFR Part 98)
  - MSW landfills that meet reporting threshold report to **Subpart HH**
  - LMOP will add a voluntary module to e-GGRT for the purpose of entering data about LFG recovery and beneficial use projects
- Electronic reporting will streamline and improve the efficiency of reporting voluntary LMOP data

## Coming Soon



Partners will be able to provide data updates via voluntary LMOP module in e-GGRT

# Voluntary Reporting through e-GGRT: Basics

- LMOP will invite Partner POCs to access the LMOP module in e-GGRT
- If you already have an e-GGRT account, you do not need to register again to utilize the system
- Users will review and update data for projects
- LMOP will populate data in the forms using the current LMOP Database so that information will not need to be re-entered
- Each year, LMOP Partners will review their project(s) data and make updates as necessary

# Options for LMOP Data Reporting via e-GGRT

## A. LMOP Partner reviews & reports data

- The e-GGRT user will be the LMOP Partner organization's main POC
- Good for Partner organizations with a few projects

## B. LMOP Partner delegates additional person(s) to review/report data on a project by project basis

- This occurs on a project level basis, and can be delegated to unlimited other users (they will each need to have an e-GGRT account)
- Good for Partner organizations with many projects

# Primary Partners for Data Reporting

- Many LMOP Partners can be involved in one LFGE project
  - Landfill owner, project developer, end user, etc.
  - Note: LMOP will only request data from LMOP Partners
- To streamline electronic reporting, LMOP is introducing the concept of a **Primary Partner** to report on each project
  - To be used in cases where there is more than one partner involved in the project
- You will be notified via email within the next month if you have been designated as a Primary Partner

# “Primary Partner” - An Overview

- The “Primary Partner” will be responsible for updating LMOP on the project
  - Primary Partner will log into e-GGRT and review the project details
- Not involved in the project any more?
  - Let us know! We will reassign this role to another LMOP Partner
- Don’t know all of the landfill or project details? Are you assigned to too many projects?
  - You can delegate others to review and report data for projects

# But I'm already reporting Data to Subpart HH...

- There is no duplication in data collection between LMOP voluntary request and Subpart HH
- Where the data is collected by GHGRP, LMOP will not request the same data (e.g., landfill open/closure years, landfill design capacity, amount of LFG collected)
  - LMOP will update the LMOP Database with the latest GHGRP data as it is published annually
  - LMOP and Subpart HH are separate modules in e-GGRT

**LMOP will be mindful of GHGRP reporting deadlines and will minimize conflicts in data requests**

# LMOP Voluntary Data vs. Subpart HH Data

LMOP Voluntary Data	Subpart HH (Municipal Solid Waste Landfills) of the GHGRP
<ul style="list-style-type: none"><li>• Data is focused on LFG energy project information</li></ul>	<ul style="list-style-type: none"><li>• Data is focused on GHG emissions, information about the landfill (landfill operations status, waste disposal quantity, waste disposition)</li></ul>
<ul style="list-style-type: none"><li>• Annual reporting</li><li>• Traditionally data requested via Excel; transitioning to a separate voluntary module in e-GGRT</li></ul>	<ul style="list-style-type: none"><li>• Annual reporting through e-GGRT</li></ul>
<ul style="list-style-type: none"><li>• Participation in LMOP is voluntary</li><li>• Request for data from Partners is authorized through an approved ICR</li></ul>	<ul style="list-style-type: none"><li>• Required by 40 CFR Part 98</li></ul>

# This Sounds Complicated!

- We will help you every step of the way
  - Webinars when reporting begins
  - Email or phone assistance
- There is only one webpage of data to review per project
- The data will be pre-populated with information that already exists in the LMOP Database
  - If all is correct, you only have to click once to mark the data as reviewed

# Why?

- Streamlines data collection
- Provides more accurate information on LFG energy projects to share the important achievements of LMOP Partners
- Providing project updates is a requirement of being an LMOP Partner
- LMOP's Database is widely used – only one of its kind!



**LMOP wants to recognize your accomplishments and achievements in generating renewable energy and reducing methane emissions**

# Questions

Q&A

Next steps

Contact information

# Next Steps

- We will reach out to all LMOP POCs to ensure we have the right POC at your organization
  - Contact us if there is a better POC for the LMOP module in e-GGRT
    - Perhaps a more technical person (if you are administrative)
    - Someone who is already an e-GGRT user
- Look out for emails from us about timeline, next steps, Primary Partner assignments, e-GGRT invitation instructions

# Wrap Up

- Slides from today's presentation will be emailed to all participants.
- To learn more about EPA's LMOP program, visit LMOP's website at [www.epa.gov/LMOP](http://www.epa.gov/LMOP)
- Please fill out the webinar evaluation form.
  - Your feedback is much appreciated

An official website of the United States government.

We've made some changes to EPA.gov. If the information you are looking for is not here, you may be able to find it on the EPA Web Archive or the January 19, 2017 Web Snapshot. Close X

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## Landfill Methane Outreach Program (LMOP)

CONTACT US   SHARE   f   t   p   e

### LFG energy projects reduce methane emissions

- 632 projects operating in 2018
  - Pulling LFG from ~575 landfills
  - Reducing 123 MMTCO<sub>2</sub>e of methane this year

1   2   3   4

#### LANDFILL METHANE OUTREACH PROGRAM

LMOP is a voluntary program that works cooperatively with industry stakeholders and waste officials to reduce or avoid methane emissions from landfills. LMOP encourages the recovery and beneficial use of biogas generated from organic municipal solid waste. [Learn more about LMOP.](#)

#### Learn and Engage

- [Basics of Landfill Gas \(LFG\)](#)
- [Benefits of LFG Energy](#)
- [Join the Program](#)
- [Connect with LMOP Partners](#)

#### Access Data

- [LFG Energy Project Data](#)
- [Landfill Technical Data](#)
- [Data by State](#)
- [Project Profiles](#)

#### Research

- [Project Development Handbook](#)
- [LFGcost-Web](#)
- [LFG Energy Benefits Calculator](#)
- [Resources for Funding](#)

National Map of LFG Energy Projects

# Thank you!

Please reach out with any questions or comments

**Lauren Aepli**

[aepli.lauren@epa.gov](mailto:aepli.lauren@epa.gov)

(202) 343-9423