

Working with Academics

Al Shaw

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<http://j.mp/nicar17-academics>

#NICAR17

Great stories are hiding in plain sight — in academic papers.



Characterizing hurricane storm surge behavior in Galveston Bay using the SWAN + ADCIRC model

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ABSTRACT

The SWAN + ADCIRC shallow-water circulation model, validated for Hurricane Ike (2008), was used to develop five synthetic storm surge scenarios for the upper Texas coast in which wind speed was increased and landfall location was shifted 40 km westward. The Hurricane Ike simulation and the synthetic storms were used to study the maximum water elevations in Galveston Bay, as well as the timing and behavior of surge relative to the hurricane track. Sixteen locations indicative of surge behavior in and around Galveston Bay were chosen for analysis in this paper. Results show that water surface elevations present in Galveston Bay are dominated by the counterclockwise hurricane winds and that increasing wind speeds by 15% results in approximately 23% (+/− 3%) higher surge. Furthermore, shifting the storm westward causes higher levels of surge in the more populated areas due to more intense, higher shore-normal winds. This research helps to highlight the vulnerability of the upper Texas Gulf Coast to hurricane storm surge and lends insight to storm surge and flood mitigation studies in the Houston–Galveston region.

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Nat Hazards (2015) 77:1183–1203

DOI 10.1007/s11069-015-1652-7

ORIGINAL PAPER

Vulnerability of an industrial corridor in Texas to storm surge

Daniel W. Burlison · Hanadi S. Rifai · Jennifer K. Proft ·
Clint N. Dawson · Philip B. Bedient

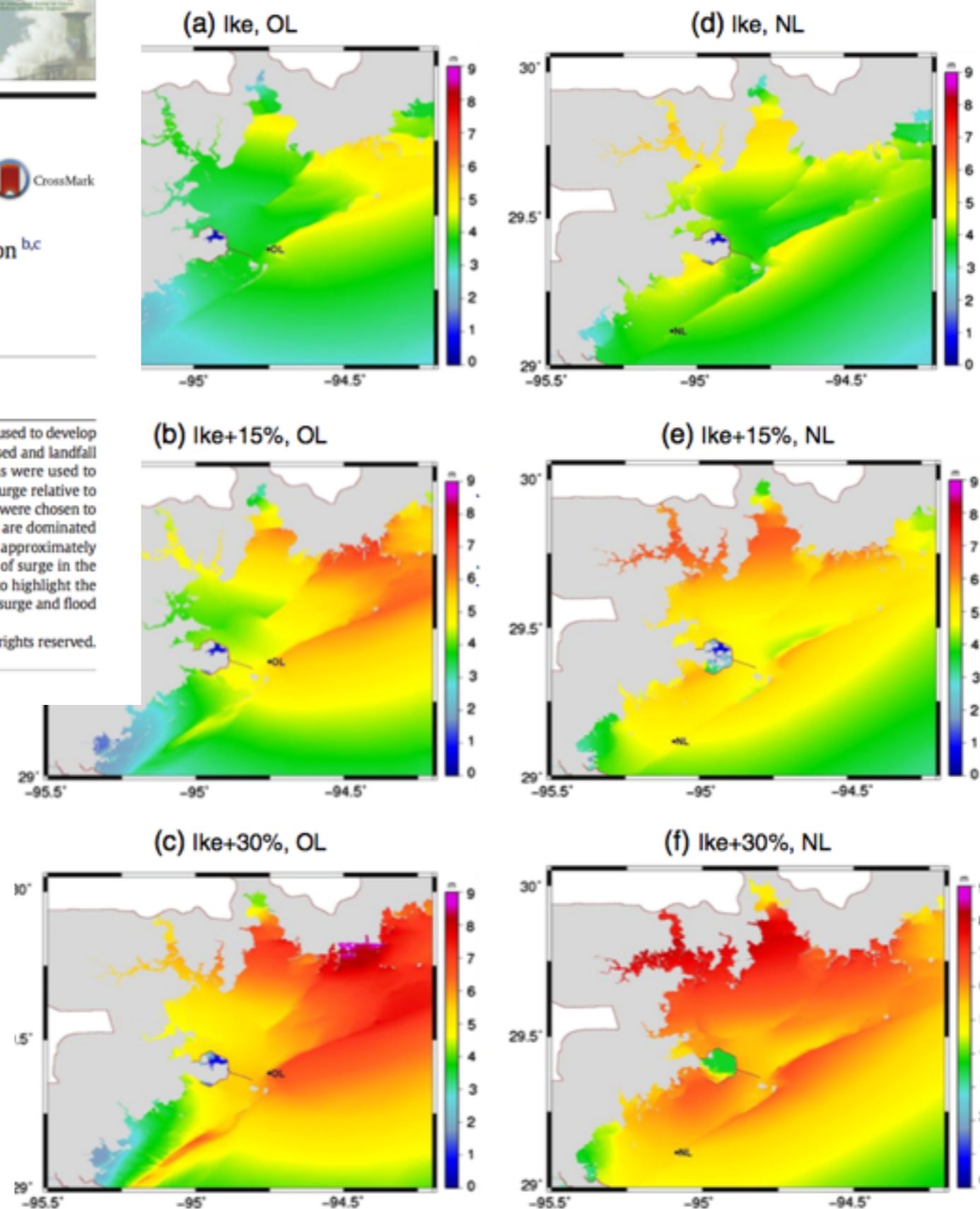


Fig. 9. Maximum water surface elevations from ADCIRC + SWAN for the Hurricane Ike original, +15%, and +30% wind scenarios at the original landfall (OL) and new locations. a. Ike, OL. b. Ike + 15%, OL. c. Ike + 30%, OL. d. Ike, NL. e. Ike + 15% NL. f. Ike + 30%, NL.



...if that storm had been stronger, it would have devastated the Ship Channel, killed thousands, and crippled the economy.



Existing Storm Protection

About the maps | Flood levels in top chart taken at Kemah Boardwalk. | Sources: NOAA/GOES, USGS/NASA Landsat, SSPEED Center at Rice University, University of Texas Institute for Computational Engineering and Sciences, University of Houston Dept. of Civil and Environmental Engineering, Texas A&M Galveston Institute for Sustainable Coastal Communities, Jackson State University/Coastal Hazards Center, Harris County Appraisal District, U.S. Census

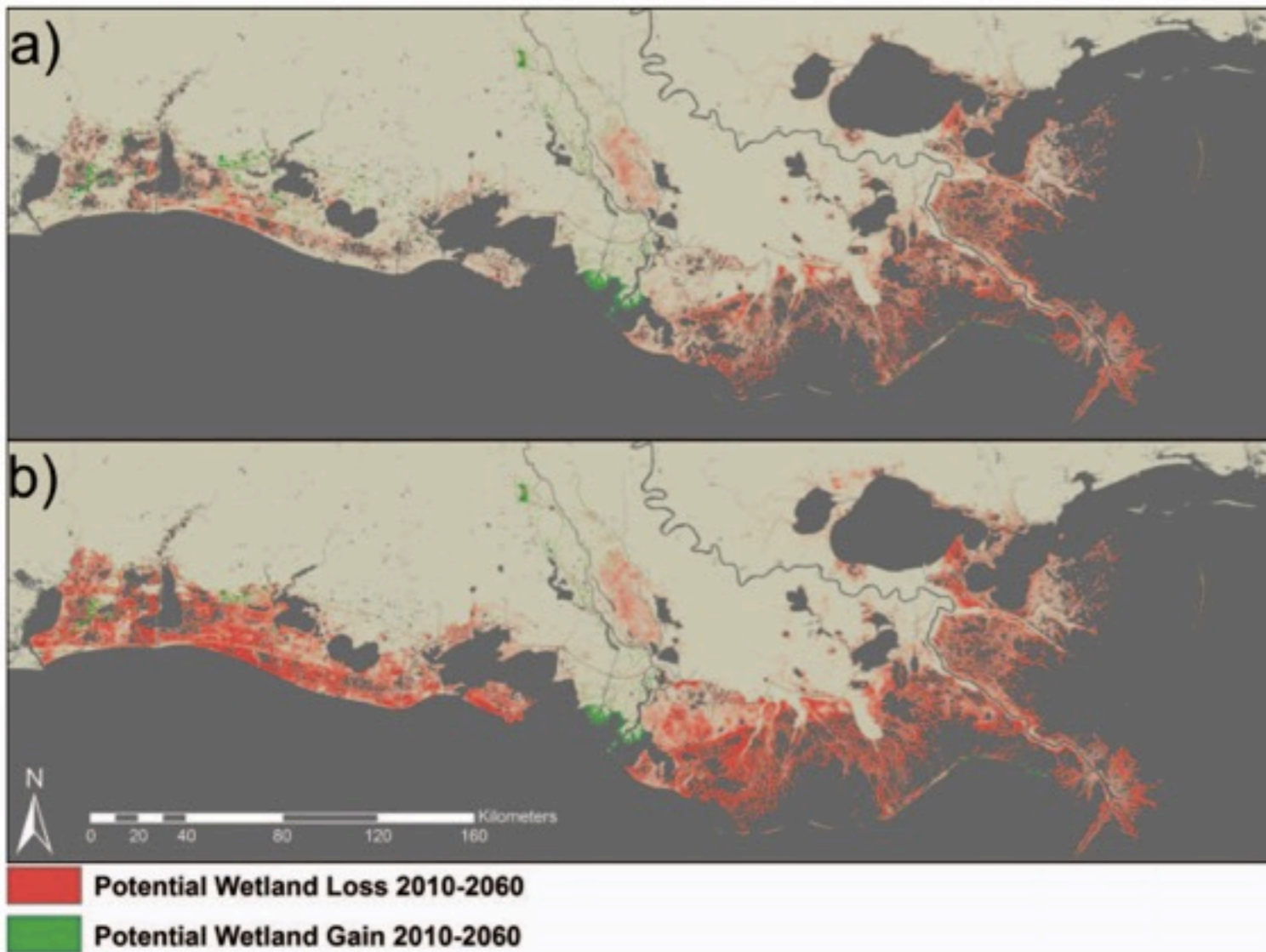


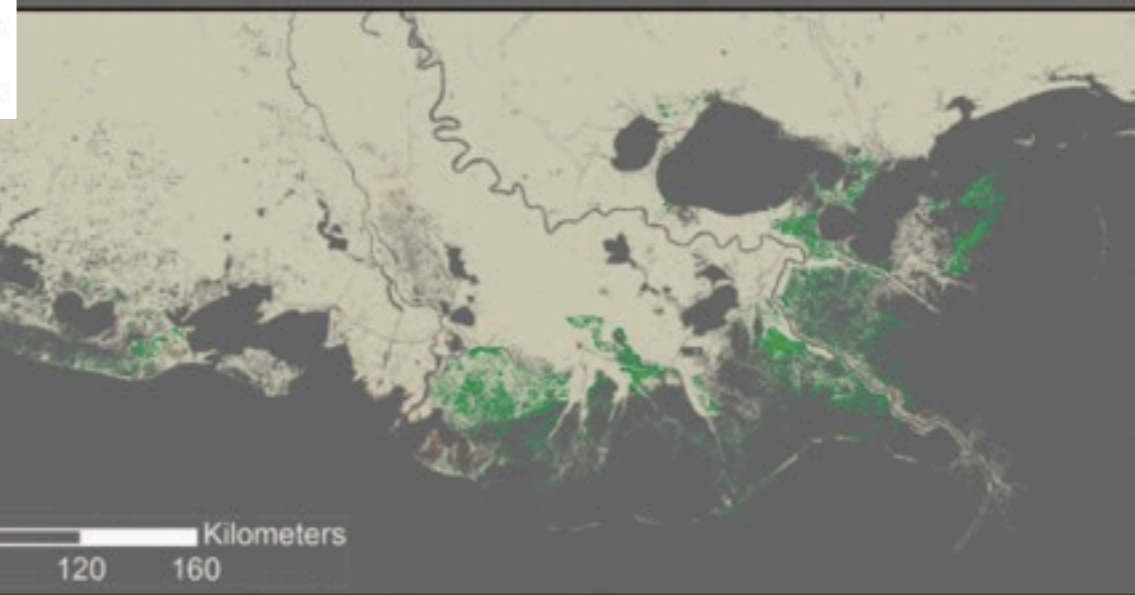
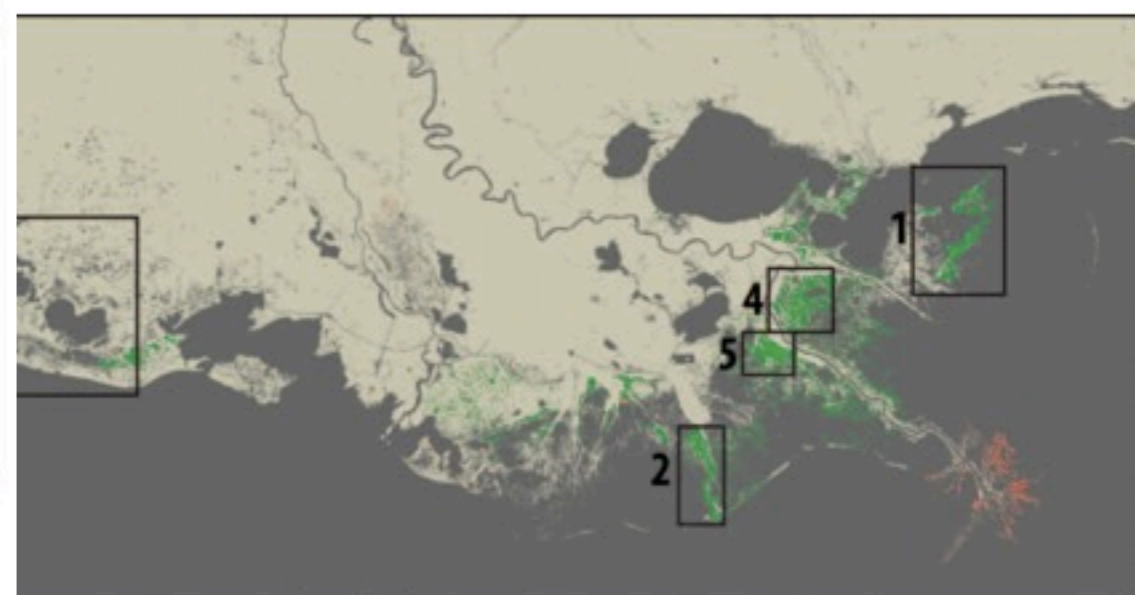
Figure 3. Map of potential wetland area changes under a "Future-without-action" condition for moderate (a) and less optimistic (b) environmental uncertainty scenarios, 2010–2060.

Forecasting the Effects of Coastal Protection and Restoration Projects on Wetland Morphology in Coastal Louisiana under Multiple Environmental Uncertainty Scenarios

Brady R. Couvillion[†], Gregory D. Steyer[‡], Hongqing Wang[†], Holly J. Beck[†], and John M. Rybczyk[‡]

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Coastal Restoration Assessment Branch
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[‡]Department of Environmental Science
Western Washington University
Bellingham, WA 98225, U.S.A.



Land area increases as a result of Master Plan (2060)

Land area decreases as a result of Master Plan (2060)

Figure 6. Projected land area increases and decreases with Master Plan implementation at the end of the simulation period (2060) under moderate (a) and less optimistic (b) environmental uncertainty scenarios. Increases and decreases are calculated by comparing FWOA model results to Master Plan model results in 2060. Locations represent the Biloxi Marshes (location 1), the western side of Bayou Lafourche (location 2), the Chenier Plain (location 3), upper Breton Sound (location 4), and the location of a proposed diversion near Myrtle Grove (location 5).

http://www.lacoast.gov/crms2/crms_public_data/publications/Couvillion%20et%20al%202013.pdf

LOSING GROUND

Louisiana's Moon Shot

The state hopes to save its rapidly disappearing coastline with a 50-year, \$50 billion plan based on science that's never been tested and money it doesn't have. What could go wrong?

by Bob Marshall, The Lens, Al Shaw and Brian Jacobs, ProPublica

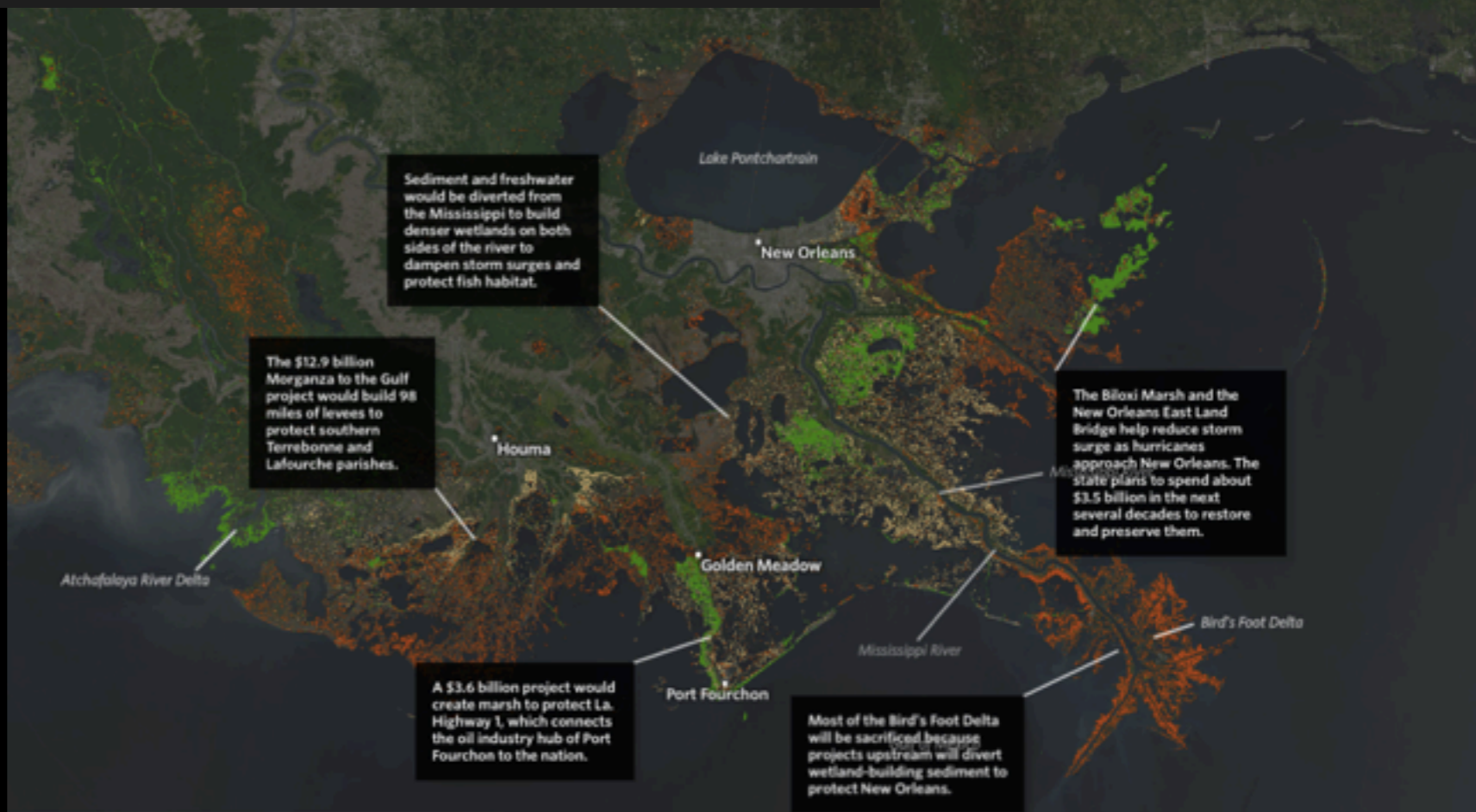
December 8, 2014



...l rise are properly accounted for — wetlands than it **loses** every year. ...tinue to creep in. Even in the most ppear.

Wetlands Saved

MISSISSIPPI



But you need help from the authors to both understand the research and present the results.

Step 1: Read the paper(s).

Nat Hazards (2015) 77:1183–1203
DOI 10.1007/s11069-015-1652-7

ORIGINAL PAPER

Vulnerability of an industrial corridor in Texas to storm surge

Daniel W. Burlison · Hanadi S. Rifai · Jennifer K. Proft ·
Clint N. Dawson · Philip B. Bedient

Hindcast and validation of Hurricane Ike (2008) waves, forerunner, and storm surge

M. E. Hope,¹ J. J. Westerink,¹ A. B. Kennedy,¹ P. C. Kerr,¹ J. C. Dietrich,^{1,2} C. Dawson,³
C. J. Bender,⁴ J. M. Smith,⁵ R. E. Jensen,⁵ M. Zijlema,⁶ L. H. Holthuijsen,⁶ R. A. Luettich Jr.,⁷
M. D. Powell,⁸ V. J. Cardone,⁹ A. T. Cox,⁹ H. Pourtaheri,¹⁰ H. J. Roberts,¹¹ J. H. Atkinson,¹¹
S. Tanaka,^{1,12} H. J. Westerink,¹ and L. G. Westerink¹

Structural Integrity of Storage Tanks

Jamie E. Padgett, Ph.D.
Assistant Professor

Risk Analysis

DOI: 10.1111/j.1539-6924.2012.01840.x

Perspective

Examining the 100-Year Floodplain as a Metric of Risk, Loss, and Household Adjustment

Wesley E. Highfield,* Sarah A. Norman, and Samuel D. Brody

Delineating the Reality of Flood Risk and Loss in Southeast Texas

Samuel D. Brody¹; Russell Blessing²; Antonia Sebastian, M.ASCE³; and Philip Bedient, F.ASCE⁴

Urban Studies at 50

Urban Studies
50(4) 789–806, March 2013

Examining the Impacts of Development Patterns on Flooding on the Gulf of Mexico Coast

Samuel Brody, Heeju Kim and Joshua Gunn

[Paper first received, November 2011; in final form, April 2012]

Journal of Environmental Planning and Management

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/cjep20>

Examining the impact of land use/land cover characteristics on flood losses

Samuel Brody^a, Russell Blessing^b, Antonia Sebastian^c & Philip Bedient^c

^a Departments of Marine Sciences/Urban Planning, Texas A&M University, 200 Seawolf Pkwy, Galveston, TX, 77553, USA

^b Center for Texas Beaches and Shores, Texas A&M University at Galveston, Galveston, TX, 77553, USA

^c Department of Civil and Environmental Engineering, Rice University, Houston, TX, USA

Published online: 06 Jun 2013.

Sometimes the data is already freely available.

The image is a screenshot of a web browser displaying the USGS Scientific Investigations Map 3164 page. The browser's address bar shows the URL <https://pubs.usgs.gov/sim/3164/>. The page header features the USGS logo and navigation links for 'USGS Home', 'Contact USGS', and 'Search USGS'. Below the header, the title 'Scientific Investigations Map 3164' is displayed, followed by a breadcrumb trail '>> Pubs Warehouse > SIM 3164'. The main content area is titled 'Land Area Change in Coastal Louisiana from 1932 to 2010' and lists the authors: Brady R. Couvillion, John A. Barras, Gregory D. Steyer, William Sleavin, Michelle Fischer, Holly Beck, Nadine Trahan, Brad Griffin, and David Heckman. To the left of the text is a thumbnail image of the report cover, which shows a map of Louisiana with a grayscale overlay indicating land area changes. To the right of the text is a sidebar containing metadata and download links. The sidebar indicates the report was first posted on June 1, 2011, and provides links for a 'Pamphlet PDF (1.92 MB)', a 'Map PDF (16.2 MB)', and a 'Downloads Directory'. The 'Downloads Directory' link is circled in red. Below these links, there is a note to refer to a 'readme' file for more information. At the bottom of the sidebar, there is a section for 'For additional information contact:'.

USGS Scientific Investigations x

Secure <https://pubs.usgs.gov/sim/3164/>

USGS
science for a changing world

USGS Home
Contact USGS
Search USGS

Scientific Investigations Map 3164

>> Pubs Warehouse > SIM 3164

Land Area Change in Coastal Louisiana from 1932 to 2010

By Brady R. Couvillion, John A. Barras, Gregory D. Steyer, William Sleavin, Michelle Fischer, Holly Beck, Nadine Trahan, Brad Griffin, and David Heckman

Abstract

Coastal Louisiana wetlands make up the seventh largest delta on Earth, contain about 37 percent of the estuarine herbaceous marshes in the conterminous United States, and support the largest commercial fishery in the lower 48 States. These wetlands are in peril because Louisiana currently undergoes about 90 percent of the total coastal wetland loss in the continental United States. Documenting and understanding the occurrence and rates of wetland loss are necessary for effective planning, protection, and restoration activities.

The analyses of landscape change presented in this report use historical surveys, aerial data, and satellite data to track landscape changes. Summary data are presented for 1932–2010; trend data are presented for 1985–2010. These later data were calculated separately because of concerns over the comparability of the 1932 and 1956 datasets (which are based on surveys and aerial data, respectively) with the later datasets.

First posted June 1, 2011

- [Pamphlet PDF \(1.92 MB\)](#)
- [Map PDF \(16.2 MB\)](#)
- [Downloads Directory](#)
Refer to the [readme](#) file for more information.

For additional information contact:

Hint: Older papers can still be newsworthy!

The screenshot shows a web browser window displaying a USGS webpage. The browser's address bar is empty. The page header includes the USGS logo and navigation links: "USGS Home", "Contact USGS", and "Search USGS". Below the header, there is a section titled "2 to 2010" with authors listed as "Michelle Fischer, Holly Beck, Nadine Trahan, Brad Griffin,". A red circle highlights the text "First posted June 1, 2011". Below this, there are three links: "Pamphlet PDF (1.92 MB)", "Map PDF (16.2 MB)", and "Downloads Directory". The "Downloads Directory" link includes a sub-link "Refer to the [readme](#) file for more information."

Losing Ground
by Bob Marshall, The Lens, Brian Jacobs and Al Shaw, ProPublica, Aug. 28, 2014
Houma

In 50 years, most of southeastern Louisiana not protected by levees will be part of the Gulf of Mexico. The state is losing a football field of land every 48 minutes — 16 square miles a year — due to climate change, drilling and dredging for oil and gas, and levees on the Mississippi River. At risk: Nearly all of the nation's offshore oil and gas production, much of its seafood production, and millions of homes.

EXPLORE THE COAST

Step 2: Learn as much as you can about the data and technologies used in the research.



Vulnerability of an industrial corridor in Texas to storm surge

Daniel W. Burleson · Hanadi S. Rifai · Jennifer K. Proft ·
Clint N. Dawson · Philip B. Bedient

1186

Nat Hazards (2015) 77:1183–1203

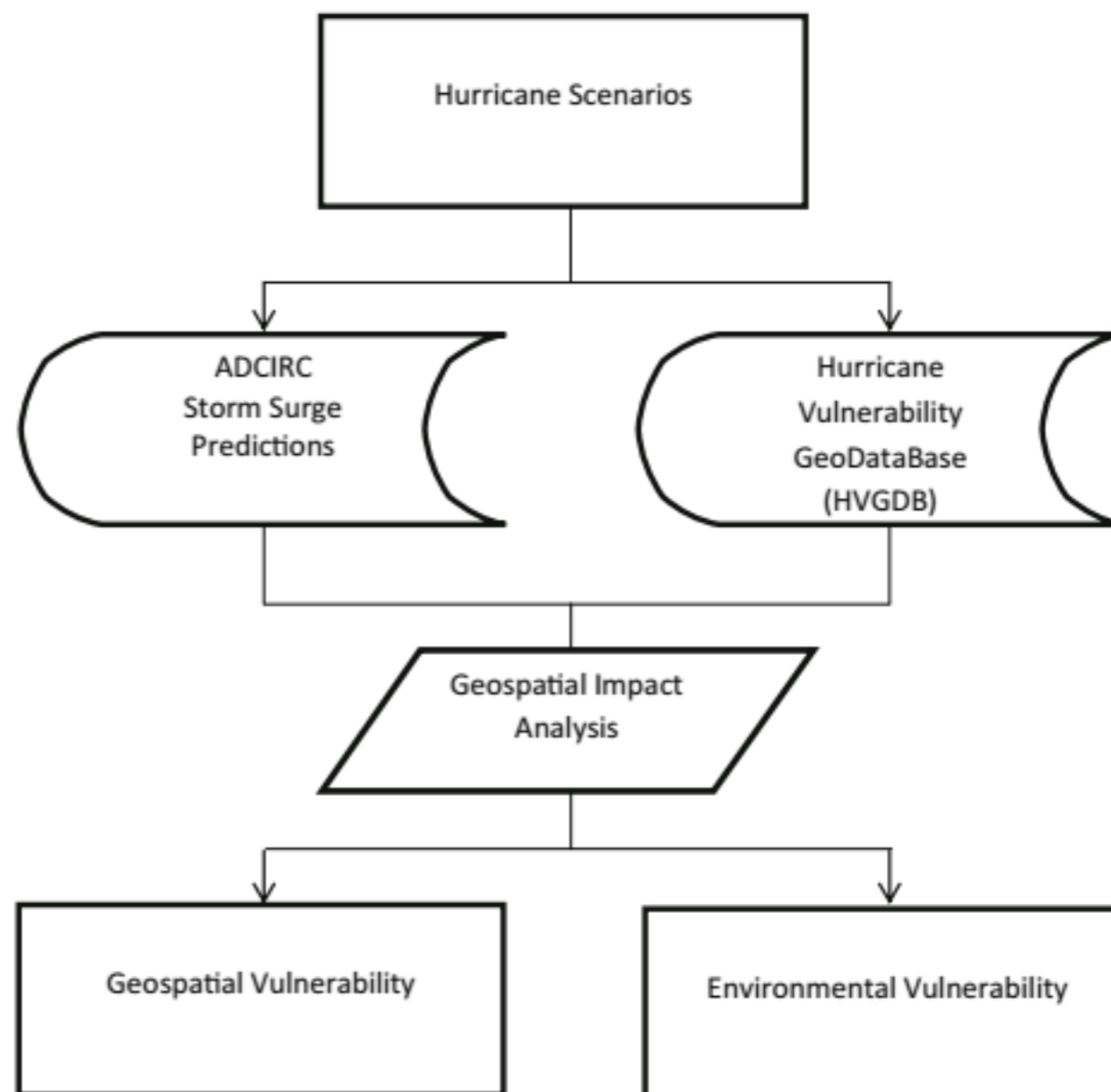


Fig. 2 A schematic of the conceptual model developed for characterizing vulnerabilities to storm surge

2.2 SWAN + ADCIRC storm surge predictions

This modeling system has been successfully validated for recent hurricanes Katrina, Rita, Gustav, and Ike (Westerink et al. 2008; Zijlema 2010; Dietrich et al. 2010; Dietrich et al. 2011a, b; Hope et al. 2013). When compared to observed high-water marks from Hurricane Ike, for instance, 94 % of modeled high-water marks were within 0.50 m of the measured values (Hope et al. 2013).

Inputs to SWAN–ADCIRC include a data assimilated Ocean Wind Field (OWF) and a high resolution computational domain encompassing the Western North Atlantic, Gulf of Mexico and Caribbean Sea. The unstructured finite element mesh incorporates a significant amount of detail around the Houston–Galveston region and consists of 3,323,388 nodes with resolution down to 30 m in the nearshore. The grid represents a subset of the grid (SL18TX33) presented in Hope et al. (2013) without the refinement that was undertaken for Louisiana. Storm surge data for calibration with 206 verified data locations that were derived from several sources including the US Geological Survey (USGS), the National Oceanic and Atmospheric Organization (NOAA), Texas Coastal Ocean Observation Network (TCOON), and the State of Louisiana Coastwide Reference Monitoring Station (CRMS).

2.3 HSC-IC Hurricane Vulnerability GeoDataBase (HVGDB)

A specialized GIS geodatabase was developed in this research that includes topography, parcel boundaries, and critical infrastructure in the HSC-IC. The main purpose of developing the HSC-IC Hurricane Vulnerability GeoDataBase (HVGDB) was to link the modeled storm surge from the scenarios described in the previous section with the geospatial land use, topography, industrial facility, and environmental data. The HVGDB can be envisioned as a tool to analyze, interpret, map, and store the resulting vulnerabilities that can also serve as a means of communication and decision-making among its users (e.g., scientists, engineers, hurricane modelers, decision makers). Therefore, while not all

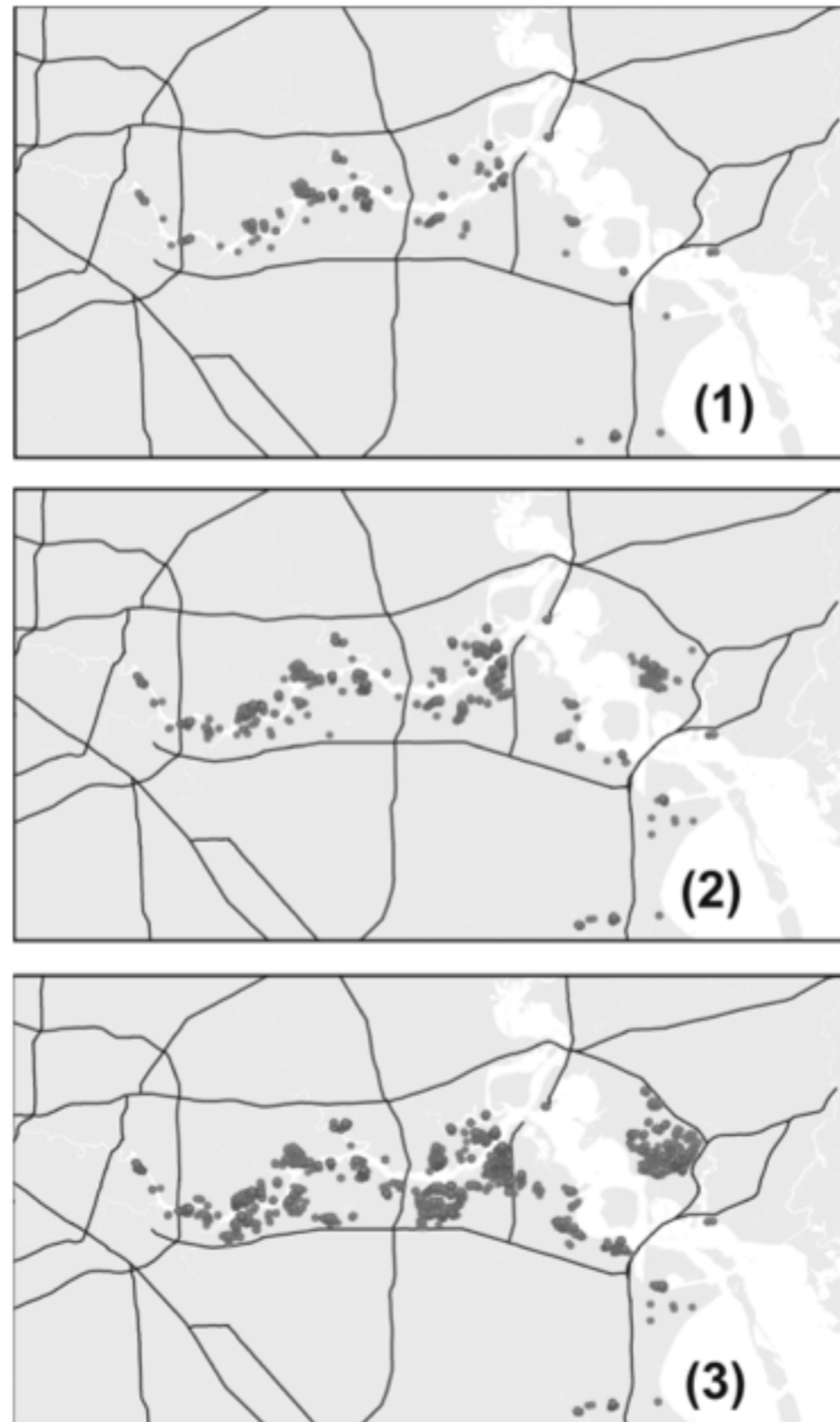
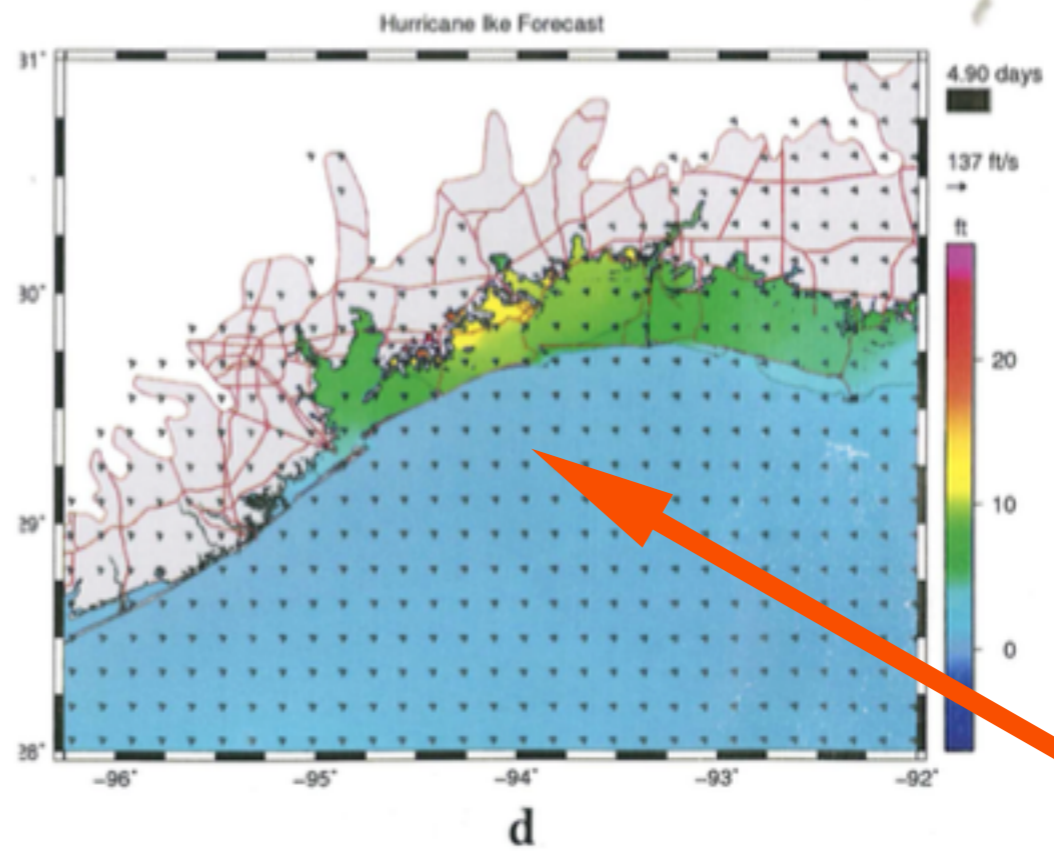
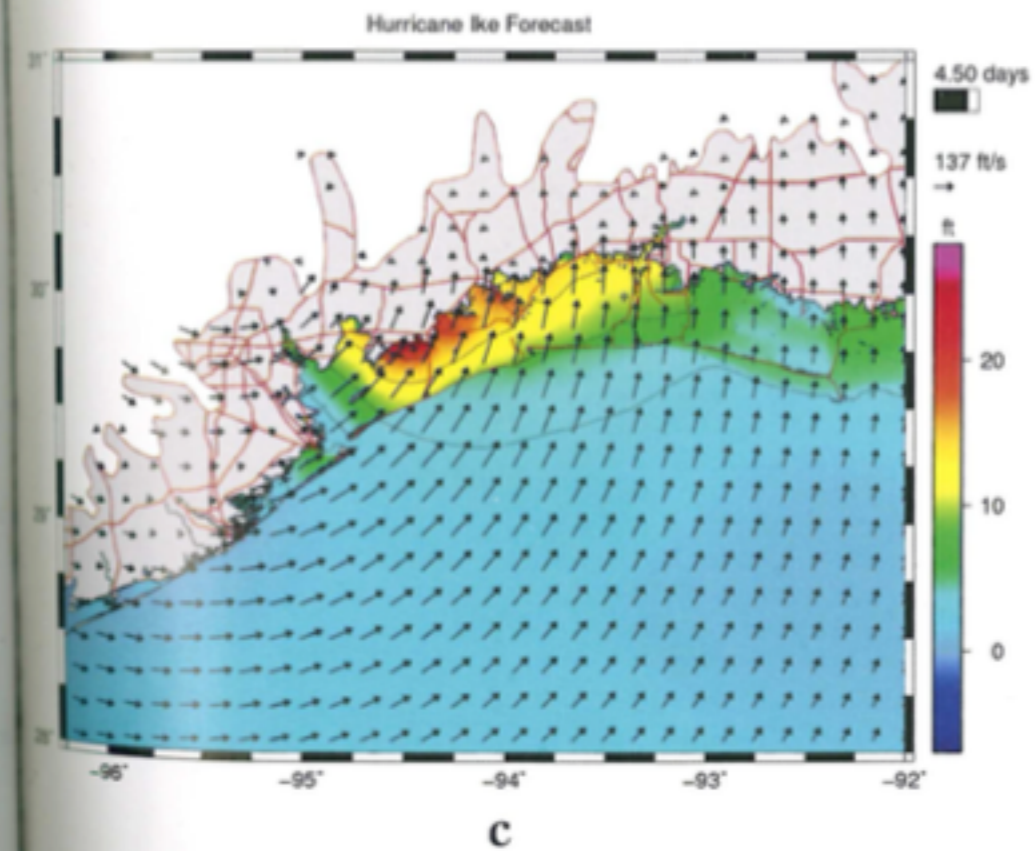
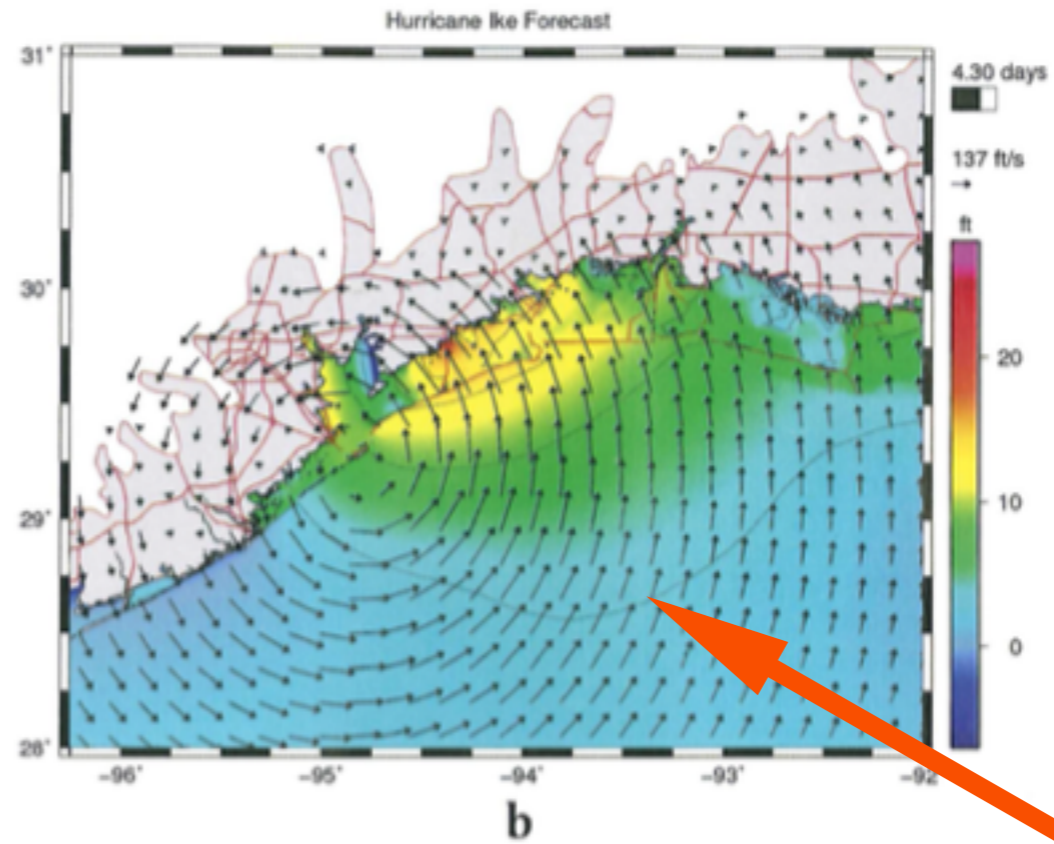
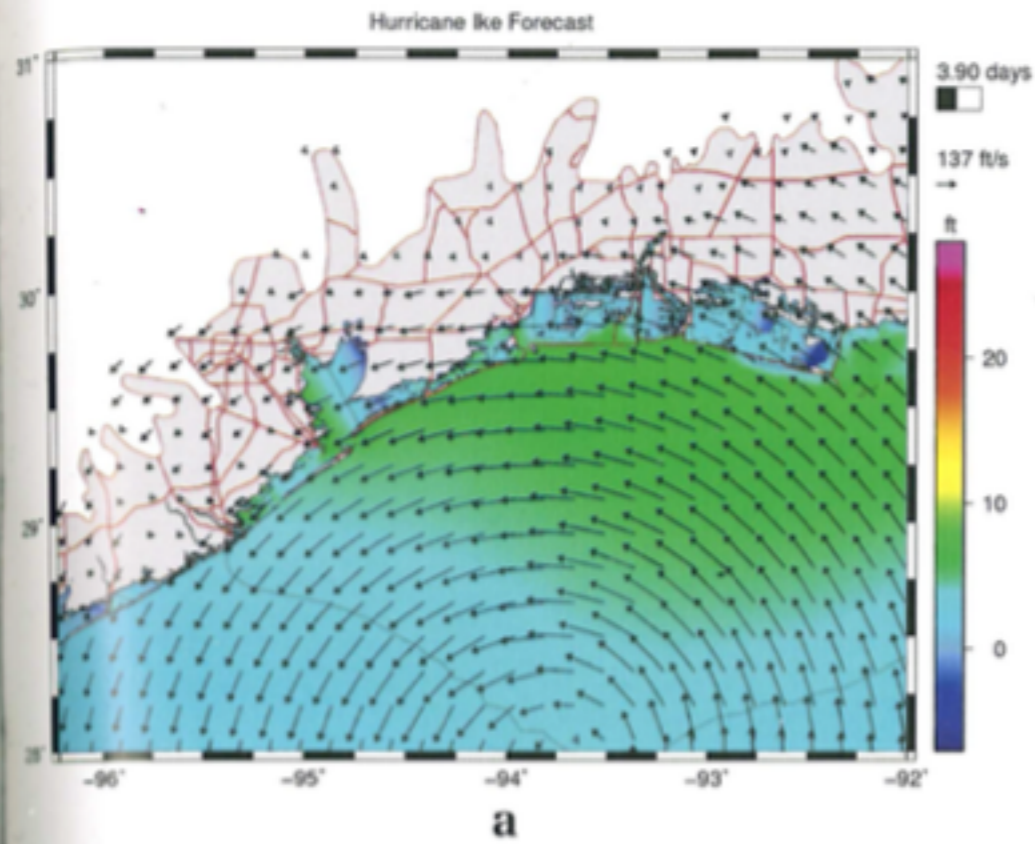


Fig. 7 Inundated tanks for the modeled scenarios. The dots represent tanks that would be inundated based on their elevation and storm surge level—Hurricane Ike (*panel 1*), Hurricane Ike at point 7 (*panel 2*), and Hurricane Ike at point 7 with 30 % increase in wind speed (*panel 3*)



windy

calm

Figure 5.6a-d. The ADCIRC model maps the progression of Hurricane Ike as it makes landfall, showing wind vectors and inundation levels along the Texas coast.



Characterizing hurricane storm surge behavior in Galveston Bay using the SWAN + ADCIRC model



Antonia Sebastian^{a,*}, Jennifer Proft^b, J. Casey Dietrich^d, Wei Du^b, Philip B. Bedient^a, Clint N. Dawson^{b,c}

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^b Institute for Computational Engineering Sciences, The University of Texas, Austin, TX, United States

^c Department of Aerospace Engineering and Engineering Mechanics, The University of Texas, Austin, TX, United States

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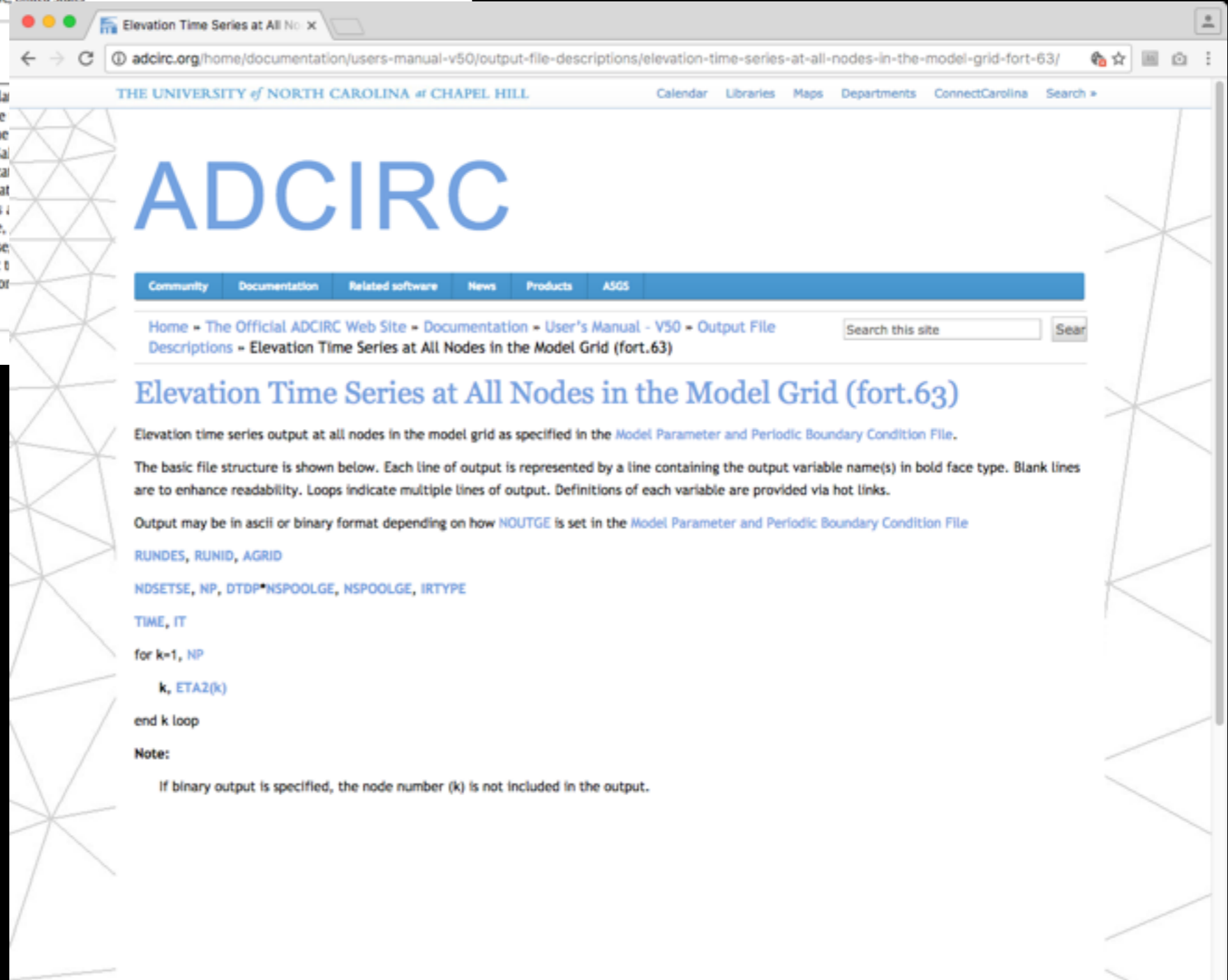
Storm surge

Forerunner

Hydrograph

ABSTRACT

The SWAN + ADCIRC shallow-water circular five synthetic storm surge scenarios for the location was shifted 40 km westward. The study the maximum water elevations in Galveston Bay along the hurricane track. Sixteen locations indicated for analysis in this paper. Results show that by the counterclockwise hurricane winds a 23% (+/- 3%) higher surge. Furthermore, more populated areas due to more intense vulnerability of the upper Texas Gulf Coast to mitigation studies in the Houston-Galveston



The screenshot shows a web browser window displaying the ADCIRC documentation page. The browser's address bar shows the URL: adcirc.org/home/documentation/users-manual-v50/output-file-descriptions/elevation-time-series-at-all-nodes-in-the-model-grid-fort-63/. The page header includes "THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL" and navigation links for "Calendar", "Libraries", "Maps", "Departments", "ConnectCarolina", and "Search". The main heading is "ADCIRC" in large blue letters. Below it is a navigation menu with "Community", "Documentation", "Related software", "News", "Products", and "ASGS". The breadcrumb trail reads: "Home - The Official ADCIRC Web Site - Documentation - User's Manual - V50 - Output File Descriptions - Elevation Time Series at All Nodes in the Model Grid (fort.63)". The page title is "Elevation Time Series at All Nodes in the Model Grid (fort.63)". The main text explains that the page shows elevation time series output at all nodes in the model grid as specified in the "Model Parameter and Periodic Boundary Condition File". It notes that the basic file structure is shown below, with each line of output represented by a line containing the output variable name(s) in bold face type. Blank lines are used to enhance readability, and loops indicate multiple lines of output. Definitions of each variable are provided via hot links. The output may be in ASCII or binary format depending on how "NOUTGE" is set in the "Model Parameter and Periodic Boundary Condition File". The output format is shown as follows:

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RUNDES, RUNID, AGRID
NDSETSE, NP, DTD*NSPOOLGE, NSPOOLGE, IRTYPE
TIME, IT
for k=1, NP
    k, ETA2(k)
end k loop
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Note:
If binary output is specified, the node number (k) is not included in the output.



Catalog <http://opendap.renci.org> X

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Catalog <http://opendap.renci.org:1935/thredds/catalog/ASGS/catalog.html>

Dataset **Size** **Last Modified**

ASGS		--
zack/		--
two/		--
test.ncml		2016-09-22 19:48:07Z
solutions/		--
sandy/		--
run.me		2015-03-16 17:49:56Z
phil/		--
nine/		--
nam/		--
matthew/		--
katrina/		--
karen/		--
julia/		--
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isabel/		--
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connectCarolina Search

Search

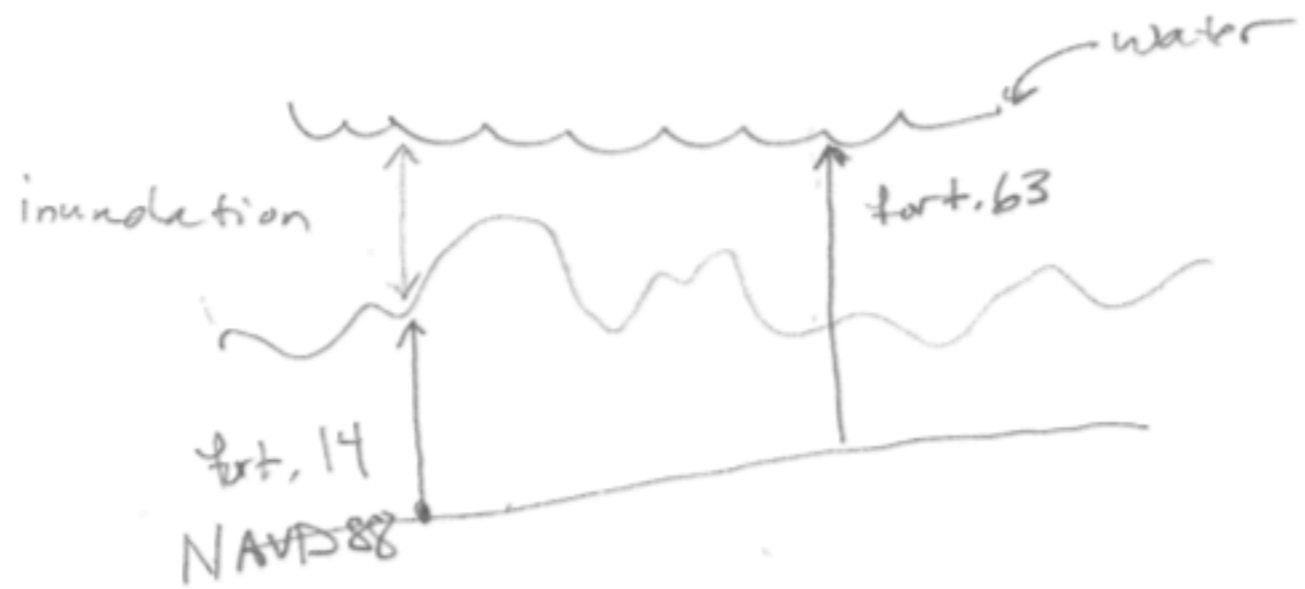
face type. Blank lines

File



**Step 3: Contact the
researcher. Get on a plane
if you can.**

ncdump



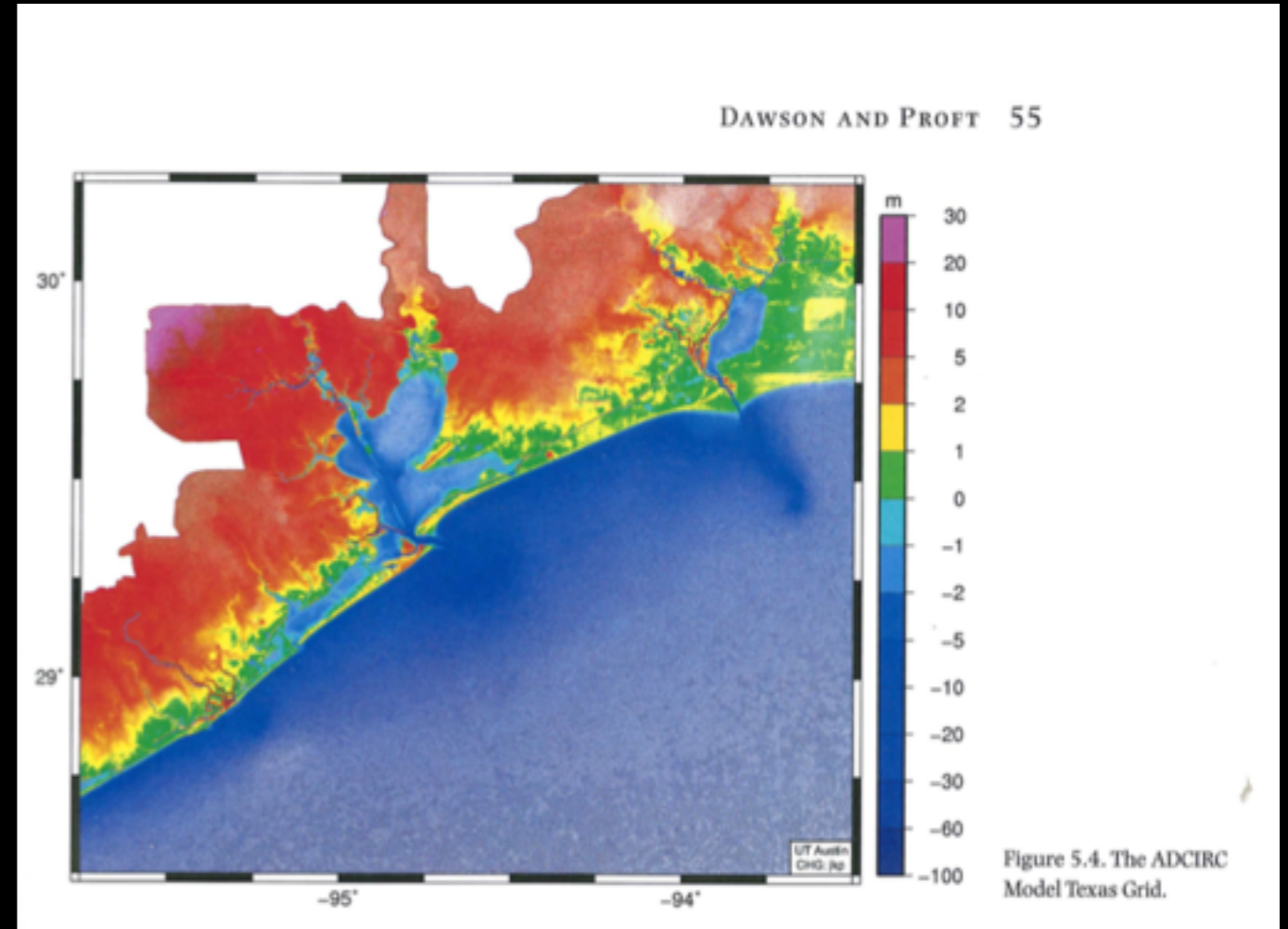
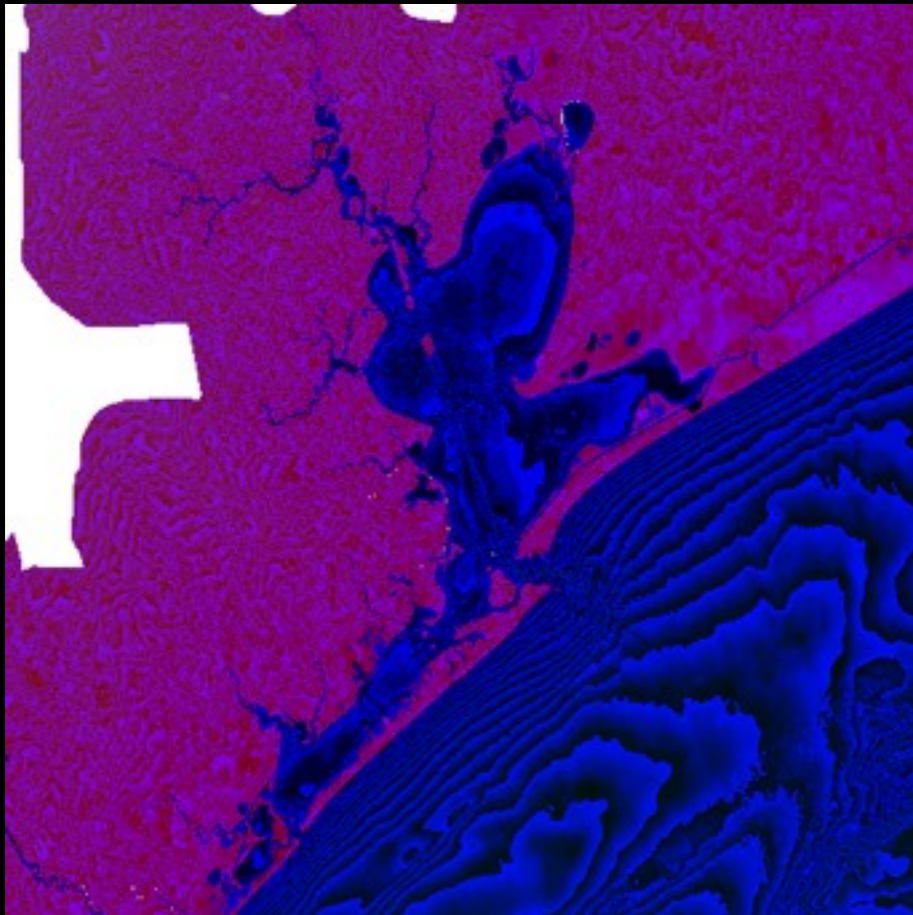
**Once you get the data,
make sure it matches the
paper!**

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tx2008_r35h
3666307 1846542
1 -95.2348460000 29.8469070000 -12.6699990000
2 -95.2344780000 29.8445710000 -12.0169990000
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4 -95.2354060000 29.8477430000 -12.7420000000
5 -95.2356890000 29.8466290000 -12.6150000000
6 -95.2349510000 29.8436950000 -11.6780000000
7 -95.2354200000 29.8446890000 -12.0449990000
8 -95.2347630000 29.8457650000 -12.3539980000

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lon lat depth



**Think about how to make
the findings accessible to a
wider audience.**

- Color
- Labels
- Annotation
- Context

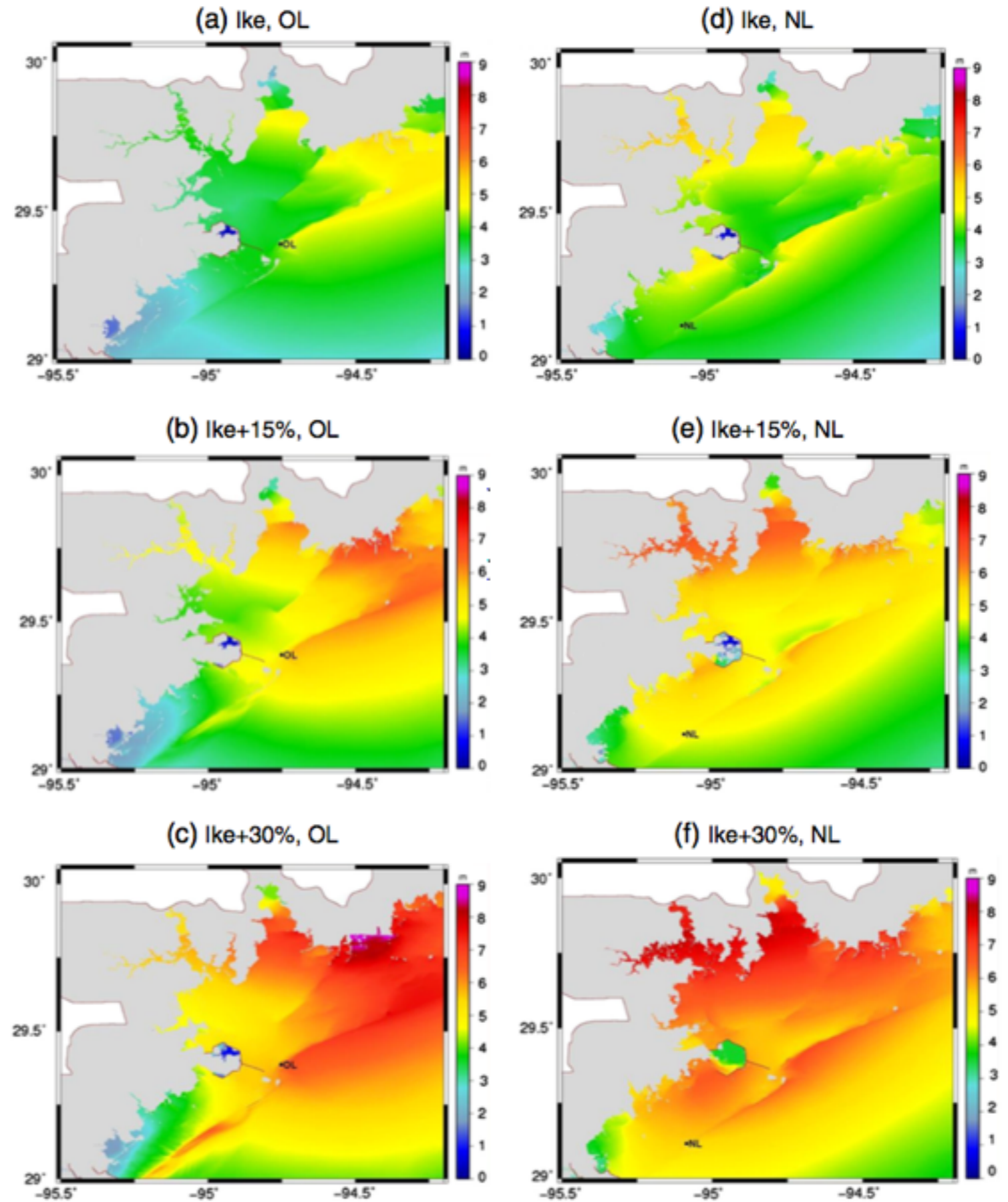
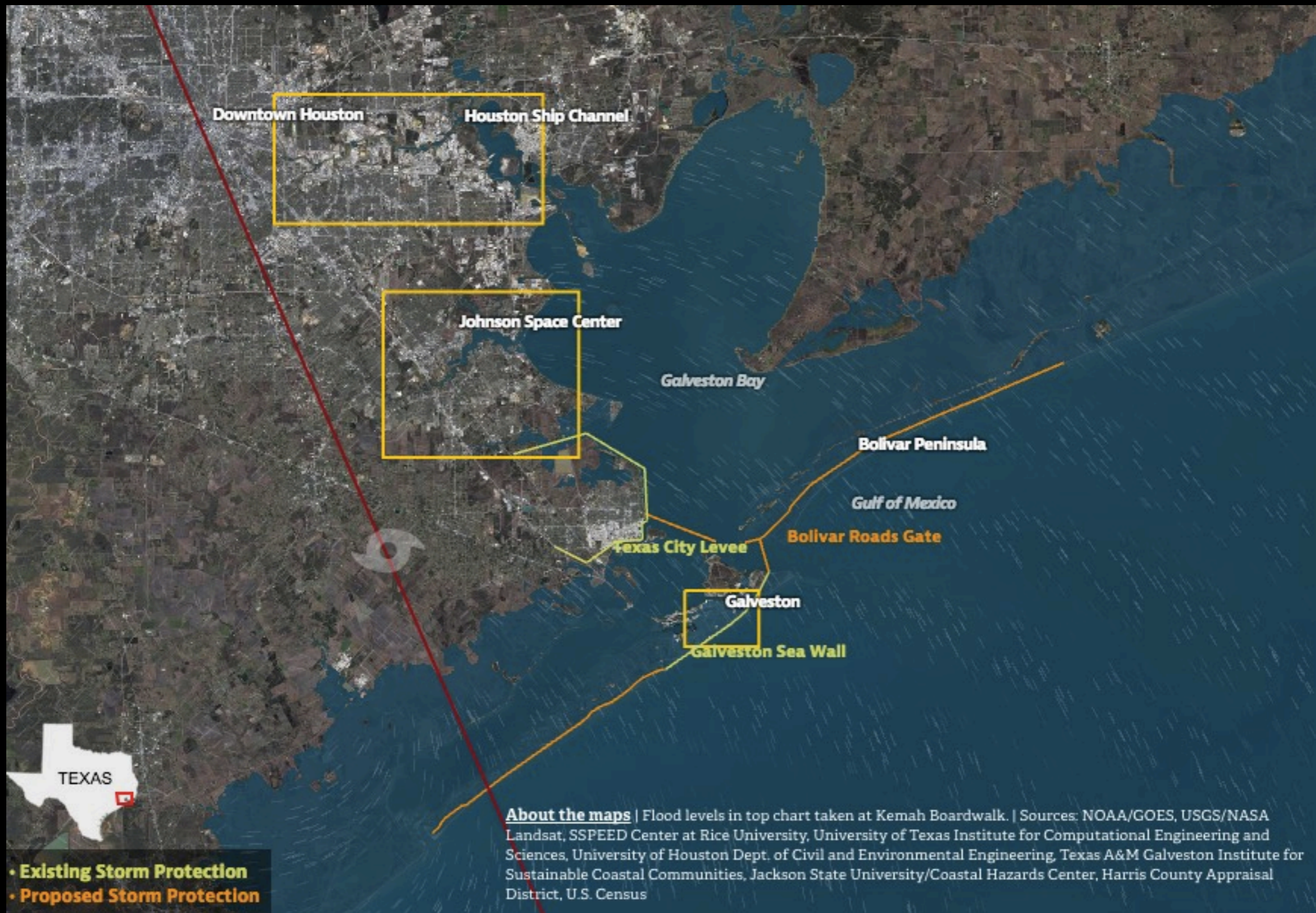


Fig. 9. Maximum water surface elevations from ADCIRC + SWAN for the Hurricane Ike original, +15%, and +30% wind scenarios at the original landfall (OL) and new landfall (NL) locations. a. Ike, OL. b. Ike + 15%, OL. c. Ike + 30%, OL. d. Ike, NL. e. Ike + 15% NL. f. Ike + 30%, NL.

Where is the coastline
in these maps?



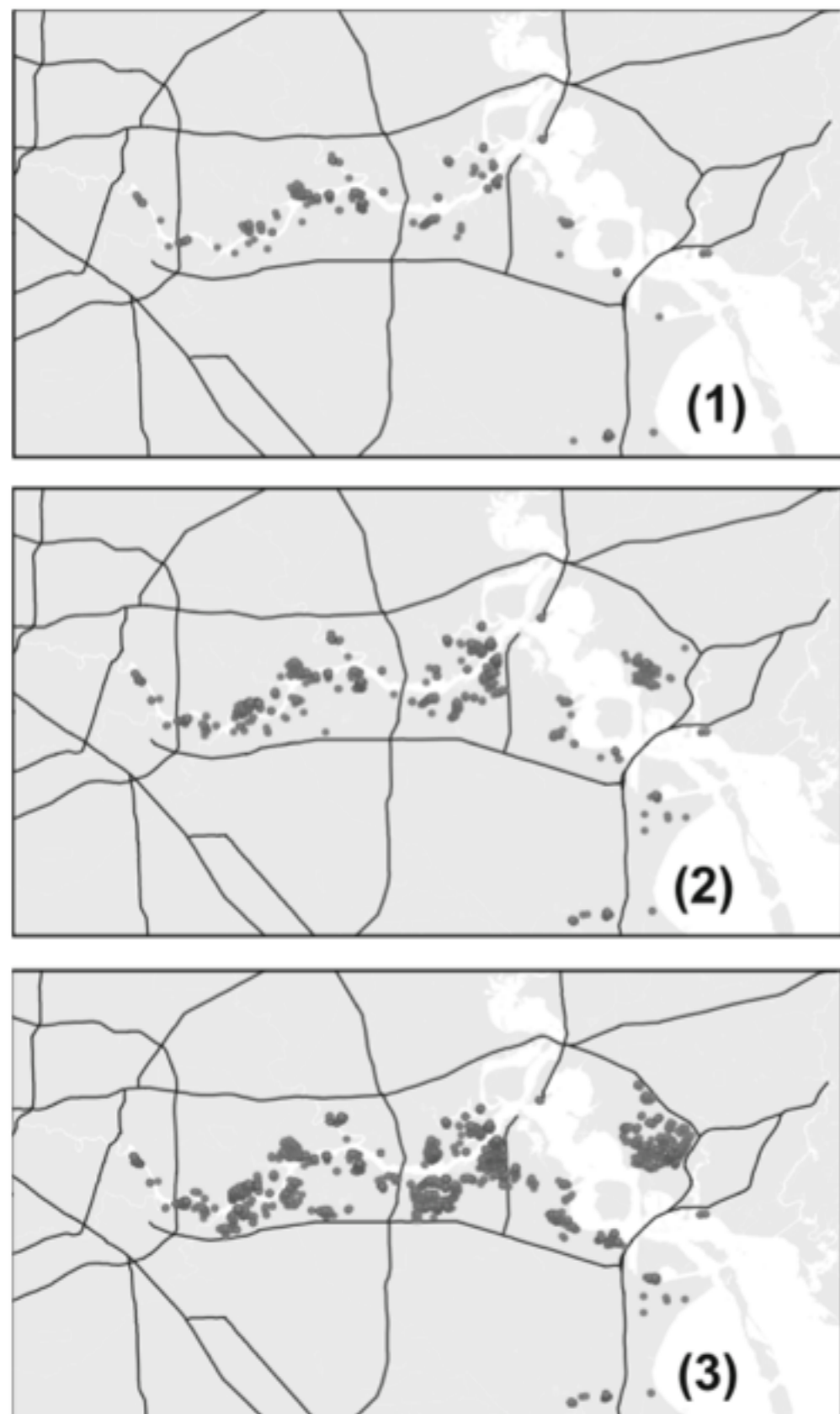


Fig. 7 Inundated tanks for the modeled scenarios. The dots represent tanks that would be inundated based on their elevation and storm surge level—Hurricane Ike (*panel 1*), Hurricane Ike at point 7 (*panel 2*) and Hurricane Ike at point 7 with 30 % increase in wind speed (*panel 3*)

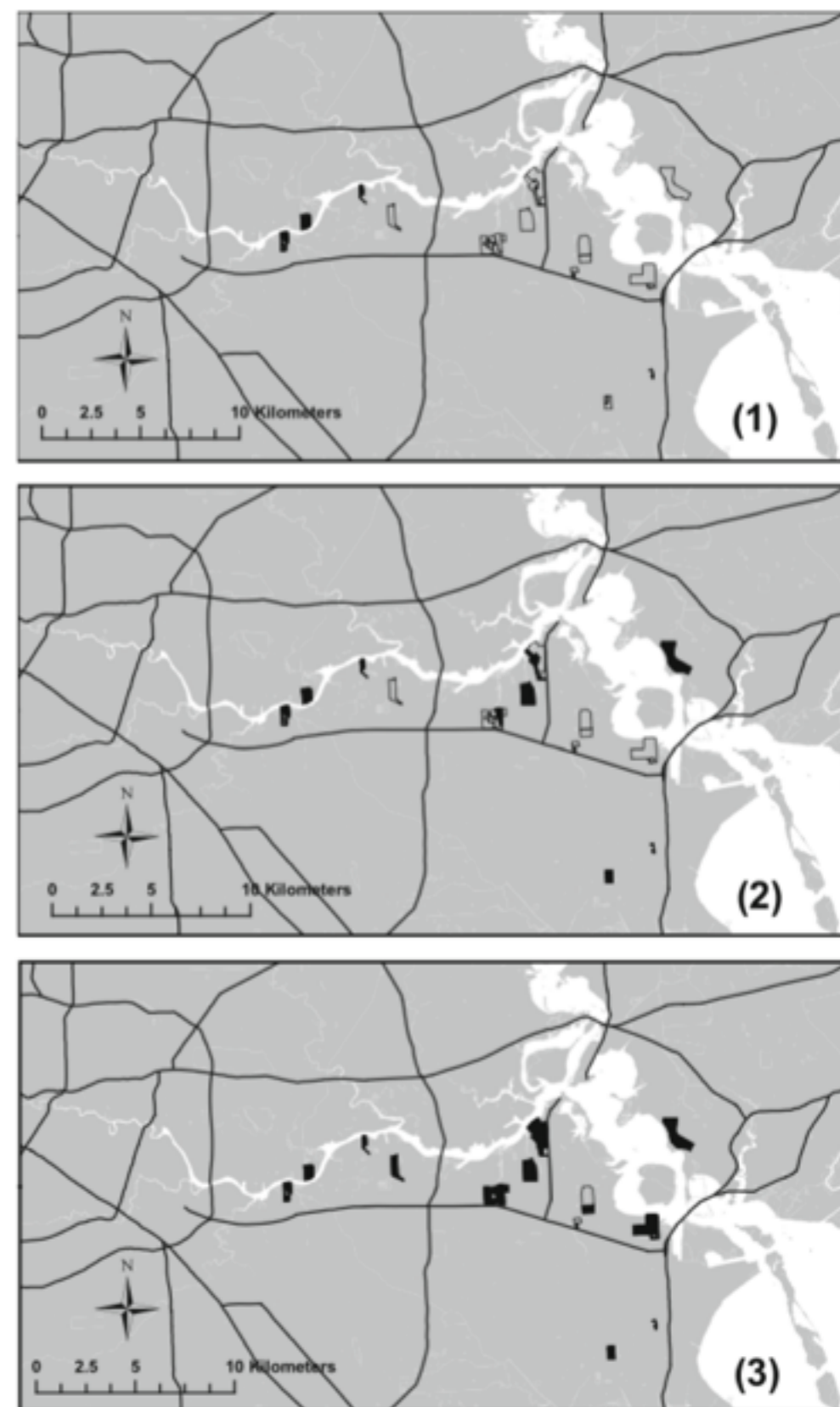
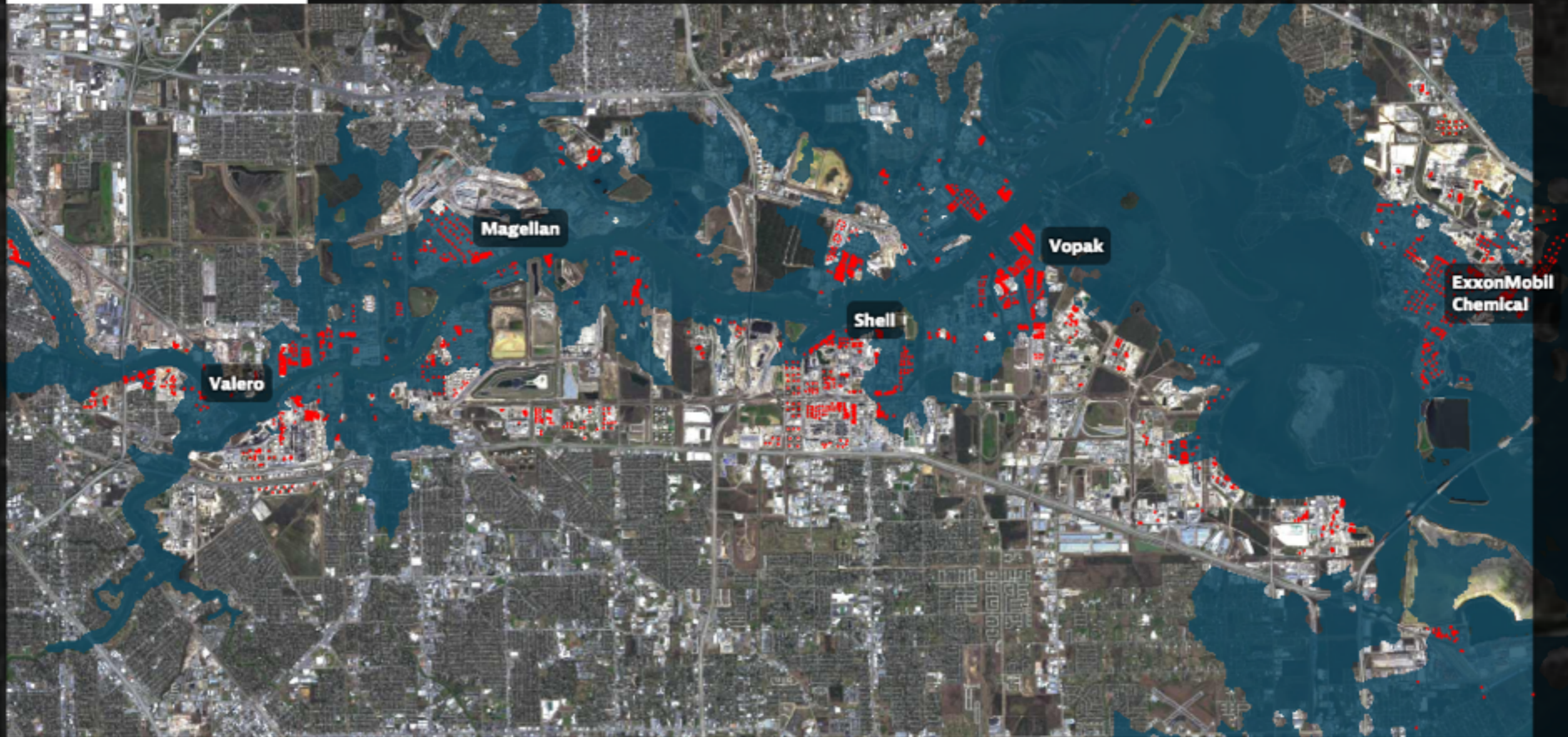


Fig. 10 RMP reporting facilities with relatively high environmental vulnerability due to stored toxic volumes and high geospatial vulnerability due to inundation. Facilities in solid black represent RMP reporting facilities that are the most vulnerable to releases to the environment due to storm surge from Hurricane Ike (*panel 1*), Hurricane Ike at point 7 (*panel 2*), and Hurricane Ike at point 7 with 30 % increase in wind speed (*panel 3*)

Houston Ship Channel

« Back to Greater Houston



Adding context

Why Isn't Texas Ready for the ...

https://projects.propublica.org/houston/#hsc

PRO PUBLICA THE TEXAS TRIBUNE Hell and High Water Plain Text Version Facebook Twitter Donate

16 Hours before Landfall Flood Level Storm makes landfall

Storm Scenarios Proposed Solutions

Intro Ike P7 P7+15 36 Mid-Bay Spine 1 Spine 2

See flood levels for a location in Houston

Ex: 1000 Tidal Rd, La Porte, TX



Galveston Greater Houston Clear Lake

Experts want better protections

Murphy Oil's tank wasn't the only one to fail in 2005, and it didn't even cause the largest spill; tanks damaged during Hurricanes Katrina and Rita caused more than 8 million gallons of oil to spill in Louisiana, Mississippi and Texas, according to government estimates.

Some tanks on the Houston Ship Channel were even damaged during Hurricane Ike in 2008, though the storm surge was far smaller than originally anticipated. About 15 feet of water covered the eastern part of Magellan Terminals Holdings' oil storage terminal in Galena Park, right on the Ship Channel, the company reported to the Texas Commission on Environmental Quality.

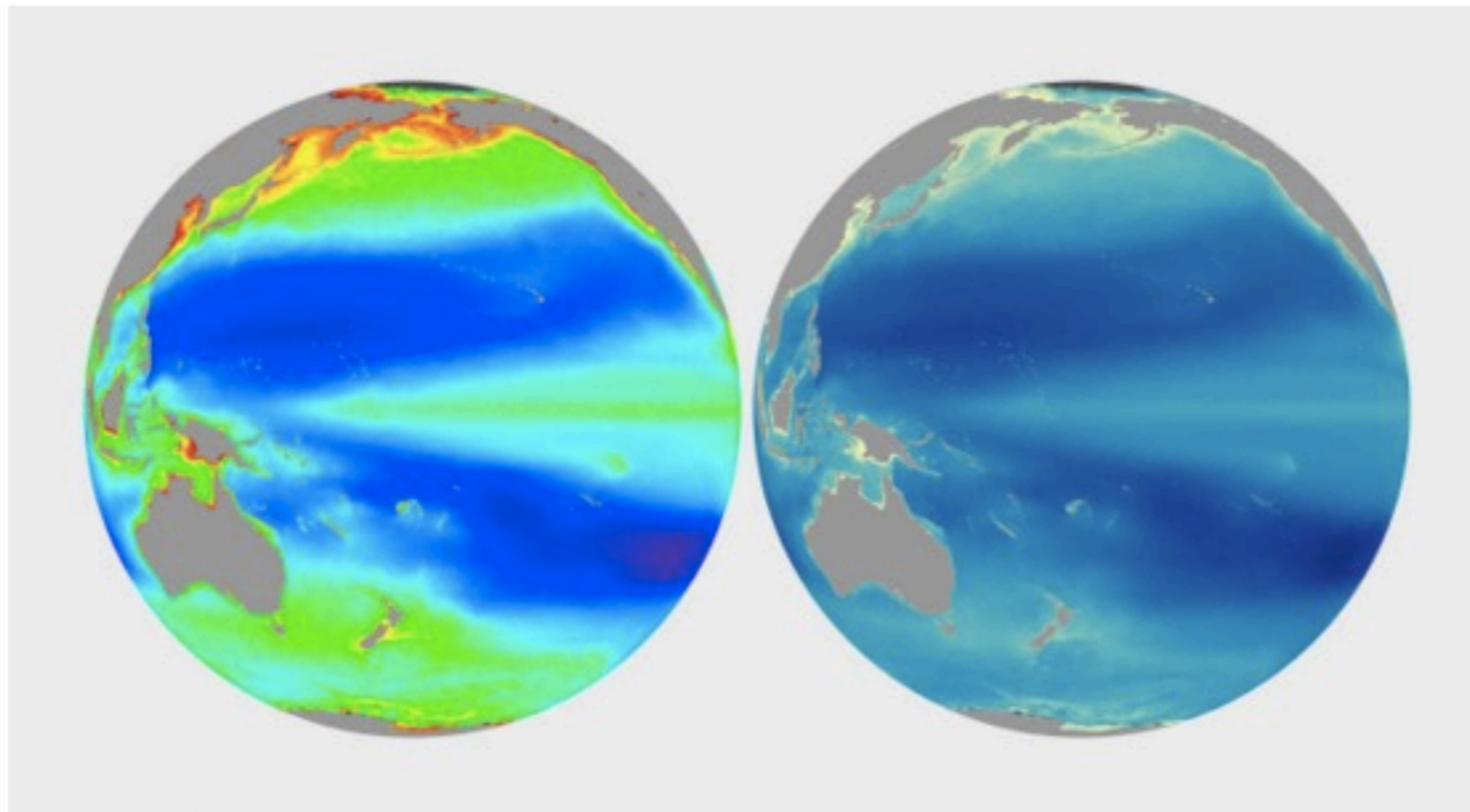
The storm surge and high winds caused damage to several tanks and a spill of nearly 1 million gallons of oil. Some was recovered, but about 300,000 gallons were released into the Ship Channel and "lost at sea," Magellan reported. (The spill didn't appear to impact any homes or businesses in Galena Park.)



"As a community, it would be good if we could come together and have a discussion about" the issue of storage tank safety, said

**Question some things that
are standard practice in
academia.**

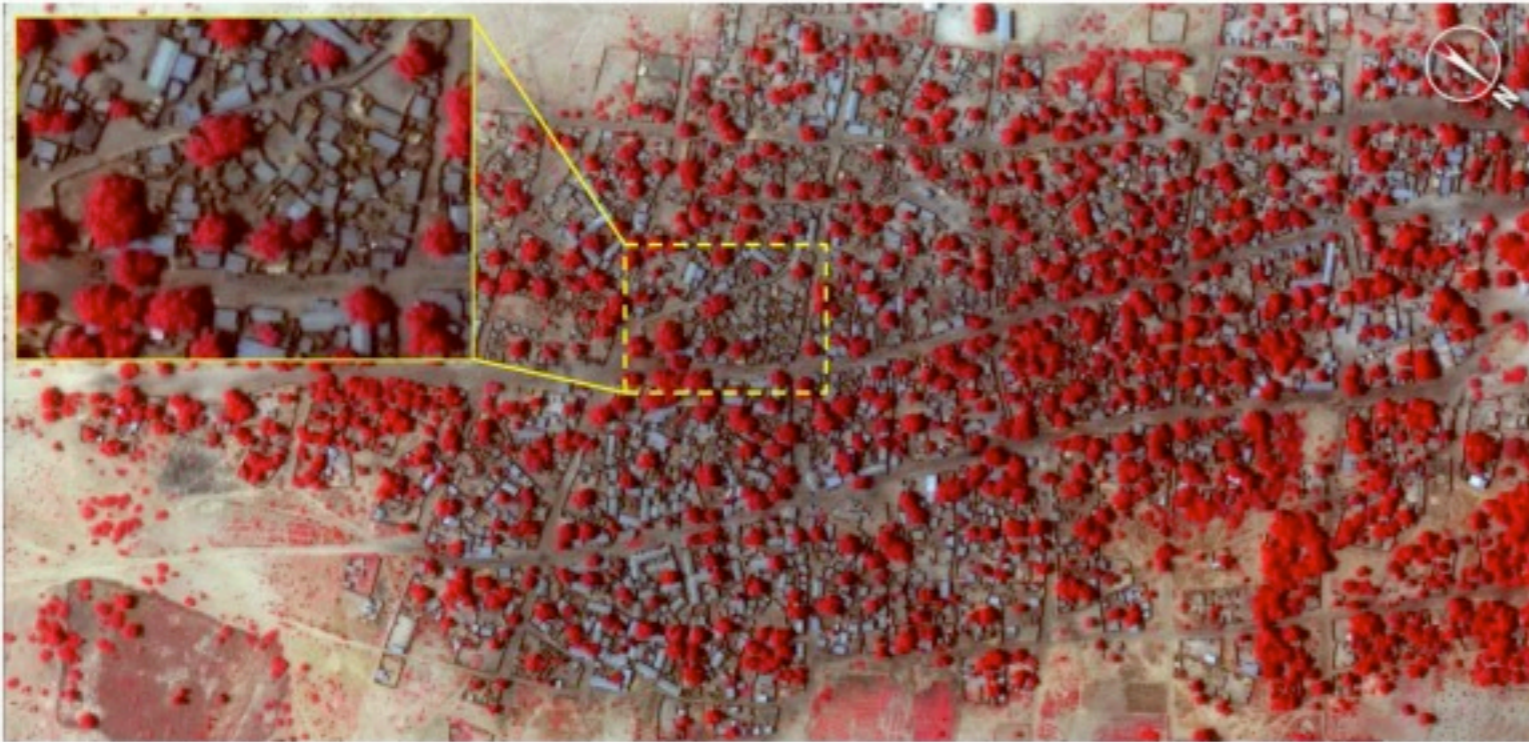
Rob Simmon/NASA



The unnatural colors of the rainbow palette (left) are often difficult for novice viewers to interpret. A more naturalistic palette for phytoplankton (more or less a type of ocean vegetation) trends from dark blue for barren ocean, through turquoise, green, and yellow for increasing concentrations of the tiny plants and algae.

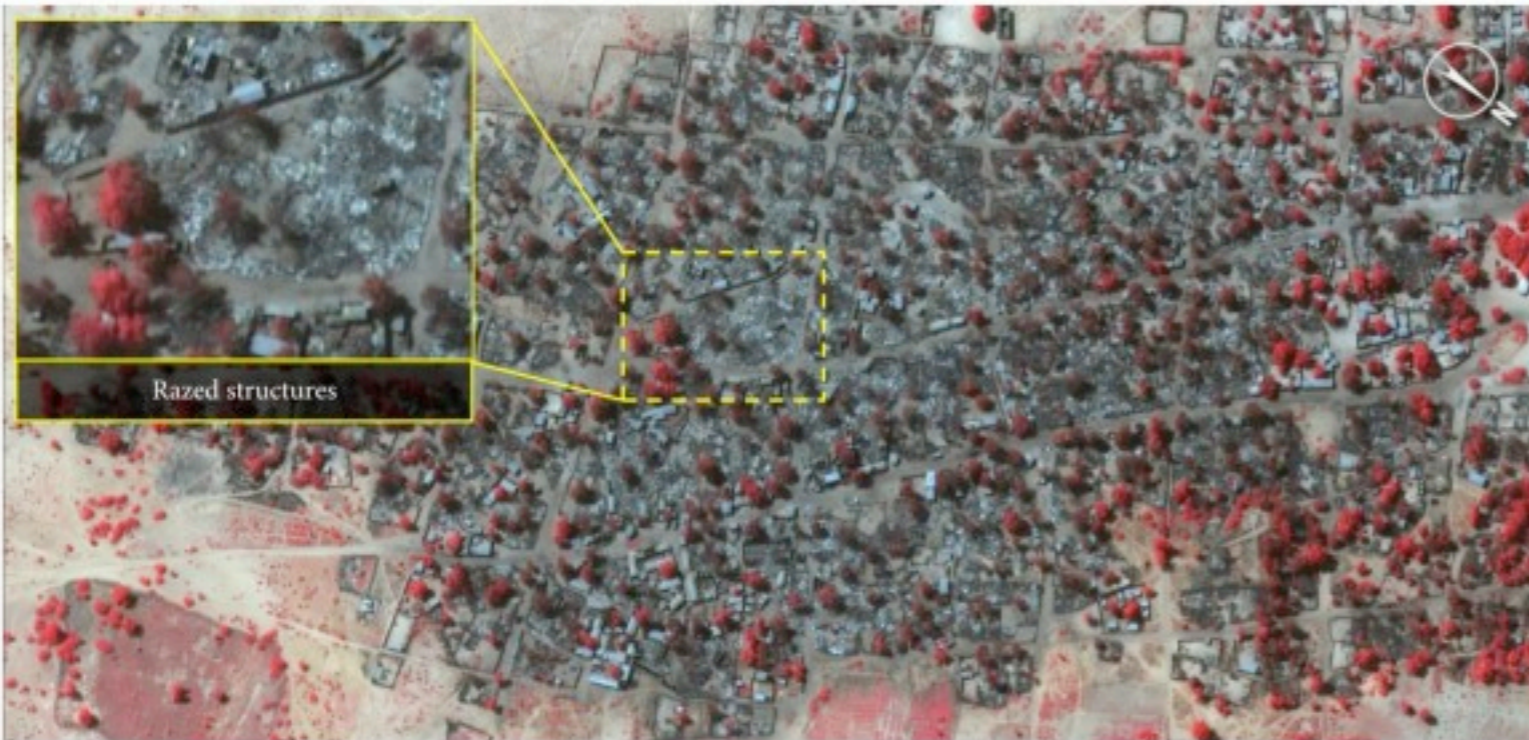
<http://earthobservatory.nasa.gov/blogs/elegantfigures/2013/08/19/subtleties-of-color-connecting-color-to-meaning/>

Original DigitalGlobe



13° 6'33.77"N, 13°52'34.98"E

DigitalGlobe False-Color Infrared Imagery, January 2, 2015



13° 6'33.77"N, 13°52'34.98"E

DigitalGlobe False-Color Infrared Imagery, January 7, 2015

New York Times

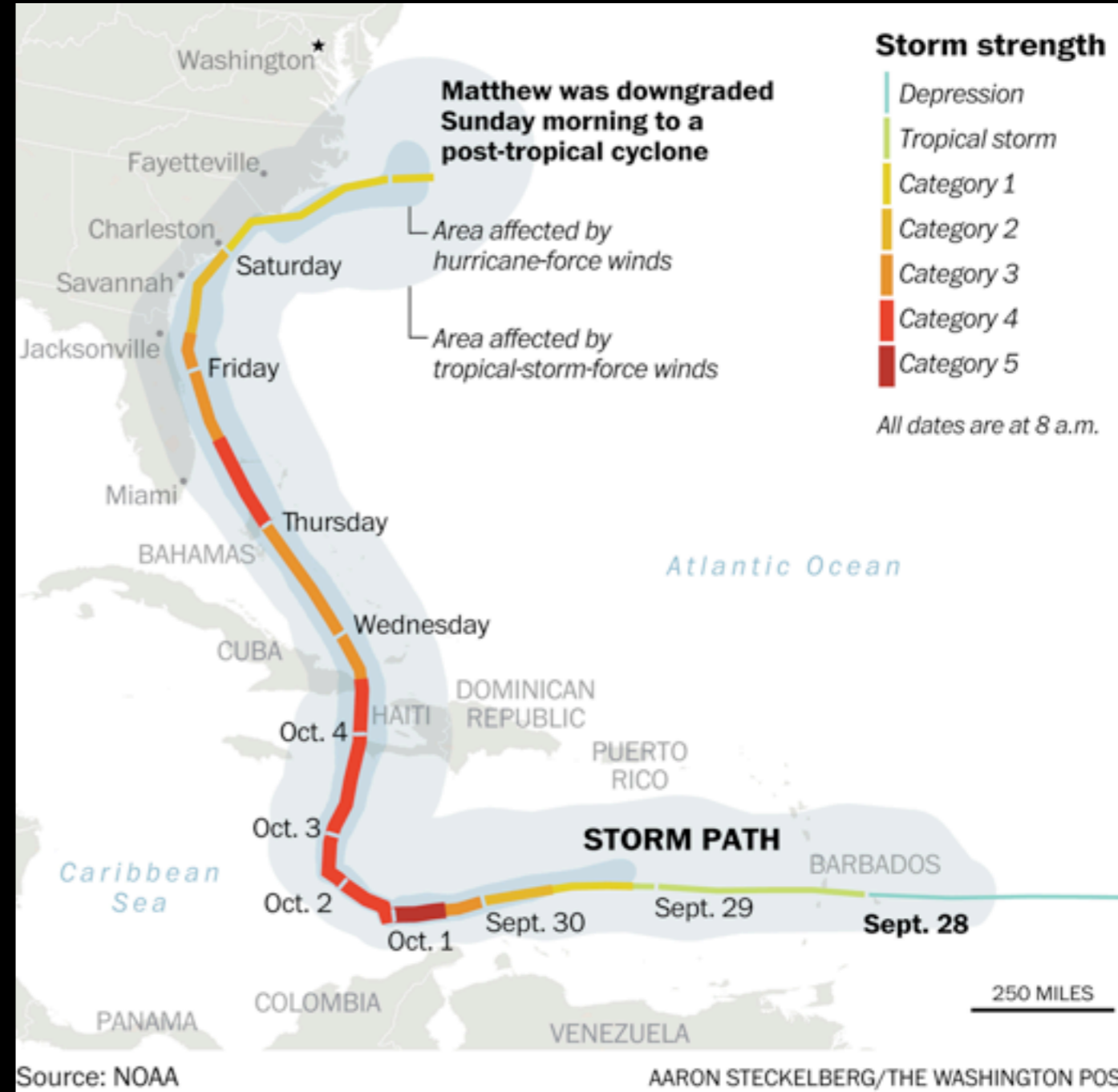


Satellite images taken five days apart show large-scale destruction in Doro Gowon, Nigeria, the home of a now-destroyed military base. Digital Globe

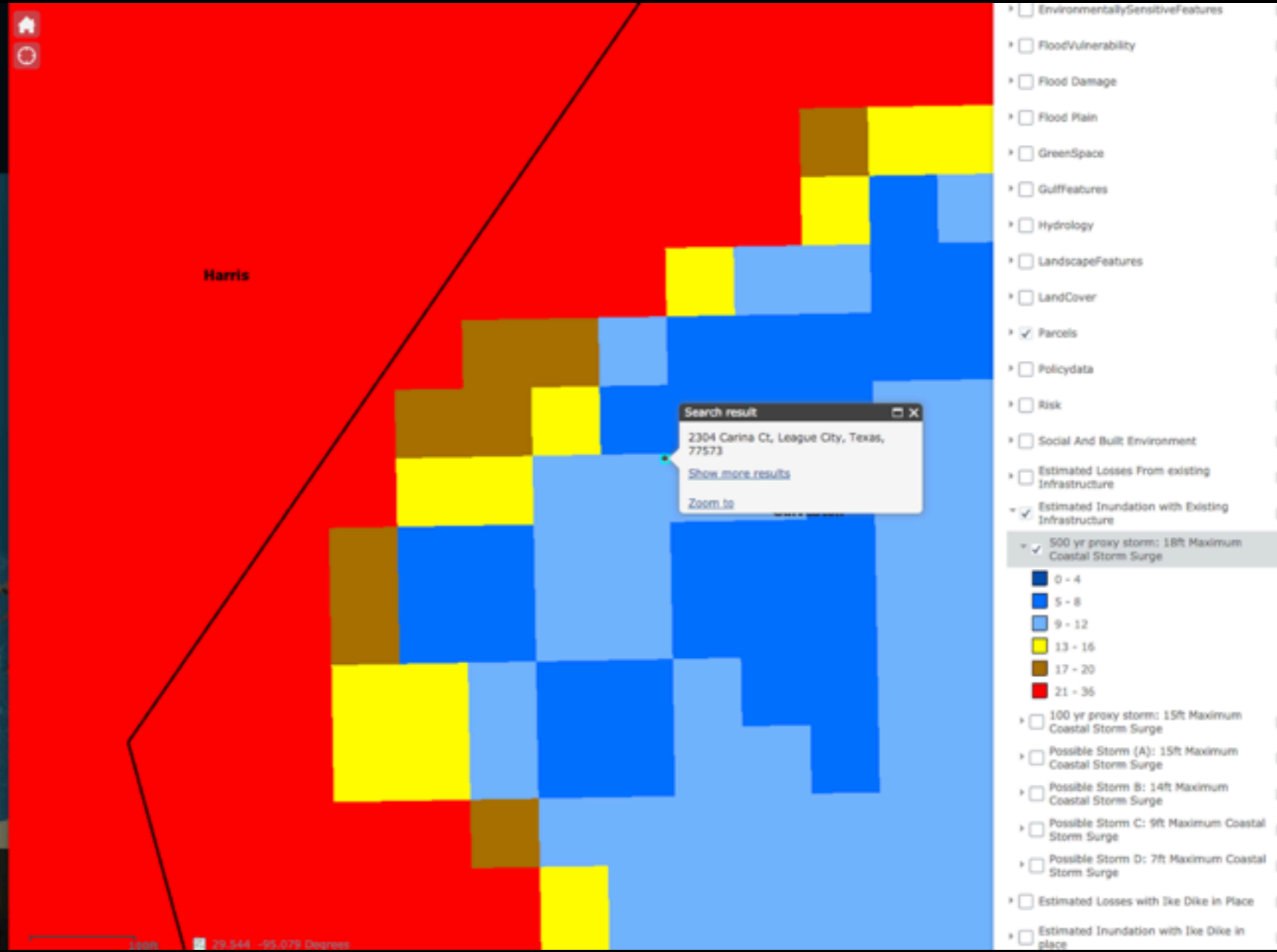
NOAA



Washington Post

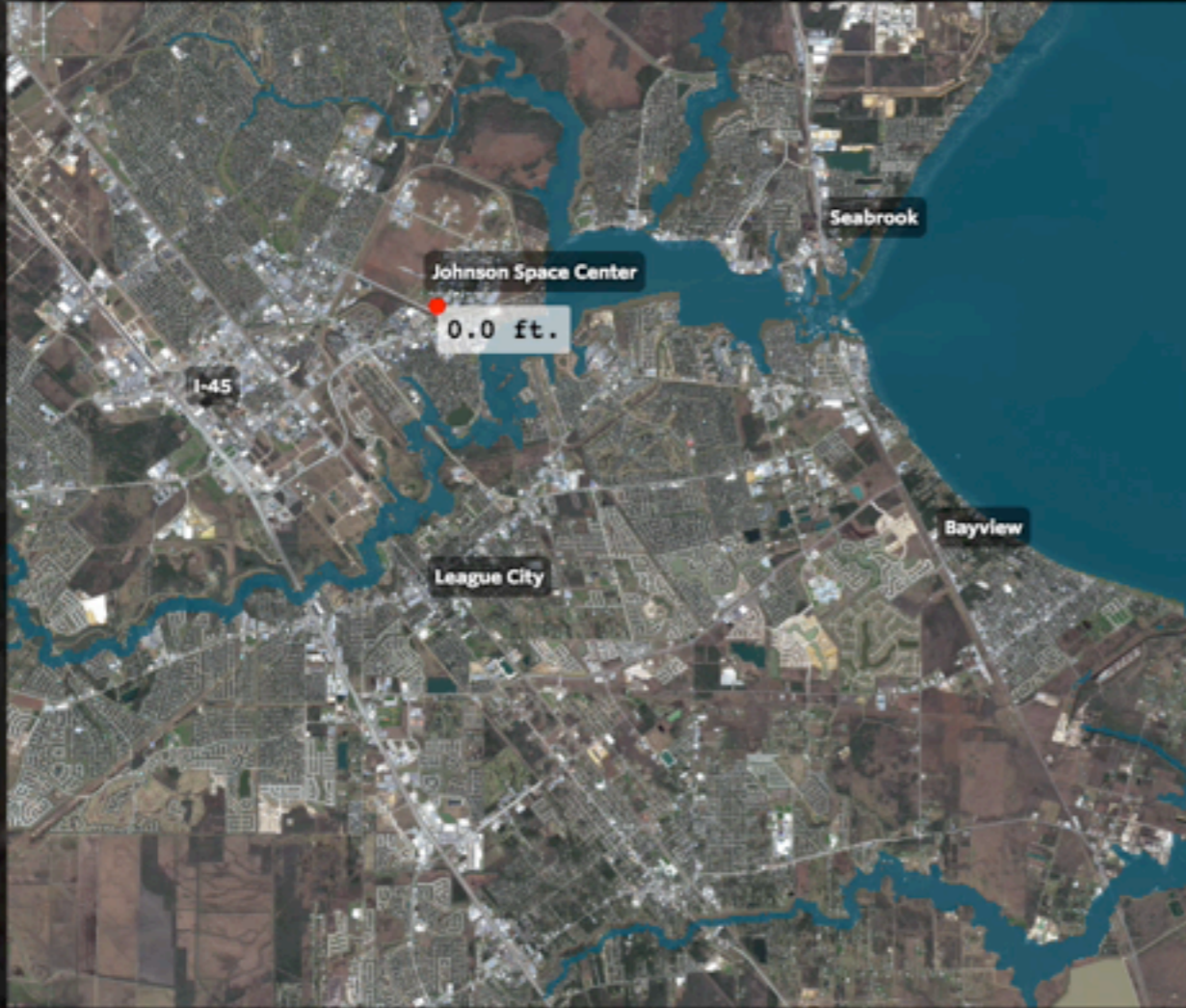


Keep a dialog open as you work, and share your progress (without compromising editorial integrity).



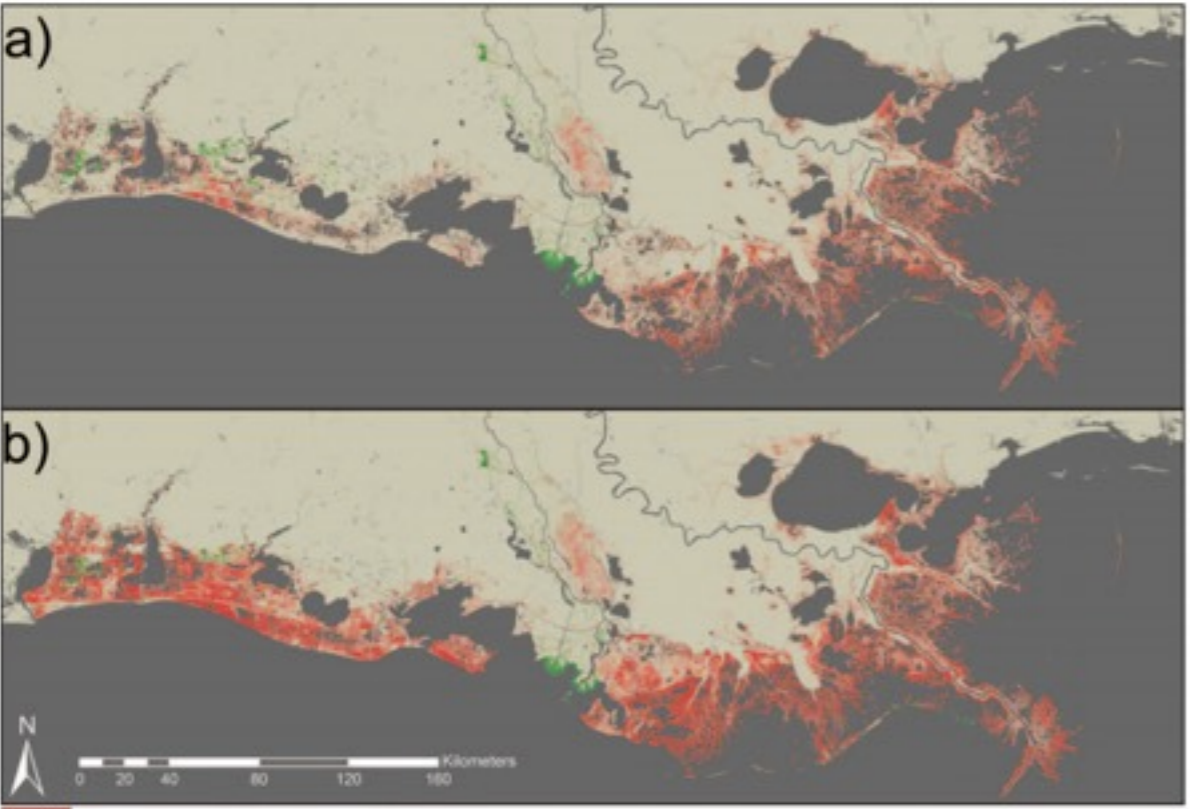
ProPublica

Texas A&M Galveston



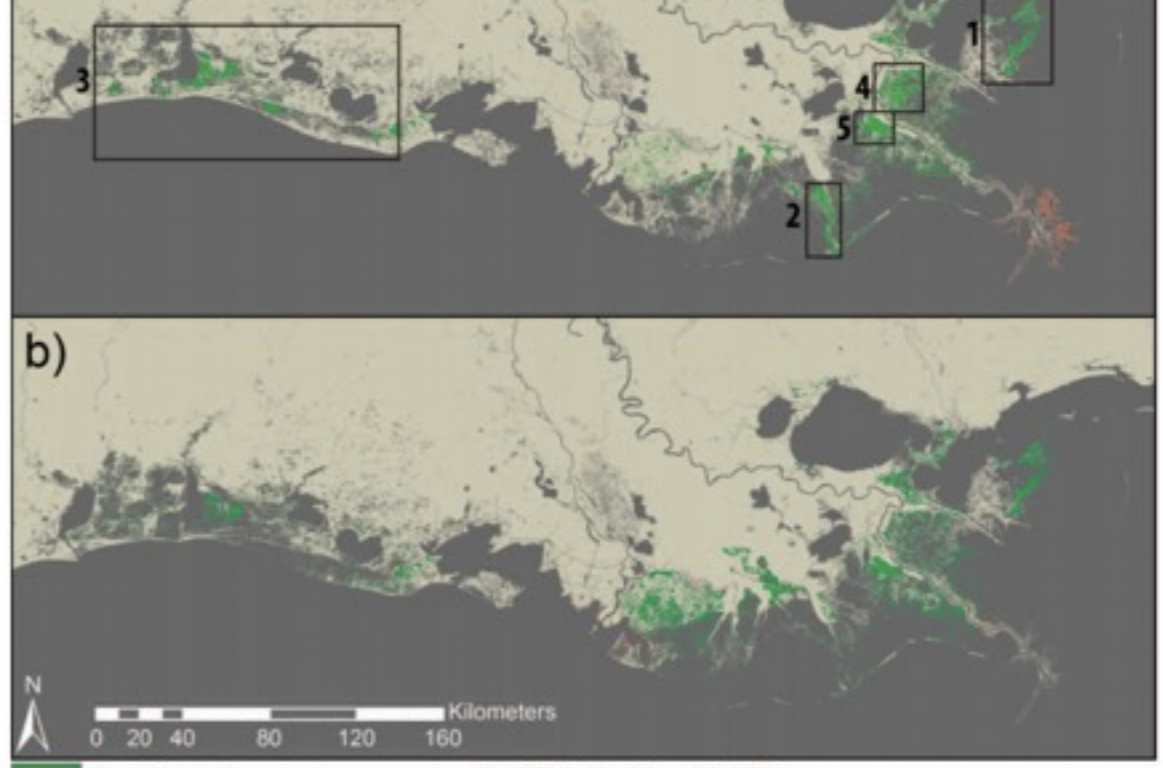
Existing Storm Protection

Sometimes the point you want to make with the data is broader or different than what the paper does.



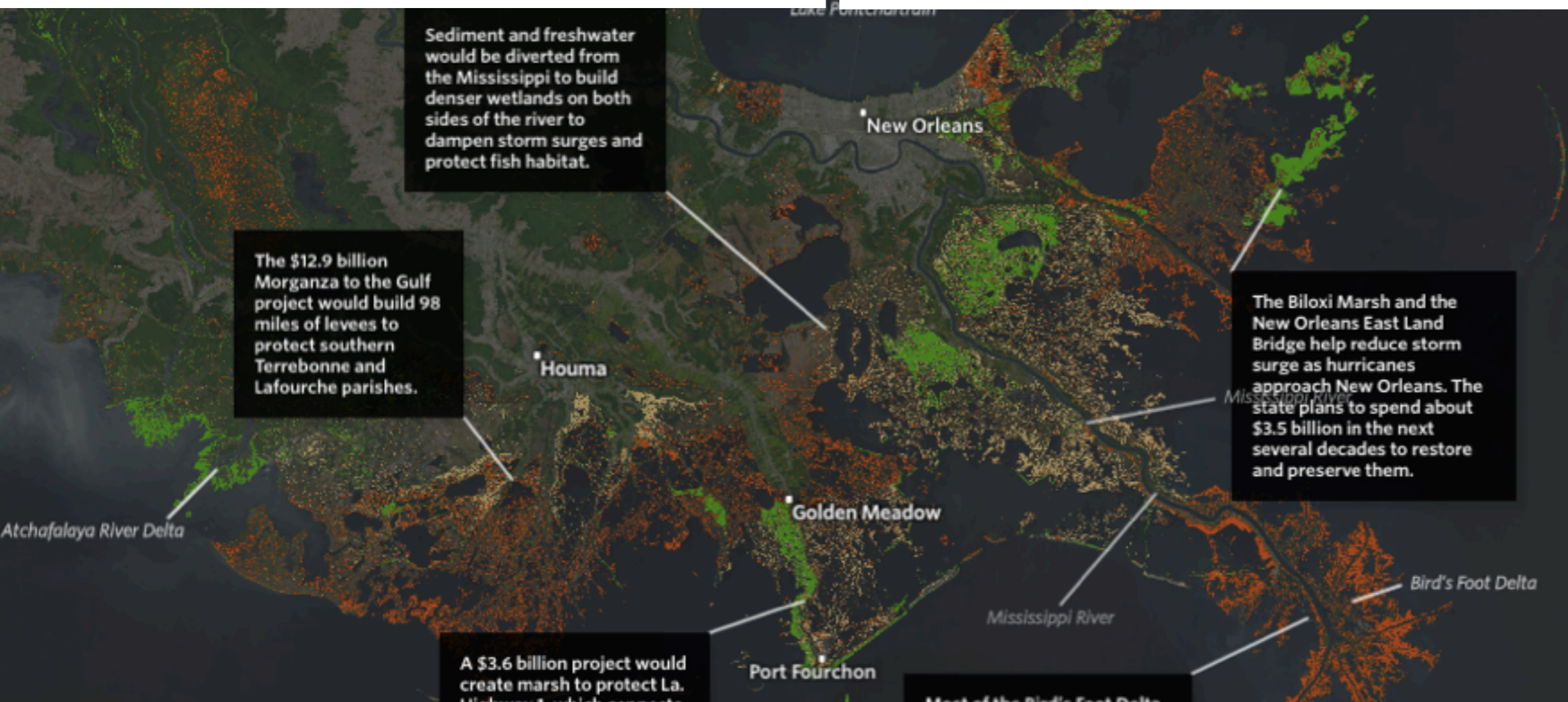
Potential Wetland Loss 2010-2060
Potential Wetland Gain 2010-2060

Figure 3. Map of potential wetland area changes under a "Future-without-action" condition for moderate (a) and less optimistic (b) environmental uncertainty scenarios, 2010-2060.



Land area increases as a result of Master Plan (2060)
Land area decreases as a result of Master Plan (2060)


Figure 6. Projected land area increases and decreases with Master Plan implementation at the end of the simulation period (2060) under moderate (a) and less optimistic (b) environmental uncertainty scenarios. Increases and decreases are calculated by comparing FWOA model results to Master Plan model results in 2060. Locations represent the Biloxi Marshes (location 1), the western side of Bayou Lafourche (location 2), the Chenier Plain (location 3), upper Breton Sound (location 4), and the location of a proposed diversion near Myrtle Grove (location 5).



Write about what you did and share it with researchers


How We Made Hell and High Water X

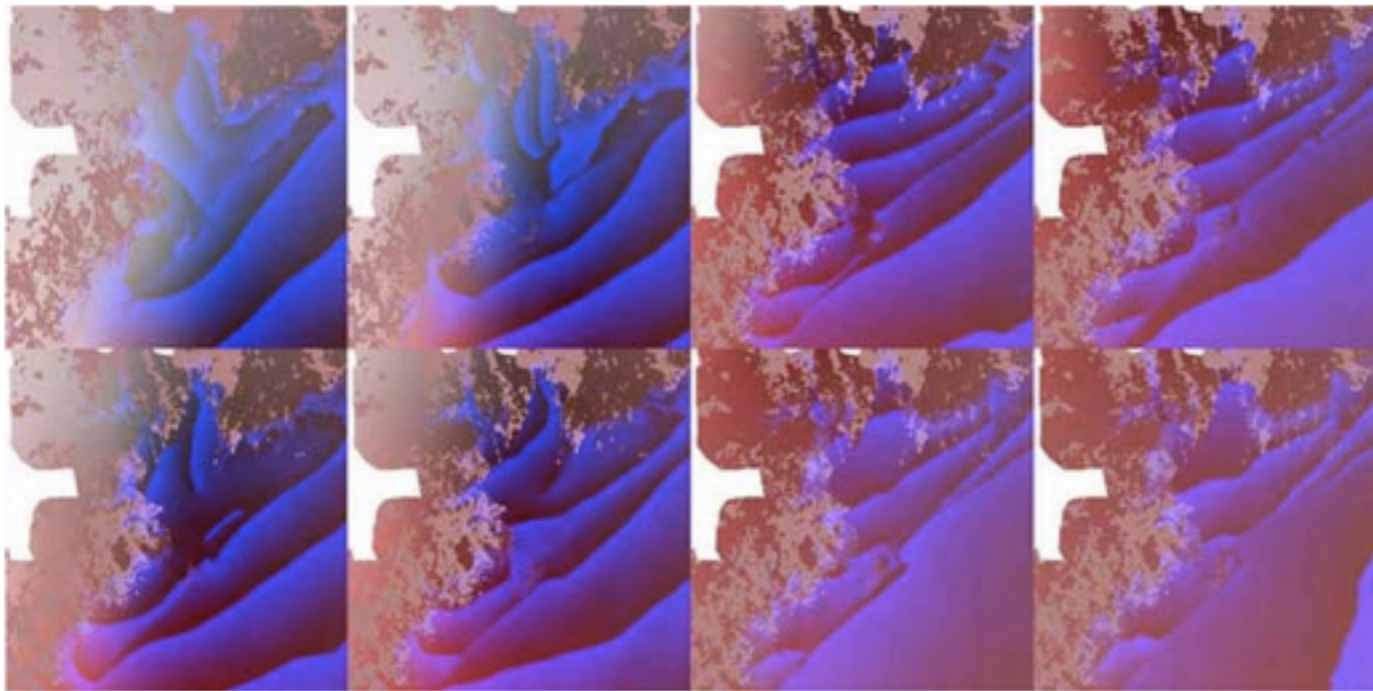
Secure <https://www.propublica.org/nerds/item/how-we-made-hell-and-high-water>

 **The ProPublica Nerd Blog**
Secrets for Data Journalists and Newsroom Developers

How We Made Hell and High Water



by [Al Shaw](#) and [Jeff Larson](#)
ProPublica, March 3, 2016, 7:59 a.m.


Comments | 



This image is really a database. It shows eight hours of a simulated hurricane hitting Southeast Texas. Water elevation and wind direction are encoded into the images' red, green, blue and alpha channels.

Our interactive story, "[Hell and High Water](#)," includes a map with seven animated

The News Apps Team  



Download Our Data

Use [ProPublica's data](#) — cleaned, categorized and often created from multiple sources — in

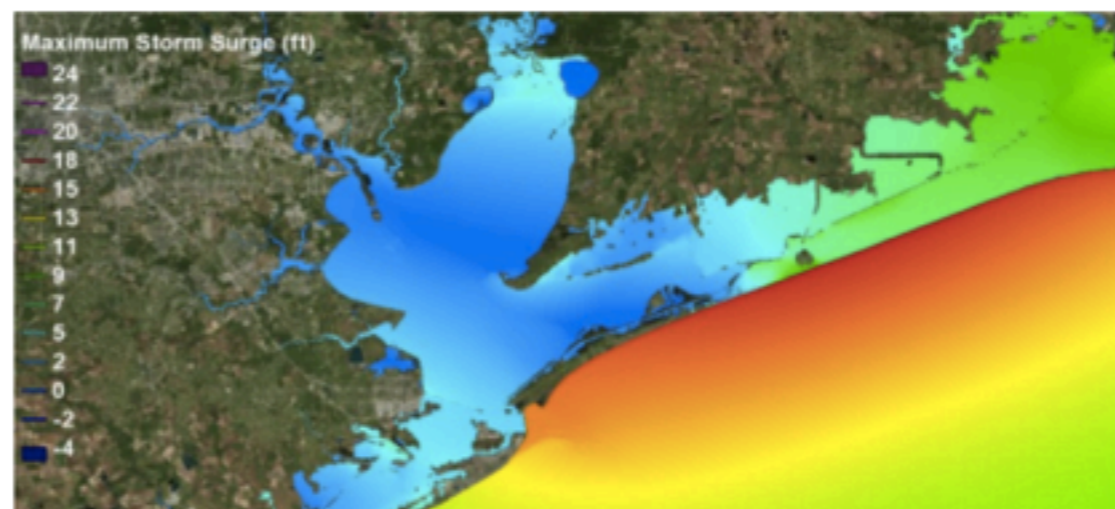
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MARCH 16, 2016

ProPublica uses ADCIRC for investigation on Houston disaster preparedness

Researchers and engineers from the Coastal Resilience Center of Excellence (CRC) were recently involved in a major investigative multimedia report on Houston's vulnerability to major storm damage.

"Hell and High Water," a report by investigative journalism site ProPublica and the Texas Tribune, presents storm surge and flooding scenarios along the Texas coast using the ADCIRC computer model. ADCIRC was developed by a team co-led by CRC Principal Investigator and UNC-Chapel Hill Professor



Bruce Ebersole of Jackson State University, a co-PI on the CRC project **“The Incorporation of Rainfall Into Hazard Estimates for Improved Coastal Resiliency,”** provided data for the report.

“During my employment with the Corps of Engineers...I got a good first-hand look at how vulnerable the Houston-Galveston region is to a major hurricane storm surge,” Ebersole said. “The region is steadily growing in population and infrastructure, so its potential for significant damage, and possible loss of life, during hurricanes is increasing....ADCIRC is an excellent tool for simulating hurricane storm surge [and] is central to the work which we are presently doing.... It is great to see ADCIRC get positive exposure as the valuable, reliable engineering tool that it is.”

Dr. Clint Dawson, head of the Computational Hydraulics Group at the **University of Texas-Austin** and a co-PI on the **“Improving the Efficiency of Wave and Surge Models via Adaptive Mesh Resolution”** project with the CRC, said ProPublica approached his team about the story about a year ago. Dawson and colleagues contacted the Severe Storm Prediction, Education, and Evacuation from Disasters (SSPEED) Center about using data that had been generated for the Center for the ProPublica feature.

“The outcome I hope to see is better awareness among the general public and decision-makers about the risk along the Texas coast,” Dawson said. “This research has received quite a bit of publicity in the Houston-Galveston area, but not so much outside of the area.”

Led by UNC-Chapel Hill, the Coastal Resilience Center of Excellence is a Department of Homeland Security (DHS)-

Thank you!

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