

**Thunder Bay National Marine Sanctuary (TBNMS)
Advisory Council
-April 16, 2019 Meeting Minutes-**

Date: April 16, 2019

Time: 6:00 p.m.

**Location: Great Lakes Maritime Heritage Center (GLMHC), 500 W. Fletcher Street,
Alpena, MI 49707**

Meeting Attendees

NOAA: Andrew Augustyn, Chuck Bennett, Jeff Gray, Phil Hartmeyer, Jean Prevo, Katie Wolf, Kelli Wasikowski – AmeriCorps

State of Michigan: Wayne Lusardi

NEMIGLSI: Meag Schwartz, Adam Ziani - Americorps

SAC Members: Roger Baumgardner, Jim Dessenberg, Nancy Kinney, John Kozlowski, Steve Kroll, Bill Lamar, Don MacMaster, Al Moe, Tom Rayburn, Ann-Marie Ruder, Steve Schnell, Chuck Wiesen

SAC Alternates: Michael Beaulac, Thomas Brindley, Rick Houchin, Pat Labadie, Tim Lee, RC Olsen Laugal, Ron Meneghel, Melissa Olsen

Guests: Jane Kroll, Bob Richards – Stock Bridge High School & Stock Bridge students

Media: None.

WELCOME AND ACTION ITEMS

Chuck Wiesen, Vice Chair, called the meeting to order.

We have some new council members with us so introductions were made. The new members are:

Timothy Lee – Education Alt.

Jim Dessenberg – Citizen-at-Large

Ruth Carol Olsen Laugal – Citizen-at-Large Alt.

Richard Houchin – Citizen-at-Large Alt.

Steve Schnell – Tourism/Recreation

Robert Krafft – Business/Economic Development Alt.

The council reviewed and approved minutes from the December 2018 council meeting.

Chair elections will be held at the June meeting. If you are interested please contact Jeff Gray.

REGIONAL REPORT – Ellen Brody

Tomorrow we will issue a Notice of Intent to conduct scoping on the concept of designating an area of eastern Lake Ontario as a national marine sanctuary. This action will kick off an initial three-month public process to assess interest in the proposed sanctuary's goals, management, and boundaries.

In January 2017, the Governor of New York and several counties along the eastern side of Lake Ontario nominated the area to be considered as a national marine sanctuary. The area encompasses 21 known shipwrecks and one aircraft that span more than 200 years of history. The historical record indicates that an additional 47 shipwrecks and two historic aircraft are also likely located there.

The goals of the nomination are to protect and interpret this nationally significant collection of shipwrecks, while fostering education and research partnerships and increasing opportunities for tourism and economic development.

Designation process steps:

SCOPING: NOAA announces its intent to designate a new national marine sanctuary and asks the public for input on potential boundaries, resources that could be protected, issues NOAA should consider and any information that should be included in the resource analysis.

SANCTUARY PROPOSAL: NOAA prepares draft designation documents including a draft management plan, draft environmental impact statement that analyzes a range of alternatives, proposed regulations and proposed boundaries. NOAA may also form an advisory council to help inform the proposal and focus stakeholder participation.

PUBLIC REVIEW: The public, agency partners, tribes and other stakeholders provide input on the draft documents. NOAA considers all input and determines appropriate changes.

SANCTUARY DESIGNATION: NOAA makes a final decision and prepares final documents. Before the designation becomes effective, the Governor reviews the documents. Congress also has the opportunity to review the documents.

The proposal received from Lake Ontario was 1,700 square miles. Oswego will potentially be the center.

STOCKBRIDGE HIGH SCHOOL STUDENTS TRAVEL TO NMSAS – Bob Richards

In November, 13 students from Stockbridge High School traveled to the National Marine Sanctuary of American Samoa for three weeks. The Stockbridge InvenTeam worked with the National Marine Sanctuary of American Samoa to conduct an ROV workshop, as well as, an ROV outreach program. The workshop was a 2-day event held at the Ocean Center, and hosted 4 students from each of the 12 high schools in American Samoa. Through the ROV outreach program the InvenTeam was able to speak with 1,000 students from 8 of the local high schools in three days.

GREAT LAKES CRUISE SHIPS – Michael Beaulac

If it was a sovereign nation, the Great Lakes region would be the 3rd largest economy in the world.

Both Canada and the USA have realized the need for new strategies and recommendations that can help accommodate the increase in Great Lakes cruising.

Main success factors for Great Lakes cruising: the St. Lawrence Seaway, two season international ships (they come in the summer, and exit the Great Lakes during the winter), global wealth and interest, and bi-national support.

The St. Lawrence Seaway is the limiting factor of prospective ship size. We won't see the behemoths that cruise the Caribbean.

What do cruise companies look for?

1. A community interest in hosting a cruise ship
2. Adequate port facilities (water depth, dockage, access to community, security, and aesthetics)
3. Nearby attractions (within 45 minute bus ride)

What do cruise passengers look for?

1. History, arts, and culture
2. Safe, secure harbors and communities
3. Idyllic landscapes

Demographic is mid-50s – 70s; North American/European/Asian

There is a 30% port visit increase projected in the next 3 years in Great Lakes.

2/3 of passengers return to a port destination within 3-5 years after cruise

Average passenger spends \$107/day per port

There are other revenue generators, too: embarkation fees, waste management, food/provisioning, excursion services, high end goods, fuel

Two primary coalitions exist to help manage and collate partners for GL cruising industry

Cruise ships work with communities on 2 levels: marine (vessel/port operations personnel) and tourism (CVB, excursion providers, site managers)

Current limitations:

1. Industry is low on ports, especially with increase in number of vessels (Mackinac Island)
2. Customs and border protection; cruise ships can't go between Canadian and American ports without checks – this is a time waste concern for operators

Current push is to evaluate if, or what it would take, to get ports cruise ship ready. Mike is on a working group developing list of port recommendations that these companies are looking for.

SANCTUARY UPDATE

National Register of Historic Places (NRHP) – Phil Hartmeyer

The NRHP is the nation's official list for sites significant to American history, engineering, culture, and archaeology.

Since Steve Kroll got the first shipwreck in the area listed in the early 1990s (FT BARNEY), the Sanctuary has listed an additional 6 to the register: PEWABIC, KYLE SPANGLER, NORMAN, GRECIAN, JOSEPH S. FAY, and CHOCTAW, which was officially listed on December 18, 2018.

Register nominations are climax reports that analyze and interpret historical and archaeological data on the Sanctuary. These documents are seminal works on individual sites, and are available to the public online.

Jeff Gray

The research team is beginning to deploy the 42 mooring buoys in the sanctuary.

The Great Lakes Maritime Heritage Trail project is coming to a close with partner agencies arriving to pick up their materials; trails project is a big accomplishment that has been in the works for a decade.

Riverfront Park is another iteration of the trail, and will give the riverfront near our building a big facelift.

Alpena MARC, Rotary Club, and others have been hard at work conceptualizing designs that will benefit both local residents and visitors like housing the Alpena Youth Sailing Club and other community groups.

Hope to have something in place for our 20th anniversary in October 2020.

Katie Wolf

She'll send the latest list of upcoming events, and lectures to the SAC. We are looking for Friends of Thunder Bay NMS volunteers to man information booths at these events. Events are fun, and a great way to interact with the public on behalf of the Friends.

Alpena Shipwreck Tours is officially kicking off the season on May 18, 2019 with a weekend of free cruises!

Grants from Alpena Youth and Recreation and Community Foundation for Northeast Michigan totaling \$14,325 + \$2,000 have given us the opportunity to offer 17 cruises for schools and community groups, many of which don't get the opportunity to experience the tour.

We are looking for Maritime Festival sponsors, and are grateful for our latest Platinum Sponsor Wolverine Credit Union.

Thunder Bay NMS Management Plan

Shutdown set us back, and we're not where we'd like to be. We're getting back in the saddle and will keep all informed on the latest processes.

PUBLIC COMMENT:

Nancy Kinney - I am thrilled to see Hannah MacDonald doing so well in sanctuaries. Everyone should know she is the host for many of NOAA's online webinar lecture series.

Adjourn - The meeting was adjourned at 8:40pm.

2019 TBNMS/SAC Schedule of Upcoming Meetings:

- June 18
- August 20
- October 15
- December 17

All meetings are 6:00-8:30pm at the Great Lakes Maritime Heritage Center unless otherwise specified.

**Thunder Bay National Marine Sanctuary (TBNMS)
Advisory Council
-June 18, 2019 Meeting Minutes-**

Date: June 18, 2019

Time: 6:00 p.m.

**Location: Great Lakes Maritime Heritage Center (GLMHC), 500 W. Fletcher Street,
Alpena, MI 49707**

Meeting Attendees

NOAA: Andrew Augustyn, Chuck Bennett, Dennis Donahue, Stephanie Gandulla, Jeff Gray, Russ Green, Joey Jackson, Justin Pinero (Greening Youth) Sarah Waters, Katie Wolf

NEMI/GLSI: Meag Schwartz

SAC Members: Roger Baumgardner, Jim Dessenberg, Beach Hall, Nancy Kinney, Steve Kroll, Bill LaMarre, Al Moe, Don Newport, Susan Nielsen, Tom Rayburn, Ann-Marie Ruder, Carol Shafto, Chuck Wiesen

SAC Alternates: Robert Doyle, Rick Houchin, Dave Karschnick, Bob Krafft, C.Pat Labadie, Tim Lee, RC Olsen Laugal, Merl Melton, Ron Meneghel, Melissa Olsen

Media: None.

WELCOME AND ACTION ITEMS

Carol Shafto, Chair, called the meeting to order.

The council reviewed and approved minutes from the April, 2019 council meeting. Thunder Bay NMS Sanctuary Advisory Council (SAC) Chair election was held. Steve Kroll was nominated by Chuck Wiesen. There were no other nominations. Mr. Kroll gave a short overview of his many years as a sanctuary volunteer, SAC member, and member of other NOAA Committees. There being no other nominations, Don Newport moved that the nominations be closed and that Mr. Kroll be unanimously elected Thunder Bay NMS Advisory Council chair for a two year term. Second by Ann-Marie Ruder. Motion carried.

Outgoing SAC chair Carol Shafto was presented with a sanctuary nautical chart and given a standing ovation recognizing her many years of tireless leadership to Thunder Bay NMS and SAC.

The SAC Vice Chair election will be held at the August 20, 2019 meeting. If you are interested in this position, or would like more information, please contact Jeff Gray.

ALPENA COUNTY LIBRARY SPECIAL COLLECTIONS – Eric Magnus-Eubank

Eric Magnus-Eubank, director of the Alpena County Library, gave an overview of the library's current facility renovation and modernization projects. The focus is to bring technology, the arts, and humanities together in one publically accessible location. A significant portion of the funding for this project will come from a millage renewal election on August 6, 2019.

WISCONSIN/LAKE MICHIGAN, LAKE ONTARIO (OSWEGO, NY), MALLOWS BAY (MARYLAND) DESIGNATION UPDATES – Russ Green

Russ Green gave a short update on the status of three proposed national marine sanctuary sites.

Wisconsin-Lake Michigan

With the election of a new governor in Wisconsin in November, 2018, the designation process is again moving slowly forward. Shipwreck research projects are scheduled for the summer 2019 field season.

Lake Ontario (Oswego, New York)

The nomination of the Lake Ontario site has been completed. Designation is expected within the next year. Shipwreck research projects are scheduled for the summer 2019 field season.

Mallows Bay-Potomac (Maryland)

The Mallows Bay-Potomac site designation documentation was recently published in the Federal Register. Full sanctuary designation is expected by the end of 2019. Given concerns expressed by the commercial fishing industry in the bay, the State of Maryland and NOAA will have a five year review/good faith clause in the designation proposal.

By way of review, NOAA's sanctuary designation process includes the following steps:

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GREAT LAKES MARITIME HERITAGE TRAIL UPDATE – Joey Jackson

The Great Lakes Maritime Heritage Trail project is coming close to completion. Over 120 signs will be installed in 32 locations from Hammond Bay to Tawas City. Currently, installations are being completed at the New and Old Presque Isle Lights, in Black River, and at the Rogers City Marina. This project is a collaborative effort with the State of Michigan, The DNR, NOAA, and local partners. The funding for this project came from a Transportation Enhancement grant from the Michigan Department of Transportation.

FRIENDS OF THUNDER BAY NATIONAL MARINE SANCTUARY (FTBNMS) UPDATE – Katie Wolf

Katie gave the council an overview of FTBNMS activities over the last sixty days. Highlights included the ongoing development plan for the Thunder Bay Riverfront adjacent to the Great Lakes Maritime Heritage Center in collaboration with the City of Alpena and other partners, receipt of nearly \$50,000 from the Besser Foundation as a grant for instructional media and technology enhancements on the glass bottom boat *Lady Michigan*, receipt of a NEMCOG Regional Prosperity Initiative grant to promote tourism in northeast Michigan through billboard advertising, and use of the Alpena County Youth and Recreation Fund grant of \$14,325 to provide a total of 14 free community cruises to Alpena youth and families during the 2019 season. FTBNMS helped host a very successful weekend for the “Surf’s Up in the Sanctuary” Art Exhibit with films from the 2019 World Paddling Film Fest, and “Get Into Your Sanctuary” free cruises (tickets distributed to Alpena residents for six cruises). These events attracted more than 1,600 visitors to the Great Lakes Maritime Heritage Center from Friday through Sunday, June 14-15-16, 2019.

The next major set of events on the sanctuary’s calendar are the Battle of the Paddle’s on July 3rd and the Thunder Bay Maritime Festival on the July 4th. The Maritime Festival will include the Cardboard Boat Regatta, free musical entertainment, food vendors, and lots of kid-friendly activities. New this year will be the Maritime Heritage Trail Sidewalk Chalk Art Contest for all ages. Thunder Bay Arts is co-hosting this new event with FTBNMS. For more details and registration information, visit www.thunderbayfriends.org. A copy of the Maritime Festival brochure was distributed at the meeting and is also attached to these minutes.

The Friends have been working hard to extend outreach to surrounding communities which recently included participation in the MI CareerQuest, a regional career fair held in Onaway involving more than 1,500 middle and high school students, Rogers City Harbor Open House, and North Point outings for the Audubon Society and The Nature Conservancy.

SANCTUARY UPDATE

EDUCATION/OUTREACH UPDATE – Sarah Waters

Sarah gave a thorough review of education and outreach recent activities. Specifically, the new Great Lakes Maritime Heritage Center exhibit install is 95% complete. As part of NOAA’s marine debris research, U of M student partner Lara O’Brien is looking at the effect balloon

releases have on the Great Lakes region. Thunder Bay NMS invites you to visit NautilusLive.org to learn more about this summer's research activities. Justin Pinero is a senior in the marine biology program at Stetson University in Florida and Thunder Bay NMS's newest student intern. Welcome Justin!

MSU graduate student Dean Martin recently contacted Thunder Bay NMS about his degree program capstone project. NEMI/GLSI coordinator Meag Schwartz, MI Sea Grant coordinator Brandon Schroeder, and Sarah Waters helped guide his project to completion.

Thunder Bay NMS has developed a relationship with U of M Museum of Natural History Planetarium director Matt Linke.

Thunder Bay NMS will be hosting University of Indiana faculty and students for a 2019 summer field school in underwater archaeology.

Alpena High School won the recent MATE Regional ROV competition and is competing in the international in Tennessee this week.

GREAT LAKES STEWARDSHIP INITIATIVE (GLSI) – Meag Schwartz

Meag gave a recap of Alpena High School's Science in the Sanctuary class's final project: capturing Fisheries Heritage stories from Northeast Michigan to be published on the Great Lakes Fisheries Train website. After interviewing and publishing stories about charter boat captains, local restaurant owners, and other community members, students culminated their work with a trip on the glass bottom boat Lady Michigan. There they were able to talk with local partners like the Alpena CVB, Lafarge/Holsum, and the U.S Fish and Wildlife Service.

The NEMI/GLSI Network was able to support a very active spring field season including stewardship projects with participants from Cheboygan Schools, Inland Lakes Schools, Onaway Community Schools, Rogers City Schools, Hinks Elementary School, Besser Elementary School, Ella White Elementary School, Lincoln Elementary School, Alcona Community Schools, Oscoda Community Schools, Au Gres Schools, and others. All projects included a stewardship component which may have been marine debris research, invasive species pulls, or trash pick-up. There were dozens of partners that contributed to these efforts with NEMI/GLSI acting as the strategic coordinator.

NEMI/GLSI hosted a Lake Sturgeon workshop in Onaway in May, 2019.

The annual summer Institute will be held in July in Grayling, MI with a "Forest to Fish" theme looking at how land use effects the watershed.

VISITOR EXPERIENCE ACTIVITIES – Andrew Augustyn

Over the last 60 days, the Visitor Experience team has had two half days of specialized training, hosted 29 school groups (1,260 students), 11 classroom cruises, 384 ticketed Lady Michigan passengers, 2 motor coach groups, 4 room rentals, 2 ROV open houses, 4 public lectures, and 6 free to the community cruises. In all, the team has interacted with over 8,300 visitors.

This summer’s activities will include dozens of STEM focused programs, ROV open houses, regular and charter cruises, room rentals, and the Alpena Youth Sailing schools.

GREAT LAKES ENVIRONMENTAL RESEARCH LABORATORY UPDATE – Dennis Donahue

NOAA Great Lakes vessel superintendent Dennis Donahue gave the council an overview of his shop’s activities during a typical field season. He and his team of technicians, vessel captains and crews operate 35 vessels tasked with supporting the many research activities scheduled by Thunder Bay NMS, other NOAA sites and sites that partner with NOAA for research vessel access. They operate in all five Great Lakes and are active from first thaw until ice forms on the lakes in late fall/early winter. Winter finds most of the vessels in some sort of lay-up for maintenance ranging from routine to significant refit.

PUBLIC COMMENT:

Chuck Wiesen- To the SAC, please consider volunteering at Maritime Festival. Jeff, please schedule Tom Rayburn, Thunder Bay NMS SAC marine industry representative for a future SAC meeting presentation on the Lake Carriers Association

Adjourn - The meeting was adjourned at 8; 55 pm.

2019 TBNMS/SAC Schedule of Upcoming Meetings:

- August 20
- October 15
- December 17

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LIVE ENTERTAINMENT
THE WAY DOWN
WANDERERS
GENOT PICOR
 & THE DEPOT TOWN PLAYERS
HIGH SPEED
 SIDEWALK CHALK ART CONTEST
WATER SLIDE
KIDS' ACTIVITIES
ROV DEMONSTRATION
HELICOPTER TOURS
 STORY TELLING • FOOD VENDORS
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 MidMichigan Hospital
 Well-Connect Geothermal
 Wenzel Bennett & Harris, PC

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Alpena Community Credit Union
 Alpena Beverage Co., Inc.
 Boldrey, Senchuk, Rouleau & Williams
 Edward Jones - Chuck Ingle
 Thunder Bay Arts
 Thunder Bay Electric
 Wolf Family Dentistry



FREE ADMISSION

GREAT LAKES MARITIME HERITAGE CENTER
 500 WEST FLETCHER STREET ■ ALPENA, MI 49707

THURSDAY, JULY 4TH

10:00AM - 4:00PM

ThunderBayFriends.org



GENOT PICOR & THE DEPOT TOWN PLAYERS

This lively, multi-instrumental three-piece ensemble specializes in children's theatre, incorporating interactive stories, dance and movement, silly sing-alongs and crisp vocal harmonies. Find them behind the Great Lakes Maritime Heritage Center on July 4th!



THE WAY DOWN WANDERERS

Named Rolling Stone Country Winter's 2019 #1 of 10 New Artists You Need to Know, this year's Thunder Bay Maritime Festival featured band is The Way Down Wanderers! "High energy percussion, mandolin, guitar, bass, banjo and fiddle weave seamlessly together to create an experience for fans that has sold out shows across the UK and the United States."

Be sure to catch them at the Battle of the Paddles on July 3rd or in the Big Tent at 1:00pm on July 4th!

SCHEDULE

WEDNESDAY, JULY 3RD

BATTLE OF THE PADDLES

4:00pm Registration

5:30pm Races Begin!



BEER TASTING

4:30pm - 8:00pm Craft Beer Tasting on the Pool Deck & live music by The Way Down Wanderers

THURSDAY, JULY 4TH

ENTERTAINMENT - BIG TENT

11:00am - 1:00pm High Speed

1:00pm - 2:30pm The Way Down Wanderers

SIDEWALK CHALK ART CONTEST

10:00am - 2:00pm Artists at Work

3:00pm - 3:45pm People's Choice Voting

CARDBOARD BOAT REGATTA

11:00am - 1:00pm Set-Up & Fine Tuning

1:00pm Check-In Deadline, Judges Review

2:30pm Races Begin

4:00pm Awards Ceremony



ALPENA SHIPWRECK TOURS

Join us aboard the glass bottom boat *Lady Michigan* and view the magnificently preserved shipwrecks of Thunder Bay National Marine Sanctuary! Shipwreck cruises run at 10:00am, 1:00pm, and 4:00pm, with our Fourth of July Fireworks Cruise at 9:00pm. See the Sanctuary Store inside the Great Lakes Maritime Heritage Center for more information and ticket sales or online at alpenashipwrecktours.com.



HIGH SPEED

High Speed brings a variety of genres including classic rock, pop, and country to the stage, pleasing any crowd. They enjoy being creative and making the songs their own, as well as planning out their sets to make sure the audience gets the best musical experience.

Catch them at 11:00am on the 4th in the Big Tent!

CARDBOARD BOAT REGATTA

The Friends of Thunder Bay National Marine Sanctuary is hosting the 8th Annual Thunder Bay Cardboard Boat Regatta. Racers must engineer river-worthy vessels built solely of cardboard, duct tape, and paint to compete for the Thunder Bay Cup. An absolute blast to watch, and even more fun as a participant. Go to thunderbayfriends.org for more information and for registration.

The regatta begins at 2:30pm on July 4th.



BANDURA GYPSIES

Showcasing diverse artistic talents, the Bandura Gypsies will alternate between demonstrating their chalk art illustrations and performing acoustic folk songs and ballads along the Maritime Heritage Trail during the festival's first Sidewalk Chalk Art Contest, open to all ages. The duo rocks a unique blend of style and sound and are loved by music fans from 8 to 80. Watch them illustrating or performing music just north of the foot bridge on the riverside of the pool deck on July 4th.

**Thunder Bay National Marine Sanctuary (TBNMS)
Advisory Council
-August 20, 2019 Meeting Minutes-**

Date: August 20, 2019

Time: 6:00 p.m.

**Location: Great Lakes Maritime Heritage Center (GLMHC), 500 W. Fletcher Street,
Alpena, MI 49707**

Meeting Attendees

NOAA: Andrew Augustyn, Chuck Bennett, Stephanie Gandulla, Jeff Gray, Phil Hartmeyer, Jean Prevo, Katie Wolf

NEMI/GLSI: Meag Schwartz

SAC Members: Roger Baumgardner, Jim Dessenberg, Nancy Kinney, John Kozlowski, Steve Kroll, Bill LaMarre, Don MacMaster, Don Newport, Susan Nielsen, Thomas Rayburn, Ann-Marie Ruder, Steve Schnell, Carol Shafto, Chuck Wiesen

SAC Alternates: Michael Beaulac, Thomas Brindley, Rick Houchin, Bob Krafft, Pat Labadie, RC Laugal, Timothy Lee, Merl Melton, Ron Meneghel, Melissa Olsen

Media: None.

Guests: Pete DeCola - Superintendent of Stellwagen Bank NMS

Tim Donovan - NOAA Office of Law Enforcement

Jeff Ray and Doug Costa - NOAA Diving Unit

Tom Swanson, Daniel Dean, Andrew Babione, and Kelcie LaRoche - United States Coast Guard

Bob Thompson – Alpena Public Schools

Eva Lusardi, Madison Gohl, Savannah Thompson, and Josh Beatty - UR2 ROV Team Members

WELCOME AND ACTION ITEMS

Steve Kroll, Chair, called the meeting to order. The council reviewed and approved the minutes from the June 18, 2019 council meeting.

Thunder Bay NMS Sanctuary Advisory Council (SAC) Vice Chair election was held. Carol Shafto nominated Roger Baumgardner. There were no other nominations. Chuck Wiesen moved that the nominations be closed and Don Newport seconded. Roger Baumgardner was unanimously elected Thunder Bay NMS Advisory Council Vice Chair for a two-year term.

Jeff Gray presented outgoing Vice Chair Chuck Wiesen with a framed painting of the *Pewabic* recognizing his years of service to Thunder Bay NMS. Chuck has filled in as Chair, is the President of the Friends of TBNMS Board and is a dedicated sanctuary volunteer.

Steve Kroll spoke about his vision to move the council forward in his new role as Chair. He would like to see the council become more proactive as a group. His goal is to reinforce some of the connections that we already have and also look at previous connections that we may have lost. One way to do that is through the constituent reports.

In the past, 2-3 members were assigned to give an informal report at each. The council had moved away from those reports but Steve would like to bring them back with a refreshed format. The presentation that Tom Rayburn will be giving tonight about the Lake Carrier's Association is one example, but there are other more informal ways to do it. Steve is looking for members to talk to the groups they represent and then present the feedback they receive to the council. The ideas and feedback received from the constituency groups will help the council during the upcoming management plan review. Steve will volunteer to do the first constituent report with his alternate Bob Doyle and potentially the Thunder Bay Underwater Preserve representatives, Bill LaMarre and Merl Melton.

Steve encouraged the council members to keep the communication pathways open with their constituent groups by passing along Jean's monthly email updates, lecture series invitations, special event notifications, etc. It's a great way to share information and start a dialog with your constituency groups.

Steve would also like to put together an informal meeting in the future to discuss these types of ideas. He feels everyone on the council has lots of talents and abilities.

Tim Lee sees an opportunity for the Thunder Bay NMS to be involved with the career navigation position which is a 3-year grant funded position with Alcona Schools and the AMAESD. This position will create a pathway for students for job opportunities. Great way to connect the schools to the businesses and to the sanctuary. Steve Kroll will get in touch with Tim Lee to discuss this idea further.

Management Plan Review:

Russ Green and Jeff met last week to discuss the upcoming management plan review. Depending on how much time Russ can dedicate to the review, Steve is hoping to have a draft at the October meeting for members to review. There could potentially be an informal working group meeting prior to the October meeting to dig in to the management plan.

UR2 ROV TEAM – Savannah Thomson, Eva Lusardi, Josh Beatty and Madison Gohl
Alpena High School’s UR2 ROV Team won the regional MATE competition held in Alpena in May and went on to compete at internationals in Kingsport, Tennessee. This year’s missions highlighted the role that ROVs play inshore - in freshwater rivers, lakes, and dams in Eastern Tennessee. UR2 ROV Team placed 11th at the competition. Josh Beatty received an award for ingenuity for frame design and Savannah Thomson received an award for public speaking.

The team enjoyed representing our community and shared stories of their experience of competing with the other teams from around the world, working together and using the competition as a networking opportunity.

SANTUARY UPDATE: RESOURCE PROTECTION/LAW ENFORCEMENT

In June, Jeff attended a joint law enforcement summit in Santa Barbara. Tomorrow Jeff will be meeting with representatives from the US Coast Guard, NOAA’s Office of Law Enforcement and Stellwagen Bank National Marine Sanctuary to continue discussions regarding resource protection and law enforcement.

Tim Donovan from NOAA’s Office of Law Enforcement (OLE) is participating in the joint meeting. He works in a small unit in Gloucester, Massachusetts with a staff of about 50 people covering the east coast. The OLE is working on increasing their presence on the east coast and in Michigan. His office is currently looking for an enforcement officer to be placed in Ann Arbor. They deal with all sorts of issues including, sea food fraud, commercial fishing issues and enforcing the Magnuson-Stevens Act.

Jeff would like to see OLE have more presence in Thunder Bay to help eliminate illegal behaviors. Tim’s office is committed to working toward this.

Jeff has invited the US Coast Guard to come to a future meeting to give a presentation.

Sanctuary Research Update:

42 mooring buoys were deployed this season. A full update on the mooring buoy program will be given at the next meeting.

This has been one of Thunder Bay’s busiest research years. A full research update will be given at the next council meeting.

Upcoming Events:

August 22 – 7:00pm

Sanctuary Cinema Series - *Lake Invaders: The Fight for Lake Huron*

September 12 – 6:00pm

Corkscrews & Canvas on the Roof! in partnership with Art in the Loft

September 19 – 7:00pm

Sanctuary Lecture Series - *Lake Nation: People and the Fate of the Great Lakes*
presented by Dave Dempsey

September 26 – 7:00pm

Sanctuary Cinema Series - *Michigan Micro Adventures Volume 2*

October 24 – 7:00pm

Sanctuary Cinema Series - *Haunted Lighthouses!*

October 26 – 5:30pm

Halloween Celebration – Downtown Trick or Treating

PUBLIC COMMENT:

Nancy Kinney – On September 10th Presque Isle Public Library will be having an ROV build for adults at the Presque Isle Clubhouse. Contact the Presque Isle County Library to sign up for the build.

Adjourn - The meeting was adjourned at 6:55pm for the public presentation “The Great Lakes, its Lakers, and the Lake Carriers’ Association” presented by council member Tom Rayburn, Director of Environmental and Regulatory Affairs for the Lake Carriers’ Association.

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State of Michigan: N/A

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SAC Alternates: Tom Brindley, Robert Doyle, Amber Hess, Bob Krafft, Pat Labadie, Timothy Lee, Ron Meneghel, Melissa Olsen, RC Laugal

Media: N/A

Guests: Linda Doyle

WELCOME AND ACTION ITEMS

Steve Kroll, Chair, called the meeting to order. The council reviewed and approved the minutes from the August 20, 2019 council meeting. The proposed 2020 Meeting dates were approved. See attached.

Thunder Bay's SAC Charter is going to expire in January. Steve Kroll, Chuck Wiesen and Roger Baumgardner volunteered to work with Jean Prevo to review the current Charter and present any suggested revisions at the December council meeting. Jean will email a copy of the Charter to the council with the minutes for this meeting. It is also available on the Thunder Bay NMS website at https://nmsthunderbay.blob.core.windows.net/thunderbay-prod/media/archive/pdfs/sac_charter.pdf.

Management Plan Review: Steve Kroll would like to discuss an alternate plan to attack Thunder Bay NMS's management plan. With limited Thunder Bay staff Steve doesn't want to see them become overtaxed and during previous reviews the Office of National Marine Sanctuaries has provided an extra staff person to help. Jeff Gray will be visiting sanctuary headquarters for a meeting and is hoping to have more information soon. He will work with Steve and Jean to schedule a meeting to discuss this in more detail.

PARTNER REPORT

Peter Esselman, Phd. – Great Lakes Science Center, US Geological Survey

Dr. Peter Esselman of the Great Lakes Science Center spoke about the development and application of a robotic computer vision system to quantify species and habitat in the sanctuary. Zebra mussels reorganized the food web in the lake. Only 4% of the United States' side of the great lakes has been mapped. Therefore, there is a pressing need for information to understand the impacts of the ecosystem. Dr. Esselman showed the underwater drone - autonomous underwater vehicle (AUV) that they are using to conduct the survey.

This project has four main tasks:

- Habitat - map the bottom type of rock, etc.
- Estimate the number of round gobies (gobies eat the zebra mussels, so there are tons of gobies now.) Need to find out how many predators of the lake they can support.
- Estimate the number of zebra mussels.
- Study cladophora occurring on the lakebed. As the sunlight increases from the mussels filtration the algae starts to grow.

The AUV can travel 15 kilometers in a day. It has 4.5 hours of charge and photographs 5 frames a second. Which produces thousands and thousands of photos per day. The AUV travels 1.5 meters off the lake bottom with 1.5 meters of swath width. The team is coupling it with other tools like the multibeam sonar to make inferences of the lake bottom. Also doing high resolution 3D reconstruction. The AUV is a game changer, each piece of data has a latitude and longitude associated with it.

CONSTITUENT REPORT – Steve Kroll, Diving Representative

Steve contacted charter captains in the area and received the following information for the 2019 dive season.

Sanctuary Diver Use from Charter Boats 2019:

Total Diver Days - 398

Sport (regular gasses/shallower dives) - 91

Technical (mixed gasses/deeper dives) - 307

Snorkeling - 4

Freediving/ Spearfishing - 2

Approximate number of different divers - 167 (only 3 from Michigan)

Most of the dive charter customers were from outside the Alpena area and from other states. Diver days can equal two to three dives per day.

The numbers Steve reported were only from dive charter operators, but there were others doing dives from their own personal boats. From his own experience, Steve would double the numbers for technical divers and would triple the sport diving numbers from personal boats.

Steve also asked the charter operators for feedback and they said they would like to see more mooring blocks for the wrecks in Presque Isle and on some of the deeper wrecks in the sanctuary.

Timothy Lee will present at the next meeting in December.

FRIENDS OF THUNDER BAY NATIONAL MARINE SANCTUARY – Katie Wolf

Upcoming Events:

WATER WALKERS Book Series Author Reception, Talk & Book Signing
Thursday, October 17, 6:30 p.m. to 8:30 p.m.

CINEMA SERIES: “Haunted Lighthouses”
Thursday, October 24, 7:00 p.m. to 8:00 p.m.

Halloween at the Great Lakes Maritime Heritage Center
Friday, October 25, 5:00 p.m. to 8:00 p.m.

CINEMA SERIES: “Crossing Lake Superior”
Thursday, November 7, 7:00 p.m. to 8:30 p.m.

LECTURE SERIES: “U.S. Life-Saving Service on Superior’s Shipwreck Coast”
Thursday, November 21, 7:00 p.m. to 8:30 p.m.

Friends Fundraising:

Halloween Candy Round Up
Underway now through October 25

Friends Membership Campaign
Underway now through end of year

8th Annual Thunder Bay International Film Festival Sponsorship Solicitation
Underway now through November 15

Giving Tuesday, December 3, 24 Hours of Giving
cfnem.org or thunderbayfriends.org

End-of-Year Final Fundraising Push
Month of December

Grants & Special Projects:

Projects Completed:

Besser Foundation Grant for Lady Michigan Enhancements: \$50,000
Michigan Humanities Council Impact Grant for Student Cruise: \$15,000
Alpena Youth & Recreation Grants for Alpena Community Cruises: \$14,570
Community Foundation Grant for Student Cruises (Outside of Alpena): \$2,500

New Projects:

Great Lakes Maritime Heritage Waterfront Park 10% Match (Designated Funds)
Besser Foundation 75th Anniversary Grant: \$200,000
Rotary Club of Alpena: \$50,000
First Federal of Northern Michigan Legacy Foundation: \$33,000
Alpena Youth & Recreation Millage Fund: \$57,000
Outstanding: \$93,000
TOTAL NEEDED: \$433,000

2020 Lecture & Cinema Series

Community Foundation for Northeast Michigan Impact Grant: \$2,500
Community Foundation for Northeast Michigan Women's Giving Circle: \$1,500

Friends Board Activities:

Board Informal Coffee: Monday, September 23
First Federal of Northern Michigan Legacy Foundation Check Presentation: October 4
Board Planning Meeting for 2020 & Board Meeting: November

Please keep spreading the word about the sanctuary lecture series.

Katie mentioned that general fundraising is important because it isn't as restrictive as grants. It allows the Friends of Thunder Bay NMS to do things like pay for staff, host educational events, etc.

There will be a full presentation on the Great Lakes Maritime Heritage Waterfront park grant at the December meeting.

SANTUARY UPDATE

Volunteer Appreciation Night – November 7, 5:30-7:00pm. You all should receive an invitation for the event via email. If you did not receive an email invitation, please contact Mary.Tagliareni@noaa.gov. During the event we will be honoring Thunder Bay NMS Volunteer of the Year, Barry Schatz.

Great Lakes Maritime Heritage Trail

This project continues to move ahead with 121 trails signs to be installed. A full presentation will be given at a future meeting once the project has been completed.

8th Annual Thunder Bay International Film Festival (TBIFF) – January 22-26, 2020

Stephanie Gandulla gave a sneak peak of a short film by Mad Law Media the production company that also produced the films *Big 5 Dive*, *Small Town Big Heart* and *Big Brownie*. Their new film (yet to be titled) will premiere at the TBIFF in January.

Education Update – Sarah Waters

TBIFF 5th Annual Student Film Competition

As part of TBIFF, the Northeast Michigan Great Lakes Stewardship Initiative network and Friends of Thunder Bay NMS host a Student Film Competition open to students in 8th-12th grade. This year's theme is “#GreatLakesAre.” Students are asked to submit a short film, 5 minutes or less, about what the great lakes mean to them. There is no entry fee and selected films will be shown at the festival, with the winning films receiving prizes. The deadline for entry is January 3, 2020. For more information visit <http://www.nemiglsi.org/calendar.asp?ogt=pv&pid=103>.

NOAA Great Lakes Marine Debris Program

Sarah Waters and NEMIGLSI Network Coordinator, Meag Schwartz joined other agency and regional partners at the Great Lakes Marine Debris Action Plan Workshop in Toledo, OH on August 28-29. Partners collaborated to update the Action Plan for 2020-2025 with the specific goals of research, policy, prevention and removal. More information can be found on the Marine Debris Collaboration Portal (<https://greatlakes-mdc.diver.orr.noaa.gov/home>).

Detroit Zoological Society Climate Change Communication Workshop

In September, the Detroit Zoological Society (DZS) invited the sanctuary as members of the National Network for Ocean and Climate Change Interpretation (NNOCCI) to assist with a professional development training for DZS staff. Sarah Waters and Stephanie Gandulla conducted an introductory climate change communication training using the NNOCCI curriculum for a diverse group of 25 staff members at the Zoo: including programs, education, and exhibit team members, volunteer coordinators, *Science on a Sphere* program managers, evaluation team members, and the DZS sustainability coordinator. Sanctuary staff led the group through the NNOCCI strategic framing toolbox, including opportunities for the DZS staff to practice using the tools to encourage productive dialogue and community level solutions.

ACC Industrial Tech Program ROV Piloting Track

Sarah Waters spoke about the new ACC class which includes two Alpena High School early college program students that are dual enrolled. Thunder Bay NMS is working with those students to offer volunteer opportunities outside of class.

Alpena Public Schools

Alpena High School 9th grade Project-based Learning class *Science in the Sanctuary* is starting year two. If you are interested in being a reviewer for their final project presentation contact Sarah.A.Waters@noaa.gov.

AHS's advanced biology class's 12th grade team project is focused on Microplastic sampling research. The students in that class did a Facebook takeover of the NEMIGLSI page. To see their posts visit [Facebook.com/NEMISStewardship/](https://www.facebook.com/NEMISStewardship/).

Student Mini-boat "Fautasi" Launched in Thunder Bay National Marine Sanctuary

Sanctuary staff worked with the Stockbridge, Michigan High School "InvenTeam" on Tuesday, October 8, 2019 to help launch their 5-foot long sailboat as part of their Educational Passages mini boat project. Students that participate in the project prepare, deploy, and track their own unmanned sailboat equipped with a GPS transmitter. Students follow the boat's path here: <http://educationalpassages.org/boats/fautasi/> to learn about currents, weather, technology, and more. When the boats land, students can create connections with classrooms in the landing area. This multidisciplinary approach uses Great Lakes literacy to empower students. The Stockbridge students anticipated their boat would take about a week to travel across Lake Huron to Canada. It made the trek in just under 5 days, landing in northern Michigan, just short of the Canadian border.

The Stockbridge team is using the skills developed as part of this project to not only learn about the Great Lakes but to learn about Global Positioning Systems and sensors that they will continue to develop for future mini-boat launches, other class projects, and to help them prepare for the MATE Great Lakes Regional ROV Competition hosted by Thunder Bay BNMS on May 16, 2020. For more information, contact sarah.a.waters@noaa.gov.

Sarah also mentioned that the Ernest F. Hollings Undergraduate Scholarship NOAA Summer Internship 2020 is now open for applications. For more information visit <https://www.noaa.gov/office-education/hollings-scholarship>

2019 Huron Pines AmeriCorps Service Report – Kellie Wasikowski

This year's Thunder Bay NMS AmeriCorps member was Kellie Wasikowski. Kellie gave a report on her time as an AmeriCorps member. She put in 1,700 service hours for Thunder Bay NMS. She assisted with numerous events and education programs starting with the TBIF and student film competition last January. Kellie worked with the ACC Marine Tech student group. She led spring break and summer programs for the Boys & Girls Club and also spoke to their youth volunteer corps about the AmeriCorps program. Kellie also worked with NEMIGLSI doing citizen science and fieldwork projects.

Kellie also hosted two AmeriCorps training workshops at the Great Lakes Maritime Heritage Center. One of the workshops was a member training and the other was climate change interpretation training.

Her opportunities at Thunder Bay NMS were multigenerational, not only did she work with students but she was also able to work with senior citizens building ROVs at the Presque Isle Clubhouse with assistance from the Rogers City ROV Club.

2019 Research Update – Stephanie Gandulla

Telepresence – Enabled Exploration and Outreach in Thunder Bay National Marine Sanctuary with Ocean Exploration Trust

In partnership with Dr. Robert Ballard's Ocean Exploration Trust and the University of New Hampshire's Center for Coastal and Ocean Mapping Joint Hydrographic Center Surveying project to characterize and better understand the lake bottom for managers, communities, navigation, fisheries, etc., but the team was also looking for shipwrecks. They spent most of their two weeks in Rogers City. Also incorporated numerous outreach efforts. This is a 3-year project so they will be back two more years.

Reportedly lost in Hammond Bay:

Glad Tidings: wooden schooner, 3-masted, built in Detroit 1866, Lost April 19, 1898. (length 113, beam 26)

John C. Liken: wooden steambarge, built in Sebawaing, MI 1873, Lost May 4, 1890 cargo lath (length 90, beam 21)

Reportedly lost in shipping lanes:

Ohio discovered in 2017 Ocean Exploration & Research project:

<https://oceanexplorer.noaa.gov/explorations/17thunderbay/welcome.html>

Links to project with Ocean Exploration Trust:

<https://nautiluslive.org/blog/2019/05/07/searching-shipwrecks-thunder-bay-national-marine-sanctuary>

<https://nautiluslive.org/album/2019/05/18/mapping-lakebed-thunder-bay-national-marine-sanctuary>

NOAA's National Centers for Coastal Ocean Science – Lakebed Mapping in Thunder Bay NMS

Spatial ecologists from NOAA's National Centers for Coastal Ocean Science (NCCOS) collected high-resolution bathymetry and imagery of lakebed within Thunder Bay National Marine Sanctuary (TBNMS) in Lake Huron. Using multibeam sonar and drop cameras deployed from research vessels managed by the Great Lakes Environmental Research Laboratory (GLERL), the ecologists worked with sanctuary staff and partners (including Michigan Department of Natural Resources, US Fish & Wildlife Service, and University of Michigan) to

prioritize areas to map based on the potential for cultural and physical resources and ecologically significant lake floor habitat within the sanctuary. This project, which also includes an assessment of previous mapping data, will generate new maps and videos of sanctuary resources and inform future mapping work. This is the first NCCOS spatial ecology project in TBNMS, and will add significantly to the 16% of bottomlands mapped within the sanctuary.

19.3 square miles mapped

26 sites ground-truthed

MEDIA:

<https://coastalscience.noaa.gov/news/ground-truthing-thunder-bay-national-marine-sanctuary-habitat-maps/>

<http://www.wbkb11.com/ecologists-mapping-the-bottom-of-the-marine-sanctuary>

<https://www.thealpenanews.com/news/local-news/2019/08/a-clearer-picture-of-thunder-bay/>

<https://upnorthlive.com/news/local/noaa-scientists-scan-lakebed-for-underwater-vessels>

<http://www.wbkb11.com/noaa-scientists-x-ray-lakebed-for-shipwrecks>

Indiana University Center for Underwater Science Maritime Heritage Field Project

During the project two wrecks explored: the *Fay* and the *Shamrock*. The team gathered rapid assessment data and still photographs of the *Fay*, to be used to assess condition and make recommendations. They also gathered photogrammetric data (overlapping still photographs) on both wrecks (over 10,000 pictures of the *Fay*.)

Four days of shore-based diving, used an inflatable boat to shuttle divers from land to the sites. The project will produce:

- Rapid Assessment Report, including photos, orthomosaic site plan, status, and recommendations, for the SS *Joseph S Fay*
- Three-dimensional photogrammetric model of the SS *Joseph S Fay*
- Three-dimensional photogrammetric model of the *Shamrock*

MEDIA:

<http://www.wbkb11.com/indiana-university-students-diving-for-shipwrecks-with-noaa>

<https://www.thealpenanews.com/news/local-news/2019/07/indiana-students-helping-develop-3d-images-of-shipwrecks/>

Mooring Buoy Program – Phil Hartmeyer

Thunder Bay NMS staff has retrieved 42 moorings from the lake over five days. Tackle innovations have proved strong, and systems looked great coming out of the water. Stay tuned for the most current buoy status by bookmarking the Thunder Bay Shipwreck Mooring Map.

Middle Island Sinkhole Project

Thunder Bay NMS supported partners from the Max Planck Institute for Microbiology at the University of Bremen, The University of Michigan, and Grand Valley State University over two

weeks to collect samples and data from the Middle Island Sinkhole. The Middle Island Sinkhole project is one of the longest-running field projects whose partners have published dozens of research articles in peer-reviewed journals about the science conducted here.

NOAA Diving Program' Field Trainer Course

Thunder Bay NMS hosted NOAA Diving Program instructor Nick Jeremiah who put on a Field Trainer Course for Doug Costa (Unit Dive Supervisor, Stellwagen Bank NMS), Jason Leonard (Field Operations Coordinator, (Papahānaumokuākea Marine National Monument), and Phil Hartmeyer (Unit Dive Supervisor, Thunder Bay NMS). The candidates became the most recent three of twenty-one certified NOAA Diving Program Field Trainers. Field Trainers are able to certify already-certified divers in the field, without sending them to NOAA Dive School in Seattle, or Pensacola. The array of facilities at Thunder Bay NMS including research quarters, dive locker, tank, and classrooms allow this type of training to take place. The certification grants Thunder Bay NMS a creative tool to get the right researchers, scientists, students, and volunteers in the water.

PUBLIC COMMENT:

Bob Krafft announced that Steve Kroll was recently appointed to the Underwater Salvage and Preserve Committee by the Governor. Steve said he is looking forward to participating on this board.

Bob Krafft also mentioned that he was in Anchorage, Alaska and they had passed a bill to eliminate all plastic bags. He would like to see that happen in Alpena.

ADJOURN:

The meeting was adjourned at 8:30pm.

2019 TBNMS/SAC Schedule of Upcoming Meetings:

December 17

All meetings are 6:00-8:30pm at the Great Lakes Maritime Heritage Center unless otherwise specified.

**Thunder Bay National Marine Sanctuary
Advisory Council
-December 17, 2019 Meeting Minutes-**

Date: December 17, 2019

Time: 6:00 p.m.

**Location: Great Lakes Maritime Heritage Center (GLMHC), 500 W. Fletcher Street,
Alpena, MI 49707**

Meeting Attendees

NOAA: Andrew Augustyn, Chuck Bennett, Stephanie Gandulla, Phil Hartmeyer, Katie Wolf

State of Michigan: Wayne R. Lusardi

NEMI/GLSI: Meag Schwartz

SAC Members: Roger Baumgardner, Jim Dessenberg, Nancy Kinney, Steve Kroll, Don Newport, Tom Rayburn, Carol Shafto, Chuck Wiesen

SAC Alternates: Mike Beaulac, Tom Brindley, Robert Doyle, Bob Krafft, C. Patrick Labadie, RC Laugal, Timothy Lee, Merl Melton, Ron Meneghel

Media: N/A

Guests: N/A

WELCOME AND ACTION ITEMS

Steve Kroll, Chair, called the meeting to order. The council reviewed and approved the minutes from the October 15, 2019 council meeting.

TBNMS Advisory Council Charter Review: Thunder Bay National Marine Sanctuary Advisory Council's charter expires in January, 2020. Steve Kroll, Chuck Wiesen, and Roger Baumgardner worked with Jean Prevo and Jeff Gray to review the current Charter and present suggested revisions. With input from SAC, revisions include:

1. Page 4, third bullet point under: As equal management...., *maritime heritage*... instead of"cultural and natural resources....:
2. Page 10, c*votes shall be made by written ballot when more than one person is on the ballot for any position*".
3. Page 13,e "The council shall base its advice *on* (delete or) a vote...."

There being no other changes, a motion to approve the TBNMS advisory council charter as amended was made by Carol Shafto with a second from Don Newport. Motion carried.

Management Plan Review: An ad hoc committee of SAC members will review the *Research Action and Preservation and Conservation Action Plan* chapters of the TBNMS management plan in January, 2020. Target for completion of this review will be the April, 2020 SAC meeting.

CONSTITUENT REPORT – Tim Lee, K-12 Education Representative

Tim gave the council a comprehensive overview of area school districts activities in two areas.

College and Career Exploration

- Community connections provide districts with professionals who visit schools to discuss career opportunities and challenges. At Alcona Community Schools. Lincoln Pharmacy, Alcona Motors, Gillies Funeral Home, Kalitta Air, Besser Company, Omni Metalcraft and MidMichigan Medical Center-Alpena have hosted recent work site visits.
- Alpena Community College and Lincoln Tech partner with Alcona Community Schools to offer post high school courses, career guidance, and financial aid information.

Place-Based Education reviewed by district

- Alcona Community Schools-Elementary-community garden, fisheries including salmon and sturgeon, Harrisville Harbor and State Park Stewards, Monarch Butterfly watch, and Rockport fossil discovery field trips
- Alcona Community Schools-Middle/High School- community garden, Ewe Tube, Future Farmers of America Sugar Shack, Negwegon State park/Endangered species and interpretive signs, and school forest exploration
- Alpena Public Schools-Elementary-Lafarge Fossil Park at the Jesse Besser Museum, Macroinvertebrates, Monarch watch, Rusty Crayfish project, Salmon in the classroom, and school yard pollinator garden
- Alpena Public Schools-Middle/High School- Microplastics research in Lake Huron, School forest and nature trail exploration, Science in the Sanctuary/Shipwreck Alley two hour block courses, and the TBNMS Student Film Competition
- Au Gres-Sims School District-Charity Island Threatened Pitcher's Thistle research project, Greenhouse, Rain Garden, and Macroinvertebrates river investigation
- Cheboygan Area Schools-Gordon Turner Park stewardship project, pollinator garden (future project), and Sturgeon in the classroom
- Onaway Area Schools-Barnwell erosion project, Green School Initiative including windmill, wind turbine, recycling, and solar panels, Hydroponics-student grown produce for the cafeteria, school forest, and Sturgeon in the classroom
- Oscoda Area Schools-Aquaponics, invasive species research including Sea Lamprey and Garlic Mustard, Owl Green Team greenhouse and school yard, physics and drones, Pine River and Van Etten Lake watershed exploration, and Salmon in the classroom

- Rogers City Schools-pollinator garden (elementary) and Salmon in the classroom (middle school)
- Tawas Area Schools-Phragmites research with St. Joseph Hospital (community partner) and Rain Garden (future project)

Continued work at many area schools includes watershed and environmental stewardship further inland, district collaborative projects, and career and post-secondary events for elementary school students and their families.

SAC thanked Tim for his very thorough report and *congratulated him on his recent recognition as an education leader in Michigan.*

AHS Science in the Sanctuary: This presentation will be added to a future SAC meeting agenda.

FRIENDS OF THUNDER BAY NATIONAL MARINE SANCTUARY (FTBNMS)

Andrew Augustyn reported that the glass bottom boat *Lady Michigan* has her new engine, upgraded navigational and educational electronics and is ready for the 2020 cruising season.

Katie Wolf updated the council on several recent fundraising activities.

- FTBNMS received \$15,392 in donations from the December 3, 2019 Giving Tuesday initiative from 56 donors. This dollar amount is up significantly from 2018.
- To date, the fall campaign has raised \$18,117 from all sources.
- 2019 Alpena Youth and Recreation Grant reimbursement will be \$14,325.
- The 2019 “Get Into Your Sanctuary” campaign was very successful.
- The Great Lakes Maritime Heritage Waterfront Park and Trail project has raised \$426,040 of the \$433,380 state grant match requirement. Fundraising for this project will be complete in the first quarter of 2020. Final approval and public announcement will be in the spring of 2020. Planning and engineering funds may now be expended.

2020 Thunder Bay International Film

Sponsors include:

- \$5,000 - Michigan Film and Digital Media Office (tentative)
- \$2,500 - Alpena Agency and Auto-Owners Insurance
- \$1,000 - Community Foundation for Northeast Michigan, HPC Credit Union, mBank, and the National Marine Sanctuary Foundation
- \$500 - Alpena Area Convention and Visitors Bureau
- \$250 - Alpena Beverage, Alpena Community Credit Union, Boldrey, Senchuk, Rouleau, and Williams CPAs PC, Tom and Karen Brindley, DPTV-Great Lakes Now, Everett

Goodrich Trucking, Inc., Lappan Agency, McDonalds of Alpena, and Thunder Bay Eye Care

The 2020 festival includes the 5th annual Student Film Festival. This year's topic is #GreatLakesAre.... Good luck to all student entrants.

SANTUARY UPDATE

TBNMS staff members Phil Hartmeyer, Stephanie Gandulla, and Wayne Lusardi each gave an update on recent activities and an overview of presentations they will be making at the Society of Historical Archaeology conference in Boston, MA January 8-11, 2020. What follows are presentation abstracts.

Wayne R. Lusardi: Aviators Down! Tuskegee Airmen in Michigan

During the middle years of World War II, Michigan was selected by the U.S. Army Air Force as a place for advanced training for African-American pilots that had graduated from the Tuskegee flight program in Alabama. The potential for Tuskegee related archaeological sites worldwide is low. Outside of Tuskegee Army Airfield itself, very few places where African-American military pilots trained, fought or occupied are conducive for archaeological research. Although many Tuskegee aircraft were involved in accidents, the material remains were almost always recovered, leaving little, if any, trace of the resultant disaster. Aircraft that went missing are a notable exception. Two planes, both Bell P-39Q Aircobras, have recently been discovered in the Great Lakes. At least four additional aircraft flown by Tuskegee Airman remain to be discovered in Lake Huron. Recent efforts to locate, document, recover and conserve Tuskegee aircraft will be discussed.

Phil Hartmeyer: A Tale of Two Giants: Norman, Grecian and the Great Lakes Steel Revolution

The middle nineteenth century witnessed substantial changes in the Great Lakes maritime landscape. Vertical integration of raw material industries, the birth of steel cities, corporate fleets, and revolutionary shipbuilding and canal technology granted shippers previously unfathomable commercial opportunity. Sisterships Grecian and Norman were launched at the leading edge of this shift in maritime commerce. In unrelated events, both steel bulk freighters met their end in the waters of Northeast Michigan, now part of NOAA's Thunder Bay National Marine Sanctuary. Comparative archaeological analysis using digital documentation methods will be presented to shed light on these two examples of an iconic Great Lakes vessel class.

Stephanie Gandulla: Thunder Bay National Marine Sanctuaries Citizen Science Program
Charged with protecting nearly 100 shipwrecks that lie in the cold, fresh waters of Lake Huron, Thunder Bay National Marine Sanctuary embraces an open philosophy of engaging diverse user groups to assist in the documentation of maritime heritage resources. Whether it's technical divers, high school science students, or hobbyist drone pilots, the sanctuary has successfully

leveraged such interested partners to create historical and archaeological records that, without such support, might be years in the making. This developing and dynamic network of sanctuary users and producers also fosters a preservation ethic in on-water recreation groups and boosts tourism for sanctuary communities. Learn the challenges and rewards from the sanctuaries developing citizen science program through illustrative case studies, and see a selection of stunning products showcasing the rich maritime history of the Great Lakes.

Sanctuary Designation Updates

- Mallows Bay National Marine Sanctuary recently had its formal designation ceremony. Jeff Gray represented TBNMS and reports that our sanctuary was referenced as among the models the committee and community used in developing their initial operational plan. Congratulations Mallows Bay!
- Lake Ontario is selecting their community input committee with guidance from NOAA staff.
- Wisconsin/Lake Michigan appears to be fully back on track. Recently the governor sent a letter to NOAA restating his offices intent to fully support the sanctuary designation process.

NOAA has a four step process for sanctuary designation.

1. Scoping - NOAA announces its intent to initiate the sanctuary designation process and asks broad spectrum community input on possible sanctuary boundaries and specific cultural and/or environmental resources to be protected.
2. Sanctuary Proposal - Draft Management Plans and a Draft Environmental Impact Statement are prepared.
3. Public Review - NOAA and community planners broadly seek public and private sector input on the planning documents.
4. (Final) Sanctuary Designation - NOAA makes a final determination of sanctuary designation and posts an announcement in the Federal Register.

PUBLIC COMMENT:

Happy Holidays Everyone!

Nancy Kinney highlighted Hannah Hazewinkel and the Alpena 4H Tech Changemakers who taught a class for the Association of Lifelong Learners on microplastics in the GLMHC Theatre the same afternoon as the SAC meeting. Nancy would like to have them present at a future SAC meeting.

ADJOURN:

The meeting was adjourned at 8:30pm.

2020 TBNMS Advisory Council Schedule of Upcoming Meetings:

March 10, 2020

April 21, 2020

June 16, 2020

August 18, 2020

October 20, 2020

December 15, 2020

All meetings are 6:00-8:30pm at the Great Lakes Maritime Heritage Center unless otherwise specified.