



Composting and Emission Factors: A Hunt for the Truth

**Thoughtfully brought to you by:
Bob Barrows and Louis Bivins**

So, What is a Composting Facility?

Operations that use microorganisms to decompose organic feedstock (yard debris, manures, food scraps, etc.) to produce compost



Types of Aerobic Composting Facilities in Oregon

Large Static Pile



Turned Windrow



Types of Aerobic Composting Facilities in Oregon

Aerated Static Pile (ASP)



Vermicomposting



Emission Controls - Biofilter



A photograph of Donald Trump speaking at a podium. He is wearing a dark suit, a white shirt, and a red tie. His arms are outstretched to the sides. The background is a blue wall with some architectural elements.

I know what you are thinking...

**Why should I care about
composting facilities, DEQ air
quality program does not
regulate them!**



THE SAGA CONTINUES

DMX

JAY-Z

Composting Production

2018 combined throughput of all Oregon composters was 750,326 tons!

Or,

\$681,295,100,000 in stacked dollar bills.

How does that Relate to Emissions and EF's?

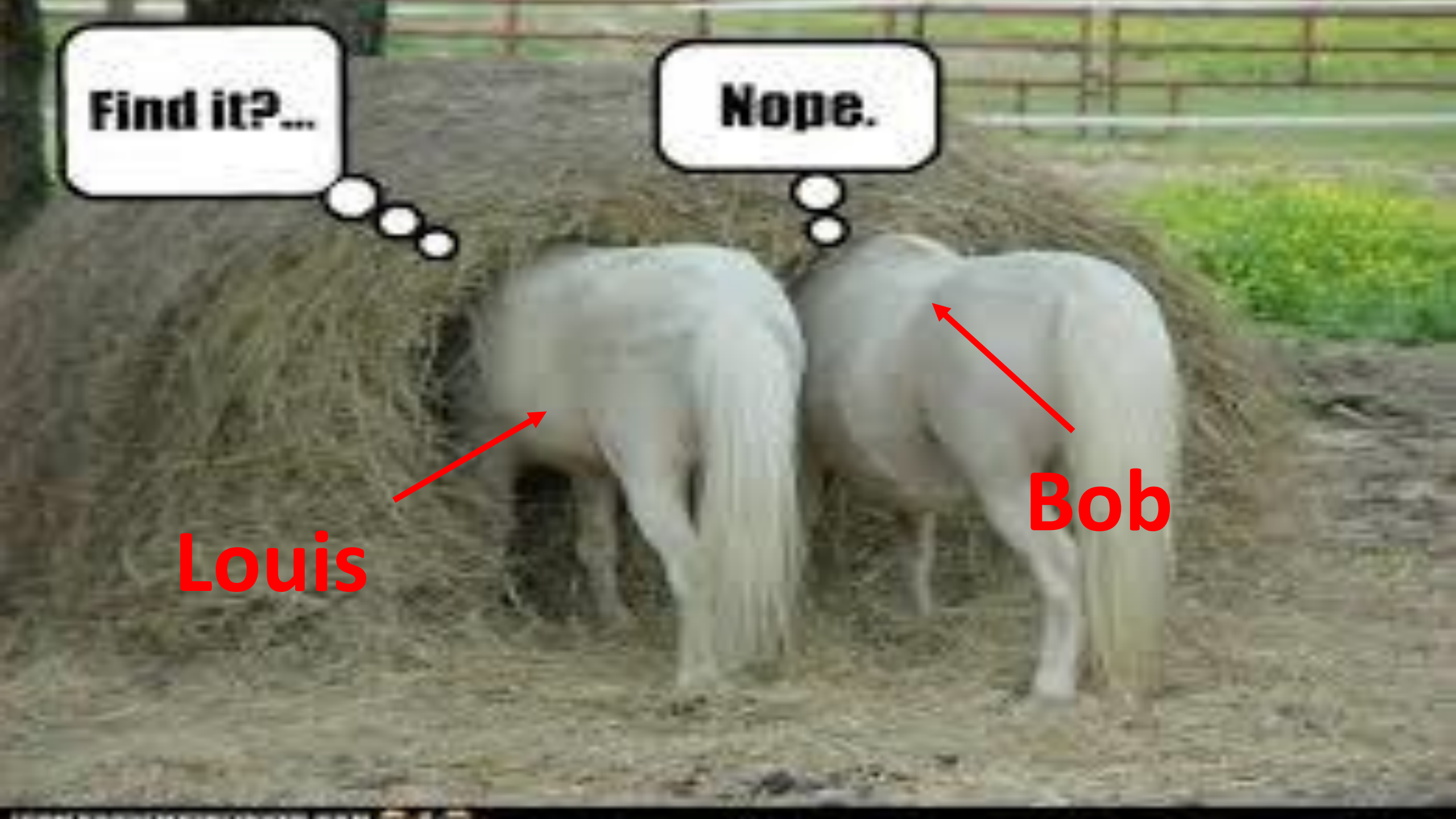


Find it?...

Nope.

Louis

Bob



Available Emission Factors and Data

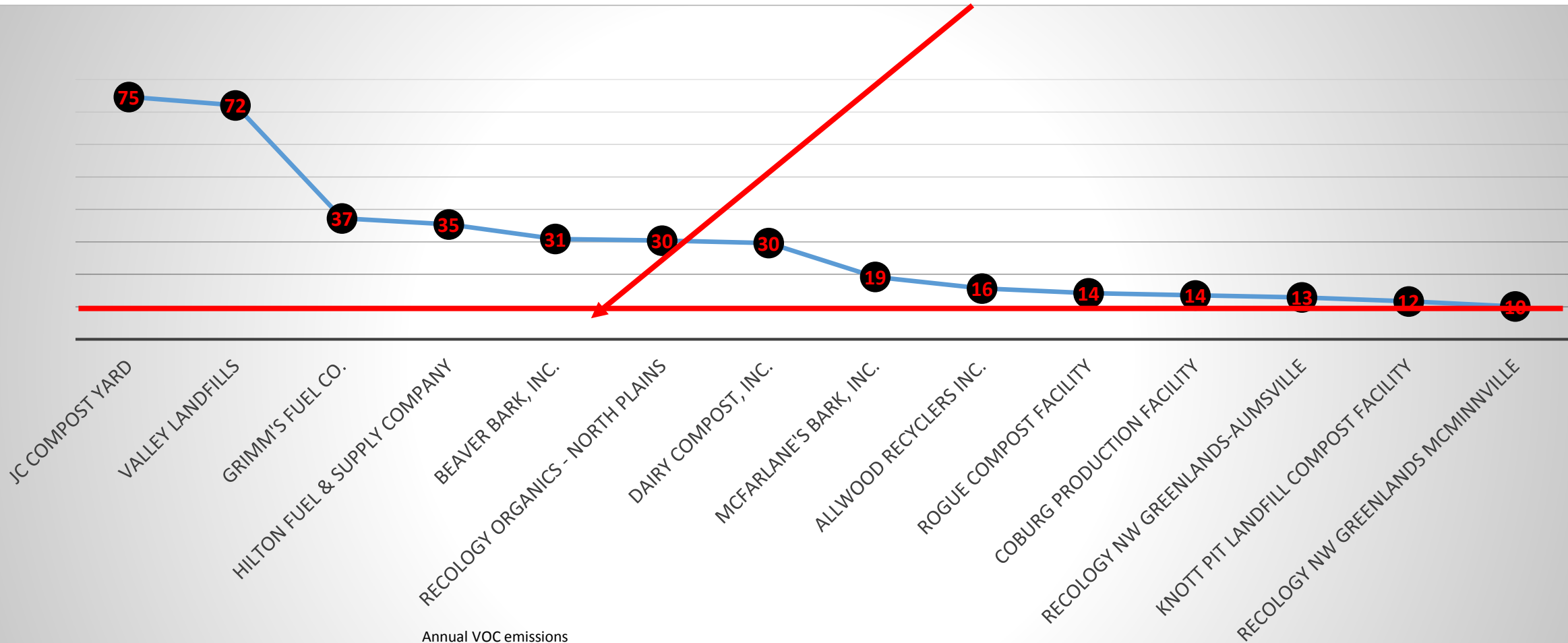
Factors ranged from 0.12 lb
VOC/wet-ton feedstock to 19.9 lbs
VOC/wet-ton feedstock.

Permitting Applicability

Applying the high and low EF's from the previous slide to Oregon composting facilities and their 2018 actual throughput...

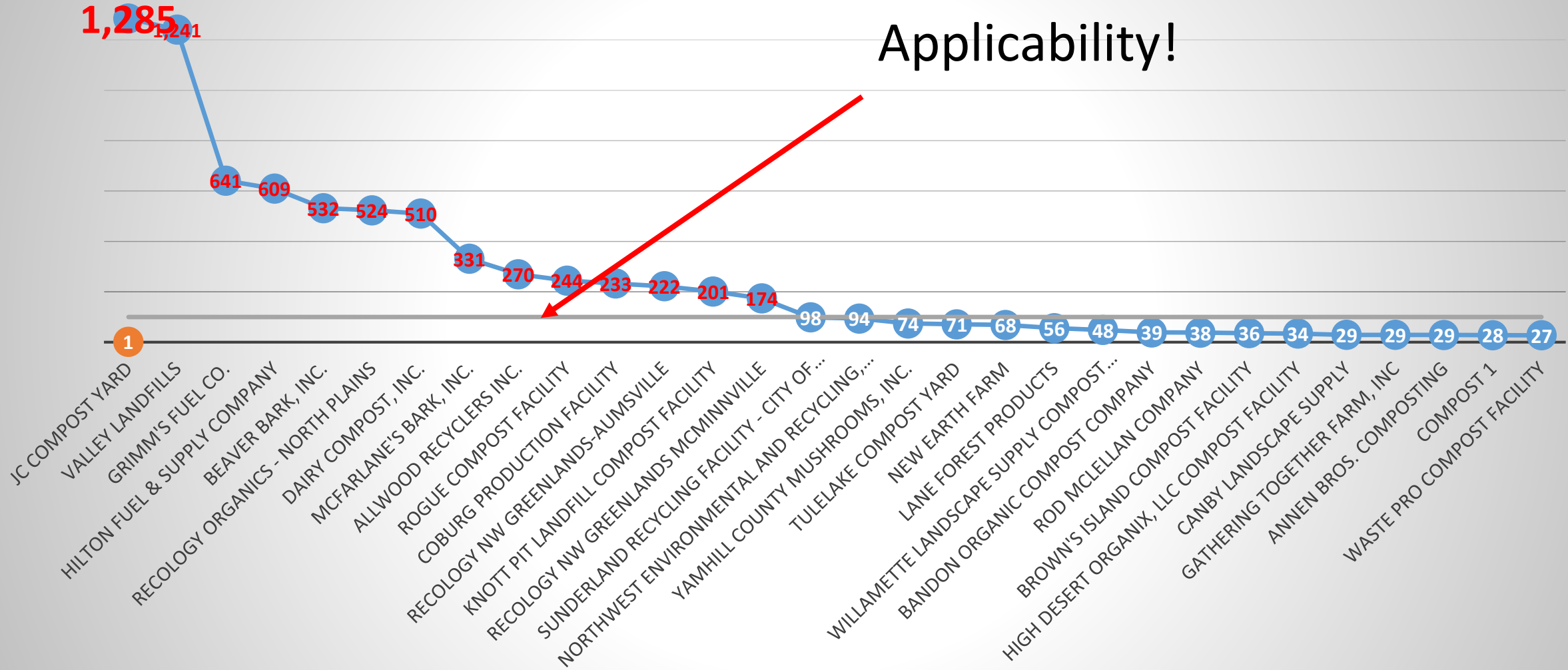
The Obligatory Graph 1 of 2

ACDP Applicability



Graph 2 of 2

TV
Applicability!



Additional Permitting Requirements

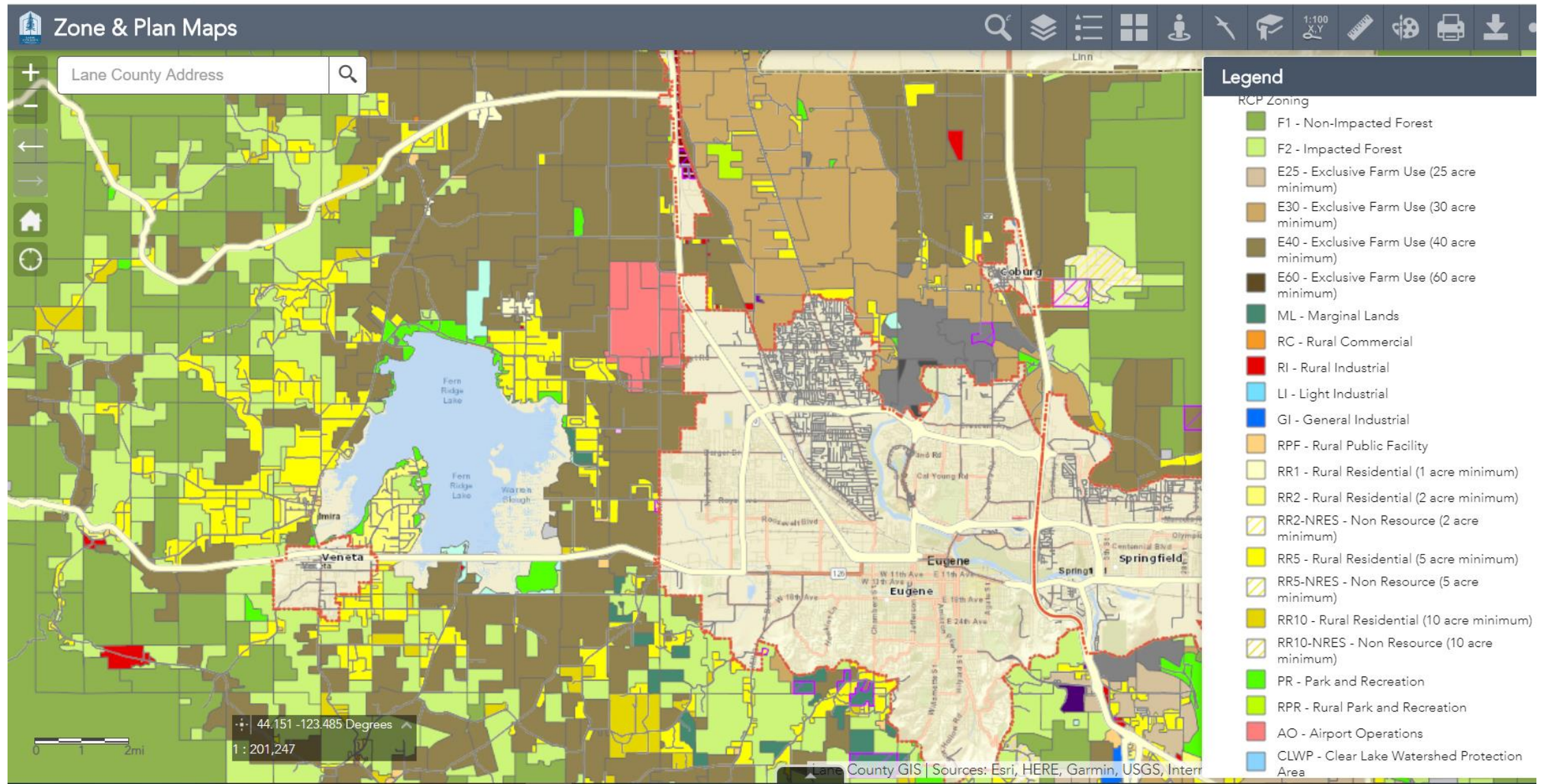
NSR

PSD

Modelling



Limited Composting Facility Capacity - Zoning



Limited Composting Facility Capacity - Cities



Eugene Zoning Map

Map Search About Zoning Using This Map

Controls

Use the Search Tab
or
Zoom and Click on a Tax Lot

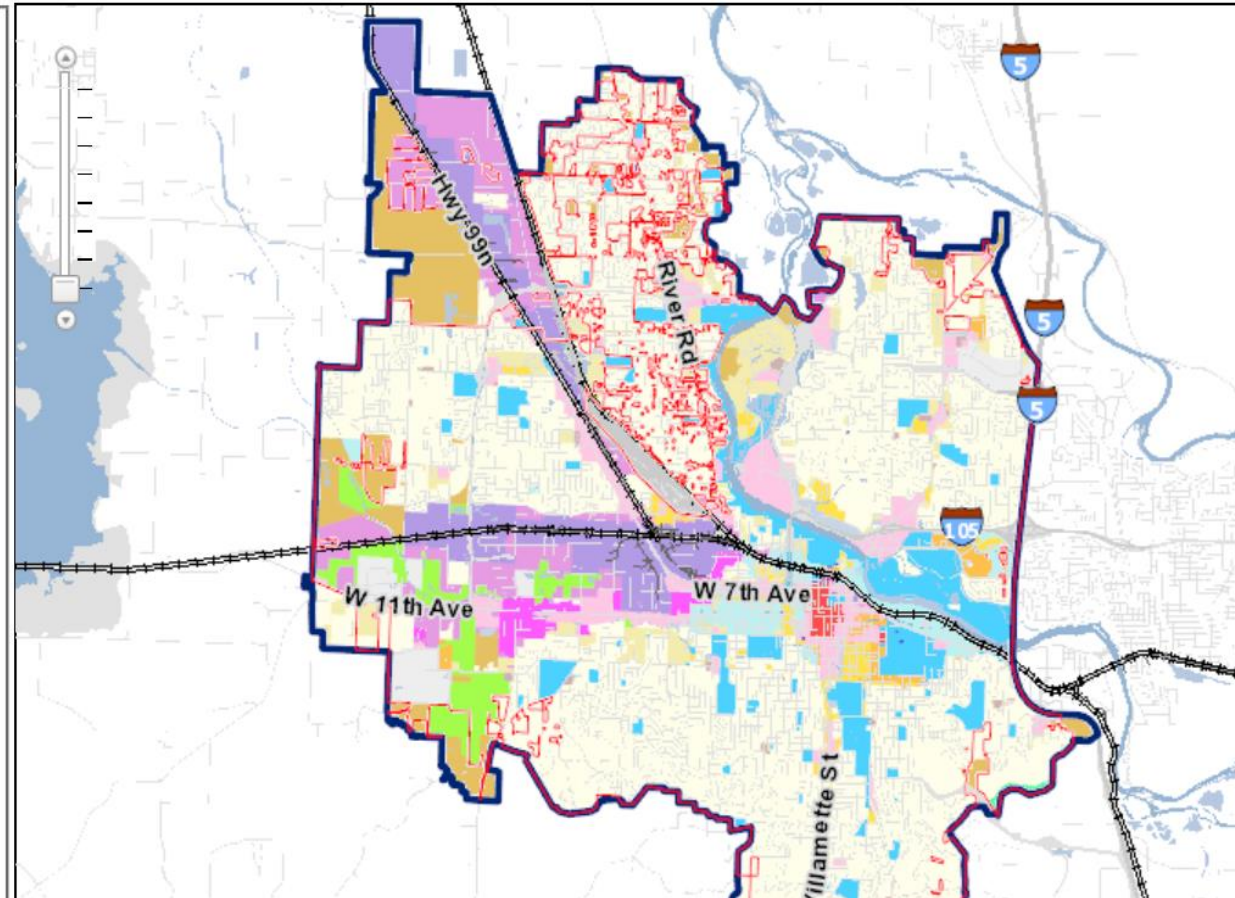
- Base Zones
- Overlay Zones
- Special Area Zones
- Special Area Zone Subareas
- 2013 Aerial Photographs
- Tax Lot Boundaries
- Eugene City Limits
- Eugene Urban Growth Boundary

Clear Selection

Reset Map

Base Zones

Land located within the Eugene Urban Growth Boundary is zoned to provide areas suitable for certain types of development. Each base zone provides a set of regulations governing the uses, building setbacks, building height and other development features.



Legend

Base Zones

- AG Agricultural
- C-1 Neighborhood Commercial
- C-2 Community Commercial
- C-3 Major Commercial
- GO General Office
- PL Public Land
- E-1 Campus Employment
- E-2 Mixed Use Employment
- I-2 Light-Medium Industrial
- I-3 Heavy Industrial
- R-1 Low-Density Residential
- R-1.5 Rowhouse
- R-2 Medium-Density Residential
- R-3 Limited High-Density Residential
- R-4 High-Density Residential
- NR Natural Resource
- PRO Park, Recreation & Open Space
- S Special Area
- S-H Historic

What's Next?

Develop EF's from the available data?

Use the EF's in the available data?

Conduct stack testing?

Require AQ permits for annual throughput exceeding a specific level?

Establish facility BMPs and Quality Control measures in rule that if employed, would replace Title V AQ permit?





Thank You!