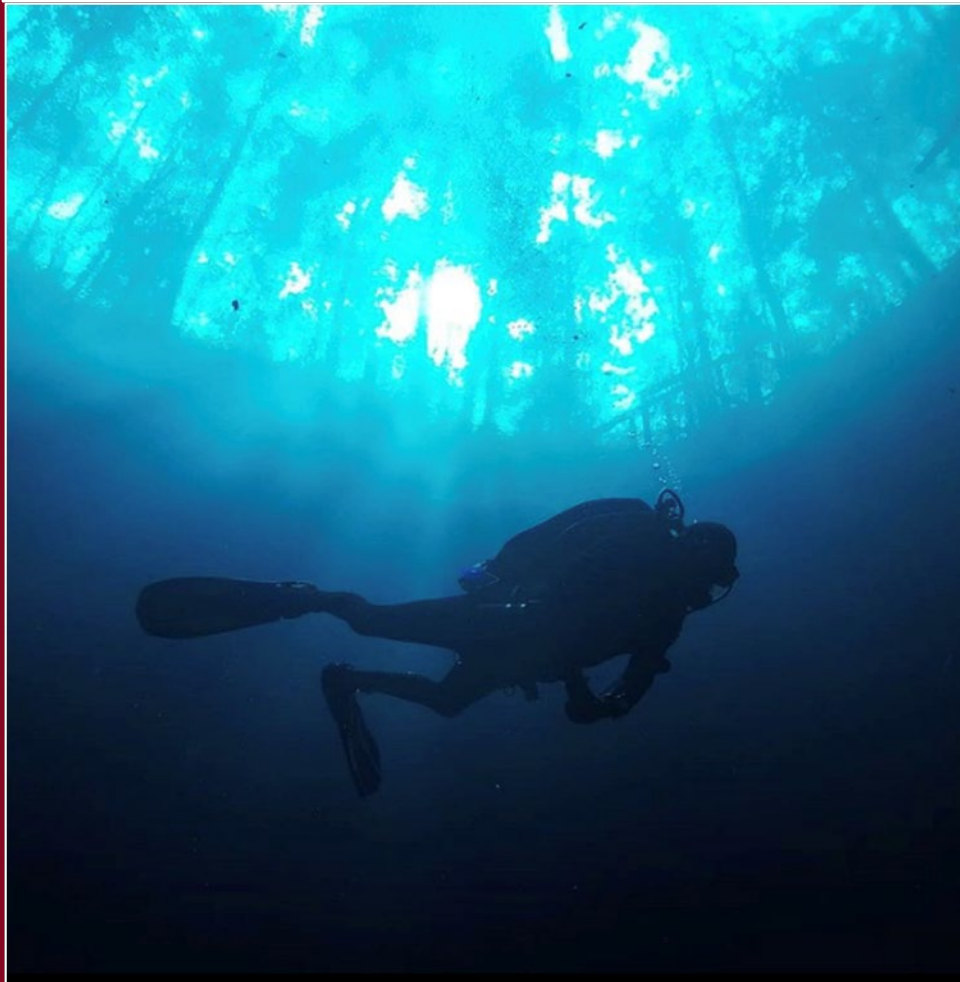




ACADEMIC DIVING PROGRAM
DIVISION OF RESEARCH

ANNUAL REPORT FY 2024



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Overview

The FSU Academic Diving Program (ADP) oversees and supports underwater research conducted by FSU faculty, staff, students and visiting scientists. The FSU Diving Control Board governs scientific diving operations with representative members from each invested department of the University. Day-to-day operations are managed by the Diving Safety Officer (DSO), with assistance provided by the Florida State University Coastal and Marine Laboratory (FSUCML) staff.

The objectives of the ADP can be divided into three categories: training, project oversight, and logistical support. Each function aims to facilitate research while minimizing risk and liability to the University.

1. **Training** is provided through workshops and a spring credit course, emergency care certifications necessary to maintain American Academy of Underwater Sciences (AAUS) active diver requirements, and crossover diver training from other organizations to FSU/AAUS standards.
2. **Diving Project Oversight** is provided through assistance in compliance with national standards, review and approval of dive plans, record keeping, and providing letters of reciprocity for divers collaborating with other organizations.
3. **Logistical Support** is provided through the coordination of diving operations, and the management of the diving locker to ensure that researchers have access to quality diving equipment.

This report summarizes the activity of the ADP in fiscal year (FY) 2024, from July 1, 2023, to June 30, 2024.

Operational Summary

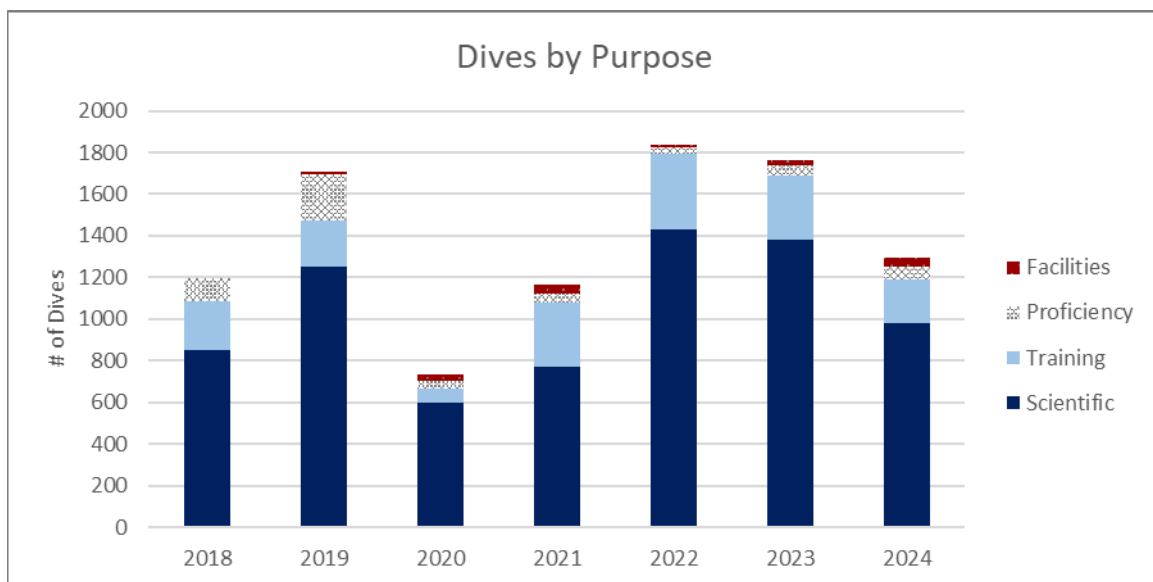


Figure 1. Annual changes in the total number of dives in four categories: proficiency, training to become Scientific Divers, scientific dives and facilities dives. Facilities dives began in FY 2019.

In FY 2024, the ADP facilitated underwater research for 64 scientific divers, including eleven visiting researchers (Figure 2). Divers included undergraduate students, graduate students, research staff, postdoctoral researchers, and faculty (Figure 3) from across campus, including the Coastal and Marine Laboratory and the departments of Anthropology, Biological Science, and Earth, Ocean, and Atmospheric Science. The Department of Biological Sciences consistently accounts for the largest number of divers. In FY 2024, 33 divers from Biological Science logged 750 dives. Collectively, the ADP enabled 1,293 dives and over 930 hours in the field working underwater (Figure 1).

For the second year in a row, there were no Incident Reports filed with the Diving Control Board.

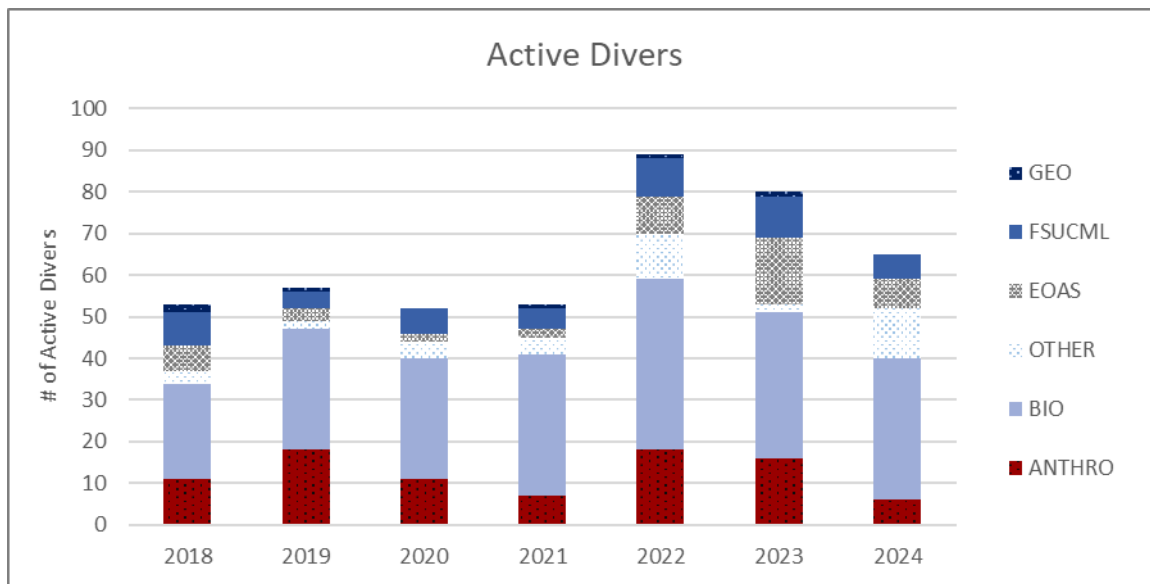


Figure 2. Annual changes in the number of active divers over time by department. Active divers are individuals currently using scuba diving as a tool to train for or contribute to research at FSU. ANTHRO = Anthropology, BIO = Biological Science, EOAS = Earth, Ocean, & Atmospheric Science, FSUCML = Coastal & Marine Laboratory, GEO = Geography, OTHER = Visiting Researchers and all other departments.

As projected, FSU diving activity declined in FY 2024 (Figures 1 and 2) as diving-intensive projects wound down and three diving member of the research faculty departed FSU. The FSU Underwater Archaeology Field School was discontinued and replaced by researchers visiting from the Texas A&M University. Diving in support of the Apalachicola Bay Systems continued, as did biological research abroad in Bonaire and the US Virgins Islands.

The spring 2024 Introduction to Scientific Diving course concluded with the certification of eleven new AAUS scientific divers. Additional certifications were issued for specialties in emergency oxygen and emergency first response. The FSUCML Diving Scholarship enabled diver training for seven of these students, providing equipment, diving accident insurance, and paying for lab fees.

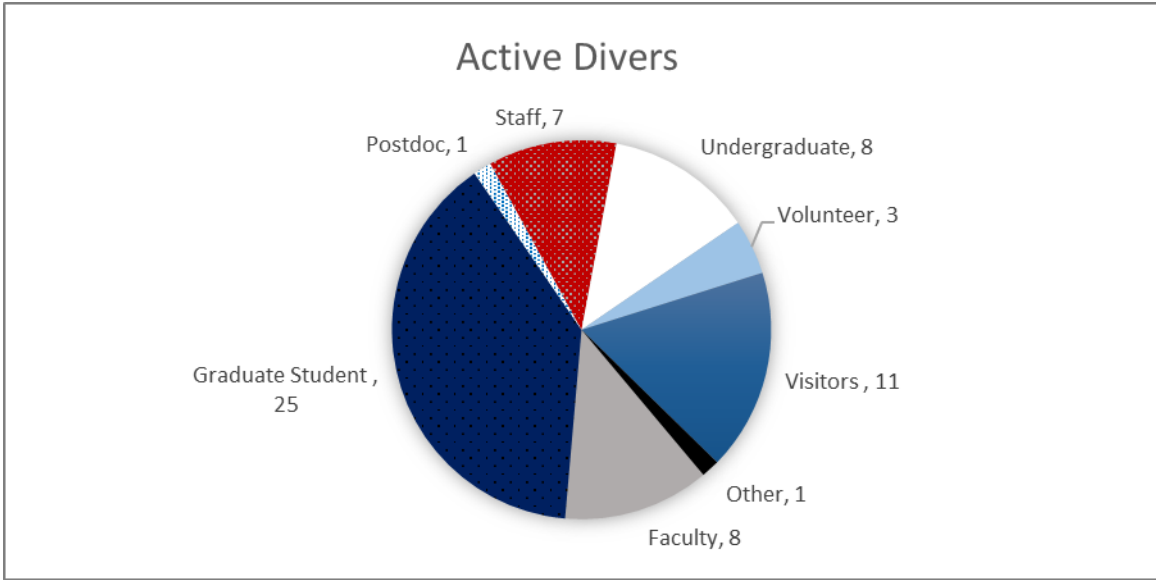


Figure 3. FY 2024 active divers by position at FSU. Graduate students consistently account for roughly half of active scientific divers at FSU, many of whom will work as volunteers to support each other’s academic goals. Researchers from the University of Florida and Texas A&M visited FSUCML to rent equipment and services and to access the unique ecological and archaeological resources of the area.

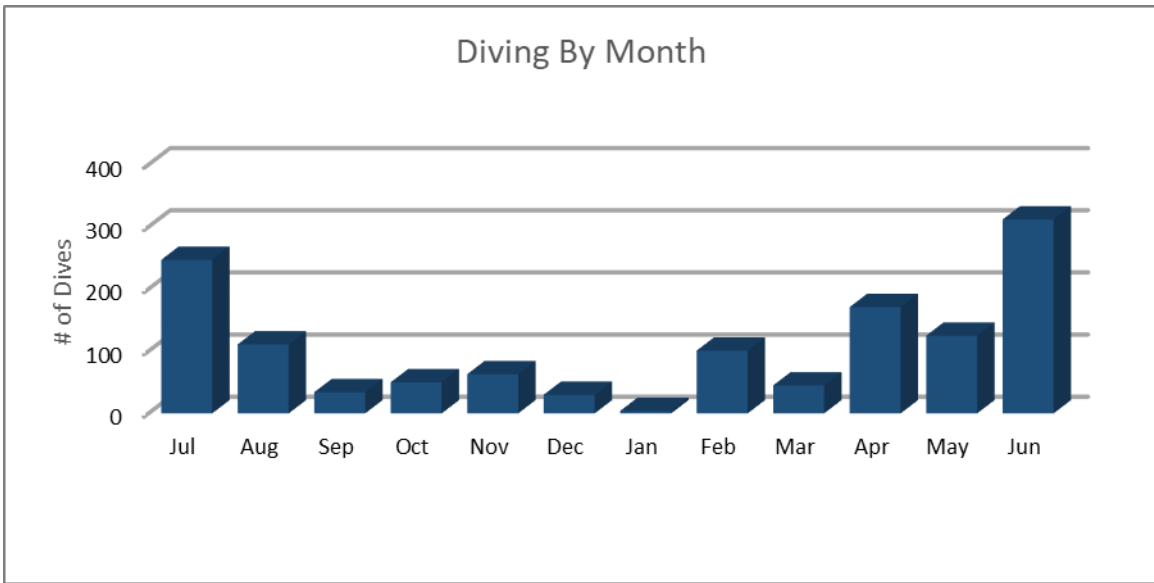


Figure 4. FY 2024 diving activity by month. Diving activity is influenced by predictable seasonal trends in field research.

In February, the ADP received a Certificate of Accreditation from the American Academy of Underwater Sciences (AAUS) following a year-long external review of procedures, dive activity, accounting and the credentials of personnel, and a site-visit from two diving safety experts from other universities in our region. This external review was completed with support from the FSU Coastal and Marine Laboratory and leadership within the Office of Research and included direct participation from students, faculty, and the Diving Control Board. The American Academy of

Underwater Sciences (AAUS) is a non-profit, self-regulating body dedicated to the establishment and maintenance of standards of practice for scientific diving with a mission of advancing and facilitating safe and productive scientific diving. This certificate serves as recognition of organizational excellence and achievements as required by the AAUS Accreditation Program and continued commitment to safe and productive scientific diving. Recommendations for programmatic improvement were provided and are being implemented.

In Accreditation, FSU joins a short list of other respected programs who have earned this recognition and further distinguishes our research programs and the preeminence of our university.

Training and Research Locations

The nature of the research diving requires the ADP to operate in many locations, both locally and internationally. Most divers work primarily on FSU main campus in Tallahassee, while others are stationed at laboratories and research sites including FSUCML, the Apalachicola National Estuarine Research Reserve (ANERR), and the Smithsonian Tropical Research Institute in the Republic of Panama (STRI).

The dive locker and marine training operations are centered at the FSUCML as well as a substantial portion of scientific work, including the Apalachicola Bay System Initiative (ABSI). All facility dives are also located at and in support of the FSUCML. Routine underwater maintenance of the FSUCML seawater system and the research vessel (R/V) Apalachee was undertaken by the ADP beginning in FY 2019 and increased threefold at the direction of the FSUCML Director (Figure 1). This work was classified as essential maintenance during the pandemic.

The Morcom Aquatics Center in Tallahassee serves as an outstanding site for training dives and watermanship evaluations. Several north Florida karst features also serve as important training sites, particularly Cherokee Sink, a karst window located inside Wakulla Springs State Park.

During FY 2023, research teams worked primarily in Florida. Visiting researchers used on the banks of the Aucilla River. There were also operations in the US Virgin Islands and abroad including the Dutch Caribbean, the Republic of Panama, French Polynesia, and British Columbia.

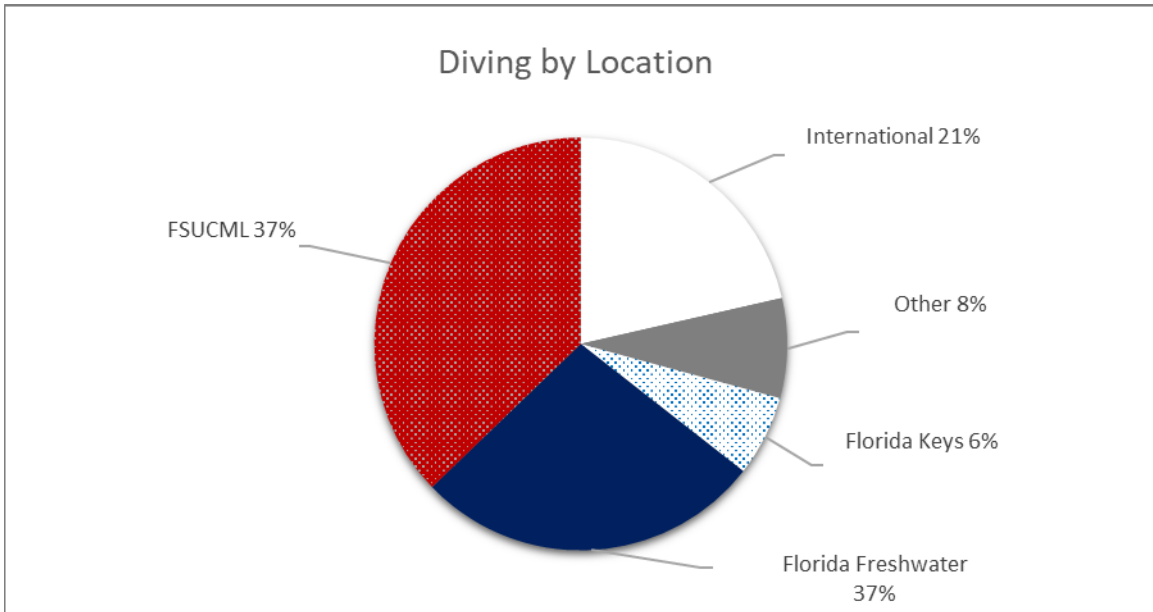


Figure 6. Percent of total FY 2024 dives by location. International diving locations included the Dutch Caribbean, Panama, French Polynesia, and British Columbia. Florida freshwater sites were primarily the Aucilla River and Cherokee Sink.



Figure 5. Scientific Divers-in-Training practice their skills at Morcom Aquatics Center in Tallahassee.



Figure 9. The Introduction to Scientific Diving course near St. Teresa Beach, FL in spring 2023. In FY 2024, over \$21.5k in private donations were given to support two diving scholarships, including for the FSUCML Diving Scholarship, which provides funding for deserving FSU students to become Scientific Divers.

Looking Ahead

In FY 2025, new research endeavors are burgeoning in the paleoclimatology of the equatorial Pacific, and work will continue on the oyster reefs of Apalachicola Bay, earning insight into the root causes of decline of the bay's ecosystem and the deterioration of oyster reefs. Each of these projects and many others will tap into scholars that trained with the ADP in previous years, enabling FSU research to thrive in an exciting and important underwater environments

Recommendations for programmatic improvement from the Accreditation process are being implemented and will contribute to the development of a new 5-year strategic plan. The plan will establish financial goals and identify new ways to engage donors and generate revenue, while ensuring long-term efficiency and success. A well-executed strategic plan will ensure the ADP is well-positioned to meet demand for scientific diving operations, support new and existing scientific diving initiatives, leverage talent and resources, enable collaboration with our strategic partners, and serve as an alluring example of what FSU has to offer students, faculty, and the greater academic community - all while minimizing expense, risk, and liability to the University. It will also ensure the program remains vital to FSU's research objectives.

Importantly, the ADP must stay prepared to continue its mission: “to provide excellence in underwater research support at Florida State University, including quality instructional and operational assistance using optimal technologies, while ensuring that scientific diving is performed safely following the standards of the American Academy of Underwater Sciences.”

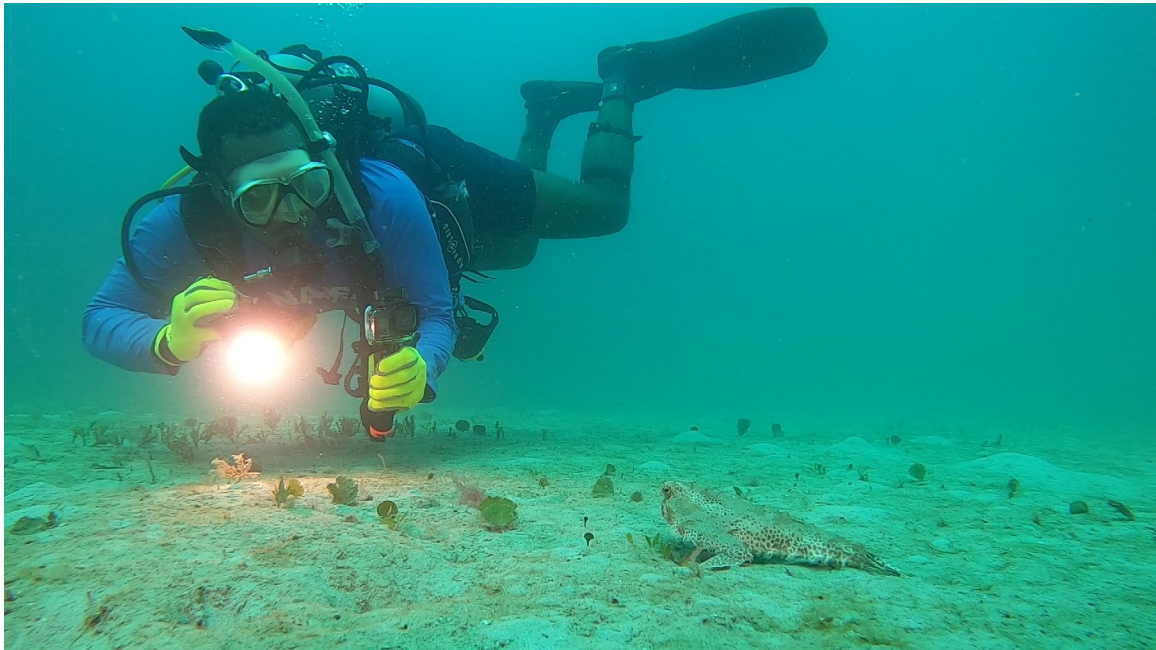


Figure 10. A batfish settles on the seafloor next to scientific diver during a 2023 FIO Peerside research expedition.