Overview

The FSU Academic Diving Program (ADP) oversees and supports underwater research conducted by FSU faculty, students, staff, 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) 2022, from July 1, 2021, to June 30, 2022.

Operational Summary

Diving activity in FY 2022 was the highest it has been in recent history, surpassing even pre-pandemic activity levels. As limitations brought on by the COVID-19 pandemic eased throughout FY 2022, research trips that had been previously cancelled or postponed were reinitiated. The spring 2022 Introduction to Scientific Diving course was able to proceed as scheduled with careful adherence to COVID-19 exposure control guidelines and lessons were conducted through in-person classroom sessions and dive training at the Morcom Aquatics Center, and various field sites. While exposure control guidelines remained in effect, the FSU Diving Control Board periodically updated guidelines to reduce impediments to operations for vaccinated individuals, including the cessation of viral testing mandates.

![Dives by Purpose](image)

**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.
Throughout FY 2022, the ADP facilitated underwater research for 80 active FSU scientific divers and an additional 9 visiting scientific divers (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, Earth, Ocean, and Atmospheric Science, and Geography. Biological Science consistently accounts for the largest proportion of divers. In FY 2022, 41 divers from Biological Science logged 1196 dives. Collectively, the ADP enabled 1838 dives and over 1533 hours in the field working underwater (Figure 4).

![Active Divers Chart](image)

Figure 1. 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. FY 2022 is the first year dives from visiting researchers has been reported.

![Active Divers Diagram](image)

Figure 3. FY 2022 active divers by positon at FSU. This is the first year that the ADP has reported on visiting divers at the FSUCML.
The ADP manages 30 regulator systems, 2 breathing air compressors, 39 buoyancy control devices, 166 compressed gas cylinders and a variety of additional equipment to enable safe and productive underwater research. In FY 2022, 206 equipment rental requests were made to the ADP, with rental time periods ranging from one day to several months.

There was one Incident Report filed with the Diving Control Board in FY 2022, detailing a vessel capsizing during a diving operation. The Academic Diving Program Incident Call Tree was initiated and there were no significant injuries. An investigation revealed the cause of the incident to be mechanical failure brought on by damage to the thru-hull plumbing for the live well, located in the port stern compartment.

The spring 2022 Introduction to Scientific Diving course concluded with the authorization of 11 new AAUS scientific divers. One diver was unable to complete the course due to a medical disqualification. Three additional divers-in-training were authorized as scientific divers during the fiscal year, each of whom entered the program with significant experience. Open water certifications were issued for the first time in years support of the FSUCML Diving Scholarship. Additional certifications were issued for specialties in dry suit diving, enriched air nitrox, and emergency first response.

**Training and Research Locations**

The majority of diving operations continue to be concentrated in Florida. 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. The Department of Anthropology’s Underwater Archaeology Field School was held over six weeks on the banks of the Aucilla River. Boat diving and marine training operations are centered at the FSUCML. All facilities dives are also located at and in support of the FSUCML.

A substantial portion of domestic scientific work is also launched from 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 classified as essential maintenance during the pandemic (Figure 1).

International research was especially impacted by the pandemic, as travel restrictions limited access to study sites and in some cases, expeditions were delayed for years. During FY 2022, research teams were able to complete trips to the Dutch Caribbean, Panama, French Polynesia, and British Columbia.

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Figure 4. FY 2022 diving activity by month. In addition to the pandemic, diving activity was influenced by predictable seasonal trends in field research.
Figure 5. Percent of total FY 2022 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.

**Looking Ahead**

The tremendous growth in dives logged from 2017-2019 and continuing in 2022 is expected to slow over the next several years as a few diving intensive projects come to an end. However, the amount of underwater research projects at the FSUCML and other research labs in Tallahassee continue to grow. Thanks to strategic investment in equipment, the ADP is well positioned to support this activity while also reducing expenditures.

Most importantly, the ADP is 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 11. FSU scientific divers tabulate data south of the FSU Coastal and Marine Laboratory.
Figure 12. FSU scientific divers at a study site in the Florida Keys National Marine Sanctuary.

Figure 13. Student divers practice deploying transects at the Morcom Aquatics Center.