

Interim Report on Findings at the Stock Island Landfill

City Commission Review Request:

1. If the landfill is currently a danger to the local community or environment.
2. What is the “Highest and Best Use” for the landfill?
 - If “landfill reclamation” is a viable option.
 - If landfill could be used as a city park or another option like a solar park.
 - If we should leave as is.

Monica Haskell, Chair
Sustainability Advisory Board

Background



North Stock Island, 1963

1920's: Informal dumping

1950's Formal Dump

1960's: Landfill
(no sorting)

1985: FDEP Landfill Permit

1987: Waste To Energy
(ash and construction)

1989: Monitoring Starts

1990: Phase I Closure
(gas vents installed)

1992: Phase II Closure
(>99% of leachate eliminated)

1993: Closure Plan Approved
(22 monitoring items)

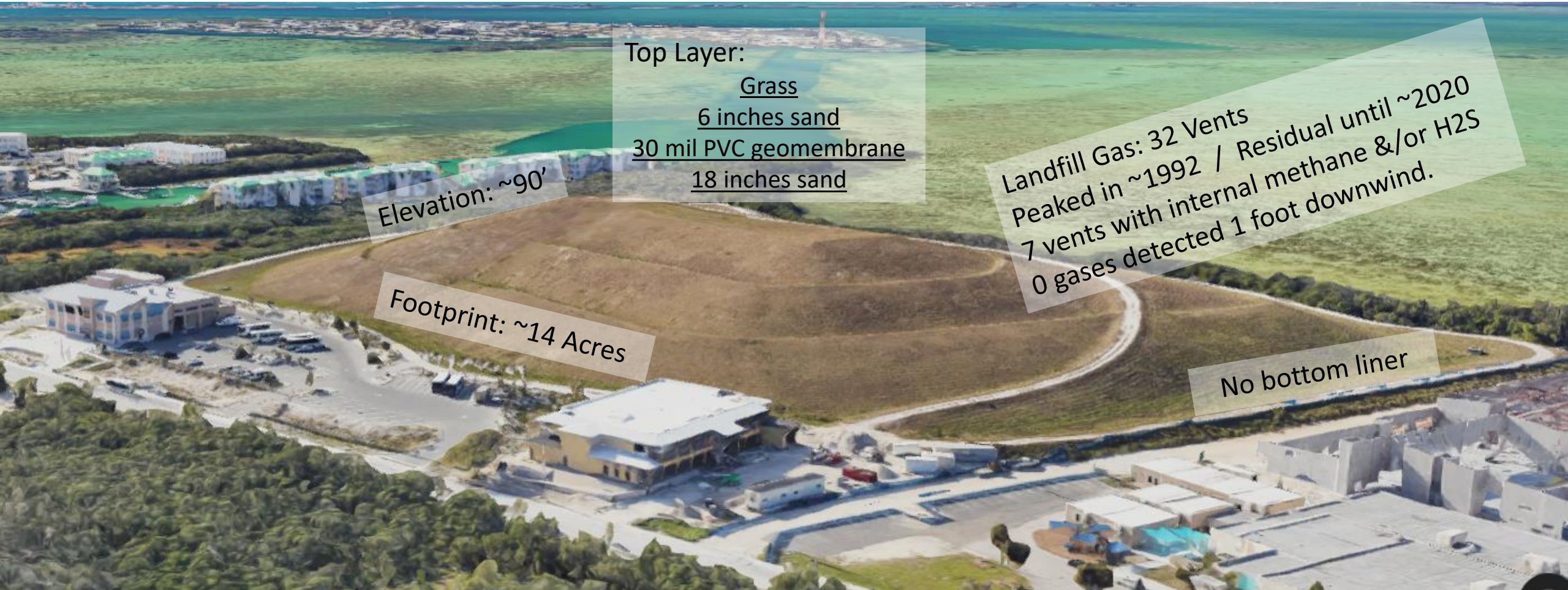
2011: Monitoring Changes
(45 more items, less often)

2014: Monitoring Change
(back to 6 items)

2016: FDEP Certification of Completion
(still voluntarily monitor)

Current Conditions

30 Years of Water Quality Sampling



Top Layer:
Grass
6 inches sand
30 mil PVC geomembrane
18 inches sand

Elevation: ~90'

Footprint: ~14 Acres

Landfill Gas: 32 Vents
Peaked in ~1992 / Residual until ~2020
7 vents with internal methane &/or H₂S
0 gases detected 1 foot downwind.

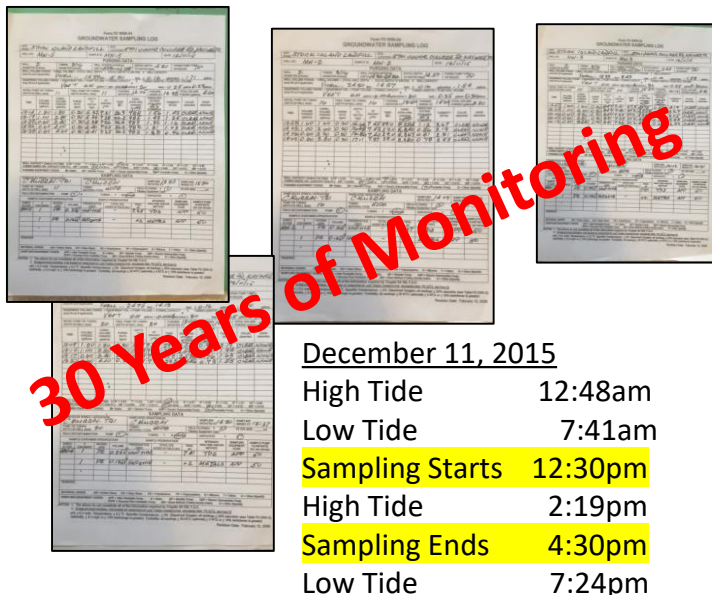
No bottom liner

1) Is the landfill a danger?

- A) No evidence of leaching toxins
- B) Sampling data is not skewed
- C) No Health Complaints
- D) Gerald Adams School is Safe
- D) Hydrogen Sulfide is NOT at Dangerous Levels

Concentration (ppm)	Short Term Symptoms/Effects
0.00011-0.00033	Typical background concentrations (11-33 ppb)
0.01-1.5	Odor threshold (when rotten egg smell is first noticeable to some.) Odor becomes more offensive at 3-5 ppm. Above 30 ppm, odor described as sweet or sickeningly sweet.
2-5	Prolonged exposure may cause nausea, tearing of eyes, headaches or loss of sleep. Airway problems (bronchial constriction) in some asthma patients.
20	Possible fatigue, loss of appetite, headache, irritability, poor memory, dizziness.
50-100	Slight conjunctivitis (eye irritation and redness). Respiratory tract irritation after 1 hour. May cause digestive upset or loss of appetite.

30 Years of Monitoring



December 11, 2015
High Tide 12:48am
Low Tide 7:41am
Sampling Starts 12:30pm
High Tide 2:19pm
Sampling Ends 4:30pm
Low Tide 7:24pm

FDEP/FFWCC/FDOH Records:

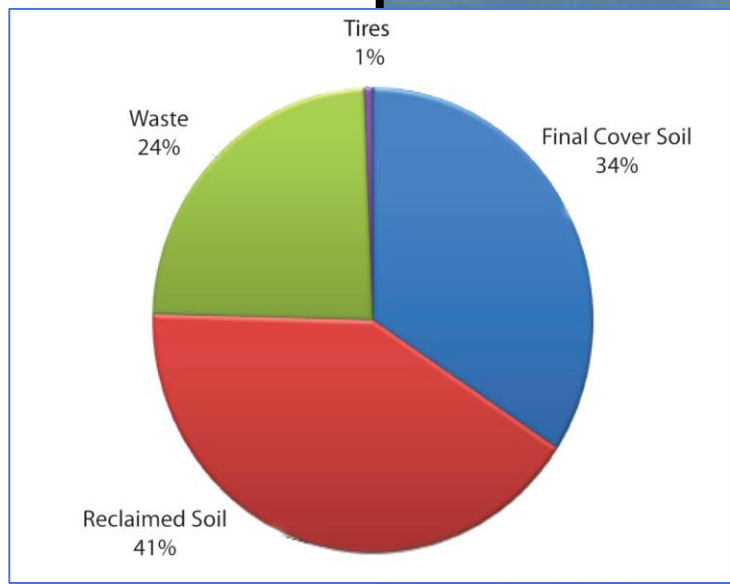
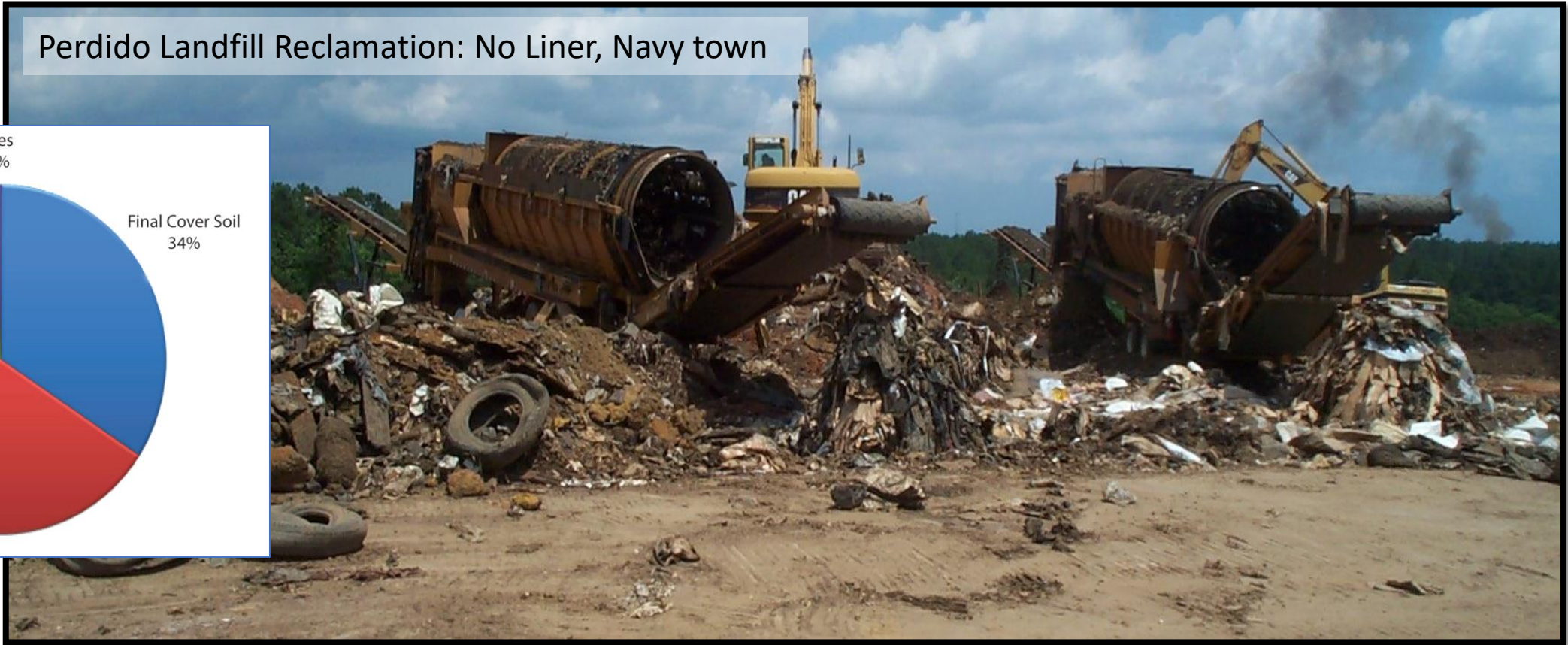
- Health Complaints: 0
- Fishkills: 0
- Distressed Vegetation: 0
- Smell Complaints: 0



2) Is landfill reclamation a viable option?

Pro's: High redevelopment land value
Available for other community needs
No more landfill maintenance

Con's: Would re-open liner, creating leachate.
80-100 trucks per day, for 3-4 years.
Total Cost: \$69M-189M



Next Report:

3) Can the Landfill be a Park?

4) Should we leave it as is?



Questions?

Monica Haskell, Chair
Sustainability Advisory Board