

Annual Presentation to the County of Sonoma

April 2018 – March 2019



Site Plan

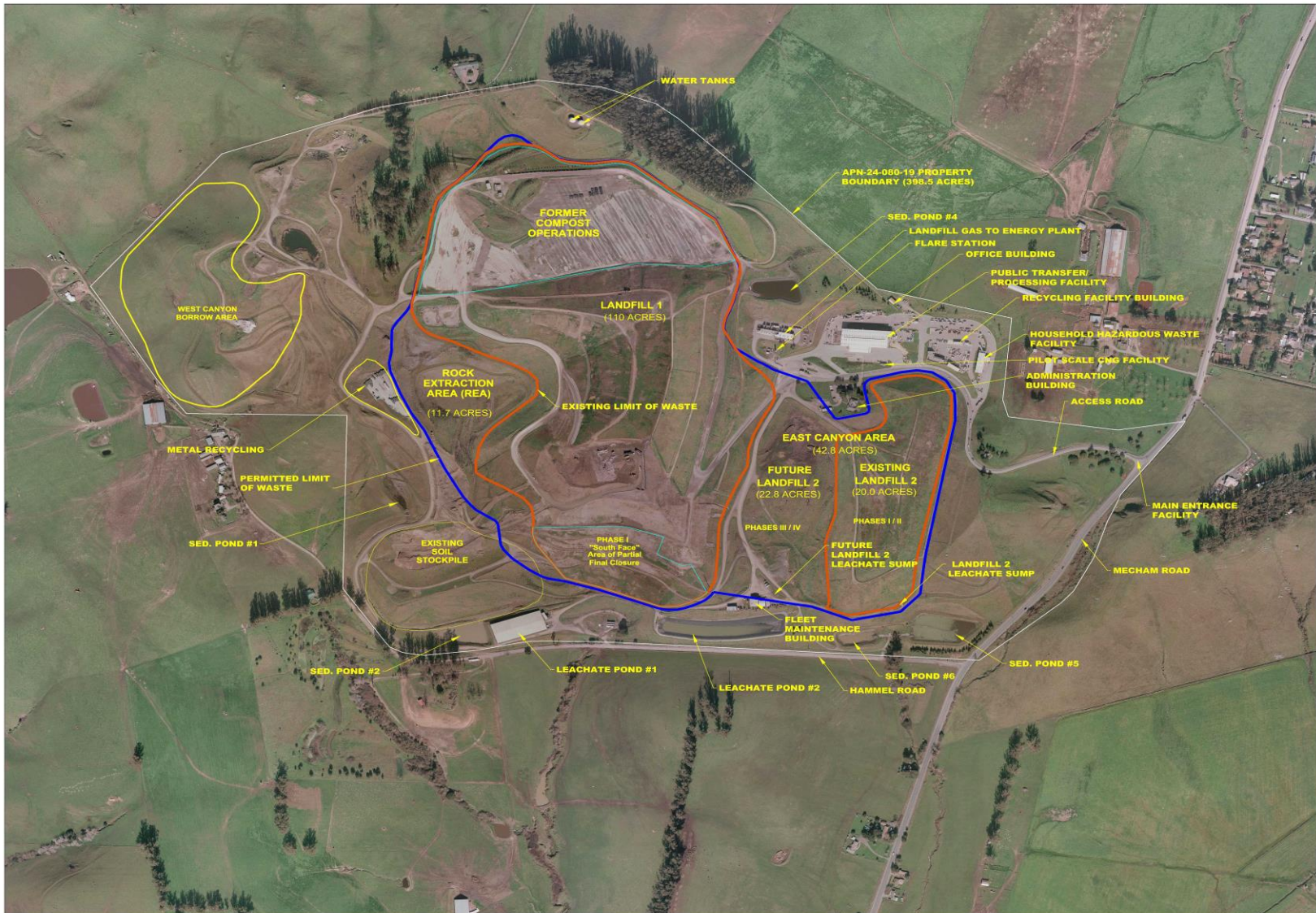


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Summary of Landfill Airspace

As of 12/31/2018

| | | |
|------------------------------------|--|------------------------|
| Projected Airspace Volume Consumed | | 22,802,068 Cubic Yards |
| Remaining Airspace of the Landfill | | 9,847,932 Cubic Yards |
| Remaining Capacity of the Landfill | | 7,878,346 Tons |
| Remaining Life of the Landfill | | 26.2 Years |
| Change in Airspace | Solid Waste Placed in (1/1/18 to 12/31/18) | 928,570 Cubic Yards |
| | Volume Consumed as of 12/31/2017 | 22,802,068 Cubic Yards |

Waste Placement by Quarter, 2018 by Material Type (in tons)

| 2018 | <u>MSW</u> | <u>Fire Waste</u> |
|--------------|----------------|-------------------|
| Jan – Mar | 73,011 | 524,809 |
| Apr – Jun | 77,031 | 35,201 |
| Jul – Sep | 89,152 | |
| Oct – Dec | 96,382 | |
| TOTAL | 335,576 | 560,010 |

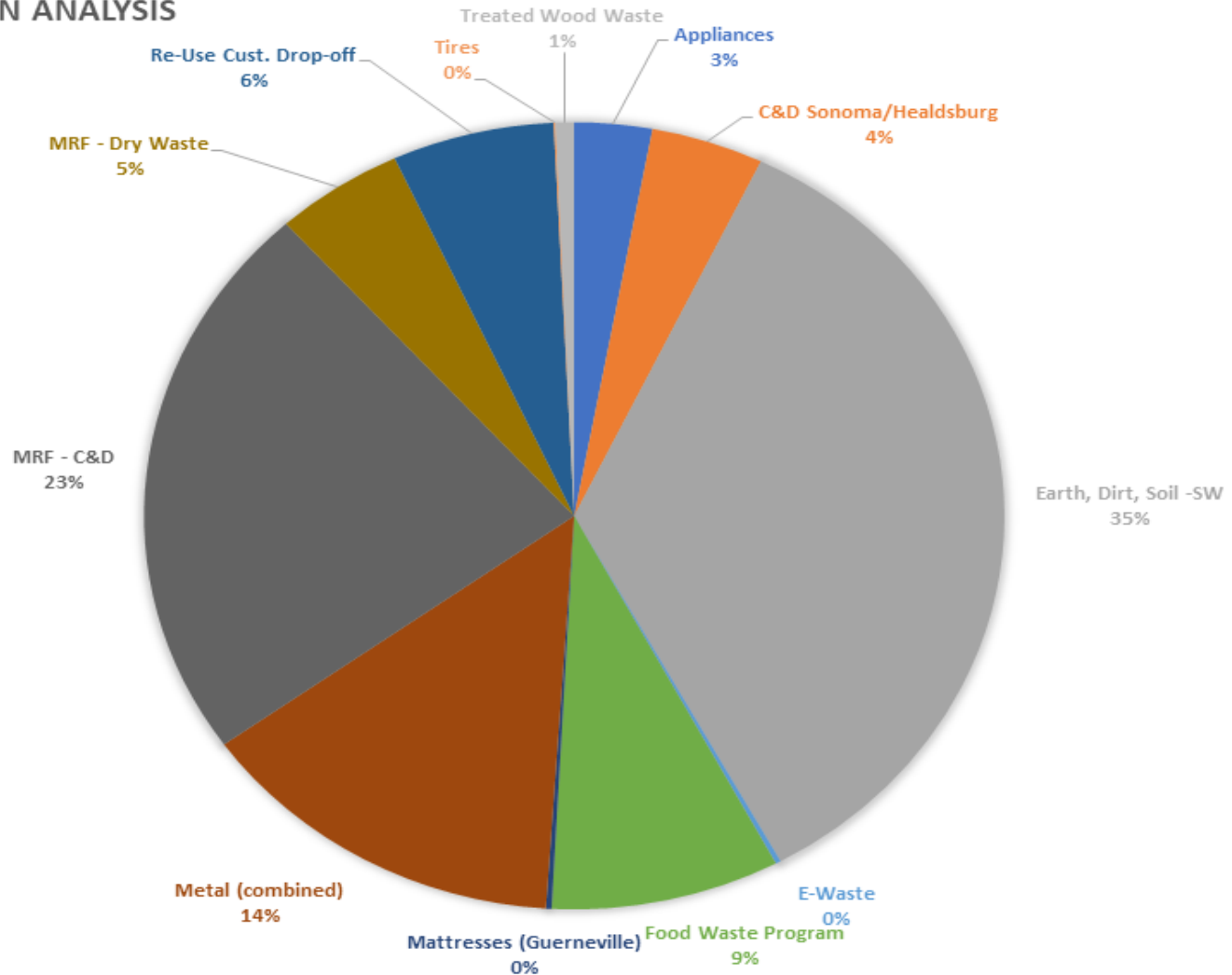
Fire Waste Totals 11/7/17 to 6/30/2018 917,318

Diversion Analysis

| Diversion Analysis | | | | | | | | | | | |
|-----------------------------|--|--|----------|----------|-------------|---------|--------|------------------|--|----------------------|--|
| | | | 2018 | 2018 | 2018 | 2019 | | | | | |
| DETAIL | | | Apr-June | July-Sep | Oct-Dec | Jan-Mar | | <u>2018/2019</u> | | <u>Calendar 2017</u> | |
| Appliances | | | 458 | 454 | 434 | 646 | | 1992 | | 1676 | |
| C&D Sonoma/Healdsburg | | | 829 | 837 | 831 | 396 | | 2893 | | 4616 | |
| Earth, Dirt, Soil -SW | | | 1166 | 11700 | 9341 | 1624 | | 23831 | | 8032 | |
| (Beneficial Reuse) | | | | | | | | | | | |
| E-Waste | | | 24 | 45 | 24 | 43 | | 136 | | 150 | |
| Food Waste Program | | | 1159 | 1356 | 1706 | 1658 | | 5879 | | 4332 | |
| Mattresses (Guerneville) | | | 17 | 18 | 16 | 94 | | 145 | | 7 | |
| Metal (combined) | | | 2198 | 2518 | 2127 | 2781 | | 9624 | | 3769 | |
| MRF - C&D | | | 1504 | 3197 | 3943 | 7188 | | 15832 | | 1903 | |
| MRF - Dry Waste | | | 521 | 1511 | 852 | 416 | | 3300 | | 1243 | |
| Re-Use Cust. Drop-off | | | 883 | 1410 | 1096 | 773 | | 4162 | | 1705 | |
| (Includes Cardboard, glass, | | | | | | | | | | | |
| mixed paper, rigid plastic) | | | | | | | | | | | |
| Tires | | | 10 | 10 | 9 | 16 | | 45 | | 36 | |
| Treated Wood Waste | | | 76 | 126 | 175 | 99 | | 476 | | 193 | |
| | | | | | | | | | | | |
| | | | | | | | TOTALS | 68315 | | 27662 | |
| | | | | | Annual Goal | | | 67,000.00 | | | |

Diversion Analysis – Chart

2018 DIVERSION ANALYSIS



How to Achieve Annual Diversion Tonnage

| <u>Initiative</u> | <u>Projected</u> | <u>2018 Totals</u> |
|-------------------------------------|--|--------------------|
| Food Waste | 7,055 tons (20% increase) ^(a) | 5,879 |
| Z-Wall Sort | 4,578 (10% increase) ^(b) | 4,162 |
| C&D – increase runtime on sort line | 31,200 ^(c) | 15,832 |
| Commercial Dry Waste program | 3,960 (20% increase) ^(d) | 3,300 |
| Soil for Beneficial Reuse | 5,958 (75% decrease) ^(e) | 23,831 |
| All Others | <u>15,311 (no change)</u> | <u>15,311</u> |
| Totals | 68,062 | 68,315 |

(a) Add one dedicated food waste route truck

(b) Due to Sonoma County rebuilding effort

(c) Run sort line 8 hours/day, 5 days/week, 50 weeks/year with 50% recoverable rate (or 50% residuals)
Need to focus on proper staffing and consistent operation of the MRF throughout the year. LEED program, Industrial Carting and Pacific Sanitation inbound volumes will help with this increase

(d) Increase commercial route activity – focus on open market accounts

(e) No more fire waste tons – projected total includes Special Waste

Green House Gas Study Updates

This GHG inventory represents a snapshot of GHG emissions from the Site in 2014, 2017, and 2018. LFG-derived GHG emissions would have occurred as a result of waste placement of the waste at any landfill facility in the region; however, because of additional waste placement and subsequent LFG generation, GHG emissions from LFG increased from 2014 to 2018. Transportation emissions are higher for the 2018 inventory due to the large increase in the volume of waste generated in the county due to wildfires in 2017. Total site-wide GHG emissions are shown below.

The Site has implemented several programs and projects that directly or indirectly lead to lowered GHG emissions. Waste diverted from disposal at the MRF results in GHG reductions. Though those reductions will be indirect and offsite, the reductions are attributable to development of the MRF. Improved LFG capture could also achieve GHG emission reductions, which could result from improvements to the GCCS and/or cover management practices.

| Source | 2014 | 2017 | 2018 |
|--------------------------|--------|--------|---------|
| Landfill Methane | 58,617 | 79,600 | 64,000 |
| Haul Vehicles | 1,984 | 1,534 | 3,485 |
| Total GHG Emissions | 60,601 | 81,134 | 67,485 |
| Recycling GHG Reduction | 0 | 0 | -28,598 |
| Net GHG Emissions | 60,601 | 81,134 | 38,887 |
| Biogenic CO ₂ | 21,285 | 28,904 | 22,485 |

All emissions in MTCO₂e

- Other improvements:
- 16 additional dual extraction wells on Landfill Unit 1
 - increased production at the on-site power plant
 - 9.1 acre final closure project on Landfill Unit 1 (south side)

Food Waste Program Update

- Since inception (April 1, 2015) the Commercial Food Waste Program in Sonoma County has struggled
- Recent State Laws have aided in promoting participation
- Tonnage numbers by year:
 - 2015 3,406
 - 2016 4,877
 - 2017 4,332
 - 2018 5,879
- 36% increase in Food Waste pickup (2017 to 2018)
- Adding dedicated routes will continue to increase the diversion

New Developments

Central Landfill Improvements

Republic Services acquisition of Industrial Carting and Global Materials (July 2018)

Additional Cell Construction on former Compost Deck (\pm 5 acres) and REA (2020)

- should provide one additional year of airspace effective July 2019
- plan to proceed with permitting the next fill area (Rock Extraction Area – REA- west of Unit 1)
- REA will accommodate waste for 8+ years

Site Improvements

- new well construction (16 dual extraction for gas and leachate)
- leachate pond improvements (new pumps with VFDs)
- engine overhauls at on-site power plant to improve durability
- 9.1 acre final closure – south slope of Landfill unit 1

Transfer Station Improvements

Site Paving at Sonoma Transfer Station

New Misting System at Sonoma Transfer Station

New Structural BMPs at Guerneville Transfer Station

Partial Final Closure Area (Landfill Unit #1)



Partial Final Closure Area (Looking Northwest)



Sonoma Transfer Paving Improvements



Sonoma Transfer Paving Improvements



Sonoma Transfer Paving Project



Recycle Town Update

- In the last several years, environmental laws surrounding stormwater at industrial facilities has led to pollution litigation at multiple locations across the State.
- Republic Services has been working with Garbage Reincarnation to reduce their footprint and have operating best management practices which are defendable in this new regulatory landscape.
- Unfortunately, due to infrastructure constraints, Garbage Reincarnation cannot meet applicable standards such that change will be necessary, including closing the Healdsburg facility and ensuring a reduced footprint at the Central facility.
- While we understand that many people enjoy these services, these same exact services are provided elsewhere in the County, and as such waste diversion opportunities will continue to exist.
- Republic since partnering with the County has been committed to recycling and green initiatives, and will be looking to provide other opportunities in the future.
- **Healdsburg Site photos**



QUESTIONS ?

Thank you.

