



2023 Education, Outreach, and Communications Report



May 2024

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Cover photo: The Aquarius Art Tunnel, created by artist Janavi Mahimtura Folmsbee, introduces Houston airport travelers to the sanctuary in vivid color. Photo: Michelle Johnston/NOAA

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Disclaimer

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Report Availability

Electronic copies of this report may be downloaded from the Flower Garden Banks National Marine Sanctuary [website](#).

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Overview

The purpose of this document is to report the Flower Garden Banks National Marine Sanctuary (FGBNMS) Education, Outreach, and Communications activities completed during fiscal year 2023 (FY23).

Outreach is a team effort at FGBNMS. For most of FY23, there was only one full-time staff member assigned to education and outreach activities, who also started to manage the Sanctuary Advisory Council mid-year. However, the remaining sanctuary staff stepped in to contribute their expertise to education and outreach efforts throughout the course of the year.

Together, staff provided 35 presentations/programs to schools, clubs, and the general public; conducted seven trainings for naturalists, teachers, aquarium professionals, and advisory council members; hosted or participated in six community events; and reached the public through exhibits at seven different venues. Our programs, trainings, and events reached almost 4,000 people, while our exhibits placed information about the sanctuary in front of another 3.4 million zoo, aquarium, and museum visitors.



Sanctuary research partner Dr. Xinping Hu, from Texas A&M Corpus Christi, speaks with Texas State Aquarium visitors at the FGBNMS activity booth during the aquarium's Earth Day celebration. Photo: Kelly Drinnen/NOAA



Education/Outreach Staff Projects

Kelly Drinnen, Acting Education Coordinator (full-time)

- Website
- Social Media
- Communications
- Presentations
- Events
- Seaside Chats
- Webinar Support
- Outreach Products
- Condition Report
- Exhibits
- Aquarium Sanctuary Partnerships for America's Keystone Wildlife
- Media Requests
- Visitor Services
- Recreation and Tourism
- Content Verification
- Editing
- Special Projects – Sanctuary History, Hiring staff
- IT Support
- Sanctuary Advisory Council

Leslie Whaylen Clift, Constituency Affairs Coordinator (part-time, ended 3/11/23)

- Sanctuary Advisory Council
- Ocean Guardian Schools
- Presentations
- Condition Report
- Climate Vulnerability Assessment
- Cultural Landscape
- Diversity & Inclusion Grant Program Planning
- Editing

Taylor Galaviz, Constituent Engagement Specialist (full-time, started 8/14/23)

- Sanctuary Advisory Council
- Ocean Guardian Schools
- Presentations
- Events

FY23 Highlights


In FY23, education and outreach programs reached about 1,000 fewer people than the year before. This was the result of ongoing staffing issues, efforts to begin annual education/outreach reporting, and the need to hire a new Constituent Engagement Specialist. However, about 400,000 more people were exposed to various sanctuary exhibits during the same time frame.

The sanctuary research team really stepped into outreach roles this year, providing several kinds of classroom presentations and hands-on opportunities for local college and university students, participating in career fairs, and networking with students, which, in turn, helps to prepare and encourage a future workforce. One of the research staff also spearheaded a program funded by an internal Diversity and Inclusion mini-grant from the Office of National Marine Sanctuaries. This resulted in new outreach to underserved community members through a field trip to the Moody Gardens Aquarium and a Try Scuba Event at a local pool. An *Earth is Blue* video of the field trip program helped to further promote sanctuary efforts.



An internal Diversity and Inclusion mini-grant funded a partnership opportunity with Big Brother Big Sisters of Galveston, Moody Gardens, and FGBNMS. Photo: NOAA

The completion of the Aquarius Art Tunnel by artist Janavi Mahimtura Folmsbee, a Sanctuary Advisory Council member, was a significant milestone in FY23 (see cover photo). While much of the support work leading up to the project was completed the previous year, the grand opening took place this year, and it was worth the wait! The resulting public art project representing FGBNMS is truly immersive, with bold colors on walls and floors, unique lighting features overhead, and an original soundtrack that includes sanctuary sounds. An unbelievable amount of media coverage was generated by this exhibit, with mention of FGBNMS in every single article.



This year also saw a significant increase in the number of student interview requests, from high school through Ph.D. level. Most were related to specific school projects, but some were also interested in applying for NOAA scholarships and were researching how they might be able to support sanctuary efforts.

The staff wrote and edited the education, heritage, and sense of place ecosystem services sections for the sanctuary's upcoming condition report. Since these sections were not part of the last report, a lot of research went into determining what topics should be discussed and what information was relevant. It was an interesting exercise in understanding how different sanctuary activities support each of these topics.

Education/Outreach Programs

School Programs

College: 11 programs, 141 students/instructors

There were no requests for K–12 classroom presentations this year.

College level presentations were provided in person by members of the research team, at three local schools, with assistance from education staff. Topics ranged from general sanctuary introductions to fish and coral identification, lionfish dissections, and research diving.

After-School Programs

7 programs, 1,421 students/teachers

Four after-school programs involved networking/career discussions with various Texas A&M Galveston (TAMUG) groups, while another had a sanctuary staff member judging a local middle school science fair.

Two programs, supported by a Diversity and Inclusion mini-grant from the Office of National Marine Sanctuaries, provided hands-on experiences for members of the Galveston Big Brothers/Big Sisters group. The experiences included a field trip to Moody Gardens and a Try Scuba event at the local community pool. The Try Scuba event was also available to other underserved audiences in Galveston. An Earth is Blue [video](#) about the collaborative Moody Gardens event was released in November 2023.



The sanctuary partnered with Texas Scuba Adventures to offer a Try Scuba event for underserved audiences at a local community pool. Photo: Kelly Drinnen/NOAA

Summer Programs

There were no summer programs this year due to staffing limitations.

Presentations

11 presentations, 425 participants

Presentations for adult audiences generally last about an hour, although some are shorter. These presentations introduce people to sanctuary habitats and marine life, and are often supplemented with information on topics like climate change, coral bleaching, or invasive species. A question and answer session follows each presentation, allowing for more in-depth discussions and additional topics of interest.

FY23 audiences included members of Osher Lifelong Learning Institute, Rotary Club, The Wednesday Club, and a church, as well as shell and sea bean collectors and divers. Two of these programs were conducted virtually.

Community Events

6 events, 1,030 people in attendance

Participation in community events was limited this year due to staffing considerations.

At the beginning of November, FGBNMS hosted a booth at Dickinson Market on the Bayou. However, attendance was low and the sanctuary is unlikely to participate in the future.



A volunteer helped sanctuary staff host a booth at the Dickinson Market on the Bayou, a small, local farmers market. Photo: Kelly Drinnen/NOAA

At the end of November, sanctuary staff attended the dedication of the Aquarius Art Tunnel at Houston's George Bush Intercontinental Airport. G.P. Schmahl gave a short talk about the sanctuary and participated in the official ribbon cutting ceremony.



Sanctuary staff and friends pose with artist Janavi Mahimtura Folmsbee following the official dedication ceremony for the Aquarius Art Tunnel at Houston's George Bush Intercontinental Airport. Photo: Marissa Nuttall/NOAA

In April 2023, FGBNMS supported a booth hosted by NOAA Ship *Thomas Jefferson* at the Galveston Tall Ships Festival. Later that month, FGBNMS hosted a booth at Texas State Aquarium during their Earth Day celebration. Research partners from Texas A&M Corpus Christi and the Harte Research Institute volunteered at our booth with some of their students.

In June, FGBNMS hosted a booth at Artist Boat's annual World Ocean Day Festival in Galveston, in conjunction with staff from the [Mesophotic and Deep Benthic Communities \(MDBC\)](#) restoration projects and a couple of local volunteers.

In August, MDBC staff hosted a Get Into Your Sanctuary event on behalf of FGBNMS. The event focused on the use of remotely operated vehicles (ROVs) to explore mesophotic areas, inside and outside the sanctuary. Participants took turns snorkeling over a reef canvas and fish photos strategically placed on the bottom of the local community pool, and driving the sanctuary's small ROV over these same features. The overwhelming success of these activities has encouraged the sanctuary to plan for more of the same in FY24.



A young boy operates a small ROV in the local community pool during the annual Get Into Your Sanctuary event. Photo: National Marine Sanctuary Foundation

Seaside Chats

4 presentations, 807 participants

The Seaside Chats program stayed virtual in 2023, since this allows more people to participate and gives the program a broader geographic reach. An average of 200 people attended each webinar, representing a total of 34 states, two U.S. territories, and 10 countries.

Three of the presentations focused on sanctuary history, as a follow up to the 30th anniversary, while the fourth looked at environmental DNA.

- February 1 – The Best Job Ever, presented by Steve Gittings, Office of National Marine Sanctuaries
- February 8 – Reconstructing the Flower Garden Banks from the Inside Out, presented by Bill Precht, Dial Cordy and Associates, Inc.
- February 15 – Exploring a Future Sanctuary, presented by Tom Bright, retired, Texas Sea Grant
- February 22 – Coral Forensics in the Deep Flower Garden Banks, presented by Luke McCartin, Lehigh University

While attendance was lower this year than last, it's difficult to say why. Both the subject matter of the presentations (more history than science) and a declining interest in online offerings could be factors. However, participation is still much higher than what we were able to reach with in-person programs.

This program continues to be popular with local Master Naturalists, who are allowed to count their participation toward continuing education requirements. Teachers who attend are also offered continuing professional education hours. Students sometimes participate to earn extra credit in their classes.

Citizen Science

Lionfish Invitational: 2 presentations, 56 participants

City Nature Challenge: 0 participants

Volunteer divers and research partners participated in two [Lionfish Invitational](#) expeditions (June 12–13 and July 24–26, 2023) to remove lionfish from FGBNMS. This included a one-hour introductory presentation about the invasive lionfish problem and techniques for safe removal. Additional outreach was conducted throughout the trip as 250 lionfish were removed, measured, and stored for future evaluation, all under sanctuary permits.



This team of 30 people worked together to collect data and remove lionfish during the Lionfish Invitational trip in July 2023. Photo: NOAA

Texas Caribbean Charters once again offered a trip the weekend of the City Nature Challenge in April 2023, but the trip was canceled due to weather and no data was collected. Plans are underway to try again in 2024.

Trainings

Naturalists: 1 program, 27 participants

Zoo/Aquarium Professionals: 2 programs, 30 participants

Teachers: 2 programs, 22 participants

Advisory Council Members: 2 programs, 7 participants

Training programs are presentations of varying lengths offered to zoo/aquarium professionals and volunteers, Master Naturalists, dive professionals, teachers, and advisory council members as a form of continuing education.

Providing these groups with in-depth sanctuary information and answering their questions, increases the likelihood that they will share information about the sanctuary with their respective audiences.

Student Interviews

Students: 9

While students of varying levels have occasionally contacted the sanctuary with questions about what we do and how we do it, FGBNMS received enough interview requests this past year that we decided to track and report it. Requests ranged from general informational interviews, to discussions of sanctuary usage and needs from NOAA scholarship candidates. Interviews ranged from 30–60 minutes each.

Exhibits/Kiosks

4 aquarium exhibits, 1 traveling exhibit, 2 video kiosks, 1 partner exhibit

3,464,099 total visitation at exhibit locations

Tennessee Aquarium, Texas State Aquarium, Moody Gardens Aquarium, and Cameron Park Zoo all have [aquarium exhibits about Flower Garden Banks National Marine Sanctuary](#). Over the years the sanctuary has collaborated with these sites to provide messaging and occasional programming to supplement the exhibits.

Cameron Park Zoo (since 2010) and Downtown Aquarium Denver (since 2013) also host video kiosks about the sanctuary. These stand-alone units allow guests to interact via touch screens to learn more about the sanctuary and the wildlife that live there.

Reef on the Road is an exhibit made of three 10-foot-tall units that provide images, information, and videos about the sanctuary. The exhibit has been located at Galveston Cruise Terminal 2 since 2019. Approximately 470,000 cruise passengers encountered this exhibit as they began their journeys.

In November 2022, FGBNMS was invited to decorate a Christmas tree in the main lobby of the Houston Museum of Natural Science. Both shallow and deepwater habitats of the sanctuary were featured under the theme *Down Under, Out Yonder in the Deep Blue Gulf*. Ornaments, floral picks, and other elements were used to represent 22 different sanctuary species. NOAA, FGBNMS, and National Marine Sanctuary Foundation logos were prominently displayed on various ornaments, as well. Approximately 98,000 museum visitors had the opportunity to learn about the sanctuary from the information panel mounted in front of the tree.



The FGBNMS Christmas tree featured 22 sanctuary species, as well as logo ornaments, to help museum visitors learn about sanctuary reefs. Photo: Kelly Drinnen/NOAA

Collaborations

Aquarium-Sanctuary Partnerships for America's Keystone Wildlife

Moody Gardens, Texas State Aquarium, and Tennessee Aquarium are part of Aquarium-Sanctuary Partnerships for America's Keystone Wildlife, supported by NOAA's Office of National Marine Sanctuaries, the National Marine Sanctuary Foundation, and the Association of Zoos and Aquariums. These relationships recognize shared goals of increasing the capacity of the sanctuary to fulfill priority field conservation objectives, as well as enhancing interpretive messaging and programming.

In addition to the activities listed below, FGBNMS collaborated with or shared content about these partners on numerous social media posts.



Sanctuary staff visited Moody Gardens' 2022 Ice Land attraction to see the ice sculpture of R/V *Manta* along with the various examples of sanctuary fish and coral species carved from ice. Photo: NOAA

Moody Gardens

- **Coral Rescue Lab** – Moody Gardens is housing 100 FGBNMS coral fragments, of five different species, in their Coral Rescue Lab. FGBNMS provided a brief slideshow that runs outside the lab to explain why the corals are housed there and how the two organizations work together on this project.

- **Big Brothers/Big Sisters (BBBS) Program** – FGBNMS worked with Moody Gardens to expand the horizons of underserved students in the local community through BBBS Galveston. A [video](#) of the program was released in November 2023.
- **Blog Posts** – Moody Gardens posted two blog posts in support of sanctuary activities – [Working Underwater in a National Marine Sanctuary](#) and [National Marine Sanctuary Day](#).
- **Ice Land** – The Caribbean Christmas theme of this seasonal ice sculpture exhibit incorporated elements of Flower Garden Banks National Marine Sanctuary and the research vessel *Manta*.
- **Dive Support** – Moody Gardens divers trained for and supported hydraulic drilling activities in order to install new moorings at FGBNMS.

Tennessee Aquarium

- **Web Story** – Two Tennessee Aquarium divers participated as science divers to support data collection before and after lionfish removals during a Lionfish Invitational trip. Afterward, one of the aquarists wrote about her experience participating in the Lionfish Invitational. The [article](#) and a [video](#) were featured on the aquarium’s website and promoted on social media.

Texas State Aquarium

- **Dive Support** – One Texas State Aquarium diver participated in two FGBNMS research cruises that included manta tagging, mooring buoy installation, and documentation of coral bleaching. One diver also participated as a science diver to support data collection before and after lionfish removals during a Lionfish Invitational trip.
- **Fish ID Training/Earth Day Booth** – FGBNMS provided training for aquarium interpretive staff the night before hosting a booth at the aquarium’s Earth Day celebration.

Other Aquarium Support

Audubon Aquarium of the Americas was not in a position to actively participate in an Aquarium-Sanctuary Partnership, but as a result of discussions stemming from that effort the aquarium has started providing dive support for research, monitoring, and outreach efforts.

- **Dive Support** – One Audubon Aquarium diver participated in a Stetson Bank long-term monitoring cruise. One diver also participated as a science diver to support data collection before and after lionfish removals on a Lionfish Invitational trip.

Communications

Social Media

As changes occur in individual platforms and audience preferences, FGBNMS strives to strike a balance between what entices and intrigues audiences, but also educates and garners support. Interestingly, the top 10 posts from each platform in FY23 showed almost no overlap.

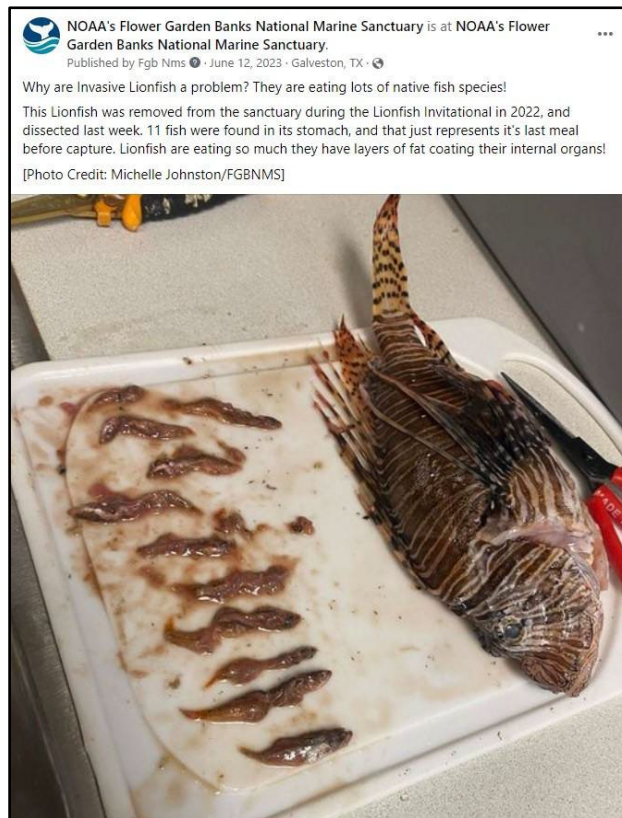
Posts generally occur once a day, Monday through Friday. Additional posts are sometimes created to recognize special events or holidays.

Facebook

End of Year Followers: 28,555

Total Reach: 421,657; Average Reach per Post: 1,673

Average Number of Posts: 21 per month



Lionfish were the subject of the most popular Facebook post of FY23, reaching over 58,000 people.

The number of FGBNMS Facebook followers has risen by approximately 500, a five-fold increase over the previous year's gains. The demographic for this page is primarily people aged 25–64, with approximately 52% male and 48% female. Content is informational and often includes links to our website for additional information.

Top 10 Posts (159,276 reached):

- 6/12/23 [Why are Invasive Lionfish a problem?](#) – Lionfish dissections – 58,254 (1)
- 8/8/23 [Tonight's the night!](#) – Coral Spawning – 39,430 (2)
- 8/9/23 [Talk about slick!](#) – Coral Spawning – 19,505 (2)
- 2/15/23 [Divers, apply now to join us](#) – Lionfish Invitational – 10,029 (1)
- 2/22/23 [Large gaping mouths allow invasive lionfish...](#) – Lionfish – 7,197 (1)
- 7/7/23 [This mesophotic reef at Alderdice Bank...](#) – Mesophotic Zone – 5,740 (3)
- 9/27/23 [Whether coming or going, gliding or turning loops...](#) – Manta Rays – 5,640 (4)
- 7/17/23 [Reef-mojis, the many faces of fish!](#) – Fish Faces – 5,186 (5)
- 4/20/23 [Celebrate Earth Day with us at Texas State Aquarium!](#) – Earth Day – 4,569
- 8/21/23 [Have you captured a one-in-a million ocean-themed photo?](#) – Photo Contest – 3,726

Twitter/X

End of Year Followers: 3,779

Total Impressions: 131,990; Average Impressions per Tweet: 524

Average Number of Posts: 21 per month



Citizen Science was the focus of the most popular Twitter/X post of FY23, reaching over 6,000 people.

Twitter, now known as X, has had ongoing changes in business practices and fluctuating response from users this year. As a result, the sanctuary saw only a small increase in followers

(60), about one fourth of our growth in previous years. Almost 39% of all Twitter users are aged 25–34, with 56% male and 44% female. Content includes 3–4 hashtags per post to draw attention to specific subjects or tie into trending topics. Website links are included when possible.

Top 10 Posts (27,658 impressions):

4/18/23 [April is #CitizenScience Month and you can help!](#) – Citizen Science – 6,567

7/13/23 [Congratulations to Adrienne Correa](#) – Volunteer of the Year – 4,150

8/15/23 [Do you study #CoralReefs?](#) – Gulf Reef Symposium – 2,895

4/7/23 [Alien Hovercraft Spotted in @FGBNMS!](#) – April Fools – 2,733

8/31/23 [What are those markings on this fish?](#) – Fish ID – 2,247

4/12/23 [Did you say there are beautiful, thriving #CoralReefs...](#) – FGBNMS – 2,240

5/11/23 [You are about to enter another realm.](#) – Mesophotic Zone – 1,824

4/14/23 [It's #NationalGardenDay!](#) – Coral Gardens – 1,761

3/14/23 [Happy #ButterfliesDay!](#) – Butterflyfish – 1,633

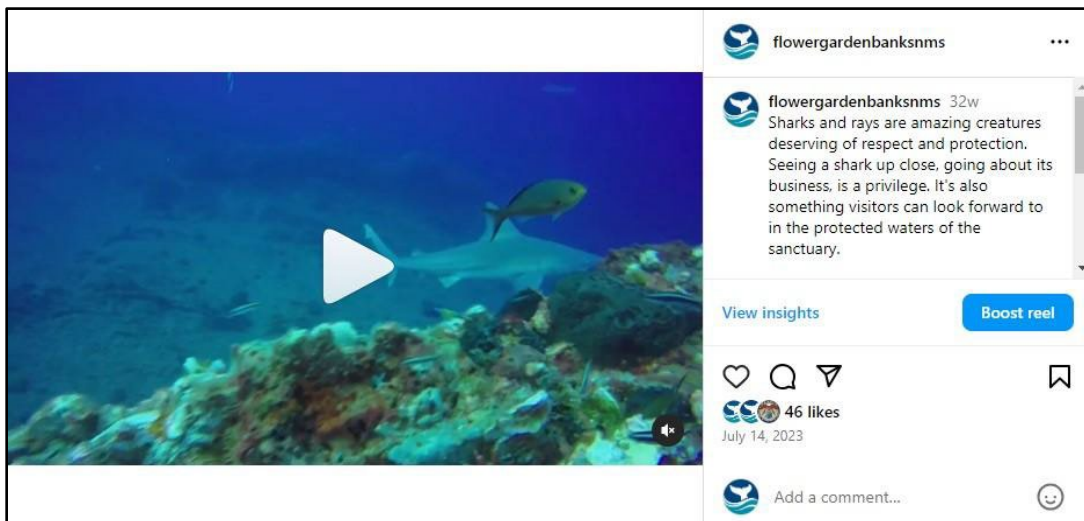
1/19/23 [A Manta for Maite!](#) – Memorial for Maite Rodriguez – 1,608

Instagram

End of Year Followers: 558

Total Reach: 29,487; Average Reach per Post: 117

Average Number of Posts: 21 per month



A shark reel was the most popular Instagram post of FY23, reaching over 1,100 people.

The number of FGBNMS Instagram followers has risen by over 300, more than doubling the amount seen at the end of FY22, after the account's first six months. The demographic for this account is primarily people aged 25–44, with approximately 68% female and 32% male. This platform is more image oriented, with short videos drawing the most attention. Numerous hashtags, in English and Spanish, are used with every post to draw attention to the content.

Top 10 posts (3,940 reached):

7/14/23 [Sharks and rays are amazing creatures](#) – Sharks & Rays – 1175

7/3/23 [Oh Buoy!](#) – Mooring Buoys – 362

8/10/23 [FGBNMS is known for a spectacular...](#) – Coral Spawning – 360

8/29/23 [How do we take water samples near the reef?](#) – Water Quality – 335

6/12/23 [Why are #InvasiveLionfish a problem?](#) – Lionfish Dissections – 309

7/13/23 [Congratulations to Adrienne Correa](#) – Volunteer of the Year – 288

8/3/23 [This could be you!](#) – Get Into Your Sanctuary Day – 284

8/15/23 [Join us at Moody Gardens, November 2-3, 2023](#) – Gulf Reef Symposium – 279

9/21/23 [We have mixed feelings about hurricanes.](#) – Hurricanes – 275

8/30/23 [Whale, whale, whale...](#) – Whale Sharks – 273

Interestingly, Flower Garden Banks National Marine Sanctuary was the subject of the second most popular [post](#) for PADI Travel in 2023, with over 11,600 likes.

Email Lists

The sanctuary maintains five different email lists, targeted to different interests. People can sign up for the lists through the [FGBNMS website](#) or a link provided at the bottom of the emails. Diving, fishing, and volunteer lists showed increases of over 1,000 subscribers in the past year, while education and sanctuary updates showed increases of almost 1,500 subscribers.

FGBNMS email subscribers totaled 30,817 at the end of the fiscal year, with some people subscribed to multiple lists.

Diving

Subscribers: 4,844

Average Number of Emails: 5 per month

Subscribers to this list include individuals, as well as dive shops and dive clubs from across the Gulf states. Content covers diving-related news and issues in the Gulf of Mexico. Emails are sent as items of interest arise, and often include news from local dive clubs.



Education

Subscribers: 7,242

Average Number of Emails: 13 per month

Subscribers to this list include formal and informal educators from across the country. Content covers information on coral reef and ocean conservation issues, educational resources, grant and scholarship opportunities, professional development workshops, job and internship opportunities, and more.

Emails are sent as content becomes available, with each containing six items of interest. Sources for these items include the Office of National Marine Sanctuaries, various branches of NOAA, marine education lists, and Houston/Galveston environmental education organizations.

Fishing

Subscribers: 4,393

Average Number of Emails: 5 per month

Subscribers to this list include individuals and some fishing related businesses from across the Gulf states. Content covers fishing-related news and issues in the Gulf of Mexico. Emails are sent as items of interest arise, and often include news from NOAA Fisheries and the Gulf of Mexico Fishery Management Council.

Sanctuary Updates

Subscribers: 9,516

Average Number of Emails: 3 per month

Subscribers to this list include individuals and media contacts. Content covers the latest sanctuary news, events, and web updates. Emails are generally sent once a week.

Volunteers


Subscribers: 4,822

Average Number of Emails: 0-1 per month

Subscribers to this list include individuals who are interested in volunteering for the sanctuary. Since volunteer opportunities with the sanctuary are few and far between, volunteer opportunities offered by our community partners are also shared.

Media Coverage

Weekly searches are conducted on the internet to identify places FGBNMS is mentioned in the news. From October 1, 2022 through September 30, 2023, 183 articles were identified and saved. Photos of the sanctuary were included in 39% of these articles. Additional mentions were also found in various online calendar-type announcements that were not tracked in any way.



The primary topics addressed by these articles were:

- Coral Health – disease, heat wave, bleaching (40 articles)
- Aquarius Art Tunnel Project (21 articles)
- Dive Destinations (15 articles)
- Marine Life – mostly Rice’s whale (14 articles)
- Lionfish (12 articles)
- Climate Risks for Coral (11 articles)
- OceanGate Submersible Accident (6 articles)
- Anthropocene (4 articles)

In addition, Kelly Drinnen was interviewed in Spanish for the first time, by both Univision Houston and Telemundo Dallas television stations. The focus for both was the marine heat wave and its effects on the sanctuary. The Univision team also visited the Coral Rescue Lab at Moody Gardens as part of their feature.

- Univision Houston – [TV](#), [Instagram Reel](#)
- Telemundo Dallas – [Part I](#), [Part II](#)

Website

The sanctuary website provides a strong internet presence. With a combination of informational and educational elements, it is a great resource to learn about the sanctuary.

Transition to the current design layout began in 2015 and is ongoing. Older style pages still exist, but are being updated to the newer format as time allows. Content on both old and new style web pages is constantly being updated.

Google analytics changed formats June 1. It is not clear if the two different analytics gather data in the same ways, but the newer version does not appear to offer all of the same kinds of information that was previously tracked.

New Pages

- December 21, 2022-September 30, 2023 – [Christmas Tree Brightens Holiday Sea-son](#) news article
 - 39 page views, average 1:50 minutes viewing time
- January 3-September 30, 2023 – [Hurricanes & Tropical Storms](#) replacement page
 - 46 page views, average 1:33 minutes viewing time
- January 3-September 30, 2023 – [Manta for Maite](#) page
 - 236 page views, average 3:08 minutes viewing time
- March 16-September 30, 2023 – [Mesophotic Species](#) page (sponge & fish posters)
 - 129 page views, average 1:45 minutes viewing time
- July-September 2023 – [Offshore Conditions](#) page (Sofar buoy)
 - 456 page views, average 36 seconds viewing time
- July-September 2023 – [Echinoderm Species](#) page
 - 298 page views, average 27 seconds viewing time
- September 2023 – [Echinoderm Image Gallery](#)
 - 24 page views, average 4:11 minutes viewing time

New Content

- [2023 Seaside Chats](#) webinar information, then recording links, including English and Spanish captions
 - 2,224 page views, average 7:36 minutes
- [2023 Lionfish Invitational](#) information and application materials
 - 3309 page views, average 1:27 minutes, 446 application downloads
- New [Sanctuary staff](#)
 - 2137 page views, average 3:20 minutes
- New [Advisory Council members](#)
 - 1196 page views, average 3:37 minutes
- [Advisory Council meeting information](#)
 - 730 page views, average 2:15 minutes
- [Advisory Council recruitment](#) information and application materials
 - 814 page views, average 3:24 minutes, 68 application downloads
- [2022 Research Report](#)

- [Advisory Council charter amendments](#)
- [FY22 Accomplishments Report](#)
- [Marine Debris Report](#)
- [2022 Education Report](#)

Website Traffic

The FGBNMS website received 117,601 page views, with the top 10 pages accounting for 53% of the website traffic.

Ten Most Visited Pages:

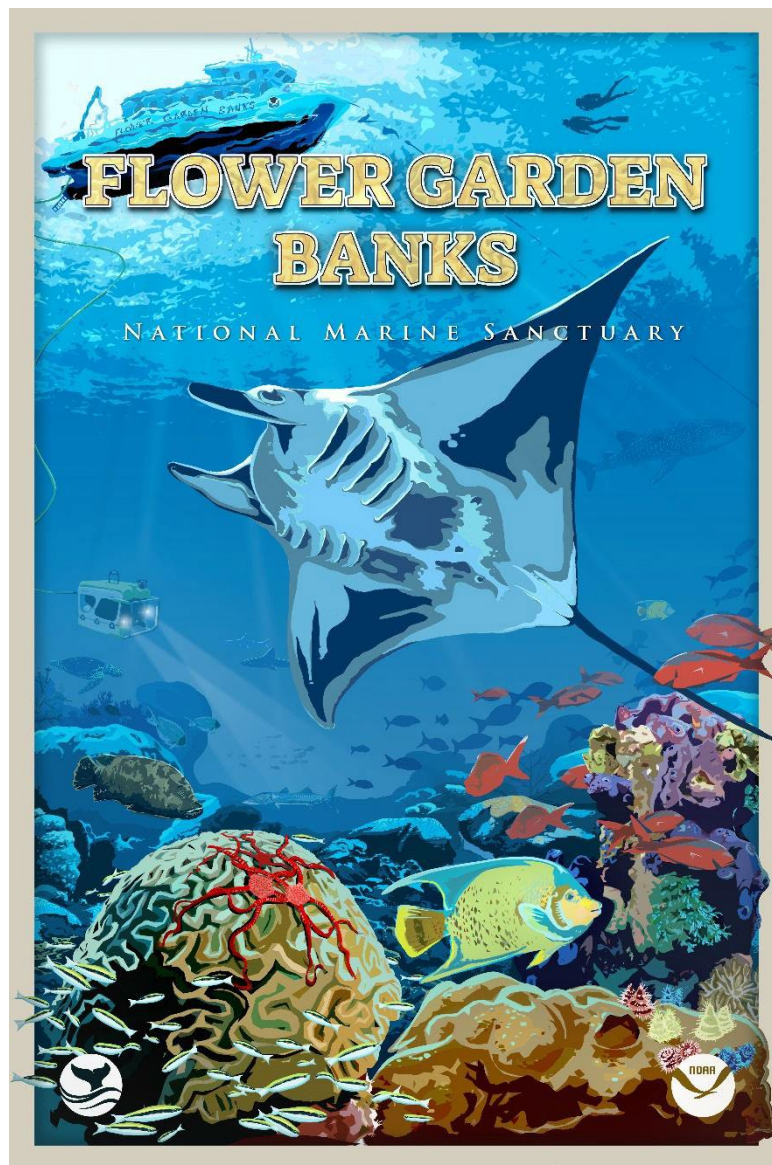
Page Name	Page Views	% of Total Page Views
Welcome	26,373	22.4%
Dive Charters (Visit)	9,756	8.2%
Invasive Lionfish (Education)	7,768	6.6%
Coral Basics (Education)	3,892	3.3%
About	3,077	2.6%
Coral Bleaching (Education)	2,830	2.4%
Visit	2,811	2.3%
Seaside Chats (Education)	2,224	1.9%
Natural Setting (About)	1,945	1.7x%
East West What Will I See (Visit)	1,805	1.5%

The most visited sections of the website were Education, About, and Visit, accounting for 57% of total website traffic.

Education/Outreach Products

In 2023, we continued sharing the fans, shopping bags, and playing cards purchased in 2022, and ordered new stickers. The sanctuary cornhole game, created in 2022, was also a popular feature at both indoor and outdoor events, where it helped us build awareness of the sanctuary.

- **Save Spectacular Commemorative Poster** – The Flower Garden Banks National Marine Sanctuary poster is the 9th in a Save Spectacular series of posters being created in recognition of the 50th anniversary of the National Marine Sanctuary System. The education team provided content and images for the backside of the anniversary poster, and summarized staff preferences for the graphic design on the front side of the poster. The poster will be available for distribution in 2024.




- **Manta Logo Stickers** – Due to the current popularity of stickers, the sanctuary decided to create new stickers using the sanctuary’s original manta ray logo. The current sanctuary logo was printed on the paper backing of each sticker.



- **Sanctuary Banner-Ups** – Pull-up banners are used to create colorful backdrops at sanctuary events and provide visual context for the sanctuary’s location. FGBNMS ordered two new banners to replace ones with outdated sanctuary maps.



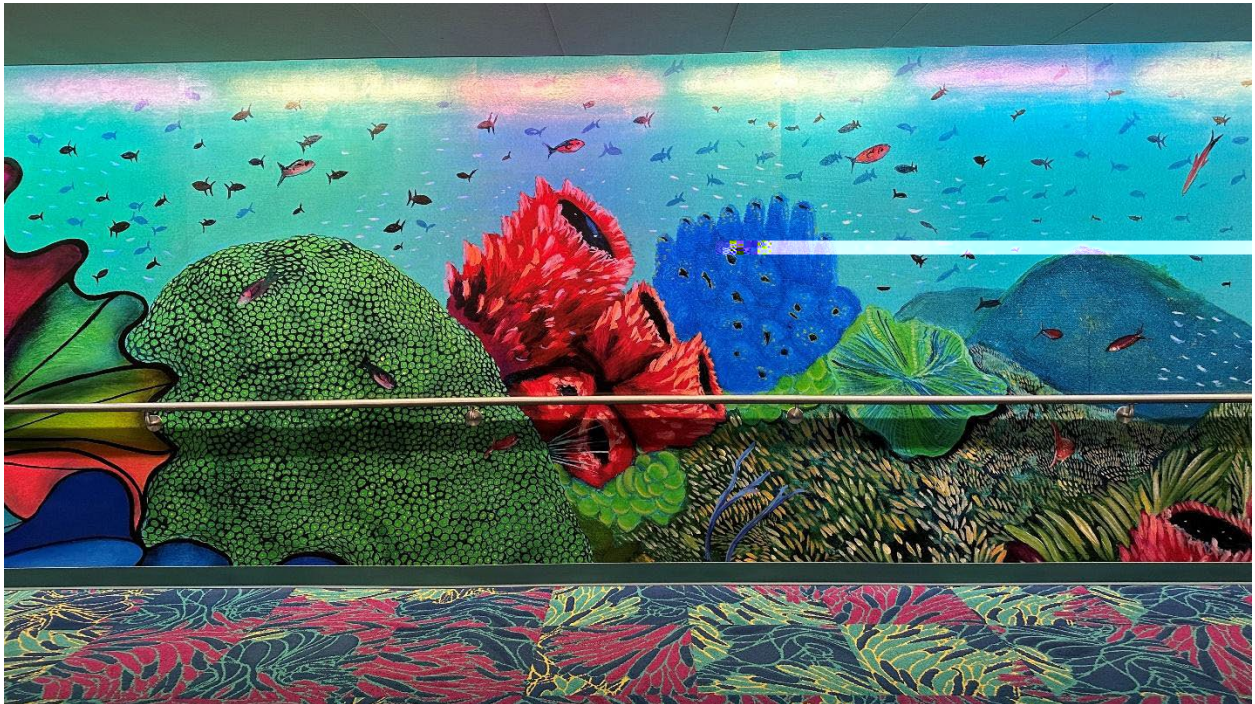
- **Ballroom Banners** –The current set of banners hanging in the ballroom at the sanctuary offices are faded and out of date. These banners provide outreach about the sanctuary system, but also provide some sound absorption in the spacious meeting area. New banners were ordered and will be hung in the ballroom after office renovations are completed in 2024.

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- **Sanctuary History Book** – A local author has written a detailed history of Flower Garden Banks National Marine Sanctuary after several years reviewing sanctuary documents and interviewing people associated with the sanctuary’s development. In 2023, the education team helped the author connect with a possible publisher and will review the draft in 2024.
 - **FY22 Education, Outreach, and Communications Report** –This was the first summary report of all sanctuary education, outreach, and communications activities for a single fiscal year. The goal is to produce a similar document each year moving forward.
 - **FY24 Education Action Plan** – This internal document outlines expected education and outreach activities for October 1, 2023 through September 30, 2024, with goals and objectives to keep our site on track. It was developed in consultation with the sanctuary research team and shared with the advisory council.

Sanctuary-Inspired Art

Aquarius Art Tunnel

In 2021, artist Janavi Mahimtura-Folmsbee began consulting with sanctuary staff regarding the Aquarius Art Tunnel, an art project commissioned by the Houston Mayor’s Office of Cultural Affairs on behalf of IAH George Bush Intercontinental Airport through the city’s Civic Art Program and Houston Art’s Alliance. The goal of the project was to create an immersive ocean experience in a 240-foot tunnel connecting two terminals at the airport, using sanctuary images and sounds for inspiration.



A section of the Art Tunnel features a reef scene of fish swarming over coral heads and sponges, all realistically representing the sanctuary’s reefs and surrounding marine life. Photo: Kelly Drinnen/NOAA

For this project, Janavi carefully selected only confirmed [sanctuary species](#), including 77 of them in all—from sharks and rays, down to shrimp and Christmas tree worms, and of course, corals. Using photos from the sanctuary as reference, she created visions of the shallow reefs, the semi-dark [mesophotic reefs](#), and even the artificial reefs of the [decommissioned gas platform](#) found within sanctuary boundaries.



The ceiling lights in the Aquarius Art Tunnel are covered with lenticulars, semi-transparent overlays that blend together Janavi's art and sanctuary photos. Photo: Kelly Drinnen/NOAA

In November 2022, this massive art installation was completed. The walls depict murals of sanctuary life and habitats intermingled with brilliant swaths of color in Janavi's signature style. Below these, the floor is covered in a specially designed carpet modeled after coral polyps. Above, the ceiling lights are covered in semi-transparent pieces called lenticulars, which show a mix of art and sanctuary photos depending on your viewing angle. In addition, visitors hear original music overlaid with reef sounds from the sanctuary, and they can create unique tunnel selfies using a custom Instagram overlay.



NATIONAL MARINE
SANCTUARIES

AMERICA'S UNDERWATER TREASURES