



ODOR WORKSHOP

OCTOBER 17, 2017



WESTERN PLACER
WASTE MANAGEMENT AUTHORITY



INTRODUCTIONS

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MEETING OVERVIEW

WPWMA & Sunset Industrial Area

Regional Odor Sources

WPWMA Facility & Odor Sources

WPWMA Odor Monitoring & Reduction Efforts

WPWMA Master Planning Project

Discussion and Feedback

WPWMA & THE SUNSET INDUSTRIAL AREA



WESTERN PLACER WASTE MANAGEMENT AUTHORITY

- **Joint Powers Authority** (Placer County, Lincoln, Rocklin, Roseville)
 - Also serving Auburn, Loomis, Colfax
- **Established in 1978 to acquire, own, operate and maintain a sanitary landfill**
- **Provides recycling and disposal services to customers throughout western Placer County**
- **Serves as the cornerstone for jurisdictions to meet state waste mandates**
- **Centered in the Sunset Industrial Area**

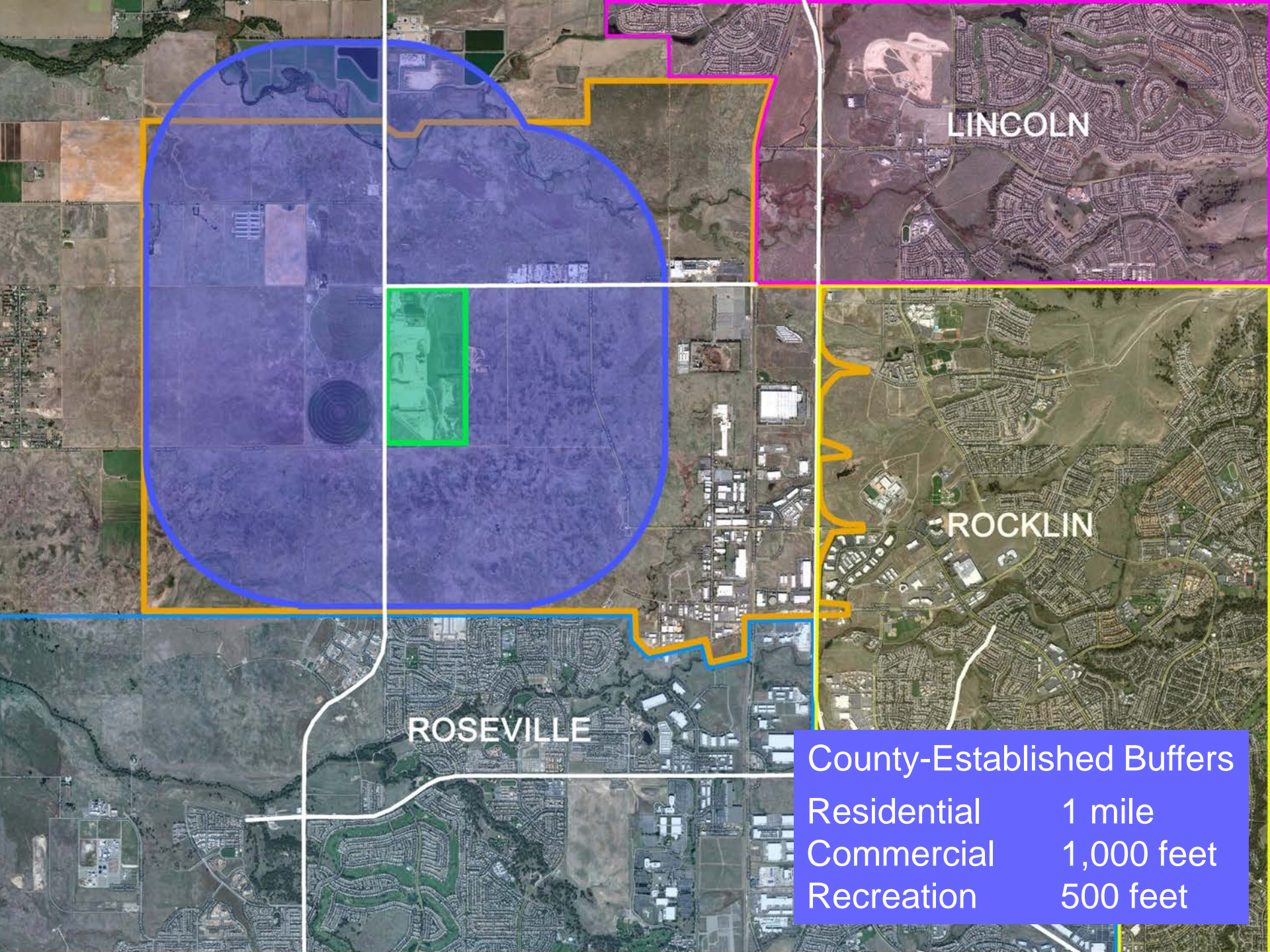


SUNSET INDUSTRIAL AREA

Identified in 1967 to:

- Preserve Highway 65 corridor for industrial uses
- Protect industrial development from residential encroachment
- Protect the WPWMA from incompatible encroachment

Placer County currently updating 1997 SIA Plan



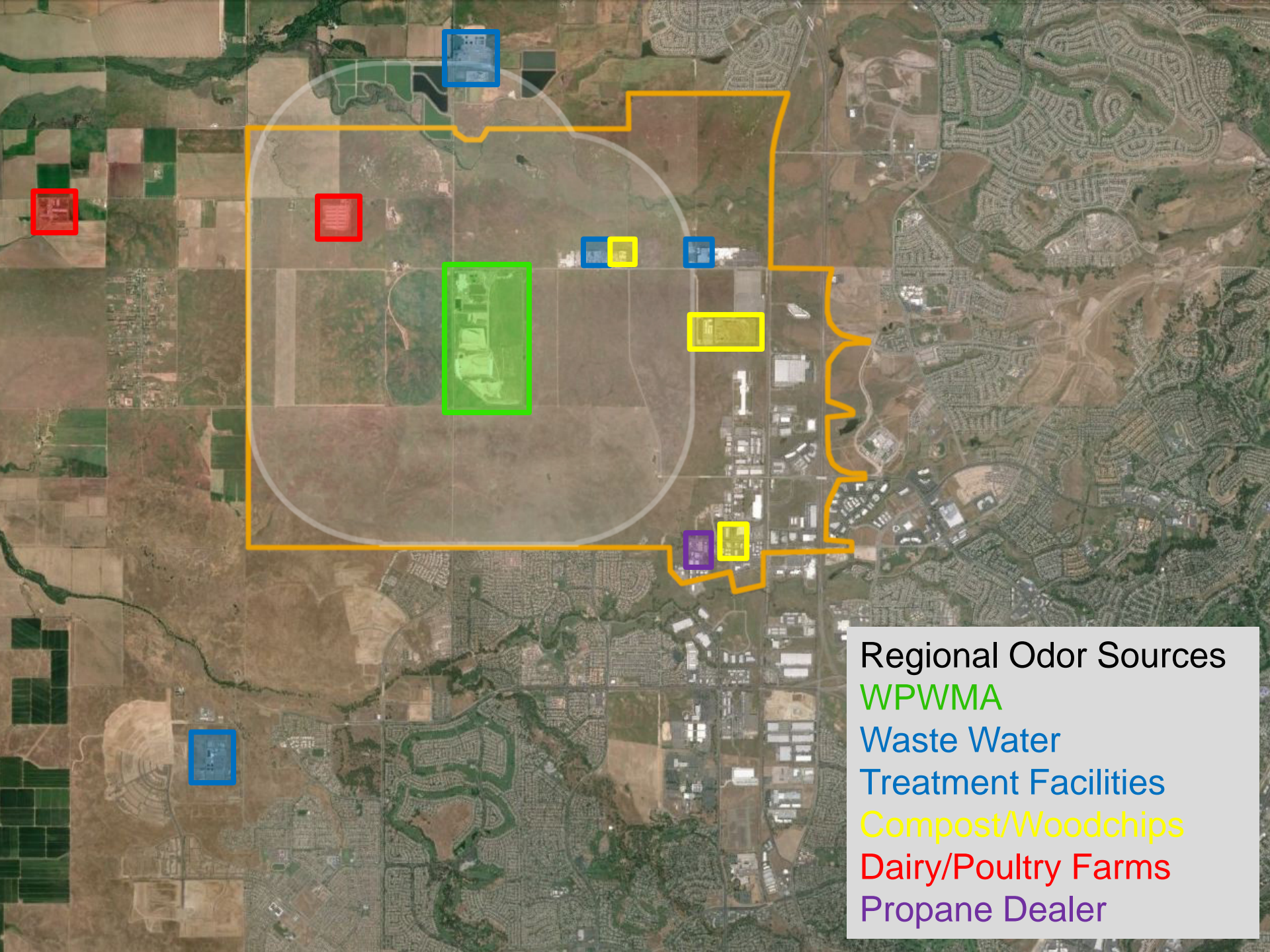
LINCOLN

ROCKLIN

ROSEVILLE

County-Established Buffers	
Residential	1 mile
Commercial	1,000 feet
Recreation	500 feet

REGIONAL ODOR SOURCES



Regional Odor Sources

- WPWMA
- Waste Water Treatment Facilities
- Compost/Woodchips
- Dairy/Poultry Farms
- Propane Dealer

WPWMA FACILITY & ODOR SOURCES



WPWMA FACILITIES

Western Regional Sanitary Landfill

- Began operating in 1979
- Site life estimated through 2058
- Only active landfill

Materials Recovery Facility (MRF)

- Began operating in 1995
- Sorts residential and commercial waste

Composting Operations

- Green waste diverted from landfill
- Aerated static pile (ASP) pilot study



WPWMA ODOR SOURCES

Primary odor sources

- Composting operations
- Landfill gas surface emissions

Secondary sources

- Daily waste disposal
- Receipt of wastewater treatment plant sludge
- Materials Recovery Facility



WPWMA ODOR MONITORING EFFORTS



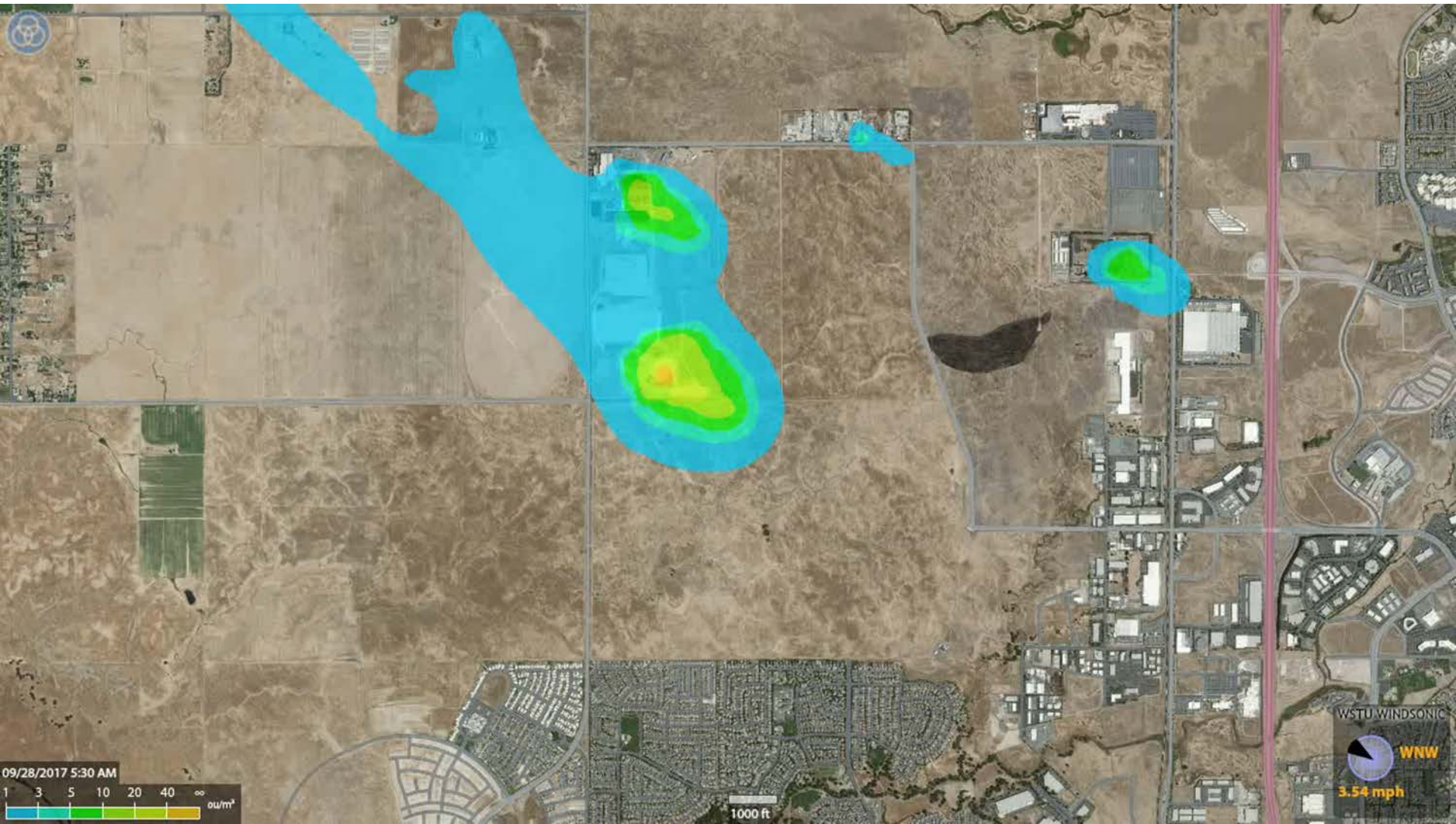
WPWMA ODOR MONITORING EFFORTS

Continuous Facility Odor Monitoring System

- Installed April 2014
- Investigation, sampling, analysis of facility odor sources
- Real-time odor collection sensors, static odor constants
- Graphical odor dispersion modeling estimates
 - Measured odor data
 - Onsite weather station data
 - Local topographic features



WPWMA ODOR MONITORING EFFORTS





WPWMA ODOR MONITORING EFFORTS

2015 Facility Operations Odor Study

- Comprehensive facility evaluation to improve accuracy of odor monitoring system
- Quantified surface odor emissions from
 - Active landfill face
 - Landfill gas surface emissions
 - MRF
 - Compost



WPWMA ODOR MONITORING EFFORTS

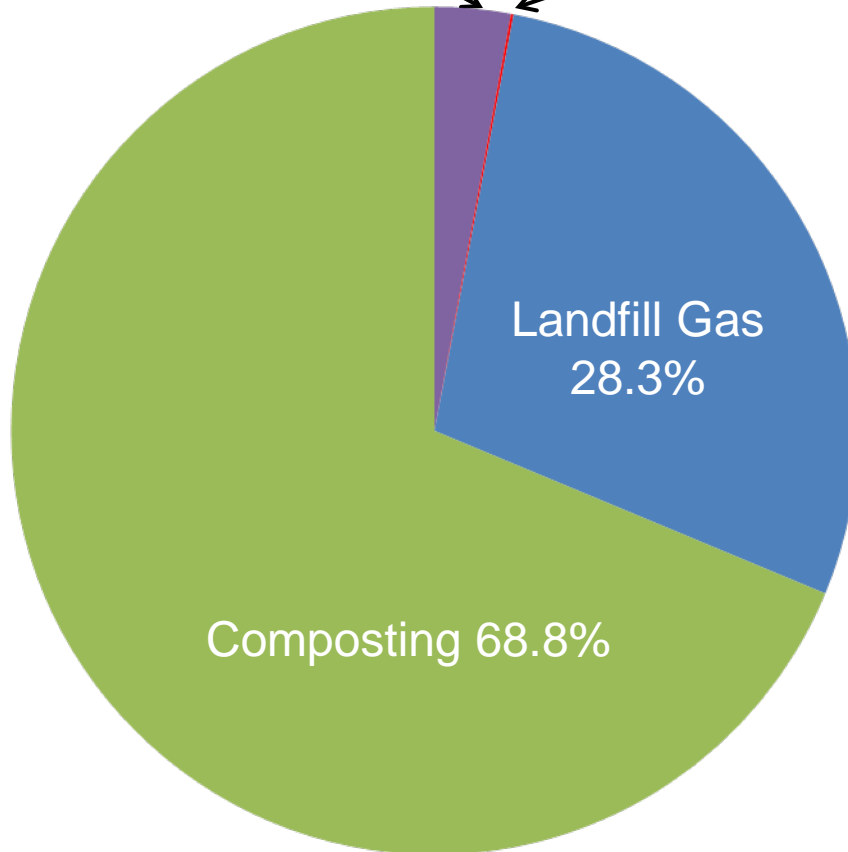




WPWMA ODOR MONITORING EFFORTS

Overall Contribution to Site Odors

Active Landfill 2.9% MRF 0.1%



- Active Landfill Areas
- MRF
- Inactive Landfill Areas (Landfill Gas)
- Composting

WPWMA ODOR REDUCTION EFFORTS



WPWMA ODOR REDUCTION EFFORTS

Landfill Operations

- Minimize daily fill area
- Immediate burial of waste water treatment plant sludge
- Landfill not currently operated on weekends
- Gas wells installed early

Compost Operations

- Aerated compost water collection ponds
- Compost managed to prevent anaerobic conditions





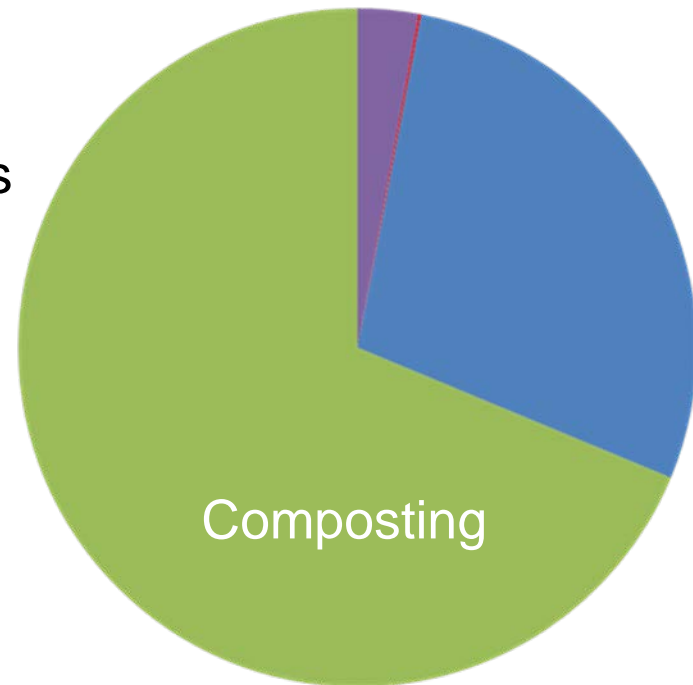
WPWMA ODOR REDUCTION EFFORTS

Composting Pilot Study

- Evaluated aerated static pile (ASP) technology
- Air injection and compost biofilter to reduce odors
- San Diego ASP/biofilter study

Corresponding Odor Study

- ASP evaluated to determine effectiveness of reducing compost-related odors
- 90% control of greenwaste odors
- Greenwaste/food ASP emissions were comparable to current greenwaste composting





WPWMA ODOR REDUCTION EFFORTS

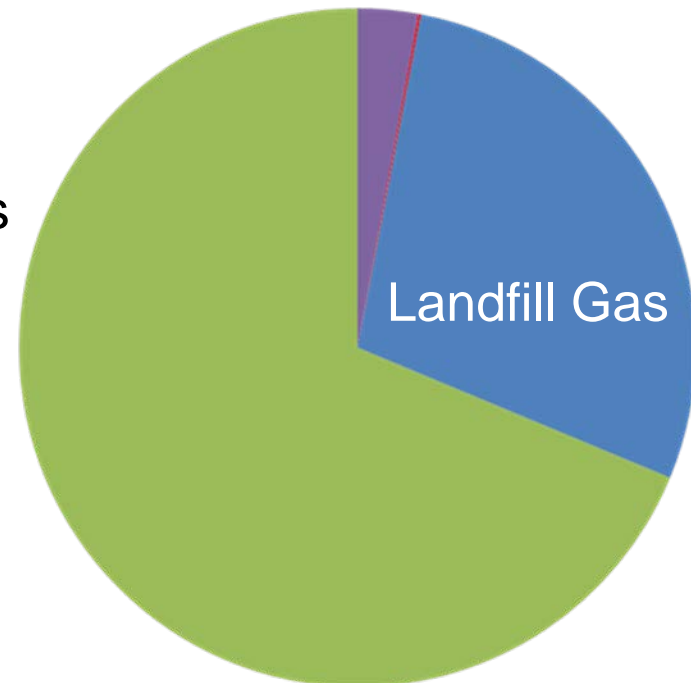
Landfill Gas Surface Emission and Odor Reduction Projects

Partial Final Cover

- Final closure of strategic landfill areas ahead of regulatory requirements

Landfill Gas Collection System Upgrade

- Added, replaced and repaired landfill gas wells to provide more consistent and reliable landfill gas control
- Optimized gas well construction
- New gas flare with advanced control technologies







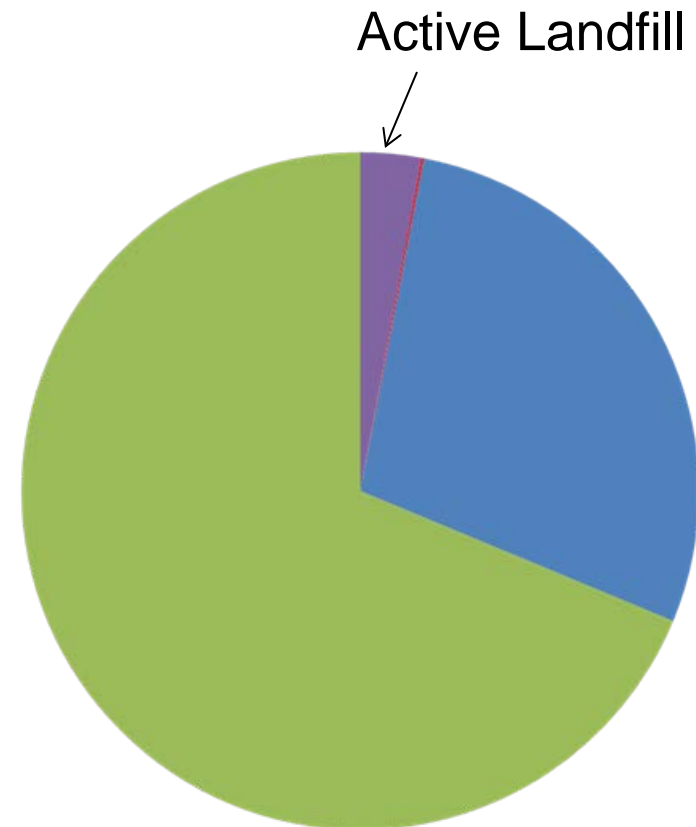
WPWMA ODOR REDUCTION EFFORTS

Odor Neutralizer Pilot Study

- Misted along southern landfill perimeter
- Applied to MRF residue prior to landfiling

Corresponding Odor Study

- Evaluated efficacy of several commercial neutralizers
- Experimented with application rates and methods
- Tested several Alternative Daily Cover materials
 - Identified C&D fines as best ADC
 - Pending regulatory approval



PUBLIC INVOLVEMENT & NOTIFICATIONS



ODOR NOTIFICATIONS

Online Odor Notification

- Solicit feedback from the community
 - Time / location / description / duration / intensity
- PCAPCD concurrently notified of all odor notifications and copied on all investigation responses
- WPWMA staff conducts field investigations during facility hours
- Public involvement crucial to understanding odor movement
 - Location
 - Frequency
 - Intensity



NOTIFICATION RESPONSE

ODOR NOTIFICATION INFORMATION

Notification No. 1199

This section presents a summary of the odor notification information received by the WPWMA via its on-line odor notification form.

Date and time notification was filed	9/28/2017 6:51 AM	Additional Comments
Date and time odor was experienced	9/28/2017 6:45 AM	None
Length of time odor was experienced	15 to 30 minutes	
Odor description	Gassy	
Odor intensity (between 1 and 5)	3	
Street	Fidymont Farms elementary	
Contact information	Not provided	

WEATHER CONDITIONS

This section presents a summary of the weather conditions reported by the WPWMA's on-site weather station before, during and immediately after the time the odor was reported to have first been experienced.

Average Weather Conditions	Wind Speed (mph)	Wind Direction	Temp (F)	Atm Pressure (in Hg)	Precip. (in)	Humidity (%)
5:45 AM to 6:45 AM	2.69	NNE	61.2	29.67	0.00	60.1
6:45 AM to 7:45 AM	2.89	WNW	61.3	29.69	0.00	61.5
7:45 AM to 8:45 AM	3.11	W	61.1	29.71	0.00	62.8

RESPONSE ACTIONS

This section provides a summary of the field investigation (if any) of the reported odor performed by WPWMA personnel.

Performed field investigation ☐ Yes ☒ No If NO, why No staff available to visit site

Field investigation performed by Time of field investigation

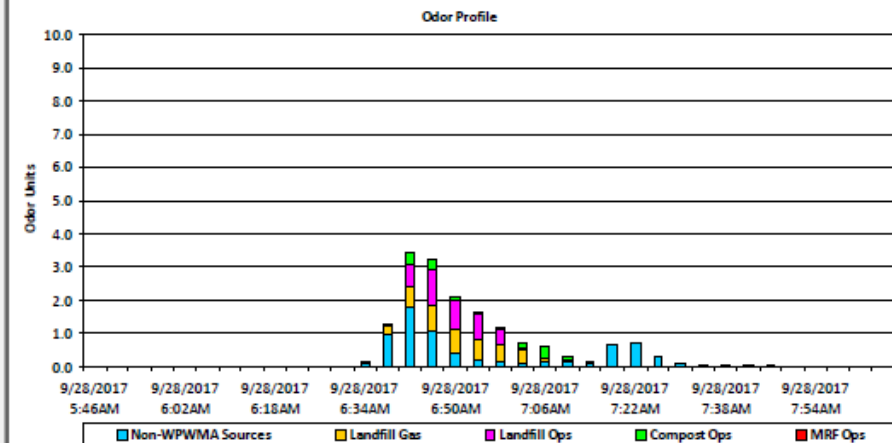
Detected odor during field investigation ☐ Yes ☐ No ☒ N/A

Odor Description/Primary Odor Source Odor Intensity

Comments

Model Reference Location Fiddymont Farm Elementary

This section provides a summary of the predicted sources of odor and their estimated contribution to the potential odor profile at the reported location. These results are based on the WPWMA's continuous odor monitoring system and air dispersion modeling predictive software.

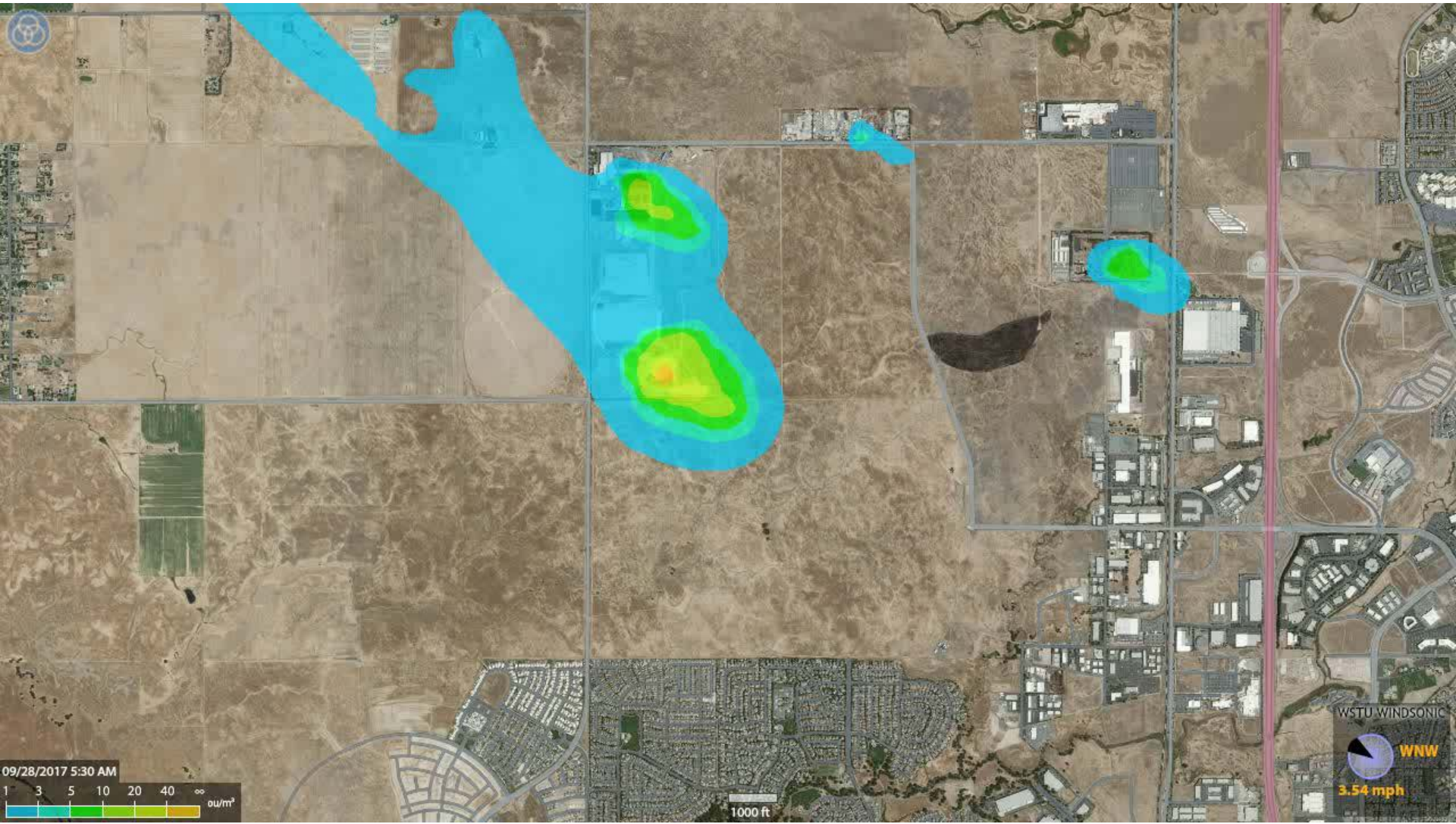


Odor Unit Key: >1 odor unit - Odor concentration is below the odor threshold
1 odor unit - 50% of the population can detect an odor.
3 odor units - 50% of the population can qualify the odor.

5 odor units - The odor is recognizable and identifiable
10 odor units - The odor is sufficient enough to be considered an annoyance.



WPWMA ODOR MONITORING SYSTEM



FACILITY MASTER PLANNING



FACILITY MASTER PLANNING

Comprehensive planning effort to identify and address the needs of the WPWMA and its jurisdictions, considering:

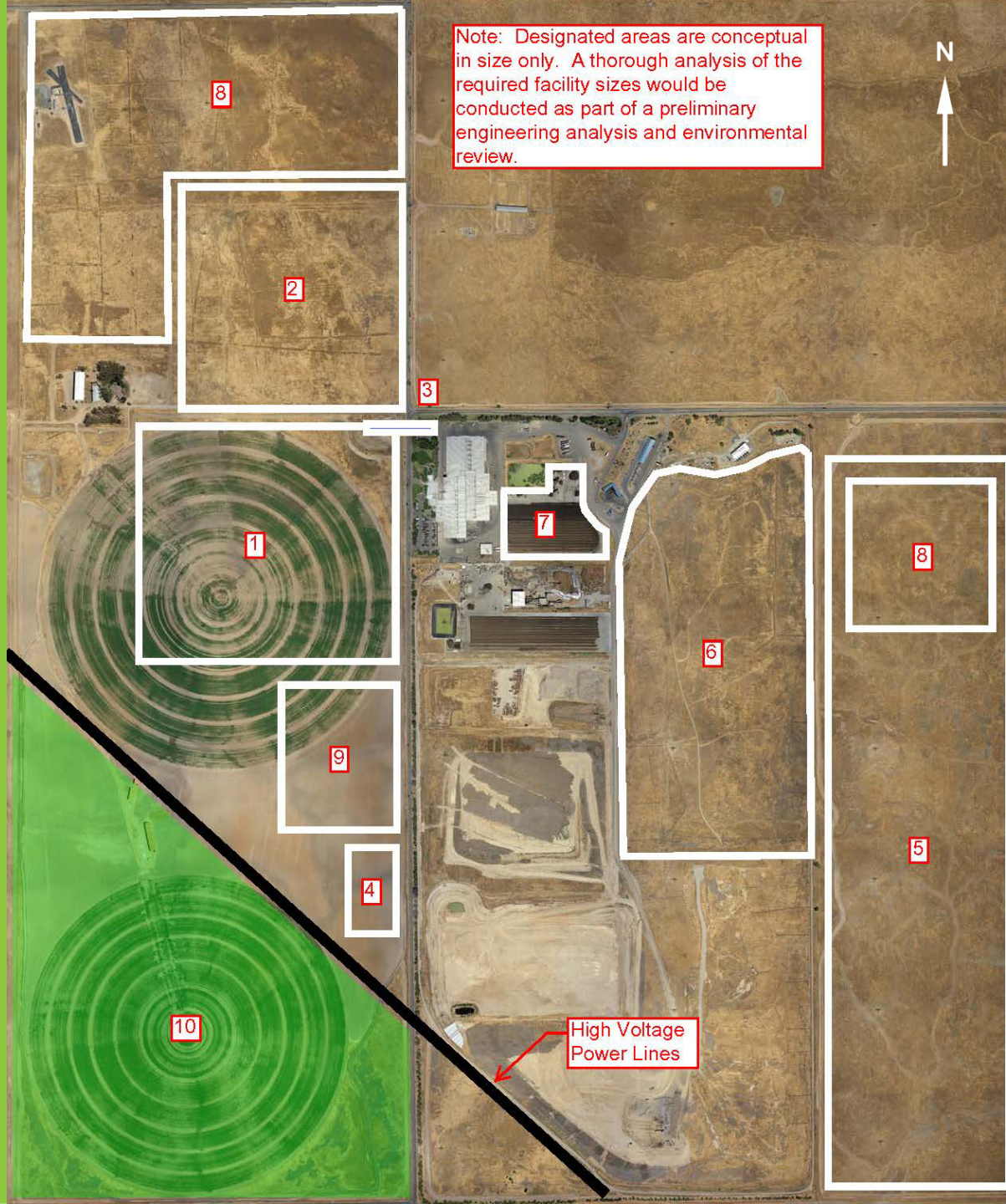
- Anticipated regional growth
- Current and future changes in applicable regulations
- Increasing operational efficiencies and material diversion rates
- Improving compatibility between operations and current / future neighboring land uses

Note: Designated areas are conceptual in size only. A thorough analysis of the required facility sizes would be conducted as part of a preliminary engineering analysis and environmental review.



POSSIBLE FACILITY USES (original)

1. New Composting Area
2. New Public Tipping Area
3. Overpass or Underpass
4. LFG to CNG Fueling Station
5. New Landfill Modules
6. Unlined Module Relocation
7. Alternative Technologies Pilot Study Project Area
8. Solar Array, other Alternative Energy Projects or Complementary Manufacturing
9. University Research and Development Center
10. Other Commercial/Industrial Uses or Buffer Space



DISCUSSION & FEEDBACK



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