



CLIMATE  
ACTION  
RESERVE

# Landfill Project Protocol V5.0

Overview Webinar

May 23<sup>rd</sup> 2019

# Reserve Staff



CLIMATE  
ACTION  
RESERVE

- Sami Osman, *Senior Policy Manager*
- Heather Raven, *Senior Project Coordinator*
- Bety Zavariz, *Policy Associate*

# Agenda



CLIMATE  
ACTION  
RESERVE

1. Background
2. Protocol Updates
3. Questions



CLIMATE  
ACTION  
RESERVE

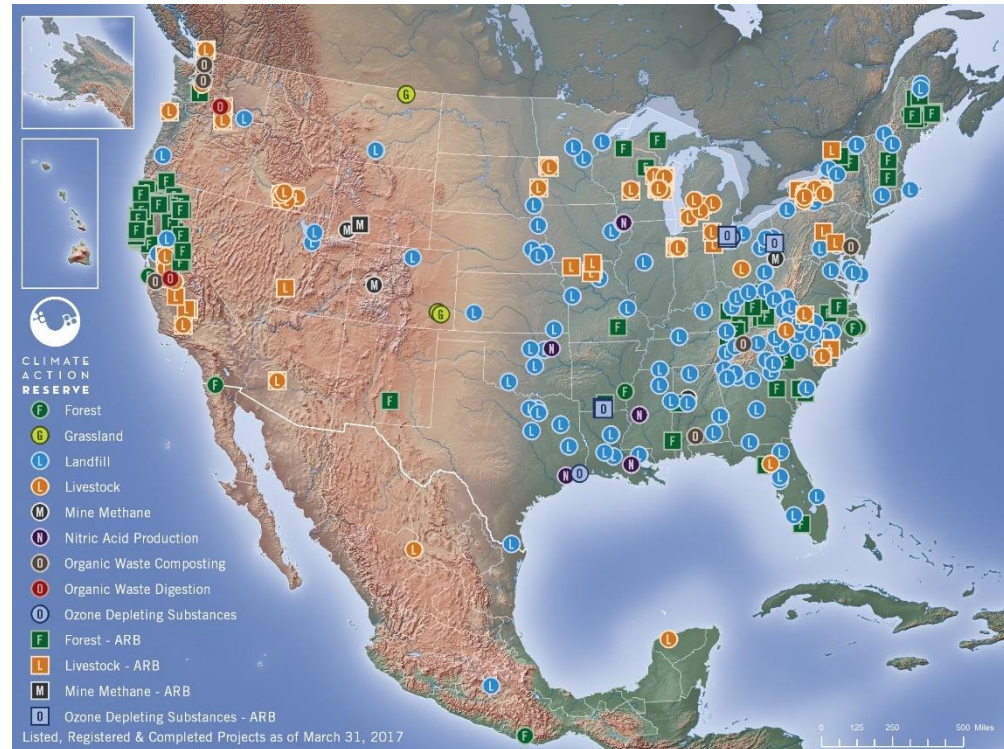
# BACKGROUND

# Climate Action Reserve



CLIMATE  
ACTION  
RESERVE

- Private, nonprofit carbon offset registry, founded in 2001:
  - Develop carbon offset policies and protocols
  - Manage a registry of voluntary offset projects
  - Oversee independent verification program
  - Accredited Offset Project Registry for California Air Resources Board
- 18 different project protocols for U.S. and Mexico
- >126M offset credits issued, both voluntary and compliance (CA)



# Landfill Protocol Development History



CLIMATE  
ACTION  
RESERVE

Version	Adoption Date	Notes
V1.0	Nov 29, 2007	Protocol adopted
V2.0	Nov 18, 2008	Improved accuracy and conservativeness in ER calculations and better guidance for MRV
V3.0	Dec 2, 2009	Eligibility for closed landfills with flares, updated definitions and QA/QC guidance
V4.0	June 29, 2011	Introduced size threshold for LFG-to-energy projects in performance standard test
V5.0	April 24, 2019	Removed size threshold for LFG-to-energy projects, introduced limits on credit stacking, increased flexibility for monitoring and verification



CLIMATE  
ACTION  
RESERVE

# PROTOCOL UPDATES



## Section 2.2 Project Definition

- Expansion of existing landfill gas capture & destruction system into new cell(s)
  - Can be considered an expansion of existing project
  - OR
  - Submitted as a new project with new crediting period
- Impact on projects: Can continue as usual, ignore landfill expansion, or submit as expansion to existing offset project, or submit expansion as new offset project



# Section 2.2 Project Definition

- Project development and verification considerations:
  - Cells from different projects must be engineered in a way that LFG cannot migrate between cells
  - Projects can share common destruction devices
    - Provided flow of methane from each project is metered separately
- Regulatory compliance implications:
  - Starting presumption = Any regulatory non-compliance applies equally to all projects at landfill

# Section 3.2 Project Start Date



CLIMATE  
ACTION  
RESERVE

- Project start date must be no more than **90** days after landfill gas is first destroyed
- Projects must be submitted to the Reserve no more than **12** months after the project start date

# Section 3.3 Project Crediting Period

- Flexibility for 2<sup>nd</sup> crediting period
- Flexibility for projects that did not maintain continuous reporting
  - Submit one Zero-Credit Reporting Period form and one Monitoring Report to cover the entire period of lapsed reporting



CLIMATE  
ACTION  
RESERVE

# QUESTIONS

# Section 3.4.2 Limits on Credit Stacking



CLIMATE  
ACTION  
RESERVE

- Projects that receive mitigation credits for upgrading landfill gas into high-Btu fuels will not be eligible to receive offset credits for the same period of time under this protocol
- Examples of high-Btu credits:
  - Renewable Fuel Standard (RFS)
  - California Low Carbon Fuel Standard (LCFS)

# Section 3.4.2 Limits on Credit Stacking



CLIMATE  
ACTION  
RESERVE

- Project development and verification considerations:
  - Any type of mitigation credit received for project activities must be disclosed by the project developer to the verification body and the Reserve on an ongoing basis
  - Projects may be listed in the Reserve while receiving high-Btu credits
  - Specific reporting requirements for such projects has not yet been determined – likely minimal

# Section 3.4.3 Legal Requirement Test



CLIMATE  
ACTION  
RESERVE

- Added guidance regarding requirements for landfills that commenced construction, reconstruction, or modification after July 17, 2014 (Subpart XXX in 40 CFR 60 in NSPS)
- BMP: Define in monitoring plan and verification report which subpart the landfill is subject to (WWW or XXX)
- Federal regulations listed in the protocol are not exhaustive

# Section 3.4.3 Legal Requirement Test



CLIMATE  
ACTION  
RESERVE

- Removed local NMOC threshold (Section 3.4.2.3 in V4.0)
  - Projects subject to closed flare mandate at local level are no longer eligible





CLIMATE  
ACTION  
RESERVE

# QUESTIONS

# Section 6.1.1 Indirect Monitoring Alternative



CLIMATE  
ACTION  
RESERVE

- Instead of using flow meters, projects may demonstrate volumes of CH<sub>4</sub> using output data for their destruction device
- Conditions:
  - Must measure output using commercial transfer meter
  - Must propose appropriate method to convert from energy output to volume of CH<sub>4</sub> destroyed and must outline method clearly in monitoring plan
    - Method must be approved by Reserve prior to implementation
  - Must apply method consistently throughout the reporting period

# Section 6.1.1 Indirect Monitoring Alternative



CLIMATE  
ACTION  
RESERVE

- Protocol QA/QC should be met when project developer can control maintenance of the meters
- If project developer cannot control maintenance, ideally provide documentation to demonstrate manufacturer QA/QC requirements met
- Must demonstrate to verifier's satisfaction that use of such data and method is reasonable and conservative

# Section 6.2 Instrument QA/QC



CLIMATE  
ACTION  
RESERVE

- Flow meters and continuous methane analyzers must be calibrated by the manufacturer or a certified third-party calibration service **per manufacturer's guidance or every 5 years when calibration frequency is not specified by the manufacturer**

# Section 7.3 Reporting Period and Verification Cycle



CLIMATE  
ACTION  
RESERVE

- **Flexibility for verifications**
- Reporting periods
  - Initial reporting period may be up to 24 months
  - All other reporting periods of 12 months or sub-annual
- Verification periods
  - Initial verification period limited to one reporting period
  - Subsequent verifications may cover up to two reporting periods
    - Interim monitoring report required for deferred verification year

# Section 7.3 Reporting Period and Verification Cycle



CLIMATE  
ACTION  
RESERVE

- Site visit schedule
  - Site visit at initial verification
  - For subsequent verifications, at least once every two reporting periods
- Reporting periods may be verified without a new site visit if:
  - A site visit occurred in the previous reporting period; and
  - The current verification is conducted by the same verification body as the previous verification; and
  - No significant changes in data management systems, equipment, or personnel since previous site visit



CLIMATE  
ACTION  
RESERVE

# QUESTIONS

# Contact Information



CLIMATE  
ACTION  
RESERVE

## Bety Zavariz

[bzavariz@climateactionreserve.org](mailto:bzavariz@climateactionreserve.org)

(213) 542-0298 (Pacific Time)

## Sami Osman

[sosman@climateactionreserve.org](mailto:sosman@climateactionreserve.org)

(213) 542-0294 (Pacific Time)

## Lucy LaViolette

[llaviolette@climateactionreserve.org](mailto:llaviolette@climateactionreserve.org)

(213) 542-0288 (Pacific Time)