Guidelines for Developing Derelict Trap Removal Programs in the Gulf of Mexico

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Gulf States Marine Fisheries Commission

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GUIDELINES FOR DEVELOPING DERELICT TRAP REMOVAL PROGRAMS IN THE GULF OF MEXICO

Developed by the

Derelict Trap Task Force

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Table of Contents

Appendices

Preface

The wire crab trap dramatically influenced the blue crab (*Callinectes sapidus*) fishery in the Gulf of Mexico. Crab traps were introduced in Louisiana and Texas, as early as 1948, and were widely accepted throughout the Gulf of Mexico by the middle 1950's. Although adoption of the crab trap had a positive impact on fishing efficiency and harvest, proliferation of traps has resulted in user group conflicts and an increase in problems associated with lost or discarded (derelict) traps.

Certain fishing practices and physical characteristics of traps contribute to trap loss and ghost fishing mortality; these include the large number, unattended nature, poor size selectivity, and high durability of vinyl-coated traps. Unattended gear is prone to loss and the number of ghost traps increases additively as fishing effort rises. The problems associated with derelict crab traps are multi-faceted. The traps contribute to mortality of blue crabs and bycatch, exacerbate user group conflicts, create visual pollution, and may cause damage to sensitive habitats.

In October 2001, the State-Federal Fisheries Management Committee of the Gulf States Marine Fisheries Commission formed the Derelict Trap Task Force to define state issues relevant to the derelict crab trap problem. This task force was comprised of representatives from the Crab and Habitat subcommittees, Law Enforcement Committee, Commercial/Recreational Fisheries Advisory Panel, and the Sea Grant Advisory Program. The task force was asked to assist states and/or other appropriate institutions in developing guidelines for derelict trap removal programs.

The efforts outlined in this guide can be used by agencies, organizations, or individuals that want to develop a program for trap removal or by an agency mandated to do so. These efforts can be accomplished by committees and subcommittees, or by a single, dedicated individual.

This document is a broad outline of the various components that can be implemented in developing derelict trap removal programs and includes reviews of ongoing programs in the Gulf States. Not all the components may apply to every program. State program reviews relevant to trap retrievals are included as appendices.

While the Derelict Trap Task Force has focused primarily on the problems associated with the wire blue crab trap in the Gulf of Mexico, many other trap fisheries can benefit from such a program. Recognizing that derelict traps are an issue in many regions of the coastal United States, this guide attempts to provide program narrative which can be applied to any type of derelict trap (blue crab, stone crab, lobster, or fish). Likewise, the basic principles in this guideline are similar to other volunteer-based, debris cleanup programs and could also be applied to other debris activities.

I. Designate Lead Agency

A. Select Program Coordinator

A state or other institution should select a program coordinator to serve as director and point of contact for trap removal program activities. The coordinator will organize individuals to ensure that trap removal activities follow existing state regulations or legal guidelines and are effective. If necessary, this person would submit the necessary documents or information required for authorization to conduct a trap-retrieval event. This person will be responsible for overseeing development of rules or legislation (if needed), working with industry, solicitation of volunteers and donations, publicity, in-house and external logistics, data collection, and program review.

B. Identify Stakeholders

The lead agency will identify individuals and groups with an interest in establishing a program to remove derelict traps from coastal waters. These may include but are not limited to: commercial harvesters, recreational users, law enforcement, civic groups, state/federal agencies such as Sea Grant and Marine Extension Service, legislators, conservation groups, and land owners. Because NOAA "species of concern" such as terrapins, birds, and some small mammals may be impacted by derelict and abandoned traps, the planning committee may want to include conservation groups concerned with these organisms.

C. Select Planning Committee

A planning committee should be formed which includes representatives of the various stakeholders and the program coordinator. This committee will be responsible for the development of the removal plan.

II. Plan Program Publicity

Civic and conservation groups, print and audio media, state resource agency publications, Sea Grant outreach programs and newsletters, and presentations to interest groups are potential outlets for disseminating information defining the need for and scope of the problem, as well as for generating participation. Public awareness of program goals should begin prior to plan development. Individual notification to fishery stakeholders may be required. Notification is essential when area or fishery closures are involved.

III. Develop Derelict Trap Removal Plan

The planning committee should coordinate with state and federal agencies and state and local municipalities if it is necessary to gain access to restricted areas or wildlife refuges. Guidelines may need to be developed to allow transport of traps from or over private property.

A. Task Assignment

The planning committee is responsible for delegation of the tasks identified below.

B. Tasks

The planning committee is responsible for identification and delegation of tasks associated with the Derelict Trap Removal Plan. The following list has been compiled from existing removal programs and may need to be modified for individual states or sites.

1. Regulatory

a. Review Existing Regulations and Legislation

The planning committee and the state resource management agency should review state ordinances and statutes to determine whether agency or legislative authority is needed for a closure of the trap fishery and for non-owners to remove derelict traps.

b. Propose New Regulations and Legislation

New legislation or regulations may need to be introduced. Legal issues regarding traps as private property must be addressed in any new legislative or regulatory initiative. It may be necessary to define traps as 'litter' or 'debris' under public health safety codes to allow for removal and disposal by agencies or organizations conducting trap retrieval events.

c. Determine Program Type

The planning committee should solicit input from their state management agency, industry, and/or any existing fishery advisory committees regarding times, seasons, and methods of trap removal which would be least disruptive to the crab fishery. Seasonal or area closures may or may not be the most appropriate mechanism for removing derelict traps. Marine law enforcement staff should be consulted to ensure the legality of trap removal options.

2. Budget Development

The planning committee should develop a budget which identifies both actual and in-kind dollars, taking into consideration donated goods, services, and volunteer man-hours. Sources of funding outside the state agency need to be identified and donations solicited. Supplies that assist volunteers should either be budgeted or donated. A list of suggested supplies and materials is provided on page 6.

Budget codes should be implemented to track actual costs of the program (personnel time, vehicle mileage, boat hours and fuel, printing and publicity costs, supplies provided by agency or institution, etc.).

3. Data Collection

Data collection is essential for determining potential impacts of derelict traps on habitat and fish and wildlife resources. If these data are to be used for management decisions, volunteer-collected data may be of limited value. If possible, agency personnel should work in the area in conjunction with volunteers to collect scientific data and provide reliable species identifications. Data need to be recorded as traps are retrieved. A designated data recorder should be appointed on each vessel.

a) Design Forms

The program coordinator and planning committee should work with the state management agency to determine the type of data collected and the design of the form. The forms should be simple to understand and define all relevant terms and procedures.

b) Data Components

Suggested data collection elements include:

1) location of trap - on water or on land,
2) gear or buoy identification – present or absent,
3) trap condition - fishable or non-fishable,
4) degradable panel information,
5) escape vent information, and
6) bycatch (crabs, finfish, other; live or dead).

In addition, the form should provide for the identification of the individual or volunteer group, the number of people per boat, and the hours worked. Trained observers (biologists, graduate students, and state agency staff) can ensure collected data is accurate. The type of data collected should be as similar as possible between events to allow for the comparison of data. Impacts of derelict traps may vary regionally.

4. Volunteer Recruitment

Volunteers should be solicited from stakeholder organizations and the public at large. Presentations to local conservation/sportfishing groups will reach a large number of potential volunteers and can snowball into additional requests for presentations elsewhere. Volunteer contact information must be maintained as continued communication is critical to actual participation in the event. Information on boat size and availability is essential to planning of water-based events. Shallow-draft vessels or air boats are helpful in marsh and nearshore waters. In large water bodies, a collecting vessel or barge anchored in a central location is useful. All participants should be advised to wear suitable clothing and heavy-duty footwear and/or waders.

5. Public Relations/Education

Pre-event publicity is essential to wide participation in the trap removal program. Supporting organizations, stakeholder groups, dignitaries, and media representatives should be asked to participate in outreach and educational activities at the event with interactive displays for the public and participants.

6. Volunteer Training

The program coordinator and members of the planning committee should meet with volunteer representatives for a program overview, discussion of specific tasks, and assignment of removal areas. A site coordinator from the lead agency should be assigned for each collection site to organize volunteer effort and ensure any questions or problems are addressed promptly.

a. Assignment of Site Coordinator

On the morning of the event, at each pre-selected site, the planning committee or program coordinator should ensure that knowledgeable staff is onsite to orient volunteers. If any dignitaries have been invited to cleanup sites on the day of the event, the program coordinator should invite appropriate media and organize any speaking events with the site coordinator.

The site coordinator is responsible for all onsite activities and for reporting to the program coordinator and planning committee.

b. Onsite Activities

1) Orientation, Attendance and Safety Release Forms

Orientation should begin with safety reminders including basic common sense guidelines on lifting and handling fouled traps, treatment of cuts and abrasions that may result from trap handling, severe weather precautions,

and emergency phone numbers. A basic first aid kit is required at each site. All vessels should meet U.S. Coast Guard regulations.

The site coordinator should maintain records of volunteers. Sign-in sheets should be provided and volunteer information collected at the time supplies are distributed.

It is recommended that agencies draft a release form to discourage lawsuits should injuries to volunteers occur and to gain permission for use of photographs for publicity.

2) Communication

A cell phone number should be obtained for each vessel if possible. Coast Guard Auxiliary staff can be helpful with communication between vessels and shoreline staff, and they can provide a direct line to the U.S. Coast Guard in case of emergency. It is recommended that the U.S. Coast Guard is informed of the activities prior to the event. In remote areas where cell phones may not have adequate reception, VHF radios may be the preferred method of communication.

The program coordinator should provide the cell numbers and contact points for the site coordinators at all the other locations for large water areas or larger scale events.

3) Maps and Navigation

Navigational instructions should be given to volunteers, including locations of derelict trap concentrations as determined by pre-event aerial surveys, if available.

Laminated grid maps with areas of trap concentrations delineated should be provided at the site. Site coordinators should assign areas of responsibility to volunteer groups prior to or at the event.

4) Distribution of Supplies

Supplies and goods should be distributed or available onsite during initial operation and may include:

work gloves	first aid kits
gaffs or hooks	tarpaulins
wire snips	cutting shears for lines
heavy-duty trash bags	bottled water
grid maps	emergency phone lists

VHF radio information	sunscreen
insect repellent	hammers

5) Data Form Collection and Management

The site coordinator should review the data collection form with the volunteers. The need for accurate and complete information should be stressed. Questions should be encouraged prior to departure.

The site coordinator should assign an individual at each location to count incoming traps (using tally meters/clickers, if available), record trap retrieval numbers and information by participant affiliation (management agency, NGOs, university, general public, etc), and collect data sheets from participants. These individuals should quickly review data sheets to make sure that necessary information has been recorded correctly and to resolve any questions. The completed forms should be given to the site coordinator.

The site coordinator should keep accurate numbers of volunteers and hours worked, vessels, traps collected, and fuel/oil consumption by individual vessels upon returning. These data can be used to determine the economic value of the volunteer activities and can be used as match in many funding programs.

6) Physical Removal of Traps

Barges and large platform vessels provide efficient collecting stations for on-water transfer of traps. Oyster- and barnacle-fouled traps and lines should be handled with caution; fouling organisms may be removed with hammers or other instruments. Lines and floats should be removed; floats and lines in good condition may be recycled. However, styrofoam floats and polypropylene ropes are only recyclable under strict procedures by permitted recycling centers. Flattening the traps while on the boat allows the traps to be stacked, thereby reducing relay of traps to shore.

7) Disposal

Approval may be needed for temporary disposal of traps at onshore sites; city, county, navigation district, or private ramp owners should be contacted prior to the event. Exhaust all means to recycle before traps are disposed in landfills. Early contact with recycling and landfill facilities helps ensure adequate trap disposal. If contacted early, recycling centers or landfills are often willing to reduce charges for landfill disposal, dumpster rental, dump truck hauling, manpower, etc.

A crushing apparatus at each site will reduce the volume of traps for disposal; cities, counties, or paving companies may be good sources for backhoes or other trap-smashing equipment. Plywood sheets can accomplish the same task with minimal expense. A log splitter can be modified to crush traps as well.

Buoys and polypropylene rope may be illegal to burn or recycle; cutting shears are essential at collection sites to remove and dispose of rope and buoys.

IV. Agency Program Review & Reporting

The program coordinator, with the help of the planning committee, should prepare a thorough report of all aspects of the trap removal program.

A summary document detailing total number of traps removed, volunteer numbers and hours (persons, vessels), type and value of donated goods, staff hours expended and agency costs, cost/benefit estimate, and analysis of data collected should be provided to participants and other interested parties. Recommendations for future removal program efforts should be developed.

V. Appendices

Overview

Since 2002, thousands of volunteers have been utilized in the removal of 58,611 derelict blue crab traps from Gulf of Mexico marine waters. Texas leads in number of years of trap cleanups and in number of traps collected, with Mississippi and Louisiana ranked second and third, respectively.

Total number of derelict blue crab traps collected in Gulf of Mexico estuarine and marine waters.

	Florida	**Alabama**	**Mississippi**	**Louisiana**	**Texas**	**Total**
2002	NP	438	2,400	NP	8,070	**10,908**
2003	NP	1,084	1,818	NP	3,858	**6,750**
2004	138	418	856	6,894	3,571	**11,877**
2005	288	NP	NP	4,623	2,475	**7,386**
2006	879	346	NP	2,935	1,922	**6,072**
2007	NA	154	11,150	1,498	2,816	**15,618**
Total	**1,305**	**2,440**	**16,224**	**15,950**	**22,712**	**58,611**

NP = no program, NA = not available

Derelict trap removal programs have been carried out in areas of the Gulf of Mexico for six consecutive years. During that time numerous issues related to program activities were identified; some issues were common to all states, while others were specific to individual states. Four issues occurred in every state: 1) volunteer fatigue, 2) variable funding, 3) quality of data collected by volunteers, and 4) commercial fishery interactions.

Volunteer Fatigue

Public enthusiasm, measured by the number of volunteers, has decreased in states where volunteer participation was monitored. Anecdotal evidence suggests that volunteers are less likely to participate as the density of derelict crab traps declines, or after they have participated in multiple clean up campaigns. Also, retrieving crab traps is a dirty, messy job and some volunteers may be reluctant to continue to participate.

Estimated number of volunteer participants.

	Florida	**Alabama**	**Mississippi**	**Louisiana***	**Texas**
2002	NP	45	NA	NP	554
2003	NP	175	NA	NP	494
2004	NA	158	NA	+90	311
2005	NA	NP	NP	+46	234
2006	NA	67	NP	+31	100
2007	NA	22	NP	16	211

*volunteer boats not individual

NP = no program; NA = not available

Variable Funding

Trap removal programs have been funded by various state, federal and private sources in each state. Funding may be in the form of grants, cash donations, volunteer efforts, supplies, disposal, equipment rental, etc. The lack of long-term programmatic funds and annual variation in funding sources/donations complicates long-range planning efforts.

Volunteer Data Collection

Data collection is essential for determining potential impacts of derelict traps on habitat and fish and wildlife resources. If these data are to be used for management decisions, volunteer-collected data may be of limited value. If possible, agency personnel should work in conjunction with volunteers to collect scientific data and provide reliable species identifications. Any data elements collected need to be recorded as traps are retrieved. A designated data recorder should be appointed on each vessel.

Commercial Fishery Interactions

The impact of fishery closures on the harvesting and processing sectors will vary with the size of the closure area and the length of time the area is closed. Impacted crab fishermen will lose some fishing time and incur costs associated with trap relocation and some dealers near the closure areas may experience a temporary reduction in supply of crabs. Scheduling trap closures during seasons of low harvest, or keeping some areas always open to harvest lessens the impact on the fishery. The benefits of derelict crab trap removal (reductions in user group conflicts and ghost fishing mortality) justify any short-term impact to the fishery.

In states without closed seasons, it is important to clearly define the characteristics of a derelict or non-fishable trap, to avoid inadvertently retrieving legal, fishable traps.

State Programs

The following pages provide individual state program details broken down into similar broad categories where appropriate and information is available. Each state program developed independent of the others and each has its own way of accomplishing the same jobs, therefore the specifics to each program are summarized here.

A. Results
B. Planning Timeline
C. Regulations/Legislation
D. Forms
E. Stakeholders
F. Program Publicity
G. Education/Outreach
H. Budget/Funding
I. Specialized Equipment
J. Disposal
K. Program Recognition

Florida

A. Results

While the information in this appendix focuses principally on blue crab trap retrieval events, in Florida, blue crab trap retrieval is a relatively new issue. Initial trap retrieval efforts in Florida were state-led efforts focused on the retrieval of lost or abandoned stone crab and lobster traps during the closed seasons for those fisheries. This program had various sources of funding, until a $25 fee dedicated for trap retrieval efforts was added to the annual license/endorsement fees for each of these fisheries. At first, traps were retrieved by agency law enforcement personnel, but eventually the program evolved to the point where the state fishery-management agency coordinated the trap retrieval events, contracting with commercial fishermen and fishing organizations to retrieve traps. This ongoing program is coordinated by the Florida Fish and Wildlife Conservation Commission (FWC), and thousands of traps and tens of thousands of pounds of trap debris have been removed from the water and beaches. After major storm events, during which trap loss was high, additional agencies (such as the Federal Emergency Management Agency) and groups (such as commercial fisherman organizations) have contributed time and funds to the retrieval of lost traps and trap debris.

A timeline of the evolution of this closed-season trap retrieval program is provided below.

Florida's Closed Season Trap Retrieval Efforts

Florida fishermen are required by law to retrieve their own traps prior to close of season. Some traps are abandoned through neglect, or are lost as a result of a force of nature. Section 370.143, Florida Statutes, authorizes the FWC to implement "deep water" trap retrievals. This statute refers specifically to stone crab and spiny lobster (crawfish) traps. Most of the trap retrievals conducted under this statute have been in the Keys and other south Florida locations. The history of these trap retrieval efforts is summarized below.

- In 1985, the Department of Natural Resources (DNR) was tasked with the responsibility for retrieval of abandoned/derelict traps during the closed seasons for stone crab and spiny lobster. Florida Marine Patrol (FMP) officers used Department vessels to pull traps by hand.
- In 1993, DNR and the Department of Environmental Regulation merged to become the Department of Environmental Protection (DEP), and DEP assumed responsibility for the trap retrieval program.
- In 1996, DEP's Research Institute and Office of Fisheries Management contracted commercial fishermen to retrieve traps during the closed season. FMP officer presence was required to document trap information for a $10 per trap-retrieval fee assessed to the trap owner. Collection of these trap-retrieval fees funded the retrieval effort for the following year's effort. Earliest program records indicate that in 1996 and 1997, approximately 3,500 traps were recovered.
- Recognizing the necessity for trap retrieval and recovery after several storms during 1998, Organized Fishermen of Florida (OFF) and Monroe County Commercial Fishermen (MCCF) conducted an extensive one-day trap retrieval in 1999. This combined volunteer effort resulted in the retrieval of approximately 9,000 traps and 15,000 pounds of debris from ropes and buoys.
- In 2000, DEP and Florida Keys National Marine Sanctuary (FKNMS) joined efforts to contract with commercial fishing captains to remove traps and shoreline debris. Federal Emergency Management Assistance (FEMA) funded the removal of approximately 11,637 traps and 8,205 buoys with line. During the 2000 Florida legislative session, both industry and state managers

successfully established a fee for stone crab trap licenses, with $25 of each $125 fee to be dedicated to the cost of trap retrieval and allow a retrieval fee "waiver" of 5 traps per license issued. A $25 dedicated license fee had previously been established for the crawfish endorsement and trap fishery. Florida Statutes 370.143 authorizes a $10 per trap assessment to the trap owner per each trap retrieved (in excess of 5 traps collected per endorsement held).

- In 2001, after the merger of the Marine Fisheries Commission, Game and Fish Commission and selected offices from the Department of Environmental Protection created the Fish and Wildlife Conservation Commission (FWC), volunteers participated in an FWC-authorized limited trap retrieval conducted in the areas of Long Key, Marathon, and the John Pennekamp Coral Reef State Park that resulted in nearly 500 traps retrieved.
- In 2002, FWC's Marine Fisheries Services and Marine Research Institute (now the Fish and Wildlife Research Institute) conducted trap retrieval in the summer of 2002 under a contractual agreement awarded to the Organized Fishermen of Florida.
- In 2003, FWC's Marine Fisheries office coordinated trap retrieval between Marine Fisheries' employees in Marathon, FL and the program manager in the Tallahassee office.
- In 2005, the FWC's trap retrieval program was expanded state-wide and covers all state waters of the Gulf of Mexico, Dade County (Atlantic Ocean), and Monroe County (Gulf and Atlantic).
- Annually, there is approximately $130,000 available, plus administrative costs, to perform trap retrieval. In 2006, Organized Fishermen of Florida, Inc. was awarded a contract through the State of Florida competitive bid process for trap retrieval to be conducted during the summer and early fall in five "Zones" of county water boundaries: Zone 1 - Escambia through Jefferson Counties, Zone 2 - Taylor through Hernando Counties, Zone 4 - Charlotte through Collier Counties, Zone 5 - Dry Tortugas and Marquesas and Zone 6 - Monroe and Dade counties. NOTE: Zone 3 - Pasco through Sarasota Counties did not receive any bids.
- In 2007, the "zones" were eliminated from the FWC's trap retrieval program contract. Instead, the contractor was required to conduct trap retrievals in all regions established in the contract (all state waters of the Gulf of Mexico, the Marquesas Keys, the Florida Keys and Dade County).

One condition of the trap retrieval contract is that an FWC observer must be present. During a trap retrieval trip, the observer records the location and quantity of traps retrieved, as well as license data (i.e., crawfish or stone crab endorsement number, buoy colors). Buoys, ropes, wire and plastics are returned to shore for disposal at a landfill. Disabled wooden traps are dropped at sea within Florida Keys National Marine Sanctuary-approved drop site coordinates. Only Commission-approved participants are authorized to retrieve a trap, except when a trap owner has a written agreement (filed with the Commission) allowing another fishermen to pull trap gear (which is not part of the trap retrieval program and must be conducted during the open season for the fishery or during a Commission approved extension period). Individuals not authorized to handle traps may be subject to misdemeanor or felony charges, suspension or revocation of all fishing privileges, and an administrative penalty up to $5,000 in addition to court penalties.

At this time, there is no closed season for blue crabs in Florida (at least state-wide, although there is an annual two-week closure of the fishery in the offshore waters of the Florida Gulf coast), so identifying lost or abandoned traps among actively fished traps is problematic. The retrieval of blue crab traps differs from the retrieval of stone crab or lobster traps due to the different areas fished – blue crab traps generally are fished in shallow inshore waters, whereas stone crab and lobster traps are fished in deeper offshore waters. This makes the retrieval of blue crab traps easier, and retrieval programs more amenable to volunteer-based retrieval efforts. Recent regulation changes provided the means for public and private agencies and organizations to conduct blue crab trap (only traps that meet "derelict" criteria established by the rule) and trap debris retrievals, and the number of events has increased each year. With an increasing number of events, the number of traps retrieved has also

increased: in 2004 – 138, in 2005 – 288, in 2006 – 879. New regulations for the blue crab fishery establish an annual endorsement fee, of which $25 will be dedicated to a trap retrieval program (Section 370.135, Florida Statutes). These fees will be collected starting July 1, 2008.

B. Planning Timeline

The timeline for planning a trap retrieval event depends on how large the event is to be, when and where it will be held, and if it is a new event or a recurring event. Established events may have shorter timelines as the trap retrieval logistics have already been worked out, and organizers may have existing pools from which to solicit volunteers.

Timeline of Planning Efforts in Florida

Pre-Event

18 months
- identify program coordinator and planning committee

18-12 months
- identify legislative and regulatory requirements to implement program, and submit a Derelict Trap Cleanup Plan to the FWC for approval

4 months
- obtain permission to place dumpsters and order dumpsters
- determine who will donate the cost of the trap disposal/tipping fee
- fabricate and/or purchase necessary equipment

3 months
- Obtain commitments for airboats and have them registered for the event by the boat captains

3 - 6 months
- identify derelict trap problem areas and spring low tides in target areas
- identify potentially conflicting events or activities
- identify potential stakeholders and volunteer organizations
- solicit donations by mailing quarterly letters to major companies
- solicit volunteers
- solicit stakeholders/partner agencies
- identify FWC law enforcement participation at event

2 months
- produce brochures, data collection sheets, safety release forms
- identify lunch donor
- identify dumpster captains and supplies
- prepare contact list and guidelines for airboats and other participating vessels
- secure vessel participation
- secure dumpsters
- secure tipping fee donations or charges
- obtain any necessary approval from the city or county for placement at event

1 month
- volunteer training, which includes instruction for completion of data sheets and safety release forms

1-2 months
- coordinate press release and TV highlights and t-shirt development
- coordinate TV spots and press release
- collect t-shirts, donations, PFDs for volunteers on boats, trap-retrieving equipment, etc.

- identify which boats will have media representatives on them and obtain permission from boat captains
- follow up with FWC law enforcement participation

Day of Event

- train volunteers on site

Post Event

Following day

- ensure dumpster was removed and contents were properly disposed of
- secure data
- prepare summary of event (for media, volunteers, basis of report, etc.)

Within 2 weeks

- send thank you message to volunteers
- enter data into database
- have a post-event review with committee to discuss ways to improve

Within 60 days of event

- send a final report of cleanup data to FWC

C. Regulations/Legislation

The institution of a program to retrieve crab and fish traps during a fishery's closed season was originally authorized by the Florida legislature in 1987 (see box below for Section 370.143, Florida Statutes, including more recent amendments). Funding for the program was provided by fees assessed the owners of retrieved traps, and a dedicated portion of the annual endorsement fee for each trap fishery. As discussed in section A. Results, this statute originally applied only to the stone crab and lobster fisheries, which had closed seasons. Subsequently, the statute has been expanded to include blue crabs and seabass; although there currently is no blue crab closed season, a short closed season for the purpose of derelict trap retrieval has been discussed. In Florida, although the FWC can institute regulations regarding trap retrieval, any rules involving fees must be approved by the legislature, so the statute has been amended over time as necessary.

Section 370.143, Florida Statutes

370.143 Retrieval of spiny lobster, stone crab, blue crab, and black sea bass traps during closed season; commission authority; fees.--

(1) The Fish and Wildlife Conservation Commission is authorized to implement a trap retrieval program for retrieval of spiny lobster, stone crab, blue crab, and black sea bass traps remaining in the water during the closed season for each species. The commission is authorized to contract with outside agents for the program operation.

(2) A retrieval fee of $10 per trap retrieved shall be assessed trap owners. However, for each person holding a spiny lobster endorsement, a stone crab endorsement, or a blue crab endorsement issued under rule of the commission, the retrieval fee shall be waived for the first five traps retrieved. Traps recovered under this program shall become the property of the commission or its contract agent, as determined by the commission, and shall be either destroyed or resold to the original owner. Revenue from retrieval fees shall be deposited in the Marine Resources Conservation Trust Fund and used solely for operation of the trap retrieval program.

(3) Payment of all assessed retrieval fees shall be required prior to renewal of the trap owner's saltwater products license. Retrieval fees assessed under this program shall stand in lieu of other penalties imposed for such trap violations.

(4) In the event of a major natural disaster, such as a hurricane or major storm, that causes massive trap losses within an area declared by the Governor to be a disaster emergency area, the commission shall waive trap retrieval fees.

History.--s. 4, ch. 87-116; s. 4, ch. 87-120; s. 230, ch. 94-356; s. 34, ch. 96-321; s. 246, ch. 99-245; s. 42, ch. 2000-364; s. 2, ch. 2004-72; s. 13, ch. 2007-223.

Regulations addressing trap retrievals outside of a closed season were put into effect July 1, 2003 (see box below; Rule 68B-55, Florida Administrative Code (FAC) and more recent amendments). Prior to Rule 68B-55, the only regular trap retrieval program in state waters was the annual program coordinated by the FWC that focused on the retrieval of stone crab and lobster traps during those fisheries' closed seasons (see section A. Results). Retrievals of crab traps and trap debris also had occasionally been conducted in federal waters (e.g., in national parks) by governmental and environmental agencies involved in the issue of marine mammal entanglements in trap-fishing and other gears, or in state waters by FWC law enforcement personnel.

The trap retrieval and trap debris removal regulations allowed public and private organizations other than FWC to remove derelict traps and trap debris from the waters and shorelines of the state, albeit only with prior FWC authorization. An important part of these regulations were the definition of a derelict trap. This was especially necessary for the retrieval of derelict blue crab traps – because there currently is no closed season for the inshore blue crab fishery, a derelict trap must be carefully identified to avoid retrieving an actively fished trap. Short-term closures of the blue crab season for the express purpose of retrieving derelict and abandoned traps, as well as other methods of identifying actively fished traps in the water, have been discussed by the FWC and the FWC Blue Crab Advisory Board, but no action is underway at this time. A Blue Crab Limited Entry Endorsement Program, which went into effect July 1, 2007, limits the number of commercial blue crab fishermen and the number of traps each fisherman can fish. It is hoped that this program will ultimately decrease the number of traps abandoned in the water by decreasing the latent effort in the fishery and maintaining only those fishermen who actively fish their traps.

Amendments to Chapter 68B-55, FAC were adopted by the FWC on September 13, 2007, and went into effect October 15, 2007. These amendments: 1) modified the derelict-trap definition to account for the new requirement that blue crab traps be marked with FWC-supplied trap tags; 2) allowed local, state, or federal government personnel to remove traps, derelict traps, or trap debris from areas where trapping is prohibited year-round, without first obtaining FWC authorization; and 3) allowed commercial crab or lobster trappers to authorize individuals other than themselves to recover and return to them their traps after a catastrophic storm event. Prior to the passage of the amendment allowing the recovery of traps by alternate authorized fishermen, traps displaced long distances from their original fishing locations as a result of storms might have been lost to the fisherman to whom they belonged. In reality, fishermen in some areas have always recovered and returned each others' traps. Now that the practice is legal, they do not need to worry about being penalized for retrieving traps that might otherwise have become derelict or ghost traps.

Rule 68B-55, Florida Administrative Code

CHAPTER 68B-55 TRAP RETRIEVAL AND TRAP DEBRIS REMOVAL
68B-55.001 Definitions.
68B-55.002 Retrieval of Trap Debris.
68B-55.003 Trap Retrieval Program Funded Pursuant to Section 370.143, Florida Statutes.
68B-55.004 Retrieval of Derelict Traps.

68B-55.001 Definitions.
As used in this chapter:
(1) "Closed season" means that specified period of time during which harvest is prohibited.
(2) "Trap debris" means any piece of a trap, or any combination of such pieces not constituting a fishable trap.
(3) "Derelict trap" means any trap during any closed season for the species, or any fishable trap during the open season that lacks more than two of the following elements:
(a) Buoy.
(b) Line.
(c) Current Commission-issued trap tag (if required).
(d) Identification.
(4) "Fishable trap" means a trap that has 6 intact sides and at least two of the following elements:
(a) Buoy.
(b) Line.
(c) Current trap tag (if required).
(d) Identification.
(5) "Fishery Participant Organization" means a group of commercial fishermen all of whom possess a current saltwater products license and a blue crab, stone crab or spiny lobster endorsement. For the purpose of participation in the retrieval of derelict traps this means participants who receive and possess written permission from each other to bring their traps into land or move them back into line, who work under law enforcement supervision to retrieve traps, or who prepare a plan for Commission authorization pursuant to this rule.
(6) "Trap" means legal harvesting gear as authorized in Rule 68B-4.020, F.A.C.
Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 7-1-03, Amended 3-1-05, 10-15-07.

68B-55.002 Retrieval of Trap Debris.
(1) Local, state, or federal governmental entities, nonprofit nongovernmental organizations, fishery participant organizations, or other community or citizens groups are hereby authorized to remove trap debris from shoreline areas landward of mean low water, and from mangroves or other shoreline vegetation when they organize, promote, and participate in coastal cleanup events for the purpose of removing marine debris.
(2) Except as provided in subsection (3), other coastal cleanup events for the purpose of removing trap debris from all other areas of state waters shall only be undertaken with prior authorization from the Commission, to assure that such removal is adequately supervised.
(3) Local, state, or federal government personnel may remove trap debris located in areas that are permanently closed to trapping without prior authorization from the Commission.
Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 7-1-03, Amended 10-15-07.

68B-55.003 Trap Retrieval Program Funded Pursuant to Section 370.143, Florida Statutes.
(1) Traps shall be retrieved by Commission personnel or by a contractor under direct oversight of such personnel, by any approved persons through either a cooperative agreement with federal, state, or local governments, or with fishery participant organizations acting in conjunction with the Commission.
(2) For each trap retrieved pursuant to this section, the following information shall be documented:
(a) The intended species targeted by the trap.
(b) Owner identification/endorsement number.
(c) Presence or absence of a required tag.
(d) Commercial or recreational trap.
(e) Location of trap.
(f) Buoy colors.
(3) The Commission's Division of Law Enforcement office, in the area most appropriate to the cleanup, shall be notified by the Commission program administrator, no less than 24 hours prior to commencement of trap retrieval under this program, and on each day thereafter until cleanup ceases.
(4) Trap owners affected by a disaster, pursuant to Chapter 370.143(4), Florida Statutes, will be allowed ten calendar days after notification to claim traps from a Commission authorized storage area. Unclaimed traps will be properly disabled and disposed of as trap debris.
Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 7-1-03.

68B-55.004 Retrieval of Derelict Traps.
(1) During the closed season for the harvest of any species for which traps are allowable gear, and after any authorized trap retrieval period together with any extensions, traps are considered to be derelict and may be retrieved as part of coastal cleanup events conducted by local, state, or federal government entities, nonprofit nongovernmental organizations, fishery participant organizations, or other community or citizens groups. Except as provided in subsection (3), such events shall only be undertaken with prior authorization from the Commission, to assure that such removal is adequately supervised but without the mandatory reporting required in Rule 68B-55.003, F.A.C.
(2) During the open season for harvest of any species for which traps are allowable gears, retrieval of derelict traps may occur at any time deemed appropriate by the Commission. Commission employees, local, state, or federal personnel or members of a fishery participant organization may retrieve derelict traps. Except as provided in subsection (3), retrieval other than by Commission personnel shall only be pursuant to a Commission approved plan. The plan shall include the operational area and time period proposed,

authorized personnel, the number of vessels, methods of disposition, and number and qualifications of supervisory personnel. An approved plan shall also include notification of the Commission's Division of Law Enforcement no less than 24 hours prior to commencement of retrieval under this program with final float plan information including contact information, vessel registration numbers, trip times, and number of days.

(3) Local, state, or federal government personnel may retrieve traps located in areas that are permanently closed to trapping without prior authorization from the Commission.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 7-1-03, Amended 10-15-07.

68B-55.005 Recovery of Traps in Area of Major Natural Disaster.

(1) In the event of an executive order issued by the Governor of the State of Florida declaring an emergency resulting from a major natural disaster such as a hurricane, tropical storm, or similar weather occurance, upon a finding that the disaster has caused massive trap losses in any fishery regulated by the Commission, the Executive Director of the Fish and Wildlife Conservation Commission will issue an order declaring a trap emergency in the affected area or in a specified part threreof. Such order shall serve to activate the following provisions of this rule.

(2) The trap emergency will be in the area and during the period specified in the activation order.

(3) Each harvester in the affected trap fishery may designate persons authorized to recover and possess traps of the harvester. Such designation shall be on an Emergency Trap Recovery Designation Affidavit (FWC Form DMF- SL5500), which form is hereby incorporated by reference. The original of the affidavit shall be retained by the harvester. A copy of the affidavit will be filed with the nearest office of the Commission's Division of Law Enforcement and also provided to each person authorized to recover and possess traps of the harvester. The affidavit shall be valid from the date the notarized form is received by the Commision's Division of Law Enforcement until the end of that license year.

(4) Persons authorized to recover and possess traps of a harvester will be allowed to do so only in the area and during the period specified in the activation order. Each such person shall possess and maintain available for inspection a copy of the affidavit while the person is engaged in recovering or possessing the harvester's traps.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 10-15-07.

D. Forms

Forms relevant to trap retrieval and debris removal events are evident at every step of the process. One important form details the trap cleanup guidelines set by the FWC (see box below). Since at this time Florida does not have a closed season for the inshore blue crab fishery, derelict traps must be clearly defined to avoid the mistaken retrieval of fishable traps.

Trap Retrieval and Debris Removal Programs

Traditionally, trap retrieval efforts have been focused on traps found in deep water in the Florida Keys area. We have recently expanded our focus to include a more shallow water retrieval of traps and trap debris in a broader area to include the Panhandle and Central areas of the Gulf of Mexico.

GUIDELINES
FOR REMOVAL OF TRAPS AND/OR DEBRIS

Fishable traps may NOT be retrieved unless they are defined as Derelict

Fishable Trap -has 6 intact sides and 2 of the following:

1. Buoy
2. Line
3. Current Commission issued Trap Tag (if required).
4. Identification

Derelict Trap - any fishable trap during the open season that lacks 3 of the following may be retrieved

1. Buoy
2. Line
3. Current Commission issued Trap Tag (if required).

Or

Identification (Name address/V#)

4. Current Commercial Saltwater Products license

OR

Derelict Trap - any trap remaining in the water during closed season is a derelict trap and may be retrieved

- Closed Season for Blue Crab trapping = September 20 thru October 4, all State waters of the Gulf of Mexico seaward of 3 nautical miles from shore
- Closed Season for Stone Crab trapping = May 16 thru October 14, all waters
- Closed Season for Crawfish trapping = April 1 thru August 5, all waters

Any trap debris found during open or closed season may be retrieved.

Trap Debris - any piece of a trap or any combination of pieces that do not make up a fishable trap

Another requisite to conduct a trap retrieval program in Florida is a cleanup plan. These plans are developed by government bodies or other organizations that wish to conduct trap retrieval events, and submitted to the FWC for approval. There is no standardized form for the plan, although certain information is required. A sample plan from the city of Naples is provided.

CITY OF NAPLES
DERELICT CRAB TRAP CLEANUP PLAN

Prepared by
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239-213-7122

Introduction

The City of Naples, in Collier County, owns and manages a 1,000 ft long pier which extends out into the Gulf of Mexico. This pier is a popular fishing spot and the surrounding nearshore area extending north and south of the pier is popular for blue and stone crabbers. The City has been receiving multiple complaints regarding the debris, which includes crab traps that have accumulated under the pier. Hooks and line from the fishermen get caught on the crab traps which currently lie under the pier and the line from the traps are wrapped around the pier pilings.

The City of Naples, in conjunction with Naples Dive Center, would like to organize a small scale clean-up which will likely involve the removal of derelict crab traps, monofilament line, hooks, trash, etc. The area to be addressed with this clean-up will likely involve only the first 350 feet of the pier. The last 650 feet will have to be addressed in a later effort. It is unknown how many traps are located within the first 350 feet and whether they can be considered derelict or not.

The open season blue crab fishery is normally conducted throughout the shallows along the Gulf Coast of Florida, utilizing vinyl coated metal traps, as is the closed season stone crab fishery. These traps should be retrieved by the owner regularly to collect the catch, inspect the traps functional condition (including ropes, buoys, identification markers, and tags), release viable by-catch and relocate to appropriate fishing grounds if necessary. However, due to several causes such as owner abandonment, weather conditions, buoys cut off by boaters, or unauthorized tampering, a large number of traps become derelict. An event which likely played a large role in increasing the number of derelict traps was Hurricane Wilma. The City of Naples was directly impacted by Wilma in October 2005, and many nearshore buoys and crab traps were dislodged and pushed ashore. The pier, acting as a "catch all" for marine debris, is greatly in need of a post hurricane clean-up.

The Gulf States Marine Fisheries Commission estimates that 250,000 derelict traps are added to the Gulf of Mexico waters every year. Even though this is a small scale effort, we hope to expand these efforts in the future both around the pier and beyond to the nearshore hardbottom habitats.

Retrieval and Removal Date

The proposed City Pier Cleanup is scheduled to take place on Sunday, July 9, 2006 between the hours of 6 am and 9am under the first 350' of the pier. The only open season which coincides with the cleanup is for the Blue Crab fishery. Stone crab and crawfish seasons are closed during this time, therefore, allowing for the removal of any and all traps which relate to these 2 species.

Participants and Vessels

On-site Local and State Cleanup Participants

Agency	Law Enforcement Staff	Biological Staff	Airboats	Support Vessels
Florida Fish and Wildlife Conservation Commission (FWC)	1	0	0	1
City of Naples, Waterfront Operations Manager	0	0	0	1
City of Naples, Natural Resources Staff	0	2	0	0
Collier County Sea Grant Agent	0	1	0	0
Rookery Bay NERR staff	0	2	0	0
Volunteers (City and county) # (?)				

* It is not anticipated that vessels will be used in the cleanup for hauling debris, etc. Debris will be swam or floated ashore by divers and snorkelers.

Specific Procedures for Trap Retrieval and Debris Removal

The following describes the specific retrieval and removal procedures for traps and debris that will be employed for the proposed cleanup. In addition, these procedures also include any necessary pre-cleanup coordination and team member briefings that will be conducted prior to the implementation of the cleanup event.

For Specific Retrieval and/or Removal Protocols and Guidelines:
See document "Derelict Trap Removal Guidelines" for reference as to criteria for pulling traps.

Agency, Team Member and Public Coordination:

- During the pre-cleanup briefing, copies of the rules for the derelict trap retrieval and debris removal program, as issued by the FWC under Chapter 68B-55 F.A.C., will be provided to the participating divers and dive shop.
- Persons will be assigned their designated duties.
- Divers and volunteers will also sign waivers relieving the City of any liability, due to the nature of this cleanup.

On the cleanup day, experienced divers (either instructor or professional divers) will dive under the pier to retrieve any debris they can safely handle and will use the necessary tools, such as cutters, lift bags, etc. for monofilament and cable removal and any heavy or large objects. They will then pass debris off to secondary divers and/or snorkelers who will swim the debris to shore where persons staged on the beach will gather debris at a pre-determined staging area. Once the cleanup effort has concluded, the debris will be transferred to the onsite dumpster which will be placed adjacent to the pier. A special pickup of the dumpster will be arranged through the City in order to assure that the cleanup debris will be removed and disposed of the same day as the Pier cleanup.

For any "questionable" traps (if participants are not certain they meet the derelict criteria) the divers come across, participants will consult with the onsite Law Enforcement Officer, so an assessment can be made. Participants will have to surface the trap in order for an assessment to be made due to the traps being fully

submerged. If the trap is deemed "fishable," the trap will be returned to its original location. If this is not acceptable, divers can assess "questionable" traps in situ, note their condition on a dive slate, and consult with the FWC Law Enforcement Officer prior to disturbing the trap. If traps are highly encrusted or buried in the sediment, the divers will ensure they are not harming marine life and will leave them in place.

Data on the impact of ghost-fishing derelict traps on fish and wildlife populations and habitat is an important goal for trap retrieval programs. Information on trap type and condition, the number of dead and live crabs in the retrieved trap, and the water depth where the trap was found is recorded on Trap and Debris Removal Data Collection Cards shown below. These basic questions can be answered by most participants in a trap retrieval event, regardless of their scientific background. Specific data on bycatch species and habitat where the trap was found may be collected by scientific personnel.

Trap and Debris Removal
Data Collection Card

Name _____

Address _____

Telephone # _____

Organization _____

Location of trap/debris removal _____

E-mail Address _____

(Please complete below and mail.)

Each Box represents a trap

Check (✓) one or answer as indicated	1	2	3	4	5	6	7	8	9	10
Blue Crab Trap (✓)										
Stone CrabTrap(✓)										
Baited Trap (✓)										
Not baited Trap(✓)										
There was a Buoy attached to the Trap (✓)/ color?										
Fishable Trap (✓)										
Abandoned Trap (✓)										
Qty. of Dead Stone Crabs found inside of the trap										
Qty. of Dead Blue Crabs found inside of the trap										
Qty. of Live Stone Crabs found inside of the trap										
Qty. of Live Blue Crabs found inside of the trap										
Where was the trap found? (S) (D) (L)										
S = Shallow water D = Deep water L = Land/Shoreline										

Document **collection of lines/buoys** using tick "~~𝍸~~" marks in the space provided below.

Lines =_____

Buoys =_____

☐ Yes, I would like to participate in a future event scheduled for my area. Please contact me!

E. Stakeholders

A variety of stakeholders have participated in Florida blue crab trap retrieval and debris removal events. These include local and regional environmental groups; non-profit environmental groups; recreational groups; local, county, regional, state, and national resource and management agencies; and, of course, private citizens. Stakeholder participation differs depending on the location of the cleanup event. In many cases, stakeholder organizations sponsor the events, with limited hands-on state involvement. These organizations provide their own personnel, as well as recruiting participants from the general public. Public participation in blue crab trap clean-up events is more practical than in stone crab or lobster trap clean-up events, because blue crabbing is principally an inshore fishery, and derelict traps and trap debris are usually found in easy-to-access shallow waters and along the shoreline.

Partial Stakeholder List for Trap Retrieval Events in Florida

Tampa Bay Watch
National Oceanic and Atmospheric Administration (NOAA) Restoration Center
Pinellas County Environmental Foundation
The Ocean Conservancy
Estuary Program
Florida Guides Association in Tampa Bay
United States Fish and Wildlife Service
Miami-Dade County – Department of Environmental Resource Management
Sea-Grant Extension, Charlotte County, EarthForce,
Airboat Association of Florida
Florida Fish & Wildlife Conservation Commission –
Division of Marine Fisheries
Division of Law Enforcement
Fish and Wildlife Research Institute (FWRI)
Southwest Florida Water Management District
Department of Environmental Protection –
Division of Recreation and Parks
Aquatic Preserve
County Environmental Protection Commission
County Solid Waste Management
County Parks and Recreation
County Department of Environmental Management
County Sheriff / Marine Unit
City Municipalities – Parks and Recreation

F. Program Publicity

Blue crab trap retrieval events in Florida are generally organized or sponsored by a stakeholder group, such as a local or regional environmental organization. These groups usually advertise the event in the local media, as well as in their own newsletters and on their websites. Trap retrieval events often are mentioned in articles discussing the safety and health issues pertaining to lost or abandoned traps, as in this Florida Sea Grant news article **http://news.ufl.edu/2006/05/25/crab-traps/**.

University of Florida News

Boaters beware – loose crab traps can cause havoc and headaches, UF expert says

Filed under Research, Environment on Thursday, May 25, 2006.

GAINESVILLE, Fla. — With thousands of boats expected on Florida's waterways this Memorial Day weekend, University of Florida extension agents say sailors should be wary of lost or abandoned crab traps that can wreak havoc on propellers and engines.

But they warn that removing traps from the water could leave boaters on the wrong side of the law.

"It's kind of a bizarre situation," said Betty Staugler, a Charlotte County-based marine extension agent with UF's Institute of Food and Agricultural Sciences.

Because poaching has such a detrimental effect on crabbers' livelihood, penalties are steep. It's a third-degree felony to tamper with a trap that doesn't belong to you – even if it's obviously been abandoned or so storm-battered as to be useless, she said.

Besides the criminal penalties, anyone who tampers with a trap can be fined $5,000 and permanently lose all saltwater fishing privileges, said Juli Dodson of the Florida Fish and Wildlife Conservation Commission.

During a recent cleanup on the Peace River in Charlotte County, volunteers reeled in 161 abandoned crab traps, said Staugler, also a specialist with Florida Sea Grant, a state and federal effort to create a sustainable coastal economy and environment.

But the search covered just a three-mile span of the river and there is danger to boaters wherever blue crab fishermen are active – which is just about anywhere in the state where salt water meets fresh, she said.

Cleanups like the April 10 half-day event Staugler organized weren't even allowed before 2003, she said. To stage such a cleanup, it takes state approval and a written plan that covers everything from precisely where the cleanup will take place to who'll be involved.

Staugler said she doesn't believe many crabbers purposely abandon traps, but the few who do cause a lot of headaches.

Capt. Ralph Allen, who operates King Fisher Fleet in Punta Gorda, said his fishing expedition and tour boats run into abandoned traps most frequently during the winter when crabbers are less active.

But for less experienced boaters – including some who will take to the water this weekend – the trap's buoy and rope can be hard to spot, especially if they've been in the water for a long time.

"After being in the water a few months, they can be surprisingly hard to pick up," he said.

The traps are square; about 2 feet long and generally have chicken-wire mesh on the sides and a rebar bottom. A line runs from the trap to a white or colored buoy. Storms, boaters or currents can knock the buoys loose, leaving traps nearly impossible to detect.

Allen, whose company runs river tours and fishing trips, said his boats tangle with abandoned traps and loose lines about 10 times a year. When that happens, he's forced to call in a diver to clear the line from the boat's propeller.

"Starting in about November, I shake my fist a lot and grit my teeth," he said.

Boaters who hit a trap or tangle in loose lines may untangle the line, but must leave the trap where they found it, Staugler said.

Unattended traps can attract wildlife that can swim or crawl inside and starve, Staugler said. Some cleanup volunteers around the state have found everything from diamondback terrapins to grouper to catfish stuck in abandoned traps.

In recent years, state environmental officials have debated whether to pay for volunteer-based cleanups, or whether there should be a short shutdown of blue crab season, during which fishermen would account for their traps and any unclaimed traps could be removed.

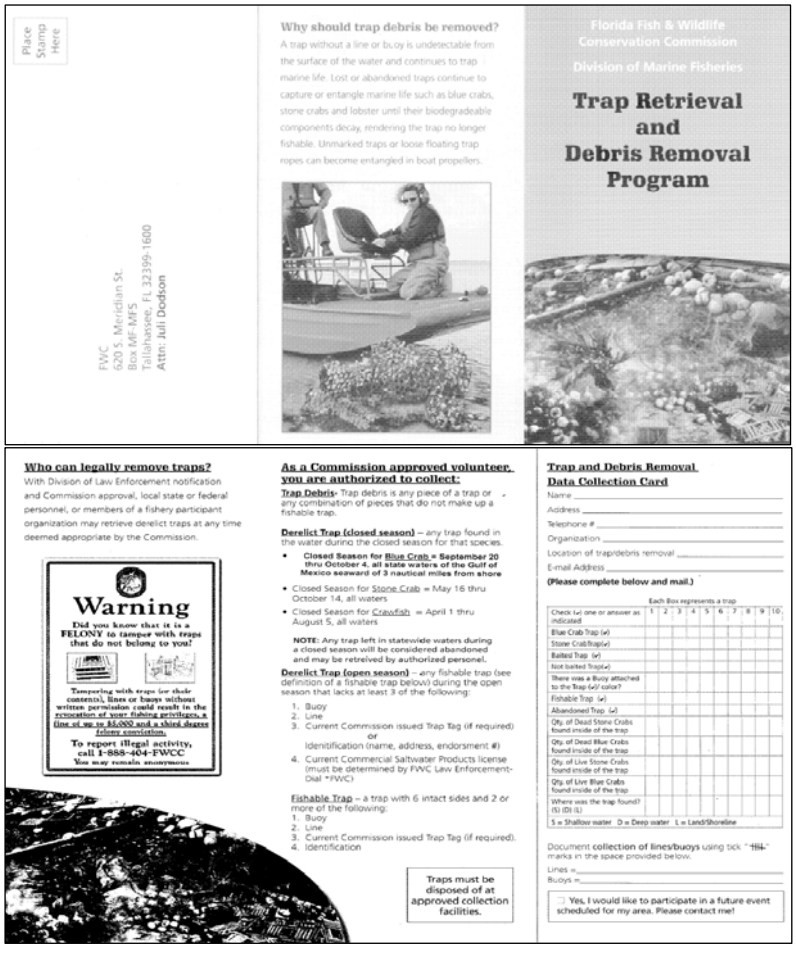
Early numbers from the Florida Fish and Wildlife Conservation Commission show that in 2005, Florida crabbers hauled in more than 11 million pounds of hard- and soft-shell blue crab, earning them about $11.4 million.

Credits

Writer Mickie Anderson, mickiea@ufl.edu, (352) 392-0400
Source Betty Staugler, staugler@ifas.ufl.edu, (941) 764-4340

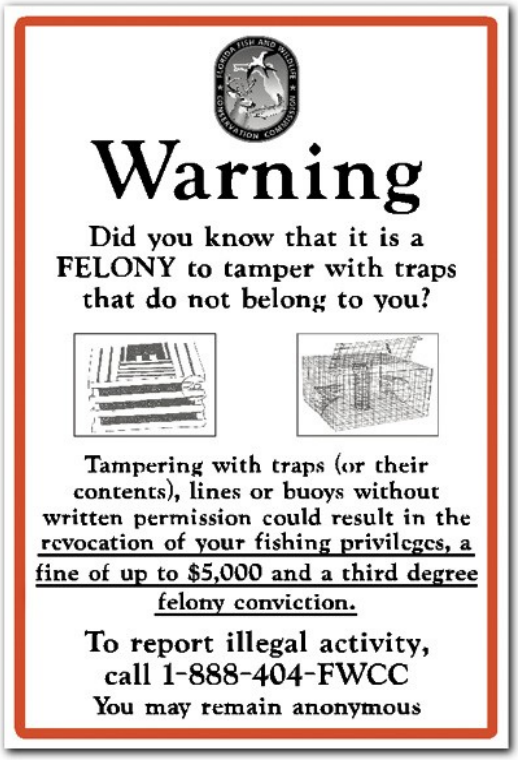
G. Education/Outreach

The FWC employs several methods to educate the public on the general issue of derelict traps and promote their participation in trap retrieval events. One method is the FWC-published brochure "Trap Retrieval and Debris Removal Program" (see below). The document briefly explains the issue, and details the procedures followed by commission-approved volunteers to retrieve derelict traps. Importantly, it also advises against the removal of traps when not part of a commission-approved retrieval event, which is a third-degree felony punishable by a fine and suspension or revocation of all fishing privileges.



This advisory message is emphasized in signage available for posting at boat ramps, fish houses, piers, etc. (see below). The sturdy metal signs detail the penalties for tampering with traps, and provide FWC contact information to report illegal activities. Although these signs are meant as deterrents to trap molestation and theft and do not advocate for trap retrievals *per se*, they do warn against the inappropriate retrieval of traps. Such signage at points of water access is particularly important in Florida with its high number of resident boaters and tourists who rent vessels, who may think they are doing an environmental favor by removing traps that they may mistakenly identify as derelict.

FWC Warning Signage Against Trap Molestation



A third method of derelict trap retrieval outreach is providing promotional materials in the captains' packets that are distributed at the events, and to volunteers who participate in the event. These promotions may include t-shirts, fish measurement decals, candy, or other goodies.

H. Budget/Funding

Budget

The budget of any trap retrieval event varies with the size and scope of the proposed event. Unlike in some of the other Gulf States, where events may be state-wide and several days in length, Florida events to retrieve blue crab traps generally are local in scale – cleaning a portion of a bay or river, for example – and last for a single day. This likely is because these events have local sponsors, and are not FWC-coordinated events.

An exception to the short-term, localized blue crab trap retrieval events is the FWC-coordinated stone crab and lobster trap retrieval program, which involves numerous locations and participants, and may continue for weeks or months (see section A. Results).

The budget below includes costs for many facets of the event, although partners or sponsors sometimes absorb certain expenses. For example, volunteers or local agencies may provide boats and fuel, equipment, and personnel at no cost to the sponsoring agency or organization. Also, local merchants may donate food, merchandise, coupons, or other items for give-away bags. However, calculating the total estimated costs, even when some things are donated, helps the sponsor of an event to track what actual costs might have been incurred. This is especially useful if donated time or items are to be used as match for grant funding.

Estimated Budget for a One-Day Event

Staff and equipment:	
3- 5 environmental staff – coordination, planning and participation (~ 75 hours at varying rates: $20/hr used here)	$1,500
1-2 boats (includes fuel, mileage, etc.) @ $150/boat	$150 – 300
Equipment (buckets, shovels, tarps, pliers, etc)	$200 estimate
In-kind and volunteer labor:	
132 hours @ $17.19/hr (22 volunteers X 6 hours)	$2,269
In-kind equipment:	
5-12 boats (includes fuel, mileage, travel, etc.) @ $150/boat	$750 – 1,800
Donated items:	
Dumpster (delivery, haul and fuel fee – Dumpster is often donated)	$292-442 (varies by vendor)
Trap disposal/tipping fees	$60
Lunch (estimated @ $5 per person)	$110
TOTAL ESTIMATED COSTS	$5,331 – 6,511

Funding

Various types of funding may be available from county and governmental operations as well as private funding from interested parties and participants. Funding needs or availability may vary depending on the locations of a cleanup event. In Florida, a small fee is incorporated into the trap-fishery licenses, and designated for use in trap retrievals (see section D. Regulations/Legislation).

I. Specialized Equipment

Most of the specialized equipment used for trap retrieval and disposal are easily made from readily available materials. Essential on-board equipment includes hooks or grapples for pulling traps aboard. A simple hook can be made by screwing a utility hook into one end of a six-foot broom handle or pole. The opposite end of the pole can be marked at one-foot intervals using a permanent marker to provide a simple way for trap retrieval participants to determine water depth for data collection, navigation, etc.

Wire blue crab traps contain little actual material, but have considerable volume. Disposal of retrieved traps is simplified by decreasing their volume using a trap "masher". This masher can consist simply of a flat metal plate on the end of a steel rod. Alternative trap-mashing methods identified but not necessarily used in Florida events include covering the traps with plywood and driving a vehicle onto the plywood, or constructing a mechanical trap masher. All lines and buoys should be removed from the traps prior to mashing, especially if the traps are to be recycled.

J. Disposal

Traps should be compacted in order to fit as many as possible into the waste receptacle (see information on trap "mashers" in Section I. Specialized Equipment). Gloves and sunglasses should be worn to protect hands and eyes when crushing traps. A step stool is useful for getting traps into the waste receptacle if it has high sides.

Trap debris (lines and buoys) is disposed of in trash receptacles. As with the traps, gloves and sunglasses should be worn during debris disposal to protect participants from scrapes and cuts due to fouling, which may be heavy. Sturdy hand snips or shears may be required to cut the lines from the traps; generally, lines are tied too tight or are too fouled to allow knots to be easily untied.

Currently in Florida, retrieved traps are disposed of in landfills, and are not recycled. Some obstacles to recycling include the large geographic area involved (it is difficult to concentrate retrieved traps for easy pick up), the lack of storage areas for traps prior to their pickup by a recycling firm, and the need to clean the traps prior to recycling, as well as the determination and separation of the recyclable materials in a trap from the non-recyclable. However, there is interest in recycling trap materials and this option will be pursued as practical.

Alabama

A. Results

A total of 2,440 derelict crab traps were collected from Alabama waters in five years of Derelict Crab Trap Removal Programs. Volunteers removed 2,315 of these traps from shallow waters and 125 traps were removed during deep-water clean-up efforts. After the first two years, the deep-water removal effort was phased out and all subsequent efforts have focused solely on the shallow-water areas. From 2002 – 2007 a range of 1,560 – 2,128 total volunteer hours were recorded for the program.

Alabama's Derelict Crab Trap Removal Program (2002 - 2007) Summary of Volunteer Effort

Year	Date of Closure	Estimated # of Boats	Estimated # of Volunteers	# Traps Caught per Volunteer (CPV)	Calculated # of Hours Worked	Number of Traps Removed
2002	15-June	25	36 - 50	6.5 - 9.0	144 - 200	323
2002*	5 - 11 June					115
2003	15-March	36	150 - 200	5.4 - 7.2	600 - 800	1,074
2003*	10 - 16 June					10
2004	13-March	40	127 - 190	2.2 - 3.3	508 - 760	418
2005	No program					
2006**	11-March	26	55 - 70	4.9 - 6.3	220 - 280	346
2007^	24-March	7‡	22‡	7.0	88	154
					Grand total of deep water traps collected:	**125**
					Grand total of shallow water traps collected:	**2,315**

* Deep-water clean-up
** State-wide closure but geographic extent of the removal effort concentrated in problem areas
^ Regulatory Authority limited to Causeway area therefore, effort limited to Causeway area
‡ Not an estimate

The June 2002 pilot program corresponded with the opening of the commercial brown shrimp season. To take advantage of lower spring tides the 2003 event was scheduled for March and has been conducted in March in all subsequent years. In 2003, 1,074 derelict traps were collected and account for 46% of all traps collected in the programs' entirety. The appreciable decline in traps in 2004 to 418 indicates that the historic accumulation of derelict traps has been greatly reduced. As a result, the program is now viewed as a maintenance program that can be maximized by conducting a program every second or third year.

The 2006 program was undertaken to remove derelict traps re-distributed by hurricanes and volunteer effort focused mainly in upper Mobile Bay. At constituency request, a 2007 event was held. It was the only event to be geographically restricted by regulation to the head of Mobile Bay; all previous events had included all coastal Alabama waters within 500 yards of the shoreline, except in 2002 when traps were removed from within 100 yards of the shoreline.

Data collection is an integral part of each event. Data was collected for trap location, condition and the associated bycatch for all events. The volunteer collected data varies greatly in quality with particularly poor data returns in the 2006 and 2007 events. Overall, data sheets were submitted for 1,931 derelict traps; not all sheets had every field completed. From the data recorded, 1,198 traps were removed from the water and 711 traps were removed from land. Where recorded, 29% of derelict crab traps were reported as being in usable condition. Bycatch data records 919 bycatch

organisms encountered excluding oysters. Seventy-five percent of bycatch was blue crab, eight percent xanthid crabs and five percent sheepshead. A total of nine diamondback terrapins were noted for the program, five of which were collected in a single trap. Species composition of the bycatch varied greatly with geographical area.

B. Planning Timeline

In Alabama, the timeline below describes the optimum schedule of event planning. With an established program, the timeline can be significantly reduced as personnel have established protocols with participants and vendors. Also, collection of specialized gear at the end of the program reduces or eliminates the fabrication step, and associated time.

18 months
- Identify program coordinator and planning committee

18-12 months
- Identify legislative and regulatory requirements to implement program

6 months
- Identify problem areas and spring low tides in target areas
- Identify potentially conflicting events or activities
- Identify potential stakeholders and volunteer organizations
- Identify dumpster locations and obtain permission from property owner

4 months
- Order dumpsters
- Fabricate necessary equipment (grapples & hooks)
- Solicit donations
- Follow proper protocol to establish state regulation as needed

3 months
- Purchase equipment (i.e. gloves, first aid equipment and tin snips)
- Coordinating press release and TV highlights and t-shirt development
- Identify T-shirt vendor (purchased or donated)
- Regulation signed to have airboats registered by captain

2 months
- Produce brochures, data collection sheets, safety release forms
- Volunteer training
- Identify dumpster captains and supplies
- Contact and provide guidelines for registered airboats

1-2 weeks
- Media spots
- Collect t-shirts and donations
- Distribute materials to volunteers

Post-event
- Post-event report, presentations, press releases, data summary, volunteer thank you notes

C. Regulations / Legislation

In Alabama, crab traps, regardless of condition, are considered private property and cannot be removed from state waters by any individual other than the owner. Consequently, a new regulation was written creating closed areas and redefining any traps remaining in the designated areas as marine litter. Each new program results in a re-writing of the regulation to accurately reflect the appropriate dates. In 2002, the initial regulation permitted derelict traps to be removed within 100 yards of the shoreline for coastal Alabama, in all subsequent events the closure area was extended to 500 yards from the shoreline. In 2007, the geographical extent of the Removal Program was limited by regulation to the head of Mobile Bay; in all previous events, the regulation encompassed all state waters south of the Mobile Bay Causeway / Bayway highways.

It is illegal to operate airboats within the AMRD jurisdiction and as a consequence, the regulation must specifically permit registered airboats to participate in the program.

"Temporary Closed Crab Fishing Season in Certain Areas", is hereby adopted to read as follows:

"220-3-.52 Temporary Closed Crab Fishing Season in Certain Areas

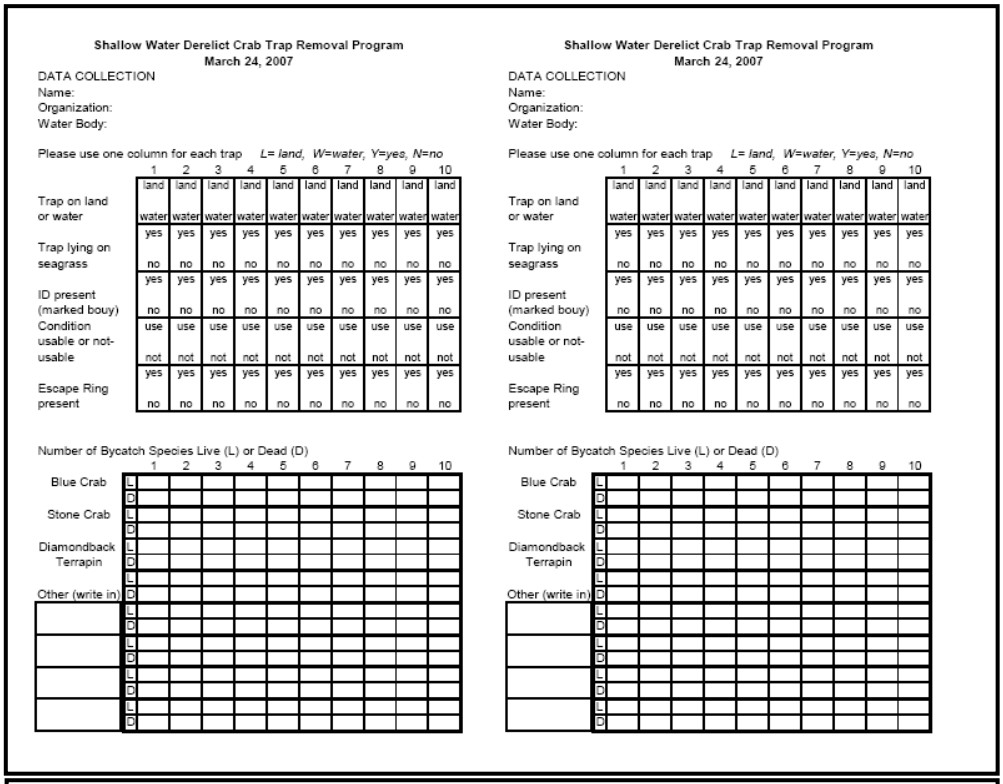
(a) There is hereby established a one day closed fishing season for the taking or harvesting of crabs by use of crab traps (recreational or commercial) in any inside waters of the State of Alabama under the jurisdiction of the Marine Resources Division within 500 yards of the shoreline on Saturday, March 24, 2007.

(b) During the closure defined in (a) of this regulation, no crab traps (recreational or commercial) shall be allowed in any waters closed by this regulation to the taking or harvesting of crabs by the use of crab traps (recreational or commercial) and any traps in the closed areas shall be considered marine litter and may be removed by any individual from these closed waters. Any individual who removes crab traps (commercial or recreational) that are considered to be marine litter must remove the marine litter from the waters of the State of Alabama under the jurisdiction of the Marine Resources Division and properly dispose of such.

(c) It shall be lawful for those assisting with the removal of derelict crab traps to use an airboat on any of the public waters of this state subject to an ebb and flow of the tide of at least two inches, south of a line beginning at the Mississippi state line following the eastbound lane of the Interstate Highway 10 to the Florida state line (except when Interstate Highway 10 lies north of U.S. Highway 90 Battleship Parkway, the line follows the eastbound lane of U.S. Highway 90) on Saturday, March 24, 2007. Any individual who uses an airboat must register such vessel with the Marine Resources Division no later than 5:00 p.m. on Thursday, March 22, 2007.

D. Forms

The initial data collection forms designed for the 2002 pilot program were modified based on user suggestions and have remained virtually unchanged since 2003. Additional registration forms track volunteer information and participation times.



Shallow Water Derelict Crab Trap Removal Program
March 24, 2007

DATA COLLECTION
Name:
Organization:
Water Body:

Please use one column for each trap *L= land, W=water, Y=yes, N=no*

	1	2	3	4	5	6	7	8	9	10
Trap on land or water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water
Trap lying on seagrass	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no
ID present (marked bouy)	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no
Condition usable or not-usable	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not
Escape Ring present	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no

Number of Bycatch Species Live (L) or Dead (D)

		1	2	3	4	5	6	7	8	9	10
Blue Crab	L										
	D										
Stone Crab	L										
	D										
Diamondback Terrapin	L										
	D										
Other (write in)	L										
	D										
	L										
	D										
	L										
	D										
	L										
	D										

Shallow Water Derelict Crab Trap Removal Program
March 24, 2007

DATA COLLECTION
Name:
Organization:
Water Body:

Please use one column for each trap *L= land, W=water, Y=yes, N=no*

	1	2	3	4	5	6	7	8	9	10
Trap on land or water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water	land / water
Trap lying on seagrass	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no
ID present (marked bouy)	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no
Condition usable or not-usable	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not	use / not
Escape Ring present	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no	yes / no

Number of Bycatch Species Live (L) or Dead (D)

		1	2	3	4	5	6	7	8	9	10
Blue Crab	L										
	D										
Stone Crab	L										
	D										
Diamondback Terrapin	L										
	D										
Other (write in)	L										
	D										
	L										
	D										
	L										
	D										
	L										
	D										

Alabama's Derelict Crab Trap Removal Program
Shallow Water Clean-up

Instructions:
Please fill out a column for each trap. Location can be a major bay or a well defined smaller area.

Question 4: *Usable* traps are fishable with minor repairs
Non-usable traps are too heavily damaged to be fished
Question 5: *Escape Ring present* look for a 2 3/8" PVC ring located on an outside trap wall

Safety Tips:
Wear a life vest, gloves and protective clothing
Use caution with barnacles, shell and rusty wire
Be careful when pulling/lifting traps stuck in the mud
Use a VHF radio or cell phone for emergency situations

Derelict Crab Trap Dumpster Locations:
Dumpster sites will be manned from 8:00 a.m. to 1 p.m.

Chocolotta Bay Boat Launch on Causeway
Meaher State Park on Causeway

Please return data sheets to site representatives or mail to:
Alabama Marine Resources Division
P.O. Box 189
Dauphin Island, AL 36528

Diamondback Terrapin Identification:
- Usually have small black spots on head and legs
- May have a blue or gray head & a diamond shaped spot on head
- The shell is brown to black with diamond shaped patterns; underside is yellow to brown

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Alabama's Derelict Crab Trap Removal Program – March 13, 2004

Volunteer Information

Name:	Date of Birth:
Home Address:	Phone: Email:

Date	Time In	Time Out	Total Hrs Worked	Description of Work

I certify that the above representation of my time is accurate and complete. I waive all claims and release Grantee, the Gulf States Marine Fisheries Commission, and any other non-profit or government agency from any use of my photograph or name. I hereby consent to the photographing of myself and the recording of my voice and the use of these photographs and/or recordings singularly or in conjunction with other photographs and/or recordings for advertising, publicity, commercial or other business purposes. I understand the term 'photograph' as used herein encompasses both still photographs and motion picture footage to reproduce and use such photographs and recordings of my voice, for use in all domestic and foreign markets including the internet.

Volunteer Signature:

E. Stakeholders

The Alabama Marine Resources Division (AMRD), in partnership with the Mobile Bay National Estuary Program (NEP), is responsible for Alabama's derelict crab trap removal program. All regulatory authorization derives through AMRD with AMRD and NEP staff sharing organizational responsibilities. No successful removal program would be possible without the support and cooperation of various local, state and federal agencies and universities, organizations, private companies and individuals.

The initial program was driven by the combined interests of the inshore shrimping fleet and the Coastal Conservation Association (CCA). These constituencies had both experienced difficulties with derelict traps. The crab industry recognized the problem but was concerned about the economic impacts associated with an area closure. By limiting the length of the closure, all groups endorsed the program.

While CCA provides a sizeable volunteer contingent, NEP and AMRD also solicited additional stakeholder groups with a history of environmental stewardship. A partial list is provided below. Additionally, some companies provided in-kind donations for volunteer support.

Alabama Coastal Foundation
Alabama Department of Environmental Management
Alabama Historical Commission
Alabama Power Foundation
Alabama State Lands Division, Coastal Section
Alabama Wildlife and Freshwater Fisheries
Auburn Marine Extension and Research Center
Bay Area Fly Fishers
Boise Paper Solutions – give-away donation
City of Mobile – dumpster rights
Coastal Conservation Association
Dauphin Island Sea Lab
Dog River Clearwater Revival
DuPont – give-away donation
Fairhope Yacht Club
Fort Morgan Civic Association
Gulf Coast Research Laboratory
Gulf of Mexico Foundation
Gulf States Marine Fisheries Commission
Mobile Area Water and Sewer Service – in kind donation
Mobile Canoe and Kayak Club
Mobile County Wildlife
Mobile Junior Civic Association – dumpster rights
Mobile Sail and Power Squadron
Mississippi Department of Marine Resources
The Original Oyster House – in kind donation
Town of Bayou La Batre – dumpster rights
U.S. Coast Guard Auxiliary
U.S. Fish and Wildlife Service
Weeks Bay National Estuarine Research Reserve
Wolf Bay Watershed Watch

F. Program Publicity

Program publicity is vital to the success of the derelict crab trap removal program. In addition to word-of-mouth efforts, a concerted effort was made by AMRD and NEP to utilize as many media venues as possible. NEP maintained an active webpage for the program and coordinated many television, radio and press events in which NEP, AMRD and various volunteers participated. AMRD provided an informational brochure to all interested parties and coordinated closure information with the crab industry. Media exposure was tracked in a spreadsheet.

Crab Trap Publicity 2006

DATE	WHAT	WHERE	MEDIA
5-Mar	Extension Radio Program with Clear Channel Radio		Radio
	WPMI - Darwin		TV
18-Jan	Comcast Cable	info cable channel	
18-Jan	Arts & Entertainment Calendar	al.com	internet
	WHIL - JoAnn Breland		Radio
19-Jan	WPMI - Event Calendar	online	internet
Feb	Dog River Clear Water Revival Newsletter	membership	newsletter
18-Feb	WHEP radio - Walter Tatum		radio
	Website - AMRD	online	internet
	Website - MBNEP	online	internet
13-Feb	Website - FYC	online	internet
8-Feb	Email List - ACF		email
13-Feb	Email List - Crab Traps		email
13-Feb	Email List - FYC		email
13-Feb	Information to Mobile Register Rainer	email	newspaper
13-Feb	multiple press releases	email	newspaper
17-Feb	Email list - FYC	email	email
19-Feb	Google Alert - MR Crab Traps	email	internet
19-Feb	Mobile Register - Crab Traps Sport Section	South AL	newspaper
24-Feb	Mobile Register - Crab Traps	South AL	newspaper
24-Feb	Google Alert - MR Crab Traps	internet	
25-Feb	WNSP - Sean Sullivan got message		Radio

The program was acknowledged statewide in an *Outdoor Alabama* television segment and was presented with a Gulf of Mexico Program Gulf Guardian Award as a partner with the Gulf States Marine Fisheries Commission.

G. Education Outreach

Outreach activities took many forms. In addition to publicity venues, outreach efforts were conducted by providing brochures, static displays to various festivals, presentations, establishing a webpage, providing an informational page in AMRD's Information Calendar, and providing an article in the *Outdoor Alabama* magazine. The webpage provided global access to our program while the calendar and magazine articles focused on state residents.

DUMPSTER DROP-OFF POINTS FOR DERELICT CRAB TRAPS

Meaher State Park on the Causeway

Chocolotta Boat Launch on north side of Causeway

Dumpster sitters will be available from 8:00 am to 4:00 pm to collect data sheets, collect volunteer information and aid in trap disposal.

THIS CLOSURE AFFECTS ONLY THOSE TRAPS NORTH OF THE ARLINGTON CHANNEL TO MSC #78 THEN SOUTHEASTERLY TO THE MAYDAY PIER IN DAPHNE

ALABAMA MARINE RESOURCES DIVISION OF THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

P.O. Box 189
Dauphin Island, AL 36528

The Alabama Marine Resources Division and Mobile Bay NEP would like to thank all of those people and organizations who supported and participated in this event to help conserve Alabama's marine resources.

Alabama Coastal Foundation

Mobile County Wildlife & Conservation Association

Coastal Conservation Association

Holcim, Inc.

Mobile Gas Service Corps

Waste Management

Alabama Wildlife and Freshwater Fisheries Division

Auburn University Marine Extension Service

And all others who helped make this event a success.

Funding provided by:

Mobile Bay National Estuary Program

Holcim Inc.

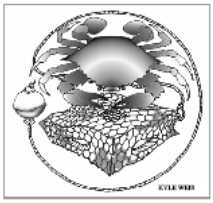
Mobile County Wildlife & Conservation Association

Visit our Web Site

www.mobilebaynep.com

ALABAMA MARINE RESOURCES DIVISION OF THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DERELICT CRAB TRAP REMOVAL PROGRAM



Shallow Water Clean-up

Saturday, March 24, 2007
8:00 a.m. to 4:00 p.m.

For more information call:

Alabama Marine Resources
251 861-2882 (Mobile County)
251 968-7576 (Baldwin County)

Mobile Bay National Estuary Program
251 431-6450

DERELICT CRAB TRAPS: PROBLEMS AND SOLUTIONS

Problem: Crab traps have been used extensively in local waters since the 1950s and each year an estimated 20 – 40% of these traps become lost due to storms, broken lines and neglect. These traps can continue to fish for months or years causing crabs and fish to be trapped and die needlessly. The traps can also damage boats and engines, cause personal injury and are unsightly. Derelict traps can be found from marsh edges to deep water.

Solution: In 2002, Alabama created a program to address the derelict trap problem. Shallow water and marsh edges were patrolled by volunteer organizations. Any trap found near shore was considered marine litter and removed. A total of 477 derelict traps were collected.

Following a successful pilot program, a shallow water removal program was completed in March 2003 and removed 1,074 derelict traps from local waters; the March 2004 program removed 418 derelict traps and another 446 traps were removed in March 2006. This decreased removal rate reflects the successful removal of accumulated derelict traps.

The program has made significant strides toward eliminating accumulated derelict traps. This decreases bycatch, increases vessel safety and improves visual aesthetics.

Taking of traps at any other time or location can be considered theft of property.

SUGGESTED VOLUNTEER SUPPLIES:

Sunscreen	Insect Repellant
Boots	Heavy Duty Work Gloves
Water & Snacks	Tarps to Protect Truck or Boat
Wire Snips	Hammers
First Aide Kit	Rope
Hat	VHF radio / Cell phone

TAKING TRAPS: DO'S & DON'TS

DO remove only traps unquestionably within 500 yards of shore

DO remove encrusted traps with or without a float

DO remove damaged, unattached traps along shore

DO remove traps with fresh bait if unquestionably within 500 yards of shore

DON'T become confrontational

DON'T take traps attached to a pier (the trap can be set on the pier and an informational brochure left)

DON'T struggle with a trap, injury could occur

DON'T take a trap with fresh bait if you have any question about its distance from shore

DATA COLLECTION:
Name _____
Organization_____
Location_____

One Column per Trap

	1	2	3	4	5
Trap on land or in water (L/W)					
Trap lying on seagrass (Y/N)					
ID present (marked buoy) (Y/N)					
Trap condition Usable (U) Non-usable (N)					
Escape Ring present (Y/N)					

Number of Bycatch Species / Live (L) or Dead (D) ex.: Blue Crab = 2L 1D

	1	2	3	4	5
Blue Crab					
Stone Crab					
Diamondback Terrapin					
Other (*write in*)					

Please return to address on back.

A standard Power Point presentation and speaker were made available to any interested organization both before the event as an educational tool to encourage participation and after the event to maintain a sense of program 'ownership'.

H. Budgeting / Funding

The Alabama Derelict Crab Trap Removal Program has had numerous funding sources. Initial 2002 funding was provided by the Coastal Impact Assistance Program (CIAP) administered by the Department of Conservation and Natural Resources, State Lands Division. In 2003, NEP received a NOAA Habitat Restoration grant through the Gulf of Mexico Foundation. In 2004, AMRD received a habitat restoration grant administered by the Gulf States Marine Fisheries Commission. In 2006 and 2007, the efforts were reduced and NEP covered operating expenses through a budgetary line item. AMRD supplied personnel time for organization, dumpster monitoring and clean-up.

To date, no single funding source has been identified to provide long-term funding for this program.

I. Specialized Equipment

Trap removal was done from the shoreline and all types of boats. Tin snips, waders, and gloves are all essential gear, but based on volunteer input, AMRD had hooks and grapples made specifically to improve trap retrieval.

J. Disposal

All traps collected in Alabama were returned to designated dumpster sites. A waste removal company was contracted to provide a 30 / 40 yard roll-off dumpster at designated sites and to take the traps to local landfills. Volunteer groups typically select a target area and are provided with a map for all dumpster locations.

K. Program Recognition

The derelict program has been recognized as a highly successful volunteer initiative. It was featured in an *Outdoor Alabama* television segment, and has received the 2004 "Gulf Guardian Award". The most significant recognition of the program comes from the repeated constituency requests for the program.

Mississippi

A. Results

In 2000 the Mississippi Department of Marine Resources (MDMR) in cooperation with the Gulf Coast Research Laboratory (GCRL) began a program to address derelict traps in Mississippi waters. Coastal waters were surveyed by air and boat to locate areas of dense trap concentrations. Initial efforts were limited to agency personnel from the MDMR and GCRL and focused on accurate recording of trap location and condition and on identification and enumeration of bycatch species. This provided a scientific base of information that could be used to evaluate impact on natural resources. Removal programs in 2000/01 focused on shallow waters and targeted traps visible on winter low tides and onshore.

In 2003 and 2004 the DMR and GCRL held volunteer-based retrieval programs. In 2004, a deep water component was added to coincide with the opening of shrimp season, and trawl fishermen were permitted to bring in derelict traps caught in their nets for a specified period of time. Because it is illegal for any person other than the owner to possess a trap, some trawl fishermen discard traps taken in their nets at specific locations within the Mississippi Sound. Side-scan sonar was used to locate these areas. No programs were held in the two years following hurricane Katrina (2005 and 2006). In 2007, monies from a hurricane Katrina recovery grant were used to fund a retrieval program using commercial crab fishermen to collect the traps. This was a week-long effort in the three coastal counties with ~ 10,000 traps removed from state waters. To date, over 16,000 traps have been removed from Mississippi waters.

B. Planning and Timeline

8 Months

- review legislative and regulatory requirements to implement program and submit a Derelict Trap Cleanup Plan to the Mississippi Commission on Marine Resources for review
- establish planning committee and identify MDMR (biologists and law enforcement) and GCRL participants
- set dates for clean-up

4 Months

- obtain permission to place dumpsters and order dumpsters
- contact recycle facility
- fabricate and/or purchase necessary equipment

3-6 Months

- select materials for volunteer packages
- identify derelict trap problem areas
- identify potentially conflicting events or activities
- identify potential stakeholders and volunteer organizations
- solicit volunteers
- solicit stakeholders
- provide notice to crab fishermen and processors

2 Months

- print data collection sheets, safety information guidelines, maps, waivers
- identify site personnel and establish responsibilities (trap smashing, data collection…..)
- prepare contact list
- secure vessel participation
- secure dumpsters

1-2 Months

- coordinate press releases for print and visual media
- collect materials for volunteer packages, donations, trap-retrieving equipment, etc.
- identify which boats will have media representatives on them
- confirm MDMR law enforcement participation

Day of Event

- train volunteers on site, review safety guidelines, pass out materials
- collect data sheets

Post Event

- get traps to recycle facility and ensure other trap materials (rope, buoys) are properly disposed of
- prepare summary of event (for media, volunteers, basis of report, etc)
- enter data into database
- have a post-clean-up review to evaluate program
- submit report to the Mississippi Commission on Marine Resources

C. Regulations and Legislation

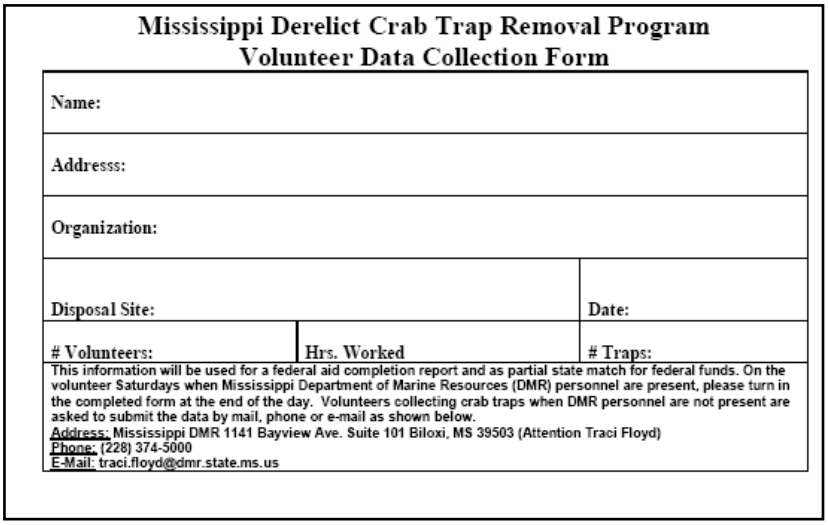
Mississippi Code
49-15-84.1 Closed season for use of crab traps; removal of abandoned traps.
(1) The commission may establish a closed season for the use of crab traps in the public water of this state. The commission may designate the closed season as not less that ten (10) days nor more than thirty (30) days per year. Any crab trap remaining in the public water after the expiration to the seventh day of a closed season may be considered as abandoned under the regulations established by the commission.
(2) The commission shall adopt rules to govern the removal and disposal of abandoned crab traps as necessary to enhance:
(a) The conservation and management of crab resources
(b) Boating safety
(c) The cleanliness of the beds and bottoms of the public waters of the state; and
(d) Enforcement of this chapter
(3) Abandoned crab traps are litter and are subject to immediate removal and disposal

Crab Ordinance

The commission may establish a closed season or seasons for the use of crab traps in the public waters of this state. The commission may designate the closed season as not less than ten (10) days nor more than thirty (30) days per year. Any crab trap remaining in the public waters after the expiration to the seventh day of a closed season shall be considered abandoned and can be removed for proper disposal. The first seven days of the closed season shall be a period of time for crab fishermen to remove traps from the water; however, during this time harvest of crabs caught in traps is prohibited. The commission shall publish the season closure dates and areas in a closing order to the general public.

D. Forms

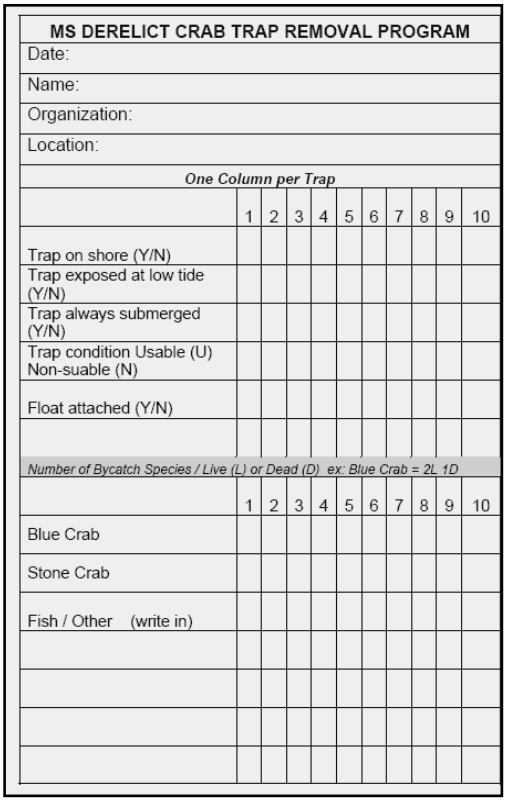
The form developed for the Mississippi trap removal program was designed to provide information on location and condition of the trap and data on bycatch. Knowledge of location provides data that can be used to evaluate impact on habitat (grassbeds, marsh) and whether the trap poses a navigational hazard. Trap condition and description determine the capability of the trap to: 1) continue to ghost fish, 2) create entanglement hazards, and 3) comply with licensing regulations. Ability of derelict traps to "ghost fish" increases mortality of crab and fish species attracted to the trap and has been implicated as a causative factor in the decline of diamondback terrapin populations in some areas. Because there was limited quantitative data on bycatch, the Mississippi program conducted two removal programs using MDMR and GCRL biologists to identify and record information on bycatch. This provided scientific data that could be used to evaluate impact on other fishery resources. Data on bycatch collected by volunteers provides an ancillary pool of information that can augment the quantitative data.



Mississippi Derelict Crab Trap Removal Program
Volunteer Data Collection Form

Name:		
Addresss:		
Organization:		
Disposal Site:		**Date:**
# Volunteers:	**Hrs. Worked**	**# Traps:**

This information will be used for a federal aid completion report and as partial state match for federal funds. On the volunteer Saturdays when Mississippi Department of Marine Resources (DMR) personnel are present, please turn in the completed form at the end of the day. Volunteers collecting crab traps when DMR personnel are not present are asked to submit the data by mail, phone or e-mail as shown below.
Address: Mississippi DMR 1141 Bayview Ave. Suite 101 Biloxi, MS 39503 (Attention Traci Floyd)
Phone: (228) 374-5000
E-Mail: traci.floyd@dmr.state.ms.us



MS DERELICT CRAB TRAP REMOVAL PROGRAM

Date:

Name:

Organization:

Location:

One Column per Trap

	1	2	3	4	5	6	7	8	9	10
Trap on shore (Y/N)										
Trap exposed at low tide (Y/N)										
Trap always submerged (Y/N)										
Trap condition Usable (U) Non-suable (N)										
Float attached (Y/N)										

Number of Bycatch Species / Live (L) or Dead (D) ex: Blue Crab = 2L 1D

	1	2	3	4	5	6	7	8	9	10
Blue Crab										
Stone Crab										
Fish / Other (write in)										

E. Stakeholders

Stakeholders were identified as those actively involved in the commercial fishery, the public that used coastal waters for recreation or lived along the shoreline, conservation organizations concerned with fisheries and the environment, and governmental agencies concerned with management of fisheries and habitat protection. Retrieval programs have a direct impact on commercial crab fishermen. Closed seasons can result in economic losses to fishermen so retrievals were planned in concert with commercial crab fishermen to minimize that loss. Mississippi has a Blue Crab Taskforce (BCT) with membership made up of commercial and recreational crab fishermen, marine enforcement officers, representatives from other fisheries, and scientists and resource managers working with blue crabs. This group is consulted on issues that pertain to all aspects of the crab fishery. Efforts to enlist volunteers to participate in retrieval programs targeted recreational and commercial fishermen through the BCT and the general public through visual and print media. The Gulf Regional Derelict Trap Removal Program allowed fisheries biologists from other Gulf of Mexico states to participate in Mississippi retrieval activities. Two special groups of stakeholders became apparent as the program developed and an effort was made to establish a cooperative, working relationship with them.

Diamondback terrapin biologists and conservationists expressed concern that derelict traps were one of the causes of declines in turtle populations. Bycatch information on terrapins in derelict traps was collected and shared with them at their annual meetings, and PowerPoint presentations on the status and success of retrieval programs throughout the Gulf were developed.

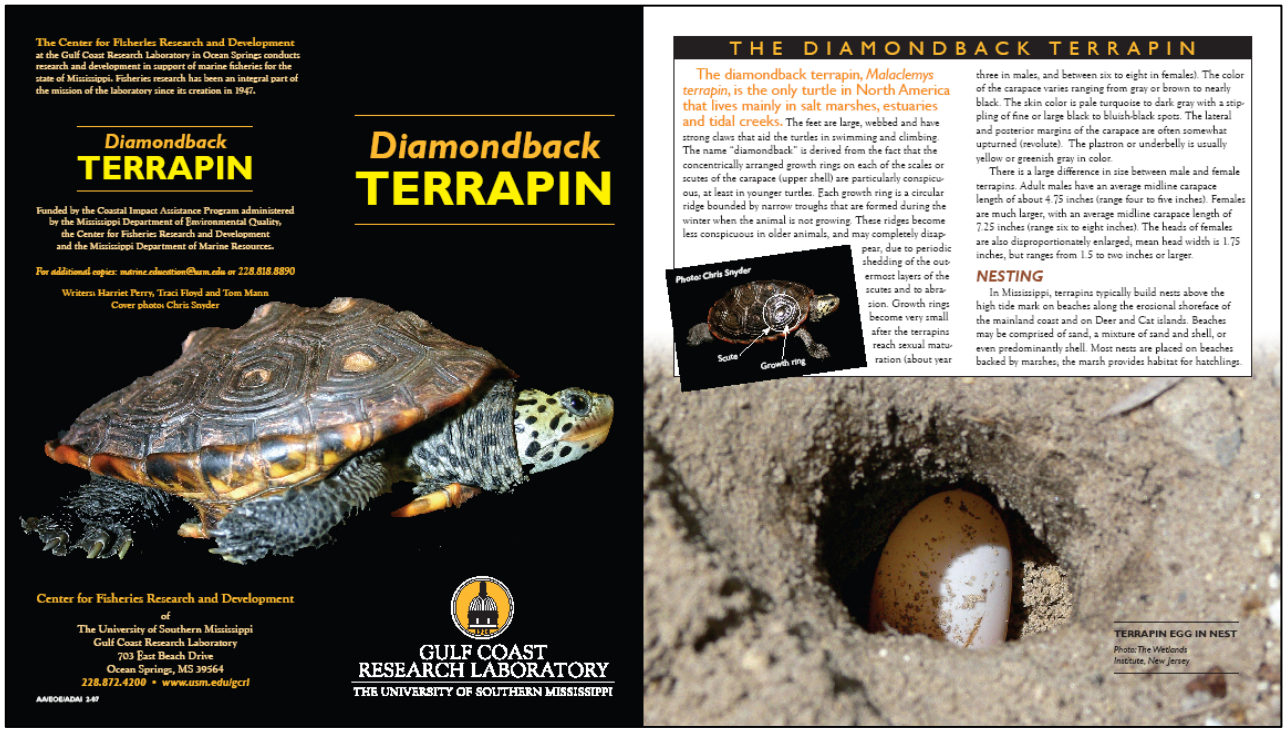
The second group originated out of the NOAA Office for Protected Species concerning interactions of marine mammals and trap-type commercial fishing gear. With a plan in place for removal of derelict traps in the Gulf, the Derelict Trap Task Force began to work with Protected Resources and SeaGrant to develop educational materials targeting all marine mammal interactions as well as those with commercial fishermen.

F. Program Publicity

Mississippi planners used both print and visual media to publicize retrieval activities. Mississippi's Sun Herald and The Mississippi Press printed several newspaper articles. The program has been featured on the local television station WLOX and was also a topic for *Mississippi Outdoors* which is broadcast on the Mississippi Public Broadcasting Network. The program received recognition and publicity from the scientific and environmental community when it was presented with a Gulf of Mexico Program, Gulf Guardian Award and the Keep Mississippi Beautiful Award.

G. Education Outreach

Outreach activities included displays at local festivals and environmental gatherings and presentations on the retrieval program at scientific meetings. Because bycatch of diamondback terrapins is an issue with derelict and abandoned traps, an educational brochure was written on terrapin life history and ways to help conserve terrapin populations.



The Center for Fisheries Research and Development at the Gulf Coast Research Laboratory in Ocean Springs conducts research and development in support of marine fisheries for the state of Mississippi. Fisheries research has been an integral part of the mission of the laboratory since its creation in 1947.

Diamondback TERRAPIN

Funded by the Coastal Impact Assistance Program administered by the Mississippi Department of Environmental Quality, the Center for Fisheries Research and Development and the Mississippi Department of Marine Resources.

For additional copies: marine.education@usm.edu or 228.818.8890

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Diamondback TERRAPIN

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AA/EOE/ADA/ 3-07

GULF COAST RESEARCH LABORATORY
THE UNIVERSITY OF SOUTHERN MISSISSIPPI

THE DIAMONDBACK TERRAPIN

The diamondback terrapin, *Malaclemys terrapin*, is the only turtle in North America that lives mainly in salt marshes, estuaries and tidal creeks. The feet are large, webbed and have strong claws that aid the turtles in swimming and climbing. The name "diamondback" is derived from the fact that the concentrically arranged growth rings on each of the scales or scutes of the carapace (upper shell) are particularly conspicuous, at least in younger turtles. Each growth ring is a circular ridge bounded by narrow troughs that are formed during the winter when the animal is not growing. These ridges become less conspicuous in older animals, and may completely disappear, due to periodic shedding of the outermost layers of the scutes and to abrasion. Growth rings become very small after the terrapins reach sexual maturation (about year three in males, and between six to eight in females). The color of the carapace varies ranging from gray or brown to nearly black. The skin color is pale turquoise to dark gray with a stippling of fine or large black to bluish-black spots. The lateral and posterior margins of the carapace are often somewhat upturned (revolute). The plastron or underbelly is usually yellow or greenish gray in color.

There is a large difference in size between male and female terrapins. Adult males have an average midline carapace length of about 4.75 inches (range four to five inches). Females are much larger, with an average midline carapace length of 7.25 inches (range six to eight inches). The heads of females are also disproportionately enlarged, mean head width is 1.75 inches, but ranges from 1.5 to two inches or larger.

Photo: Chris Snyder
Scute
Growth ring

NESTING

In Mississippi, terrapins typically build nests above the high tide mark on beaches along the erosional shoreface of the mainland coast and on Deer and Cat islands. Beaches may be comprised of sand, a mixture of sand and shell, or even predominantly shell. Most nests are placed on beaches backed by marshes, the marsh provides habitat for hatchlings.

TERRAPIN EGG IN NEST
Photo: The Wetlands Institute, New Jersey

THE GENDER OF TERRAPINS IS DETERMINED BY THE TEMPERATURE OF THE NEST: *The warmer the nest, the more females produced.*

Nesting beaches may range from "pocket" beaches several yards long to more extensive beaches several hundred yards long with partial shade and small bushes. Mating occurs in the water, and a female may lay several clutches of eggs from a single mating.

Females nest from April to August with a nesting peak in June. Females typically nest more than once each year, but the frequency of nesting in Mississippi is not currently known. Each female usually produces from four to 15 eggs with an average of eight per clutch that hatch within 60-80 days. Hatching time will vary with season and average temperature but will typically be two to 2.5 months.

Hatchlings, upon emerging from the nest, usually move into the vegetative cover of the high marsh instead of into nearby open water. Terrapins do not guard the nest and most nests are raided by predators, including raccoons, speckled kingsnakes, fish-crows, feral hogs and possibly sea-gulls. Since terrapins live a relatively long time, have low mortality rates as adults, and lay many eggs during a reproductive lifetime, populations can generally sustain relatively high levels of nest predation and high mortality rates of juveniles.

NEW JERSEY TERRAPIN EMERGING FROM EGG
Photo: Christina Watters

NEW JERSEY HATCHLINGS
Photo: Christina Watters

FEEDING

Foraging habitat for larger juveniles and adults includes salt marshes and their associated bayous and tidal channels. Diamondback terrapins appear to prefer bays and marshes with soft mud sediments as opposed to firmer, sand-floored marshes. Their primary food consists of periwinkles, bivalves and other mollusks, and crustaceans such as fiddler crabs and small blue crabs. Since the heads of mature females are so large, they can eat much larger and heavier-shelled prey than males. Juveniles less than two years old live in the upper marsh landward of nesting beaches. These areas often have wrack deposits that provide cover for young terrapins and often have freshwater pools. They forage on tiny crustaceans, mollusks and insects.

Terrapins brumate (hibernate) beneath mud or sand, often in shallow bays, from late November through February. They may reemerge during warm intervals and may also become dormant during particularly hot weather in the summer.

UNIQUE TRAITS

The terrapin subspecies found in Mississippi is the Mississippi diamondback terrapin (*Malaclemys terrapin pileata*). It ranges from the panhandle of Florida to western Louisiana and is distinguished from other terrapin subspecies to the east and west by the presence, generally, of dark pigment on the upper mandible, and an elongate diamond-shaped patch on the top of the head. Head-enlargement of females is most pronounced in the Mississippi subspecies, and the top of the shell and legs are often dark.

FEMALE WITH DIAMOND-SHAPED PATCH ON HEAD
Photo: Tom Mahrman

In young terrapins, the posterior-most portion of the keel extending along the center of the carapace is characterized by one or two expanded vertebral knobs. These knobs are not seen on terrapins along the eastern seaboard.

SURVIVAL CONCERNS

Although terrapins can live to be 40 years old, most die in the hatchling stage. Terrapin populations in all states face significant natural and man-made threats to their survival. They are harvested commercially in some states and protected in others. In Mississippi, terrapins are designated as a non-game species in need of management and are monitored as a species of special concern. Major causes of terrapin population declines have been identified as over-harvest and loss or alteration of habitat. Incidental capture in fishing gear such as trawls and crab traps also contributes to the mortality of terrapins.

YOUNG MISSISSIPPI TERRAPIN WITH POSTERIOR KNOBS ON KEEL
Photo: Tom Mahrman

Programs to reduce the capture of terrapins in fishing gear have been implemented in many states. Installation of turtle excluder devices in crab traps fished in terrapin habitats will reduce accidental drowning of turtles and have been shown to improve crab catch. These devices consist of 1.75 x 4 inch rectangles of coated, stiff wire clipped into the access funnels of crab traps. These improve catch efficiency of crab traps while simultaneously minimizing by-catch of terrapins and other species. Rectangles of these dimensions would exclude approximately 98.4% of terrapins. A 2 x 4 inch device would exclude 80% of terrapins.

"Ghost fishing," unintentional destruction of terrapins and other species by derelict and abandoned crab traps, can be reduced by removal of such traps from shallow coastal waters. In the Gulf of Mexico, successful regional and state programs to remove derelict crab traps have been implemented, and thousands of these traps have been removed from Gulf waters. Survival of terrapins will require the protection and restoration of important terrapin habitat and the adoption of fishing practices that reduce the incidental catch of these turtles.

Photo: Chris Snyder

Blue crabs (*Callinectes sapidus*) have been harvested in Mississippi for hundreds of years. All along the coast, both commercial and recreational fishermen seek out this seafood delicacy. Its genus name, *Callinectes*, is a combination of two Latin words meaning "beautiful swimmer," while its species name, *sapidus*, means "savory."

Did you know?

Blue crabs spend a portion of their lives in brackish-water areas of the Mississippi Sound. These waters, known as estuaries, are transitional zones between the salty Gulf and freshwater inland rivers. Blue crabs feed on both plants and animals. They feast on marine worms, snails, fish, seaweed and marsh grasses.

Anyone can easily determine the sex of a crab simply by looking at its abdomen. All males have a slender "T"-shaped abdomen (above top). Female crabs have a triangle-shaped abdomen (above bottom), which turns into a semi-circle or "apron" after molting occurs.

Because they have a hard, rigid exoskeleton, crabs must periodically molt (shed their shells) in order to grow larger. Such crabs are called "soft shells."

A female crab with fertilized eggs exhibits a spongy yellow-orange-colored mass which extrudes out under the apron. This crab is often referred to as a "sponge" crab (above). The color of the egg mass will darken as the embryonic crabs develop.

What are derelict crab traps?

Derelict traps are defined as traps, which are un-buoyed, unmarked and not actively fished. These traps are abandoned or lost due to many factors including floats that are cut by boat propellers, caught in shrimp trawls, storms and theft. These traps are a navigational hazard and may contribute to crab and finfish mortality. More than 4,000 derelict crab traps have been retrieved and recycled in Mississippi waters through agency and partner staff, volunteers and fishermen.

The Derelict Crab Trap Removal Program, a joint effort of the Mississippi Department of Marine Resources and Gulf Coast Research Lab, is funded in part by the Mississippi Department of Environmental Quality through the Mississippi Coastal Impact Assistance Program (CIAP). CIAP is a federally sponsored program that provides money for the state and counties to address statewide coastal issues. Contact the DMR to volunteer.

How to Catch 'em

Even the most clever crabs can be easily caught. Before you begin, remember, it is illegal to place any crab trap where the line or float interferes with normal boat traffic. Should you catch a sponge (egg-bearing) crab, the law requires you to return it to the water immediately.

- The simplest and least expensive way to catch a crab is using string with fish, chicken or other meat as bait. When the crab takes the bait, the string is slowly and carefully pulled up and the crab scooped into a waiting net or basket.
- A common method of catching the tasty blue crab is by using a crab or drop net. The bait is tied securely to the bottom of a cylindrically shaped net. The net is attached to string and lowered into the water until it hits bottom. There it lies flat so the unsuspecting crab will go after the bait. The nets are left and checked periodically until there are enough captured delicacies.

A commonly used crab trap or "pot." A license is required for both commercial and recreational use.

- For the more advanced crabber, crab traps or "pots" are used. Bait is placed in the bait-well found inside the trap. After baiting, the trap is attached to a strong line and lowered into the water to rest on the bottom. A float is attached to the other end of the line, marking the trap's location if it is not tied to a pier.

H. Budget/Funding

The derelict trap program has had several funding sources. Initial funding came through a grant from the Mississippi Tidelands Trust Fund. With that grant, coastal waters were surveyed for derelict and abandoned traps and a retrieval program was developed. Coastal Impact Assistance Program monies, administered by The Mississippi Department of Environmental Quality, provided dedicated funding for the trap removal activities. Success of local programs in Texas, Louisiana, and Alabama have led to the development and funding of a Gulf of Mexico regional program to address derelict traps. Trap removal activities following Hurricane Katrina have been funded by NOAA, and the Gulf States Marine Fisheries Commission provided funding through the Emergency Disaster Relief Program. Also funds were given to the state through the Community Based Restoration Program provided by NOAA.

I. Specialized Equipment

Various types of vessels and equipment were used to remove derelict traps from the water and marsh including a shallow draft skiff, canoes, and kayaks. Grappling hooks, gaffs, waders, and wire snips were also essential gear. An innovative piece of equipment conceived in Louisiana, but developed in Mississippi, was the conversion of a log splitter into a hydraulic press to "smash" traps, see photo below. This made hauling to the recycler easier and more efficient.

J. Disposal

All traps collected in Mississippi were recycled. The MDMR has a cooperative partnership with a local scrap yard; the traps are recycled and the value of the scrap was donated to the recycler.

K. Program Recognition

The derelict trap program has received many accolades since its inception. The program was featured in a *Mississippi Outdoors* television segment. The program also received the "Keep Mississippi Beautiful Award" as well as the "Gulf Guardian Award". The biggest reward the derelict trap program has received however is the support of the public and the fishing industry.

Louisiana

A. Results

A total of 15,950 derelict crab traps have been removed from Louisiana coastal waters during four years of crab trap cleanups, see below. Volunteer effort was 181+ boat-days; not included is effort by Louisiana Department of Wildlife and Fisheries (LDWF) and agency / university personnel. The latter groups contributed 42.7% of the total effort from 2005-2007. Coastwide cleanups were not attempted because of the large size of the estuaries and high numbers of derelict traps.

YEAR	AREA	DATES	TRAPS	BOAT-DAYS*
2004	Upper Terrebonne Bay Estuary	2/28-3/14	6,676	90
	W. Vermilion Bay	5/14-5/22	218	?
	TOTAL		6,894	90+
2005	Sabine Lake	2/18-2/27	4	2
	Breton Sound Estuary	2/26-3/13	1,941	21
	Middle Terrebonne Bay Estuary	3/5-3/20	2,437	23
	E. Vermilion Bay / West Cote Blanche Bay	5/16-5/22	241	3+
	TOTAL		4,623	46+
2006	Southwest Terrebonne Bay Estuary	3/4-3/13	2,935	31
2007	E. Lake Pontchartrain	2/24-3/5	774	13
	Upper Barataria Bay Estuary	3/3-3/12	724	1
	TOTAL		1,498	14
2004-2007	**OVERALL**		**15,950**	**181+**

*Volunteer boats

There are several points that should be made concerning Louisiana's crab trap removal efforts. First, despite the high number of derelict traps that have been retrieved, many remained within each closure area. Deep water traps in bayous and lakes were not collected and many shallow water traps were not retrieved because the entire closure area was not covered by the volunteers. Second, while a tremendous amount of publicity was generated and an enthusiastic endorsement was received from the general public and recreational and commercial fishermen, this enthusiasm was not reflected in direct volunteer participation. There has been a decline in number of traps and volunteer participation over the 2004 to 2007 period from 6,676 traps to 1,498 traps and from 90+ boat-days to 14 boat days. Third, the spring deep water cleanups where only traps with floats and lines are visible and which are dependent upon the cooperation of shrimp fishermen returning crab traps incidentally caught in their gear were not successful. The reluctance of shrimp fishermen to retain traps for later disposal at shore based disposal sites was probably the main contributing factor. In contrast, the shallow water winter cleanups, which were dependent upon volunteers that actively targeted visible derelict traps, were more productive.

Data on effort and traps collected from 2005 to 2007 were also summarized below according to participant classifications -- LDWF, recreational, commercial, and agency/University. LDWF personnel collected 44.5% of the total number of traps and also had the highest number of traps (89.7)

per boat day. Commercial fishermen were also very productive, with 86.9 traps per boat day. Recreational fishermen contributed the most effort, but only retrieved 17.1% of the total number of traps.

Number of Participants in Clean Ups from 2005-2007

CATEGORY	BOAT-DAYS	TRAPS/BOAT-DAY	PERCENT TRAPS (%)
LDWF	45	89.7	44.5
Commercial	23	86.9	22.1
Recreational	56	27.6	17.1
Agency/University	14	66.1	10.2
Other/Unknown	--	--	6.0

Based upon the first four years of the program, the following recommendations are made:

- Direct efforts towards winter shallow water cleanups, because they are more efficient and cost effective than deep water cleanups and have less of an impact than spring closures, due to lower crab catches during the winter.
- Continue to keep closure areas relatively small to minimize the impact on the commercial blue crab fishery and to facilitate management from logistical and financial standpoints.
- Decrease the length of the closure period from 16 days to 9 days to further reduce any impact to the crab fishery.
- Continue the broad based publicity efforts, but also target smaller groups or organizations that may use the cleanup as a community project. Individuals are more likely to participate if others in their group are involved.
- Attempt to recruit more commercial fishermen and agency/university volunteers, because of their productivity.

B. Planning Timeline

This timeline assumes that legislation (if necessary) has already been secured and a funding source is in place.

9 months (June)
- Begin preliminary discussions on clean up sites and dates

7-8 months (July-Aug)
- Submit recommendations to the LDWF
- Make preliminary contact with marina owners
- Place derelict traps on Louisiana Wildlife and Fisheries Commission (LWFC) agenda
- Prepare LWFC paperwork (Rule, Notice of Intent, resolution) and presentation

5-6 months (Sept-Oct)
- LWFC presentation (Sept)
- Write first news release (proposed regulations)
- Update derelict crab trap web site for next year's proposal
- Request crab trap license holders mailing labels
- Prepare information packet for media and others
- Print closure area maps
- Contact landowners / marina owners

3-4 months (Nov-Dec)
- Provide preliminary instructions / responsibilities to field personnel
- Prepare brochures / instruction sheets / mail-outs for each closure
- Place brochure information on web site
- Contact local groups about volunteer help
- Purchase supplies
- Requisition dumpsters (early-Dec)

2 months (Jan)
- Detailed instructions to area participants (including logistics)
- Mail out to crab fishermen about winter closures
- Send volunteer information to conservation, fishermen, and other organizations
- Begin publicity efforts (radio, newspapers, etc.)
- Write news release (designated trap disposal sites)
- Request other LDWF assistance

1 month (Feb)
- Continue publicity efforts (radio, newspapers, etc.)
- Write third news release (final request for volunteer help)

March
- Trap cleanups
- Write news release on cleanup results

April/May
- Place results on web site
- Finish overall report

C. Regulations / Legislation

In the past, legislative statutes specified that any crab trap could only be removed by the owner of the trap, or by shrimp fishermen who incidentally capture traps in their shrimp gear. Consequently, a broad-based derelict crab trap cleanup could not take place without additional legislation.

A LDWF sponsored bill was passed during the 2003 Regular Legislative Session to establish a derelict crab trap removal program. The bill is contained in R.S. 56:332(E, G, and M). The bill gave the Louisiana Wildlife and Fisheries Commission (LWFC) the authority to establish a program for the removal of derelict crab traps, and to specify: the beginning and ending dates and geographical areas of the trap closure, who may remove the abandoned traps, and the locations where the removed abandoned traps are to be placed for disposal. Two time windows were provided for the closures: a) up to a 16 consecutive day period between February 1 and March 31; and, b) up to a 14 consecutive day period, which includes the opening of the spring inshore shrimp season.

D. Forms

Several forms were used for volunteers on LDWF volunteer days and on non-volunteer days. In addition, a form was developed for the LDWF to monitor traps collected at disposal sites.

DERELICT CRAB TRAP SUMMARY SHEET

Area: _____ Date:_____

AREA		REC	COMM	LDWF	AGCY	UNK	TOTAL
Falgout Canal	TRAPS						
	BOATS						
Indian Ridge	TRAPS						
	BOATS						
Overall	TRAPS						
	BOATS						
	%TRAPS						
	%BOATS						

REC=recreational boats; COMM=crab boats; LDWF=Dept. boats; AGCY=other state agency or university boats; UNK=unknown

Note: for the LDWF, one-boat day counts as a boat.

DERELICT CRAB TRAP TALLY SHEET

Site:_____ Date:_____

*TYPE	BOAT / LA NO.	#TRAPS	#PERSONS

NOTE: Circle number of traps when a boat is ferrying traps only

***REC=sport boat; CR=crab boat; SH=shrimp boat; AG=agency boat**

Dock Volunteers: _____

DERELICT CRAB TRAP REMOVAL PROGRAM
Data Collection Form

- **Name:**_____
- **Address:**_____
- **Organization:**_____
- **Disposal Site:**_____**Date:**_____
- **No. Volunteers:**_____**Hrs. Worked:**_____**No. Traps:**_____
- **Name/Address of Other Helpers:**

_____

_____

_____

_____

_____

_____

_____

On the main volunteer days when Louisiana Department of Wildlife and Fisheries (LDWF) personnel are present, please turn in the filled out form at the end of the day. Volunteers collecting crab traps when LDWF personnel are not present are asked to submit the data by mail, phone, or EMAIL as shown below:

- **Address: Louisiana Department of Wildlife and Fisheries; PO Box 189; Bourg, LA 70343**
- **Phone: (985)594-4139**
- **EMAIL: vguillory@wlf.louisiana.gov**

E. Stakeholders

The LDWF is the lead agency for the derelict crab trap program, but the cleanups would not have been successful without the assistance and cooperation of many individuals, institutions, organizations, and private companies.

A planning committee was formed prior to the first cleanup to assist with education, public relations, publicity, and solicitation of volunteers and donations. The steering committee was comprised of representatives from the LDWF, Barataria-Terrebonne National Estuary Program (BTNEP), Coastal Conservation Association (CCA), Crab Task Force, Louisiana Wildlife Federation (LWF), Louisiana State University (LSU) Sea Grant, and LSU Cooperative Extension Service. The contributions of individuals and organizations of the steering committee were invaluable and a major contributing factor to the initial success of the derelict crab trap program.

Many other groups, organizations, corporations, and individuals also participated in the cleanups or cooperated in some manner.

Louisiana CCA	Seabreeze Marina
Ducks Unlimited	Pointe Aux Chenes Marina
Wildlife Federation	Josh's Marina
Keep Louisiana Beautiful	Quintana Canal Launch
Apache Louisiana Minerals Inc.	Beshel's Marina
Burlington Resources	Boudreaux's Marina
Delacroix Corp.	End of the World Marina
Livaudais LLC	Louisiana Universities Marine Consortium (LUMCON)
Morgan City Land	Quintana Canal Launch
Steinburg LLC	Falgout Canal Marina
Stone Energy	Indian Ridge Property
Little Lake Hunting Club	The Dock
Barabay Properties	US Fish and Wildlife Service
Madison Land Company	Lake Catherine Marina
Joseph Bernstein	Bonnabel Public Launch
River Rest Property	C-WAY Marina
Cozy Campers Campground	

F. Program Publicity

Publicity and volunteer recruitment are vital to the success of any volunteer based effort such as Louisiana's derelict crab trap removal program, and major emphasis was placed on publicity and volunteer recruitment. Many organizations and individuals have contributed through radio and television interviews, newsletters, brochures, and by providing information to the print media.

The LDWF's involvement with publicity was broad based:

- A comprehensive information packet was prepared for the planning committee members, the media, and the public.
- A derelict crab trap web site (www.derelictcrabtrap.net) was prepared which included background information about derelict crab traps, regulations, closure maps, information for volunteers, etc.
- Brochures (see Section 6 for example) were prepared and distributed at outdoor events, sporting good stores, marinas, and commercial seafood dealers.
- LDWF news releases were distributed to media outlets.
- An information sheet containing a summary of regulations, a map, and volunteer instructions was mailed to all crab trap gear license holders located near each closure area and also to commercial shrimp gear license holders in areas when a spring closure in association with the opening of the spring inshore shrimp season was held.
- A power point presentation was prepared and presentations were made to various groups and organizations and governmental officials.
- Information/request for volunteers was distributed to local conservation or environmental groups, newspapers and magazines, and radio and television stations.

G. Education / Outreach

DERELICT CRAB TRAP REMOVAL PROGRAM BROCHURE
Terrebonne Bay Estuary Closure

THANK YOU for your interest in the Louisiana Department of Wildlife and Fisheries (LDWF) derelict crab trap removal program. This program is volunteer-based and cannot succeed without help from those who enjoy our coastal waters and are willing to work to help make a difference. Your cooperation will facilitate the success of the 2006 derelict crab trap sweep.

Regulations

The removal of derelict crab traps may take place over a 9-day period from 6:00 a.m. March 4 through 6:00 a.m. March 13, 2006 within a portion of the Terrebonne Bay Estuary as described later.

Crab traps remaining in the closure area will be considered abandoned and volunteers will be allowed to retrieve these traps, subject to the following regulations:

- Traps may be removed only from between one-half hour before sunrise to one-half hour after sunset.
- Crabs and bycatch in the derelict crab traps must be released.
- Traps may not be possessed outside of the closure area and must be brought to designated disposal sites.
- Designated disposal sites include Falgout Canal Marina and Indian Ridge property just south of the hurricane protection levee on Bayou Dularge.

State derelict crab trap regulations do not provide authorization for access to private property; authorization can only be provided by individual landowners. Volunteers should respect property and not litter.

Volunteer Instructions

The two volunteer days on the two Saturdays (March 4 and March 11) will be emphasized. Traps, however, may be retrieved at other times as specified earlier.

LDWF personnel will be present at each disposal site on the designated volunteer days beginning at 7:30 a.m. and remaining until approximately 4:00 p.m. to distribute instructions, maps, and supplies (tarps, grappling hooks, garbage bags, and gloves) to the volunteers and to assist with the unloading of derelict traps. Volunteers are needed to retrieve traps and to work at the disposal sites. Volunteers may launch their boats at any site, but must bring the derelict traps to the designated disposal sites.

More Information

Additional information may be obtained from the Derelict Crab Trap Removal Program web site (www.derelictcrabtrap.net) or the contact person: Vince Guillory: LDWF, PO Box 189, Bourg, LA 70343; (985)594-4139; vguillory@wlf.louisiana.gov.

Closure Area Boundaries and Map

The closure area is defined by the following boundaries:

from a point originating from the intersection of the eastern shoreline of Bayou Dularge and the northern shoreline of Falgout Canal; thence westward along the northern shoreline of Falgout Canal to Lake Decade; thence westward and then southward along the northern and western shoreline of Lake Decade to the mouth of Bayou Decade; thence southwesterly along the northern shoreline of Bayou Decade to Lost Lake; thence westward along the northern shoreline of Lost Lake to the mouth of an unnamed bayou originating from Big Carencro Bayou; thence northward along the eastern shoreline of the unnamed bayou to Big Carencro Bayou; thence northward and then westward along the northern shoreline of Big Carencro Bayou to the eastern shoreline of Four League Bay; thence southwesterly to the northernmost point of land on Pointe Au Fer Island at Mosquito Pass; thence southward along the eastern shoreline of Pointe Au Fer Island to the mouth of Oyster Bayou; thence southward along the western shoreline of Oyster Bayou to a point along the inside-outside shrimp line as defined in R.S. 56:495; thence eastward along the inside-outside shrimp line to the eastern shoreline of Bayou Grand Caillou; thence northward to the first red channel marker (No. 10) in Bayou Grand Caillou; thence northward along the red channel markers in Bayou Grand Caillou to channel marker No. 40; thence due eastward to the eastern shoreline of Bayou Grand Caillou; thence northward along the eastern shoreline of Bayou Grand Caillou to the Tennessee Gas Pipeline canal; thence westward along the northern shoreline of the Tennessee Gas Pipeline canal to Bayou Dularge; thence northward along the eastern shoreline of Bayou Dularge and terminating at the intersection of Falgout Canal and Bayou Dularge.

I. Budget/Funding

Funds for 2004 and 2005 were provided by the NOAA Habitat Restoration Center, with leftover monies from a Section 201 Crab Meat Imports petition utilized as a portion of the state match. BTNEP provided a grant to fund the 2006 cleanup. The Crab Task Force sponsored legislation to provide for permanent funding beginning in 2007 by implementing and dedicating a $5 fee on crab trap gear license holders to derelict crab trap removal program.

J. Specialized Equipment

Easily recognizable equipment was used during the retrieval and disposal of derelict crab traps. However, some gear or equipment was modified to meet the program needs. Grappling hooks were made from modified pieces of rebar. The most innovative piece of equipment was the conversion of a log splitter into a hydraulic press to "smash" traps.

K. Disposal

All recovered traps must be brought to a designated disposal site, where traps are smashed and buoy lines are removed. A waste disposal company is contracted to place one to three 40 yard roll-off dumpsters at each site, to replace full dumpsters, and to bring the traps to a landfill. A main issue has been to estimate the number of dumpsters that are needed at each site.

L. Program Recognition

The 2004 derelict crab trap program was the recipient of two awards. The Gulf of Mexico Program gave a second-place award in the governmental category to the Gulf States Marine Fisheries Commission Gulf-wide derelict crab trap program, of which Louisiana was a participant. The program also received a 2004 first-place award from the Keep Louisiana Beautiful program. The 2006 derelict crab trap program received an award from the *Coastal Living* Magazine for "Sea and Shore Preservation".

Texas

A. Results

In the six years since the inception of Texas' Abandoned Crab Trap Removal Program in 2002, volunteers and TPWD staff have removed 22,712 traps from the coastal waters of Texas. Volunteers have been an invaluable part of this effort; from 2002-2007 1,804 volunteers using 654 private vessels have assisted in removing crab trap waste from the bays. The numbers of traps removed have declined steadily from the start of the program, from a high of 8,070 traps in 2002 to 1,922 traps in 2006; however, there was an increase to 2,816 traps in 2007. This general decline reflects the success of the program; bay waters are becoming cleaner with respect to numbers of derelict traps. Geographically, the majority of traps removed have come from the Galveston Bay system (7,875 traps, 40%) and the San Antonio Bay system (6,061 traps, 30%). These two ecosystems have historically accounted for the highest crab landings/effort in Texas.

Data on condition of derelict traps and observed bycatch were collected on a sample of traps removed each year. During 2002 TPWD staff along with trained volunteers collected data from each of the eight ecosystems in Texas. From 2003-2007, TPWD staff only collected data with a target of 30 traps/ecosystem/year. In the six years since inception of the program, data from 1,703 traps were collected. A total of 3,675 bycatch organisms were observed, 53% of which were blue crabs. The remainder of bycatch was dominated by stone crabs (21%), sheepshead (8%), and Gulf toadfish (3%). Three diamondback terrapins were collected and recorded by staff; anecdotal reports from volunteers indicated several more were found in Galveston Bay during 2005.

B. Planning Timeline

18 months
- Identify program coordinator and planning committee

18-12 months
- identify legislative and regulatory requirements to implement program

6 months
- Identify problem areas and spring low tides in target areas
- Identify potentially conflicting events or activities
- Identify potential stakeholders and volunteer organizations

4 months
- order dumpsters
- fabricate necessary equipment

3 months
- coordinating press release and TV highlights and t-shirt development
- regulation signed in to have airboats registered by captain

2 months
- produce brochures, data collection sheets, safety release forms
- volunteer training
- ID dumpster captains and supplies
- contact and guideline airboats

1-2 weeks
- TV spots

Post event
- post event report, presentations, press releases, data summary

C. Regulations/Legislation

Senate Bill 1410 was signed into law on May 22, 2001, and became effective September 1, 2001. This bill authorized the Texas Parks and Wildlife Commission to set a closed season for crab traps used in the public water of this state, and allows removal of abandoned crab traps by the public during this closed season. Texas Parks and Wildlife Commission ruled in November 2003 that the closed season for crab traps would run from the 3rd Friday of February for 10 consecutive days each year.

AN ACT

relating to crab traps used in the public water of this state and to removal requirements for abandoned crab traps.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Subchapter B, Chapter 78, Parks and Wildlife Code, is amended by adding Section 78.115 to read as follows:

Sec. 78.115. CRAB TRAPS; REMOVAL OF ABANDONED TRAPS.

(a) In this section, "abandoned crab trap" means a crab trap located in the public water of this state that is designated as abandoned by the commission after the expiration of the seventh day of a closed season established by the commission under this section.

(b) The commission may establish a closed season for the use of crab traps in the public water of this state. The commission by rule shall designate the closed season as not less than 10 days or more than 30 days between January 31 and April 1 in years designated by the commission.

(c) The commission shall adopt rules to govern the removal and disposal of abandoned crab traps as necessary to enhance:

(1) enforcement of this chapter;

(2) the cleanliness of the beds and bottoms of the public water of this state;

(3) boating safety; and

(4) the conservation and management of crab resources.

(d) Abandoned crab traps are litter for purposes of Section 365.011, Health and Safety Code, and are subject to immediate removal and disposal. An abandoned crab trap must be disposed of in compliance with the Health and Safety Code. Section 12.1105 does not apply to the removal and disposal of an abandoned crab trap under this section.

(e) A proclamation made by the commission under this section prevails over a conflicting commission proclamation made under Chapter 47, 61, or 66.

SECTION 2. This Act takes effect September 1, 2001. The Parks and Wildlife Commission shall adopt rules as required under Section 78.115, Parks and Wildlife Code, as added by this Act, not later than January 31, 2002.

_____ _____

President of the Senate Speaker of the House

I hereby certify that S.B. No. 1410 passed the Senate on April 5, 2001, by the following vote: Yeas 30, Nays 0, one present, not voting.

_____

Secretary of the Senate

I hereby certify that S.B. No. 1410 passed the House on May 8, 2001, by a non-record vote.

_____

Chief Clerk of the House

Approved:

_____

Date

_____

Governor

D. Forms

Prior to the 2002 Texas trap removal, TPWD staff developed a form that could be used to collect biological and trap condition data that might be useful for fishery managers. During 2002 TPWD staff, along with trained volunteers collected data from abandoned traps; from 2003-2007, TPWD staff only, collected data with a target of 30 traps/ecosystem/year. Minor changes were made to the form in the first couple of years based on input from biologists, but the form has remained basically the same.

LIABILITY RELEASE

In consideration for the opportunity to participate in the Texas Abandoned Crab Trap Removal Program on or about February 19, 2005, **I AGREE TO RELEASE, DISCHARGE, INDEMNIFY, AND HOLD HARMLESS THE TEXAS PARKS & WILDLIFE DEPARTMENT FROM ANY AND ALL CLAIMS, LOSSES, DAMAGES, DEMANDS, CAUSES OF ACTION, SUITS, AND LIABILITY OF EVERY KIND RESULTING FROM THE CRAB TRAP REMOVAL PROGRAM, INCLUDING WITHOUT LIMITATION ANY CLAIM FOR LOSS, DAMAGE, OR DESTRUCTION OF PROPERTY, OR INJURY (INCLUDING DEATH) REGARDLESS OF WHETHER SUCH LOSS ARISES IN WHOLE OR IN PART FROM THE NEGLIGENCE OF TPWD.** The released parties include all agents, employees, officers, directors, and contractors of TPWD. I have read this release and I understand all of its terms.

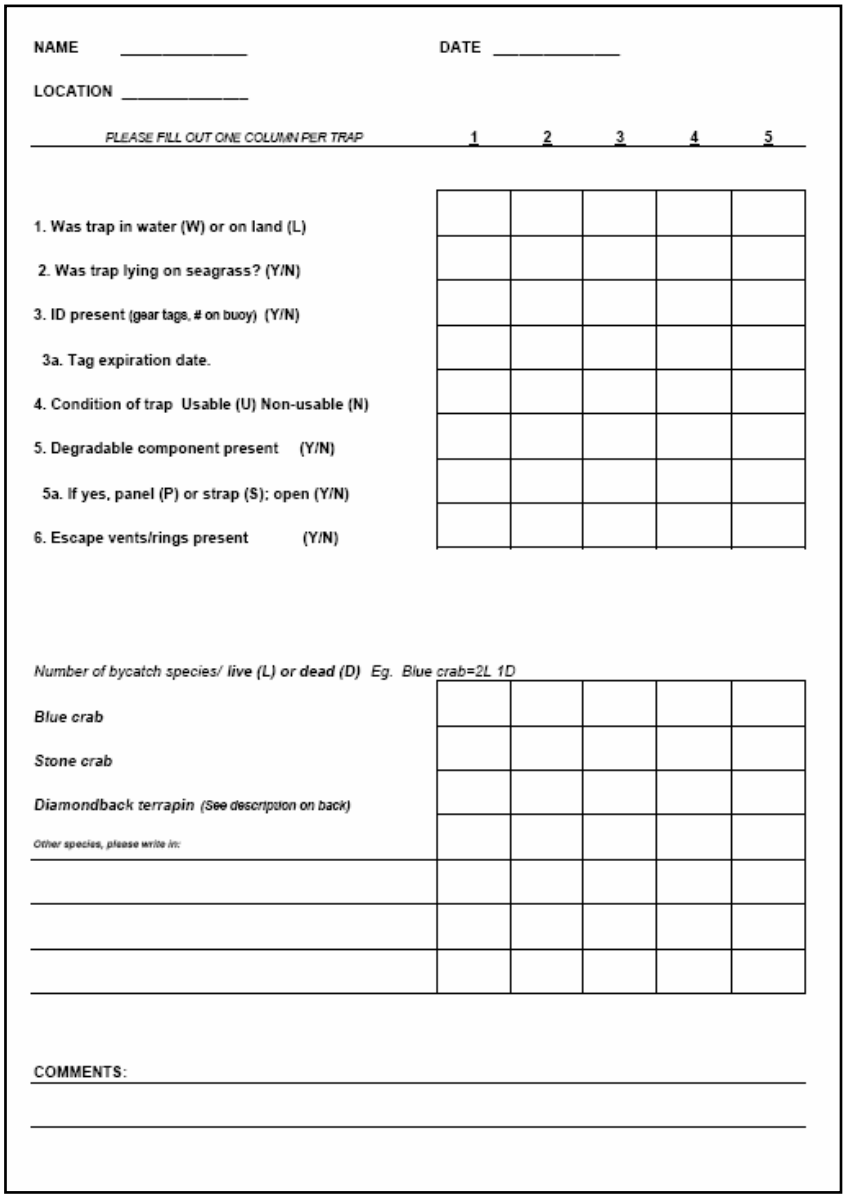
I understand that water activities pose risks of personal injury and property damage, including but not limited to drowning, animal stings or bites, and hypothermia. I understand that litter such as abandoned crab traps presents dangers of cuts, punctures, and other injury.

I understand that I am participating in the Crab Trap Removal Program at my own risk and that TPWD does not have responsibility for my safety or the safety of persons under my care.

I WILL WEAR A PERSONAL FLOTATION DEVICE (LIFE PRESERVER) AT ALL TIMES WHILE IN OR ON THE WATER AND FOLLOW SAFE BOATING PRACTICES AND I WILL ASSURE THAT ALL PERSONS UNDER MY CARE DO SO AS WELL. I WILL USE ALL APPROPRIATE PROTECTIVE EQUIPMENT TO PROTECT MYSELF AND ALL PERSONS UNDER MY CARE FROM INJURY DUE TO LITTER.

I sign this release voluntarily and with full knowledge of the legal consequences.

Signature of Volunteer or Parent/Guardian (Parent/Guardian must sign if participant is under 18)	Date	Printed Name
Signature of Volunteer or Parent/Guardian (Parent/Guardian must sign if participant is under 18)	Date	Printed Name
Signature of Volunteer or Parent/Guardian (Parent/Guardian must sign if participant is under 18)	Date	Printed Name
Signature of Volunteer or Parent/Guardian (Parent/Guardian must sign if participant is under 18)	Date	Printed Name
Signature of Volunteer or Parent/Guardian (Parent/Guardian must sign if participant is under 18)	Date	Printed Name



NAME _____ DATE _____

LOCATION _____

PLEASE FILL OUT ONE COLUMN PER TRAP	1	2	3	4	5
1. Was trap in water (W) or on land (L)					
2. Was trap lying on seagrass? (Y/N)					
3. ID present (gear tags, # on buoy) (Y/N)					
3a. Tag expiration date.					
4. Condition of trap Usable (U) Non-usable (N)					
5. Degradable component present (Y/N)					
5a. If yes, panel (P) or strap (S); open (Y/N)					
6. Escape vents/rings present (Y/N)					

Number of bycatch species/ live (L) or dead (D) Eg. Blue crab=2L 1D					
Blue crab					
Stone crab					
Diamondback terrapin (See description on back)					
Other species, please write in:					

COMMENTS: _____

_____

E. Stakeholders

Stakeholders benefiting from removal of derelict traps from state waters include all citizens who use and value the public waters of Texas. Recreational and commercial fishermen will benefit from increased protection of blue crab and associated bycatch organisms caught in derelict traps. Waterfront property owners will notice aesthetic benefits from reduced numbers of traps in the waters bounding their property. Commercial fishing vessels and outboard motor boats of all types will benefit from reduced damage to their propellers and gear caused by accidental contact with submerged traps. Coastal habitats and the local, state and federal agencies tasked to protect these habitats will certainly benefit as well.

F. Program Publicity

Texas trap removal programs have been publicized through a variety of media, including news releases, newspaper and magazine articles, radio and television interviews, website postings, and presentations to numerous conservation, civic, university, and other groups. Public awareness of each year's event often begins slowly, evolving into greater interest in the weeks and days before the public event day. TPWD staff are usually scrambling to accommodate volunteers the week of the event.

TEXAS PARKS & WILDLIFE

Crab Season to Close!

TEXAS PARKS & WILDLIFE

FEBRUARY 17 – FEBRUARY 26, 2006

To remove derelict crab traps from the coastal waters of this state, past Legislative and TPWD Commission action has created a 10-day coastwide closure for the use of crab traps beginning on the third Friday of February each year. During this closure, any crab trap located in public waters will be considered abandoned and will be subject to immediate removal and disposal by TPWD and/or volunteers. For more information contact your regional Coastal Fisheries Outreach Specialist:

Bobby Miller – Upper Coast - (281) 534-0110 – Dickinson Marine Lab

Art Morris – Lower Coast - (361) 825-3356 – Corpus Christi Field Station

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*OVER 15,000 ABANDONED CRAB TRAPS HAVE BEEN REMOVED TO DATE. OVER 200,000 BLUE CRABS ALONE HAVE BEEN SAVED FROM THE GHOST FISHING EFFECTS OF THESE TRAPS. PLEASE USE DUMPSTER LOCATED AT REAR OF THIS PARKING LOT TO PLACE ABANDONED TRAPS ONLY—**NO HOUSEHOLD TRASH PLEASE!!**.*

G. Education/Outreach

Publicity is key for volunteer recruitment. Television, radio, and print media are obvious candidates, but do not overlook less apparent outlets for publicity (e.g. university student groups, conservation groups, websites, meetings, etc.). One or two project leads (depending on geographic range of project) should be selected to facilitate publicity, volunteer recruitment, media requests, funding procurement, staff and project direction. Coordination with landowners (e.g. USFWS, NPS, state, private) is mandatory in some protected areas.

H. Budget/Funding

The following lists donors of funds, goods, and services from Texas' initial trap removal program in 2002. In the six years of trap removal events in Texas, many of these entities have continued their support with funding, volunteers, goods, services, trap removal, etc.

List of participant organizations and/or donors to the 2002 Texas Abandoned Crab Trap Removal Program.

Best Manufacturing
Chambers County
Charlie's Bait Stand
Christmas Bay Foundation
City of Aransas Pass
City of Corpus Christi
City of Kingsville
City of Palacios
City of Port Lavaca
Clear Creek Environmental Foundation
Coastal Bend Bays & Estuaries Program
Coastal Bend Guides Association
Coastal Conservation Association
Commercial Metals
Crawley's Bait Camp
Dawson Recycling
Eagle Point Bait Camp
ExxonMobil
Galveston County
HEB
Jefferson County
Kirby Inland Marine
Marker 37 Marina
Matagorda County
Padre Island National Seashore
Pompano Lease Service, Inc.
Port Mansfield Port Authority
Port of Bay City
Republic Waste Services
Saltwater Anglers League of Texas
Saltwater Conservation Association of Texas
Saltwater-Fisheries Enhancement Association
Shore Fishing and Casting Club International
Smart Shield
Stingaree Marina
Team Oso
Texas A&M University-Corpus Christi Science Club
Texas A&M University-Corpus Christi Tri-Beta Society
Texas General Land Office
Texas Marine Mammal Stranding Network
Texas Parks and Wildlife
Texas Outdoor Writers Association
Trailer Trash
U.S. Coast Guard Auxiliary
University of Texas Marine Science Institute
U.S. Fish & Wildlife Service
Valley Sportsman Club
Victoria College Biology Club
Waste Management Inc.
Willacy County
Wimberly Investments

I. Specialized Equipment

Texas staff has utilized a variety of methods to crush traps prior to disposal, including stomping by foot, crushing with backhoe, or crushing with forklift loaded with pallet full of heavy bricks

Texas version of the "Trap Crusher"

J. Disposal

Trap disposal has been handled at the ecosystem level. In 2002, a large disposal company, with many facilities located coastwide, was approached to donate trap disposal for the entire project. The notion was that one company would be easier to coordinate with than several smaller companies. After submitting a donation request to the parent company that was reviewed by its in-house donation committee (donations requests were reviewed once each month), it was denied based on the cost and scope of the project. After much time and effort by staff to secure this donation, it eventually proved fruitless and the tougher path had to be taken. Each bay system has since secured disposal or recycling at the local level, contacting several companies, municipalities, and counties. Nevertheless, all disposal was donated, but the effort to secure it was more time consuming.

K. Program Recognition

The Gulf-wide program was recognized in 2004. The Gulf of Mexico Program gave a second-place award in the governmental category to the Gulf States Marine Fisheries Commission Gulf-wide derelict crab trap program, of which Texas Parks and Wildlife Department was a participant.