

*New Jersey Dept. of Transportation  
Office of Maritime Resources*

*The Beneficial Use  
Of Dredged Material*

*From CDFs:*

*Yes, We Can!*



# *Raw Dredged Material*

- Sand, silt or clay particles
- Landside runoff
- Storm events
- Periodic removal required
- Not soil, must be amended before used as soil
- May contain contaminants

# *Processed Dredged Material*



**Over 13 million cubic yards placed, and still going strong!**

# *Highway Construction using PDM*



- 80,000 cyd dredged material
- 2 monitored berms
- Settlement, strength and workability
- No significant environmental impacts or human health exposure concerns
- \$8/cyd cost escalation over conventional materials
- Best if placed immediately; requires remixing if stored
- Heavily impacted by freeze/thaw

# *Scott's Top 10 Common Myths and Misconceptions about Dredged Material*

1. All dredged material is contaminated.
2. Dredged material is a solid waste.
3. Dredged material does not meet NJDOT specifications.
4. Dredged material can only be used as non-structural fill.
5. NJDOT will not give me contracts if I use dredged material.
6. NJDEP will slow down my permit if I use dredged material.
7. I must have water access to receive dredged material.
8. I will have to amend the material before I can use it.
9. The stuff they take out of the river is “useless spoils”.
10. All dredged material is black mayonnaise.

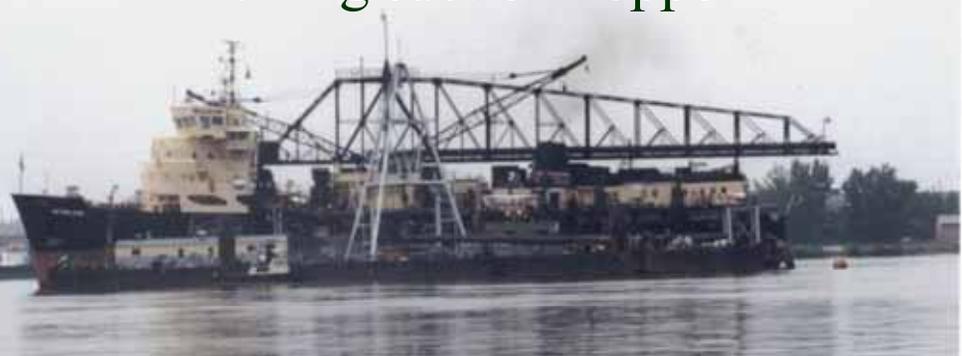


# Dredging Equipment

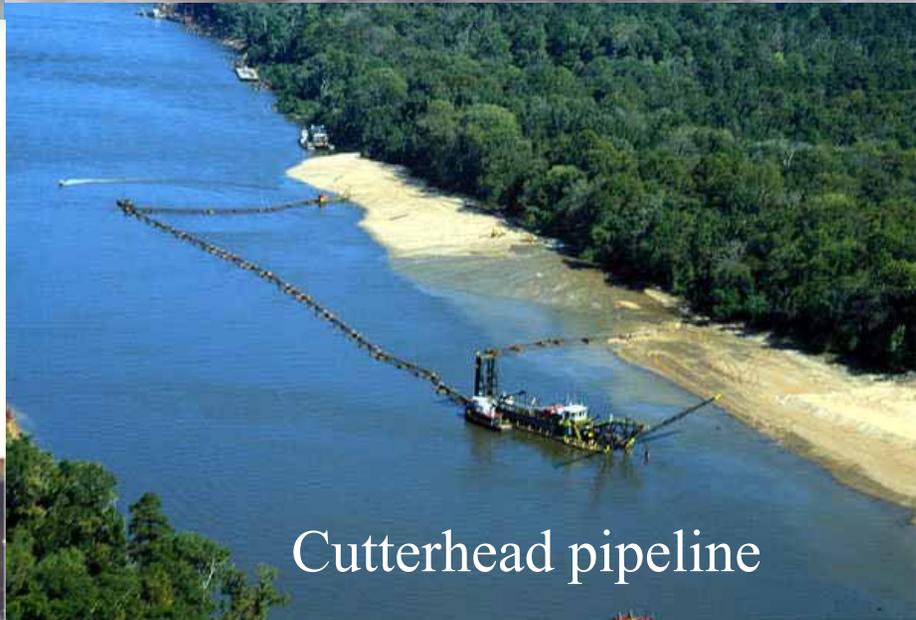
Backhoe (for rock)



Trailing suction hopper



Clamshell (for mud)

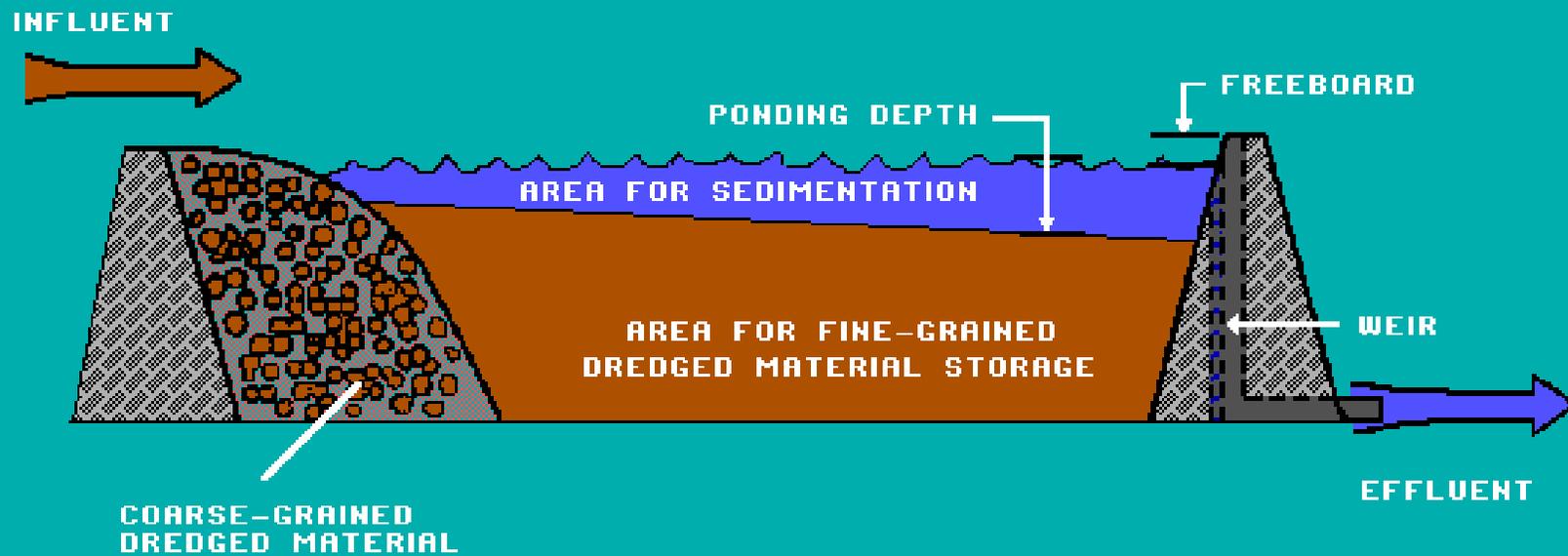


Cutterhead pipeline

# *Confined Upland Disposal*



# CONCEPT OF A DREDGED MATERIAL CONFINED DISPOSAL FACILITY



# *Old Confined Disposal Facilities*



**Resource for  
construction  
materials**

**AND**

**Resource for  
future  
dredged  
material  
management**

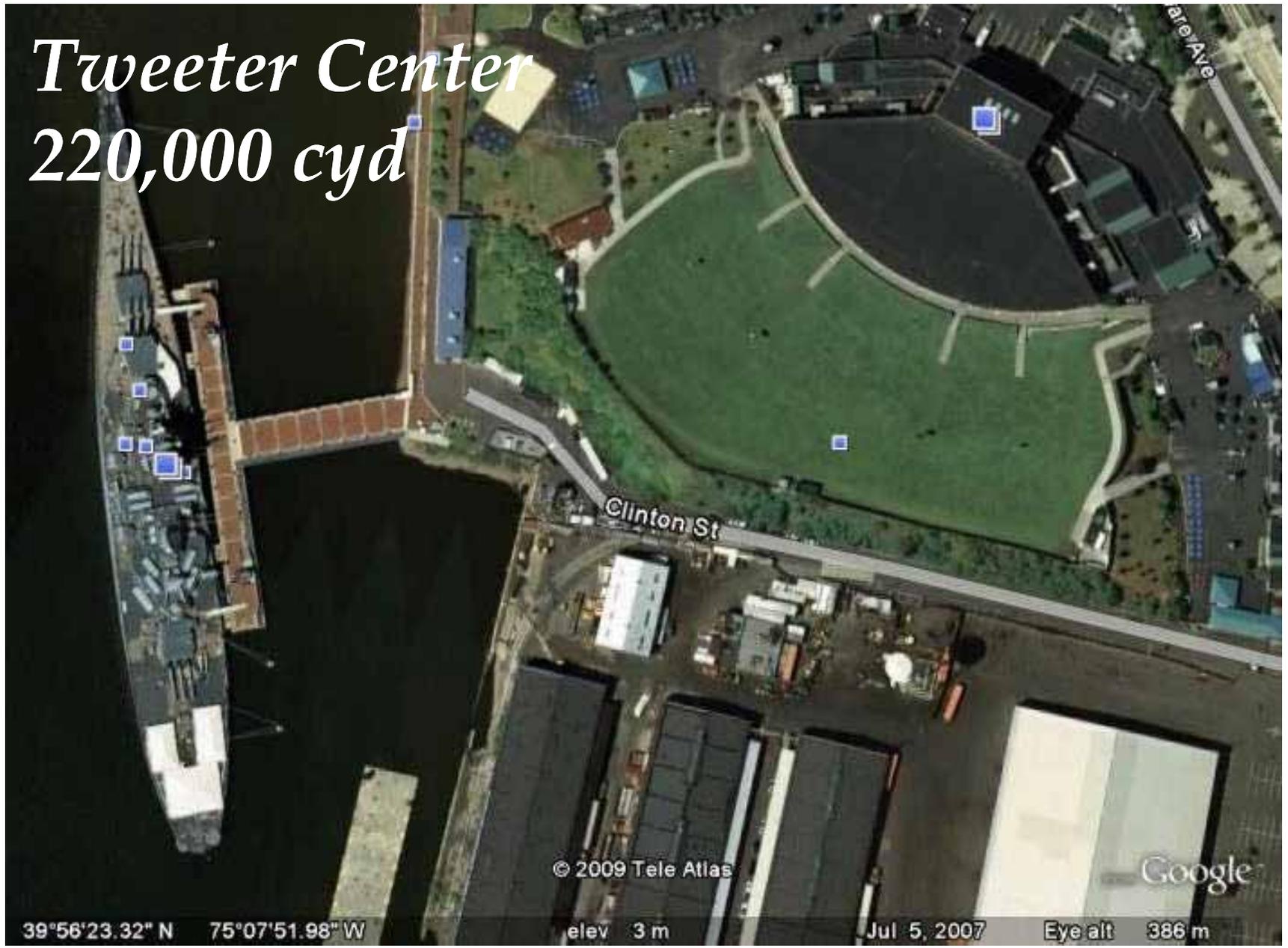
# *Free Fill!!*





*Palmyra Cove CDF*

*Tweeter Center*  
*220,000 cyd*



39°56'23.32" N 75°07'51.98" W

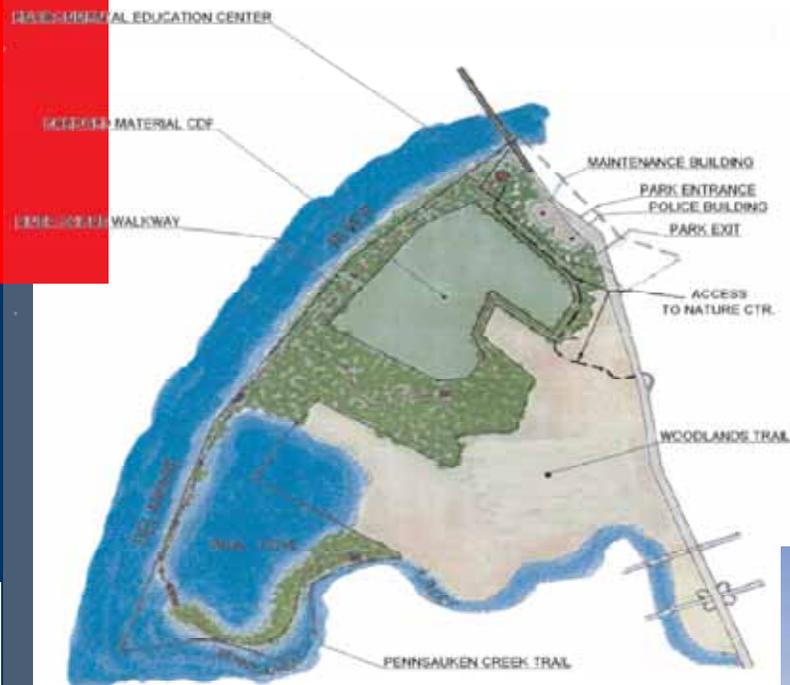
© 2009 Tele Atlas

elev 3 m

Jul 5, 2007

Eye alt 386 m

# Palmyra Cove Beneficial Use Technology Campus



MANAGEMENT AREA  
-257 ACRES  
-8,000 FEET ON THE DELAWARE RIVER  
-3,000 FEET ON THE PENNSAUKEN CREEK



# *Applications for Palmyra Cove Material*

- Most material met NJDOT specifications for grades I-11, I-12, I-13
- Roadway sub-base
- Embankment fill
- Retaining wall backfill
- Pipe trench bedding
- General Earth Fill



*Burlington County  
Resource Recovery Complex  
15,000 cyd*



*Route 29  
Blended Topsoil  
2900 cyd*



*Harrison Avenue Landfill  
180,000 cyd (pending)*





*National Park CDF*

© 2009 Terra Atlas

Google

# *Riverwinds Golf Course*





*Cape May Canal CDF "C"*

Image © 2009 DigitalGlobe  
© 2009 Terra Atlas

Google

# *Harbison-Walker (Magnesite)*

1



# Fort Mifflin CDF

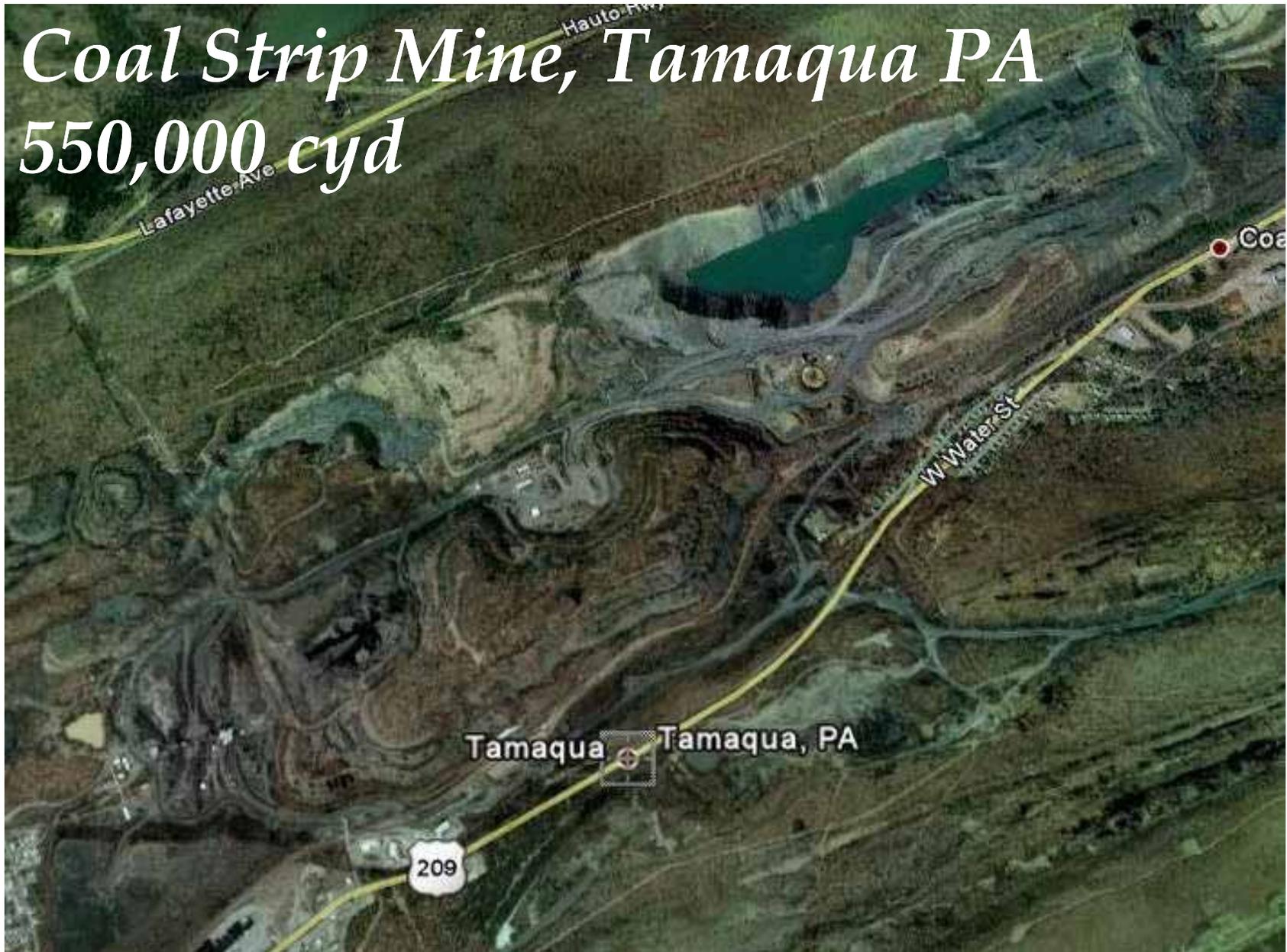


# Philadelphia Airport

1,200,000 cyd



*Coal Strip Mine, Tamaqua PA*  
*550,000 cyd*





*Belford Landfill  
200,000 cyd*



“N61” CDF

© 2009 Tele Atlas  
Image © 2009 TerraMetrics

Google

# *Atlantic Highlands CDF*





*Monmouth Cove Marina CDF*

Image © 2009 TerraMetrics  
Image © 2009 DigitalGlobe  
© 2009 Tele Atlas

Google



*NJ Turnpike Exit 1*  
*180,000 cyd*

Image © 2009 DigitalGlobe  
© 2009 Tele Atlas

Google

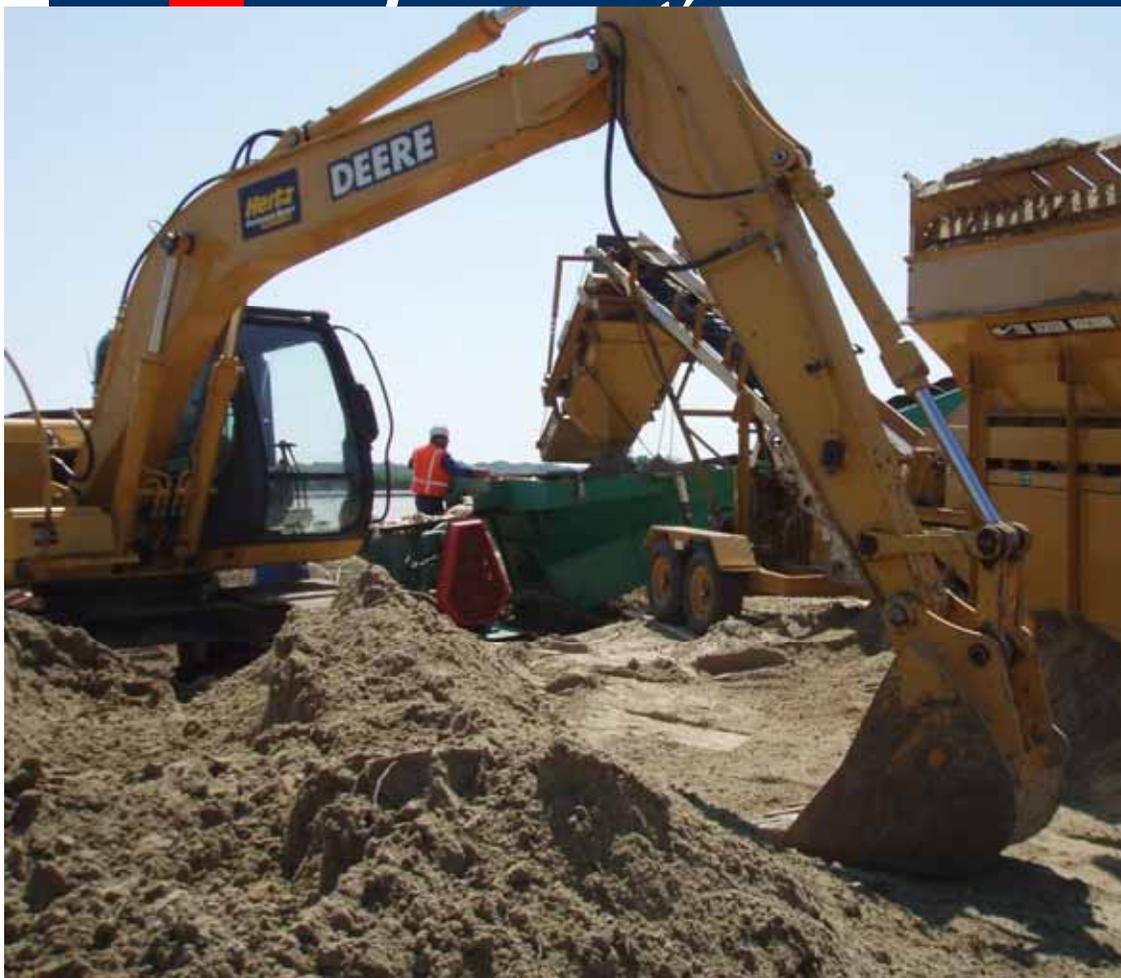
*Neptune Landfill*  
*100,000 cyd*



# *Separation Facilities*



# *Separation Pilot Cape May*



# *Bayshore Recycling*



# *Burlington Island CDF*

Burlington Island, Burlington, NJ 08016

© 2009 Tele Atlas

E Pearl St

130  
130N

Google



# Sampling Points

Cell A

76.4% Sand

23.6% Silt/Clay

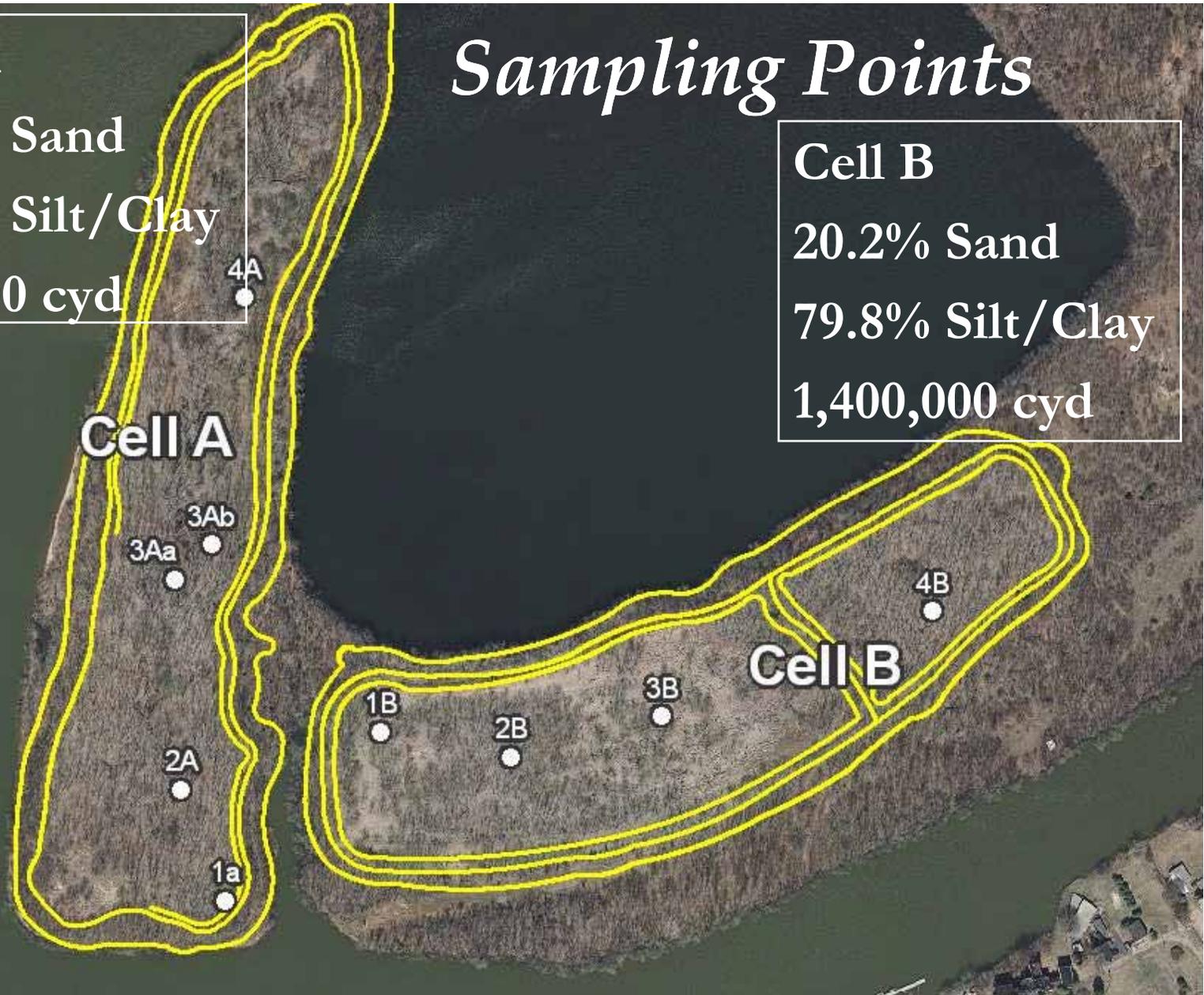
900,000 cyd

Cell B

20.2% Sand

79.8% Silt/Clay

1,400,000 cyd



# *The Bottom Line*

- Dredged material can and has been used across the region in projects ranging from highway construction to mine reclamation.
- Dredged material is readily available.
- The State of NJ encourages the use of dredged material whenever and wherever possible.
- NJDOT-OMR can assist you in using dm in your project.

