



BayTimes

Winter 2014

Environmental Monitoring, Education, and Advocacy
St. Andrew Bay Resource Management Association Newsletter

Save the Date!!

RMA's annual membership and volunteer appreciation luncheon is Saturday, Dec. 6, 12-2, at Jim and Ann Barkuloo's house on 2310 Ashland Drive. We will provide the **shrimp boil** and non-alcoholic canned drinks, plates, napkins and cutlery, a few tables and chairs, and a couple of fire pits. Please bring a camp chair if you can and a side dish to share. And BYOB if you want. RSVP to sabrma@sabrma.org or call 763-4303 and leave a message. This way we know how much food to prepare! We hope to see all of our members and volunteers at the party, and if you would like to join RMA, please come to the party and bring your membership dues for 2015!



Patrice Couch works with student volunteers from PCMI; youngsters make an important contribution while learning environmental stewardship.

St. Andrew Bay Watch Update

St Andrew Bay Watch is proud to announce that we are in our 25th year of monitoring the health of St. Andrew Bay and area lakes, creeks, and bayous! In November 2013 we received a grant from the National Fish and Wildlife Foundation (NFWF) to fund water quality monitoring and shoreline restoration projects through December 2015. We would like to thank Linda Fitzhugh, Jim Barkuloo, Jessica Graham, Wendy Jones, Jon Hemming, Barbara Albrecht, and John Foster for their help writing and reviewing our successful grant proposal. We appreciate the support from NFWF, the Jelks Family Foundation, private donors, and our working partnerships with University of Florida LAKEWATCH and the Florida Department of Environmental Protection that are helping to sustain our program. Our success rests firmly on the shoulders of our dedicated volunteers who perform most of the field and lab work and provide technical guidance required to complete our activities. Volunteer work hours are used as credits toward in-kind match requirements in grant proposals, so we track this regularly. Since December 2013, we have been fortunate to have 149 people volunteer over 2,200 hours of their time for the betterment of our bay system! The value of this donated time is \$46,834.00, so this is a significant contribution these "Citizen Scientists" make so we can achieve our goals in a cost-effective way with only four part-time paid staff members. Our volunteers provide a tremendous service to RMA and to our community, so we thank them very much.

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- Join Now or Renew

Highlights of our work this year include collecting over 2,700 water samples at 84 sites with a focus on measuring nutrients, chlorophyll, and turbidity (water clarity). Last April, our data were used to create RMA's first annual water quality report card which compared water quality in St. Andrew Bay 20 years ago to water quality now. The report card debuted at Bay County's Earth Day celebration. In this first report card, we looked at three parameters (nutrients, chlorophyll, and water clarity) and assigned a water quality grade to each waterbody. Water quality in West Bay improved over the past 20 years while water quality in Grand Lagoon declined. Page two of the report card highlighted the increasing trend in beach swimming advisories caused by fecal bacteria. The report card is being used in public outreach efforts to identify which areas of the bay need attention. We expect to create a second annual report card next year. A copy of the report card can be viewed on our website at <http://sabrma.org/waterqualityreportcard.html>. Many thanks to the committee that volunteered to create the report card: Linda Fitzhugh, Alan Collins, Steve Theberge, Gail Carmody, Laura Paris, and Jessica Graham. And a huge thanks to David Burris for doing all the hard work of analyzing the data. This report card would not have been completed without David's expertise and commitment to the project.

St. Andrew Bay Watch loves to support students interested in marine science. During spring and summer of 2014 we were pleased to host a post-graduate internship for Christel Weably. Christel was visiting from Germany after receiving a Bachelors Degree in Earth Sciences. We are grateful for her help with water sampling, data management, and sample processing. We were sorry when she had to return to Germany, but we are happy that she will apply the new skills she learned to decide on a career path.

We are thankful for our new intern, Joy Haas, who began volunteering with us in August. Joy is a senior at North Bay Haven Charter Academy and is active in her Environmental Club. After high school, she plans to attend college to earn a degree in Natural Sciences. Joy works in the lab processing water samples for evaluation of chlorophyll and turbidity. She also preps sample coolers and assists with office tasks. We look forward to working with her for the rest of the school year. Last May, we reestablished an education/outreach program with AMIKids Panama City Marine Institute (PCMI). Students are collecting water samples each month to test water clarity (turbidity) of Massalina and Watson Bayous. High school students are learning to use specialized equipment to measure water quality indicators at the surface and at the bottom of the water column - temperature, salinity, dissolved oxygen, pH, and secchi depth (another measure of water clarity). In addition to water sampling, they assist with shoreline restoration projects. PCMI Director, Ron Boyce, is excited about working with RMA to provide these hands-on STEM learning opportunities.

In August, we had the opportunity to assist Jim Barkuloo and new RMA Board member, Mike Foate, in working with homeowners to complete natural shoreline stabilization projects at four sites in St. Andrew Bay. Next year, we will complete shoreline restoration projects in West Bay and East Bay. The site in West Bay is located west of the old Panama City Beach WWTP outfall. We are working with the St. Joe Company to restore eroded shoreline within the West Bay Preservation Area. We are in the process of working with Tyndall Air Force Base to determine the feasibility of using native marsh grasses to stabilize shorelines adjacent to historic cultural resources.

As we look forward to celebrating our 25th anniversary in 2015, we can use your help. We

would like to host special events to celebrate our "Bay Watch Silver" anniversary to raise awareness of the importance of St. Andrew Bay and to raise funds to maintain St. Andrew Bay Watch. We want to promote opportunities for corporate and private donations. In addition, we want to reach out to past Bay Watch volunteers and acknowledge them in a special way. We need help in order to make these visions a reality. If you are interested in helping, please contact Laura by calling 850-763-4303.

Volunteer opportunities are available to suit your interests. We welcome new and returning volunteers to help us in the field, lab, or assist in the office. We hold monthly Bay Watch volunteer training orientation meetings for those who want to join a boat trip to collect water samples. To learn more about St. Andrew Bay Watch, please visit www.sabrma.org. If you use Facebook, please "like" us by clicking the Facebook icon at the bottom of our home page. You may also reach us at the office by calling 850-763-4303.

Patrice Couch and Laura Paris



Mardi Gras is February 7th, 2015

RMA will enter its float in the Mardi Gras parade in downtown St. Andrews. If you are interested in participating, please contact Georgia at gpeach@me.com.

The St. Andrew Bay Resource Management Association, Inc., is a charitable organization as determined by Section 501 c (3) of the Internal Revenue Code. A copy of official registration #CH34339 with the Florida Department of Agriculture and Consumer Services may be obtained from the Division of Consumer Services by calling 1-800-435-7352 or on the website www.freshfrom-florida.com.

Tagging Sea Turtles in St. Andrew Bay



Meg Lamont and an assistant release Cinnamon a juvenile sea turtle fitted with a satellite tag attached to its shell to transmit information on the turtle's travels.

No formal studies have been conducted to characterize the size and diversity of the sea turtle assemblage in St. Andrew Bay. To better understand how many turtles are in the bay and how they are using this body of water, I am conducting a study that will allow us to track turtle movements and learn more about the turtle population that uses St. Andrew Bay. My study involves capturing juvenile turtles, gathering samples from each individual and attaching a satellite tag to some of the turtles. The satellite tag is attached to the back of the turtle and when the turtle rises to breathe, the antenna breaks the surface of the water. At this time, the tag sends information to a satellite that transmits the data to a receiving station which then summarizes it and emails location information to us in the form of a latitude and longitude. Each satellite tag can transmit for up to one year which allows us to see where each individual turtle is spending its time during that year-long period. From this information we can correlate various environmental data, such as water depth, water temperature, and habitat type, to turtle locations to see what factors are affecting the turtle distribution in the bay. In addition,

by tracking turtles, we can determine whether they are staying in St. Andrew Bay while they grow into adults or whether they are moving into and out of the various coastal bays in Northwest Florida. Juvenile turtles are often seen in the near-shore waters of the Gulf of Mexico and it is unclear where these turtles are going and what they're doing in the Gulf. Satellite tracks for turtles throughout the world can be seen at the webpage www.seaturtle.org. The tracks from all of the turtles we tag in St. Andrew Bay will be available on that page after each tag has been deployed.

In addition to tracking the turtles, we gather biological samples from each turtle we capture. This includes collecting a very small sample of skin and blood from each individual. We use these samples to examine the genetic origins of the turtles and learn more about what they're eating. Genetic analyses help identify which nesting beaches these juveniles originated from: were they born on nearby beaches in NW FL or have they migrated to St. Andrew Bay from a long-distance? We can also use these samples to conduct stable isotope analyses. This helps us determine whether their diet is changing over

time or whether they are consistently eating the same food items. All of these analyses help fill in the picture of what these turtles are doing in St. Andrew Bay, how long they stay there, and whether they are healthy.

Finally, when each turtle is captured we place small metal tags in its front flippers and a microchip (called a Passive Integrated Transponder tag which is very similar to what veterinarians put in domestic pets) in its shoulder. Then, we weigh and measure each turtle. The flipper and PIT tags allow individual identification of each turtle; if the turtle is spotted by someone else or becomes stranded, we know where that individual was and what condition it was in. We can use that information to determine the number of turtles in this population and to calculate a survival rate for those turtles. If the survival rate is low, that may indicate the turtles need extra protection whereas if it is high, it suggests the turtles are doing well. In addition, any time we recapture an individual we can see how much the turtle grew during that time and we can estimate the health of the turtle by calculating and comparing its body condition. Combined with

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Turtle Watch Update

Turtle Watch just completed an exciting nesting season on Panama City Beach. We found 37 loggerhead nests which produced 3115 hatchlings. That's the 3rd highest annual nesting and best ever hatchling numbers since Turtle Watch began in 1991! Unfortunately, nearly 60% of the hatchlings that emerged at night were affected by lights from beachfront development, the greatest threat to sea turtles on our heavily developed beach. Thankfully most of the disoriented turtles were rescued by volunteers. Our educational program also had a great year. Led by Nancy Evou, the Turtle Watch Education Director, volunteers gave presentations at several schools and on the beach as part of our Adopt-a-Nest program. Volunteer recruiting for the 2015 season will begin in March; send an email to pcbturtle@yahoo.com if you are interested in volunteering.

Kennard Watson



2014 Turtle Watch volunteers



This nest was laid too close to the waterline, so Lynda Yates is moving it to protect it from flooding.



tagging from page 3

the satellite tracking and genetic and stable isotope analyses, this information provides basic information about what types of turtles are in St. Andrew Bay, where they came from, where they are spending their time, how long they will stay in the bay, what is determining their distribution in the bay and whether they are thriving or in need of additional protection. The data we are gathering during this study will provide the first information available for turtles in St. Andrew Bay and it will allow managers to better protect these beautiful creatures. Since August we've been able to deploy satellite tags on five juvenile turtles in St. Andrew Bay: three loggerhead turtles, one Kemp's Ridley turtle and one green

turtle. One turtle was captured in West Bay (we named her Cayenne), one was captured near Shell Island (Saffron), and the other three were captured in Crooked Island Sound. All tracks are available on seaturtle.org. We're continuing to survey through the winter and will hopefully deploy more tags in the next few months. Winter will probably be slow though as turtles tend to move out of the coastal bays in the winter and into the deeper (and warmer) waters of the Gulf. So we may not get many tags out again until spring.

Meg Lamont, Ph.D. Biologist, USGS

Three Rivers Science Fair needs judges

The Bay County school system needs judges for the Three Rivers Regional Science and Engineering Fair. Judging will be Tuesday, January 27th, 2015, beginning at 8:15 am at the FSU-PC Holley Academic Center. Breakfast and lunch will be served.

Please call 850-767-4539 to confirm your participation and follow the link below to fill out the Judges Information Card: <https://sites.google.com/a/bay.k12.fl.us/science/competitions/science-fair>

The Bay County School Board appreciates your continued support and assistance with this event as it would not be possible without the help of community members like you.

Turning Turtles in Tortuguero

If you missed the Citizen Science talk in September, then you missed Anne Ake's presentation on her latest book, *Turning Turtles in Tortuguero*. This book focuses on the origins of sea turtle conservation and it features stories and sketches from Larry Ogren, RMA member and dedicated St. Andrew Bay Watch volunteer and retired NOAA Fisheries Biologist. Larry, one of Dr. Archie Carr's students, ran the sea turtle conservation and tagging efforts in Costa Rica for several years beginning in 1956. The biological station is still in operation and is the longest running sea turtle research station in the world. We thank Anne for this wonderful book describing the origins of sea turtle conservation and life in an isolated Caribbean village. Anne donates to RMA a portion of the proceeds of books purchased by RMA members and supporters from the turningturtles.com website or directly from Anne, or Kim Ogren. If you purchase a book from the website, please send Anne an email to validate that the donation should be made to RMA--anneake2@gmail.com.

Linda Fitzhugh

Field Trip to Costa Rica Anyone?

The RMA Board is considering organizing a trip to Costa Rica. Are you interested in learning more about sea turtle conservation and other conservation efforts in Costa Rica? Well first of all, you should buy Anne Ake's book! Then secondly, you should come to the appreciation luncheon December 6th and sign up for more information or email sabrma@sabrma.org. Costa Rica is a small country making a huge effort to conserve both its beauty and bio-diversity. We will visit Tortuguero and a family owned organic coffee farm as well as other places that highlight the amazing biodiversity.



*Getting to
Tortuguero is
half the fun.*

RMA membership and community Citizen Science meetings for 2015

All meetings start at 6 pm in the Gibson Lecture Hall in the Student Union East building on the Gulf Coast State College campus. January 27 – Chandra Hartman from Wild Root, February 24 – Chris Gardner from NOAA Fisheries, March 31 – Bonnie Samuelsen from Audubon Florida, April 28 – Julie Terrell from UF Extension Program, and May 19 – TBD. A quick RMA membership meeting will take place after the presentation. Join us for some very interesting talks next year!

Our Volunteers are the Best!

The RMA Board is indebted to the hundreds of volunteers who donate their time and expertise to get the work done! We cannot thank you enough for your help protecting St. Andrew Bay and its resources. Please come to our membership and volunteer appreciation luncheon so we can thank you personally!

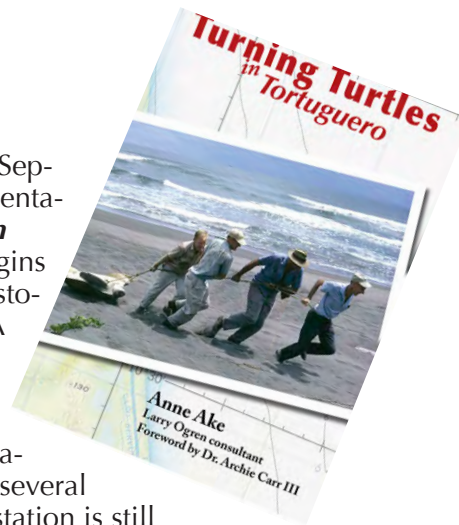
RMA Board of Directors

Mike Foate has agreed to serve on the RMA Board of Directors and we cannot be more pleased! Mike has been instrumental in organizing shoreline restoration projects and he has agreed to work on a new initiative to map St. Andrew Bay's shoreline. We hope this project will be funded as it is a multi-year project and will result in a map identifying the miles of vegetated, eroded, or bulk-headed shorelines. We will be looking for volunteers to help with this new initiative.

Bill Wallace

The RMA Board wishes Bill Wallace the best as he works to build a sustainable, off-the-grid community at Wildcat. Bill is stepping down from his duties as RMA Secretary so we are looking for someone to fill this vacancy. The secretary is responsible for recording and disseminating meeting minutes and he/she will help maintain membership records. If you are interested in serving on the RMA Board as secretary or in some other capacity, please contact Linda Fitzhugh at 872-3488 or sabrma@sabrma.org.

Linda Fitzhugh



Steve Theberge appointed to Florida Wildlife Federation Board



Steve Theberge, RMA Board member, was recently voted to the Board of the Florida Wildlife Federation (FWF) as the District I Director representing the Panhandle of Florida. Steve has many years of experience as a marine educator and has particular expertise in fisheries biology and management. He hopes his position on both Boards will result in more cooperative efforts between RMA and FWF to preserve clean water, protect critical wildlife habitats, and restore and maintain healthy estuaries, bays, and springs in Northwest Florida. Congratulations Steve and thank you for your service

Linda Fitzhugh

Scallop Restoration

RMA has been working with scientists at the Florida Fish and Wildlife Conservation Commission (FWCC) in St. Petersburg for over a decade on scallop restoration. The scientists monitor the spat population every month at 10 sites in St. Andrew Bay and volunteers in the community as well as Gulf Coast State College students raise the spat collected in November and December in cages hanging off the NOAA Fisheries dock. The purpose of placing the scallops in cages is to give them time to get larger so that once they are released they are able to avoid predation.

Last year, FWCC scientists found no scallops at their monitoring stations. It is hypothesized that the excessive rains and resulting turbidity made it extremely difficult for the spat to survive. Keep your fingers crossed that there will be spat this winter for us to place in cages.

If interested in this project, please email Linda Fitzhugh at lfitzhugh@gulfcoast.edu.

Seagrass Monitoring

The seagrass monitoring program has not done much since its director became President of RMA in 2011. So first of all I want to apologize to all the dedicated volunteers who were left wondering what had happened. Why wasn't Linda bugging me to get into the cold water of West Bay in October to measure seagrass height? Well, the seagrass program is changing its focus from measuring seagrass productivity in two areas of the bay (behind Shell Island and in West Bay) to mapping seagrasses in many more areas of the bay. Seagrass productivity is important to know, but in reality, we need to understand how seagrass cover is changing across the entire bay system. And with aerial flights occurring (at best) every 10 years (the last one was in 2003), we need to do some of our own mapping to better identify areas in the bay where seagrass loss is occurring. With the heavy rains of 2013 and the massive movement of sand in the bay due to extremely windy conditions over the winter, it appears that seagrass loss has taken place in many areas of the bay. We need to get better data on this.

If you are interested in helping with this new mapping project, please email lfitzhugh@gulfcoast.edu. I really need assistants who would like to be trained to use side scan sonar to map seagrasses underwater and to use a drone to map seagrasses from the air. And of course, the program needs all of its volunteers to continue the work started in 2000.

Linda Fitzhugh

Restore ACT News

RMA prepared three pre-proposals for the Restore ACT meeting on November 12, 2014. These pre-proposals discussed the need for a water quality report card for 2015, a shoreline mapping survey, and a study to determine the cause of beach advisories at Carl Gray Park and Beach Drive. The community submitted 47 pre-proposals and the advisory committee will pick 10 of these to be submitted as full proposals. Keep your fingers crossed that RMA gets the chance to submit a full proposal to the committee!

Linda Fitzhugh

Shoreline Restoration

St. Andrew Bay Watch is pleased to announce that in 2014 several waterfront property owners made the decision to give the gift of life by being participants in St. Andrew Bay Watch's Living Shoreline Restoration Program. With the help of community volunteers, four Living Shoreline Restoration Projects were completed that required the planting of 3,100 smooth cord grass (*Spartina alterniflora*) plants. These projects restored approximately 825 feet of shoreline!

In 2015, St. Andrew Bay Watch volunteers will monitor the restored shoreline sites and add more cord grass if necessary. St. Andrew Bay Watch is looking for more waterfront property owners to give the gift of life by getting involved in a Living Shoreline Restoration Project. Please help us spread the word about how shoreline restoration benefits waterfront properties. Costs to the property owner can be as low as \$2.50 per foot of shoreline restored! We would like to recognize Jim Barkuloo, Patrice Couch and Laura Paris for their energy and organizational skills with this project. And a big thank you to all the waterfront property owners and volunteers who planted 3,100 plants!

Mike Foate

*Give the Gift of Life –
Plant a Living Shoreline!*



No one is too young or too old to learn and practice good conservation.

Jim and Barbara replant a shoreline.



Volunteers get their feet wet--and more--planting cord grass restoration sites in St. Andrew Bay.

Debbie and Laura find digging holes under water challenging

RMA recycles aluminum cans and used ink jet cartridges

Please save your aluminum cans for RMA's recycling program! You can drop off cans behind the U.S. Fish and Wildlife office on Balboa Ave. or at Jim and Ann Barkuloo's home at 2310 Ashland Drive. If you would like someone to pick up your cans, please call Jim or Ann Barkuloo at 850-763-1820 or leave a message at 763-4303. We also recycle used ink jet cartridges. These can be dropped off at the RMA office building by placing them in a plastic bag and attaching the bag to the door knob if no one is in the office. Kudos to our St. Andrew Bay Watch program for using these ink jet cartridges to obtain supplies from Office Depot.

Membership Update

RMA thanks all the members listed in this newsletter for their monetary contributions for 2014. Although we do write grants to cover operational expenses for our programs, we rely on member contributions to help fund these programs since not all costs can be covered by grant monies. So thank you! We cannot do our work protecting the resources of the bay without your contributions. And we will collect 2015 membership dues starting at the December 6th membership and volunteer appreciation luncheon. We hope to see you there! Many, many thanks to all the folks below who either renewed their membership or became members of RMA in 2014. Our work cannot be done without your support, so thank you. Please consider renewing your membership for 2015 and please help us increase our membership rolls by inviting your friends and neighbors to become members! Membership categories are: individual (\$20), family (\$25), nice person (\$35), patron (\$50), benefactor (\$100) and life (\$500). Checks can be made out to RMA and sent to PO Box 15028, Panama City, FL, 32406. At the party, we will be able to process dues electronically by credit card, by check, or by cash! Please contact lfitzhugh@gulfcoast.edu if there are errors in this membership announcement or if you want to become our secretary. RMA needs help keeping track of its members!

Life Members:

Georgia Beauchemin, Mike Brim, Gail Carmody, Alan Collins, Gary Fitzhugh, Linda Fitzhugh, John Foster, Edward and Leanda Gagnet, Cicero Garner, Laurie Garner, Candis Harbison, Allen Jelks, Don Johnson, John Newman, Alex Samples, Doug and Caroline Smith, Mary Thieme, Mary Weaver, and Jeff Whitton.

2014 Annual Memberships:

John and Kim Ackerman, Anne Ake, Gary and RoseMarie Anderson, Ronny and Sandra Archer, Dianna Avrigian, Jim and Ann Barkuloo, Bart and Susan Bartheekmy, Diane Bateman, Susan Bates, Jeremy Bazata, Fred Beauchemin, Tom and Chris Bettendorf, David Burris and Mary Mittiga, Norm and Mary Jo Capra, Labron and Loraine Chance, Graham Clarke, Peter Claussen, Felton Cofer, Bob Colenda, Beverly Craft, Frank Dama, Paul and Iris Davis, Elaine Dawson, Mic and Geri Dottorelli, Henry Dusseault, Dennis and Dawn Dykes, Chris Forman and Emily Ellis, Bill and Debbie Fable, Mike and Vivian Foate, Robert Gilmore, Michael Grabner, William and Barbara Greene, Lucia Grizzard, Alice Guay, Gulf Coast Women’s Club, Doris Hair, Sara Heath, Frank and Ann Higgins, Bryan Hodges, Kathy Hoffmaster, Laura Holland, Jack Holt, Ron Houser, Laura Humphreys, Laura Jenkins, Bobby and Susan Johnson, Victor and Sally Johnson, Gwendolyn Jones, Cheryl Kellogg, Patty Kelly, Jeff Krepper, Neil and Susan Lamb, Linda Laroux, Henry Lawrence, Susan Llorca, Charlotte Long, Jim Loyed, Douglas and Connie Lurie, Marlene Mahoney, Tim Matthews, Steve McLellan, Sandra McQuagge, Chris Metcalf, Nancy Mills, Rene and Annette Moser, Larry and Kim Ogren, Max Pepmiller, Tim and Nancy Pride, Sunnyside Beach Property Owners, Lisa Rhodes, John and Barbara Robertson, Bonnie Samuelsen, David Schmidt and Sara Klasky, Gary and Rosalie Shaffer, Carmen Shirely, Barbara Sielke, Brad Smith, Tita Sokoloff, Tom and Trish Stauffer, Bob and Vivian Steele, George Stevenson, Jimmy Stone, Steve Theberge and Lisa Rahn, Mark and Jolie Thompson, Bill Wallace, George and Anna Walrond, Christine Waters, Kennard Watson, Beverly Whaley, and Ellen Whitaker.

Yes!

I want to be part of this effort. Please sign me up for an annual membership:

Individual \$20
 Family \$25
 Nice Person \$35
 Patron \$50
 Benefactor \$100
 Life \$500
 Student, Senior, Low income \$5

Name _____ Phone _____ Email _____

Address _____ City _____ State _____ Zip _____

Check here to have your email added to RMA’s Action-Alert and Newsletter lists.

Mail to: St. Andrew Bay RMA, PO Box 15028, Panama City, FL 32406

Membership dues can be paid by check, or by PayPal at the RMA website: www.sabrma.org