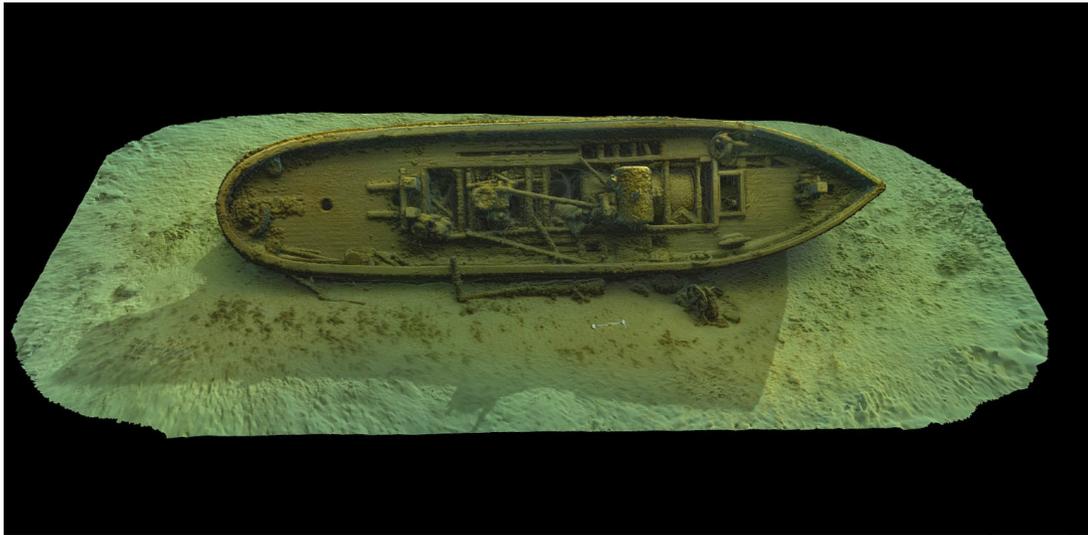




Great Lakes Shipwreck Preservation Society

Dedicated to Saving our Shipwrecks "From Prevention to Preservation"

2020 Newsletter Volume 25



This is the historic tug *Sport* from Lake Huron. The final product is a three dimensional model that can be rotated and viewed from any angle. Of course if you didn't photograph the shipwreck from a direction or if a detail was obscured in the original photos by a shadow or another part of the wreck it will also be absent from the model.

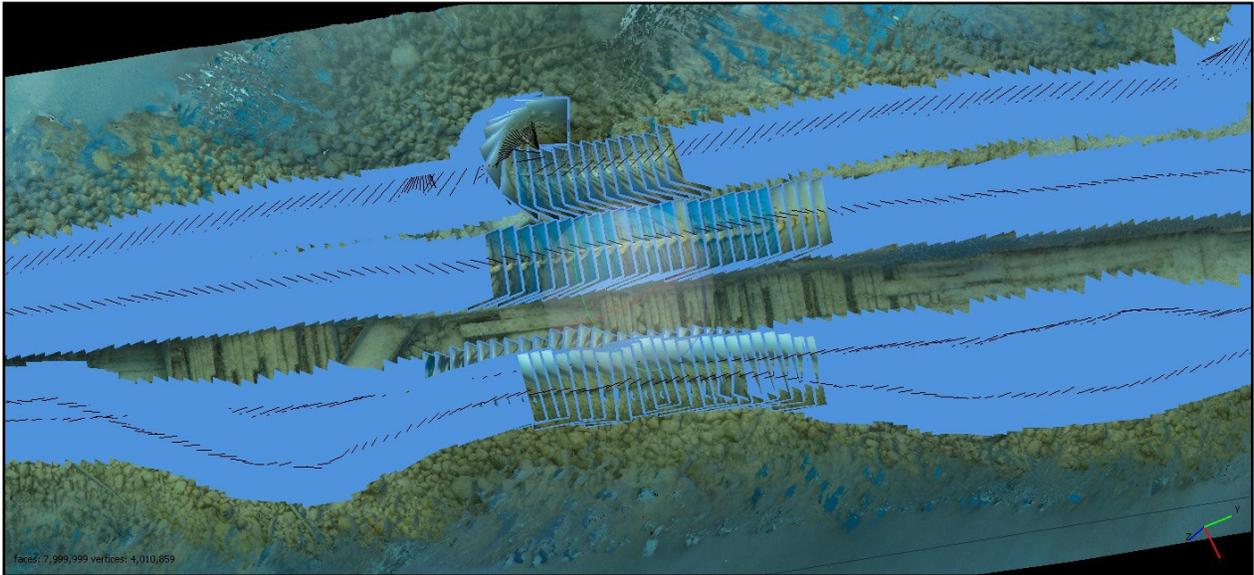
Announcing The Great Lakes Shipwreck 3D Model Database Project

by Ken Merryman

In the fall 2019 GLSPS Newsletter I described our goal to create a database of 3D models for all Great Lakes Shipwrecks. Through the winter and spring we have been working tirelessly to define a program to support this goal. The idea is to "crowd source" the image data then create the models and store both the image data and model data in an archival database. The models and image data will be accessible on line so the public and students of maritime archaeology would have access to the information. The public will be able to visit the Great Lakes shipwrecks without getting wet. Archaeologists will be able to evaluate large numbers of shipwrecks for important historical information. Resource managers will be able to determine what historical information contained in the sites could be at risk from deterioration of the site and determine what sites justify further study. As a diving community collecting and making this information available could be the most valuable thing we can do to protect and preserve our shipwrecks.

These models would be mostly photogrammetry models which for those who may be unfamiliar with the terminology a brief description is in order. Strictly speaking, the term photogrammetry is the technique that allows one to determine the distance between two points in a plane parallel to a photographic image or film plane by measuring the distance between the points on the image or film plane of the camera. In simpler terms it means one can determine the size of an object in a photo from the size of the object on the camera sensor. Using that algorithm as the basis and a significant number of other techniques software companies have created software that allows one to build a 3D digital model of an object by shooting photographs of the object at multiple angles around the object. The actual model generation is typically done in four steps and in reality each step takes advantage of its own algorithms.

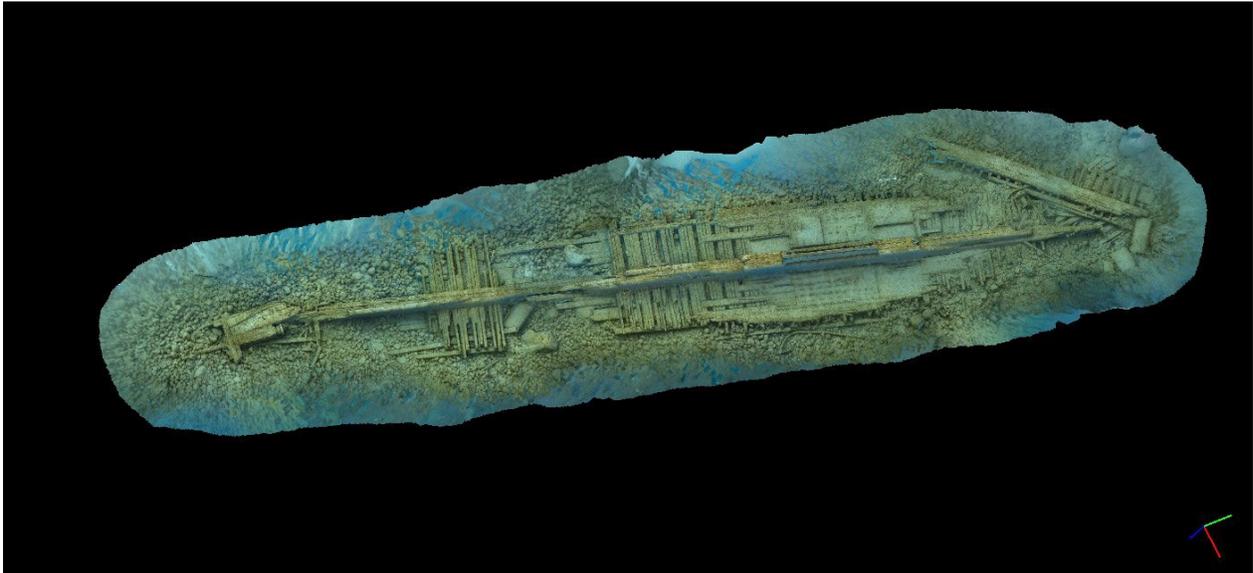
The first step is photo alignment. The software recognizes certain points in each photograph and when there is appropriate overlap between photographs the software can essentially link one photo to the next assigning a virtual position and angle to the subject in space that each image was taken. Points that exist in multiple photographs are recorded and form a sparse point cloud which gives a rough model or form of the object. The point cloud can then be “densified” to create a more-dense and more exact point cloud called a dense point cloud. From the dense point cloud a set of interconnected triangles can be created giving the cloud a faceted surface. Since the triangles are small relative to the surface of the model, the model appears to have a smooth surface. To get the appearance of higher resolution each triangle is then colored or “textured” by using a snippet from the original photograph that projects on to the triangle surface. Once textured we end up with a fairly detailed model of the object, which in our case is a shipwreck.



The first step is the photo alignment. Each blue rectangle represents a separate image that will be used to create the model. Most of the rectangles you are viewing from the edge.



Once the photos are aligned and positioned in space points common to three or more images are recorded and create a sparse point cloud like this one of the shipwreck Fletcher in Lake Michigan, The sparse point cloud can then be “densified” to create more points called a dense point cloud.



The points are then connected to create millions of small triangles that give the model a surface called a mesh. Each small triangle is then colored or textured using the small snippet of the original image that was used to create the triangle.

All of this sounds complicated but the steps have been combined into a reasonable process to take you from photos to models in hours to days depending on the size and complexity of the subject and the quality of the images. The reason for explaining the technology is because this technology is rapidly catching on with scientists and divers all over the world as all of us recognize the value in documenting our rapidly deteriorating underwater environment whether it be shipwrecks or coral reefs. It is even being used to study the rate of glacier melt due to global climate change.

Since we announced our hope of creating a database of 3D models of Great Lakes shipwrecks last fall, we have learned of several other similar projects in other parts of the world including the Truk Lagoon Baseline Project led by Australian divers and photographers Pete Mesley, of Lust4Rust and Marcus Blanchford. We are now following and sharing information with this group and they are following our progress.

So where are we today? Before Covid19 our plan was to announce our program at our UMSAT 2020 show with a demonstration of our models and even a demonstration of visiting a few shipwrecks in virtual reality with the VR glasses which by the way is really amazing. We now have our website up and running <https://3dshipwrecks.org> with over twenty models, our project goals and instructions for participating and a first cut at the database. We have also started a dialogue with several individuals and groups to work with us to model the shipwrecks in their area. To date we have processed models on all five Great Lakes and Lake Minnetonka. During the shelter at home period I took the time to see if old video we shot as a photomosaic could be retargeted to make a 3D model and had some success even with old standard definition video. I even had some success creating a model from video I shot of several shipwrecks not intended for model making but that covered the wreck site very completely. Results vary and seem to depend on visibility and distance from the subject like most underwater photography. To date we have handshake agreements with photographers from Pennsylvania Archaeological Shipwreck Survey Team and Wisconsin Historical Society to share image data for the database and interest from two charter operators to do the photography to make models of wrecks in their areas.

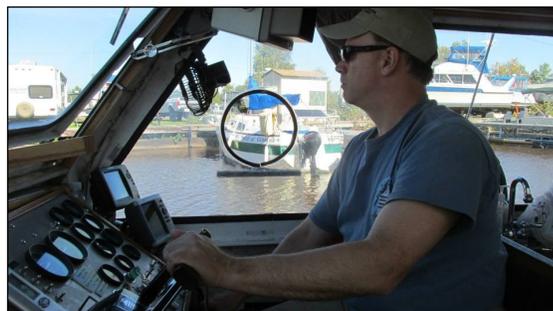
We look at this year as a limited roll-out of the program to gather information to determine costs and how to pay for it, data size, requirements for agreements between partners, how best to furnish the data to the public, data formats for the database, standards for storing archival digital data, and what searchable historical data that needs to be stored with the models. I've often described the project as a centipede with a hundred legs that need to be studied in some depth, questions answered, documented, and built into a plan. Once we know enough to create a plan with costs we assume we will seek a grant to help with the "heavy lifting" of creating the database design and the archiving protocols but for now we can do a lot of the learning to develop the details of the plan fairly inexpensively.

So far every leg of the centipede we have studied has returned an answer that it is technically feasible. However, with 1200 to 1400 known shipwrecks in the Great Lakes it will not happen overnight, but we are in it for the long haul. My goal for this season is to do ten shipwrecks. With the postponing of the Hamilton Scourge project due to Covid-19 we lost two of the planned ten shipwrecks. I am hopeful we can fill in with a couple of others. If you enjoy shooting pictures or video of our Great Lakes shipwrecks you will probably also enjoy doing it to make models. I invite you to give it a try. Take a look at our new website www.3Dshipwrecks.org for some information that will help you get started and join the effort to preserve our shipwrecks.

President's Message from the Helm

The Effect of the COVID-19 Outbreak on the GLSPS

The COVID-19 Outbreak has affected most of us throughout the world. Social distancing, "stay at Home Orders" from local, state and federal Governments and lack of communications has been put in play. However, the advent of Online Meetings or Meet Ups has been discovered by many to bridge the gap between Social visiting and conducting everyday business.



The GLSPS is no different than the rest of the world. In order to keep the synergy going among the GLSPS Board of Directors, Staff and Members, we too are using the Online Meeting services that are now available.

Fortunately, the GLSPS has been presenting online meetings for over a year already! In the earlier part of 2019, the GLSPS set up an Online meeting system from "Zoom". We have been broadcasting all our meetings since February 2019.

Since February of 2019 we have presented every meeting the GLSPS sponsored including the Board of Directors, UMSAT Show and Committee Meetings. This was put into play because we have Board Members, Committee Chairpersons, Project Leaders and Members all over the US and world. Some of our members have mentioned that they would like to become more involved but, have no idea where to start. The best way is joining us for the Board of Directors Meetings. Unfortunately, those interested people can't physically join us for the meetings. We have to come up with an online meetings system to meet that need. That is why we've been the pioneers for the Non-Profit Organizations to spread interest all over the U.S. and the world rather than just the local areas.

Please join us in a **"Zoom"** Online Meeting. All our meetings are broadcasted and have been since February 2019. Please join us by logging in as a member. Then going to the **"Events Calendar"** and Click on the date of the meeting and scroll down to the description of the meeting where you will find the link to the Zoom Meeting. Click on it and you will be prompted to download the current and secure software for the GLSPS Zoom Meeting System. This will only happen once, (unless there's a software update). Once the software is loaded you don't have to do it again when Zooming into the next online meeting.

It is pretty simple to join us and keep in contact with the GLSPS Board of Directors, other staff and members and keep informed as to what is going on in the Organization.

The GLSPS will continue to broadcast all meetings even after the COVID-19 Outbreak has been cleared. Please do not hesitate to join us during any meeting we sponsor. What better way to be more active as a GLSPS Member!

Phil Kerber

GLSPS President

Diver Down Flag – Why Do Boaters Ignore this Flag?

By Dean Soderbeck

Is it that they do not know what it is?

Is it a marker for a hot fishing spot?

I've been a diver and educator for over 30 years and have not been able to figure out why boaters don't know what the diver down flag means. Do they not know what it is? Do they think it is a marker for a hot fishing spot? After many fruitless years of asking state officials at lakes, dive shows, and other events about my concerns and recommendations on this topic, I wrote the Minnesota Department of Natural Resources Information Center about my concerns on 6 April 2019.

My letter:

I have a question. Who is this guide written for? The valuable information in this guide is to help train boaters, correct?

How many sentences does the average boater read before losing focus? Do pictures help tell the story?

If you show a picture, what information is given, and to whom?

Turn to page 48 in the guide book.

Under the heading SCUBA DIVING, you have a picture of a flag with a white strip on it.

The first words should be what this flag represents. Is it a fish location marker, a channel marker, a controlled area marker, than what is your intention?

If it is a Scuba Diver Below marker than state it right away like the rest of your pictures in this guide book. Tell the boat operators within the first few words the distance a watercraft operator **MUST STAY AWAY DISTANCE OF 150 FEET**, and not mention the distance until 8 sentences from the beginning of the subject matter.

You have to grab the subject matter within the first paragraph, or you loose them.

You than can describe the size of the flag and how far scuba divers will be from the flag and how many divers are within the 50 foot zone from the flag.

As a diver I know the rules of the flag and how far a boater must be away from my flag, than why describe my safety rules first as a diver and not the safety rules for a water craft operator. Is this book written for them or for me as a diver?

Too many times, I see boats above me while diving checking out my dive flag. Some of them actually grab it and try to take it, not knowing what it is for. Smaller personnel water craft think it set up for a slalom course. As divers, there is no sense of direction of noise, but it does get louder as a motor gets closer. Divers know to head to the bottom of the lake for protection as the noise gets louder.

- Avoid paddling under the influence of drugs or alcohol.
- Learn how to get out of, hang on to and re-enter your capsized watercraft.
- Take the free BoaterExam Paddle Sports Safety Course online or other paddling safety courses through the American Canoe Association.
- Wear bright clothes, carry a whistle and a white light.

Laws:

- Nonmotorized craft over 10 feet require registration in Minnesota.
- A U.S. Coast Guard-approved wearable life jacket is required for each person on board a watercraft.
- Children under 10 years old are required to wear a life jacket.

SCUBA DIVING

Scuba divers must display a warning flag when diving.

The diver's flag must:

- Measure at least 15 inches horizontally and 12 inches vertically.
- Both sides must have a red-colored background bisected diagonally by a 3-inch wide white stripe.
- There is also a blue and white diver's flag authorized under the federal rules of the road.



Other scuba diving laws and rules:

- Boats not involved with the diving operation must remain 150 feet away from a flag.
- No more than four divers shall dive under one flag.

Educate the boaters as my life depends on their common knowledge of what this flag stands for.

PLEASE CHANGE THE NEXT EDITION of the Minnesota Boating Guide for 2020.

Also note that the fishing guide book when given to you when you purchase a fishing license does the same thing. Please change that guide book as well.

THANK YOU,

SSI, Open Water Instructor

PADI DiveMaster

The very next day, a DNR Customer Service Specialist from the Office of Communications & Outreach reached out to me and said that she forwarded my remarks to the “Boating Law Administrator” for consideration. Four days later, I received a letter from Lieutenant Adam Block, the State Boating Law Administrator. He thanked me for my feedback and told me he would save my email for their next revision of the boating guide. He also promised to pass it along to those responsible for the fish regulation book as well.

Lieutenant Block kept his promise – the new 2020 Minnesota Boating Guide addressed my concerns and clearly states boaters are required to maintain 150’ distance from the diver flag.

Thank you, Lieutenant Adam Block and the DNR revision committee, for ensuring the safety of divers across the state!

Cancelled

By Jeff Lee

On March 25, 2020, Minnesota Governor Tim Waltz signed executive order 20-20 directing Minnesotans to stay at home and limit their movement outside their home to essential needs. Locking Minnesota down for the foreseeable future with the intent of slowing the spread of the Coronavirus-19 virus. With the GLSPS dive show and fundraiser, Upper Midwest Scuba and Travel Show, scheduled for April 3-4, the decision was made to cancel the show for 2020. Many people had volunteered their time in an effort to make the 20th show the very best. Speakers included Frederick Stonehouse, Greg Piper, Ric Mixer, Keith Cormican, Jeff Ginther and Doug Klein. A Rec to Tec Panel for divers was scheduled. Sponsors such as Aquaventure, Air Down There, Scuba Center, Northland Scuba and others were signed up. But with the cancellation of the 2020 UMSAT show, the GLSPS joined the ranks of thousands of organizations, museums and businesses who had been planning events that would not be happening.

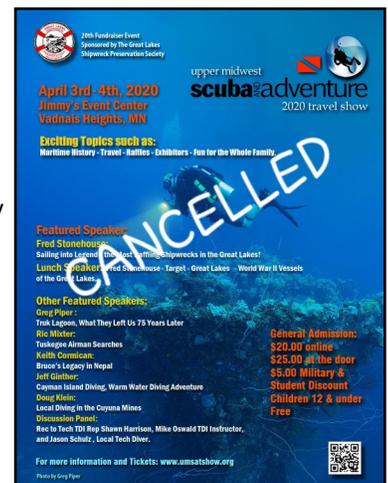
The lockdowns were not contained to the United States. Worldwide, nations were taking drastic measures to contain Covid 19. And like in the US, major events that would bring people to a confined area were cancelled. The financial impact will probably never be known.

But humans are very good at adapting. People that stayed at home used the internet to stay connected with their favorite places and people. Virtual events were organized all across the world. As an example, an online maritime conference was put on by the Great Lakes Shipwreck Research Group using lecturers that usually speak at live conferences. An enthusiast could listen and learn about their favorite topics from the comfort of their home. Museums and individuals took to the internet to share their passions and interests. Different forums were used. Facebook Live, Zoom and YouTube were some of the platforms used to reach the quarantined masses.

What will 2021 hold? Will the people come back to live events like the UMSAT Show and Gales of November? Or will they be content to be “virtually” there. The future is unknown but what is known is that many places are hurting financially. Please donate, become a member to an organization or museum and hit the tip jar after watching an online presentation. Buy the books of the presenters. Shop the places that normally sponsor an event. Get involved and be active.

The conferences and events do not just happen. Many people volunteer their time to find venues and hotels. To find the speakers. Brochures need to be printed. Thousands of small details and decisions. To get the sponsors. Without sponsors, the shows would not happen. Please let them know you appreciate them, the sponsors, the speakers and the show volunteers.

Will there be a live UMSAT Show on **April 9 - 10, 2021** or a virtual one? Stay tuned.



Annual Safety Committee Meeting 2020

The GLSPS Board of Directors requires an annual safety meeting according to our bylaws. This year we called a safety meeting on April 14, 2020, during the COVID-19 Pandemic Outbreak. The state, federal governments and world have changed because of the Covid-19 Outbreak and everyone's safety protocols needed to change as well.

Since we have been using the Zoom Online Meeting System for over a year, we thought there was a perfect opportunity to continue with the work we had started. We have multiple people that are part of the safety committee that are physically located far away from where we call the home of the GLSPS. Many of them still want to be part of the process. Zoom has filled that gap for us.

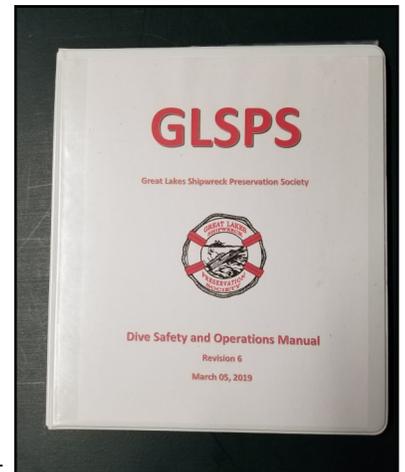
The safety committee meeting is important and is an integral part of all the processes the GLSPS engages in for the Society. The committee had an important reason to discuss some additional issues with what was going on in the world at that time. We had to discuss changes to the safety protocol to run the RV Preservation dive projects and the above water preservation projects. A major decision would have to be made as to whether we should even launch the boat this year. Since the pandemic continued, all our projects were not be able to continue. The decision to launch the boat for the 2020 season is a simple one. Additionally, the Liability Release and Waiver Forms language will need to be changed on all the forms, include new safety protocol and how we handle anyone contracting the COVID-19 Virus or any other disease. Social distancing protocol will need to be created and added as a supplement to the current and just updated Safety Manual. It was a long discussion and we continued the process two weeks until all necessary language was updated and checked by the legal team.

Because the RV Preservation would not meet the states requirements of Social Distancing, we were not allowed to launch the boat in 2020. However, we still had a few shore dives that were available as they would meet the state requirements. So, we still needed an active and up-to-date safety protocol to be in place before the dives were implemented this year. Therefore, we completed the update to the manual to have it available throughout the summer months. The Safety Committee will meet again in 2021 to update the Safety Manual based upon the most current pandemic information from the CDC. It is especially important to keep our members and staff as safe as possible during the COVID-19 Outbreak.

The GLSPS Board of Directors is watching all the state and federal changes to the pandemic to see how we can move forward in 2021 to complete the many preservation projects we have planned for the future. The GLSPS would like to thank our committee members for their long and hard hours, and the GLSPS members for their patience. We all have to go through this, and we will get through it together.

Please stay safe!

GLSPS Safety Committee



GLSPS First Response Update Training

The EFR Class was another success! The class was set up a while ago and ironically enough it was also held at the beginning of the reported Coronavirus (COVID-19) Outbreak which was March 11, 2020. The GLSPS Board of Directors decided to have the class based upon the information available at the time. We all agreed to discuss more about it at the beginning of the class before we proceeded. We talked about having to take extra precautionary measures to protect ourselves. We decided to use latex gloves and other barriers along with thorough cleaning of the test dummy's after every use.

The class started off with a detailed review. Most participants have been attending the class since 2007. Each year it becomes easier and almost second nature and automatic to us as far as a response to a patient. Practice is the name of the game to be efficient at attempting to save a patient's life.

We then continued with the practical part of helping a patient by identifying ourselves to the person we are going to help medically and having someone call 911. Then immediately start assessing the patient to find out why they are not responding. Were they just in an accident, or are laying on the floor or ground and why? We used the three-practice dummy's that Scott brought for the participants.

The newest CPR procedures were practiced. This new version of CPR is a fast-paced procedure and is hard to keep up with so, it needs to be practiced and mastered. If you perform CPR correctly, you will not get as exhausted. Although you will still get tired and exhausted. That is why you need others to help or trade off/take turns when performing CPR!



After each one had a chance with CPR we moved into the AED defibrillator and how to use it properly. Both Scott and GLSPS brought their AED units to use and practice on. The GLSPS has an AED unit that is carried on the RV Preservation Research Vessel at all times. To be able to practice the use of the AED the unit (Phillips AED) comes with practice pads and verbal instructions as to how you use it properly. It is a great unit and is easy to operate with it's tutorial.

The Emergency First Response Class is a requirement of the GLSPS Safety Protocol and the Captains of the RV Preservation and Project Leaders must go through the training every two years to be able to operate the boat or be in charge of a Project and certain Programs. That way there is always someone on-board or at each event that is medically trained for certain medical emergencies.

After we all mastered the AED equipment use and procedures, we jumped right into the oxygen application training/review. As I mentioned above, many of us have been through this class multiple times since it was started back in 2007. We know firsthand how to operate the oxygen systems on both the RV Preservation and with our portable oxygen systems we bring with us at certain dive sites. Although a little review is always welcome. We started with the basic set up of equipment and how to maintain it. How to assemble it properly and three ways to apply it to a patient. The three ways were, Auto flow re-breather mask, on-demand mask and using an AMBU (Artificial Manual Breathing Unit) bag / resuscitator to aid in a patient that's not breathing. We also touched on the manual operating O2 valve (positive pressure inflation) which has been replaced by the bag systems now. PPI is not used anymore because of a chance of over inflating the patient's lungs. We discussed one more topic on using the restricted airway pieces. We discussed how you determine the correct size to use on the patient, and how to insert it properly. The selection the GLSPS has in its First Aid Bag are color coded for easy selection and patient size.



The medical equipment that is supplied on the *RV Preservation* is quite good. They have a bagging system in the first aid bag for emergency use if needed. It's cleaned twice a season for protection against infectious diseases. We have an Oxygen unit with both a 14 CU FT and a 25 CU Ft tank of Oxygen on-board. Not to mention we have Surface Supplied Oxygen System for decompression in a 280 CU FT tank on-board as well. We typically have a lot of O2.

After mastering the non-breathing patient and oxygen application procedures, we discussed other things such as back board operation and protecting a neck injury. Then discussed what to do with bleeding patients, broken arms or legs. We also discussed many different scenarios whenever you would experience a person that needs medical help. We talked about what we do first,

second, third, fourth and so on. We think it is an advantage to talk about real world situations to help understand and practice what one needs to do to try and save a life. Even I (Phil K) discussed a recent Medical Emergency I was involved in with a 90-year-old man that showed signs of a heart attack. His heart stopped for 30 seconds! Luckily, I was trained to notice something was happening and had someone call 911 and started CPR right away and after the patient and I were secured. I can happily say I saved him along with the help of others that were medically trained. At the time of this closing report the 90-year-old guy has now had a pacemaker installed and is living comfortably and safe again.

Our final topic was the importance of protecting yourself from infectious diseases, such as the Coronavirus (COVID-19). When you see someone needing help medically, the first thing to do is make sure you are protected as well. That includes the environment you might find yourself in at the moment. It might be on the side of the road, a busy street, a car accident, a boat out on the water, at the mall in a terribly busy place or it is very noisy. The next particularly important safety protocol is for the person giving the medical care is to don or apply all barriers available before helping the person and before he or she becomes your patient. You must protect yourself or you could become a victim as well.

As usual this class was highly informative. It was a great review and we were able to practice a lot of the procedures live. Thank you, Scott and Tracy, from "Air Down There Scuba" for teaching the class for the GLSPS once again. Scott is an EMT and trainer for the Little Canada Fire Department. Scott has been teaching this class since 2010. We appreciate that he and his staff are well trained and are willing to do the class training for us every two years.

Thank you to all the participants for joining us for the EFR Class 2020. A special thanks to our Captains that operate the RV Preservation Research Vessel. It always nice to have our Captains up-to-speed as far as the medical training is concerned. Thank you to our Project Leaders for keeping themselves up-to-date on the EFR requirements of the GLSPS as well!

If you have any questions or comments about the EFR Class, please feel free to contact us by clicking on the email address below or contact list on the left side of the GLSPS website.

We hope to see you at the next EFR training/review class in 2022. Please watch for it in the Calendar of events.

GLSPS Board of Directors

Phil Kerber President and GLSPS Dive Safety Officer (DSO)

info@glsp.org

GLSPS - Fundraising Apparel

Just a "NOTE:" to inform our readers that GLSPS apparel is available anytime, not just at our "SHOW BOOTH". As most of you know, our shirts depict a variety of North Shore of Lake Superior Ship Wrecks from Duluth to Isle Royale. We also did some up showing the **HENRY B. SMITH**, which was discovered in the eastern part of Lake Superior by GLSPS Members Jerry Eliason and Ken Merryman.

I'll provide a short summary of types of merchandise we have on hand. We have **baseball caps** with GLSPS logo and a small diver's flag; we have **desert hats**; we have a few GLSPS jackets; we have some white, steel, and black polo shirts depicting 20 years of GLSPS; we have **T's** in S, M, L, XL, 2XL, 3XL & 5XL; we have pull-over **crew, hooded, and zip-hooded** sweat-shirts; we have grey, charcoal or red **long-sleeve**, and black or blue **short-sleeve** polo shirts; we have dark and stone washed **denim** shirts; and a variety of colors **WILSON** T-shirts. (Most out-of-stock items can be ordered, it just takes a little longer.)

It's difficult to provide photo's of all the items, but if you have an interest; please feel free to call: (or text) **Ken Knutson** at: **612-578-1551** with your desires (size, type and color???) and I will call (and maybe text a pic of the item you are interested in.)



Video Experience on the RV Preservation

– Wim Wilcke

This is the first article (well paragraph) I'm writing for the GLSPS newsletter following my first season with the GLSPS.

I have compiled some footage on select projects and events I was involved over the past year. I've only completed three videos so far, but there is still great footage that I have not incorporated yet so I'm looking forward to some future content as we all will miss the restricted access to the RV preservation this season due to the global Pandemic!

I'm excited to be part of this society. I've really enjoyed the camaraderie and learning from other members. I'm looking forward to further involvement on future projects!

Check out my videos (hosting courtesy of Phil's YouTube account):



Ice Dive Feb 2019 Hopkins

<https://www.youtube.com/watch?v=9aWnezSzh-o>



Ice Dive on Lake Minnetonka-GLSPS 3D Photogrammetry Practice on the *Excelsior* Stern Wheeler

<https://youtu.be/4InrXsHCrZI>



Fun Dives Aug 2019 Madeira and Hesper <https://youtu.be/CISDIGuVO9o>

2020 Project Schedule Announcement

The COVID-19 Outbreak has affected many of the Nations scheduled Events.

Since there is not a play book written for this situation, all GLSPS diving projects and programs that were scheduled on the RV Preservation were all canceled!

The RV Preservation was not be available this year as it wasn't launched. This is mainly because of the required "Social Distancing" which cannot be maintained on a boat.

There were Fun Dives mainly from the BSA Venture Crew 820 that were still scheduled and available for this year. Shore dives are certainly a better way to Control the required "Social Distancing" which could be in effect until December or longer.

This year would be a great year to checkout your local Dive Shops to help support them with the business they have lost by joining them for their scheduled shore dives and additional training courses.

Please check back to the GLSPS website to review any changes to the "2020 and 2021 Projects Schedule"

Please contact the "Project Leader" if you have a question or need additional information on a Program or Project

GLSPS Board of Directors

info@glsp.org

RV PRESERVATION

Boat work committee chair: Ken Knutson

A better vision of *CORONA* is with a slice of lime on a tropical Latin American beach, but as a virus, it has virtually stopped life as we knew it. To assure we are on the side of safety, the GLSPS Board decided to ground the "PRES" for the 2020 Season, although, we do have a vast list of jobs we would like to get done, we will not be looking for volunteers to help this summer at Spirit Lake Marina.



We will probably put together two or three person teams to get some items done, or go up individually to work on specific tasks. We also hope to fix some minor oil leaks, do a compression check on the Starboard engine, do some electrical improvements, and do much cleaning and some painting - as needed.

As reported last fall, we need an outside GPS antenna direct to the AIS. After researching the intermittent AIS response the tech's agreed there is probably insufficient internal antenna reception inside a steel boat. We have purchased the correct antenna and will install it this summer.

Once again a special "THANK YOU" to the Koziol Charitable Giving Account for our New Radar and to our member Mike Mack for sealing the leaks in our inflatable dingy. It is holding air very well, but will need some additional work on sealing the inflation valves/seals.

You can follow any of our accomplishments on the GLSPS.org site, we will try to update our progress as we check off the completed items from our "TO DO" list.

Just go to "GLSPS.org", click on "Events Calendar" and view our 2021 summer progress.

We are eager to get members more involved in making our society even greater than it now is!

FOOD FOR THOUGHT: What is *Photogrammetry*??? How can you be a part??

Hey folks, We finally got some work done on the "Pres" here are some results:

Great Lakes Shipwreck Preservation Society
RV Preservation Maintenance and Service Work Performed
September 12, 13, and September 19, 2020

These are the tasks we completed:

1. Compression tests on all cylinders of Starboard engine. Warmed up engine wired fuel shut off to no fuel position.
2. Removed all 6 injectors and performed compression tests.
3. Results:

Cylinder Number	1 st Stroke	4 th Stroke (Max)	% Difference
# 1 Cylinder	240	330 +	
# 2 Cylinder	240	330 +	
# 3 Cylinder	220	330 +	
# 4 Cylinder	195	330 +	
# 5 Cylinder	190	330 +	
# 6 Cylinder	210	330 +	



Special adaptor to check compression on a diesel engine.

4. REMINDER, We do not need to remove the shaft to prevent fuel injection with fuel lines removed. Just wire tie the fuel lever on the fuel injection pump to the "Shut Off" position.

5. Adjusted valves on starboard engine. Noted that the rear cylinder's intake valve clearance was looser than it should have been. So that why we check all the other valves.
6. Drained oil in both engines using oil evacuating system on-board boat.
7. Changed both oil filters.
8. Drained both fuel injection pumps.

Please Note: We found that the port side fuel injection pump drain pipe and drain cock was broken off and missing. We are not sure how long it was missing or where it went. It was not located in the bilge anywhere.

9. The drain valve and 1/8 inch piping was replaced with new parts from Napa.
10. Filled both fuel injection pumps with about a cup of SAE 30 Non-Detergent oil for next season.
11. Filled port engine with 15W-40 oil.

12. Removed oil draining system hose for replacement on starboard engine. (Leaking at the crimped part of the hose by the main oil drain plug). Hopefully, this is what has been leaking all along?? Had to bring the hose back to the Cities to have a new custom hose made at the local Napa parts store. The new hose was 20 inches longer, so no sharp bends and no excess torque on the fittings.

13. The next weekend we brought and installed the customized hose. Oil was poured back in the engine and it was run to recheck for leaks. It appears OK for now and no additional leakage was noted after oil sat in the engine for over two days. No oil leak gushers at this time!

14. Repaired (replaced with new parts) the port side fuel injection pump drain valve assembly that was broken off and missing.

15. Checked fuel injection pump static timing on both engines. Both engines were timed properly at 19 degrees BTDC. Which is what the specification calls for.

16. Drilled out broken drain valve from freshwater strainer. Plastic was too hard so drilled a small hole in the plug and added a screw with an O-ring on it. It should hold until next spring when we replace the two screen cups with new updated drain valves.

17. Run water and start both engines to warm up and check for any additional leaks. All appear OK at this time. The new oil hose is not leaking yet! However, the normal seepage of both engines is still apparent.

18. Drained any water in the freshwater cooling system for the heat exchangers and winterized both engines using RV Antifreeze to -50 below.

19. Ordered two main engine water pumps. Both are starting to show seepage. One of the pumps is in the spare engine parts container in the front bilge.

20. Cleaned spilled oil and water from entire engine bilge. (No sign of drain valve assembly?)

21. The forward head liner was lowered to access the ceiling of cabin area to string a new GPS Antenna cable to the AIS System and to wire in two extra wires for a 12-volt TV/Monitor.

22. Drilled one large hole and four small holes to mount cable bulkhead and seal GPS Antenna cable.

23. Prepared the antenna cable bulkhead area for painting, then primed that area. Paint dried overnight and the bulkhead was screwed down. A new stainless-steel mount was ordered and will be installed prior to installing the tarp for winter.

24. String the cable through the front headliner and to the AIS Transceiver and pulled the two wires for the TV/Monitor.

25. Reinstalled the head liner.

26. Repaired (replaced bulbs) in the light for the "Head" Damaged by water leaking through the holes in the ceiling that were for the old compass. Sealed holes and cleaned the rust out of the lens before replacing the bulbs.

27. The engine hours of the RV Preservation - Port Engine 1199.5 Starboard Engine 1187.9

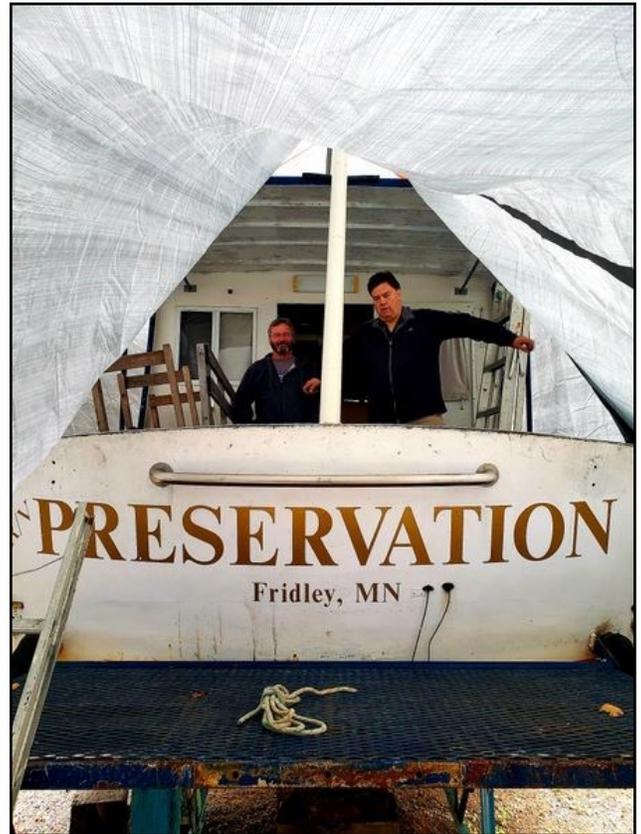
28. The scuba compressor was used to pump up several tanks this year to make sure it is still operating at optimal condition. We changed oil in the compressor and engine after running it and winterized it so that it will be ready for 2021.

29. The engine hours on compressor are 95 Hrs at the end of 2020





A new oil filter adapter was installed on the diesel engines. The new adapter uses a spin on oil filter compared to the old one which used a canister style filter. This change will help with engine servicing in the future.



After the years projects are done, the *Preservation* is hauled out onto land and prepared for winter. Tools and supplies are unloaded and the engines are winterized. The final step is to place a large tarp over the entire boat.

S.S. Meteor Preservation Project 2020

By Phil Kerber

This year has been quite a year for many organizations like the Wisconsin Underwater Archaeological Association (WUAA) and the Great Lakes Shipwreck Preservation Society (GLSPS). Due to the COVID-19 outbreak many preservation programs and projects were postponed to a later date, rescheduled for next year, or canceled all together. Preserving maritime history is very important, and somehow the volunteers will find a way to continue their passion and continue to make it work.

The GLSPS has cancelled most for their preservation programs and projects for 2020. A couple of these projects would still allow us to practice Social Distancing.

After multiple phone calls and a discussion with Megan Meyer (Director) of the Superior Public Museums, and her staff, we received special permission from the City of Superior and the State of Wisconsin to move forward on the largest Preservation Project of the GLSPS, the S.S. *Meteor* Preservation Project. Unfortunately, we had limits/restrictions for this event by only being able to

allow fifteen or less people. The state was allowing Museums to start opening, Superior has three public museums, and they could open by June 15, 2020.

Typically, the *S.S. Meteor* Project supports 55 to 70 volunteers that come from all over Minnesota, Wisconsin, and sometimes Michigan. This year we were only allowed a skeleton crew.

After we were finally cleared for the project, we set up three weekends to perform as many projects as we could maximizing the limits of people we could allow to work on the *Meteor* at one time or weekend. The dates were May 30 – 31 – June 1 (which was Memorial Weekend), June 6 – 7 and June 13 – 14. Dale Koziol and Jerry Sandvick volunteered May 30 -31. Dale replaced some rotten boards on the walkway leading up the first deck of the ship and a few other smaller tasks. Jerry painted the stairway and engine room railings.

The second weekend there were more volunteers that joined us. Kari and Craig David, Ken Knutson, Jim Christenson, Megan Meyer, Dara Fillmore, Dean Soderbeck, Josh Mersha (newcomer) and I.

Throughout the summer a few hardy folks will be stopping by to perform other needed or smaller tasks. If you are interested, please contact Phil Kerber from the GLSPS or Megan Meyer from SPM.

We completed the following tasks on the second weekend:

1. Cleaning the entire hull (bow to stern) with a pressure washer. The ship always needs an annual bath due to lots of pigeon droppings, dirt and dust collects over time.
2. The two lifeboats needed to have 4 inches of pigeon droppings removed and cleaned. The area needed to be covered with orange snow fence to keep the birds from re-entering and making a mess again. The fencing was also installed because the Marina would shrink wrap each lifeboat to secure them from additional damage and rotting.



Cleaning the inside of the lifeboats



And more cleaning of the lifeboats



Ready for shrink wrap

3. Pressure washed the walkway to the upper deck prior to painting. After the pressure washing, there were several planks that were rotten and still needed replacement before being painted. Those two tasks will be completed during the 2020 summer or by fall.

4. Crew's mess hall was scraped, primed, and painted.

5. The upper deck walkway on both the starboard and port sides were painted tile red for historical reasons. They were not able to be completely painted until later when Kari David traveled back up to Superior and finished the rest of the painting. Thank you, Kari David!



Before Photo of the Aft Section of the walkway joining the Port and Starboard side of the Meteor 6-2020



After photo of the Aft Section of Walkway Joining the Starboard side by Kari David 6-20202

6. Some housekeeping tasks such as making the beds in each room for display during the tours.

7. Cleaning, sweeping, and vacuuming the museum display areas.

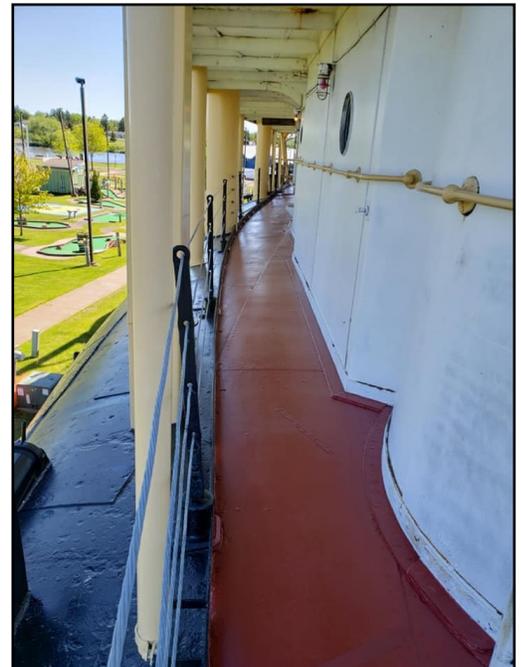
8. Replacing bulbs that were burned out.

9. Cleaning restrooms and preparing them for the season.

10. Cleaning the Office area and setting up displays of clothing and other souvenirs.

The weekend went very well, and the nine volunteers (Eleven altogether) completed many tasks.

The upper deck walkway wasn't totally completed that weekend, so Kari David traveled back to the Meteor on Wednesday June 10th, and worked on the ship every day until June 14. She completed the upper deck and a few other paint jobs that needed to be done before the opening of the Museum. Great job, Kari!



After Shot of the Port Side walkway from the Aft by Kari David 6-20202

I would like to thank all the volunteers that joined us for the work weekends. Thank you for playing a part in getting the museum ready to open to the public for the touring season by June 15, 2020.

If you have any comments or questions about the S.S. *Meteor* Preservation Project, please feel free to give me a call or send me an email.

Phil Kerber

President - Great Lakes Shipwreck Preservation Society

S.S. Meteor Preservation Project Chairman pkerber@glsp.org

612-720-2825

The GLSPS Board of Directors is asking for your help and participation in creating new projects. In order for the GLSPS to keep active in preserving maritime history, we need to create great preservation projects year after year. Since the Society has been fairly proficient completing projects we create, we are running out of projects along the North Shore of Lake Superior.

If any of the members, colleagues, or dive buddies have an idea for a preservation project, including documentation or monitoring projects, please let the GLSPS Board of Directors know.

If you have a great idea for a project (you can also help lead the project), please take a moment to log onto the GLSPS website at www.glsp.org.

- Locate the form by clicking on "Documents"
- Click on "Project Documents"
- Select "Project Request Form"
- Download to your computer and print
- Submit the completed form by scanning and emailing, or regular mail to address on website
- Please send your request forms to us by **January 19, 2020**.

The GLSPS Board of Directors will review the Project Request form at the project planning meeting **January 26, 2020**. If we have any additional questions or approve the project, we will contact you.

We hope to hear from the members about a future preservation project.

GLSPS Board of Directors info@glsp.org

The GLSPS sincerely thanks the following Sustaining and higher-level members, for their financial support.

As of January 26, 2020

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Jim Christian

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The GLSPS would like to thank Mid County Oil for donating the engine oil for the two diesel engines on the RV Preservation. If you have a need for bulk oil, gas or propane, please look them up at www.midcountycoop.com or give them a call at **888) 466-3700**

Corporate Donors:



The GLSPS thanks the 3M Foundation again this year for their donation on behalf of Steve Daniel, 3M employees. 3M is pleased to recognize and support volunteers' contributions to helping non-profit organizations.



Sometimes an organization such as the Great Lakes Shipwreck Preservation Society is truly blessed with a corporation that is very generous with helping Non-Profit Organizations. The Board of Directors and Members would like to warmly thank EcoLab Inc and Dale Koziol (an employee of EcoLab and GLSPS Board of Director) for their generous donation of money to the GLSPS. Without them, we would truly not be where we are now. Thank you again EcoLab Inc for your annual donation and Dale Koziol for serving as one of our Board of Directors.

The GLSPS also sincerely thanks:

Phil's Quality Automotive Inc. for the continued service work performed and the many parts provided by them for the RV Preservation; Jeff Redmon of Redmon Law Chartered PA for all our legal work; Air Down There Scuba for teaching our First Aid Class, our special thanks to Tamara Thomsen, Caitlin Zant and others in her group for their help with the many National Register Nomination surveys and write ups; Glenn Seaberg for creating our UMSAT show program and other show graphics, Mn Historical & Cultural Grants for Ship-wreck Display grants. Thanks to Lund's of Edina for the use of their community meeting room for our board meetings. Thanks to the UMSAT Show Sponsors, Raffle and Silent Auction donors. A special thank you to Dale Koziol for providing a Grant from his former employer to be able to purchase a new Radar System for the GLSPS RV Preservation Research Vessel.

Great Lakes Shipwreck Preservation Society
Updated January 26, 2020



2020 Directory of Officers Board of Directors
& Other Programs

Officers		Telephone
President	Phil Kerber	612-720-2825
First Vice President	Jeff Le Moine	612-803-6476
Second Vice President	Dean Soderbeck	651-483-8596
Secretary	Mac McClure	763-242-4245
Treasurer	Bob Nelson	612-916-8183
Deputy Treasurer	Paul Imsland	612-226-8832

Additional Board of Directors Members		Telephone
Director	Ken Knutson	612-578-1551
Director	Ken Merryman	763-226-9620
Director	Nick Lintgen	763-370-8254
Director	Jack Decker	641-512-1046

Supporting Function	Leader	Telephone
Equipment / Storage Manager	Phil Kerber	612-720-2825
Booth Display Manager	Dean Soderbeck	651-483-8596
Apparel Manager	Ken Knutson	612-578-1551
National Register Manager	Ken Merryman	763-226-9620
Librarian	Tim Pranke	651-395-9451
Youth Promotions Coordinator	Dean Soderbeck	651-483-8596
Newsletter Editor	Jeff Lee	218-435-6407
Website and Technology Assessment Manager	Phil Kerber	612-720-2825
	Nick Lintgen	763-370-8254
Put-It-Back (PIB) Coordinator	Steve Daniel	651-470-5389
UMSAT Show Facebook Acct Administrator	Dale Koziol	651-730-7881
GLSPS Facebook Acct Administrator	Dale Koziol	651-730-7881

Standing Committees	Chairperson	Telephone
Grant Writing	Ken Merryman	763-226-9620
Upper Midwest Scuba & Adventure Travel Show 612-570-3305 / info@umsatshow.org	Mary Lillemo	612-590-7810
Membership	Ken Knutson Dean Soderbeck Bob Nelson Phil Kerber	612-578-1551 651-483-8596 612-916-8183 612-720-2825
Safety & Training	Phil Kerber Dean Soderbeck	612-720-2825 651-483-8596
<i>R/V Preservation</i> Boat Work	Ken Knutson	612-578-1551
Shipwreck. Artifact & Site Documentation	Bob Nelson Jack Decker	612-916-8183 641-512-1046
Shipwreck, Artifact & Site Monitoring	Corey Daniel	218-343-4970
Access (and subcommittee)	Tim Pranke	651-395-9451
<i>S.S. Meteor</i> Restoration	Phil Kerber Megan Meyer Ken Knutson Dale Koziol	612-720-2825 715-394-5712 612-578-1551 651-730-7881



Great Lakes Shipwreck Preservation Society

7348 Symphony St NE

Fridley, MN 55432

763-785-9516

Keep up on activities and accomplishments, sign up for projects and view many more photos of the completed projects. Check out our web-site at: <http://www.GLSPS.org> and our show website <http://www.UMSATShow.org> .