

The University of Southern Mississippi

*M.S. in Hydrographic Science*

*IHO Category A*

*IHO Capacity Building Stakeholders' Seminar*

**Maxim van Norden**

**Coordinator, Hydrographic Science Graduate Degree Program**

**Department of Marine Science**

**University of Southern Mississippi**

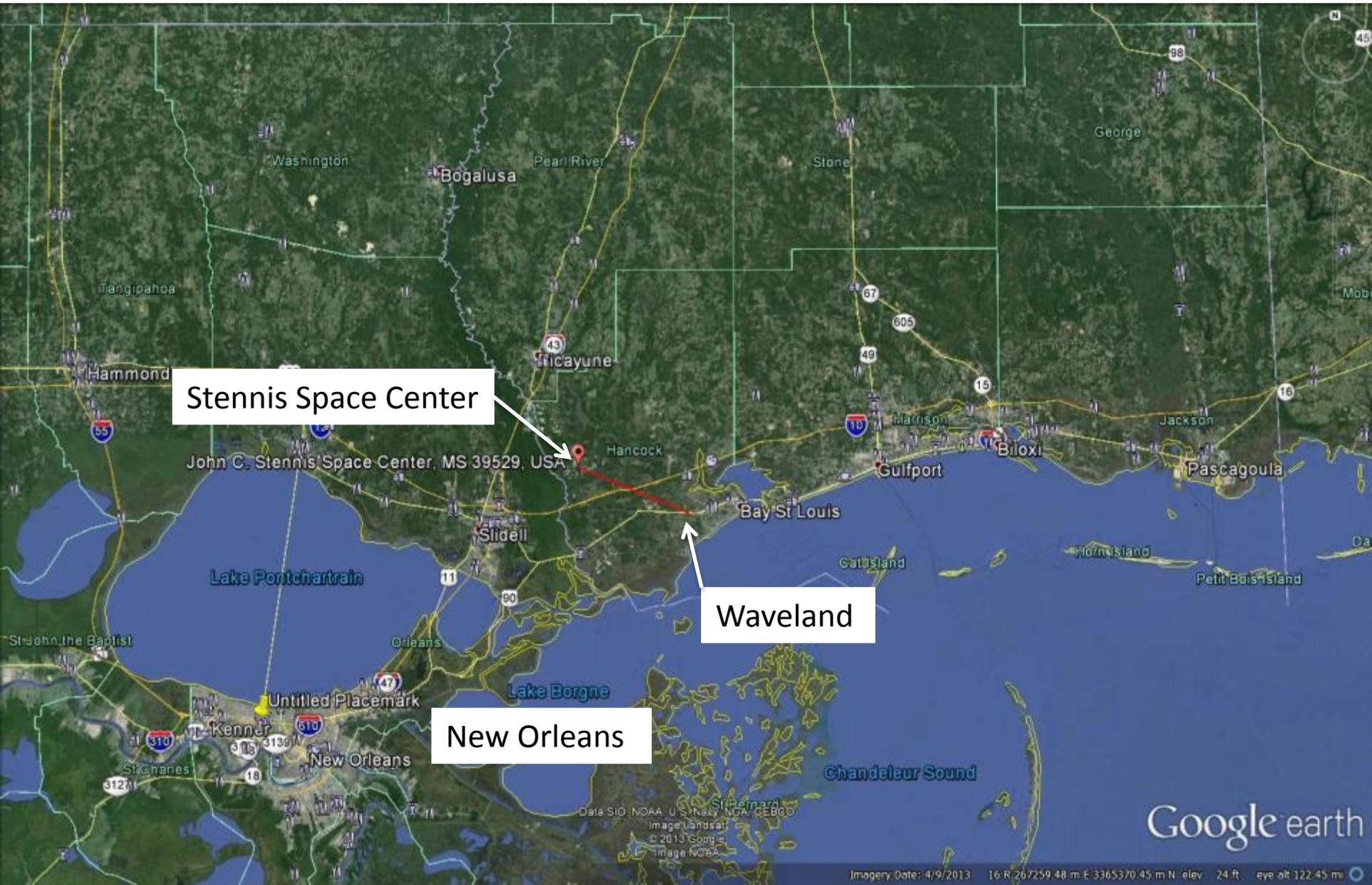
**Stennis Space Center, MS**

# Acknowledgements

The IHO CAT A program exists because of the generosity of the ROK/ Min of Ocean and Fisheries\KHOA

Support from IHB and CBSC

# Mississippi Gulf Coast Region



# IHO Student Apartment Complex Waveland, MS



# IHO Student Apartments



# No Public Transportation



2000 Century Buick owned by  
the students

## Options:

1. Shared ownership,  
current IHO  
students own car on  
left.
2. Shared Lease.
3. Van pool (only if all  
students are in  
same pool).

# M.S. Hydrographic Science Program Overview

Designed to meet FIG/IHO/ICA Standards of Competence for Hydrographic Surveyors (S-5) for Category A.

Sponsored and self-funded students follow the one-year track: 2 semesters of classroom instruction; 1 semester of application.

Grant supported students follow the two-year track and conduct research with the Hydrographic Science Research Center that covers tuition and provides a stipend.

In both options the degree awarded is a non-thesis Master of Science in Hydrographic Science.

PhD hydrographic program available as an emphasis area under Marine Science.



## Students (2000 – 2014)

147 Master's degrees in Hydrographic Science awarded; 2 PhDs awarded

Current Class 2013 – 2014: 16 students

- 2 - U.S. Navy
- 2 – Navy Civilians
- 3 – IHSAP Foreign Navy officers
- 3 – Two-year grant students
- 3 – Self funded students
- 3 – IHO students

Also 3 PhD students

U.S. Students	International Students
NAVOCEANO	Australia
US Navy	Canada
USACE	Ecuador
NGA	Egypt
NRL	Fiji
NOAA	India
Unaffiliated	Mexico
	Netherlands
	Nigeria
New IHO Students	Peru
Bangladesh	Slovenia
Jamaica	Sweden
Mauritania	Taiwan
	Thailand
	Tonga
	Trinidad & Tobago
	Tunisia
	Turkey
	United Kingdom



# The University of Southern Mississippi

## Department of Marine Science



# New Students Hydrographic Science Program





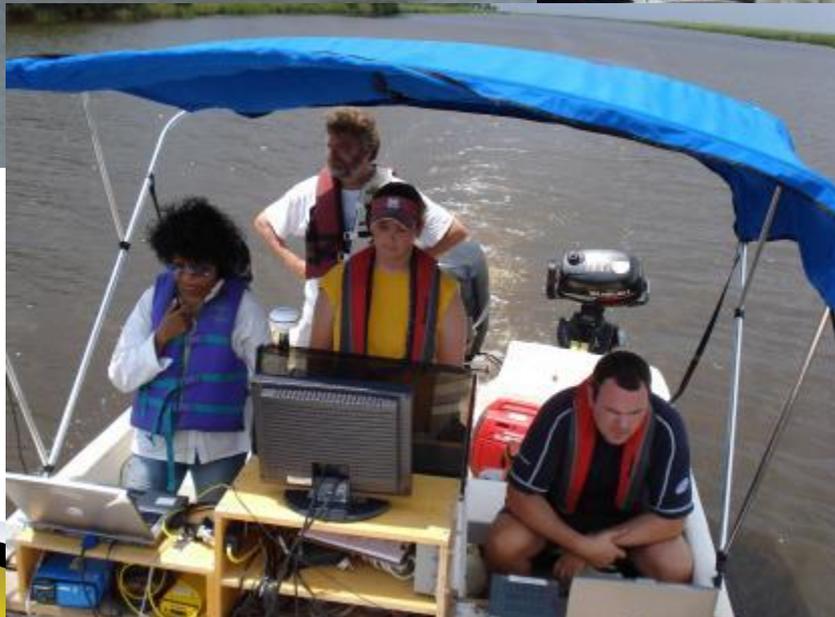
**HYDROGRAPHIC SCIENCE CLASS SCHEDULE - SPRING 2014**

	Monday	Tuesday	Wednesday	Thursday	Friday
	First Class Tuesday 14 January 2014			Last class	Friday 2 May 2014
0900	HYD601 <b>Hydro Data Mgmt</b> Church 75 minutes 0900 - 1015 Bldg 1210	HYD611 <b>Remote Sensing</b> van Norden 75 minutes 0900-1015 Bldg 1210	HYD601 <b>Hydro Data Mgmt</b> Church 75 minutes 0900 - 1015 Bldg 1210	HYD611 <b>Remote Sensing</b> van Norden 75 minutes 0900-1015 Bldg 1210	<b>Practical Exercise                      Period #2</b> 180 minutes 0900 - 1200
1015					
1030	HYD605 <b>Applied Bathymetry</b> Wells 75 minutes 1030 - 1145 Bldg 1210	HYD604 <b>Kinematic Positioning</b> Wells 75 minutes 1030 - 1145 Bldg 1210	HYD605 <b>Applied Bathymetry</b> Wells 75 minutes 1030 - 1145 Bldg 1210	HYD604 <b>Kinematic Positioning</b> Wells 75 minutes 1030 - 1145 Bldg 1210	
1145		Faculty-Student Dialogue 1145-1245			
1200					
1230					
1245					
1300	HYD612 <b>Water Levels</b> Howden 75 minutes 1300 - 1415 Bldg 1210	<b>Make-Up Classes</b>	HYD612 <b>Water Levels</b> Howden 75 minutes 1300 - 1415 Bldg 1210	<b>Practical Exercise                      Period #1</b> 180 minutes 1300 - 1600	<b>Practical Exercise                      Period #3</b> 180 minutes 1300 - 1600
1415					
1600					
	<b>15 Credits</b>				

Mardi Gras - no classes Mon & Tues 3-4 March 2014  
 Spring Break - no classes Mon-Fri 10-14 March 2014  
 Good Friday - no classes Fri 18 April 2014  
 Last exam Thurs 8 May 2014

Last drop w/o acad penalty Friday 7 February 2014

# Emphasis: On-the-Water Exercises



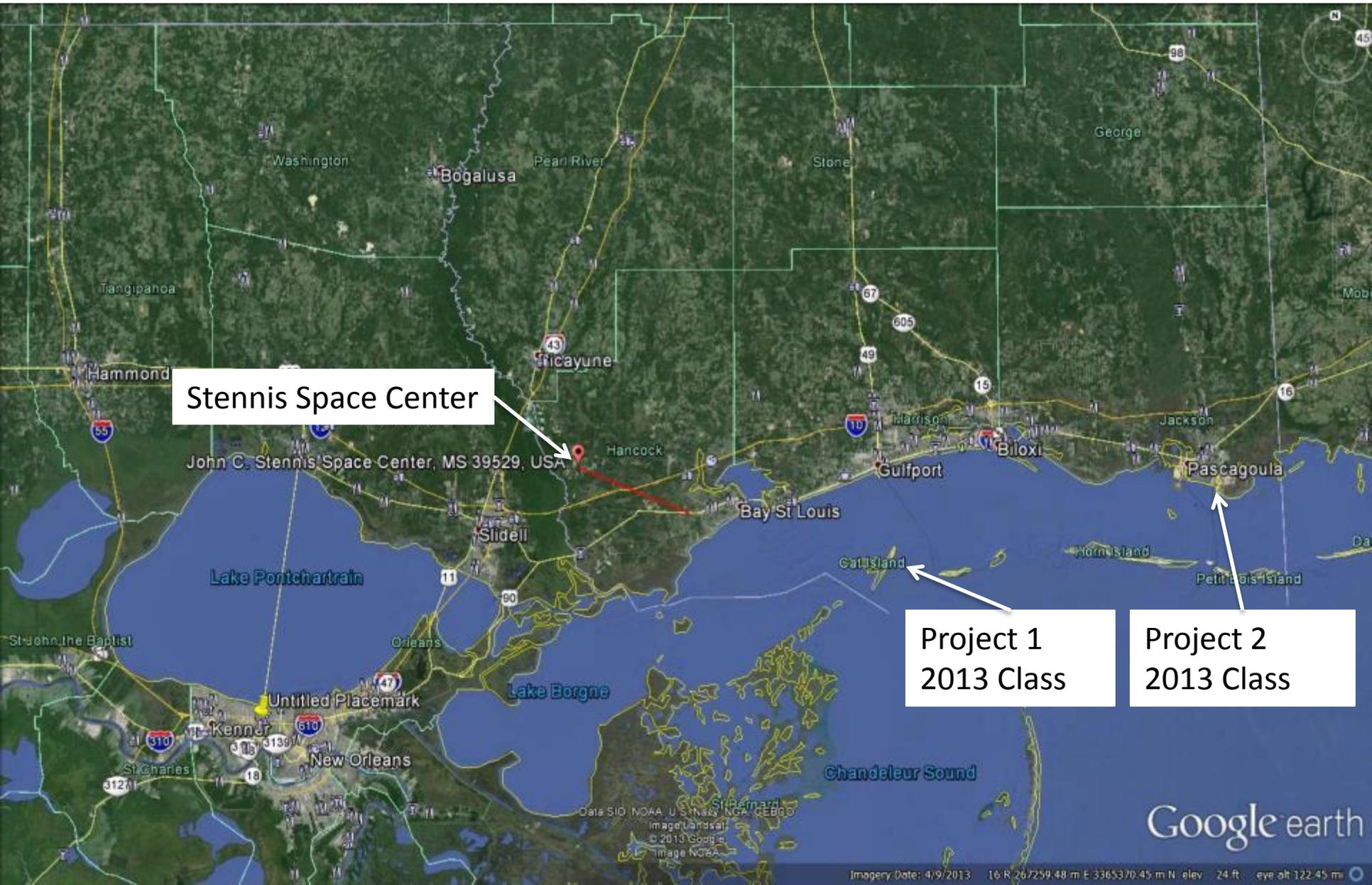
Students launching the MV Lemoyne (8.8 meter)  
at the Stennis boat ramp on the Pearl River  
for a class exercise.



## Hydrographic Science Summer Calendar 2013 - 2014 (6 Credits)

Event	Date	Comments
Law and Policy for Hydrographers	12- 16 May	HYD 603
Specifications and Deliverables	19 – 23 May	HYD 610
Survey Project Field Preparations	26 May- 6 Jun	HYD 610
Survey Project on-the water	9 – 20 Jun	HYD 610
Survey Project data processing	23 Jun – 3 Jul	HYD 610
Nautical Cartography and GIS	7 – 18 Jul	HYD 606
Preparation of reports and charts	21 – 25 Jul	HYD 610
Comprehensive exam	29-Jul	
Graduation Recognition Ceremony	31-Jul	Cat A Academic Certificate awarded
Turn-in all USM property	1-Aug-14	

# Mississippi Gulf Coast Region



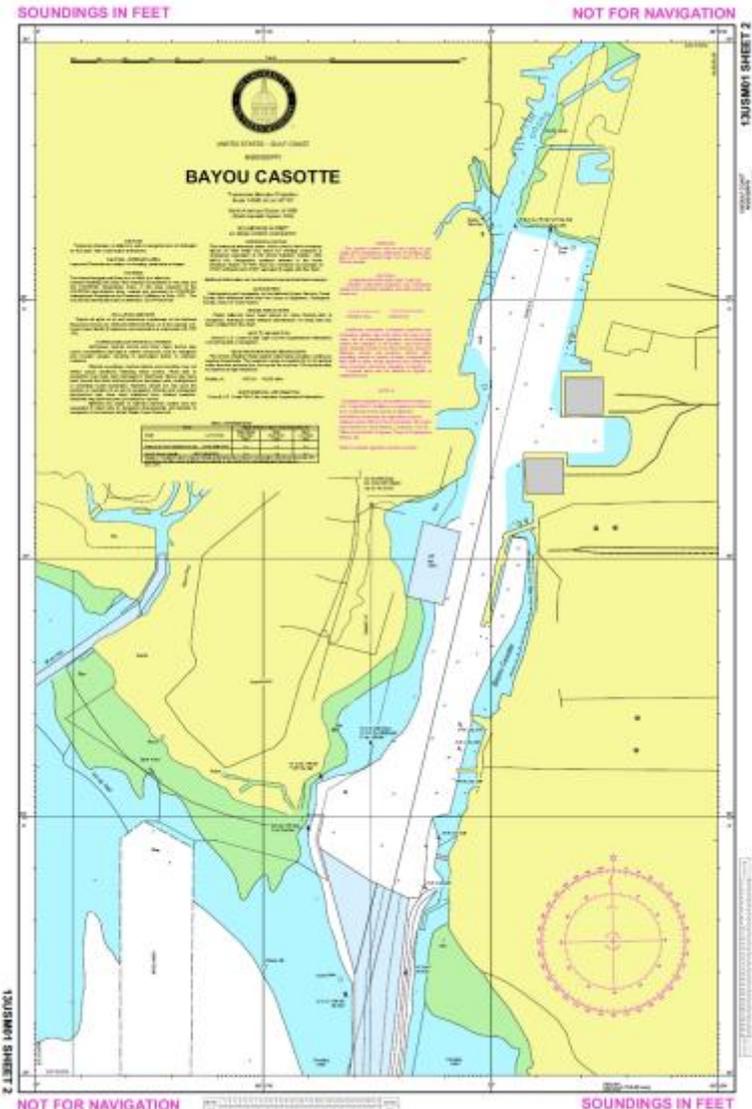
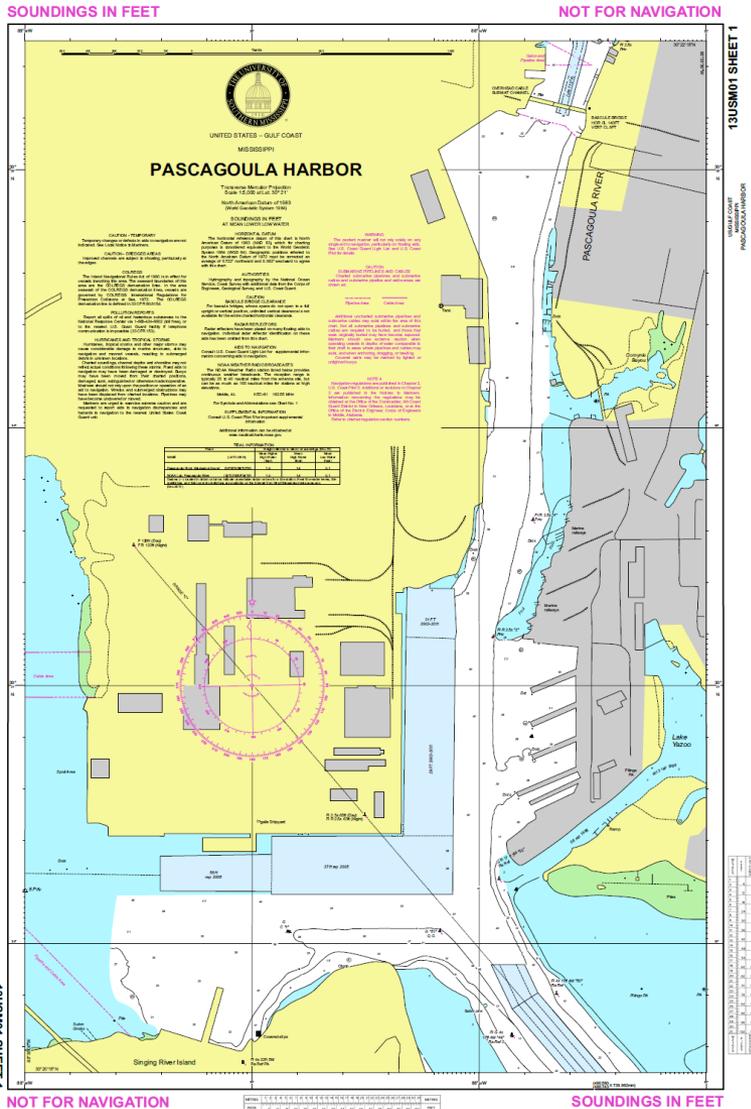
Stennis Space Center

John C. Stennis Space Center, MS 39529, USA

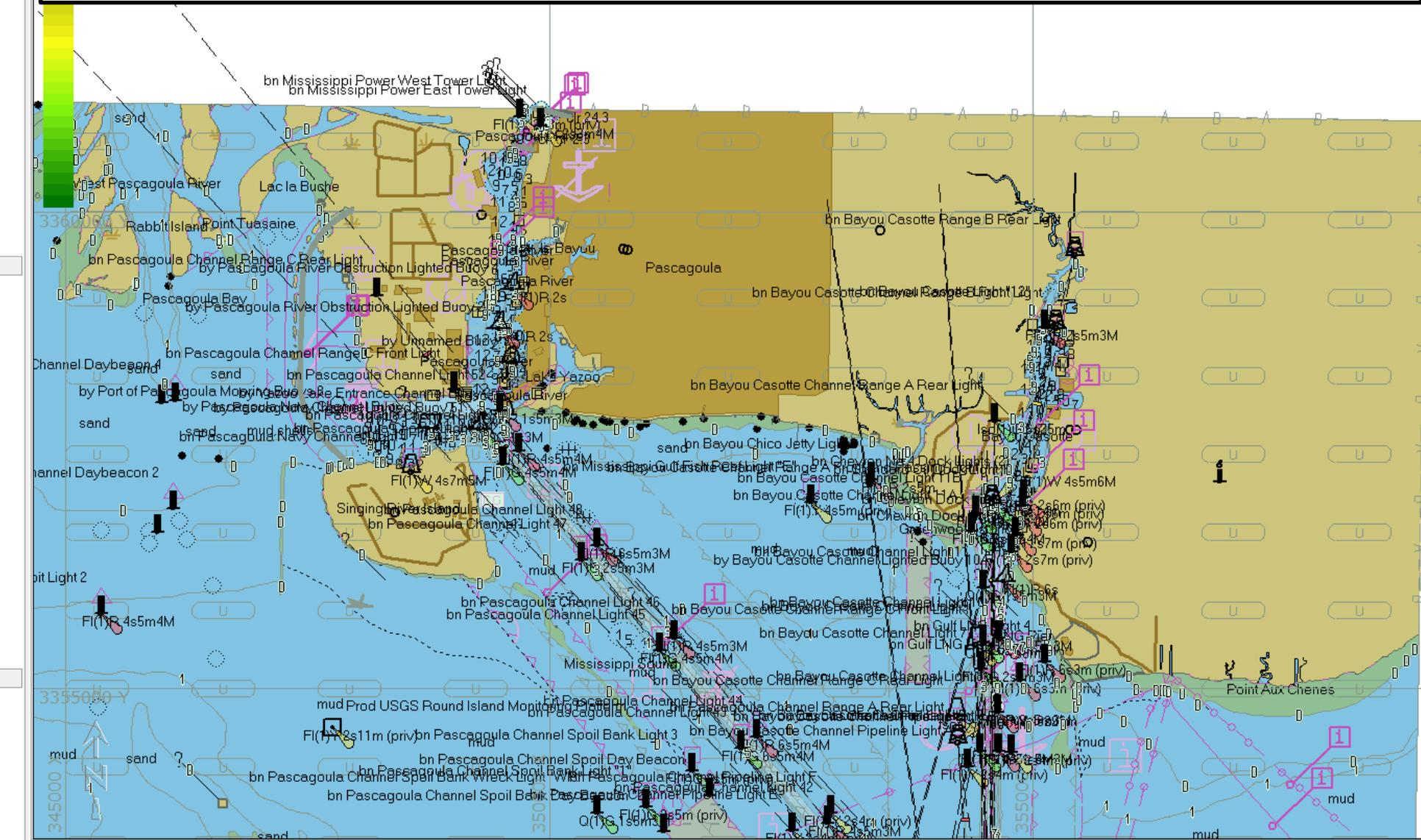
Project 1  
2013 Class

Project 2  
2013 Class

# Summer Project 2013 -- Team Port



# Team Starboard Produced ENC of Surveyed Area Pascagoula and Bayou Casotte - 2013



## Admission Requirements Submitted Online

1. A U.S. equivalent Bachelor level degree in any science, technology, engineering or mathematics with a minimum GPA of 2.75 out of 4.0. degree. Official transcripts required.
2. Applicant prior coursework should include courses that generally satisfy the FIG/IHO/ICA Standards of Competency for Hydrographic Surveyors (S-5) 11th for B1 Mathematics and Statistics, B2 Information and Communication Technology, and B3 Physics.
3. Three Letters of Recommendation.
4. A Statement of Purpose.
5. A resume of prior experience.
6. TOEFL score of 80 or more.
7. GRE combined score of 300 (total of Verbal, Quantitative and Written).
8. Waivers are on a case by case basis.
9. Admitted students are sent an I-20 by the university which is taken to a U.S. Embassy/Consulate for the F-1 visa.

# Admission and Other Startup Problems

1. Some applicants unable to take TOEFL or IELTS and GRE in time because not held locally or could not get on the schedule.
2. Some applicants travelled to other counties to take the prescribed tests.
3. Some applicants scored very low on the required tests.
4. Of seven applicants only three were selected.
5. Delays in obtaining F-1 Visa due to U.S. Embassy/Consulate closures due to Ramadan and terrorist alert.
6. All students arrived late missing math and MATLAB reviews and missing international and other student orientations. This increased learning stress.
7. Not having International Driver License delayed obtaining Mississippi Drivers License.
8. Students needed to open local bank accounts to receive funds.
9. Two students provided an incorrect address to USM causing delays in obtaining funds.
10. Lack of funds.

# Lessons Learned

1. IHO applicant process has to start earlier. CL 66 now calls for applicants to submit all admission documents to USM by 21 March. USM to make speedy decisions and issue I-20 by 31 March.
2. Student should take the TOEFL or IELTS and GRE prior to submission to PMB4 board. (Only 2 of 6 applicants as of 3 Mar).
3. Applicants should arrive nlt 3 Aug. Reviews and orientations will start 7 Aug. Classes begin on 21 Aug.
4. Initial startup funds should be paid directly to the student. These funds should cover temporary lodging, apartment and utility deposits, and initial transportation. This was agreed to at PMB4. The initial USM payout should be about 2 Sep.
5. Students should have an international driver license to greatly facilitate obtaining a US license.
6. Since there is no public transportation, students need to consider the options for transportation: shared ownership, shared lease, or van pool.
7. Students should continue to receive their salaries from home, the USM stipend of \$1700/month may not cover everything.
8. Students need to become familiar with MATLAB prior to arrival.
9. Students should bring an official vaccination record to avoid retaking MMR shots (and the expense).



THE UNIVERSITY OF  
**SOUTHERN MISSISSIPPI.**  
GULF COAST

[www.usm.edu/marine](http://www.usm.edu/marine)

**Questions?**