

GIS Showcase

Pinellas Leads the Way

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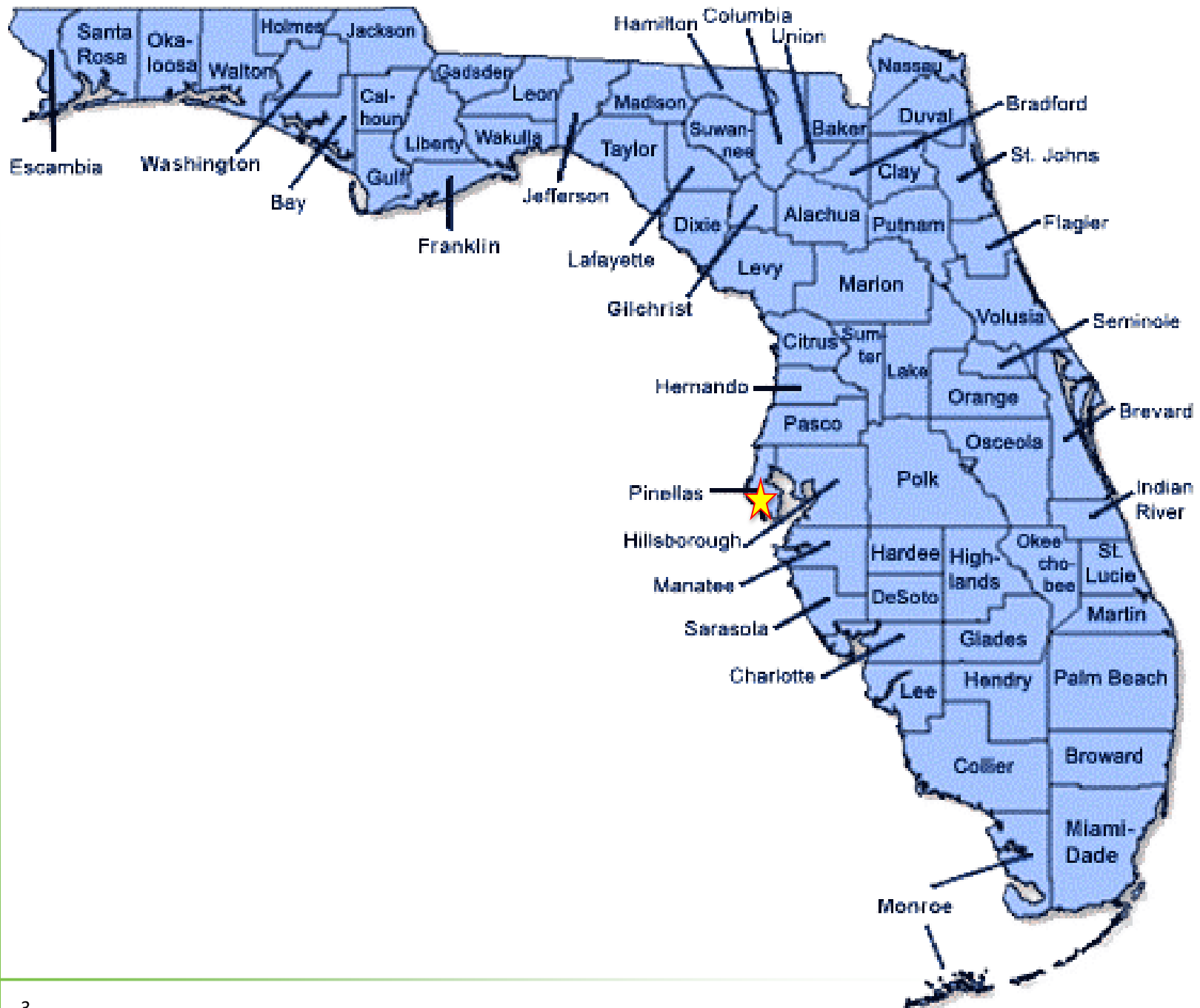
January 27, 2020

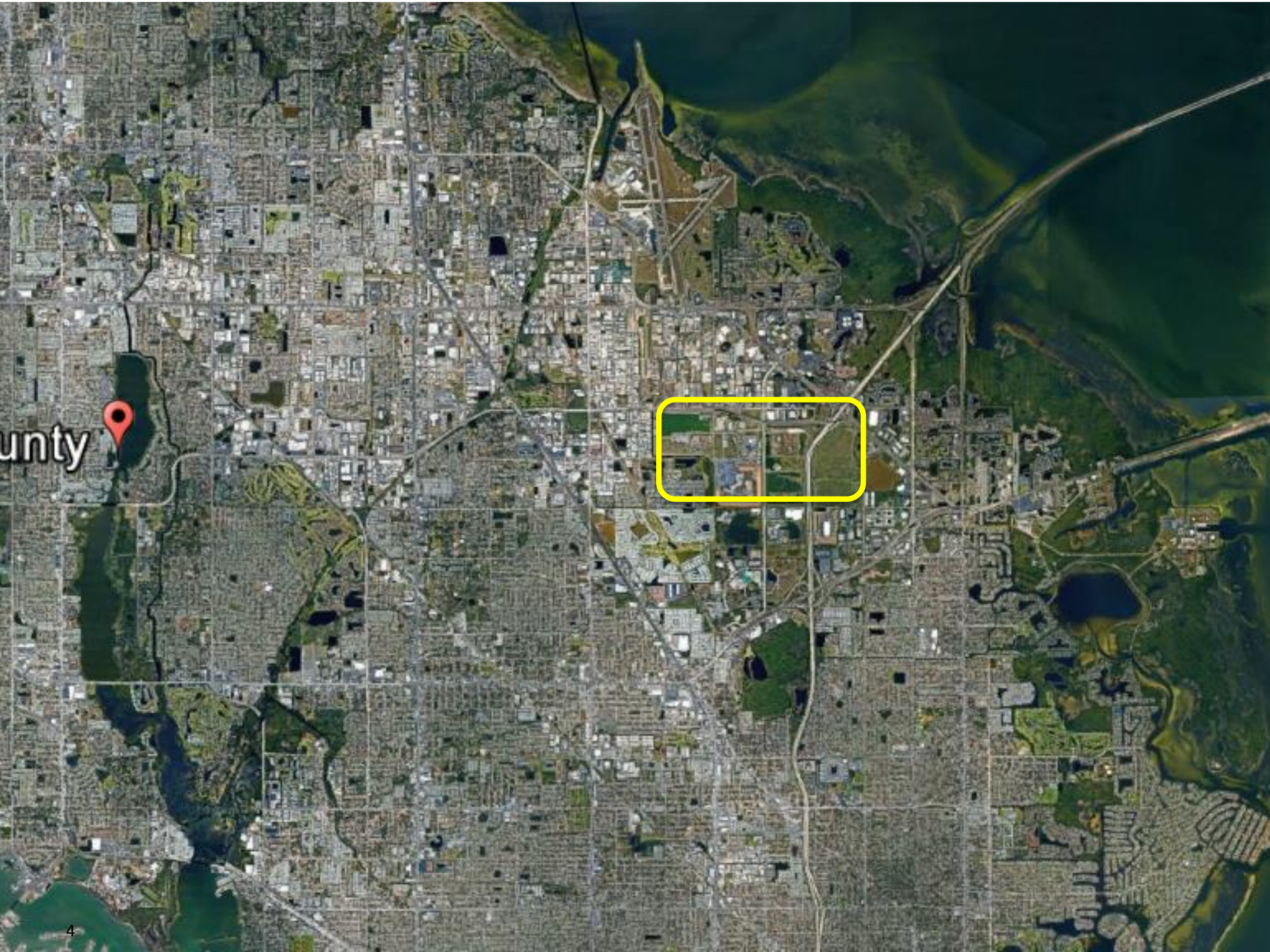


**CDM
Smith**

Acknowledgements

- Pinellas County
 - Chuck Mangio
 - Rick Clark
- CDM Smith Project Team
 - Nathan Schmaus
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 - Jason Ressler

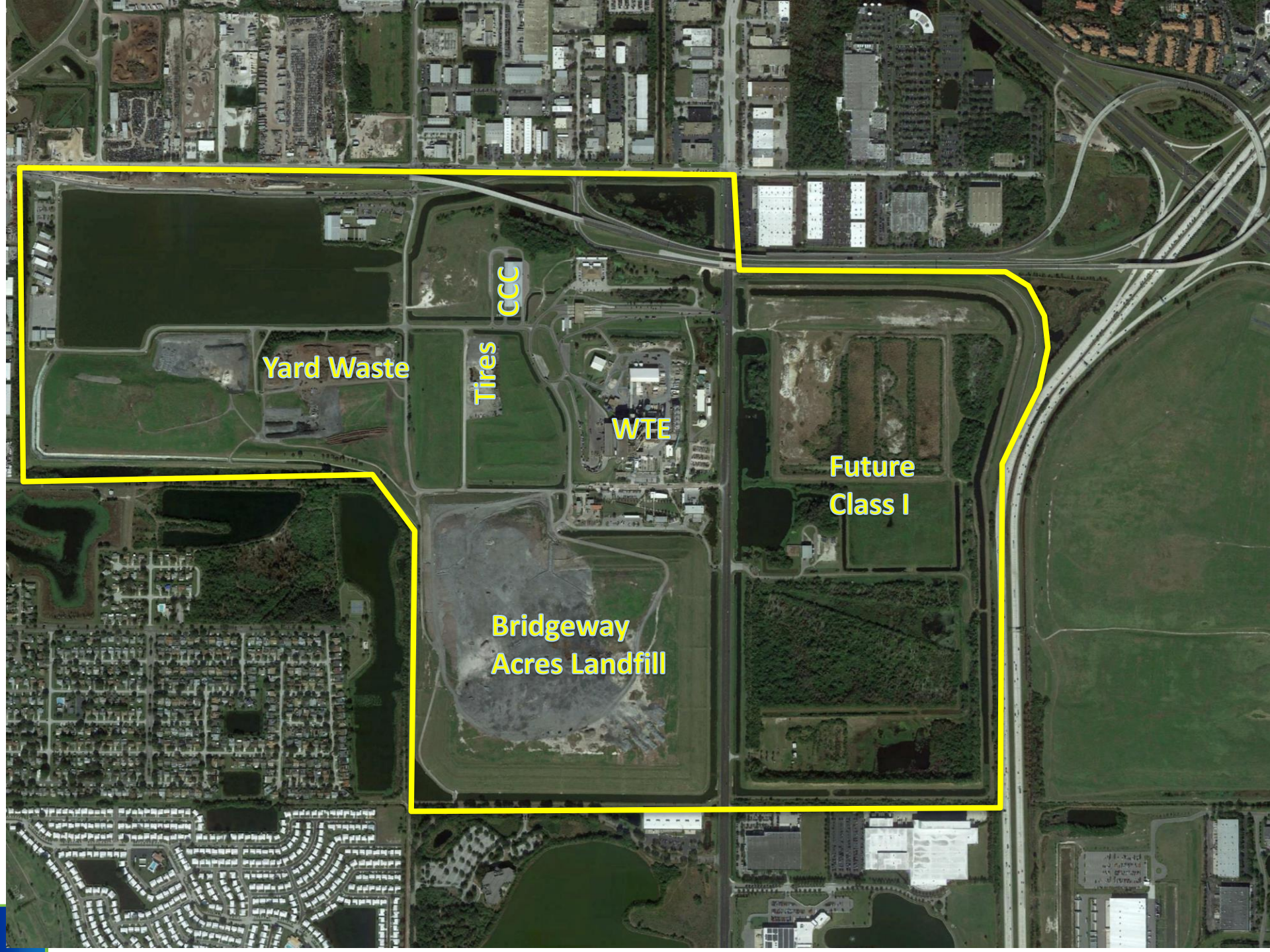




County

Pinellas County Solid Waste System

- 24 Incorporated Municipalities
- 1 Million tons/year of MSW Managed
- 1 Million residents + floating population
- County Manages multi-use facility
 - 1 closed landfill – Toytown Landfill
 - 1 active Class I landfill – Bridgeway Acres Landfill – operated by ADS
 - 3,000 tpd /60MW WTE Facility – Covanta operated
 - 1 waste tire facility
 - 1 Citizen drop off facility
 - 1 Composting Facility



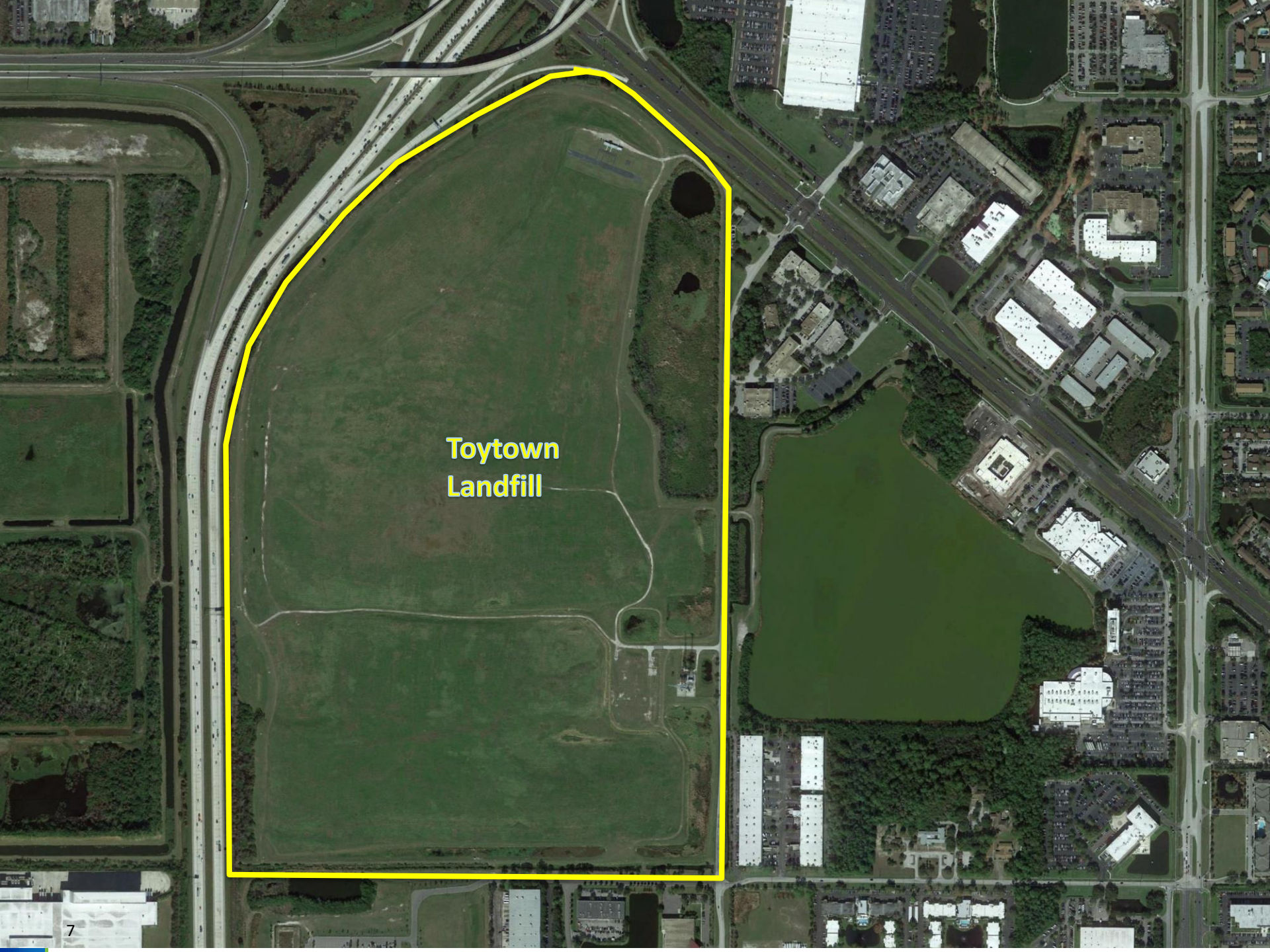
Yard Waste

CCC
Tires

WTE

**Future
Class I**

**Bridgeway
Acres Landfill**



**Toytown
Landfill**

The Task and Issues

- Objectives
 - Provide Insight and Support Landfill Operations
 - Assist County in Work Observations
- Track Contractor Performance
- Track adherence to F.A.C.
- Reporting was tedious to track
- Items of note
 - Conditions of infrastructure: Culverts, downdrains, roads
 - vegetative distress
 - Erosions
 - Stormwater
 - Cover soils



15.05.2018 09:42



February 28, 2019







D ~~7%~~ 7%
@ 75' MIN.
ING RADIUS
ERS. (TYP.)

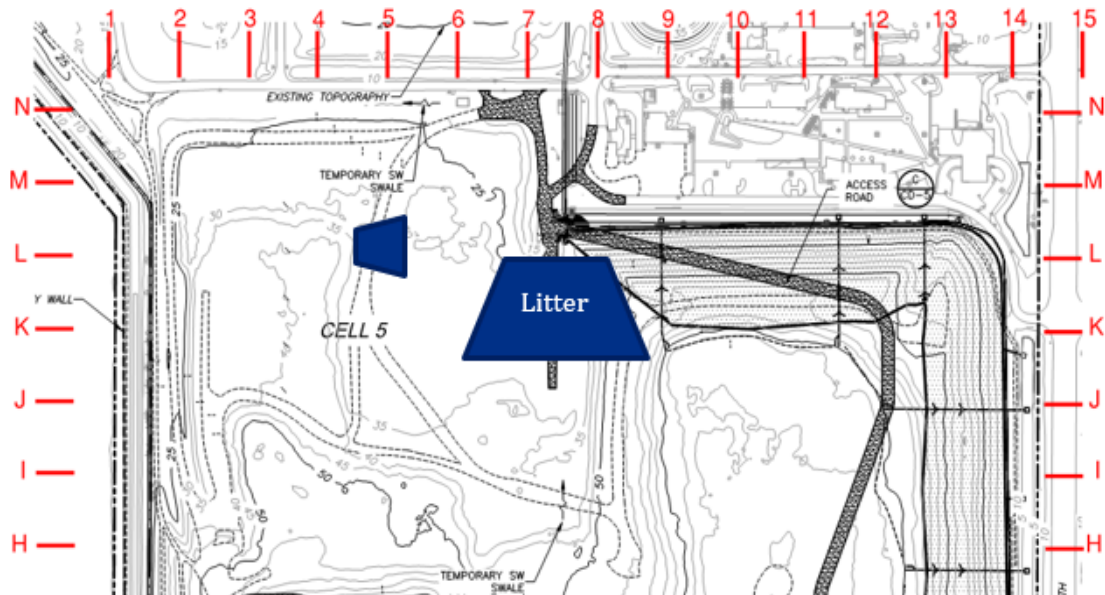
Report No.:

Date:

Project: Bridgeway Acres Class I Landfill – Operations Assistance

Page 5

FIGURE 1 – MAP OF SITE AND OBSERVED LOCATIONS OF DEFICIENCIES AND ACTIVIES



Potential Solution needs to:

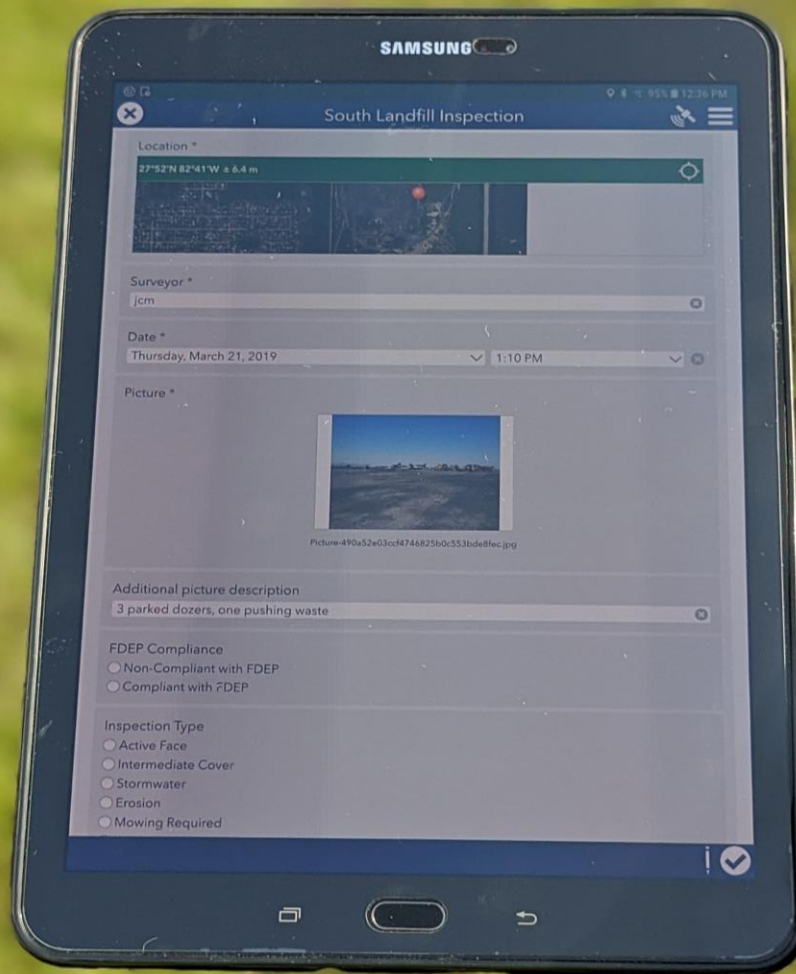
- **Decrease data collection time**
- **Reduce overall cost**
- Consistent data collection and reporting
- Real time update and feedback
- Balance accuracy and ease of use
- **Ease Tracking Contractual and Environmental Compliance**
- Integration of Photo
- Portability
- Record Keeping

Potential Solutions and Limitations

Systems	Cost	Effort	Flexibility	Versatility	Overall
CMMS	Moderate-High	High	High	High	Moderate
Excel	Low	High	Low	Moderate	Low
Access	Low	High	Low	Moderate	Moderate
GIS (ESRI)	Moderate	Moderate	High	High	Moderate-High

Why use GIS, specifically ESRI?

- **ESRI is common**
- Assets are Spatially Defined
- **Proven Application with Collector and Survey 123**
 - Capture of SEM data
 - Used in water and wastewater
 - Ease of User Interface
 - Offering beginning in 2015
 - Allows collaboration
- Data export – integration with CMMS (if needed)
- **Hardware cost decrease**
 - Tablet, Smart phones, computers





My Surveys



**Bridgeway Acres
Equipment**

Bridgeway Acres
Equipment

**Bridgeway Acres
Other**

Bridgeway Acres
Other Inspection

**Bridgeway Acres
Sod Farm**

Bridgeway Acres
Sod Farm

**Bridgeway Acres
South Landfill**

Bridgeway Acres
South Landfil...

**Bridgeway Acres
Stormwater
and Leachate**

Bridgeway Acres
Stormwater an...

**Bridgeway Acres
Toytown**

Bridgeway Acres
Toytown

**Bridgeway Acres
NPWD Area**

Bridgeway Acres
NPWD Area



Survey Information

Location *

27°52'N 82°41'W ± 6.4 m



Surveyor *

jcm



Date *

Thursday, March 21, 2019



1:10 PM



Picture *



Picture-490a52e03ccf4746825b0c553bde8fec.jpg

Additional picture description

3 parked dozers, one pushing waste



FDEP Compliance

- Non-Compliant with FDEP
- Compliant with FDEP

Inspection Type

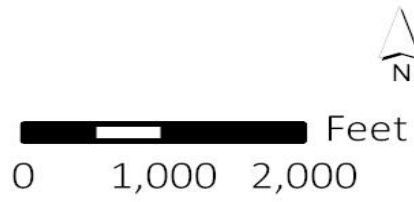
- Active Face
- Intermediate Cover
- Stormwater
- Erosion

Process

- F.A.C. Compliance and Service Agreement
- Transition from traditional data collection to real time data capture
- Select between Collector and Survey 123
- Iterative process = 6 weeks
- Report is auto populated
- Field staff provide input
- Data quality control is done on a weekly basis



- South Landfill
- Stormwater and Leachate Collection System
- Equipment Inspection
- NPWD Area
- Other Inspection
- Toytown
- Sod Farm



Generic Slide

- Incorporate slide that illustrates the data collected at Bridgeway Acres.

Qualitative Results

- Issues are conveyed in real time
 - Time bound issues are addressed quickly
 - Minimize disruption
- Kudos are conveyed in real time
- Time savings

The Future

- The future is data driven
- Garbage in – garbage out
- Collaboration – “Collaboration moves at the speed of trust”
- Data is meaningless without interpretation
- Standardization around ESRI is likely
- The front line people are more important than ever

Thank You!

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