
CIB STAC Meeting
May 11, 2012

Delaware Environmental Observing System
Delaware Geological Survey
Delaware Environmental Monitoring and Analysis Center
Office of the Delaware State Climatologist
Please note that we really do want this to be a **DISCUSSION** on the monitoring efforts we are proposing for the Inland Bays!
Current Inland Bays Monitoring Assets
Delaware’s environment may be the best monitored in the country!
The Inland Bays are equally as well monitored.
Monitoring Efforts Conducted By.....

- DNREC
- USGS
- DEOS
- DGS
- UD
Current Conditions for Harbeson, DE-REC:
Time of Observations: 2012/05/10 09:40:00 EDT
Gage Precipitation (60): 0 in
Air Temperature: 69.4 deg. F
Dew Point Temperature: 51.2 deg. F
Wind Speed: 7.7 mph
Wind Direction: 301 deg. (WNW)
Solar Radiation: 555 W.m-2
Wind Gust Speed (5): 10.8 mph at 9:37
Gage Precipitation (5): 0 in
Relative humidity: 74 %
Soil Temperature: 63 deg. F
Volumetric Water Content: 0.251

- View Last 24 Hours
- View Yesterday's Daily Summary
- View Current Monthly Summary
Tidal Conditions USGS/DGS (real-time)

USGS 01484540 INDIAN RIVER AT ROSEDALE BEACH, DE

Provisional Data Subject to Revision

Gage height

Top of pier
DGS Ground Water Conditions (most not real time)
Preaching to the Choir…

• Although the Inland Bays environment may be very well monitored, independent data streams are often not suitable for the solution of complex environmental problems.

• The ingestion, archiving, integration and dissemination of diverse environmental data is critical in the effort to solve complicated environmental issues.

• Long-term, continuous, real-time monitoring is needed to detect changes in the system over time, and to identify important environmental concerns as they emerge.
Real-Time Monitoring Sites
What is being proposed?

- A publicly-accessible website and digital inventory detailing continuous environmental monitoring efforts in the Delaware Inland Bays (hosted by DEMAC). This will include real-time, near real-time and archived monitoring efforts.
- Coordination with CIB, DNREC, DGS, USGS, DEOS, DEMAC, UD, etc. on future real-time, monitoring needs for the Inland Bays (water quality, ground water monitoring, coastal flooding).
- Instrumentation of a selected tributary basin of the Inland Bays with real-time meteorological, water quality and water level sensors.
- Installation of up to five temporary water-level sensors to better understand relationships between ocean tide heights and Inland Bay water levels (support of CFMS and water quality work).
The College of Earth, Ocean, and Environment has recently installed real-time satellite receiving stations for both polar orbiter and geosynchronous satellite products.

Receiving stations reside on the roof of the Willard Building on the Newark Campus. Polar orbiting receiver (above), geosynchronous (right).

What is being proposed? (cont.)

- Potential integration of UD Satellite Receiving Station in monitoring programs.
UD Satellite Receiving Station: What is Available?

- SST
- Chlorophyll
- Visible products
- Ocean color products (sediments, etc.)
- Salinity
- Many others...
250 meter Resolution SST Product for Inland Bays, April 29th 2012.
Expansion of the Delaware Coastal Flood Monitoring System to the Inland Bays

Welcome to the Kent County Coastal Flood Monitoring System. This page allows access to important information that can be used to assess the potential for coastal flooding in Kent County, Delaware's coastal communities. Tools available for each community include coastal inundation maps at varying inundation levels, inundation profiles for critical evacuation routes from each community, access to real-time and forecasted water levels for each community, and up to date, real-time access to NWS advisories, watches, and warnings that may be affecting each community.

Select location:

Leipsic, DE

Send Request
Phase II (this summer) will cover Lewes to New Castle. Inclusion of DBOFS data.

Phase III (proposed) will BEGIN to investigate flooding in the Inland Bays.
Discussion, Comments, Questions?