



The Pilot



Monthly Newsletter of the

Lake Hartwell Boating Club

From the Bridge - Billy Owens



What is your New Year's resolution? Let's all make one to use our boats more often this year.

It's 2020 and still cold outside and by far not my favorite time of the year, but we can still have some fun. Happy Hours will be starting back soon and we have a planning meeting coming up this month at our house (see details in this issue). What do you want to see us doing this year with the boating club? We need your input!

Also, we have a murder mystery coming up as well. This sounds like a fun event in the middle of winter when it's hard to use our boats. Speaking of using boats, one of our Co-Op charting opportunities is in February. Get a couple of blankets and a thermos of hot chocolate and make it a fun afternoon on the water. This should give you something to look forward to.

So let's make the best of the next couple of cold months and wish for warmer weather to be on it's way soon, I know I am!

Calendar of Events

LHS&PS **Calendar of Events**

January

14 Executive Committee Meeting
23 - 26 Upstate SC Boat Show
23 Happy Hour at Mac's Speed Shop
26 Planning Meeting at the Owens

February

1 Murder Mystery Party
11 Executive Committee Meeting
15 ABC Class at Cabela's

March

10 Executive Committee Meeting



Tom Hardin	01/01
Sarah Morris	01/18
David Cross.	01/24
Billy Owens	01/24
Jackie Garbarino	01/27
Adam Kraft	01/31

Our Bridge

Commander: Billy Owens, AP
president@lake-hartwell.org

Executive Officer: Pete Stevenson, AP
vice-president@lake-hartwell.org

Administrative Officer: Nioka Rose, S
admin@lake-hartwell.org

Education Officer: Bert Baxter, AP
education@lake-hartwell.org

Secretary: Charles Guderian, S
secretary@lake-hartwell.org

Treasurer: Craig McQueen, AP
treasurer@lake-hartwell.org

Assistant SEO: Ray Fedele, SN

Members At Large:

Chris Rose, SN

Don Woodard, N

Nathan Reynolds, AP

Nominating Committee

Charles Guderian, S 1 Yr

Chris Rose, SN 2 Yrs

Lynn Solesbee, AP 3 Yrs

Happy Hour - January 23th at 6 pm

I hope everyone had a Merry Christmas and a Happy New Year. The next LHS&PS Happy Hour will be at Mac's Speed Shop at 6 pm on January 23th.



Mac's is located at 930 South Main Street across the Main Street from Fluor Field. Enjoy a great selection of craft beers along with great food. Here is the website for their menu <https://macspeedshop.com/greenville/#menu>.

Parking is free along most streets in the area. There are also pay lots and potentially parking in garage at Homewood Suites if you can't find free parking.

Please email (lynn@bluewatercivil.com) or call me (864-735-5453) if you have any questions. I look forward to seeing you on the 23th for a great time together!



**Ladies and Gentleman,
your attention please.**

**A night of mystery and intrigue is
in the planning**

A minimum of 20 souls are needed

**The date is Saturday, February 1,
at the Solesbee's**

Interested?

Email admin@lake-hartwell.org

**Press the CTRL key and click the
email address to reply**

Or text 864 567 1505

Coop Charting



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

February is one of our squadron's assigned months to check the navigation aids on Lake Hartwell. Admittedly, it can be the most challenging month to be out on the lake so I suggest that we team up with a member who has an enclosed cockpit boat and try to pick an above average weather day to get the job done. Please coordinate your plans with a partner and with Jef Lockman in order to avoid duplication of zones. If we get most of the eight zones covered this time it could stand as a record accomplishment!

2019 Christmas Party New Venue

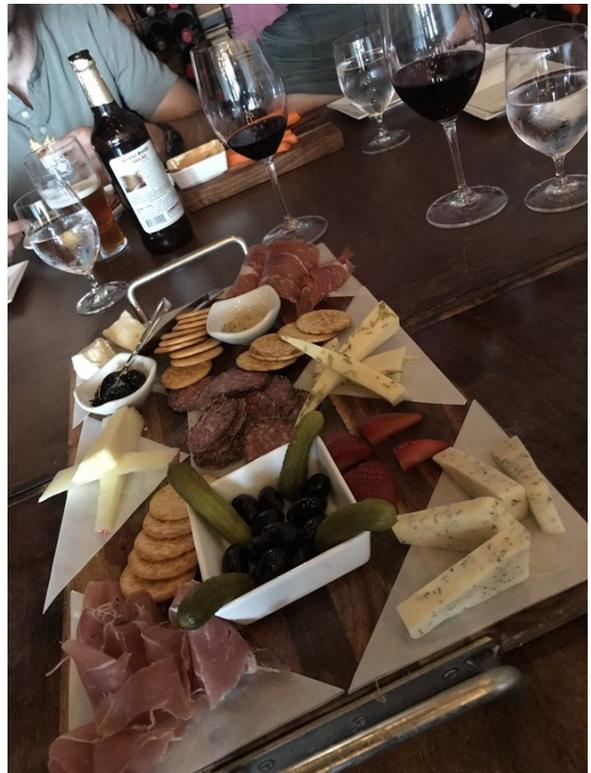
The Lake Hartwell Sail and Power Squadron which is also known as Americas Boating Club of the Upstate, celebrated its annual Christmas party at the Clemson Wine Bar on Saturday evening December 14, 2019.



A pretty new addition to the Clemson areas entertainments, the Wine Bar features an enormous list of wines, a gracious selection of delicacies for charcuterie trays and a menu of delicious paninis. You can't go wrong even if you order a draft beer.

No less than 11 of us attended the gathering and the company was grand. We spent several hours sampling and tasting and then it was time for Dirty old Santa.

Dirty Old Santa is known by various names and has become ubiquitous in the upstate, I personally have attended three such fetes in the last 6 days. OK, Dirty Old Santa is just a silly name for a gift exchange with a twist. The twist is when it is your turn you can select a new wrapped package (each person in attendance brings a gift which is placed under the Christmas tree) OR you can steal a gift that someone else has acquired. Usually there is a limit to how many "thefts" can occur and a two theft limit is typical to avoid bloodshed and disagreement over the most prized items.



2019 Christmas Party New Venue



The north end of the table presents Henry Schmitt, David Cross, Charles Guderian, Libby Cross, Pam Guderian and Rosemary Stevenson while the south end held Pete Stevenson, Angela Lockman, Jef Lockman, Kim McQueen, Craig McQueen and doppelgangers for Henry and David

Once Dirty Santa retired, we settled down to some serious consumption of refreshments and we were joined by the owner and several regular customers who said they were compelled to join the fun because no one could hear themselves think. No really, we were having so much fun they just wanted to be part of it and that was fine.

And then we all went home.

Pete Stevenson

Think Tank 2020



**What would you like to do this year?
What would you like to see happen?**

Not now, but this year with our boating club?

Wine and Cheese? Color Cruise? Some more “Float, Bob and Sips”? How about a Charleston trip, down the Cooper River to check out the markers and of course spend a fun filled weekend exploring the Charleston area?

Well, come out to our house Sunday January 26th at 3:00 pm to help put together a plan for the upcoming year.

BYOB and bring an appetizer to share. Let’s make this the best year yet with lots of fresh new ideas and some old favorites

So don’t be shy, come out and spend a fun afternoon with your Boating Club friends.

Billy Owens



DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS HARTWELL LAKE AND POWERPLANT
5626 ANDERSON HWY
HARTWELL, GEORGIA 30643-5259

December 14, 2019

Billy Owens
Squadron Commander
Lake Hartwell Sail and Power Squadron
909 Snug Harbor
Anderson, South Carolina 29625

Dear Mr. Owens,

The U.S. Army Corps of Engineers, Savannah District, Hartwell Dam and Lake would like to express our sincere appreciation for the volunteer services and support the Lake Hartwell Sail and Power Squadron provided during 2019.

We are grateful for the Lake Hartwell Sail and Power Squadron's continued emphasis on the importance of water safety at the Hartwell Project. An integral part of this is routine and timely inspection of the Aids to Navigation system. The accuracy and timeliness of your inspections and subsequent reports greatly enhances our ability to respond to potential safety hazards in a prompt manner to ensure boater safety. Your commitment to water safety and quality service is evident to all.

To express our gratitude, and in recognition of your efforts, we are enclosing a Certificate of Appreciation to the Lake Hartwell Sail and Power Squadron. Please accept and present this certificate to all of your organization's members with our sincere thanks. We look forward to continuing this partnership for many years to come.

If you have any suggestions or comments to assist us in the management of the Hartwell Project, please contact Park Ranger Dale Bowen at (888) 893-0678, extension 348.

Sincerely,

A handwritten signature in black ink, appearing to read "AW", is positioned below the word "Sincerely,".

Aaron P. Wahus
Operations Project Manager
Hartwell Dam and Lake

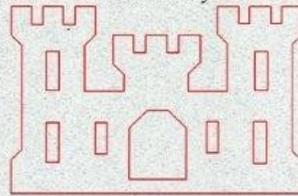
Certificate of Appreciation

Awarded to

Lake Hartwell Sail & Power Squadron

For outstanding performance associated with the Hartwell Lake Aids to Navigation Inspection Program during 2019. Only with the help of dedicated volunteers such as the Lake Hartwell Sail and Power Squadron is it possible to provide the high level of service the public has come to expect. The dedication to water safety and professional demeanor displayed by each member reflects positively on themselves and the Lake Hartwell Sail and Power Squadron.

Presented by



United States Army Corps of Engineers Hartwell Project

December 14, 2019

A handwritten signature in black ink, appearing to read "ARQ".

Aaron P. Wahus
Operations Project Manager

Part 1: Understanding Marine Corrosion—Galvanic Corrosion

Marine corrosion is a challenge for all boat owners. It has implications in both boat maintenance and boat safety. You can only cope with corrosion by diligence and proper maintenance. Certain kinds of corrosion can devalue your investment in a matter of months or even days.

To protect your boat it is critical to understand the types of corrosion. These are:

- Simple Corrosion
- Galvanic Corrosion
- Electrolytic or Stray Current Corrosion
- Crevice Corrosion

In this first article in a series, we will look at simple corrosion and galvanic corrosion.

Simple Corrosion

Simple corrosion is the process of oxidation of marine metals. Oxidation occurs when molecules on a metal surface react with oxygen. For example, iron/steel alloys develop a layer of iron oxide or rust. Aluminum metal becomes aluminum oxide, a white or gray powder.

Painting, galvanizing, plating, chemical passivation and use of alloys slow the progress of simple corrosion.

Galvanic Corrosion

Galvanic corrosion is an electrochemical reaction between two of more different metals. Galvanic corrosion is differentiated from stray current corrosion in that there is no applied source of electrical current.

Galvanic corrosion involves the same DC current generation process that is found in a storage battery. It is an electrical exchange between connected metals, whether touching or in a conductive solution. The conductive solution may be salt water, “hard” fresh water with a high concentration of dissolved mineral ions, or polluted fresh water.

Dissimilar metals used in marine components in a conductive solution form a galvanic corrosion cell, like a battery. Electrons flow from the more chemically active anode metal (e.g., outboard or stern drive leg) to the less chemically active cathode (e.g., stainless steel propeller, etc.). The anode metal that loses electrons becomes a positively charged metal ion and reacts with oxygen, becoming a metal oxide.

The oxide may become a stable coating or may dissolve away as a powder or rust flakes. The base metal then becomes pitted or creviced. The stray ions attracted toward the cathode metal become alkaline hydroxides. The rate of corrosion of the less noble, higher potential metal depends on its potential difference with other metals in contact with the solution.

For example, if zinc is connected to aluminum, the zinc corrodes. This is what makes zinc a good sacrificial anode, protecting submerged aluminum components such as lower units. If aluminum is connected to copper or bronze, the aluminum corrodes rather rapidly. This is why pressure-treated wood (containing copper) should never be used in aluminum boats as decking or in transoms.

Rate factors

The rate of galvanic corrosion is temperature dependent. The total charge in the electrolytic reaction between the two metals will always balance. A very large anode connected to a small cathode will corrode very slowly. However, if a very large cathode is connected to a small anode, the small anode will corrode rapidly. Practical considerations

You may do everything right to limit galvanic corrosion, but that doesn't mean that boats and metal structures near you are protected. You may have no steel on your boat, but if you dock near stainless steel or mild steel-containing structures or boats and connect to shore power, you must take special precautions.

The green shore power ground wire connects your aluminum components with the grounded, submerged steel and submerged metals on nearby boats. This galvanic cell can overwhelm your anodic protection system. Your submerged aluminum components will sustain serious damage unless you install a galvanic isolator. Any submerged stainless steel components will accelerate galvanic corrosion of submerged aluminum components, especially when connected to the engine ground. Most submerged metals form small anodes and cathodes on their surfaces because of alloy composition, impurities or surface disruption.

Next time, we will look at measuring your vessels susceptibility to galvanic corrosion, as well as preventing or slowing down the process

Sources:

<https://www.boatus.com/seaworthy/magazine/2015/july/marine-corrosion-101.asp>

<http://www.boatus.com/boattech/articles/marine-corrosion.asp>

<https://www.goldeagle.com/tips-tools/understanding-corrosion-around-boat/>

<https://www.jetdock.com/knowledge-center/prevent-aluminium-boat-corrosion.asp>

Learning More

Does marine corrosion seem complicated to you? Are you not sure where to start in applying best practices to your boat? United States Power Squadrons has a solution for you. Marine Electrical Systems is an elective course dedicated to onboard electrical power—both AC and DC. You will learn about electrical circuits, wiring, terminating, and routing wiring for safety and trouble-free operation. You will learn how to use multimeters and tools to check, diagnose and repair electrical problems. You also will learn about galvanic corrosion, stray currents, isolation, grounding, and safety of electrical systems.

The course material is organized in seven chapters and is intended to be presented in the classroom over nine two-hour sessions:

Day 1 - Introduction, Chapter 1: Properties of Electricity

Day 2 - Chapter 2: Boat Electrical Wiring Practices

Day 3 - Chapter 3: Direct Current Power

Day 4 - Chapter 4: Alternating Current Power

Day 5 - Chapter 5: Galvanic and Stray Current Corrosion

Day 6 - Chapter 6: Lightning Protection

Day 7 - Chapter 7: Troubleshooting Part 1; on-the-boat optional

Day 8 - Chapter 7: Troubleshooting Part 2

Day 9 - Review and Examination

This course is the best way to learn about electrical factors that can save you from sustaining considerable damage, especially if you berth your boat at a marina, or if you make any repairs or modifications to your OEM electrical system.

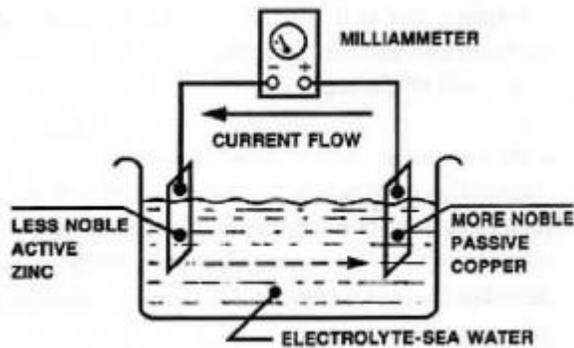
If you are interested in taking this class, indicate your interest using the contact page on the squadron website.



Nearby boats with steel alloys overwhelmed the anode on this kicker and destroyed the lower unit while docked. (courtesy Boat-US)



This lower unit became a huge anode to other more noble metals connected by seawater, sacrificing much of its aluminum metal. (courtesy Boat-US)

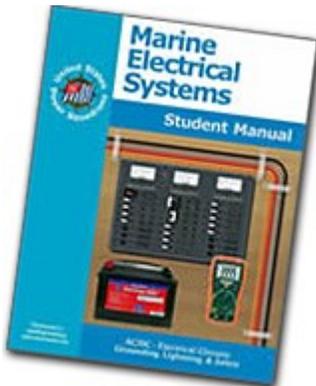


Anode material steadily oxidizes to metal ions that move through the electrolyte. (USPS Education Department)

Table 5-1 Galvanic Scale of Metals in Sea Water

Note: Potentials vary with the actual composition of the material

Material	Potential
Magnesium and its Alloys	- 1.50
Zinc	- 1.03
Aluminum and its Alloys	-0.75
Cast Iron	-0.61
Carbon Steel	-0.61
Type 430 Stainless (Active)	-0.57
Type 304 Stainless (Active)	-0.53
Type 410 Stainless (Active)	-0.52
Silicon Bronze	-0.40
Copper	-0.36
Yellow Brass 268	-0.36
Red Brass 230	-0.33
Aluminum Bronze	-0.32
Tin Bronze (G & M)	-0.31
Admiralty Brass	-0.29
Copper Nickel	
90 - 10	-0.28
80 - 20	-0.27
70 - 30	-0.25
Nickel 200	-0.20
Silver Solder	-0.20
Inconel 600	-0.17
Monel	-0.13
Stainless Steel (Passive)	-0.10
Silver/Silver Chloride half cell (Reference)	0.00
Graphite (Note Sign Change)	+0.20



A nine-session course is well worth the time and effort expended to manage your electrical system for safety and longevity. (USPS Education Department)

The more any two metals are separated in this chart, the worse the corrosion of the less noble metal when immersed in electrolyte. (USPS Education Department)

Ship's Store



Port Authority Rapid Dry Polo.

Port Authority Rapid Dry Polo. Soft and breathable, this baby pique polo has our exclusive Rapid Dry moisture-wicking technology. This unique knit has a soft inner layer which wicks moisture away from your skin to the shirt's surface where it quickly disperses and evaporates. 5.6-ounce, 60/40 cotton/poly Double-needle stitching throughout 3-button placket Pearlized buttons Open hem sleeves Side vents

Price \$26.00

Colors: White; Classic Navy; Dark Green; Royal; Jet Black; Red; Charcoal; Seafoam; Stone; Riviera Blue; Boysenberry Pink;

Moroccan Blue; Dusty Purple

Sizes: XS; S; M; L; XL; 2XL; 3XL; 4XL; 5XL; 6XL



Port Authority Outdoor Wide-Brim Hat.

Port Authority Outdoor Wide-Brim Hat. Trail-ready, this high-performance essential features No Fly Zone insect repellent technology, UPF 30+ sun protection, a concealable sun flap and a moisture wicking sweatband. The foam brim keeps it afloat in water. Fabric: 75/25 poly/nylon rip stop Structure:

Unstructured Features: Adjustable cord at crown, clip-on and adjustable drawcord

Price \$20.00

Colors: Coffee Cream; Olive Leaf; Stone

Sizes: S/M; L/XL



Sport-Tek 1/4-Zip Sweatshirt.

Sport-Tek 1/4-Zip Sweatshirt. These durable, colorfast quarter-zips feature a better fit with minimal shrinkage, as well as 2x2 rib knit cuffs and waistband. 9-ounce, 65/35 ring spun combed cotton/poly fleece Twill-taped neck 2x2 rib knit cuffs and hem with spandex *Please note: This product is transitioning from woven labels to tag-free labels. Your order may contain a combination of both labels

Price \$31.00

Colors: Athletic Heather; Black; Forest Green; Graphite Heather; Maroon; True Navy; True Red; True Royal; Vintage Heather; White

Sizes: XS; S; M; L; XL; 2XL; 3XL; 4X

Ship's Store



Eddie Bauer - Long Sleeve Fishing Shirt.

Eddie Bauer - Long Sleeve Fishing Shirt. Designed with the needs of fishermen in mind--but equally comfortable anywhere--this shirt has all the bells and whistles: a built-in rod holder, two large fly box pockets, utility loop and more. 3.5-ounce, 100% cotton poplin 100% polyester mesh upper back lining Built-in rod holder Two large fly box pockets with hook and loop closures Zippered chest pocket Utility loop and tool holder Cape back with mesh ...

Price \$47.00



Eddie Bauer - Short Sleeve Fishing Shirt.

Eddie Bauer - Short Sleeve Fishing Shirt. Designed with the needs of fishermen in mind--but equally comfortable anywhere--this shirt has all the bells and whistles: a built-in rod holder, two large fly box pockets, utility loop and more. 3.5-ounce, 100% cotton poplin 100% polyester mesh upper back lining Built-in rod holder Two large fly box pockets with hook and loop closures Zippered chest pocket Utility loop and tool holder Cape back with mesh...

Price \$41.00

Colors: Blue Gill; Driftwood; Goldenrod Yellow; Seagrass Green; White
Sizes: XS; S; M; L; XL; 2XL; 3XL; 4XL



Sport-Tek Ladies Sport-Wick Textured Colorblock 1/4-Zip Pullover

Sport-Tek Ladies Sport-Wick Textured Colorblock 1/4-Zip Pullover. Contrast sleeve stripes and texture give this moisture-wicking pullover an unrivaled look. 100% polyester Gently contoured silhouette Cadet collar Tag-free label Taped neck Front and back princess seams Contrast Vislon zipper Angled chin guard for additional comfort Set-in sleeves Thumbholes to keep hands warm Open cuffs and hem Slight drop tail hem

Colors: Black/ Iron Grey; Iron Grey/ Black; Pink Raspberry/ Iron Grey; True Royal/ Black; White/ Iron Grey

Sizes: XS; S; M; L; XL; 3XL; 4XL; XXL

Price \$33.00

Ship's Store



12" by 18" Burgee
Price 26.00



4" Burgee Decal
1.00



Lake Hartwell Boating Club

Executive Committee Meeting Minutes

December 10, 2019

MD 360 Powdersville, SC

1. Call to Order

A quorum was established with six members present as follows: Billy Owens, Pete Stevenson, Craig McQueen, Bert Baxter, Charles Guderian, and Don Woodard. The meeting was called to order and Billy Owens led the group in the pledge and invocation. The November minutes were accepted as published in The Pilot.

2. Department Reports

1. Billy Owens announced that the zip code for our squadron has been modified by National so that new members can be properly referred to us. The Christmas party is still tentatively scheduled Saturday December 14th at the Lockman's provided that enough people RSVP prior to then. Either way a blast will be circulated with the final decision to all members. Our current vessel safety inspectors are : Rick Cunningham (lead inspector, Pete Stevenson, Bert Baxter and Charles Guderian. Billy is considering getting his VSC inspector certification. Our 2020 inspection stickers have not arrived yet.
2. Pete Stevenson reported that some billboards are available at reasonable cost and could be available for squadron announcements. The booth for the 2020 boat show has not been secured but several boat dealers and marinas have been willing to share their spaces with us.
3. Craig McQueen is in the process of having all of the squadron account information transferred to him from Lynn Solesbee and expects to have a full financial report soon.
4. Bert Baxter announced that he has acquired all of the educational materials from Chris Rose and that he is planning for the next America's Boating Course to be conducted on February 15th and that Ray Fedele has volunteered to be the assistant SEO. Cabela's will be contacted to see if their meeting room is available on that date.
5. Don Woodard asked if anyone had suggestions for our next safety article. Corrosion was the suggested topic. Mentioned that a new Chief Commander is to be announced soon.

3. Pilot article assignments are as follows:

Billy= From the Bridge

Nioka= Murder Mystery Event

Executive Committee Meeting Minutes

Pete= Christmas Party

Don= Safety Article

Charles= Co op Charting

5. New Business- Several events are scheduled as follows:

Boat Show January 23-26

Murder Mystery role playing tentatively scheduled for February 1st

Coop Charting February any day

February ABC date to be determined by Bert Baxter new SEO

April 14th Shakedown Cruise

May 1-3 D26 Cruise and rendezvous on the Little River

6. The next ExCom meeting is at MD 360 Powdersville Tuesday January 14th @ 6:30PM

7. Adjourned 7:45 PM

Submitted by: Charles Guderian, Secretary



For Boaters, By BoatersSM



The Pilot

Official monthly publication of the Lake Hartwell Boating Club

Editor: Nioka Rose

Proofreaders: Pete & Rosemary Stevenson

Distribution: Don Woodard

Items are due on the 20th of the month preceding publication. Articles should be emailed to:

editor@lake-hartwell.org.

The editor reserves the right to edit submissions in a style that best serves the needs of LHS&PS, District 26, and United States Power Squadrons©

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