

The Anchorage Canal Drainage Area Retrofit Assessment

A Stormwater Retrofit Pilot Plan in the Coastal Corridor of the Inland Bays Watershed

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The Drainage Area transports polluted runoff from multiple Communities to the Anchorage Canal on Little Assawoman Bay



Stormwater Drain System

Sea Colony

Highway One Median





Homes

*Many homes
have roof
runoff piped
directly to
canals*

Stormwater Drain System

Businesses





DEMAREE
Real Estate
SALES
302-538-9200

PACKAGED ICE
ICE

ICE

ICE

ICE

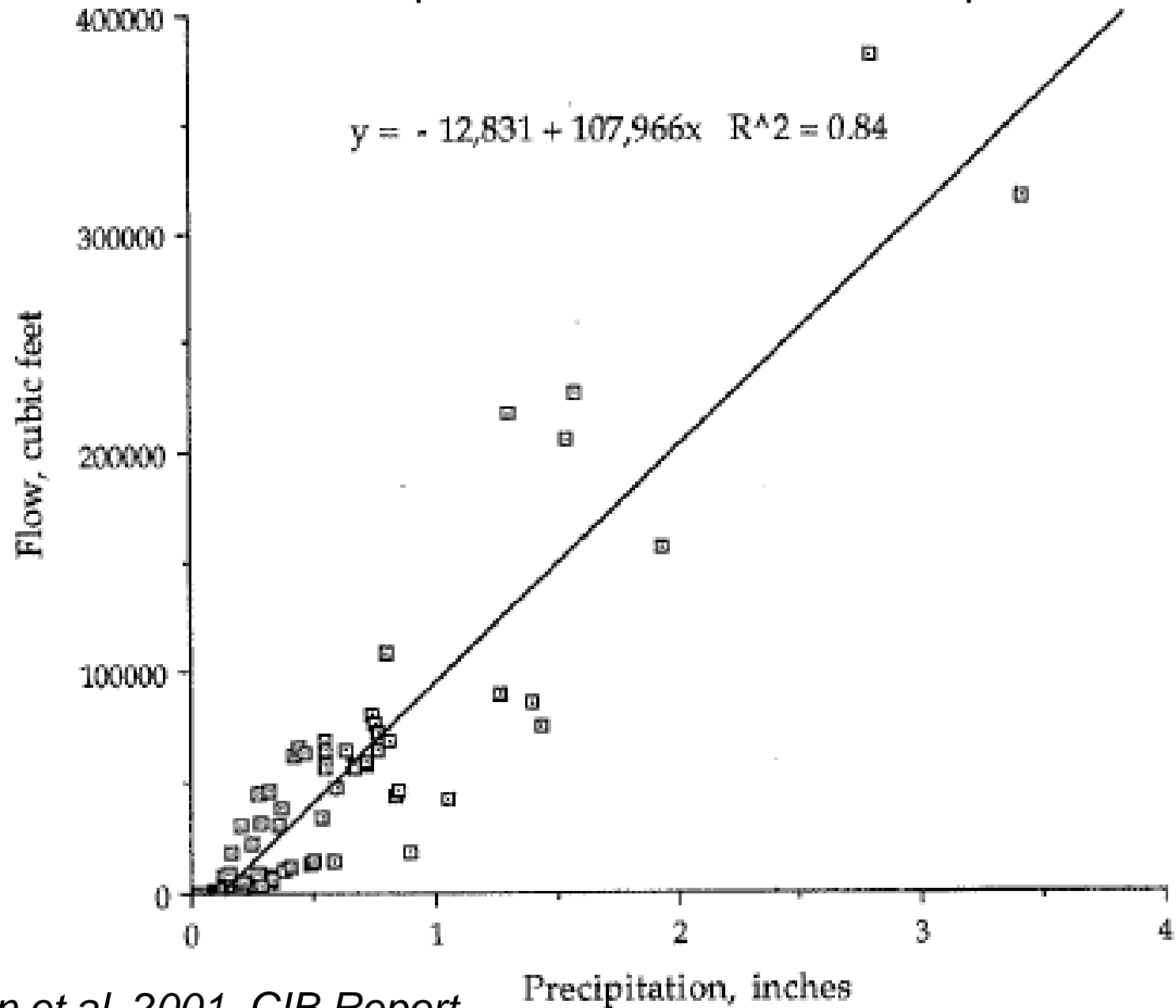


DUNE

**Flowing toward
drainage system**



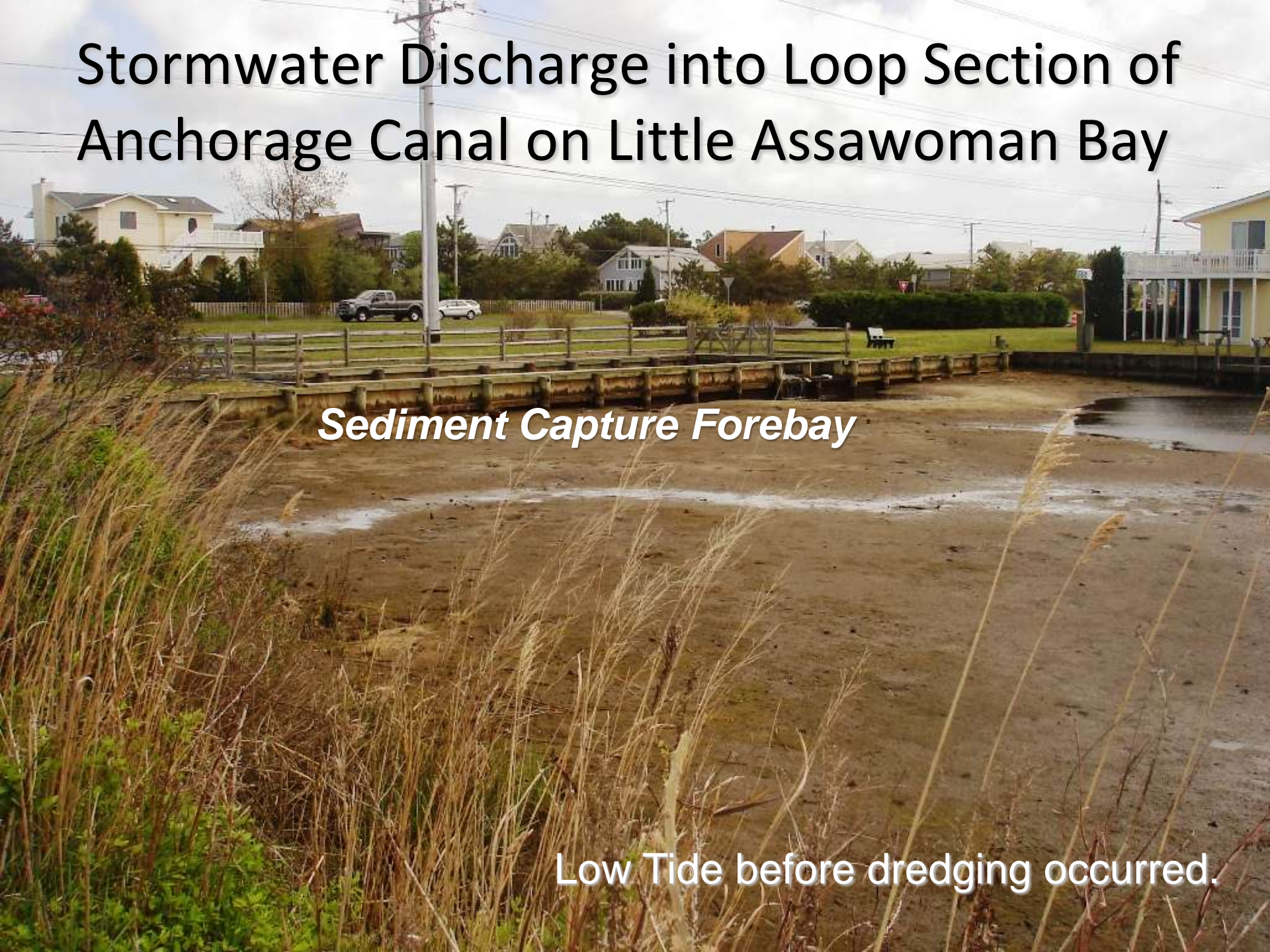
Precipitation Runoff Relationship



Stormwater Discharge into Loop Section of Anchorage Canal on Little Assawoman Bay

Sediment Capture Forebay

Low Tide before dredging occurred.





Stormwater Pollution Loads

Nitrogen

592 lbs/yr

Phosphorus

33 lbs/yr

First flush Total

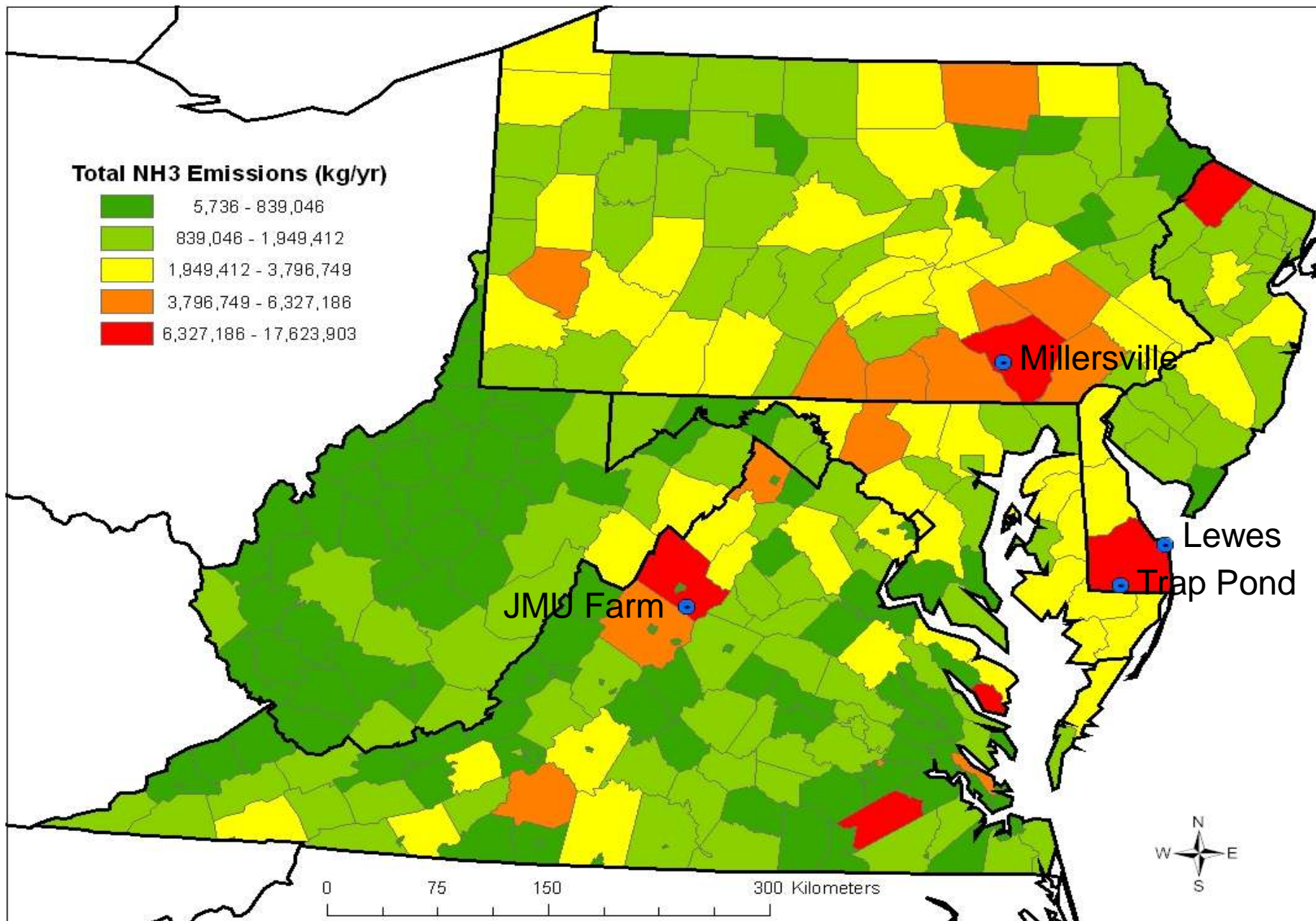
Coliforms

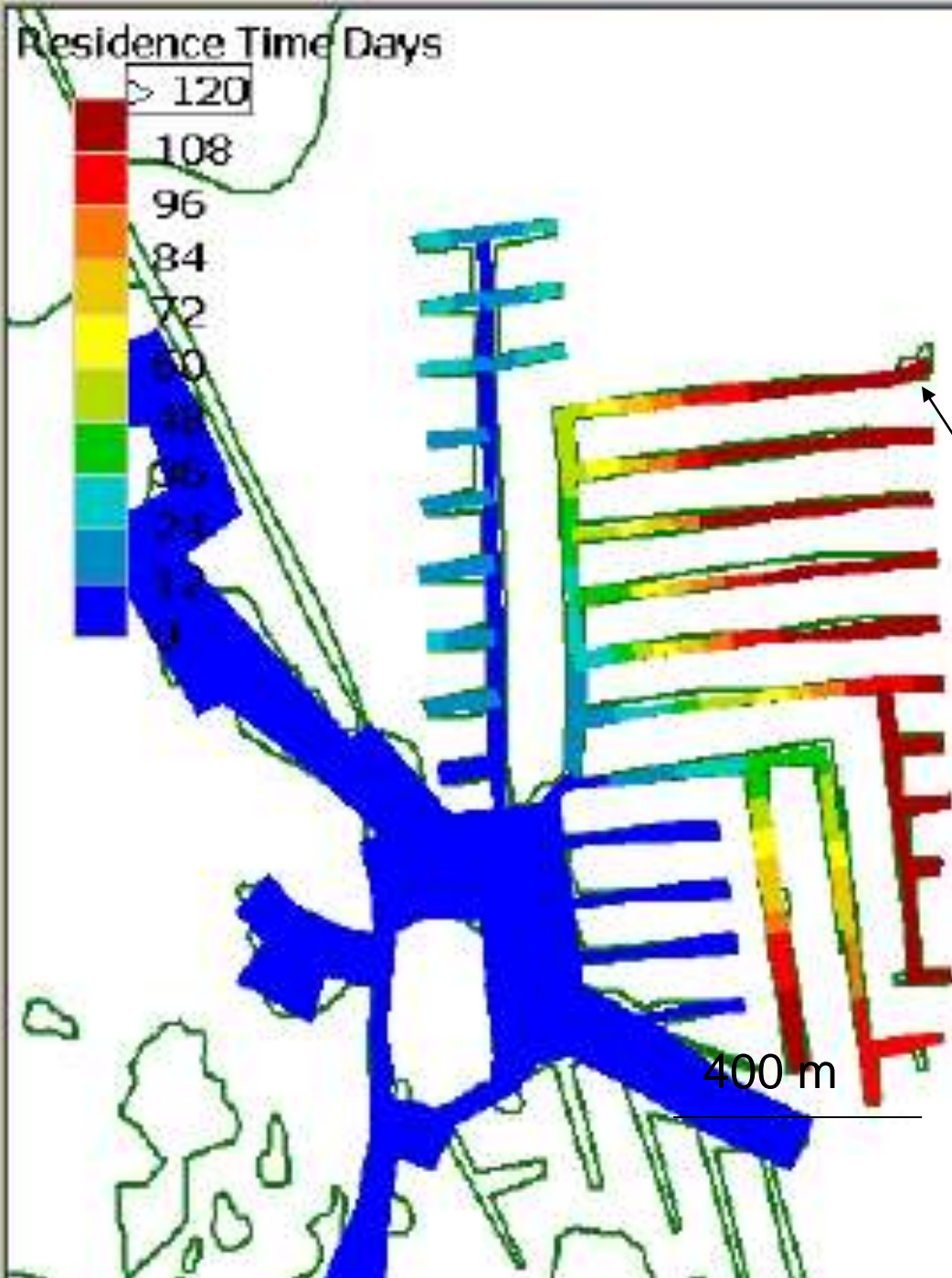
90,000 –

800,000 units

per 100 ml

Martin et al. 2001. CIB Report





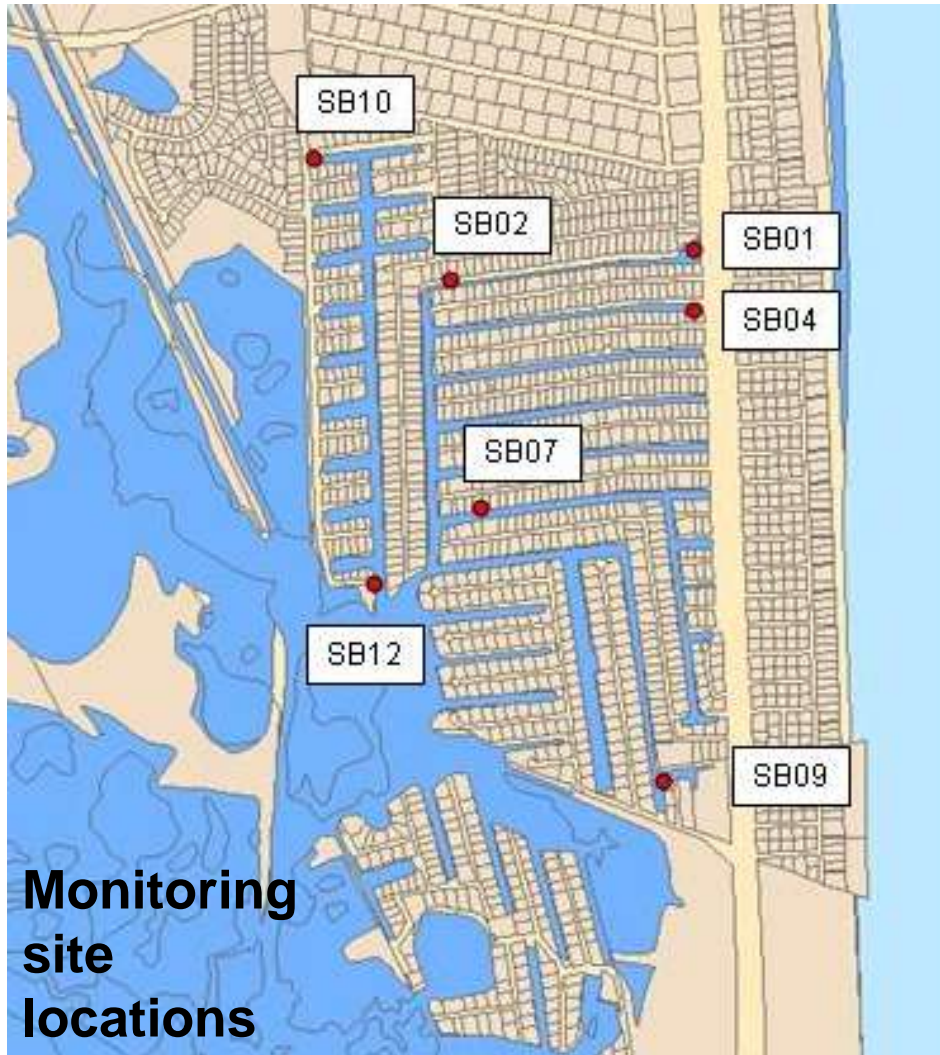
South Bethany Canals Flushing Study – *Entrix* 2005

Anchorage Canal



Potentially Harmful Algal Soup

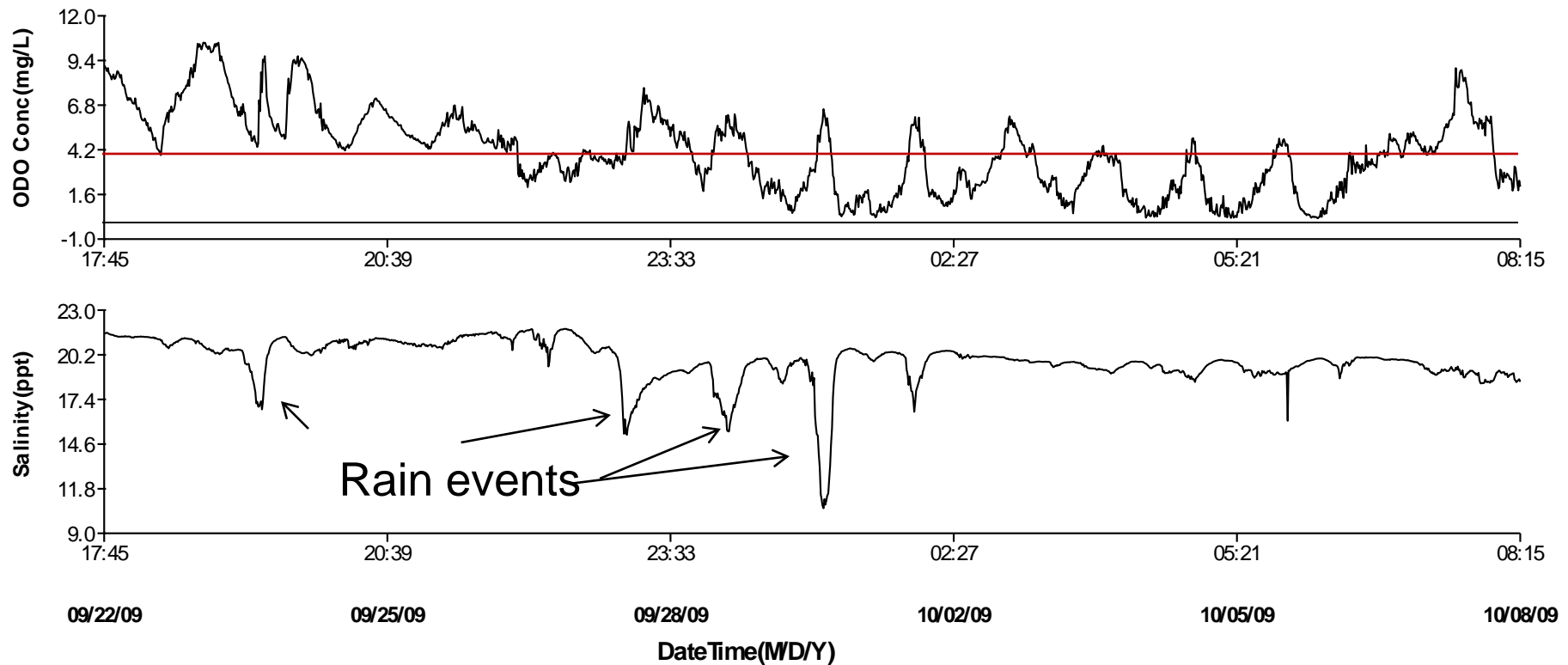
South Bethany Canals Water Quality Monitoring



- Monitored for WQ and meteorology since 2008
- Plan developed with support of UDCMP
- DelDOT funded Continuous Dissolved Oxygen Meter will be installed in Anchorage Canal this Spring.

Dissolved Oxygen and Salinity Monitoring in the Canal:

*Waters have severely low oxygen during
summer*



Finding Solutions

- Partnership formed between CIB, TSB, DelDOT
- Assessment funded by USACE & DelDOT through TSB
- CIB Hires Center for Watershed Protection & JMT Eng.
- Middlesex Beach, Sea Colony, Bethany Beach and UD join partnership
- Assessment begins



KCI conducting storm drain system mapping and inspections



Rhus copallinum
Photo by Michael Drummond

The Best Solutions Produce Multiple Benefits



An aerial photograph of Dewey Beach, Delaware. The town is situated between Rehoboth Bay to the west and the Atlantic Ocean to the east. The beach is a long, narrow strip of sand running diagonally across the top of the image. The town itself is a dense collection of buildings, mostly residential, with some commercial structures. Two large marinas are visible in Rehoboth Bay, filled with numerous boats. The water in the bay is dark, while the ocean is a lighter blue-green color. The text 'Atlantic Ocean' is in the top right, 'Dewey Beach' is in the top left, and 'Rehoboth Bay' is in the bottom left.

Atlantic Ocean

Dewey Beach

Rehoboth Bay

Atlantic Ocean

Fenwick Island

Little Assawoman Bay

