

Inland Seas Education Association 2024 Program Evaluation Report



Inland Seas
EDUCATION ASSOCIATION



Program Evaluation Summary

ISEA's 2024 programmatic year saw progress toward our [strategic plan goals](#) of ship-based programming, year-round programming, and campus utilization. We grew our participant reach through the full implementation of our second schooner, *Alliance*, which allowed us to conduct programs at eight ports between the two ships, deepening our impact in the Grand Traverse region while simultaneously reaching more participants throughout the Great Lakes. In addition, we saw educators continuing to take advantage of non-sailing season opportunities through our Watershed Exploration programs. To support the growth in programs, we hired our first School Partnership Coordinator, a full-time education staff position new to ISEA. This position will focus on building relationships with K-12 educators, recruitment for our Schoolship and Watershed Exploration programs, and supporting our professional development opportunities. In the 2024 season, ISEA surpassed pre-pandemic participant numbers, indicating strong overall program engagement.

2024 Season By the Numbers

Program Type	Programs and Participants, Past Years			2023		2024	
	2019	2021	2022	Programs	Participants	Programs	Participants
Schoolship Programs (including Fall Detroit)	118, 2,733	43, 1,403	106, 2,647	101 34%	2467 36%	106 37%	2,698 39%
ROV & Engineer and Explore Programs	33, 991	19, 396	33, 832	20/7%	480/7%	30 10%	774 11%
Watershed Exploration	–		21, 269	40/14%	536/8%	20 7%	335 5%
ISEA Public Programs	23, 609	29, 647	21, 530	30/10%	794/12%	43 15%	916 13%
Overnight Sailing Programs	6, 56	4, 36	5, 30	4/1%	33/<1%	6 2%	51 <1%
Single-Day Sail Programs (all charters)	37, 970	45, 995	42, 926	48/16%	1035/15%	82 28%	2066 30%
<i>Inland Seas</i> Away Ports	2 ports	8 ports	4 ports	5 ports	-	4 ports	-
<i>Alliance</i> Away Ports	N/A	N/A	N/A	2 ports	-	2 ports	-
<i>Inland Seas</i> Tall Ship Festival Ports (every 3rd year)	2 ports (28 sails), 1018		2 ports, 1,133	-	-	-	-
Teacher Professional Development Programs	Varied, 197 (includes youth)	3, 54	3, 55	6/2%	86/1%	2 <1%	33 <1%
Total	217, 6,574	143, 3,531	231, 6,422	249	5,431	289	6,873

Table 1. Summary of 2024 educational programs compared to previous years. Historical values provided through 2019.

Sail Days and Strategic Audience: Sail days are a metric of how ship time is allocated during the sailing season. In 2024, ISEA vessels *S/V Inland Seas* and *S/V Alliance* conducted programming for a total of 24 weeks. Programming, program-related transit, and volunteer training took place on the ships for a total of 191 of 280 available days (68% of possible days). We were intentional to not start at full capacity when scheduling our first season with two vessels running full-time. This allowed us to develop systems for scheduling, maintenance, and logistics before delivering at ISEA’s goal of sailing 75% of available sail days by 2026. Table 2 summarizes how sail days were distributed across strategic audiences identified in ISEA’s strategic plan. In terms of distribution, we are close to our 2026 goal with volunteers being slightly higher due to transits.

Sail Days Devoted to:	Primarily K-12 Audience		Teacher Audience	NW Michigan Regional Audience		Charter and Partner Audiences	
	Schoolship Programming (Schools)	Educational Charters (All-ages)	Teachers (PD, appreciation)	General Audience (Public Programs)	Volunteers (training, transit, appreciation), Members, Donors	College/ University Partners	Group Charters (non-instructional)
2022	65	3	1	26	24	14	4
2022 (of 137 days)	47%	2%	<1%	19%	18%	10%	3%
2023	74	26	1	17	21	17	6
2023 (of 162 days)	46%	16%	<1%	10%	13%	10%	4%
2024	64	32	1	23	40	19	12
2024 (of 191 days)	34%	17%	<1%	12%	21%	10%	6%
	51% combined						
2026 Goal	57%		2%	18%	11%	7%	5%

Table 2. Sail days in 2022 and 2023 compared to ISEA strategic goal 1.1 The total sail days in 2024 were 191.

K-12 Audiences (Spring & Fall Schoolship, ROV, and Watershed Exploration)

K-12 audiences are the primary demographic targeted by ISEA programs, reached primarily through the spring and fall Schoolship programs, when the sailing season overlaps with the academic school year, as well as our season extension land-based Watershed Exploration programs. Grade distribution of K-12 audiences who attended our 2024 programs are noted in Table 3. To evaluate the K-12 programs, teachers were invited to complete an evaluation form. The results of the evaluation are outlined in the sections below.

Grade Distribution	Schoolship		ROV		Watershed Exploration 2024
	2023	2024	2023	2024	
K-3	2	2	0	0	1
4-5	30	42	9	9	2
Middle School	35	28	4	11	10
High School	21	29	6	8	7
Adult/College	5	5	0	2	0

Table 3. Grade distribution of K-12 programs, 2023 and 2024.

Scholarship Support: Of the 106 Schoolship programs held in Traverse City, Suttons Bay, and Detroit, 74 were partially or fully funded, a 70% scholarship support rate. Of 30 ROV programs, 12 were partially or fully funded for a 43% scholarship rate. Of 20 Watershed Exploration programs, 65% were fully or partially funded through support from the Brookby Foundation. **Combined, K-12 programs were subsidized at a rate of 63%.** ISEA is proud to fundraise for scholarships to offset the true cost of programs in an effort to reduce financial barriers for K-12 participants.

Schoolship

Between the 2024 spring and fall seasons, **ISEA delivered 106 Schoolship programs to 2,698 participants.** This is more than recent seasons, primarily due to the addition of *Alliance*. This was the first year that we were able to offer Schoolship programs from two of our own vessels, with programs offered from *Alliance* for 4 of the 5 spring Schoolship weeks in addition to a week during fall Schoolship in Detroit. Our aim is to have the program flow feel as similar between the two ships as possible for the ease of the crew and instructors.

One way of measuring our goal of reaching a more diverse program audience, to increase the number of historically underrepresented students working in fields related to the stewardship of the Great Lakes, is by tracking which schools are considered Title 1 schools. Title 1 schools are institutions that receive federal funding to assist students from low-income families. **In 2024, 42% of schools that participated in Schoolship programs self-identified as a Title 1 school.** Some schools stated on their registration that they did not know if they were Title 1 schools, meaning the true number may be more than this. ISEA will continue to prioritize reaching underserved students throughout the Great Lakes region with our programs.

Schoolship Evaluation

Feedback regarding the Schoolship seasons was largely favorable. Teachers' favorite station was plankton (38.5%), with water quality as a close second (30.8%), whereas students' favorite station was also plankton (38.5%) with fish as a close second (30.8%). All stations were mentioned at least once within these two questions.

Reasons for choosing the program included:

- Past success and fun times with the Schoolship program
- “A wonderful opportunity for my students to experience Great Lakes ecology, ecosystems, and geography. They always have a great time.”
- “Trip of a lifetime for many students.”
- Receiving a full scholarship through participation in the Great Lakes Watershed Field Course
- Fitting with the science curriculum

Teachers identified the best part of the trip as steering the ship, seeing excitement on their students’ faces, having students participate in authentic scientific experiments, excellent instructors who kept students engaged, and exposing students to different aspects of the Great Lakes they didn’t think about before. All of these areas align with and support our approach to hands-on, experiential learning aboard a unique setting of a schooner. Multiple teachers commented on their ability to sit-back and enjoy the trip because the staff and volunteers were able to keep the students engaged so well.

Future considerations:

- Out of the 9 respondents, nobody stated that they watched the safety video before the trip. While a comprehensive safety talk is given prior to boarding, we should consider how the safety video is getting shared to increase the number of teachers who show it to their students ahead of time.
- Fine-tuning the Great Lakes Challenge station. Respondents gave mixed reviews on their students enjoying this station, but 60% thought it was a valuable addition to the program. As our newest station, this is an area to improve upon.
 - Mixed feedback on the station included:
 - “They stayed engaged, but it was probably my least favorite station.”
 - “I think it is a great activity and a culmination of all that is done on the trip. Cooperation analyzing, evaluating, are all critical parts of this and the students have to do it mainly on their own. I love to see the struggle followed by the ah-ha/light bulb moments.”

ROV Engineer and Explore

In 2024, **ISEA delivered 30 ROV programs to 774 participants**, up significantly from 2023. More teachers chose to combine an ROV program with a Schoolship program, creating a full field trip day. This was the first year that the new pavilion was available for use at Discovery Pier and it created an area for students to build their ROV that was more functional in terms of space and protection from weather. This, along with continuing to keep equipment maintained, has increased the professionalism of the program.

ROV Evaluation

We received surveys from 3 teachers who participated in the ROV program and their feedback was very positive, with teachers sharing that their favorite part of the program was:

- “Watching the kids thinking through the design process”
- “Watching some of the quieter people step up to help build the ROV. All the members in each team added their insight to the construction and helped test it in the water.”

Teachers spoke to the students enjoying driving, building, testing, and improving the ROVs. Teachers all strongly agreed that their group was engaged, learned about engineering design, learned about teamwork, gained valuable leadership experience, and made an important connection to the Great Lakes. All of these are key aspects to the iterative engineering process and lets us know we are meeting our learning goals through the ROV program.

One teacher commented, "This was my first time experiencing the ROV. I think all student groups should experience the sailboat and ROV." *We agree!*

Watershed Exploration

ISEA delivered 20 shoreside Watershed Exploration programs to 335 participants. These included a combination of programs delivered at ISEA's campus in Suttons Bay and at nearby SEEDS After School programs in Brethren, Mesick, Benzie, Kalkaska, Marion, Forest Area, and Rapid City.

Watershed Exploration Evaluation

Survey feedback for the programs from ISEA's campus indicated that the top three motivators for participation were: 1) that the program sounded interesting, 2) teachers wanted to get their students outside, and 3) the desire to increase students' comfort level with STEM. All respondents strongly agreed that they felt prepared for the field trip, coordinating logistics went smoothly, and the amount of paperwork was appropriate. Additionally, **100% of respondents strongly agreed that preparing for this trip was easier than preparing for trips to other places.**

Feedback included:

- "I love that students learned a new skill that is hard to practice during the school day. It also exposed them to career opportunities that are not just college."
- "I enjoyed the way the instructors used games to explain things."
- "Students most enjoyed working in pairs and connecting what we've been learning about the Great Lakes to streams and smaller water sources."

Suggestions for improvement included:

- Spending more time outside
- Incorporating or suggesting a take home follow up activity

Survey feedback for the SEEDS programs was largely positive with respondents noting clear communication, preparation, and excitement for the programs. **All respondents agreed that the material was age appropriate, was aligned to appropriate science and math standards, and empowered student-led inquiry.** ISEA facilitation received positive comments in regards to the style of teaching, relating well to students, and focusing on hands-on programming. In terms of changes, SEEDS staff commented that they would like the programs to be more than two days and they would like an agenda and more information ahead of time regarding what the students will be doing during the program.

Summer Programs

The summer season allows us to deliver ship-based programs across the Great Lakes while also offering public programs from our home ports in Suttons Bay and Traverse City.

Away Port Charters

This past summer we provided vessel-based programs at eight ports across Lake Michigan, Lake Superior, Lake Huron, the St. Mary's River and the Detroit River. These ports included Suttons Bay, Traverse City, Chicago, Charlevoix, Hessel, Houghton, Sault Ste. Marie, and Detroit.

Programming at these ports was delivered in collaboration with the following partners:

- Michigan Sea Grant
- Chicago Yacht Club Foundation
- Friends of the Chicago River
- Urban Rivers
- Illinois Indiana Sea Grant
- Illinois DNR Coastal Management Program
- Camp McSauba
- Les Cheneaux Watershed Council
- Great Lakes Fishery Commission
- Eastern Upper Peninsula ISD
- MiSTEM Network
- Keweenaw Bay Indian Community
- Western UP 4H
- First Catch Fishing
- Watersmeet Trout Hatchery & Fish Farm
- Minnesota Sea Grant
- Michigan Tech University Summer Youth Program
- GeoHeritage with Michigan Tech University
- Northern Institute of Applied Climate Science
- Bay Mills Indian Community
- Lake Superior State University
- University of Michigan Detroit River Story Lab
- Michigan DNR Outdoor Adventure Center
- Freshwater Forum at Cranbrook Institute of Science

Overnight Programming

Overnight multi-day programs on the ships are an opportunity to connect with participants on a deeper level about the Great Lakes by spending extended time with them. **This year we delivered six overnight programs for a total of 24 days reaching 51 participants.**

Overnight programs were conducted with the following focus areas:

Maritime Skills and Career Development: The educational focus of these programs is to teach fundamental maritime skills such as safety, navigation, and the physics of sailing. Participants are also exposed to opportunities for careers in the maritime industry, such as Captain, Mate, Deckhand, and Ship Cook. Spending extended time with professionals in this setting allowed space for conversations to learn about accessing and pursuing these careers directly from those within the industry. Additionally, youth on these sails were eligible to earn their Seagoing Skills Certificates, a micro-credential organized by Tall Ships America, of which ISEA is a member-operator. These credentials covered safety and mariner skills.

2024 Maritime Skills and Career Development programs included:

- Chicago Yacht Club Foundation Youth Overnight
 - *Chicago to Suttons Bay - 5 days*
- Detroit Youth Overnight
 - *Suttons Bay to Detroit - 5 days*

Great Lakes Science: The educational focus of these programs is to explore the functioning and health of the Great Lakes through authentic science-based experiences onboard a schooner. Participants engage in research by studying and analyzing samples including fish, plankton, water quality, microplastics, and benthic sediment. They also help the crew with vessel operation, learning to hoist and handle sails, plot and steer a course, and assist with meals in the galley.

2024 Great Lakes Science programs included:

- Young Women in STEM
 - *Traverse City to Traverse City - 3 days*
 - *Charlevoix to Suttons Bay - 3 days*
- Michigan Tech Summer Youth Programs “Ship to Shore: Freshwater Ecology”
 - *Houghton to Marquette - 5 days*
- Women on the Water (adult participants)
 - *Traverse City to Traverse City - 3 days*

Evaluation Results:

MI Tech Summer Youth Programs

“It was an amazing once in a lifetime experience. I learned a lot but had so much fun doing it!” - Participant

- 100% of Participants stated that their experience was different than the classroom experience at home
- 83% rated the experiments/hands-on activities during their course as Excellent. 17% rated Good.
- 100% of Participants would recommend Summer Youth Programs to others
- 100% of Participants noted an increase in confidence in their ability to attend and navigate college
- 100% of Participants rated ISEA Instructors as “Excellent”

Young Women in STEM

Participants were surveyed before and after their shipboard experience. Survey results showed that participants’ motivation to act on behalf of the Great Lakes remained high from the pre-survey to post, indicating that students who chose to participate in the Young Women in STEM program were already highly motivated to protect the Great Lakes. Participants indicated a strong increase in knowledge about the Great Lakes’ biological community and food web, environmental issues in the Great Lakes, plastic pollution in the Great Lakes, and techniques for sampling. In combination with their pre-existing motivation to protect the Great Lakes, we can be confident that the participants now have more knowledge and skills to be able to effectively protect the Great Lakes. Beyond Great Lakes specific knowledge and motivation, survey results indicate a high confidence prior to participation in the program in regards to teamwork, which stayed the same throughout.

Public Programming

Two vessels operating full-time this season allowed us to have a more consistent public sail schedule from Suttons Bay and Traverse City. Through this, **ISEA offered 43 public sails reaching 916 participants**. Public program options included 3-hr Great Lakes Discovery sails, 2-hr Fishes of Lake Michigan and Steady the Ship sails, and specialty 2-hr Fall Color and Night Sails.

Our post-sail survey received 35 responses. Responses were positive across the board with respondents rating their experience on a scale of 1-5 (5 indicating strongly agreeing with the question).

Average response to the following survey questions:

- How knowledgeable were Inland Seas' staff and volunteers? **4.89**
- How passionate were Inland Seas' staff and volunteers about Great Lakes issues? **4.94**
- How helpful were Inland Seas' staff and volunteers? **5.00**
- How beneficial was the program information to you? **4.62**
- How was the balance of "learning to fun" that you experienced? **4.71**
- How was your overall experience? **4.82**
- How likely are you to recommend this experience to others? **4.97**

Positive written comments included:

- "Information presented was appropriate for all ages. As a former Michigander, it is concerning that we share some of the same destructive invasive species. My fishing waders are soaking in disinfectant since we got back."
- "The time spent on each activity was great for our 7 and 5 year old kids. Long enough to provide information and keep them engaged, but not too long to lose interest."
- "This was an unexpected, but wonderful experience for the whole family - adults and kids alike. The hands-on experiments were interesting and very educational...as a college educated adult I learned a lot that I didn't expect. Learning line handling and sailing skills was fun too. The staff are friendly and engaging - it's clearly evident they love what they do and care about our fragile environment. The captain piloting the ship was jaw dropping skillful in maneuvering the ship. Highly recommend this sailing and discovery cruise! Definitely will do it again when other family are here visiting. Well done!"

Suggestions for improvement included:

- "Some parts seemed aimed at younger children, but it was very fun. Perhaps you could do more advanced information on a sail or two."
- "We loved this! All the stations were so fun. My only note is that I could have used a little more time just chilling and appreciating the beauty of sailing!"
- "The detailed email with directions may have said this, but it would have been nice to have a sign saying, "check in on the boat" at the edge of the parking lot and dirt trail. We asked inside and another family asked us in the parking lot."

Takeaways

As we look to next season, we will continue to ensure that our staff and volunteers remain passionate about the programs they are delivering and helpful to the participants. Instructor training will continue to incorporate teaching methods for different age groups and demographics. ISEA staff will discuss directional signage that is more clear for participants and fine tune the balance of active learning time to time for relaxation on public programs.

Teacher Professional Development Opportunities

Great Lakes Watershed Field Course Culminating Event: June 17-18, 2024

A group of seven teachers returned to ISEA's campus in June to celebrate and reflect upon their work over the '23-'24 school year. During this two-day period they shared their projects with one another, discussed challenges and successes, and traveled to workshops throughout the region to continue their watershed learning.

Teacher feedback was positive and included:

- "This is the best PD I have ever gone to. Part 1 & 2! I love the topics and camaraderie."
- "I liked the variety of topics and teaching ideas. Thank you for modeling for us."

Great Lakes Watershed Field Course: August 6-9, 2024

In our sixth iteration of the Great Lakes Watershed Field Course, **26 educators** traveled from **Illinois, New York, Ohio**, and across **Michigan** to spend an immersive four days learning how to engage students in local environmental issues, investigate solutions, devise a plan, and take action. The educators will be supported by ISEA staff throughout the '24-'25 school year as they facilitate student-led stewardship action projects in their classrooms.

Teachers increased their own watershed knowledge (100% were able to name the watershed they lived in following the field course, with only 85% doing so prior to the field course). They indicated that the most effective workshop components of the field course were the Schoolship experience on *Inland Seas*, touring the Kids Creek restoration project, and learning about water quality at Leo Creek Preserve. The Earth Force process as a tool for implementing stewardship projects with students was also well-received.

Teacher feedback included:

- "I loved hearing from someone (Watershed Center) who helped organize a project (Kids Creek restoration) that involved so many different stakeholders. It gave me ideas for who to contact during my own projects and also gave me hope that we can make a difference."
- "Sailing was a memorable and exciting experience. It was informative and gave a new perspective of the lake that many have not had or cannot easily access."
- "I found the Earth Force sessions extremely helpful. Earth Force is an excellent format to empower students and give them a voice. I will be able to utilize the structure for any kind of student project, not just one focused on watersheds. Very valuable."

Takeaways

Based on survey responses, we will keep the Earth Force model as a core part of the field course training. We will also maintain the partnerships with Leelanau Conservancy, Watershed Center, and the Wastewater Treatment plant. Changes we will consider include highlighting more project examples, giving time throughout the week for lesson planning, incorporating more educational context to the kayaking trip, incorporating a workshop on indigenous perspectives of the watershed, and bringing an alumni teacher from the program in to share about their experience.

Other Outreach Opportunities

Outside of direct program delivery, ISEA participates in other outreach opportunities to connect with organizations and audiences throughout the state about the importance of protecting the Great Lakes through education. In 2024, we reached **over 1,800 people** through presentations at local community events, conferences, summits, and for interested groups.

ISEA presented at: Tall Ships America Conference, DNR Nature Center Summit, Michigan Science Teacher Association (MSTA) Annual Conference, TC Sunrise Rotary, Grand Traverse Yacht Club, Leelanau Peninsula Economic Foundation, MakersFest, Freshwater Summit, and Leelanau Historic Society Maritime Heritage Day, among others.

Dormitory Use

Tables below summarize dormitory usage by audience (volunteers, interns and seasonal staff, school groups, and other groups). ISEA dorms have supported volunteers from a long distance, created accessible housing for interns and seasonal staff, and provided affordable overnight accommodations for school groups participants.

Volunteers	# Volunteers Housed	# Days Stayed
2021	5	22
2022	12	64
2023	5	15
2024	16	69

Interns and Seasonal Staff	#Interns & Seasonal Staff Housed	# Days Stayed
2021	8	163
2022	4	415
2023	8	315
2024	4	585

School Groups	# Groups Housed	#Individuals Housed	# Days Stayed
2021	2	68	2
2022	11	260	12
2023	20	435	24
2024	12	322	16

Other Groups (e.g. Teachers, non-school use)	# Groups Housed	#Individuals Housed	#Days Stayed
2021	3	49	7
2022	4	150	11
2023	3	29	12
2024	8	99	14

Conclusion

ISEA's 2024 programmatic season was overall successful. Program and participant numbers were higher than pre-pandemic numbers, indicating strong program operation and engagement. This was in part due to the addition of *Alliance* increasing our shipboard capacity. ISEA continues to work to make our programs accessible by traveling to ports around the Great Lakes and providing scholarship funds to offset the true cost to participants.

The greatest factor for success throughout all types of programming is the professionalism, enthusiasm, and knowledge of our staff and volunteers. This theme was common among feedback from all areas of programming and audiences.

From public sail participants, ISEA staff and volunteers received:

- A top rating of 5/5 for helpfulness
- An average of 4.94/5 for passion about Great Lakes issues
- An average of 4.89/5 for knowledge

Teacher feedback from the Great Lakes Watershed Field Course stated, *“Julie and Juliana were extremely effective facilitators and masterful managers of time. They were engaging, friendly, and supportive. The work they did to prepare the field course was obvious to all participants. They were good listeners and made everyone feel included and valued.”*

In addition to ISEA’s staff and volunteers, the legacy of the program is a reason many teachers return. *“Nearly 30 years ago we were looking for a quality trip to take our students on and one of the teachers on our team had taken a group of students with you and the rest as they say is history. We continue to go because of the quality instruction and the student engagement that is provided by the staff and volunteer instructors.”*

Future Considerations

Based on feedback from this year, the following are areas in which ISEA’s staff will work toward improvement:

- Consider more directional signage throughout the Suttons Bay campus for public participants to find their way to the schooner more easily
- Update pre-trip materials for the teachers to highlight the safety video, ensuring more students watch it prior to attending the field trip
- Improve the Great Lakes Challenge station to be more clear for self-guided engagement
- Develop ways to increase the survey return rate from participating schools for more thorough feedback
- Develop take-home activities for Watershed Exploration programs for teachers to implement following the field trip for lesson extension
- Continue to build out the Watershed Exploration arm of ISEA’s programs with a strong focus on recruitment and program development in the coming year
- Increase the number of programmatic sail days to deliver ISEA’s goal of sailing 75% of available sail days by 2026. To fill these days, we will be strategic in our schedule development to maintain program fidelity and staff retention.