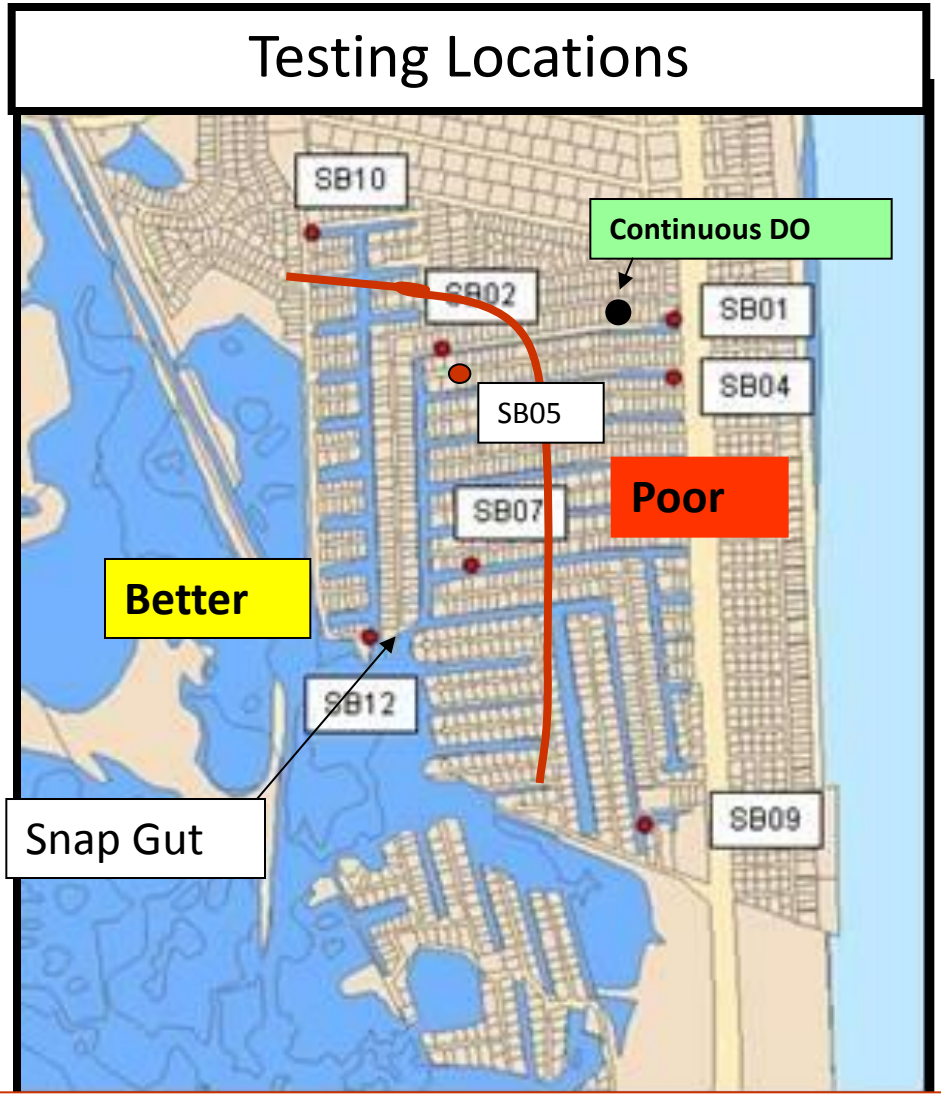
Canal Water Quality Committee Meeting, Thursday, June 9, 2011 (10:00 a.m.)
AGENDA

- Water quality monitoring; at 10 sites on our canals, continuous monitoring, monitoring at 4 sites in Little Assawoman Bay
- Retrofits resulting from Pollution & Stormwater Control Strategy For The Anchorage Canal Drainage Area Study
- Update on the cleaning out of the Anchorage Forebay
- Oyster Gardening
- Scum, trash and algae accumulating on the surface at the ends of our canals, trees and shrubs hanging over the canals
- Potential Solutions; Keep Trash out to start with, Algae & Trash Harvesters, Aerators
- Educational Opportunities:
  1. Storm Drain Stenciling/Marking
  2. Rain Gardens
  3. Lawn Care
  4. Rooftop Downspout Disconnection Education
  5. Outside Shower Disconnection Education
  6. Impervious Surface Reduction Education
  7. Delaware Coast – A – Syst
  8. Rain Barrels

Dave Wilson With Support From Ed Whereat From U of D is Leading a Group to Monitor Water Quality in the South Bethany Canals



Quantities to be monitored:

- For "Fishable" Waters
  - Dissolved Oxygen
  - Water Temperature
  - Salinity
  - Nitrogen and Phosphorus
  - Secchi Depth
- For "Swimmable" Waters
  - Bacteria
- Storm Water Influence
  - Collect accurate local rain data

The farther removed from Snap Gut, the poorer the quality of water.

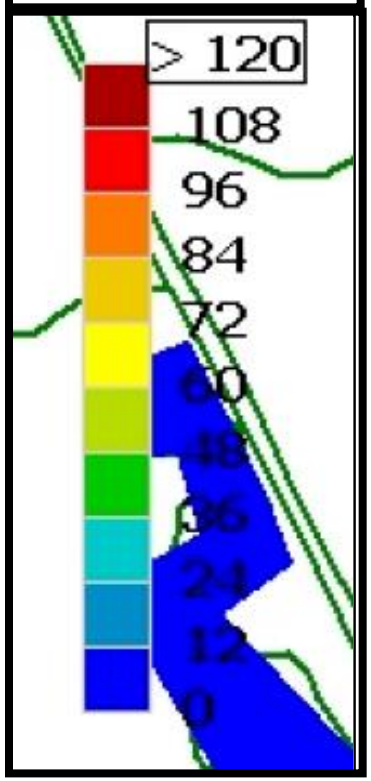
Forebay Cleanout

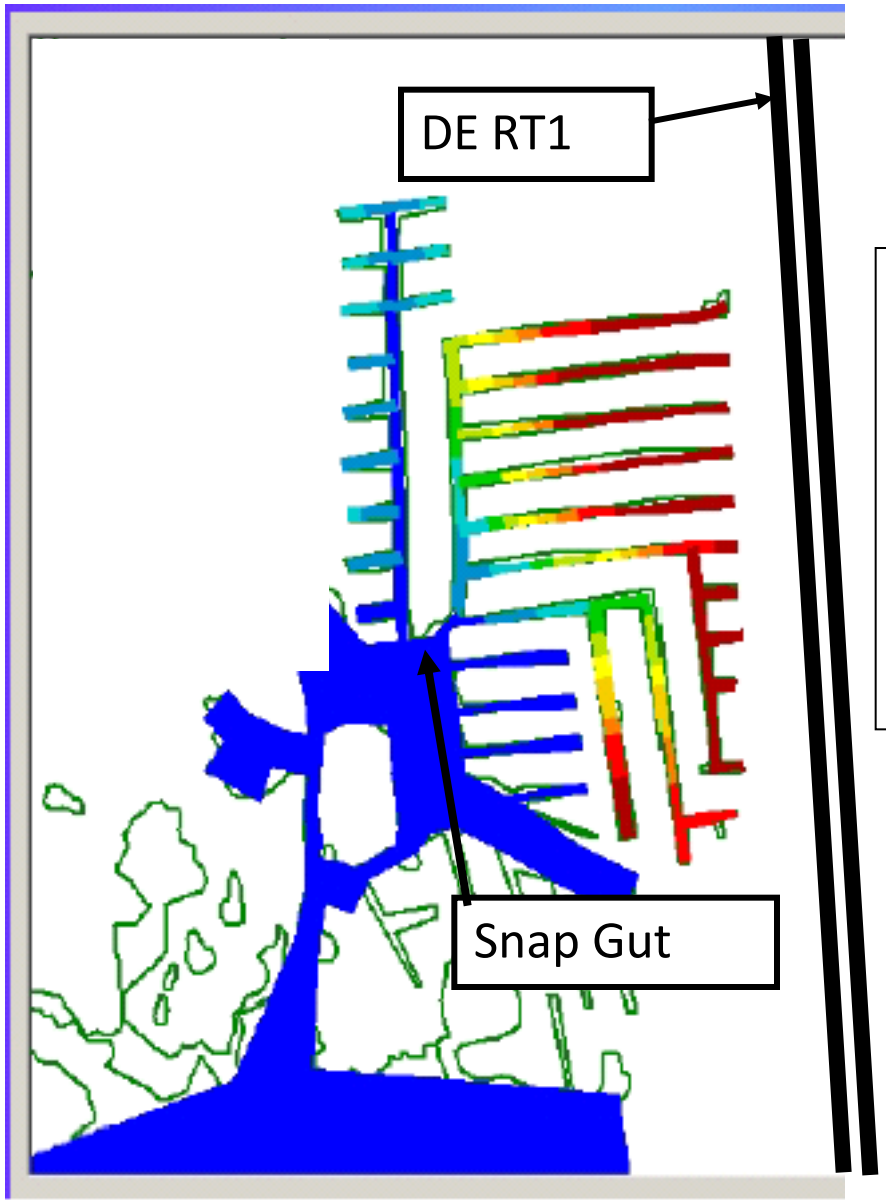
- Good Morning George,
-
- Our Sand Filter Maintenance Contract was awarded on April 26, 2011 to Diamond Hill, Inc. of Wilmington. They plan to begin work on the Sediment Forebay on or around August 15th.
-
- Please give me a call or send me an e-mail if you have questions.
-
- LaTonya
-
- ***LaTonya Gilliam, P.E.***
Maintenance - NPDES Engineer
P.O. Box 778, Dover, DE 19903
Tel. (302) 760-2191; Fax (302) 739-7251
LaTonya.Gilliam@state.de.us

Scum, trash and algae accumulating on the surface at the ends of our canals, trees and shrubs hanging over the canals

South Bethany Canals Flushing Study – *Entrix 2005* – Shows That There Is Essentially No Flushing In The Canals Far From Snap Gut.

Residence Times in Days

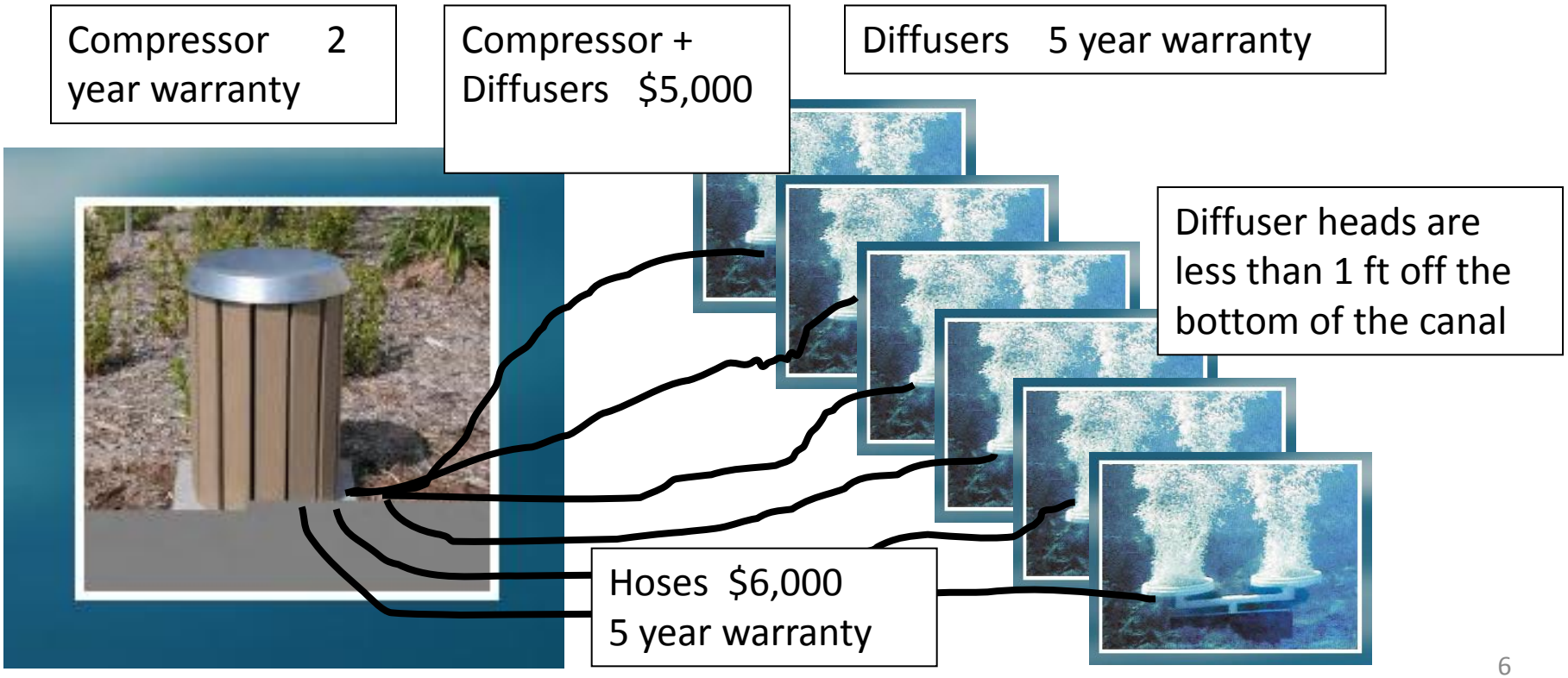




Residence time is defined as the time it takes to reduce a concentration by 36.79%

Cost For Diffusers For One 1,600 ft Canal
<$15,000 For Installation
~$750 Electrical Cost for 5 Months

- One compressor, no larger than a trash can, located at the RT 1 end of a canal, like the Petherton Canal, can supply compressed air through weighted tubing to 6, equally spaced, diffusers along the 1,600 foot length of the canal.



Surface Versus Diffuser Aeration

Advantages

Surface

1. Attractive sights & sounds
2. Ripples water surface
3. Mixes water in upper 4-8 feet to improve water quality in the upper zone.

Diffuser

1. Safe, no electricity in the water
2. Most energy efficient and effective
3. Mixes water in entire pond
4. Moves large volumes of water 50,000-80,000 GPH/horsepower
5. Reduces some nutrients used by most algae
6. Oxygenates entire pond. Allows aerobic bacteria to quickly decompose bottom muck
7. Improves overall pond health and allows for a natural balance to return
8. Decomposers can live in the deepest area of the pond