

What's a Testbed?



My Day Job

U.S. Integrated Ocean Observing System

\$4 million, 1 year

***Improve* models that forecast coastal flooding and hypoxia.**

**64 folks, 20 Universities,
2 Companies.**

Standardize Research to Ops



The Testbed Teams

3 members

Testbed "Management"

Don Wright, SURA
Liz Smith, SURA
Doug Levin, IOOS

10 members

Testbed Advisory Evaluation Group

Rich Signell, USGS

25 members

Cyber Infrastructure

Eoin Howlett, ASA

21 members

Estuarine Hypoxia

Chesapeake Bay
Carl Friedrichs, VIMS

20 members

Shelf Hypoxia

Gulf of Mexico
John Harding, MSU

24 members

Coastal Inundation

Gulf and East Coast
Rick Luettich, UNC-CH

Coastal Inundation

Atlantic & Gulf Coasts

Waves + Tides + Barometric Pressure

Tropical & Extra Tropical



Estuarine Hypoxia

Chesapeake

Shelf Hypoxia

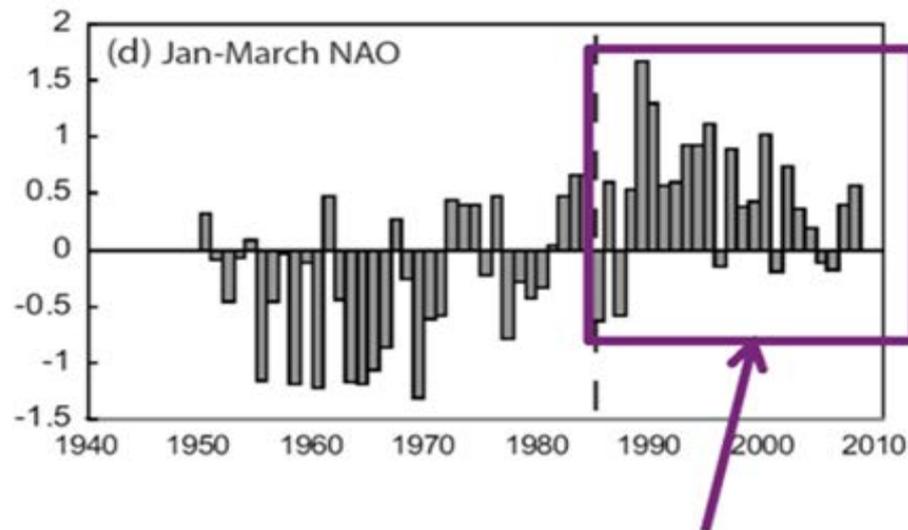
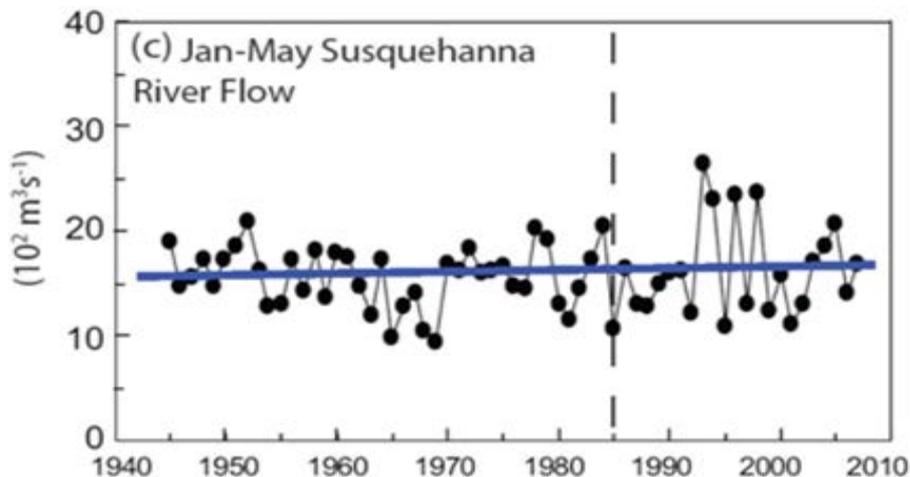
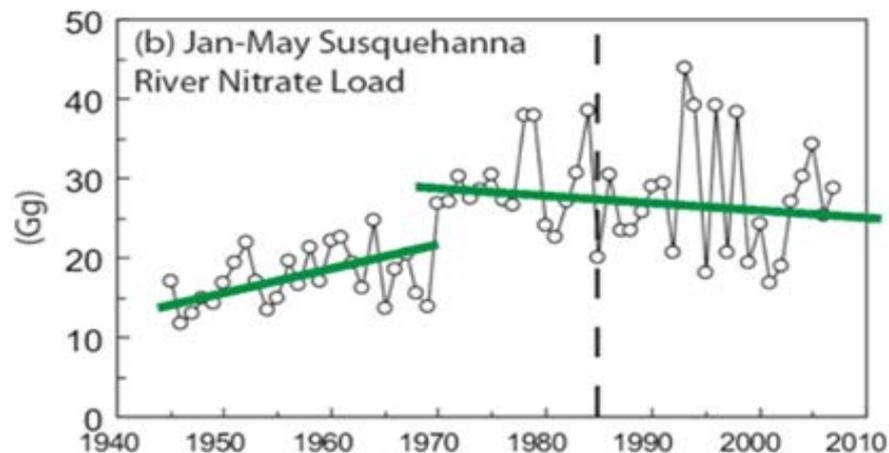
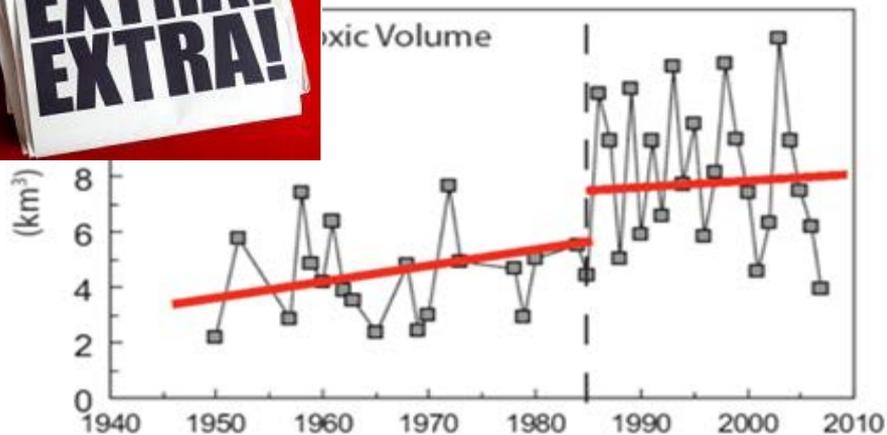
Gulf of Mexico

A Proxy for Comparing Hydrodynamic Models

Hypoxia models will advise better land use practices and waste water treatment plant improvements.



In the Chesapeake



Something that has drastically changed: The “North Atlantic Oscillation Index”

Reality Checks.. Physics vs Science



“Doug, If we “shut off” the river input into the Bay the “met” mixing accounts for water stratification & hypoxia”...

“If that is the case, has DO depletion in the Bay been a "geologically" historic event controlled by climactic variations? “

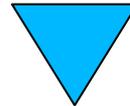
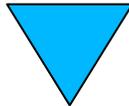
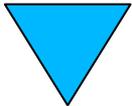
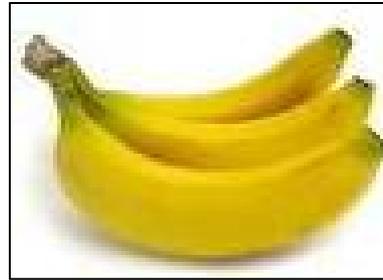
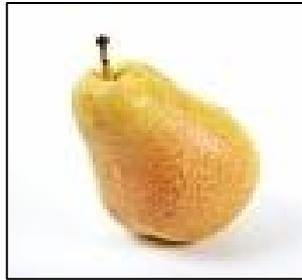
Oxygen Based on Benthic Foraminifera from Sediment Cores, Estuaries Vol. 23, No. 4 (Aug., 2000), pp. 488-508

What is in the Cyber Toolbox?

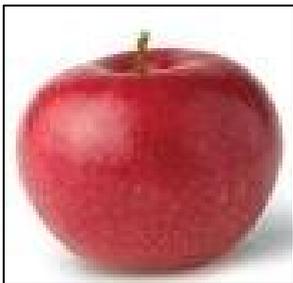
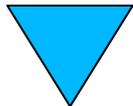


- **Transform data**
- **Skill Assessment**
- **Mine and Combine (All Star)**
- **Standardize Displays**
- **Collaborative Website**

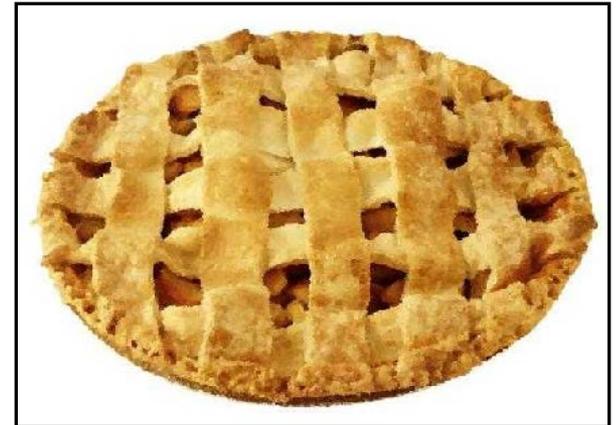
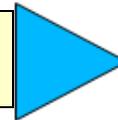
Cyber Toolbox – Making Data Universally Usable



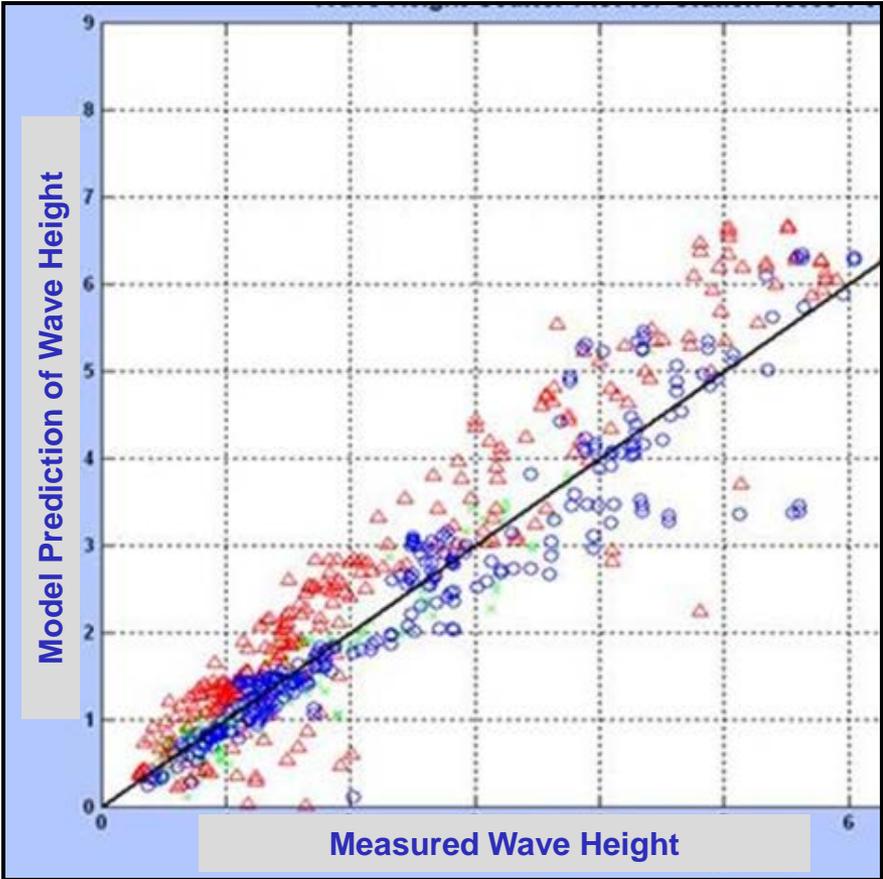
Different Data Format In..



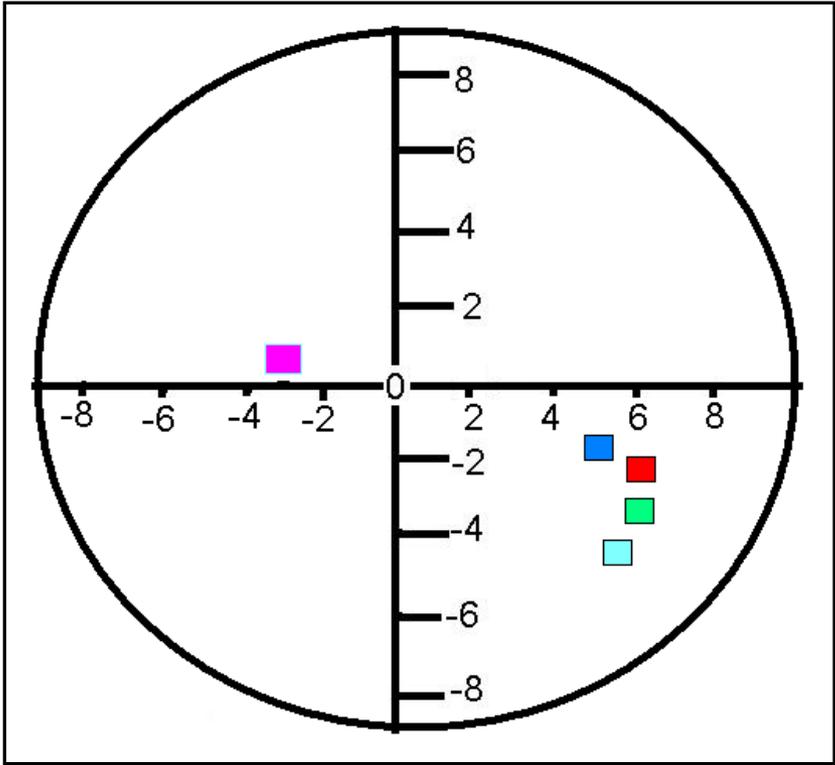
Universal Format Out



Cyber Tool Box - Model Skill Assessment

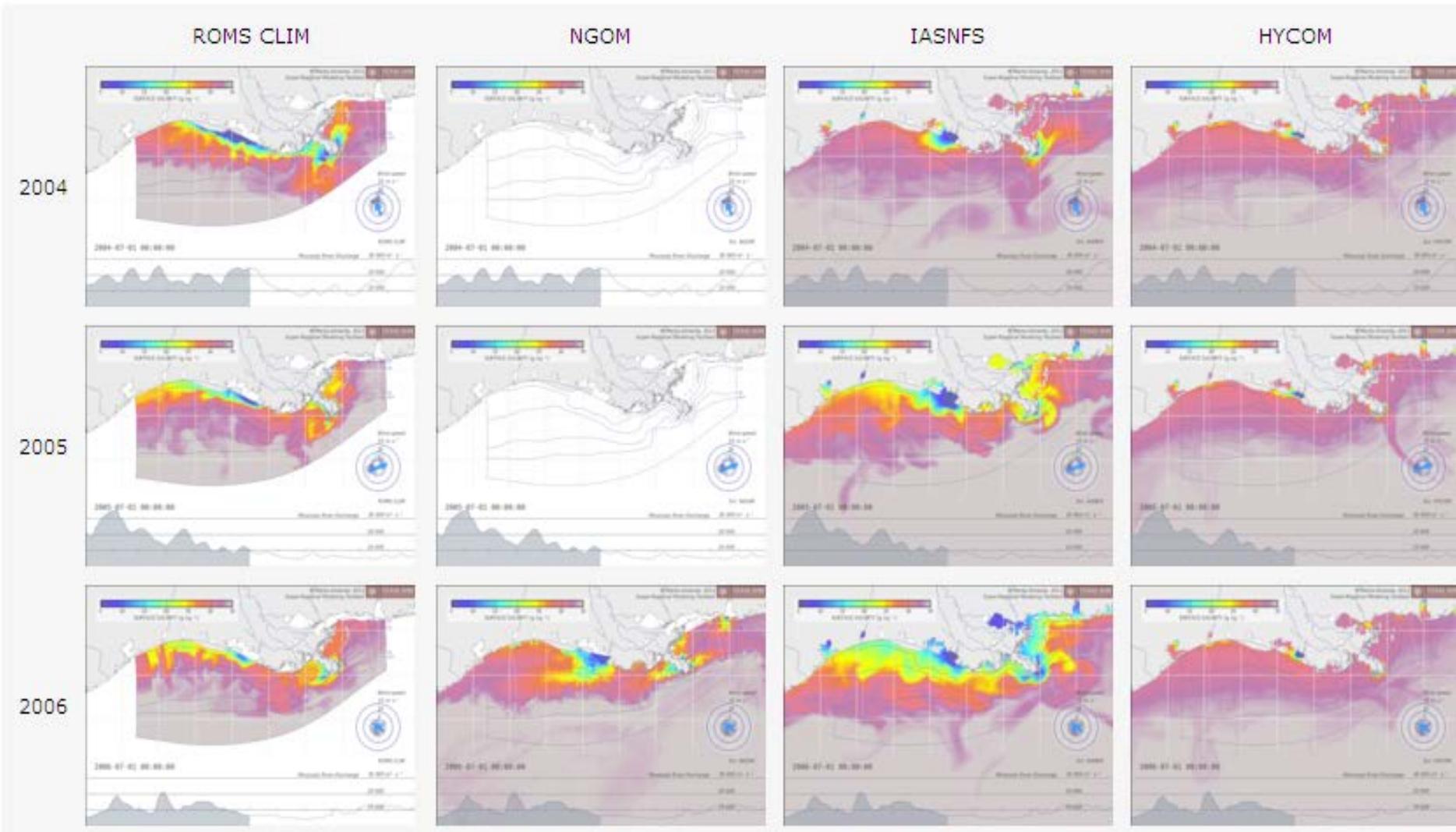


IMEDS – Interactive Model Evaluation & Diagnostic System

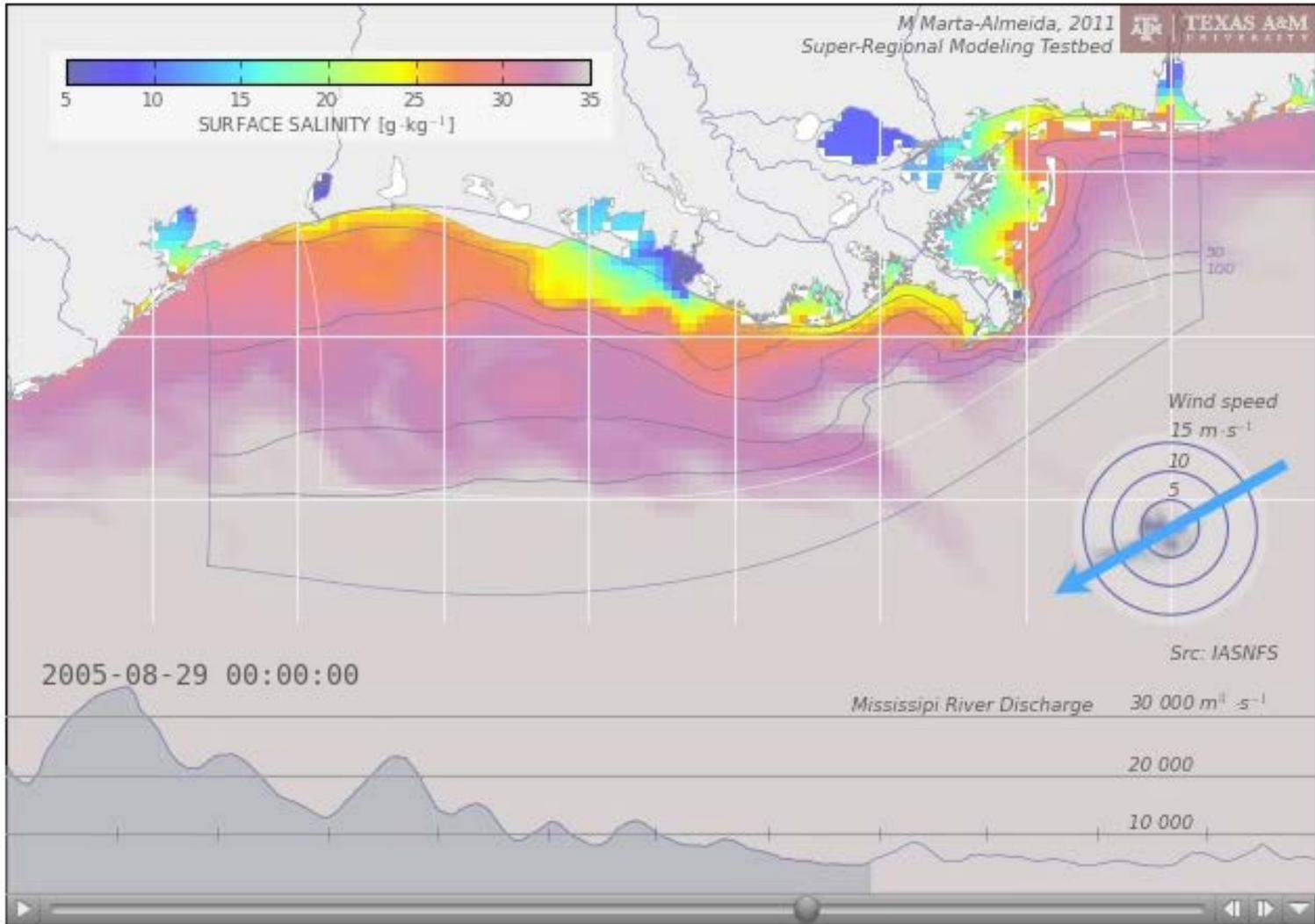


Target Analysis

Cyber Tool Box – Standardize the Output



August 29, 2005 – Katrina Makes Landfall



What's in the Testbed Future?



Expand - more *regions* & issues

Fill the Cyber Tool box

Educate present and potential users

Sustain the Testbed

What the...



Workin' with Celebrities

Dang...



DMAC Presentation Outtakes'..

Questions?



www.testbed.sura.org