# 2019 Program Evaluation Report

Inland Seas Education Association



Student from Three Oaks Academy on a Schoolship program in Spring 2019

Report contributors: Jillian Votava, Great Lakes Educator

Stephanie Rustem, *Program Coordinator* 

Chelsea Nester, GTSI Coordinator

The Inland Seas Education Association (ISEA) was founded in 1989 as a non-profit organization whose mission is to inspire Great Lakes curiosity, stewardship, and passion.

To date more than 130,000 learners have participated in ISEA programs.

Inland Seas Education Association
P.O. Box 218
100 Dame St.
Suttons Bay, MI 49682
P: (231) 271-3077
F: (231) 271-3088
isea@schoolship.org

Evaluation Summary	3
Programs of 2019	4
Program Demand	Ę
Program Experience	6
Public Sails	6
Schoolship Experience - Students	7
Schoolship Experience - Teachers	g
Youth Overnight Programs	10
Program Impact	11
Room For Improvement	2′

# **Evaluation Summary**

Each fall at the conclusion of the sailing season, the education staff takes time to review and reflect on the season: what went well, what didn't, were there any notable moments or lessons learned? We reflect on the season in multiple ways including reviewing all the surveys and feedback given by program participants. This evaluation report is a summary of all the participant feedback we received for the 2019 season. Equally important, though not covered in this report, is the feedback from our volunteers and staff—those who are involved in delivering our programs. This report summarizes our programs from the perspective of the participants, and is heavily weighted towards the responses of students on Schoolship programs.

The goal of Inland Seas Education Association is to protect the Great Lakes through education, with the mission to inspire Great Lakes curiosity, stewardship, and passion. This mission drives our programming, and every program delivered strives to fulfill this mission. This year we are looking at our season from this mission-driven perspective during this evaluation process. Four major themes surfaced while thinking about how to evaluate whether or not we are achieving our mission each season:

Demand, Experience, Impact, and Room for Improvement. As such, the 2019 Evaluation Report will look and feel a bit different from the Evaluation Reports of seasons past. Each major theme mentioned above creates the unique sections of the report, rather than focusing on specific programs or audience groups for each section. Each section therefore includes feedback from multiple audiences and programs relating to that theme.

Overall we had a very productive 2019 season, breaking our records for number of people reached in a single season. Notable differences to the 2019 season from previous seasons include participating in festivals around the Great Lakes, operating two ships simultaneously in different geographic locations, and the opening of our newly renovated campus, the Capt. Thomas M. Kelly Biological Station. Demand for our programming is growing, so is the potential to reach new audiences.

Program experience remains at a high-quality for our participants. Similar to previous seasons, most of our programs offer a positive, memorable, hands-on experience, though each sail or program is unique to those involved. "Experience" is the primary reason most of our teachers choose to do a program with us.

Measuring the impact of our programs continues to be a challenging metric to evaluate. For this season we decided to look at the impact our programs were having across four areas: understanding or content knowledge, interest in STEM, stewardship, and empowerment. All four areas showed a high level of interest or understanding across student and teacher responses. Most of our participants are interested in science, care about the Great Lakes, and want to be more involved with the Great Lakes or their water in general.

Lastly, we reviewed every single suggestion that participants gave us. Most respondents had no suggestions to offer, many stated they liked it "as is." Meaningful suggestions are included in the last section of this report grouped by topic, with a note about how we intend to address the topic.

The goal of this report is to summarize the perspectives of our participants about their program experience. We are currently updating some of our internal processes around the program evaluation process and this report reflects some of those changes in an effort to simplify and streamline how we collect and more readily use the feedback we receive.

# Programs of 2019

## **Schoolship**

- > Next Gen Seamanship
- > Next Gen Microplastics
- > Traditional
- > Diving Deeper

## **ROV (Remotely Operated Vehicles) Engineer and Explore**

## **Youth Overnight Programs**

- > Young Women in STEM
- > Chartered overnight programs

## **Public Sails**

- ➤ Great Lakes Discovery Sail
- > Fishes of Lake Michigan
- ➤ What's in the Great Lakes Food Web?
- > Great Lakes Under the Microscope
- Steady the Ship

## **Specialty Sails**

- > Breakfast Sail
- ➤ Dessert Sail
- > Fall Color Sail
- **➤** Member Sail
- > Partnered "Tasting" Sails Short's Brewing and Shady Lane Cellars
- > Other Partners Suttons Bay Bikes "Bike n' Boat"; TART "Bike n' Boat"

## **Festivals & Ports of Call**

- > Harbor Springs Blessing of the Fleet (*Utopia*)
- ➤ Cleveland Tall Ships America (*Inland Seas*)
- ➤ Green Bay Tall Ships America (Inland Seas & Utopia)
- > Sturgeon Bay Stop-over and Peterson Reception (Inland Seas & Utopia)
- > Escanaba Partnered with local "Sense of Place" series (Utopia)
- > **Duluth** Duluth Festival of Sail (*Utopia*)

## **Teacher Professional Development**

- > On-location School Teacher-Team Trainings
- ➤ Hosted Trainings for Teachers and Community Partners

# **Program Demand**

ISEA reached a record-breaking number of people during the 2019 season. Much of this elevation in participant numbers was due to ISEA's appearance and participation in several Tall Ship Festivals in the Great Lakes region. *SV Inland Seas* provided 28 sailing experiences for people in Cleveland, OH and Green Bay, WI while *SV Utopia* was used to provide deck tours in Green Bay, WI and Duluth, MN and a platform for dockside programs in Harbor Springs and Escanaba, MI. Not only did these festivals allow us to reach many more people, they also helped us interact with individuals beyond ISEA's typical reach.

Even though we were able to reach a record-breaking number of people for a single season, we do not intend to participate in these types of programs every year as they do limit the number of in-depth overnight programs, including Young People in STEM, we can provide. That being said, we may participate in more festivals in the future, just not every year.

Program Type	Number of Programs	Number of Participants
Schoolship Programs	118	2,733
ROV Engineer and Explore Programs	33	991
Cycling Programs	1	10
Public Programs	23	609
Overnight Programs	6	56
Single-Day Programs	37	970
Utopia Dockside Programs	8	199
Inland Seas Cleveland Tall Ship Festival Programs	13	463
Inland Seas Green Bay Tall Ship Festival Programs	15	555
Utopia Green Bay Tall Ship Festival (Estimated) Programs	Deck Tours	2,000
Utopia Duluth Tall Ship Festival Programs	Deck Tours	2,583
GTSI Teacher Professional Development Programs	29	197
Total	287	11,366

# Program Experience

ISEA offers a variety of programs, both on and off our ships. Programs primarily differ in their intended audience, e.g. classroom students, accelerated high-school science classes, teacher training, families, or the general public. Below is a summary of participant opinions of their direct experience on our programs.

**Public Sails** - These include all public science-themed sails, like our "Great Lakes Under the Microscope" where participants collect samples similar to our Schoolship students, as well as specialty sails, like our "Breakfast" and "Fall Color" sails where participants get to relax and enjoy the sail.

**Schoolship** - These hands-on and curriculum-based programs are typically delivered to K-12 students (i.e. this is a field trip program for a class). Emphasis is on observing, learning, and experiencing the water and the organisms that live in it. This category was divided into teacher and student perspectives.

**Youth Overnight** - This encompasses the feedback of all our youth overnight participants. Science is a main component of the overnight programs, however, there is an additional emphasis on personal growth, teamwork, and community.

Every program ISEA offers is intended to be a positive, engaging, and memorable experience. These experiences are at the core of our mission; they are opportunities to inspire Great Lakes curiosity, stewardship, and passion among learners of all ages.

## Public Sails

(includes science-themed and specialty day sails, e.g. dessert, color, etc.; n=36)

How would you rate your overall experience? **4.8** out of 5 How was the balance of learning to fun that you experienced? **4.8** out of 5 How likely are you to recommend this experience to others? **4.5** out of 5

#### Comments:

"Last year was our first sail. We loved it so much that we did it again! Already planning again for next Father's Day!"

"Loved it! Very interactive, learned a ton about the Great Lakes and how we can safeguard these treasured waters. Thank you! Only wish we would have sailed a little further out."

"This was the best educational program I have attended outside of college. I applaud Inland Seas for their professionalism & sense of sharing adventure & learning to everyone. Its the second program I have taken my family to & we will always remember it. We are grateful for having such a great experience."

Suggestions and critiques are summarized in the "Room for Improvement" section below.

# Schoolship Experience - Students

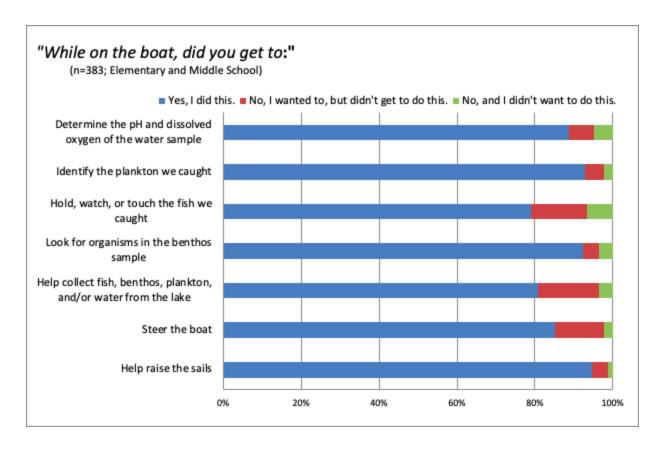
(includes all half-day programs intended for student-groups, e.g. Next-Gen, Diving Deeper, ROV, 'custom' Schoolships, etc.)

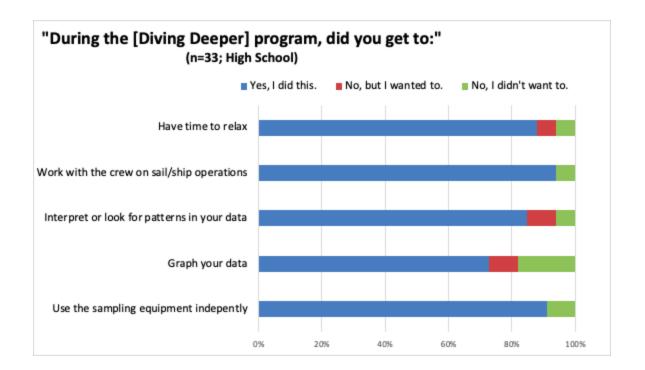
"Do you feel like you had a hands on experience?"

(n=127; ROV, Diving Deeper, and High School)

**74%** I did everything I wanted to do.

17% I didn't get to do some of the things I wanted to.





Our high school-aged participants were asked to tell us about their Schoolship experience, below is a selection of their comments.

#### Comments:

"Honestly it was an amazing experience to go and to be able to have hands on lea[r]ning and to be able to sail the ship, the whole couldn't have been better..." (Next-Gen)

"It was a very informative experience. I had no knowledge of the Great Lakes and their conditions prior to this trip." (Diving Deeper)

"I extremely enjoyed being able to decide what I wanted to focus on. I think that allowed me to be even more interested in the research. I also loved teaching the other groups about the findings at the end of the day." (Diving Deeper)

## Schoolship Experience - Teachers

(Survey results of the group leader, typically a formal teacher, who brought the student group(s) on one or more half-day program(s); n= 35)

"Please share your primary reason for choosing to do a program with us." (Top 5)

**Experience** 

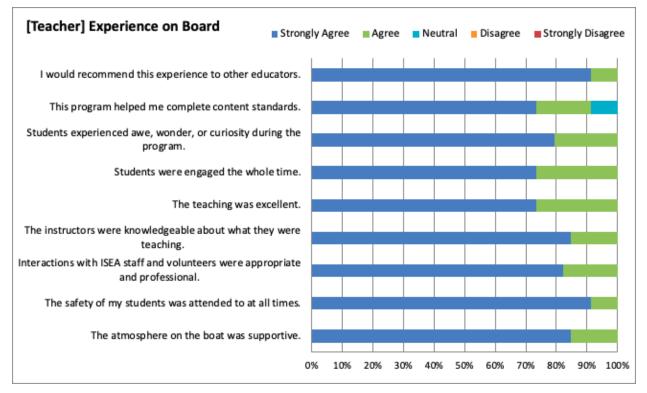
Science

Hands-On

Stewardship

**Great Lakes** 

**100**% of survey respondents felt that the content level was "just right" for their students.



#### Comments:

"Can't say enough about your Next-Gen program! Both the students and teachers got so much out of our experience. The students were engaged throughout the trip and we the teachers loved the station rotations and how the students became the teachers/experts at their assigned station."

"I really liked the added peer teaching section. I know my students were very involved in taking the information and logging it correctly."

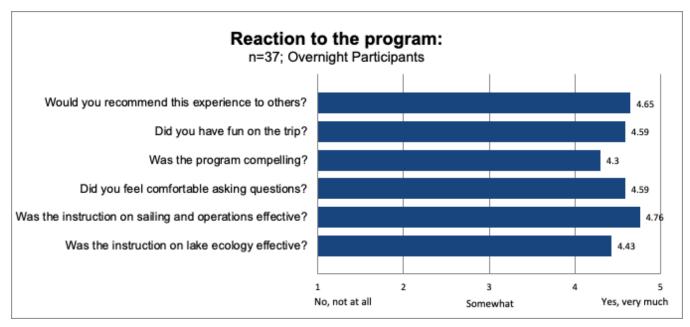
"Great job! The volunteers were amazing this year! Thank you!"

"The patience and knowledge of your crew has been wonderful each year. It is a lot of work to plan and facilitate these trips from our distance. I have always been pleased with the ease of communication between us and you. I do not have any suggestions for making it easier, or more meaningful, other than

keep doing what you are doing. We especially loved the kids teaching stations. It was empowering for them. It has been a wonderful experience for us all the way around."

## Youth Overnight Programs

(Includes Young Women in STEM and chartered overnight youth groups; n=37)



#### Comments:

"Everything was great about this experience!"

"hONESTLY I LOVED THIS TRIP ONCE AGAIN, IT WAS A PLEASURE COMING BACK. KEEP DOING WHAT YOU'RE DOING!"

"N/A everything was a great learning experience"

"Keep the cook! Keep the smiles! Keep safety first! Be blessed!"

# **Program Impact**

What impact do our programs have? Are we accomplishing our mission to inspire Great Lakes curiosity, stewardship, and passion? Traditionally impact or effectiveness of a program was assessed in terms of content learned. This was evaluated with "before and after" tests to determine knowledge gained or gains in understanding of a concept. The mission of ISEA goes beyond just delivering content however; we also strive to inspire interest and positive attitudes about science and the Great Lakes. While we still do ask content-related questions on our surveys, we also ask questions that assess attitudes, values, and interests as well. Looking at how participants respond across all these measures paints a clearer picture of our impact.

Impact of our programs is evaluated across four themes:

**Understanding and Content Knowledge** - assesses both content and perception **Interest in STEM** (science, technology, engineering, math) - assesses curiosity and career interests

**Stewardship** - assesses attitudes, beliefs, and values

**Empowerment** - assesses confidence, motivation, and inspiration

All data and graphs represent responses <u>after</u> participating in a program, except where noted. These data include the following programs: Schoolships (Next-Gen, Traditional, and Diving Deeper) and youth overnight programs (Young People in STEM and chartered groups). Currently, only our surveys for evaluating our youth overnight programs are best formatted for comparing responses before and after a program. See "Room for Improvement" section for more information.

<u>Key to graphics:</u> YO - Youth Overnight, DD - Diving Deeper, HS - High School, MS - Middle School, Elem - Elementary

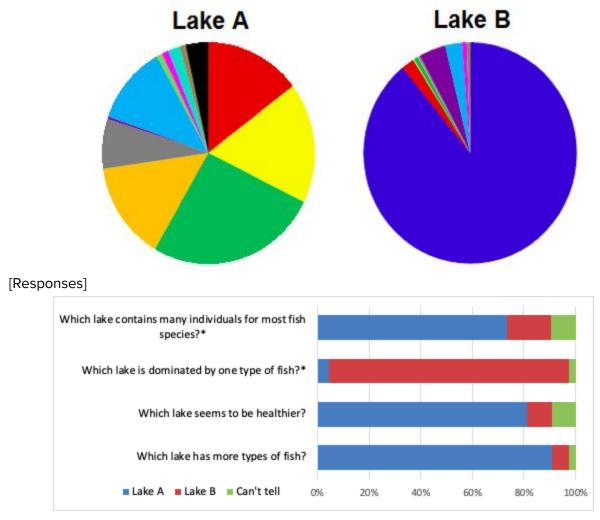
Note: Most Diving Deeper participants were high school-aged, some were older. The "HS" demographic represents high school-aged participants on a Next-Gen program, i.e. they did not participate in a Diving Deeper program.

# **Understanding & Content Knowledge**

The following are some of the content-related questions that we asked students on our surveys. The responses reflect answers given after the trip unless otherwise noted.

## [Question]

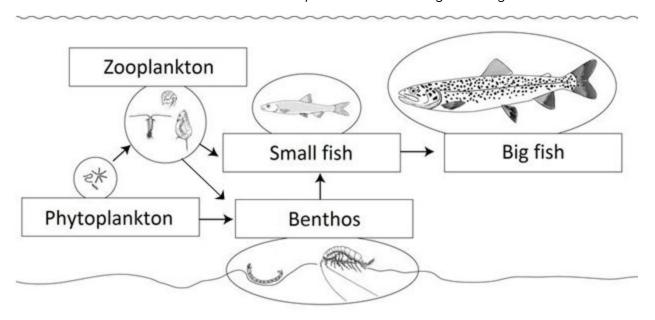
"These pie charts show all the fish in two different lakes, Lake A and Lake B. Each color shows a different type of fish found in the lake."



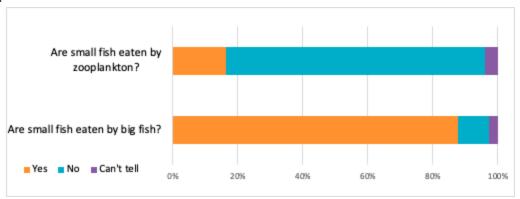
(Combined HS, MS, and Elem, n=387)
\*MS and HS responses only, n=219

## [Question]

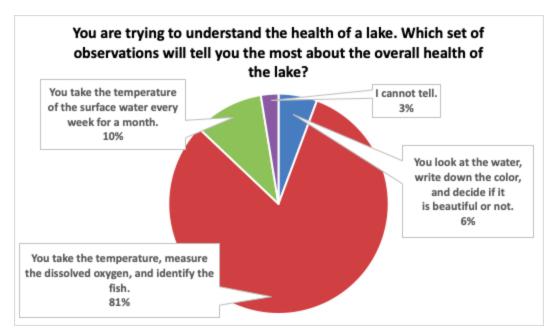
"This is a Great Lakes food web. Answer the questions below using this image."



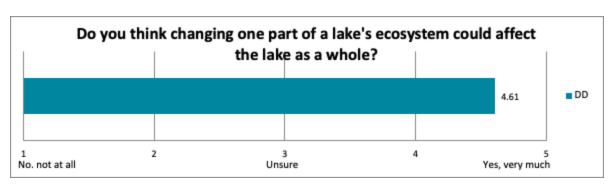
## [Responses]



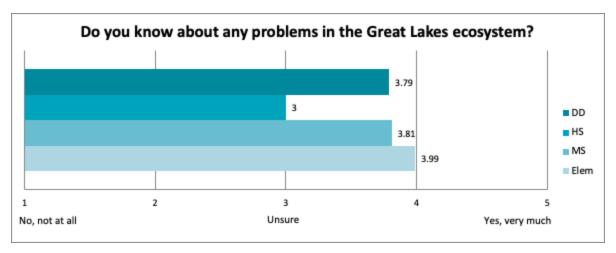
(Combined Elem and MS, n=384)



(HS, MS, Elem combined; n=387)



(DD, n=33)

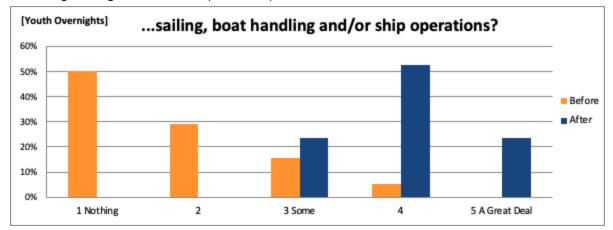


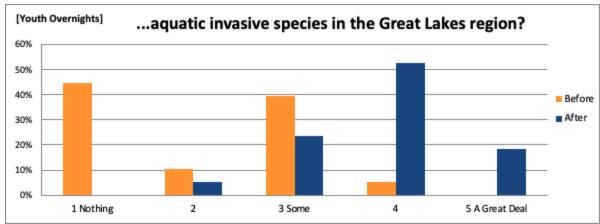
(DD, n=33; HS, n=2; MS, n=218; Elem, n=167)

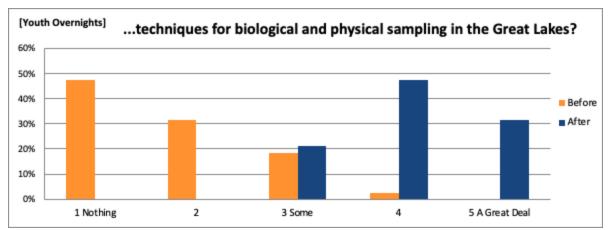
## [Before and After Question Series]

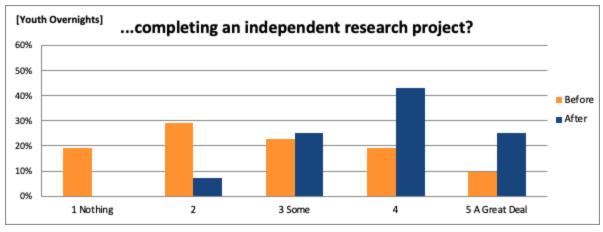
## "Indicate how much you know about the following:"

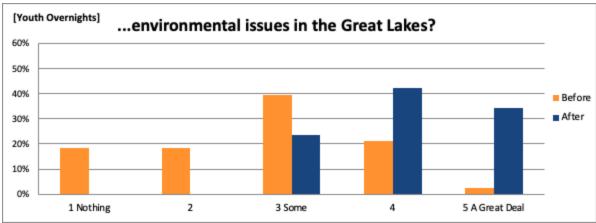
(Youth Overnight Programs; *n*=38 respondents)











# Interest in STEM (Science, Technology, Engineering, Math)

The following are some of the interest-related questions that we asked teachers and students on our surveys. The responses reflect answers given after the trip unless otherwise noted.

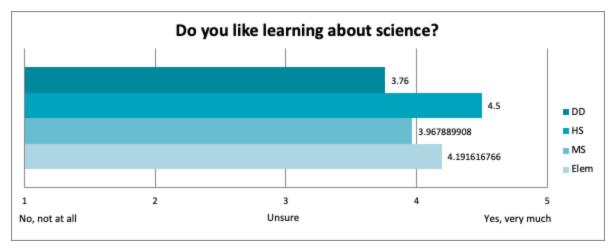
"My students demonstrated an <u>increased interest in science</u> following this experience." (Teacher respondents; n=34)

Agree or Strongly Agree 100%

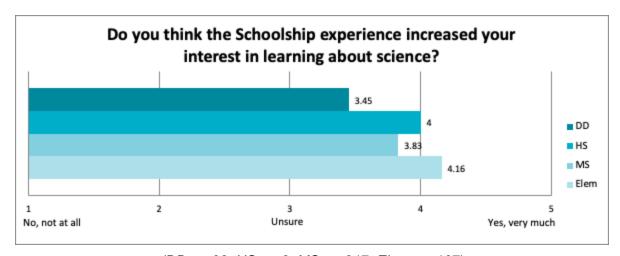
"My students demonstrated an <u>increased interest in the Great Lakes ecosystem</u> following this experience."

(Teacher respondents; n=34)

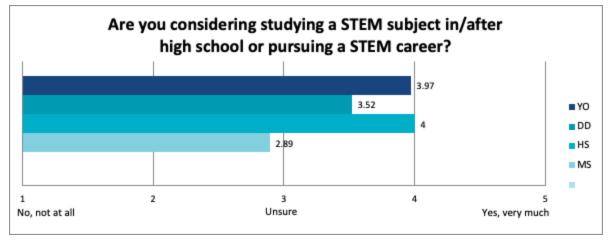
Agree or Strongly Agree 100%



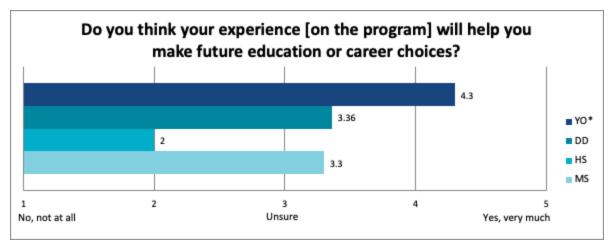
(DD, n=33; HS, n=2; MS, n=218; Elem, n=167)



(DD, n=33; HS, n=2; MS, n=217; Elem, n=167)



(YO, n=37; DD, n=33; HS, n=2; MS, n=217)



(YO, n=37; DD, n=33; HS, n=2; MS, n=217)

# Stewardship (attitudes and values)

The following are some of the stewardship-related questions that we asked teachers and students on our surveys. The responses reflect answers given after the trip unless otherwise noted.

"Do you incorporate stewardship education or stewardship projects into your curriculum?" (Teacher respondents; n=33)

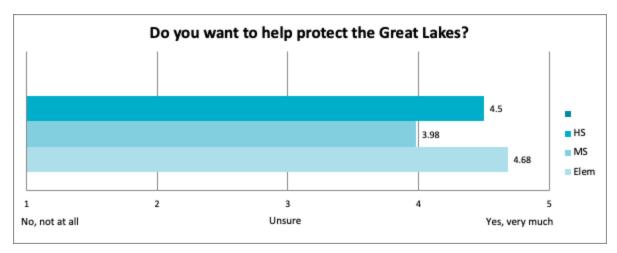
YES 76%
No, but I want to 18%
NO 6%



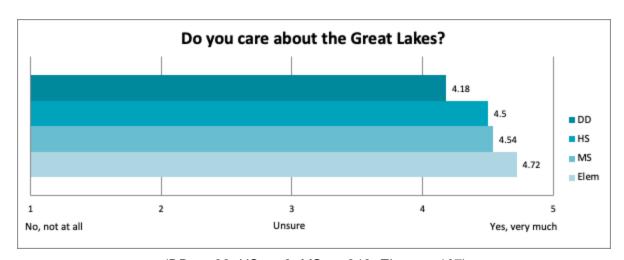
(DD, n=33)

<sup>\*</sup>This question was worded differently on the youth overnight survey.

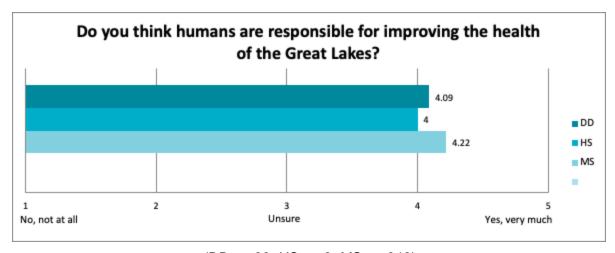
<sup>&</sup>quot;Do you think this experience gave you information about yourself that will help you make future education, training, or occupation choices?"



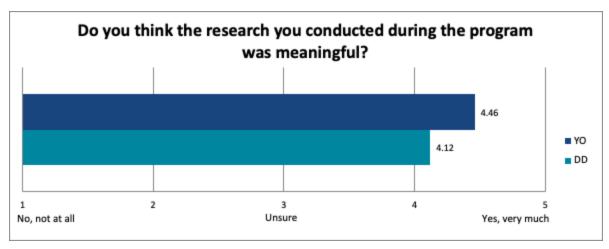
(HS, n=2; MS, n=218; Elem, n=167)



(DD, n=33; HS, n=2; MS, n=218; Elem, n=167)



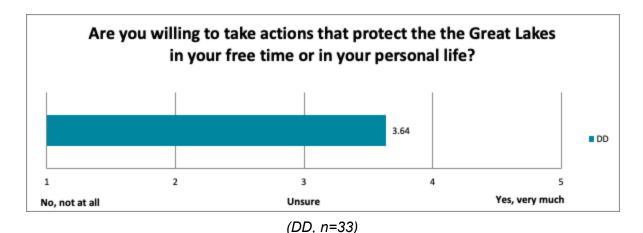
(DD, n=33; HS, n=2; MS, n=218)

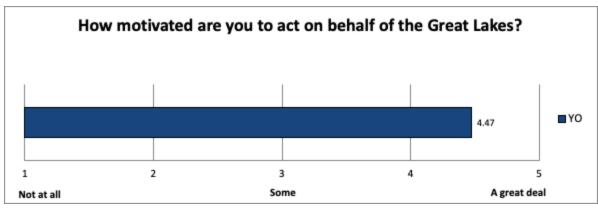


(YO, n=37; DD, n=33)

## **Empowerment** (confidence, take action)

The following are some of the empowerment-related questions that we asked students on our surveys. The responses reflect answers given after the trip unless otherwise noted.





(YO, n=38)

# Room For Improvement

All of our programs strive to connect people to the water and deepen their sense of place within the context of the Great Lakes. These programs do not happen by themselves, nor on a whim. It takes the whole village to plan, prepare, train, maintain, and deliver these programs; our volunteers are the lifeblood of our programs.

Logistics is the name of the game when it comes to getting all the pieces in place, in the correct order, at the right time to deliver a high-quality experience each and every time. While we do plan, prepare, and train during the "off-season" in order to be ready for the "on-season," sometimes we miss the mark. Below is a list of the common-themed "suggestions for improvement" we received on surveys and throughout the season. Each theme is addressed with a plan of action for our future programs.

## Weather

We cannot control the weather, and every effort is given in pre-trip and booking information to remind participants to dress appropriately and bring layers. We will always keep sets of foul-weather gear with our program materials for all ship-based programs we offer. In the event of weather-related cancellation (i.e., thunderstorms) we offer to continue the program inside, or the teacher can opt to reschedule. Our schedule is planned out several months in advance, so no cancellation is easy to reschedule and we try to avoid them as much as possible.

"Give us a 'rain check'. We drove all the way from Paradise and took three days out of school to do so, and we never got to sail." - Teacher

"Pack old blankets to use on deck when it's cold outside." - Overnight Participant

## Funding/Transportation/ Distance

Transportation and logistic issues combined with funding are the primary barriers for our school groups. Now that our dormitory space is complete, we believe the option to spend the night here at our facility in Suttons Bay will help alleviate some of the logistical barriers faced by our school groups. There will be many things to learn as we enter this new arena of offering accommodations and we look forward to collecting feedback on this in the 2020 season.

"Having the program fee covered was a game-changer for us. Thank You! ...Are you ever in the Detroit area during the school year?" - Teacher

"Unsure [if we will come next year], the cost for transportation would pose an issue. With it being an 8-hour round trip, we needed to rent a coach bus. We are not allowed to have parent drivers in our district. Hopefully we can make it work. :-)" - Teacher

"It's a long way! I will at least take a year off. :-)" - Teacher

## **Program Elements**

## Sailing

The action-packed format of Schoolship works well for classroom groups, but seems too much for adult or public groups. Our public 2-hour sails include more undirected time to enjoy the sail.

"Overall, we really enjoyed the outing. The scenery was breathtaking, and the information presented was interesting. We enjoyed hoisting sails, too. The only thing I would suggest is to have more actual cruising time. "Although it wasn't very windy, we would have loved to have a more time cruising around on the water. I think two hours of education, followed by an hour of cruise time would be a better balance, and it would also reinforce the need to keep our Great Lakes healthy for all to enjoy." - Great Lakes Discovery Sail Participant

## **Steering the Ship**

This element is emphasized on our Traditional and Next-Gen programs, but not on Diving Deeper where the experience is more about completing research projects. The opportunity to steer or not on a Next-Gen sail mostly comes up in the Microplastics station, so we will focus on including this into that station during spring training 2020.

"I didn't see any students at the helm on this trip. They've always enjoyed that in the past." - Teacher "Some students were able to steer the boat, others were not. Kids disappointed." - Teacher

## Welcome/Greeting

The campus layout at ISEA is spread out (~5 minutes to walk out to the dock from the center) and sometimes when a teacher arrives late in Suttons Bay, they instruct the bus driver to head right down to the dock, but the Lead was waiting for them in the center. We are working to standardize the welcome and integrate this into our Lead instructor training and pre-trip information.

"It was great, welcome us more when we arrive. Even if it is early." - Teacher

## Noise

The ship environment is loud, even on low wind days. *SV Inland Seas* does have a PA system and deck speakers, and a few of our Lead instructors make good use of this equipment. We currently do not require any of Leads to use this, leaving it up to them to determine whether or not they need assistance with their "outside" voice. We will emphasize the importance of clear communication (including volume) in our spring training.

"Encourage you to invest in a small amplification system. The person who guided our night skies tour was very knowledgeable, but hard to hear on one side of the boat or the other. His info was so complicated and without being able to hear him very well, our group ended up just enjoying the beautiful sky, but not learning as much as we might have expected. PS, we are neither old nor hard of hearing." - Evening Sky Gazing sail participant

## **More Information**

ISEA continues to look for new ways to reach different audiences and our specialty "partnership" sails, started in 2016, are just one way to reach non-family adult audiences. While beer, wine, and dessert tasting sails have proven to be enjoyable sails, we are also still working out how to deliver a unified message into these programs. One idea is to train an "Ambassador" role for these specialty sails so that a unified message about the work of ISEA is present in every sail we offer.

"Would have liked to hear about the mission of inland seas. The Shorts representatives were okay, but they arrived with warm beer and only two coolers." - Short's Brewing Tasting sail

## **Diving Deeper**

Diving Deeper has now been offered for five seasons, with 2015 being a pilot season. While it feels established as an offering, it still has its kinks and details to be worked out. Some groups have very little time to complete all the things asked of them (e.g. microplastics), while other groups are finished well before anyone else (e.g. water quality). Diving Deeper will continue to be refined and every effort is made to review the processes of each station.

"[M]aybe the next group could have a little more time to go through the pieces they collected. [M]y group did not have a lot of time." - Student

### **ROV**

Many of the 2019 ROV programs were offered aboard SV *Utopia*, unlike the 2018 season when all were offered at the pier without the ship present. Pop up tents were used shoreside last season, but cannot be used aboard the ship. This winter we will find a way to cover the deck, either with tarp or canvas, and make sure to have a filled water cooler available as well.

"ROV programs are HOT and there was no shade or water available. Please address." - Volunteer Instructor

## **Overnight Programs**

Our overnight programs are currently under review in order to restructure the format of the program. We strongly believe that the overnight experience is one of the most impactful programs we offer, but there is always room for improvement with one key area being the first day experience. Participants currently receive an overload of information on the first day regarding personal safety, ship operations, and science equipment among many other topics. We are committed to finding the right balance of learning and acclimating on that first day.

"It would be nice if we could take a tour of the boat when we first got there so that we knew what everything was called." -Overnight Participant

"You can add actual fishing and more explanation on the drills." -Overnight Participant "Go slower on the first day for the sea sick ones." -Overnight Participant

## **Trip Preparation**

Our website and pre-trip information guide for teachers is currently being updated, with a streamlined and unified vision in mind. We are reducing the number of sub-menus and places where teachers would have to go on the website to find all the information they would need for their trip.

"Perhaps update the pre-trip preparation information and background knowledge for kids." - Teacher

#### Mismarketed

Every effort will be made to make sure the program details are as accurate as possible wherever it gets posted (online or paper flyers), including possibly pointing out that we don't actually sail a far

distance away on a 2- to 3- hour sail. Also including when we sail out of a different port of call than our normal home-base in Suttons Bay.

"I didn't realize we would continue to circle Suttons Bay many times seeing the same views." - Fall Color sail

"My advice would be to identify the program offered e.g. title plus 'not offered sailing out of Hessel' Previously... we sailed out of Hessel each trip." - Hessel Public Participant

"Only wish we would have sailed a little further out." - Great Lakes Discovery sail

"I was on the beer cruise, and one of the descriptions about the sail spoke about sailing in Suttons Bay, so I had thought perhaps we were going to be sailing there. It was not a really big deal, and we had a great time, but were a little confused." - Short's Brewing Tasting sail

## Surveys and Evaluation

At ISEA we are working to improve and update our review and evaluation process. This evaluation report reflects the first step toward a more direct approach to evaluating our programs. Four major themes surfaced while thinking about how to evaluate whether or not we are achieving our mission each season: Demand, Experience, Impact, and Room for Improvement.

Even though each of these four themes are addressed in the surveys we currently send out, there is no single question that is the same for a single theme or across all programs and age groups. Many of these themes are expressed across different questions, with some similar questions worded just differently enough across age groups to classify as a different question altogether. Students of Schoolship and overnight programs are the demographic that we receive the most feedback from via surveys, followed by teachers and then public sail-participants. We had no survey to give other participants we worked with this season, and therefore cannot fully evaluate the effectiveness of the following: chartered "Schoolships" with organized groups outside the school system, dockside programs, dock tours, festival participants, adult overnight programs, or specialized (customized) Schoolships (e.g. Early Childhood Sail, Art Sail).

Additionally, even though before-and-after style surveys can be very insightful about what is learned on your program, they can only be used if collected correctly, i.e. directly capturing the same population before and after. This is not true of our Schoolship student responses, but was the case with our overnight participants, hence these are the only program for which before and after responses were shown in this report. More discussions are needed with the ISEA education community to decide whether or not the effort is worth it to use before and after style surveys with our Schoolship students. Many changes would be needed at the process level to ensure that the same student population takes the before and after survey.

We are working to address this issue of survey evaluation directly by re-working the participant surveys this winter. The new surveys are expected to include questions that directly collect feedback in the themed areas (Demand, Experience, Impact, Improvement), in language that can be used across age-groups and programs, especially new or one-off programs. We hope to be able to compare responses across programs and age-groups by standardizing the questions asked. This will enable us to evaluate by comparing the strengths and weaknesses of each program, as well as to compare the relative impact across different styles of programming.