

TURTLE COVE ENVIRONMENTAL RESEARCH STATION

Southeastern Louisiana University

Safety, Boating, and Facility Policy Manual



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(Revised Summer 2008, Update due July 2009)

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Turtle Cove Environmental Research Station: Safety, Boating, and Facility Policy Manual

I. OVERVIEW AND HISTORY OF TURTLE COVE FACILITIES

Mission Statement

Turtle Cove Environmental Research Station is a field research and educational facility of Southeastern Louisiana University located in the Lake Pontchartrain estuarine ecosystem. Because of its location at the upper end of this major estuary, Turtle Cove is within one hour by boat of various wetland environments, along with their aquatic counterparts, ranging from fresh to saline, including bottomland hardwood forests, cypress swamps, and marshes. Moreover, each of these habitat types exists in pristine, degraded, and restored states. The facility complements other field stations in the state (and nation) that are more concerned with higher salinity marine waters or fresh waters.

Prioritized Goals

- 1. Scholarly research** - To enhance research activities of Southeastern faculty and students and to attract regional, national, and international researchers.
- 2. University teaching** - To provide access to aquatic and wetland environments for field trips, summer courses, and special workshops.
- 3. Teacher training** - To provide opportunities for continuing education through summer programs and weekend workshops.
- 4. Public service** - To provide hands-on field experiences for K-12 students and other groups interested in wetland and aquatic environments.

In keeping with Southeastern's image as a dynamic and rapidly growing institution of higher learning, Turtle Cove is also developing as an active research and educational facility. The overall goal is to make Turtle Cove a nationally recognized center for environmental education and research in low-salinity environments.

History of the Building and Site

The Turtle Cove facility occupies a three story wood frame building crafted of virgin cypress in 1908 as a private hunting and fishing lodge for Mr. Edward Schlieder, a logger out of New Orleans until his death in 1955, when it then continued to be used by the Turtle Cove Hunting Club (Mr. Schlieder's hunting companions). In the 1960's the building and three acres of land it sits on was donated to the State of Louisiana, where it served until 1981 as the headquarters for the Louisiana Department of Wildlife and Fisheries (LDWF) Manchac Management Area (WMA).

The facility is located on the 8,325 acre Manchac WMA in St. John the Baptist Parish, Louisiana, along the south shore of Pass Manchac two miles west of Lake Pontchartrain. It has been administered since 1981 by Southeastern Louisiana University (College of Science and Technology), under a 99-year lease agreement with the Louisiana Wildlife and Fisheries Commission. University activities began in earnest at the station in 1985.

The main building at Turtle Cove contains a first floor research and teaching area, second floor living quarters with kitchen, bathrooms, and bedrooms, and a dining hall that can double as a conference room, and third floor library/computer lab and office. The entire building underwent a \$50,000 renovation in 2000 that substantially upgraded the interior. However Hurricane's Katrina and Rita in 2005 will require a much greater renovation effort to the exterior and infrastructure of the building, something that is being planned at the time of this writing.

Since Turtle Cove is accessible only by boat, several vessels, including canoes, are available for use by station visitors with properly trained operators. At the time of this revision, there are currently 6 skiffs (17-23 ft), one pontoon boat (40 ft), and several mud-boats available at the new Research Boat Shed and Education/Office Complex at Galva Canal, located five miles west of the research station along Galva Canal (an area shared with the Louisiana Department of Wildlife and Fisheries), where boats are kept for transportation to the station. Transportation for large groups is provided by the Pontoon Boat, which was purchased with FEMA funds (from Katrina/Rita damage) in December 2006. In addition, a two covered boat slips are rented on the west side of Lake Maurepas near the Black Lake Bait and Tackle store. These slips house an 18' lake skiff (Gray Boat) and a 14' flat boat (Bird Boat). This site was chosen as much for safety reasons as for gas savings, since researchers who work on the west side of Lake Maurepas no longer have to cross the 12 mile lake from the Galva site. One of the 21' skiffs (Black Boat) is on loan to the Lake Pontchartrain Basin Maritime Museum (LPBMM), where Turtle Cove staff will maintain and assist in education/outreach programs there. There are also several flat boats, pirogues, and canoes both at Turtle Cove in the barn (10) and on a trailer at Galva Canal (10) for mobile canoe transport.

Various nets and other field equipment, as well as holding tanks (with aeration and filtration) for aquatic organisms, are available at the research station. Compound and stereo microscopes, a drying oven, water quality meters, and other wet lab-types of research equipment are also available, as are modern computers and a computer lab with satellite internet service on the third floor of the station (installed in 2003).

In addition, the new Turtle Cove Research Boat Shed and Education/Office Complex contains a bathroom w/field shower, room for 6 boats, and an upstairs classroom and office complex. The classroom contains a small computer lab (3 computers) with printer and other amenities tied into satellite internet service (installed in 2007).

Website, Logistics and Contact Information

Website

The easiest and quickest way to view information on Turtle Cove is to visit the website at www.selu.edu/turtlecove. In fact, this manual can be found there as well. The website has information on the history of the station; directions to the station; current events; staff contact information; boat reservation form; maps and data; and other relevant information.

Directions to the Turtle Cove Research Boat Shed and Education/Office Complex at Galva

Canal (“Galva Boat Shed”)

To reach Turtle Cove by boat, proceed five miles east on Pass Manchac from the Interstate 55 bridge at Manchac (Turtle Cove itself is located on the south side of the pass, two miles west of Lake Pontchartrain). The boat shed for transportation to Turtle Cove is located in Galva (not on state road maps), just south of Pass Manchac in St. John the Baptist Parish, off U.S. Highway 51. The community is also known by locals as either “Manchac” or “Akers” (which is what the Post Office address calls the area). You should take Interstate 55 (south from Hammond or north from LaPlace) to the Manchac exit, go south on Highway 51 (past Middendorf’s Restaurant), cross the bridge over Pass Manchac, then take the second left turn (only about 200 yds from the bridge). A small road will take you across the railroad tracks (watch out for the trains). On the east side of the tracks, turn right and follow the shell road to its end at the SLU/Wildlife and Fisheries boat shed. For 911 emergencies, the address of the boat shed at Galva is 87 Alligator Lane, Akers, LA, 70421 (in St. John the Baptist Parish).

Turtle Cove Staff and Other Relevant Phone Numbers

- (1) Robert Moreau, Manager (for administrative, on-campus, and emergency issues, as well as Turtle Cove boat issues when Hayden is not reachable): Office Phone: (985)549-5008 (fax extension is 5068); T.C. Cell Ph (w/out voice mail): (985)507-2855; Personal Cell Ph (N.O. w/voice mail) (504)231-1067; Email: rmoreau@selu.edu.
- (2) Hayden Reno (Fleet Technician/Caretaker)--for all boating related and on-station-site problems-- T.C. Cell Ph (w/out voice mail---try calling every 5 minutes until you reach him): (985)507-7710; Home Ph (985)386-9928 (does not regularly use email hreno@selu.edu).
- (3) Michael Greene (Education/Outreach Coordinator and Biologist on Staff)—Office Ph (985)549-3600; SLU Cell Ph (w/voice mail) (985)507-9181; Email: mgreene@selu.edu.
- (4) Fred “Mars” Stouder (Marsh Restoration Project Coordinator)—Office Phone: (985)549-5355. Turtle Cove Cell Phone (w/out voice mail): (985)507-2856.
- (5) Leonard McCauley (T.C. Grad Student): Personal Cell ph: (985)215-1669
- (6) Turtle Cove Cell Phone (at station)(985)351-5477-- **ONLY TURNED ON WHEN A GROUP IS AT TURTLE COVE—DO NOT EXPECT TO REACH ANYONE ON THIS PHONE AT MOST TIMES (note that the old Turtle Cove cell phone numbers of 375-7711 and 507-2854 are no longer active numbers)**

Note: Bring your own cell phone when you go out if you have one!!!!!!!!!!

Other numbers that may help in an emergency:

911. Your cell phone can make this call from anywhere---this is your best number for emergency use!!!!!!!!!!!!!!

Gary Shaffer: Office (985)549-2865

SLU Campus Information: (985)549-2000

SLU Emergency Number (Police) (985)549-2222

Boat Mechanics and Manchac Fuel Dock:

- (1) Slidell Marine (for Honda 4-stroke engines on Blue, Black, Green and Callinectes boats): (504)649-4412 (closed on Sundays and Mondays)

(2) Byron Harris (for Gray Boat and Pontoon Boat 2-stroke engines): Hm (225)698-6272 Cell ph: (985)974-1087.

(3) Fuel Dock: (985)386-0870 or 386-9952 (call for hours of operation—they change often—always fill-up when <1/3 tank on return trip in respect for the next user!)

West Lake Maurepas Boat Shed and Fuel Dock:

Black Lake Bait and Tackle (Fuel Dock): “Doc” (owner): Hm/Wk:(225)695-6447 Cell: (225)715-3415

Technical Phone Service (to answer questions regarding use of phones, service, etc.):

Lisa Craft, Cingular Service Associate (in Hammond): (985)320-1481

SLU Phone Support: Taunya, with Phone Services (504)549-5050.

KEEP MARINE RADIO ON CHANNEL 16 FOR USCG MONITORING and in case you run into trouble (channels 2 or 22 for weather reports).

Significant Events in Turtle Cove History

Schlieder Era:

1902 - 5,506 acres bought by Salmen Brick and Lumber Company Ltd (from Chicago, St. Louis, and New Orleans Railroad Co.).

1908 - Land bought and Turtle Cove building built as hunting and fishing lodge by Mr. Edward G. Schlieder.

1948 - Schlieder died (95 years old), left \$2.6 million estate to establish the Edward G. Schlieder Educational Foundation.

Turtle Cove Hunting Club Era:

1951 - Turtle Cove Club incorporated (a private hunting and fishing club) and used the "Schlieder camp" as their headquarters (reorganized and purchased property on Galva Canal in 1980).

Department of Wildlife and Fisheries Era:

1975 - Manchac Wildlife Management Area created (5,261 acres) (Turtle Cove camp became Management Area headquarters).

1977 - Acreage of Manchac WMA increased to 8,325 acres.

Southeastern Louisiana University Era:

1981 - Turtle Cove Biological Research Station established (under 99-year lease agreement with Louisiana Department of Wildlife and Fisheries).

1983 - Grant of \$285,000 received from Coastal Zone Management Program, Louisiana Department of Natural Resources, and U. S. Department of Commerce to conduct a baseline study of the water quality and selected faunal communities in Lake Maurepas, its major tributaries and Pass Manchac.

1985- Dr. Robert Hastings hired as Director of Turtle Cove.

1986- Hayden Reno hired as Station Manager/Caretaker of Turtle Cove.

1992 - Renamed Turtle Cove Environmental Research Station.

1995 - External review of Turtle Cove programs conducted.

1996 - 622 acres of land on west end of Jones Island donated to Turtle Cove for preservation and wetlands research.

- 1997** - Donation received from Schlieder Foundation to create the Endowed Chair of Environmental Studies.
- 1998** - NSF-Sponsored Planning Workshop conducted. Dr. Robert Moreau hired as Interim Director of Turtle Cove.
- 2000**- SLU Administration provides \$50,000 for major renovations to the building (structural) and replacement of furnishings.
- 2001**- Dr. Paul Keddy replaces Dr. Robert Hastings as (Interim) Director of Turtle Cove. Turtle Cove enters into partnership with Tulane University and LUMCON for long-term monitoring of water quality and weather data in Lake Pontchartrain Basin. Two new 21' research skiffs (Blue and Black Boats) are ordered to replace vessels in the aging fleet. 20' Creole is retired for safety reasons.
- 2002**- Dr. Robert Moreau replaces Dr. Keddy assuming new title of Manager of Turtle Cove. Michael Greene is hired at 60% time as Education/Outreach Coordinator and Biologist on Staff (w/40% as Instructor in Biology). Fred Mars Stouder formally named Marsh Restoration Coordinator for all of his soft-money restoration work. Funding from the EPA-sponsored Pontchartrain Basin Research Program begins to have a major positive impact on research, education and outreach use numbers on the station over the next 5 years. Michael Greene and Debbie Dardis restart Teacher Workshop Programs at Turtle Cove that had been dormant since Dr. Hastings absence (since 2000). A satellite boat shed housing two boats is established on the west side of Lake Maurepas for expanding research efforts there. Staff members obtain administrative approval for four cell phones. Tropical Storm Isidore and Hurricane Lili inflict major damage on infrastructure at Turtle Cove, primarily in the form of bulkhead damage.
- 2003**- \$80,000 in repairs to bulkheads are made from FEMA and ORM monies stemming from the storms of 2002. Turtle Cove gets into the funding cycles of the EPA and LPRA programs, receiving grants from both programs. Turtle Cove obtains satellite internet service at the station. Station obtains one new boat and motor (14' flat Bird Boat) and two used boats: 17' White Boat from LUMCON and 21' Red Boat (Lake Skiff) from WLF to add to the growing fleet.
- 2004**- Major improvements are made to the Pontoon Boat to handle large increases in education and outreach numbers from the EPA and LPRA programs. Turtle Cove experiences record numbers of use (3,000 user days) for FY 04/05 in terms of research, education and outreach use at the station and its West Lake Maurepas boat shed. Station receives grants from EPA and LPRA programs. Turtle Cove Administrative Offices move out of Wilson Hall into New Biology Building suite on 3rd floor, beginning a long awaited reunion of working more closely with Biology Dept users.
- 2005**- A new septic system (\$35,000) is installed at Turtle Cove by Southeastern's Physical Plant. The long awaited Research Boat Shed and Education/Office Complex at Galva Canal is constructed in Spring to handle the growing fleet. Hurricane's Katrina and Rita in August/September inflict severe damage on Turtle Cove facilities estimated at \$2,5 million (\$900,000 on main building; \$1 million on bulkheads; \$458,000 on boardwalks; \$50,000 on wharfs; \$52,000 for a new Pontoon Boat; all of the EPA experiment infrastructure destroyed). Research continues (thru use of the fleet) throughout FY 05/06 but at a low rate as infrastructure is not usable. Education and outreach programs are suspended for the FY. Moreau obtains \$73,000 grant for Mitigation Study from EPA program. Station also receives

- \$90,000 grant from LPRA program for Internet Workshop development.
- 2006-** Turtle Cove facilities are approved by FEMA for major repairs stemming from storms of 2004. ORM and Facilities Planning now determine timeframe for repairs. New Research Boat Shed and Education/Office Complex will replace station as center of activities until repairs are made. \$161,000 Marine Infrastructure Improvement NSF grant is applied for. Turtle Cove set to become center for Technology Transfer for EPA and other related grant programs. Turtle Cove Administrative Offices set to move back to a renovated Wilson Hall.
- 2007-** New 40' Pontoon Boat reinstates the Outreach Program for the first time since Katrina and Rita in summer 2005. Plans are drawn up for the restoration of the main Turtle Cove building, Caretaker Residence, bulkheads, boardwalks and wharfs. National Center for Appropriate Technology (NCAT) moves into Wilson Hall.
- 2008-** Final FEMA sign-off expected on all major renovations. Record numbers of education and outreach groups in the Spring and Summer. New office furnishings for Wilson Hall and Galva Classroom provided by Administration (\$30K worth).

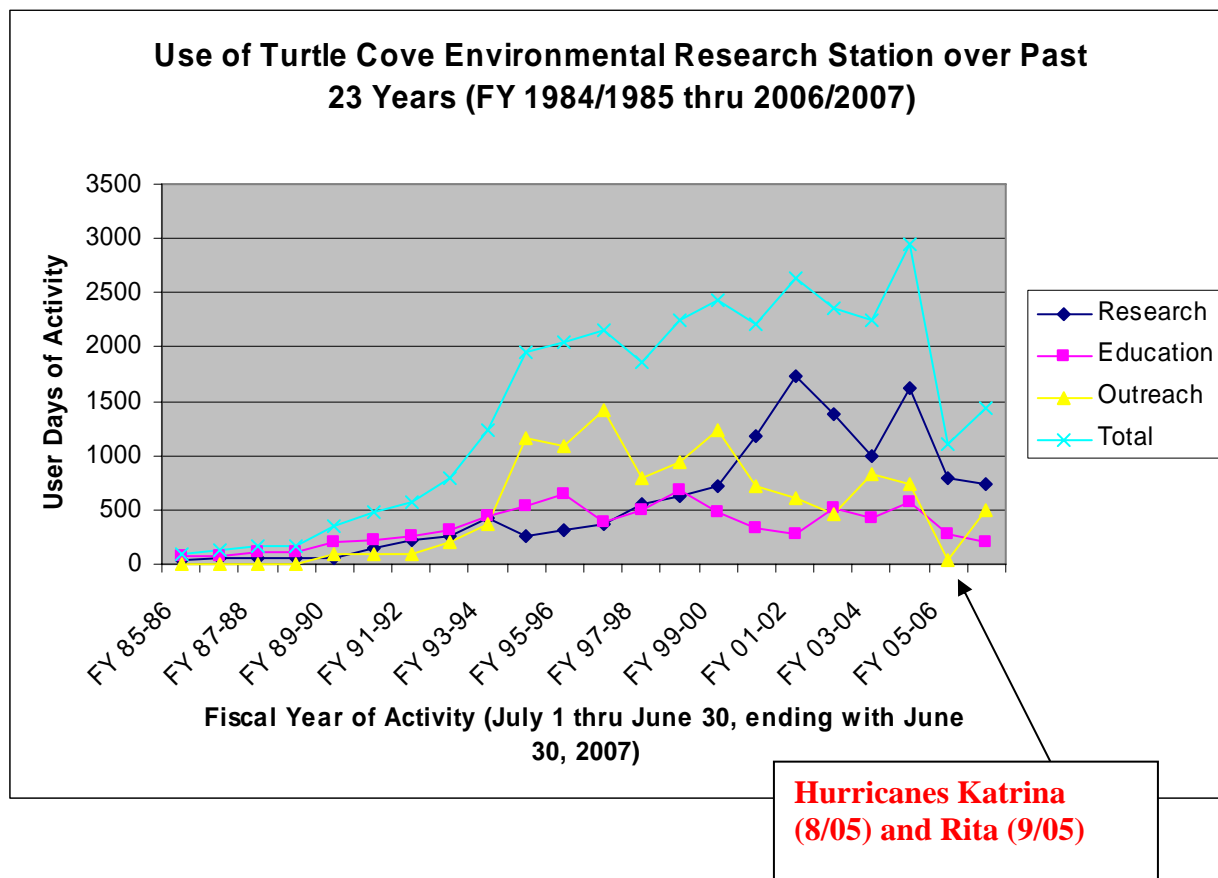
Major Accomplishments

- Comprehensive survey of Lake Maurepas, including data on water and sediment chemistry and microbiology, benthic macro invertebrates, and fish populations.
- Species inventories of Manchac marshes and surrounding waterways, including plants, fishes, amphibians and reptiles, and birds.
- Research on parasites in organisms of upper low-salinity estuarine environments.
- Ecological studies on alligator populations.
- Ecological studies on reptiles and amphibians.
- Studies on marsh vegetation and factors affecting cypress seedling survival in the Manchac marshes.
- Comprehensive program of cypress restoration in the Manchac marshes.
- In-residence summer courses offered (Marine Biology and Estuarine Ecology).
- Weekend Workshops for Teachers conducted in cooperation with Lake Pontchartrain Basin Foundation.
- Project Delta and Project CYPRESS (Louisiana Systemic Initiatives Program - summer programs for science teachers) conducted in cooperation with SLU College of Education personnel.
- Awarded grants on a yearly basis from EPA-sponsored PBRP program and the LPRA program.

- Turtle Cove becomes the hub of Technology Transfer component of PBRP and other grant programs.
- Major study on Mitigation Potential in Manchac Swamp undertaken.
- FY 05/06 produced a record 3,000 user days for research, education and outreach activities.

Use Benchmarks of Facility and Vessels

Turtle Cove has had a 21 year history of growth in the three main areas of its activities: research, education and public outreach. Overall use reached an all-time high in Fiscal Year 2004/2005 with nearly 3,000 user days of activity. A graph of the history of Turtle Cove use is presented in Figure 1 below:



Research, Education and Public Outreach Activities

On-Going Long-Term Research

Turtle Cove has entered into two partnerships to provide on-line **water quality and weather**

monitoring program. One is with Tulane University and LUMCON (station at northwest corner of Lake Pontchartrain), and the other is with USGS for station on dock at Turtle Cove. Turtle Cove personnel have participated in multi-institutional surveys of water quality and pollution problems in Lake Pontchartrain. Summaries of weather and water quality databases can be obtained from the Turtle Cove Assistant Director.

Turtle Cove personnel are continuing extensive **cypress restoration** research, and have planted thousands cypress seedlings in the Turtle Cove area. The trees are monitored for survival related to factors such as nutrient supply, elevation, nutria predation, and vegetative competition. The data are being used to guide a major cypress restoration program which will one day restore the major cypress forests that once dominated this environment.

Turtle Cove personnel have conducted research on **fish populations** and distribution patterns in Lake Maurepas and the Manchac Wildlife Management Area, as well as tributary rivers and streams.

Studies on **alligator populations** in the Turtle Cove area have provided some of the most significant and comprehensive data on food preferences of juvenile alligators. Studies on reproductive biology have yielded important data on the nesting success of alligators in this area, and especially on the mortality resulting from summer floods in the area.

Southeastern graduate students have been major users of Turtle Cove, and have completed numerous **Master's theses** based upon research work conducted primarily at Turtle Cove.

A **bibliography** of publications resulting from research conducted at Turtle Cove, including a list of Master's theses, may be obtained from the Turtle Cove Director.

Education (Courses, Field Trips and Teacher Workshops)

Turtle Cove is committed to providing educational opportunities to a wide spectrum of visitors to the Lake Pontchartrain Basin. A wide array of university courses have been taught at Turtle Cove, including Marine Biology, Wetland Ecology, Ichthyology, and others. And many other courses utilize the station to teach at least some portions of the class. In addition, many university courses utilize Turtle Cove as an educational field trip destination (i.e., the field trip portion of the class). Both Southeastern and other regional universities have used the facility in this manner. Professional workshops have been taught at the station since 1990, including several versions of the very popular Lake Pontchartrain Basin Workshops for K-12 Teachers. A list of all courses, field trips and workshops ever conducted at Turtle Cove is listed in Table 1 below (summarized in Spring 2006).

Table 1:
Historical Record of Different Classes, Field Trips and Groups that have Utilized the Turtle Cove Environmental Research Station for Instructional/Educational Purposes (from Southeastern and other Universities) from 1986-2006

(approximately 151 total)
(Compiled on 5/08/06 by Rob Moreau)

Southeastern Louisiana University Courses/Field Trips (34)

Anthropology
Biology-General
Biology-Advanced
Biology-Marine
Boating Safety
Chemistry
Ecology-General
Ecology-Invertebrate
Ecology-Plant
Ecological Methods
Ecophysiology-Plant Stress
Education 410
Education 421
Education Methods
Education Practicum
Endocrinology
Estuarine Ecology
Environmental Awareness
Environmental Management
Environmental Politics
General Physiology
Geography-History of Louisiana
Geography-Physical
Ichthyology
Limnological Methods
Mathematics
Ornithology
Parasitology-General
Plant Taxonomy
Plant Taxonomy-Advanced
Plant Taxonomy-Fall
Physiology-General
Zoology-General
Zoology Lab-Introduction To

Other Universities that have had Courses/Field Trips at Turtle Cove (31)

American Museum of Natural History (NY)
Biology of Protista (course from Loyola University)
Biology Research Group (UNO)

Davidson College (Alternative Spring Break instruction)
Delta Teachers Academy (LSU)
Eastern Michigan University (Alternative Spring Break instruction)
Eastern Oregon State College (Alternative Spring Break instruction)
Engineering Research Group (UNO)
Environmental Studies (Tulane University)
Fisheries Research Group (LSU)
Geology Club (Tulane University)
Green Club (Tulane University)
Herpetology Class (University of Wisconsin)
LSU Climatologist Group
LSU Research Group (Zebra Mussel Survey)
LSU Research Group (Ichthyology)
Marine Biology (Nunez Community College)
Pontchartrain Research Institute (UNO)
Rice University (Alternative Spring Break instruction)
Salt Lake City University (Alternative Spring Break instruction)
UIC University (Alternative Spring Break instruction)
University of Illinois (Alternative Spring Break instruction)
University of Illinois at Chicago (Alternative Spring Break instruction)
University of Kansas (Alternative Spring Break instruction)
University of Miami (Alternative Spring Break instruction)
University of Michigan (Alternative Spring Break instruction)
University of Utah (Alternative Spring Break instruction)
Vanderbilt University (Alternative Spring Break instruction)
Western Michigan University (Alternative Spring Break instruction)
Wetland Hydrology (class from Tulane University)
Wetland Hydrology (class from LSU)

Other Southeastern-Related Instructional Courses (Non-University Level) (12):

Lab School Scouts
Lake Pontchartrain Wetlands Workshops (Hastings—4/year)
Louisiana School for Math, Science and the Arts
Math and Science Upward Bound
Nature of Math (Debbie Dardis)
Project Cypress
Math-Science Partnerships (Jefferson Parish and Southeastern-Debbie Dardis—2/year)
Teacher Workshops on Louisiana’s Coastal Wetlands (Michael Greene—4/year)
Teacher Wetland Workshops (Debbie Dardis--3/year)
Upward Bound
Wacky Wetland Weekends (Training Camps for Young Biologists) (Dardis)

Public Outreach

Public outreach has also been a major component of Turtle Cove activities. Most of these

activities include group tours to the station on the Turtle Cove Pontoon Boat. K-12 school groups, community groups, government agencies and other groups schedule these trips each year. A summary of the numbers of these groups is provided below.

Approximately 40 different K-12 School Groups from region
Approximately 10 different Government Agencies (federal, state and local)
Approximately 20 different community/non profit/social groups of all types
Approximately 5 different university level departmental retreats

Generic Field Trip Schedule for Outreach Groups

Turtle Cove provides field trip opportunities one day per week on Mondays, Wednesdays and Fridays to schools and other groups interested in the history, science and human culture of the wetlands in the Lake Pontchartrain Basin. Transportation for the 30 minute boat ride down Pass Manchac is provided by a covered 40 ft Pontoon Boat, which has a total capacity of 40 persons, including the boat driver. Professional Scientists serve as guides and instructors on most occasions. Subject areas discussed through lecture and visual observation include: natural history of the physical environment; environmental history that includes social, economic and cultural aspects; impacts of cypress deforestation and reforestation; physical and social-economic impacts of wetland loss and coastal erosion, and; solutions (projects and programs) to wetland loss that Turtle Cove is involved in. Groups may expect to see a variety of wildlife including alligators, snakes (Banded Water Snake, Diamond-Back Water Snake, Cottonmouth Water Moccasin, etc.), birds (Blue Heron, Great Egret, Cormorant, Brown Pelican, Osprey, Bald Eagle, Red-Winged Black Bird, etc.), small mammals (nutria, wild hogs, etc.) and fish, as well as various wetland vegetation.

A typical one-day trip, which may vary with weather and other time limitations, could include the following activities (this **generic schedule can be adjusted depending on requirements/requests from groups**):

- 9:30am Meet at SLU/WLF Boat Shed at Galva Canal and depart on Pontoon Boat down Pass Manchac toward Turtle Cove (observe bird and reptile life, old logging canals and pull-boat ditches and changes in wetland characteristics) (for your reference, Galva Canal is about an hour and 15 minutes from Baton Rouge, one hour from downtown New Orleans, or 25 minutes from Hammond)
- 10:15 Arrive at Turtle Cove followed by short restroom break and tour of grounds.
- 10:30 Walk along boardwalk to survey marsh vegetation and other physical characteristics.
- 11:00 Lecture (bottom floor of building) on natural and socio-economic environmental history of Louisiana wetlands, impacts from human activities, and solutions to wetland loss.
- 11:30 Lunch at Station (on your own—your Turtle Cove staff person will be meeting with the Caretaker next door through approximately 1:00 or 1:30pm while your group eats/ dip-nets on boardwalk).
- 12:00 Dip Netting along boardwalk under supervision of teachers/group leaders and/or personal quite time.
- 1:30 Depart Turtle Cove for Manchac Lighthouse (20 minutes east) to view and discuss shoreline erosion and wetland loss.

- 2:00 Venture down Stinking Bayou to observe alligators (IF TIME ALLOWS).
- 2:30 Depart Stinking Bayou for return to Galva Canal
- 3:00 Arrive at Galva Canal

Cost of Trips:

There is no required cost for a one-day field trip to Turtle Cove. However, we greatly appreciate donations that help cover the cost of gas and boat expense. Suggested donation is approximately \$10/person, and should be made out in total by check to “SLU Development Foundation” (this will ensure money goes to further Turtle Cove programs). Under very special circumstances, overnight groups of 16 persons or less may arrange to visit overnight for a required charge of \$20/person/night. Such stays require your own adult supervision as no staff is available for those duties. If requested several weeks in advance, a group meal (choice of fried catfish, jambalaya, gumbo, red beans and rice, etc.) can be prepared by Hayden Reno are available for \$12/head (includes drinks and all condiments, check made payable to Reno’s Seafood). For directions to the Galva Canal Boat Shed and phone numbers for contact, please see pages...

II. HEALTH AND SAFETY REGULATIONS AT TURTLE COVE

Orientation Comments and General Health and Safety Rules

Turtle Cove is a multi-use facility being used by numerous individuals for various purposes. Such communal use requires basic rules and regulations in order to insure compatibility of these various uses. We have attempted to keep these rules to a minimum, but common sense and respect for the needs and rights of others is the best policy. Do what you can to help maintain all facilities in good working order for all Turtle Cove users.

Keys and Combinations - Most padlocks at Turtle Cove use the same key (#3210). A copy of this key is attached to each boat key. We are moving towards a combination lock approach to avoid the need for key management. Check with the Turtle Cove Manager for combination numbers, but some of the main ones include:

- Galva Canal Boat Shed Bathroom (code 7710 or 3030)
- Galva Canal Boat Shed Classroom (upstairs) (code 7710)
- Galva Canal Researcher Storage Shed (combo 7710 on door hang lock, key is inside lock). Other keys to canoe trailer, etc. are in that storage shed on right when walking inside.

Plumbing - Don't clog the commodes. Inform Turtle Cove staff immediately if there is a potential problem, and try to correct the problem before the commode over-flows.

Water - The tap water at Turtle Cove is safe to drink (is tested every year or so), but commonly tastes bad. We try to maintain a supply of bottled water (five gallon jugs in the kitchen) for drinking. Note that the water supply is usually turned off during the winter to avoid frozen pipes. If you need to use the facility during the winter, check with the station manager to have the water turned on.

Ice - The ice machine in the laundry room. There is also an ice machine upstairs at the Galva Boat

Shed outside the classroom.

3rd Floor - Potential FIRE TRAP!!!! - Note that the third floor exit is a narrow stairway to the interior of the building. Consequently, no sleeping is allowed on the third floor (even during class!). Be aware that if a fire does occur in the building, you may need to exit through a third floor window.

First Aid Kit - A first aid kit is maintained on the wall in the kitchen. If you use the last of any supplies, or if you find something missing, notify Turtle Cove staff so that those supplies may be replaced. All boats have first aid kits as well.

Snakes and Snake Bite Procedures- Note that snakes, including poisonous cottonmouths, are common at Turtle Cove. Watch your step, and wear shoes when you are outside. All snakes, as well as other wildlife, are protected at Turtle Cove, so do not kill them (except for valid scientific research). **A snakebite kit is present in the kitchen with the first aid kit. In general, if bitten by a poisonous snake (most likely to be a Cottonmouth Water Moccasin), have victim sit or lay still and calm. Place a tunicate tight and above the bite to slow down blood flow. Immediately get victim on a boat back to Galva and, if he stays coherent, then to the nearest hospital (North Oaks Hospital in Ponchatoula on Bus. Hwy. 51 between Ponchatoula and Hammond). If victim begins to fall in and out of consciousness contact 911 for case-by-case instruction.**

Swimming - Swimming at Turtle Cove is at your own risk. There is no lifeguard and alligators may be present. Water is deep off the dock and currents may be strong. Water quality is often poor, and below standards recommended for swimming. Therefore it is general policy that no diving or swimming off of the dock is allowed.

Nutria Itch - Bare skin in marsh ditches may expose you to “swimmer’s itch”, a parasitic infection than causes severe itching. So wear boots, even when it’s hot.

Dogs - Dogs and other pets are not allowed on the second floor at Turtle Cove. (They are also not allowed on the Manchac Wildlife Management Area without a permit from Louisiana Department of Wildlife and Fisheries.)

Equipment Use Regulations:

All Turtle Cove equipment is intended for on-site use at the station unless special authorization is received from the Manager for its use elsewhere.

Canoes - Several canoes (and pirogues) are available in the store room at the back of the “Barn”. If you use one, remember that you must have a life jacket for each person in a boat, regardless of water depth, ability to swim, etc. Canoes should be taken down Schleider’s Ditch only (and not in the Pass). Please clean your canoe after use, and replace it on the storage rack. **Inexperienced canoeists should not take canoes into Pass Manchac.** There are also 10 canoes on a trailer at Galva Canal that can be used at Galva (going down towards the “Prairie” area), or tailored anywhere around the basin in an appropriate vehicle like the Turtle Cove truck.

Library Books - Turtle Cove maintains a small but quality library of reference books especially pertinent to the Turtle Cove environment. These books are not to be “checked out” but must be used only at Turtle Cove. Please replace books in their proper location (by library call number) immediately after use. The key to the book cases is hanging on a nail in the pillow cabinet (in the dining area). **Return the key immediately after use.**

Computers and Projectors – A formal computer lab consisting of three modern computers and monitors and a combination color printer/copier/fax/scanner have been in place on the 3rd floor since 2003. A similar set up was installed in the Galva Classroom in 2007. Both have satellite internet service. The Galva Classroom computer lab also has a drop down power point screen, power point machine (best used with a laptop), and white board with markers.

Microscopes - Microscopes for general use are stored in office on the third floor of Turtle Cove, and are restricted to faculty and graduate student use. Combination to the lock on that door is 3600. Polaroid, 35-mm, and video cameras are available for use with these microscopes (and may be checked out from The Turtle Cove Director). Five video-flex cameras, a Scalar “scope-on-a-rope” unit, and a Scalar digital microscope are available for class use (may be checked out from The Turtle Cove Director).

Washing Machine and Dryer - You are welcome to use the washer and dryer but please rinse well any muddy clothes before placing them in either machine. Do not leave the dryer on when no one is present in the building.

Equipment Storage - If you need to store equipment or supplies at Turtle Cove for long-term use, do so in an out-of-the-way location and mark any materials with your name. If you want a locked storage area for such equipment, check with The Turtle Cove Director.

III. FACILITY USE PROCEDURES AND POLICIES

General Rules

- **Turtle Cove Use** - All individuals, both faculty, staff and students, using Turtle Cove facilities and boats must register with the Turtle Cove Manager primarily by completing a Turtle Cove Boat Reservation Form (see section IV). Activities must be for university-related research, education and outreach activities.
- **Overnight Use** - All groups, regardless of purpose, must register and obtain approval from the Turtle Cove Manager for overnight use of the facility. Those planning to use Turtle Cove overnight should check with the Turtle Cove Manager to verify that the facility is not already reserved for someone else. In order to reserve a date for use of Turtle Cove, inform the Manager well in advance if possible.
- **Smoking** is not allowed inside the building at Turtle Cove, nor on university boats. **Do not litter** the property with cigarette butts (or any other trash).

- **Illegal drugs and firearms** are not to be taken to Turtle Cove. **No alcoholic beverages** are to be taken to Turtle Cove, nor consumed at Turtle Cove, except for officially registered university-approved social events. Approved events must abide by the **University Alcohol Policy**. Public intoxication is not allowed on university property, including Turtle Cove. No one is to operate a university boat, or other vehicle or power equipment, while drinking alcohol, or under the influence of alcohol.
- **All private boats** visiting the station must abide by all Turtle Cove and university regulations, including the prohibition against drinking alcohol on Turtle Cove grounds.
- **University boats** must be used for university business only (research, education or outreach activities, or other administrative activities related to Turtle Cove).
- **No unofficial use** - Turtle Cove cannot be used for personal parties, skiing, boarding, racing, or other social activities not related to the educational and research mission of the university.
- **Do not remove any equipment** from Turtle Cove without prior authorization from the Director.
- **Clean up - Wash all dishes** after use and put them away. Leave the facility at least as clean as you found it. There is currently no custodial staff assigned to Turtle Cove. **Do not leave perishable foods at Turtle Cove.**
- **All wildlife and vegetation at Turtle Cove is protected** for the benefit of all visitors. Do not kill or remove any plant or animal life except for valid research or educational purposes.
- **Report any problems or defective equipment** to the Station Manager/Caretaker (Hayden Reno) and to the Manager as soon as possible.

Student Group Use of Turtle Cove

Approved university groups may use the Turtle Cove facility for special meetings, retreats, or other events provided that such activities do not interfere with research or educational activities being conducted at the facility. Applications for use should be addressed to Dr. Robert Moreau, Director, Turtle Cove Environmental Research Station, (P.O. Box 10585), 549-5008, or via email at rmoreau@selu.edu.

An appropriate university staff or faculty supervisor must submit the application for use and should inform all participants of regulations and policies for Turtle Cove use. That person will be responsible for the safety and behavior of the group, and will be expected to remain with the group during the entire period of Turtle Cove use.

Group Regulations (with permission from the Manager on a group by group basis)

1. Groups will be charged for boat transportation at the rate of \$200 per pickup and return trip (Boats will accommodate up to 30 persons per trip; excessive gear will require extra trips. Thus the charge for a group of 25 without excessive gear would be \$200; for a group of 35 the charge would be \$400.) Pickups are usually made at the SLU boat shed on Galva Canal. Waivers for these charges can be requested in letter to Director about the facility.
2. A complete list of the names of all participants must be given to the boat operator at the time of the initial pickup.
3. All persons younger than 15 must wear life jackets while being transported in university boats.
4. No boat trips are allowed after dark. All pickups and returns must be scheduled at least 30 minutes before sunset.
5. Alcoholic beverages, illegal drugs, and firearms are not to be taken to Turtle Cove.
6. Shoes should be worn outside at all times. (Cottonmouth water moccasins are common and dangerous!)
7. Student groups are not allowed to have open fires outside nor in the fireplace.
8. Dogs and other pets should not be taken to Turtle Cove.
9. Vegetation and wildlife (including snakes) should not be disturbed in any way.
10. Fourteen bunk beds are available at Turtle Cove (Linens are not provided). **No sleeping is allowed on the third floor.**
11. Student groups are expected to clean the facility before leaving (sweep floors, wipe tables and counter tops, wash dishes, remove all trash, food, and personal belongings), and return all furniture to its original location (Any group not cleaning the facility will be assessed a cleanup fee - \$50).
12. All damages or problems with the facility or equipment should be reported to the station manager (Mr. Hayden Reno) immediately.

For emergency calls from Turtle Cove, contact Robert Moreau (office 985-549-5008, cell 504-231-1067 or cell 985-507-2855), Hayden Reno (cell 985-507-7710 or home 985-386-9928), Michael Greene (office 985-549-3600 or cell 985-507-9181) or Fred Stouder (office 985-549-5355 or cell 985-507-2856). The cell phone at Turtle Cove is to be used only in emergencies. That number is (985)351-5477.

IV. BOAT USE AND BOATING SAFETY REGULATIONS

Boating Regulations

On August 15, 2002, new and more stringent boating safety rules for Turtle Cove boats were implemented (known as the “10 Commandments for Boat Use”). These rules are listed below.

- (1) **NEW APPROVED BOAT OPERATOR STATUS**-Beginning immediately, only “approved boat operators” as defined below will be able to check out and take out a boat that they will drive. In addition to these rules, all other rules relative to the use of the Turtle Cove Environmental Research Station and Turtle Cove boats must be followed as outlined in the Turtle Cove Policy Manual (i.e., no alcohol/illegal drugs/smoking, boats only used for

- research, education or outreach purposes, no unauthorized use of boats, etc.). Everyone now currently authorized to drive boats (from having taken a boating safety class and going through the check-out or mentoring procedure) is considered approved.
- (2) **BOAT MENTORING PROGRAM FOR APPROVED STATUS** – after taking the in-house 6 hour boating safety course (which must be completed every three years), new boat users will have to go out with “approved boat operators” until those operators (“mentors”) sign off on the new user as being capable of operating a boat by him/herself. Included in this program will be the passing of knowledge of exactly where boats can reasonably go regarding underwater hazards, knowledge of stumps, areas of low water, etc and the intricacies of operating each boat; The mentor and the student’s advisor will “sign off” via an email to the Turtle Cove Manager when training is complete—the new user will then be considered approved.
 - (3) **TWO PERSON RULE**-Any trips other than back and forth to Turtle Cove require two people at all times in the boat (only one has to be an “approved SLU boat operator”—the second person has to be an adult over the age of 21). In special circumstances, this rule can be waived by the written approval of the student’s faculty advisor—in advance. A waiver will also be given to Turtle Cove staff and affiliated staff for work relative to the administration of the research station itself and its programs (i.e., Manager, Coordinator of Education/Outreach Programs, Facilities Technician (Hayden), Turtle Cove grad students, alternative spring break program coordinators, LUMCON technicians responsible for maintenance of the on-line water quality and weather monitoring station, etc.);
 - (4) **DETAILS OF FLOAT PLAN AND CONTACT PERSON**-the revised reservation forms will include two new sections for stating precise details of the trip (i.e., route taken there and back, exact destinations, etc.) and that of a contact person name and phone number who knows about the planned trip;
 - (5) **LIFE JACKET RULE**-all persons riding in any Turtle Cove boat (except Pontoon Boat riders over 15 years old) must wear a United States Coast Guard Approved Personal Flotation Device (life preserver)—note this rule has been in effect since September 2001;
 - (6) **CELL PHONE RULE**-there must be at least one usable cell phone in a Turtle Cove boat at all times that is within range of activity throughout the course of the trip. The cell phone number must be listed on the “Turtle Cove Boat Registration Form” when signed out prior to use. The cell phone must be properly charged and can be a personal one or any other issued by the student’s lab, etc. Turtle Cove is not responsible for having a cell phone for the operator—this is the responsibility of the student (personally) or his/her lab (i.e., the faculty advisor). Contact Tanya at x5555 for procedures on obtaining a cell phone through the university via applicable external grants;
 - (7) **CHECKLIST and WEATHER-MONITORING RULE**-before taking the boat out, operators must conduct a brief checklist (one will be laminated on each boat) for important things to check including gas, life jackets, paddles, and a cell phone. In addition, each boat operator is responsible for checking weather conditions IN ADVANCE of going out. This may include watching the local TV weather forecast, the “Weather Channel” (on cable TV), logging onto “Weather.com” and checking the forecast in our area, listening to the Marine Forecast on a marine weather station (channel 2 or 22), listening to the forecast on the radio,

- etc. Users are not authorized to operate Turtle Cove boats during times and in locations of severe thunderstorms, lightning, or times of fog that severely limit visibility;
- (8) **NORMAL BOAT OPERATING HOURS**-normal boat operating hours are from sunrise to sunset, seven days a week, with the rule being daylight availability (i.e., where no boat lights are needed or required by law). Boat operators should realize that Turtle Cove staff are not available after hours or on weekends. Night-time operation is strictly prohibited, and is permitted only under very special circumstances if approved by the both the Faculty Advisor and Turtle Cove Manager via email correspondence for one-time use, or on a more formal written form for multiple use;
 - (9) **REPORTING OF ANY ACCIDENT, INCIDENT or DAMAGE**-boat users will report any accident or “unusually hard hit” made (i.e., unusually hard hitting of stumps, logs, bottom, etc.) that may have caused damage to the boat or motor, seen or unseen. Such reporting, which can be through email, phone call, or in person to the Turtle Cove Manager (Moreau) or Facility Technician (Hayden Reno) should help to warn others of obstacles in designated areas, and, after discussing the incident with the Manager, should help the boat user to understand how this may be avoided in the future. Failure to report so may result in loss of privilege to use boats.
 - (10) **CONFERENCE FOR MAJOR INCIDENTS AND POSSIBLE LOSS OF BOAT USE PRIVILEGES**-any accidents or incidents deemed “serious” by the Turtle Cove Manager and/or the Faculty Advisor will result in a meeting with the boat operator to discuss the incident, determine any loss of boat privileges that may result from the incident, and discuss how such incidents can be avoided in the future. At any time, if the Turtle Cove Manager and/or Faculty Advisor feels the boat operator is not fit to drive boats, those privileges will be taken away either temporarily or permanently.

BOAT OPERATOR RESPONSIBILITY

*Remember that the operator of the boat is considered the Captain, and is responsible for the crew and everything that happens on the boat. The Captain is also responsible for any damage the wake may cause to other people’s boats or private property.

*Always leave the boat as clean as or cleaner than you found it, and with no less than ½ tank of gas in it for the next person.

In addition, All private boats visiting the station must abide by all Turtle Cove and university regulations.

Required Boating Safety Training:

As mentioned in the rules above, in order to be approved for using Turtle Cove boats, boat operators must take (every three years) an approved boating safety course conducted by Turtle Cove personnel (or those offered by the Coast Guard Auxiliary or Power Squadron). In addition, they must demonstrate proficiency in operating boats safely while being checked out on university boats by the Manager. Boating safety courses and checkouts are conducted by Turtle Cove personnel at the beginning of each semester (or as needed).

Boat Check-Out Procedures

- Keys remain in boats (in the ignition) at all times
- Use the On-Line Boat Google Calendar Reservation System (discussed at Boating Safety Classes) at <http://www.google.com/calendar/render>, (can be accessed from the Turtle Cove website (www.selu.edu/turtlecove) to see what is available the day you need a boat, and to make the reservation.
- After placing your boat reservation on Google Calendar, fill out the actual “Boat Reservation Form” (from Turtle Cove website) and return to Manager via email. Keep copy for your records.
- Report any problems with boats or other Turtle Cove equipment to Hayden Reno (station manager) if possible, and also report such problems to the Director (Moreau) immediately, either verbally or with a written note.

Information Needed for Boat Reservation Form

The following is similar to the boat reservation form you will fill out and email to Manager after reserving the boat on the Google Calendar. This form includes a current list of all active boats and their standard locations.

Boat Registration Form (revised 7-18-07)

Turtle Cove Environmental Research Station (call x5008 for questions)

(Note: Fill out separate form for each day of use and each boat in use—unless continuous multiple days of same boat. Also enter your name and boat on boat reservation calendar as a “quick check on availability” for others).

FILL THIS FORM OUT COMPLETELY—ONE FORM PER TRIP (email to rmoreau@selu.edu or fax to 985-549-5008 in advance)

User Names: (Two-Person Rule): _____ Total # in Group: _____

(1) SLU-Approved Boat Driver: _____

(2) Second Adult Companion: _____

Cell Phone # you will have with you during trip (this is mandatory):(_____-_____)

Contact Person (who knows about your trip and when you should be expected back—this is also mandatory): Name: _____ Ph. #: (_____-_____)

Date of Use: ____/____/____ Hours of Operation: _____ AM/PM - _____ AM/PM

Total Boat Running Time (to nearest hour): _____ hour(s)

Key out by: _____ AM/PM Key in by: _____ AM/PM

Weather Conditions: You are responsible for checking weather conditions by cable TV, internet, radio, etc. Per our safety rules, any listings of small craft advisories (high winds, thunderstorms, lightning, heavy fog, etc.) prohibit you from taking a boat out during those times. **Have you checked weather conditions within 24 hours of going out? circle: YES or NO**

Boat to be Used (these boats are available to all SLU-Approved Boat Users):

(circle one) _____ (capacity)

14’ “Bird Boat w/20 hp Honda (NOT IN USE—HORT CTR) 4

16' Flat Back Canoe with 2 hp Honda 4'Stroke (Wilson Hall-Cooler Rm)	3
16' Honda Go-Devil—Hort Center (for use on W. Lake Maurepas w/Shafe)	3
16' Turtle Cove Go-Devil—Turtle Cove Boat Shed	3
17' White Boat (“Egret”)—ready Aug 07—Galva Boat Shed	5
18' Gray Boat (“Rangia”)—West L. Maurepas Slip	4
18' Brown Boat (“Pelican”)—Galva Canal Boat Shed	4
21' Black Boat (“Vulture”)—LPBMM	6 (or1,200 lbs)
21' Blue Boat (“Osprey”)—NOT IN USE Galva Parking Lot	6 (or1,200 lbs)
21' Red Boat (“Red Wing”)—Galva Canal Boat Shed	6 (or1,200 lbs)
23' Green Boat (“Maurepas”)—Galva Canal Boat Shed	8

Restricted Boats (primarily for Turtle Cove staff—other authorized users must first contact Manager Robert Moreau for authorization and availability—only he knows the schedule):

(circle one)	(capacity)
40' Pontoon Boat (“Pelican”)—Galva Canal Boat Shed (Request thru Rob)	40

Destination (circle):

Turtle Cove
Galva Canal
Lake Pontchartrain (north, south, east or west)
Lake Maurepas (north, south, east or west)
Other: _____

Purpose of Trip (circle one):

Research
Education-SLU Class: _____
Outreach-Group Tour: _____
Administrative: _____
Other: _____

Planned Route and Exact (as exact as you can) Destination:

NOTE:*****You must follow the “10 Commandments for Boat Use” (Rules and Regulations) for using Turtle Cove Boats, contact Manager Robert Moreau, or your advisor, if you don’t have a copy.*****Fill gas tank and clean the boat after use*****

Summary of Boat Operating Procedures

Check that your boat has all required equipment before using it:

- Life Jackets (one per person)
- Throw Cushion (or ring)
- Lights (if you will be out after dark or near dusk)
- Fire Extinguisher
- Flare Signal Kit
- Paddles
- Whistle or Horn
- Gas Cans (with plenty of gas)
- Anchor
- Tool Box

Report any missing or defective equipment to the Station Manager and Director immediately, as well as any others who may be planning to use that boat.

Do not move "attached" equipment from one boat to another except in emergencies (includes batteries, lights, fire extinguishers, etc.).

Check motor repeatedly when running to be certain it is pumping cooling water (Be especially careful in shallow water and at night!). All motors are now "4-Stroke" versions, and DO NOT MIX OIL WITH GAS.

Check motor for weeds after leaving canals or bayous (A few small weeds can prevent a boat from getting up on plane).

Always tie boat in at least two places and be certain that it will not be caught under or above dock if water level changes.

Raise motor out of water when leaving it in boat slip.

Clean boats (including canoes and pirogues) thoroughly after each use.

ANYONE VIOLATING THESE RULES MAY BE PROHIBITED FROM FURTHER USE OF TURTLE COVE BOATS!

Boat Gas Purchase Procedures

Gas may be charged at the Fuel Dock Marina (at the north end of the railroad bridge) in Manchac when using boats at Galva Canal. For boats being used at the West Lake Maurepas site, gas can now only be purchased by you (preferably with a P-Card) at a service station in Springfield or other major town (in a regular gas can) and brought to the boat. The Black Lake Bait and Tackle store stopped selling gas in Spring 2008. When signing the charge slip for gas at the Fuel Dock in Manchac, provide the following information on the invoice slip that you will sign:

- Print name of boat (i.e, Blue Boat, Red Boat, etc.)
- Print your name
- Print your advisor's name (i.e., the name of the faculty member whose grant will pay for trips, like "Shafe" or "Voegle".
- Sign your name.

As mentioned above, all of our boats are powered by 4-stroke engines so that oil does not have to be mixed with gas. Fill gas tanks after use if possible (the marina usually closes at 5:00 pm). Notify any subsequent boat user if there is no gas available (or if there is a mechanical problem). Phone numbers of the gas stations are located in the "Contact Information" of this manual. It is strongly recommended that you contact the gas stations prior to your trips so as to make sure of their current operating hours.

Daily Preventative Maintenance

Check the following daily before operating the vessel:

1. Fuel level: Should have enough to get where you are going and back, with enough left over for unforeseen circumstances. ("1/3 out, 1/3 back, 1/3 in reserve")
2. Fuel system: Check for noticeable leaks.
3. Vessel electrical systems: Make sure all systems function.
4. Lights: Check all lights, especially if you will be out after dark (or late in the day).
5. Propeller: Check for damage.
6. Lower unit: Check for noticeable leaks.
7. Water circulation system: Check rear telltale (especially when operating in shallow or muddy water). If there is no water stream coming out of the telltale, cut the motor and clear the water intakes.

Marine VHF Radio Operation

The marine radio call sign for all Turtle Cove boats is **WSE 5590**. The channels are numbered 1-28 and 60-88. The Coast Guard monitors channels 16 and 22 (which they call 2-2-Alpha). Additionally, there are two weather channels, WX01 and WX02.

The Controls:

On-Off-Volume: This is generally one dial or button and should be comprehensible to the average Turtle Cove user.

Squelch: This control filters out unnecessary static noise. In most cases, it is a knob which, upon turning the radio ON, is turned fully clockwise, then counterclockwise until you hear background noise (static), then clockwise just until the static disappears. This should be the optimal setting. The only time you may want to change it is if you are trying to receive a weak transmission.

Channel: Channels are changed by turning a dial or, in some cases, by entering the channel number on a keypad. When you turn the radio ON, channel 16 will automatically be selected.

High/Low: This control selects for transmission power. It is courteous, and legally required, to transmit on LOW power to limit the transmission range and avoid cluttering the airwaves with unnecessary traffic. If you cannot elicit an answer to your transmission (you may be 40 miles out in the Gulf of Mexico), then it is appropriate to switch to HIGH power.

Microphone: The microphone has a push-to-talk switch which is fairly straightforward to operate.

Channel 16: Channel 16 is the universal Distress, Safety, and Hailing channel. Boat operators are expected to monitor Channel 16 at all times so as to be aware of distress calls, safety messages from the Coast Guard, and any stations trying to reach you. But you are required to do your talking on some other channel (24-28, 62, 68-72, or 84-87).

Distress and Safety Messages:

The Coast Guard recognizes three levels of safety or distress messages.

Securite (pronounced in French se-cur-ee-tay), used to precede storm warnings and other messages concerning navigation safety.

Pan Pan (pronounced in French pon-pon), used in any situation where the safety of a person or vessel is in jeopardy but is in no immediate danger (i.e. out of gas or engine failure).

M'Aidez (pronounced in French may-day), used only when there is immediate danger of loss of life

or property (i.e. vessel is sinking or person on board is injured).

Always give priority to Distress and Safety.

Making Radio Contact:

Suppose you are in the Creole and your buddy is in the Maurepas. If all is well, both you and your buddy will have your radios ON and tuned to channel 16. Further suppose that you want to contact your buddy with some vital information. You will:

1. Check that the High/Low switch is set to LOW.
 2. Listen to ascertain that no other transmission is in progress.
 3. Press the push-to-talk button and say, "R/V Maurepas, this is R/V Creole."
 4. Wait for a reply. If none, then try again in about thirty seconds. If still no reply, try again later. Your buddy may not have his/her radio ON, or perhaps motor noise has drowned out the transmission.
 5. The appropriate answer from the Maurepas is, "Creole, this is Maurepas."
 6. Then, you say, "Maurepas, this is Creole. Switch to 84." (You could have selected another channel {24-28, 62, 68-72, or 84-87} but 84 is the channel used by Manchac locals.)
 7. Both you and your buddy change channels ("switch") to channel 84.
 8. Then you say again (after pressing the push-to-talk button), "Maurepas, this is Creole."
 9. Maurepas makes contact, and you carry on your conversation in a normal fashion.
- Important: These are public airwaves. Anything you say can and will be heard by who knows who. Federal law dictates no swearing and no whistling.
10. When you are finished, say, "R/V Creole out," and switch back to channel 16.

What about the call sign **WSE 5590**? You are supposed to use it when you make initial contact and when you sign out. In practice, the name of the vessel is sufficient. If you talk to the Coast Guard, use the call sign.

ORM Water Vessel Safety Audit and Program Requirements

Each summer Turtle Cove undergoes a Water Vessel Safety Audit by the Office of Risk Management (ORM). The Self-Audit is completed by the Manager and turned into the Director of Safety and Hazardous on campus. The latest version of the audit and the background document for the audit can be found on the main ORM website. Some of the key terms, concepts and identifications outlined in the audit—as it relates to the Turtle Cove ERS-- include the following:

High Risk Operator – *High Risk operators are those individuals having three or more convictions, guilty pleas, and/or nolo contendere pleas for moving vessel violations or individuals having a single conviction, guilty, plea, or nolo contendere plea for operating a vessel while intoxicated, careless operation, reckless operation, negligent homicide, or similar violation including any civil case for which negligence has been proven within the pervious 12 month period.*

Determination of High-Risk Operators – *is done thru a yearly check by LDWF on the current approved list of users (as provided by Manager of Turtle Cove via a "Letter of Audit" request).*

State Water Vessels – any water vessel owned, leased, and/or rented by the State of Louisiana.

(other Vessel Safety requirements)

- Manager is assigned to monitor the program.
- Monthly inspections made by Facilities Technician/Caretaker of all legal issues required (life jackets, lights, registration, flares, sounding devices, fire extinguishers, damage assessments, communication devices, trailers, etc.)—corrective actions taken and documented all relevant items.
- Preventive maintenance taken on all boats and motors yearly.
- Master list of approved users maintained.
- All accidents report

V. HURRICANE EVACUATION PROCEDURES

Following the storms of 2005, Southeastern Louisiana University had all departments develop a hurricane evacuation plan. Turtle Cove's plan of activities is as follows:

Turtle Cove Environmental Research Station:
Southeastern Louisiana University Hurricane/Severe Weather Operations Plan.

1. Phase I-The six-month period between December 1st and May 30th.

During the period, the Director and/or his/her designated representative(s) will:

- a. Review the Southeastern Hurricane/Severe Weather Operations Plan and ensure all employees are familiar with the plan.
- b. Conduct training addressing emergency operations expected during a hurricane/tropical storm.
- c. Update staffing changes and emergency contact information for Turtle Cove personnel. Identify all emergency personnel who will assist with hurricane operations (these individuals comprise the Emergency Team and are: Robert Moreau, Hayden Reno, Michael Greene, and Fred Stouder).
- d. Inventory emergency supplies and equipment especially duct tape, flashlights and batteries, ropes, gas cans, etc. Requisition needed supplies and equipment. Ensure that needed items are stocked by May 15th. Ensure Emergency Team is aware of these supplies.
- e. Coordinate with Horticulture Center and Physical Plant on assistance in hauling boats from Galva Canal and West Lake Maurepas back to Campus (to Horticulture Center). Coordinate with outside, local contractors for recovery operations, i.e., debris removal.
- f. Attend any planning meetings called by the President.

2. Phase II-Hurricane Advisory.

During the period June 1st through November 30th, upon notification by the National Weather Service that a tropical storm or formed hurricane's projected track will be into the Gulf of Mexico, the Director and/or his/her designated representative(s) will:

- a. Review the Southeastern Louisiana University Hurricane and Severe Weather Operations Plan and brief other Turtle Cove personnel as to their responsibilities.
- b. Director will alert all emergency personnel for possible support operation during extreme/severe inclement weather.
- c. Direct the inspection and/or determine the operation status of equipment, fuel, etc., as follows:
 - (1.) Generators.
 - (2.) Fuel supplies (gasoline and diesel).
 - (3.) Emergency supplies.
 - (4.) Water Vessels and Vehicles.
 - (5.) Radios and batteries.
 - (6.) Grounds at Turtle Cove and Galva Canal
- d. Attend all planning meetings called by the President, Provost (in the absence of the President), and Vice-President, Administration and Finance, and be prepared to brief Turtle Cove's operational status.

3. Phase III-Hurricane/Severe Weather Watch.

When the National Weather Center declares that a hurricane watch is in effect for the Gulf of Mexico, the Director and/or his designated representative(s) will:

- a. Initiate corrective action as necessary for any problems noted during Phase II.
- b. Verify assignment and availability of emergency team personnel.
- c. Ensure that all boats are in ready status for transport to campus or that materials, supplies and equipment at Turtle Cove and Galva Canal areas are ready for storage on higher elevation storage areas.

- d. Ensure that directives are in place for recovery supplies that may be needed following the storm.
- e. Attend all planning meetings called by the President. Be prepared to brief the Department's personnel and logistical status.

4. Phase 4-Hurricane/Severe Weather Warning.

When the National Weather Center declares a hurricane warning for the Gulf of Mexico, the Director and/or his/her designated representative(s) will:

- a. Ensure that all operational boats and vehicles are fueled.
- b. Direct personnel to load boats onto trailers and begin hauling to campus (behind Horticulture Center). Coordinate with Physical Plant drivers who will assist with appropriate Physical Plant vehicles on the hauling of boats back to campus (especially those larger boats like the Pontoon Boat that may require a 1-ton truck to pull them). Leave one boat securely and appropriately tied (or on a trailer) at Galva Canal—this boat will be reserved for emergency and immediate recovery purposes that may arise.
- c. Ensure all loose items in boats and on grounds (at Galva Canal and Turtle Cove) are secured (i.e., direct the removal and relocation of outside potential low-weight, airborne objects to storage sheds, barn or indoor facilities.).
- d. Ensure that all landscaping services equipment is secured (i.e., lawnmowers are stored on ramps at highest ground, etc.).
- e. Ensure all emergency personnel have been issued all necessary emergency equipment.
- f. Close down all building systems as necessary at Turtle Cove and Galva Canal locations.
- g. Attend all planning meetings called by the President. Be prepared to brief the Department's personnel and logistical status.

5. Phase V-Closure and Evacuation of the University; Implementation of Emergency Support Operations.

When the President makes the decision to close and evacuate the University, the Director and/or his/her designated representative(s) will:

- a. Complete any remaining tasks to prepare the Turtle Cove and Galva Canal sites (buildings, grounds, vessels, equipment and supplies).
- b. Ensure that all emergency personnel are prepared to conduct recovery operations.
- c. Attend all planning meetings called by the President. Be prepared to brief the Department's personnel, operations, and logistical status.

6. Phase 6-Hurricane Emergency Support Operations.

After the Turtle Cove and Galva Canal sites have been evacuated and closed, the Director and/or his/her designated representative will:

- a. Ensure that all emergency personnel do not unnecessarily expose themselves to hazardous situations.
- b. Prepare to implement recovery operations.
- c. Attend all meetings called by the President. Be prepared to brief the Department's personnel, operations, and logistical status.

7. Phase VII-Recovery and Reconstitution of the Turtle Cove and Galva Canal Sites.

As soon as possible after the storm, the Director and/or his/her designated representative(s) will:

- a. Notify all Emergency Team personnel to report to the Galva Canal site for recovery and clean-up operations and preparations to depart for Turtle Cove to do the same.
- b. Conduct an in-depth damage assessment of buildings and facilities listed Below and complete EMO Form (See Appendix 1 to this ANNEX.)
 - (1.) Determine if waterways are safe in order to get to Turtle Cove.
 - (2.) General condition of Buildings inside and out (checking for roof penetrations) at Galva Canal and Turtle Cove sites.
 - (3.) Other outdoor facilities (barns, pump house, Caretaker's house, Turtle Cove Boat Shed, etc.).
 - (4.) Trees and shrubbery.

- c. Initiate any repair work that can be handled by Turtle Cove personnel as soon as possible. Request repair work from Physical Plant and other outside contractors as deemed necessary for all other repair work needed.
- d. Request restoration of all utilities and equipment that were shutdown.
- e. Initiate debris removal by Turtle Cove personnel where applicable—consult with Physical Plant and Hurricane Coordinator for all other debris removal that is beyond the scope and capability of Turtle Cove staff.
- f. Initiate bid process for contract work.
- g. Remove tape and plywood window panels.
- h. Return items placed in temporary storage locations to their original location. Once any flood waters have receded, and any other environmental hazards have dissipated (i.e., high winds, rain, etc), begin return of boats and trailers and other vehicles to their normal places.
- i. Coordinate with the Director, Safety and Hazardous Waster Management to initiate and complete all applicable FEMA Forms (See ANNEX) and all State Office of Risk Management Forms (See ANNEX).
- j. Attend all planning meetings called by the President. Be prepared to brief the Department’s personnel, operations, and logistical status.
- k. Record issues and notes for the After-Action-Review.

Form more information on the Turtle Cove ERS, visit our website at www.selu.edu/turtlecove.