



## **THE UNIVERSITY OF MAINE SCIENTIFIC DIVING PROGRAM**

### **PROGRAM SUMMARY**



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## CONTENTS

Contents.....	i
Introduction.....	1
Background.....	1
Program Elements.....	2
Program Resources.....	
Program Activity.....	6
Challenges and Recommendations.....	8
Appendices	
Appendix A- Diving Operations Manager Job Description	
Appendix B1-Program Assistant Job Description (Professional)	
Appendix B2- Program Assistant Job Description (Internship)	
Appendix C- AAUS Self-Evaluation Checklist	
Appendix D- AAUS Statistics Report	
Appendix E- UMaine ‘Diving by the Numbers’	
Appendix F- Timeline of Notable Achievements	
Appendix G- Maine Scientific Diving Consortium	
Supplement 1- AAUS BOD Service Letter	

## INTRODUCTION

The goal of this report is to provide University administrators, program users, and other personnel with essential information regarding the history, purpose, and functioning of the UMaine Scientific Diving Program. The original report was written to coincide with:

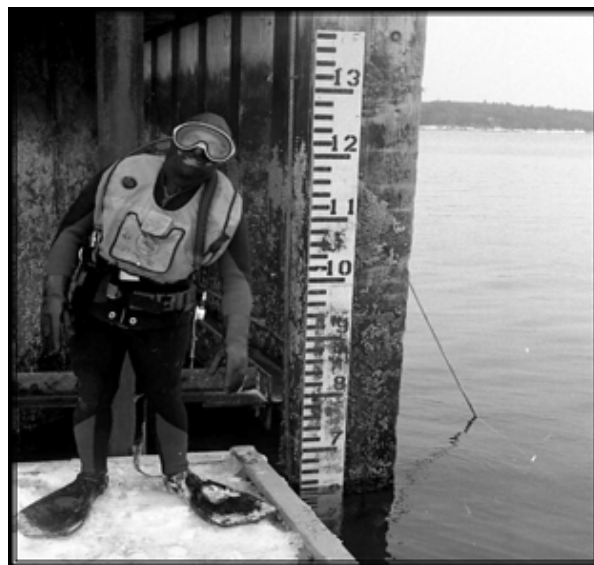
- 50 years of scientific diving activity at UMaine (late 1960s-2018)
- 10 years of academic scientific diving curriculum (2008-2018), and
- Restructuring within the UMaine System and Dept. of Safety Management (2017-2018).

The current report (2023) is intended to serve as a periodic update (5-years).

## BACKGROUND

### History and Mission

The University of Maine Scientific Diving Program supports the mission of scientists and students by facilitating the safe and efficient conduct of underwater research and education. The program has a long and distinguished history with over 50 years of activity (1960s-present). UMaine diving scientists perform work in various waters worldwide and are some of our most recognized faculty and researchers. Historically, most diving at UMaine has been conducted by researchers in the School of Marine Sciences, previously the Department of Oceanography, with the majority of diving activity occurring at the Darling Marine Center (DMC) in Walpole. While the DMC serves as the physical home of the program, various other University departments and units engage in diving activities, and as of 2017, the program supervises and supports all occupational, scientific, and recreational diving throughout the UMaine System.



*R. Steneck at Darling Marine Center (c. 1980)*

### Organization & Management

Consistent with the OSHA requirements for scientific diving [29CFR1910 Subpart T], the UMaine Diving Control Board (DCB) is responsible for oversight of the Scientific Diving Program. As defined in the federal regulations, the DCB is comprised of active scientific divers and is an independent body which retains autonomous control and oversight of all scientific diving operations. The DCB delegates management of most program elements to the UMaine Diving Safety Officer (DSO) who reports to both the DCB and the Department of Safety Management. All of these entities must interface with each other and other University departments to ensure program activities are consistent with community and regulatory standards and University policies.

### AAUS

To achieve and ensure the highest standards of practice for scientific diving activities, in 1995 UMaine adopted the standards of the American Academy of Underwater Sciences (AAUS) and became Organizational Members of this community. Adherence to AAUS standards ensures that UMaine is compliant with US federal requirements for scientific diving [OSHA 29 CFR 1910 Subpart T] as well as the more stringent and well-defined AAUS requirements, which are accepted as the recognized 'community standard' in the US and many other nations. One of only ~150 AAUS institutions worldwide, AAUS membership provides recognition for UMaine via a strong network of cooperating and similarly minded institutions. Participation in this community has raised awareness of and credibility for our programs and provides collaborative and networking opportunities for UMaine diving scientists and students.

## PROGRAM ELEMENTS

### Operational Oversight

The UMaine Diving Control Board (DCB) is responsible for oversight of the UMaine Scientific Diving Program, however, most all operational elements are delegated to the Diving Operations Manager/ Diving Safety Officer (DOM/DSO). The standards for scientific diving at UMaine are listed in the UMaine scientific diving manual ("*Standards for Scientific Diving Certification and Operation of Scientific Diving Programs*") which is approved by the DCB and implemented by the DSO.

*Diving Control Board-* per OSHA and AAUS requirements, the DCB consists of a majority of active scientific divers, many of whom are also UMaine faculty and/or researchers. UMaine maintains a separate advisory board to the DCB (A) comprised of individuals with previous scientific diving experience and/or other specialized expertise. As of 2023, the UMaine Diving Control Board is comprised of the individuals listed below:

- Emmanuel Boss, PhD
- Colby Johns
- Elisabeth Maxwell, M.S.
- Sean O'Neill (DCB Chair)
- Christopher Rigaud, M.S. (DOM/DSO)
- Robert Steneck, PhD
- Richard Wahle, PhD
- ❖ Robert Downs, USN Ret. (A)
- ❖ Warren Riess, PhD. (A)
- ❖ Mark L. Wells, PhD. (A)

*Diving Operations Manager/Diving Safety Officer-* the UMaine DOM/DSO position is administered by and reports to the Department of Safety Management (SM). The DOM is responsible for day to day oversight of a program that serves the multi-disciplinary research and educational community of UMaine. Diving related activities require extensive training, are conducted in a wide range of environments, and carry considerable risk. The DOM is tasked to support, promote, coordinate, and supervise underwater research and related activities performed under University auspices, and to oversee the training, certification, and safety of all diving related projects, personnel, equipment, and activities at UMaine and all affiliated remote sites. The position is relatively autonomous and manages an increasing resource base, budget, and staff.

The DOM is the cornerstone of the scientific diving program. In addition to administrative and managerial responsibilities, the DOM must be an active scientific diver, diving educator, and advocate for scientific divers. Involvement in the diving and scientific communities is essential to maintaining familiarity and proficiency with current concepts, methods, and technology. The DOM supports the mission of the University by ensuring that the program acts to facilitate, not simply regulate, diving activities and provide essential opportunities for scientists, educators, and students to utilize diving in the pursuit of their goals. The DOM is responsible for a number of diving-related teaching activities, including the development of academic programming, support of marketing and outreach activities, and coordinating funding requests or grant proposals for the purchase of diving equipment.

The DOM position includes many functional responsibilities other than diving. A summary of the position responsibilities can be found below, the full Position Description is included in Appendix A.

- Reviews and updates scientific diving manual; ensures compliance with OSHA/AAUS standards
- Reviews and approves individual Diver Applications and Dive Plans
- Maintains individual diver records; compiles records of diving activity (Dive Logs)
- Trains scientific divers; serves as primary instructor for academic diving programs
- Liaisons with DCB, scientific divers, AAUS, and the greater scientific diving community
- Serves as DMC Hazardous Waste Mgr., Facility Emergency Coordinator, and SM Representative

## Diver Training

### *SMS324- Introduction to Research Diving-*

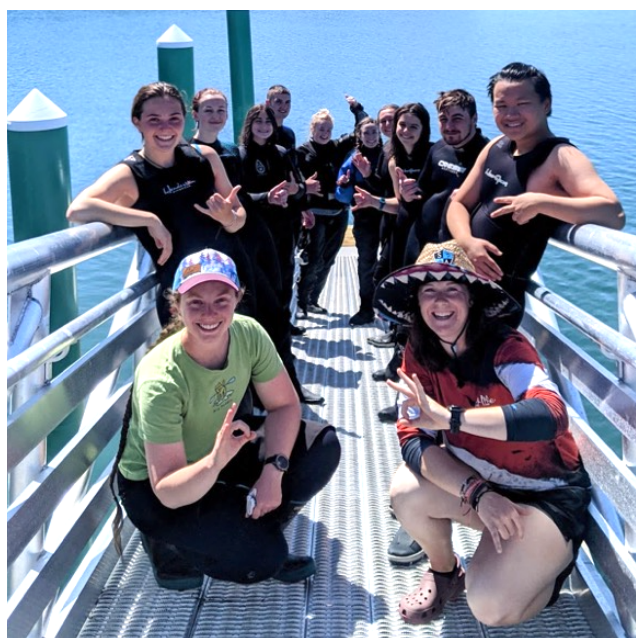
The foundation of the UMaine Scientific Diver Training Program is our academic scientific diving course, *SMS324- Introduction to Research Diving*. The goal of the course is to provide scientists and students with the knowledge and skills to safely conduct science underwater, and is designed to meet the 100-hr minimum training requirement for scientific divers as prescribed by the AAUS. Traditionally conducted in conjunction with the SMS Semester-by-the-Sea, SMS324 is also offered during May-term/Summer session.

Prior to the existence of SMS324, scientific diver training at UMaine was conducted only on an as needed and on-the-job basis. This model was inefficient and did not effectively meet the standards of the scientific diving community, the needs of UMaine divers, or provide accessible training opportunities for undergraduate students. SMS324 supports the University's mission by providing standardized and accessible training opportunities that ensure the program acts to facilitate, not simply regulate, scientific diving activities. The academic component of this occupational safety program increases its perceived significance, provides financial value to the university via tuition dollars, and is a key recruiting tool.



*C. Johns supervises students in SMS324*

As of 2022, SMS324 has run 23 sessions over 15 consecutive years (Table 1). The course has trained a total of 152 scientific divers, corresponding to 432 tuition-bearing credit hours. Using the current in-state tuition rate of \$388/ credit hour, the program has generated over \$167,000 in tuition. This revenue is likely much higher as the program draws a significant number of students from outside of Maine who pay out of state tuition (\$1,108/credit hour).



### *Basic Scuba/ Discover Scuba-*

Since 2012, the UMaine School of Marine Sciences has also offered entry-level scuba courses for SMS students. This course provides students the opportunity to become certified scuba divers on campus at UMaine, instead of seeking this training from the recreational community. As of March 2023, this course has run 11 sessions, and trained 76 divers (Table 1). In conjunction with our "try-dive" NFA 117-Discover Scuba sessions, Basic Scuba is a major SMS recruitment tool.

*UMaine Basic Scuba Students (June 2021)*



Table 1  
Summary of Academic Diving Course Enrollment (2008-2023)

Sessions	Years	# Students	Credit Hrs	Divers 228	Session	Year	# Students	Credit Hrs
25	16	152	432		11	12	76	0
	Avg. Class Size	6.08	27.00			Avg. Class Size	6.33	0.00
1	2008	5	15					
2	2009	4	12					
3	2010	6	18					
4	2011	4	0					
5		8	24					
6	2012	10	30		1	2012	4	0
7	2013	9	27		2	2013	7	0
8	2014	9	27		3	2014	7	0
9	2015	7	18		4	2015	8	0
10		9	21					
11	2016	6	18		5	2016	9	0
12		10	30					
13	2017	6	18		6	2017	7	0
14		6	18					
15	2018	3	6		7	2018	9	0
16		6	18					
17	2019	5	15		8	2019	5	0
18		9	27					
	2020	0	0			2020	0	0
19		3	9					
20	2021	5	15		9	2021	8	0
21		7	21					
22	2022	6	18		10	2022	5	0
23		9	27					
24	2023	TBD	TBD		11	2023	7	0
25		TBD	TBD					

### Research Support

In addition to scheduled academic programming, the program continues to offer on-the-job training (OTJ), guidance, and supervision for UMaine researchers, diving interns, visiting scientists, and others who require the use of scuba diving as a research tool. Examples include:

- Supervision/support for UMaine and visiting dive teams
- Required and accessory training opportunities
  - CPR/First Aid training
  - Deep/extended range diving
  - Drysuit diving
  - Enriched air nitrox
- Support of other academic courses that incorporate diving
  - SMS-531 Coral Reefs (R. Steneck)

## PROGRAM RESOURCES

*Program Assistants-* in order to effectively supervise instructional diving activities, the program maintains a part-time Scientific Diving Assistant and 1-2 Divemaster Interns. These individuals assist with academic and research related instructional activities and serve as backup for the DOM/DSO.

Additionally, Divemaster Internship positions offer valuable continuing educational experiences for Scientific Diving Program students. Candidates who complete all requirements also become certified DiveMasters, a valuable professional credential in the diving community. Job descriptions for Program Assistant positions can be found in Appendices B1 & B2;

In 2022, the Scientific Diving Assistant position was formalized into a Permanent P/T Salaried Position within the College of NSFA. This position is 60% time, with the other 40% dedicated to and funded by a Research Assistant Position within the DMC-based 'environmental research lab' (D. Brady). This was a significant achievement for the program.

*Equipment-* the scientific diving program currently maintains a cache of equipment necessary to run an effective and safe scientific diving program:

- DMC Dive Locker
- Air Station and Compressor (upgraded in 2018)
- Emergency Response equipment
  - AED (x1)
  - First Aid & Oxygen kits (x5)
- Scuba equipment
  - Scuba cylinders (~40)
  - Weights
  - BCDs, regulators, computers (upgraded in 2023)
  - Masks, snorkels, fins
  - Miscellaneous exposure protection (boots, gloves, hoods, suits)
- Support equipment
  - Dive flags/floats
  - Repair supplies and tools
  - Scientific sampling equipment (slates, transect tapes, quadrats, etc.)
- Dive Program Vehicle and Dive Trailer

*Funding-* funding for the Scientific Diving Program comes from a variety of sources:

- Safety Management (SM)- DOM/DSO salary is entirely supported by SM; SM also provides substantial annual operating funds to cover equipment, professional certifications and professional development, travel costs, and numerous special requests (~\$10,000/year).
- School of Marine Sciences (SMS)- Provides funding for academic programming; equipment needs, transportation costs, etc. for both scientific and basic scuba courses (\$5,000/yr as of FY2023).
- Darling Marine Center (DMC)- Provides funding for facility operations at the DMC including equipment maintenance (compressor, cylinders, FA/O2 kits, etc.) as well as overhead for maintenance and operation of the UMaine Dive Locker (\$5,000/yr as of FY2023).

*\*\*in recent years, the DMC has been instrumental in providing significant financial support for essential program resources:*

*2018- \$30,000 for DMC air compressor replacement*  
*2022- \$45,000 for dedicated program vehicle replacement*

- College of Natural Sciences, Forestry, and Agriculture (NSFA)-Salary for P/T Scientific Diving Assistant. In 2021/2022 this position was increased to Permanent Part-Time (60%) with an

increased salary. The additional 40% time/pay of this Full-Time position is covered by an appointment as a Research Assistant.

- Academic Course Fees- Student course fees pay for academic materials and help offset annual equipment maintenance and repair. As of 2023, students pay a combined course and equipment fee of \$850.
- Fundraising- In 2010, the DSO successfully obtained a \$10,000 foundation grant to purchase scuba equipment for student use. Via our relationship with AAUS, the program has received three private \$5000 gifts to establish and maintain a Scientific Diving Scholarship. In previous years, the UMaine Development office expressed intentions to provide fundraising assistance; however no program funds have been generated from these efforts. A dedicated gift account also exists on the UMaine giving website, though it does not see much activity.

## PROGRAM ACTIVITY

### Diving Activity Summary (1995-present)

The UMaine Scientific Diving Program has been active for over 50 years. Accurate data and records are available as far back as 1995. Since 1995 UMaine divers have conducted 23,362 scientific and training dives and spent a combined total of 15,751 hours underwater. On average, UMaine has 20-30 active scientific divers per year, who conduct an annual average of 865 scientific dives and 583 hours underwater. Graphical summaries of diving activity since 1995 are presented in Figures 1 & 2; gaps represent years for which data are not available.

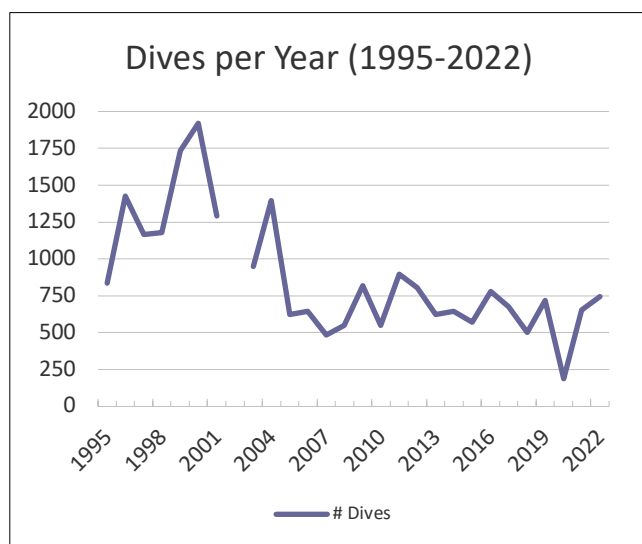


Figure 1- Dives per year (1995-2022)

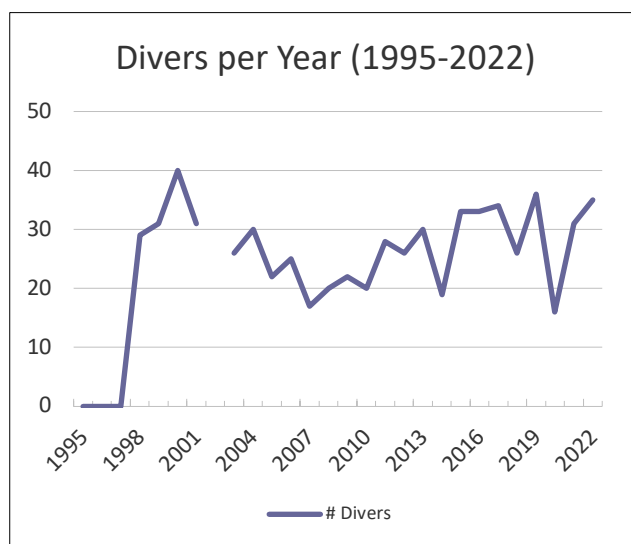


Figure 2- Divers per year (1995-2022)



### 2022 Diving Activity

UMaine submits a report of diving activity and a self-compliance checklist to AAUS on an annual basis. A copy of the 2022 reports can be found in Appendices C and D.

A summary of 2022 UMaine diving activity by individual diver and by dive team are presented in Table 2, below. In total, 745 scientific and training dives were conducted in 2022. UMaine's academic diving course (SMS324) and dives performed by the DSO and Dive Leader support staff account for a significant portion (>50%) of this activity.

**Table 2- 2022 UMaine Diving Summary**

<b><i>Historical Snapshot</i></b>	<b><i>2022 Dives by Team</i></b>	
<b>2022- 35 divers/ 745 dives</b>	ASCC W2	0
	Boss	(*27)
2021- 31 divers/ 653 dives	Brady Lab-LOBO	65
2020- 18 divers/ 199 dives	DSO-Dive Leaders	159
2019- 36 divers/ 717 dives	EPSCOR (Rasher Lab)	194
2018- 26 divers/ 504 dives	SMS324	281
2017- 34 divers/ 674 dives	Steneck	13
	Rich	5
	Wahle	32

<b><i>Diver Name</i></b>	<b><i>Team</i></b>	<b><i># Dives Logged</i></b>
Albright, H	DSO	4
Baiely, M	SMS324	18
Batchelder, J	SMS324	17
Beirne, C	SMS324	22
Boss, E	Boss	0 (*27 Rec.)
Bourassa, N	SMS324	18
Casey, A	SMS324	19
Cuddy, R	Brady	2
Farrell, S	EPSCOR	95
Fowler, M	AECC	0
Haley, C	SMS324	6
Holliman, D	SMS324	15
Ittleson, C	SMS324	17
Jalbert, P	AECC	0
Jarrett, R	Steneck	0
Johns, C	DSO	51
Kleman, K	Wahle	12

<b><i>Diver Name</i></b>	<b><i>Team</i></b>	<b><i># Dives Logged</i></b>
Kury, L	Brady	19
Layland, E	Wahle	5
Marinopolous, N	SMS324	15
Maxwell, E	Brady	40
Monteiro, L	SMS324	20
Morris, C	DSO/ Wahle	41
Oliveira, K	DSO	25
Oneill, S	Rich	5
Ouimet, A	SMS324	17
Rigaud, C	DSO	39
Risley, S	SMS324	14
Rzeszwoski, E	SMS324	17
Smy, I	SMS324	23
Steneck, R	Steneck	13
Tan, S	SMS324/Rich	25
Tominlson, L	SMS324	18
Wahle, R	Wahle	14
Yiu, D	EPSCOR	99

### Achievements & Awards

For a relatively small program, UMaine has a number of notable achievements and awards. A summary of these was previously compiled for the UMaine Development Office and has been updated (Appendix E). A chronological list of notable achievements is presented in Appendix F.

## CHALLENGES & RECOMMENDATIONS

### Oversight

Due to restructuring at the UMaine System and subsequent changes to the Dept. of Safety Management in 2017/2018 the program is now responsible for diving operations at all UMS campuses and units. To the knowledge of the DCB and DOM/DSO, as of 2023 there are no active diving operations at any campus units other than UMaine and DMC.

<i>2018 Recommendations</i>	<i>2023 Status/ Update</i>
DCB Charter- establish a formalized Charter to recognize the role and function of DCB and DSO at the System level. The DCB should be involved in this process.	Progress/Stalled- a DCB Charter was adopted by the Diving Control Board in 2019, however, it has not been recognized by appropriate UMaine officials.
DOM Job Description- update the DOM/DSO job description to reflect changes and increased responsibilities; a title change is also suggested.	Progress/Success- an internal review of the DOM Job Description and PDQ was conducted; however, no significant changes were deemed warranted by HR. An internal salary-compression review did result in a minor salary increase.
Awareness- identify need, establish scientific diving management and oversight at other UMaine System units, and provide resources and support.	Ongoing- currently no identified need for dive program services at campus units other than UMaine-Orono, Darling Marine Center.
Collaborations/Consortium- establish a state-wide Scientific Diving Consortium to foster collaborations and share resources. See outline/proposal in Appendix G	Progress/Stalled- development and financial analysis of the Sci. Dive Consortium concept was conducted by the DMC in 2021/2022. The renewed proposal has still not been embraced by appropriate UMaine officials.

### Personnel/ Staffing

Implementation and management of an effective scientific diving program requires a greater level of oversight and management than most occupational safety programs or standing safety policies. The program will require continued staffing support to meet current and future demands.

<i>2018 Recommendations</i>	<i>2023 Update</i>
Scientific Diving Assistants- formalize and increase commitment for Sci. Diving Asst. position; provide financial support for Divemaster Internships.	Progress/Success- in 2021/2022 the Sci. Dive Asst. position was made a Permanent Salaried position at 60% time with an increased salary. The additional 40% time/pay of this Full-Time position is covered by an appointment as a Research Assistant.  No funding has yet been secured for DM Interns.
Continuing Education- train current Sci. Diving Asst. as a Scuba Instructor; train DOM/DSO as an Instructor-Trainer. Ensure continued engagement with AAUS and broader scientific diving community.	Progress/Success- SDA became a scuba instructor in 2021. DOM/DSO continues to explore Con. Ed. opportunities

Unit Diving Officers- hire Unit Diving Officers and Assistants at other campuses as necessary.	Ongoing- currently no identified need for these positions at other UMS units.
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### Administration/Logistics

The scientific diving program operates more like a University department, with a need for financial and resource infrastructure and support.

<i>2018 Recommendations</i>	<i>2023 Update</i>
Continue Safety Management operational allocation for DOM/DSO position (~\$10,000)	Review Requested- in 2022, SM relinquished financial responsibility for the 'Dive Truck'; this expense has been transferred to NSFA/SMS. Current level of financial support is sufficient, but not well defined.
Provide UM System budget match to DMC/SMS program allocation (>\$5,000)	Review Requested- UM System financial support requested for program with system-wide responsibility.
Work with IT to establish system-wide diver recordkeeping system	Ongoing- recent adoption/incorporation of AAUS online logging program is helpful. Digital repository for UMaine diver records still needed.

### Programmatic

The current level of programming is adequate, but may require growth to meet future needs.

<i>2018 Recommendations</i>	<i>2023 Update</i>
Provide additional training opportunities (as staffing allows) <ul style="list-style-type: none"> <li>o Additional Basic Scuba course</li> <li>o New UW Research Methods Course</li> </ul>	<i>On-Hold- current enrollments do not justify an increase in programming, however, additional staff may lead to this development.</i>
Establish procedures for 'non-exempt' scientific dives/ working dives.	<i>No Progress- no progress has been made in this arena; likely to be a needs-based development.</i>
	<i>Divers for Hire- Establish procedures for a 'Divers for Hire' program/SOP.</i>

## **APPENDIX A- Diving Operations Manager Job Description**

Department of Safety & Environmental Management  
The University of Maine

**Title:** Diving Operations Manager

**Date:** November 3, 2012

**Department:** Safety & Environmental Management (SEM)

**Reports to:** Director, Safety & Environmental Management

**Purpose:** The Diving Operations Manager (DOM) exists to provide guidance, support, technical expertise, and oversight to scientists and students who wish to utilize scuba diving in the pursuit of research and educational goals. The purpose of the DOM is to facilitate underwater research and education while ensuring that diving operations are conducted in a safe and efficient manner and in compliance with applicable regulations and national standards. The DOM is responsible for supervising all programmatic aspects of University sanctioned diving activities at UMaine and all affiliated remote sites; The DOM may also be called upon to instruct or participate in diving activities sponsored by academic departments (i.e. School of Marine Sciences). This employee is based at the Darling Marine Center (DMC) where he/she also manages hazardous waste operations and performs other SEM related functions as described/assigned.

### **Essential Duties and Responsibilities:**

Diving Operations - Manage all programmatic aspects of UMaine diving programs in accordance with applicable regulations and community standards. Supervise and support scientific diving conducted under UMaine auspices; manage, administer, and participate in campus-wide scientific diver training and certification. Design and implement diver training programs in conjunction with the mission and objectives of UMaine academic departments; act as an instructor in credit bearing diver training courses and assist with the management and administration of all scuba courses offered through the University including recruitment, training, and supervision of scuba instructional staff. Participate in a variety of scientific diving research projects as a diver, diving safety supervisor, and/or a researcher; assist in the planning and execution of scientific diving and related research projects; provide expertise and technical support. Manage University owned/operated diving facilities and equipment; organize and implement a diving equipment and maintenance program. Administer diving program budgets, grants, and charitable giving account. Supervise program assistants as necessary. Liaison with Diving Control Board (DCB) and scientific diving community (American Academy of Underwater Sciences, AAUS); provide updates and reports as required. As required/named by the AAUS, the DOM serves as the "Diving Safety Officer" for UMaine.

Academic Diving - The DOM is responsible for a number of diving-related teaching activities, including the development of academic programming, support of marketing and outreach activities, and developing funding requests or grant proposals for the purchase of diving equipment. The teaching commitment of the dive operations manager is limited to one scientific diving course (one section only) per semester and one a basic dive safety course (one section only) per semester.

Hazardous Waste - Darling Marine Center- Manage all aspects of hazardous waste generation at DMC in accordance with applicable regulations and University policy. Prepare, maintain, and implement required regulatory plans, documents, and forms as required by law. Perform Hazardous Waste collections, determinations, and maintain Hazardous Waste storage site. Conduct Hazardous Waste training for DMC employees. Supervise hazardous waste assistants as necessary.

Facility Emergency Coordinator (FEC); Darling Marine Center- Serve as secondary FEC at DMC; assist DMC Facility Managers with planning, preparation, and response to emergencies. Provide support with preparation and implementation of facility emergency response plans/documents; participate in FEC/Safety Committee meetings/discussions. Respond to emergencies, coordinate resources, and liaison with emergency personnel as necessary.

SEM Specialist - Perform other SEM functions as assigned, including but not limited to:

- Conduct specialized safety training as necessary
- Perform safety audits and accident investigations as needed
- Act as a liaison for DMC personnel on SEM matters in cooperation with other SEM staff
- Monitor compliance with the UMaine Watercraft Operations

**Qualifications:**

**Education/ Certifications**

- A Bachelor's degree or equivalent with a background in the sciences is preferred.
- Current certification as a scuba instructor with an internationally recognized training agency; current certification as an emergency response instructor (CPR/AED, First Aid, Oxygen Administration).
- Must pass scientific diver physical exam and a driver's license background check.

**Knowledge/Skills**

- Knowledge of regulatory and community scientific diving procedures, practices and standards.
- Knowledge of underwater scientific diving methods and techniques necessary to accomplish research or other mission objectives.
- Knowledge of diving technology, instrumentation, and equipment; familiarity with scientific technology, instrumentation, equipment, and procedure associated with scientific diving operations.
- Ability and skill necessary to perform a variety of underwater tasks under adverse/difficult conditions.
- Ability to serve as working diver, lead diver, dive supervisor, and/or mission coordinator during research diving operations involving a variety of diving technologies.
- Ability to perform demonstration quality skills for training/instructional purposes.
- Ability to manage compliance with institutional diving policy.
- Knowledge of chemistry or related sciences is preferred; work experience may be substituted for education.
- Experience with OSHA, EPA/DEP, USCG regulations, chemical safety and hazardous waste regulations, and national incident management system (NIMS) is preferred; training in these areas can be provided.
- Experience and knowledge with marine/ boating safety is required.

**Communication Skills**

- The employee must have excellent written and oral communication skills.
- Ability to read, interpret, and write technical/regulatory instructions, manuals, and official reports.
- Ability to communicate with scientists, students, staff, administrators, technicians, industry specialists, regulatory officials, and the general public.

**Managerial Skills**

- Ability to provide oversight of technical and administrative programs and activities.
- Ability to coordinate and manage facilities, equipment, supplies, and related resources; understands and complies with safety measures to maintain a safe working environment.

**Position Type: Professional**

**Supervisory Responsibilities:** Supervises diving program assistants/instructors and hazardous waste assistants as required.

**Work Schedule:** Full-time regular fiscal year position; regular University of Maine work schedule. In consultation with the supervisor the employee is expected to establish regular office hours; work beyond regular hours (to include nights and weekends) may be necessary. Additionally, the employee is expected to be on call to coordinate resources and conduct required reporting in response to emergencies at the Darling Marine Center and at other UMaine facilities.

**Schedule for Evaluations:** In accordance with UMPSA agreement/contract.

**Salary Grade:** 5

## APPENDIX B1- Program Assistant Job Description (Professional)

### University of Maine Job Description

**Position Title:** Scientific Diving Assistant, Professional

**Department:** School of Marine Sciences

**Supervisor:** UMaine Diving Operations Manager

**Purpose:** Primary responsibility of the position is to assist the Diving Operations Manager (DOM) with the instruction and supervision of students enrolled in SMS academic diving courses (SMS324- *Introduction to Research Diving, Basic Scuba*). This position is based primarily at the Darling Marine Center in Walpole and is field intensive.

#### Expectations and Responsibilities

In addition to the responsibilities outlined in the *Scientific Diver Statement of Understanding and Code of Conduct*, as an industry professional and representative of the UMaine Scientific Diving Program, you will be expected to exhibit conscientious, ethical, and professional behavior at all times when interacting with students, university personnel, and other diving community professionals. You will follow the guidance of your supervisor in certain situations, but you must also be self-motivated and learn to assist the DOM by anticipating what needs to be done instead of waiting for instructions.

#### General Characteristics

- High-quality personal diving skills
- Positive and professional attitude
- General understanding of Dive Leader role
- Motivated independent worker
- Interest and ability to serve as a mentor to student divers
- Role model behavior

#### Duties and Expectations

General duties include: assist with all aspects of academic diving courses, prepare equipment, fill scuba cylinders, grade/review student assignments, instruct/ supervise divers during both confined and open water diving activities.

Specific duties include:

- Arrive on-site as scheduled, on-time, and prepared
- Assist with preparation and maintenance of diving equipment, University vehicles, and dive trailer
- Guide students in preparation, packaging, and transport of necessary field equipment
- Assist with dive site preparation and management
- Manage, Supervise, and/or Instruct classroom and in-water activities at the level of hire (Divemaster or Instructor).
  - SMS Basic Scuba class (1.5 days/week, March-June; overnight travel required)
  - SMS324- Introduction to Research Diving (1 day/week; Summer/ Fall terms)
  - SMS Discover Scuba (1 day/week; Aug, as needed)
- Encourage teamwork and positive attitude among student divers
- Assist with student concerns, issues, and problems; provide verbal and/or written evaluation/feedback to students
- Review/grade student assignments; maintain student assignment completion roster
- Prepare and review dive logs and other diver records
- Assist with program development
- Engage with and monitor social media platforms and website
- Serve as a member of the UMaine Diving Control Board



- Represents UMaine Dive Program at community and professional meetings
- Supervise Scientific Diving Assistant- Intern(s)

### **Qualifications and Requirements:**

Education/ Certifications- A Bachelor's degree or equivalent with a background in the sciences is preferred. Current certification as a scuba instructor with an internationally recognized training agency; current certification as an emergency response instructor (CPR/AED, First Aid, Oxygen Administration). Must pass scientific diver physical exam and a driver's license background check.

Knowledge/Skills- Knowledge of regulatory and community scientific diving procedures, practices and standards. Knowledge of underwater scientific diving methods and techniques necessary to accomplish research or other mission objectives. Knowledge of diving technology, instrumentation, and equipment; familiarity with scientific technology, instrumentation, equipment, and procedures associated with scientific diving operations.

Candidates must demonstrate diving/ watermanship ability acceptable to the instructor, as well as knowledge of scientific diving regulations, skills, and techniques. Ability to perform demonstration quality skills for training/instructional purposes. Ability to manage compliance with institutional diving policy. Ability and skill necessary to perform a variety of underwater tasks under adverse/difficult conditions. Ability to serve as working diver, lead diver, dive supervisor, and/or mission coordinator during research diving operations involving a variety of diving technologies.

Ability to follow strict safety guidelines and detailed work instructions but also take appropriate initiative and operate independently. Desire and motivation to exhibit role-model behavior and serve as a mentor to student divers.

- Status as an active and insured Divemaster or Instructor (PADI or SDI preferred)
- Current status as a UMaine Scientific Diver; experience with SMS324 preferred.
- Current AAUS/UMaine Diving Medical Exam and other administrative requirements
- Previous training/qualification as an AAUS Scientific Diver preferred (equivalent experience acceptable)
- Current certification in CPR/FA/O2 administration (Instructor rating preferred)
  - Ability to drive a University vehicle
  - Must provide all personal diving equipment

### **Compensation:**

Financial: Commensurate with experience.

In-kind: Costs of course-related boat dive, CPR/FA/O2 re-certification, some meals provided on dive-days.

**Location:** Darling Marine Center, 193 Clark's Cove Road Walpole, ME 04573

**Work Schedule:** *Part-time, Permanent position.* 24 hrs/week, for 12 months. Exact schedule to be determined based upon field activities and travel schedule.

**Work Environment:** This is a field intensive position requiring long-hours outdoors in a variety of weather conditions. Scuba diving requires a significant level of good health, physical fitness, endurance, and mental fortitude. Divers are regularly exposed to a variety of hostile environmental conditions; equipment is heavy, cumbersome, and limits visibility, hearing, and movement. Divers must learn to tolerate long periods of relative discomfort while maintaining focus on the duties and objectives at hand.

**To Apply:** Applicants should submit a letter of intent, professional resume/vitae, and a record of diving activity (Dive Log) to the UMaine Diving Safety Officer. Applications will be reviewed and potential candidates will be chosen; phone or personal interviews will be scheduled as necessary.

## APPENDIX B2- Program Assistant Job Description (Internship)

**Position Title:** Scientific Diving Assistant, Internship  
**Department:** School of Marine Sciences  
**Supervisor:** UMaine Diving Operations Manager

**Purpose:** Primary responsibility of the intern is to serve as a Dive Leader and assist with the instruction and supervision of students enrolled in SMS academic diving courses. The position is based primarily at the Darling Marine Center and is field intensive. The internship provides the necessary training and experience to earn certification as a Divemaster.

**Location:** Darling Marine Center, 193 Clark's Cove Road, Walpole, ME 04573 (Summer/Fall)  
Wallace Pool, University of Maine, Orono, ME 04469 (Spring)

**Work Schedule:** *Part-time, temporary position* 12-16 hrs./week for 6-12 months; Spring, Summer and/or Fall terms. Exact schedule to be determined.

**Work Environment:** This is a field intensive position requiring long-hours outdoors in a variety of weather conditions. Scuba diving requires a significant level of good health, physical fitness, endurance, and mental fortitude. Divers are regularly exposed to a variety of hostile environmental conditions; equipment is heavy, cumbersome, and limits visibility, hearing, and movement. Divers must learn to tolerate long periods of relative discomfort while maintaining focus on the duties and objectives at hand.

**Qualifications and Requirements:** Candidates must demonstrate diving/ watermanship ability acceptable to the instructor, as well as knowledge of scientific diving regulations, skills, and techniques. Ability to follow strict safety guidelines and detailed work instructions but also take appropriate initiative and operate independently. Desire and motivation to exhibit role-model behavior and serve as a mentor to student divers.

- Current status as a UMaine Scientific Diver; previous training as an AAUS Scientific Diver or equivalent experience acceptable. Experience with SMS324 preferred.
- Current AAUS/UMaine Diving Medical Exam and other administrative requirements
- Current certification in CPR/FA/O2 administration
- Ability to drive a University vehicle
- Medical insurance specific to scuba diving
- Must provide all personal diving equipment (\*some equipment may be available from UMaine)

### Compensation:

- **Financial:** None; this is an unpaid internship position.
- **In-Kind:** Divemaster academic materials and training (value: ~\$600), CPR/FA/O2 re-certification (value: ~\$100), course-related boat dive (value: ~\$150), some meals provided on dive days.

**NOTE:** *While academic materials and training are provided, the Divemaster certifications fee must be paid by the intern (~\$100-150).*

**Benefits:** None, University health and other benefits do not apply.

**To Apply:** Applicants should submit a letter of intent, professional resume/vitae, and a record of diving activity (Dive Log) to the UMaine Diving Safety Officer. Applications will be reviewed and potential candidates will be chosen; phone or personal interviews will be scheduled as necessary.

Applications are accepted on an ongoing basis with the following deadlines:

- Jan 15- Spring session
- Apr 15- Summer session
- Jul 15- Fall session

## **Expectations and Responsibilities**

In addition to the responsibilities outlined in the *Scientific Diver Statement of Understanding and Code of Conduct*, as a scientific diving intern, divemaster candidate, future industry professional, and representative of the UMaine Scientific Diving Program, you will be expected to exhibit conscientious, ethical, and professional behavior at all times when interacting with students, university personnel, and other diving community professionals. You will follow the guidance of your supervisor in certain situations, but you must also be self-motivated and learn to assist the instructor by anticipating what needs to be done instead of waiting for instructions.

### *General Characteristics*

- High-quality personal diving skills
- Positive and professional attitude
- General understanding of Dive Leader role
- Motivated independent worker
- Interest and ability to serve as a mentor to student divers
- Role model behavior

### *Duties and Expectations*

**General duties include: assist with all aspects of academic diving courses, prepare equipment, fill scuba cylinders, grade/review student assignments, act as a certified dive buddy, and supervising divers during both confined and open water dive activities.**

### **Specific duties include:**

- Complete academic and practical exercises as directed in professional Divemaster manual.
- Arrive on-site as scheduled, on-time, and prepared
- Assist with preparation and maintenance of diving equipment, University vehicles, and dive trailer
- Guide students in preparation, packaging, and transport of necessary field equipment
- Assist with dive site preparation and management
- Manage/Supervise classroom and in-water activities
- Encourage teamwork and positive attitude among student divers
- Assist with student concerns, issues, and problems; provide verbal and/or written evaluation/feedback to students
- Review/grade student assignments; maintain student assignment completion roster
- Engage with and monitor social media platforms and website

### *Divemaster Certification*

The intern will be provided the necessary training and experience to earn certification as a scuba-industry Divemaster. To do so, the intern must complete all required academic coursework and practical exercises in order to gain experience with a variety of diving activities. At minimum, interns must participate in one entire basic scuba course, one entire scientific diving course, and one discover scuba course.

Certification as a Divemaster is considered the first step towards becoming a diving-industry professional. As such, responsibility for completing the academic and participatory requirements of the internship rests solely with the candidate; professional level behavior and work is expected during all aspects of the program. The structure of diving courses at UMaine provides ample opportunities to complete these objectives over the course of a single year. Unless other arrangements are made, the internship will be officially terminated one year from the start date, regardless of whether the intern has met the requirements for Divemaster certification.

## APPENDIX C- AAUS Self-Evaluation Checklist

The AAUS requests that its Organizational Members use this provided compliance checklist to self-evaluate their programs, and maintain this record along with an up to date Dive Safety Manual uploaded to the AAUS web portal.

**AAUS OM**  
**Program Self-**  
**Evaluation**  
**C. Rigaud, UMaine; self-evaluation (Jan. 2023)**

### Inspection

	YES	NO	N.A.	Question
<b>A</b>				<b>Administration: definitions per OSHA 29CFR1910 or AAUS standards</b>
.				
1	✓			Is the DCB's membership composed of a <b>majority active</b> scientific divers?
2	✓			Does the DCB have <b>autonomous and absolute authority</b> over the scientific diving program's <b>operations</b> ?
3	✓			Is the DSO an <b>active</b> scientific diver?
4	✓			Is the DSO an <b>current, renewed instructor</b> from an internationally recognized underwater instruction agency?
5	✓			Is the DSO a <b>full member</b> of AAUS?
6	✓			Are all data and information obtained during the project considered <b>non-proprietary</b> ?
7	✓			Are divers either <b>scientists or scientists in training</b> ?
8	✓			Do scientific divers function as <b>observers</b> and <b>data gatherers</b> ?
9	✓			Review any incident reports and system for documenting
<b>B</b>				<b>Diving Safety Manual (DSM)</b>
.				
1	✓			Is DSM approved (latest revision/review) by DCB and AAUS and cover all OM's scientific diving operations?
2	✓			Includes diver training and certification requirements?
3	✓			Includes medical review standards and required physical examinations criteria?
4	✓			Includes procedures for emergency care, recompression and evacuation
5	✓			Are required records (certification, medical, dive log, injury, equipment) kept for the minimum intervals?
6	✓			Is a mechanism in place to collect individual dive log data for AAUS reporting?
7	✓			Were previous year diving statistics reported to AAUS on time?
<b>C</b>				<b>Training</b>
.				
1	✓			Is a diver training program of 100 hours with at least 12 training dives for DITs for scientific diver certification conducted?

- 2 ✓ If no diver training course is part of OM's program, is other training documentation in place?
- 3 ✓ Review documentation of Instructional Training staff and Lead Diver Qualifications
- 4 ✓ Are all scientific divers currently certified in diving first aid (Oxygen administration, CPR and First Aid)?
- 5 ✓ Have all scientific divers received Hazmat training for transportation of compressed gas cylinders every 3 years as per OSHA?

#### **D Field Operations**

- 1 ✓ Is a diving accident management plan (with diver emergency contact information) prepared for each operational diving area?
- 2 ✓ Is a Lead Diver designated for each dive operation?
- 3 ✓ Review of dive project proposals, including depth authorizations of project divers
- 4 ✓ Are reciprocity letters reviewed for all visiting scientific divers?
- 5 ✓ Are at least two comparably equipped scientific divers in constant communication underwater on every dive?

#### **E Scuba diving equipment**

- 1 ✓ Is all program diving and safety equipment maintained and documented in accordance to manufacturers recommendations?
- 2 ✓ Review documentation of OM's science divers annual equipment inspections
- 3 ✓ Is all diving equipment that is in need of repair or maintenance tagged and separated from operational gear?

#### **F Air compressor systems**

- 1 ✓ Are the operational procedures posted for the air system and compressor?
- 2 ✓ Has an air sample from the system been taken in the last 6 months and tested against CGA Grade E?
- 3 ✓ Is there a logbook documenting the operational and maintenance history of the compressor and the air system?
- 4 ✓ Is the air intake located and clearly labeled in an area that is free of potential contaminants to the air supply?

#### **G Safety equipment**

- 1 ✓ Are a first aid kit and emergency oxygen available?

## APPENDIX D- AAUS Statistics Report (UMaine, 2022)

### Stats Summary Report Entry Form

Year

The Total number of Divers Logging Dives during this reporting cycle is:

Total Divers

#### Dives by Purpose

	Dive Time in Minutes	Dives Logged	Number of Divers Logging Dives
Scientific	14771	295	11
Training and Proficiency	15857	450	29

#### Dives by Diving Mode

	Dive Time in Minutes	Dives Logged	Number of Divers Logging Dives
Open Circuit Scuba	30628	745	35
Hookah	0	0	0
Surface Supplied	0	0	0
Rebreathers	0	0	0

#### Dives by Breathing Gas

	Dive Time in Minutes	Dives Logged	Number of Divers Logging Dives
Air	30383	738	35
Nitrox	245	7	4
Mixed Gas	0	0	0

#### Dives by Decompression Profiling Method

	Dive Time in Minutes	Dives Logged	Number of Divers Logging Dives
Dive Tables	9361	265	17
Dive Computers	21267	480	19
Dive Software	0	0	0



### Dives by Specialized Diving Method

	Dive Time in Minutes	Dives Logged	Number of Divers Logging Dives
Required Decompression	103	2	1
Overhead Environment	0	0	0
Blue Water	0	0	0
Ice / Polar	0	0	0
Saturation Diving	0	0	0
Aquarium Diving	0	0	0

### Scientific or Training/Proficiency Dives by AAUS Depth Range

Depth Range	Dives Logged	Number of Divers Logging Dives
0-30 feet	457	30
31-60 feet	242	29
61-100 feet	43	21
101-130 feet	3	2
131-150 feet	0	0
151-190 feet	0	0
191-> feet	0	0

### DIVING INCIDENT(S)

Total Number of Diving Incidents occurring during this reporting cycle

2

NOTE: Please be sure to enter all incidents on the following page

## **APPENDIX E- UMaine 'Diving by the Numbers' (March 2023)**

### **History and Reputation**

- 55+ years of scientific diving activity (1960s-present)
- 28+ years as AAUS members (1995-present)
- First AAUS institution in Maine
  - 1 of only ~150 worldwide; 1 of only 2 in Maine; 1 of only 12 in New England

### **Diving Activity (1995-present)** (\*excluding 2002, no data)

- 23,362 scientific dives conducted
- 15,751 hours spent underwater
- 865 scientific dives/year
- 583 hours underwater/year
- 20-30 individual divers/year

### **Leadership and Awards**

- 17 years representation, AAUS Board of Directors (2006-present)
- 6 National Scholarship winners (AAUS)
- 5 years representation, NSF US Antarctic Program DCB (2013-2018)
- 5 years representation, ACE educational review panels
- 4 National Interns (AAUS-OWUSS)
- 3 years representation, National Park Service Dive Leadership Staff

### **Academic Programming**

- 16 years of Academic Scientific Diving courses (2008-present)
- 432 credit hours (~27/year)
- 152 Scientific Diving students (~10/year)
- 76 Basic Diving students (~7/year)

### **Finances**

#### *Revenue/expenses*

- \$167,616 tuition dollars generated (based on in-state tuition @ \$388/1cr)
- \$70,000 annual salary, Diving Operations Manager (UMaine System, SM)
- \$50,000 annual operating budget
  - \$10,000 DSO specific support (SEM)
  - \$30,000 annual salary (60%), Sci. Diving Asst. (NSFA)
  - \$10,000 equipment and supplies (SMS/DMC)
- \$850 course fee (sci. diving); \$850 course fee (basic scuba)

#### *Gifts*

- \$15,000 in gifts to support Sci. Diving scholarships (private donor)
- \$10,000 grant to purchase equipment for Sci. Diving students (Foundation, 2010)

#### *Internal Funding Support*

- \$35,000 for air station/ compressor replacement (DMC, 2018)
- \$42,000 for vehicle replacement (DMC, 2022)
- \$11,000 for scuba equipment replacement (Sci. Dive Reserve Acct., 2022)

## APPENDIX F- Timeline of Notable Achievements (2006-2023)

<b>2006</b>	<ul style="list-style-type: none"> <li>• C. Rigaud appointed to AAUS Board of Directors</li> </ul>
<b>2007</b>	<ul style="list-style-type: none"> <li>• AAUS Kathy Johnston PhD Scholarship (S. Arnold)</li> </ul>
<b>2008</b>	<ul style="list-style-type: none"> <li>• Inaugural Academic Scientific Diving course</li> </ul>
<b>2010</b>	<ul style="list-style-type: none"> <li>• \$10,000 grant to purchase scuba equipment (Dorr Foundation)</li> <li>• UMaine equipment inventory = 10 full sets of scuba gear</li> </ul>
<b>2011</b>	<ul style="list-style-type: none"> <li>• UMaine hosts 30<sup>th</sup> Annual AAUS Symposium</li> <li>• Dearborn Sci. Diving Scholarship established (\$5000 private donation)</li> </ul>
<b>2012</b>	<ul style="list-style-type: none"> <li>• Inaugural SMS Basic Scuba course</li> <li>• Financial support for Sci. Diving Assistant established (SMS)</li> </ul>
<b>2013</b>	<ul style="list-style-type: none"> <li>• Internal allocation for Dive Trailer (SMS, Fei Chai)</li> <li>• C. Rigaud appointed to NSF USAP DCB</li> <li>• Dearborn Sci. Diving Scholarship renewed (\$5000 private donation)</li> </ul>
<b>2014</b>	<ul style="list-style-type: none"> <li>• C. Rigaud appointed as National Park Service (NPS) Guest Instructor</li> <li>• Hosted AAUS/OWUSS Intern (K. Newcomer)</li> <li>• AAUS Kathy Johnston PhD Scholarship (M. McMahan)</li> <li>• C. Rigaud, ACE National Review committee</li> </ul>
<b>2015</b>	<ul style="list-style-type: none"> <li>• C. Rigaud appointed as AAUS Treasurer</li> <li>• C. Rigaud, ACE National Review panel</li> <li>• Hosted AAUS/OWUSS Intern (C. Mitchell)</li> <li>• AAUS Kathy Johnston PhD Scholarship (A. Harrington)</li> <li>• AAUS Travel Award (M. McMahan)</li> </ul>
<b>2016</b>	<ul style="list-style-type: none"> <li>• C. Rigaud NPS Guest Instructor</li> <li>• NSFA Sci. Diving account established</li> <li>• \$11,000 salary commitment to permanent P/T Sci. Dive Asst. (NSFA-SMS)</li> <li>• SEM provides dedicated Sci. Diving vehicle</li> </ul>
<b>2017</b>	<ul style="list-style-type: none"> <li>• C. Rigaud, ACE National Review panel</li> <li>• OWUSS Bonnier Publishing Intern (C. Brunton)</li> <li>• Dive Truck upgrade (Chevy Avalanche, SEM funded)</li> <li>• 10<sup>th</sup> consecutive semester of SMS324</li> <li>• AAUS Travel Award (E. Maxwell)</li> <li>• Dearborn Scientific Diving Scholarship renewed (\$5000)</li> </ul>
<b>2018</b>	<ul style="list-style-type: none"> <li>• C. Rigaud NPS Guest Instructor</li> <li>• C. Rigaud, ACE National Review panel</li> <li>• Co-Host AAUS/OWUSS Intern (=Farrell)</li> <li>• Dive Trailer upgrade (\$3500, FY17 Sci. Dive Program funds)</li> <li>• \$30,000 internal allocation, DMC air compressor replacement (Provost/DMC)</li> <li>• C. Rigaud, NSF USAP DCB site visit, McMurdo Station Antarctica</li> </ul>
<b>2019</b>	<ul style="list-style-type: none"> <li>• UMaine-Bigelow Sci. Dive Ops MOU established</li> <li>• UM DCB Charter established</li> <li>• Sci. Dive Assts. C. Johns/ E. Maxwell become DAN Instructors</li> </ul>

<b>2020</b>	<ul style="list-style-type: none"> <li>• SMS324 SOP &amp; Curriculum SOP</li> <li>• UMaine COVID-19 Diving SOP</li> <li>• SMS324- Fall 2022 offered in-person despite COVID-19 shutdowns</li> <li>• AAUS e-learning platform incorporated</li> <li>• Sci. Dive Assts. C. Johns/ E. Maxwell become PADI Instructors</li> </ul>
<b>2021</b>	<ul style="list-style-type: none"> <li>• First UMaine scuba class not taught by DSO (Johns Maxwell)</li> <li>• Return to pre-COVID diving activity</li> <li>• C. Rigaud, ACE National Review panel</li> </ul>
<b>2022</b>	<ul style="list-style-type: none"> <li>• Sci. Dive Asst. permanent, P/T position; salaried</li> <li>• C. Rigaud, ACE National Review panel</li> <li>• Equipment inventory upgrade; 10 new sets of scuba gear (\$11,000, Sci. Dive Acct. reserve funds)</li> <li>• Dive truck replacement/upgrade (\$42,000, DMC Special Funds)</li> </ul>
<b>2023</b>	<ul style="list-style-type: none"> <li>• AAUS online Dive Logging program adopted</li> <li>• AAUS Kevin Flanagan Travel Award (A. Ouimet)</li> </ul>

## APPENDIX G- Maine Scientific Diving Consortium

### Maine Scientific Diving Consortium Proposal (2022)

#### *Objective:*

Establish a UMaine-led scientific diving consortium among Maine-based research institutions, universities, and other entities.

#### *Justification:*

- UMaine has the largest and longest-established scientific diving program in Maine, and currently 1 of only 3 American Academy of Underwater Sciences (AAUS)-affiliated Scientific Diving Programs in the state (MMA, Bigelow)
- UMaine already possesses the expertise, facilities, and resources to manage and supervise scientific diving oversight and training
- The UMaine scientific diving program is consistently solicited to provide these services but currently lacks the mechanisms to do so

#### *Benefits for UMaine:*

- Provide external funding for the UMaine scientific diving program
- Solidify the reputation of UMaine-DMC as the leader of scientific diving in Maine
- Increase awareness and use of UMaine research facilities

#### *Benefits for participating entities:*

- Promote and facilitate collaboration and cooperation among diving scientists.
- Facilitate compliance with scientific diving policy and regulations
- Provide affordable access to AAUS organizational membership<sup>1</sup>
- Reduce financial burden of hosting independent scientific diving programs
- Centralize the administration and training aspects of scientific diving institutions

#### *Function:*

- UMaine will lead the creation of and manage a centralized, state-wide scientific diving program using a model similar to other scientific diving consortiums.
- The following institutions have expressed interest in joining the Consortium:
  - Manomet Research Lab
  - Bigelow Laboratory
  - Hurricane Island Foundation
- Other Maine institutions which stand to benefit from membership include:
  - UMaine System campuses/units<sup>2</sup>
  - Gulf of Maine Research Institute (GMRI)
  - Colby/Bates/Bowdoin Colleges
  - U. New England
  - Island Institute
- A single Diving Control Board (DCB) will supervise all diving activities; participating entities will be encouraged to have representation on the DCB

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<sup>1</sup> AAUS membership provides access to a nationally-recognized accreditation for scientific diving programs adhering to a safety standard which most other institutions in Maine are not able to meet independently, as well as diver certification.

<sup>2</sup> When UMaine transitioned to a system-wide model, the Scientific Diving Program was given responsibility for oversight at all UMaine System campuses/units with no commensurate additional resources. Membership of other UMaine campuses would both strengthen the Scientific Diving Consortium and improve the Consortium's ability to serve divers from those campuses.

- A single Director of Diving Programs (DDP) will serve as the chief administrative officer and manage/oversee a centralized clearinghouse for scientific diver records, training, and certification
- Satellite/unit DSOs will be utilized at other facilities/locations as necessary
- Participating institutions will accept and acknowledge legal responsibility for their own employees, students, and other affiliated divers
- Participating institutions will make a 3–5-year commitment to pay a flat annual membership fee of \$10,000 and receive:
  - Benefits listed above (over \$40,000 value)<sup>3</sup>
  - Waived Dive Program fees for up to 6 divers (\$2,100 value)<sup>4</sup>
  - Waived Scientific Diving course fees for up to 2 students (\$1,700 value)<sup>5</sup>

*Requirements:*

- Administrative shift of the current Scientific Diving Program to the Scientific Diving Consortium
- Creation of Director of Diving Programs position to be filled by Chris Rigaud<sup>6</sup>
- Meeting increased funding need projected at less than \$2,000 per year<sup>7</sup>, an excellent value given the benefits listed above

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<sup>3</sup> Cost to other institutions of implementing UMaine-equivalent dive program: at least \$40,000/year staffing cost, \$1,000/year AAUS membership fee, and varying costs of meeting infrastructure requirements.

<sup>4</sup> \$350/year Dive Program Fee \* 6 divers

<sup>5</sup> \$850 course fee \* 2 students

<sup>6</sup> Chris is the current Diving Operations Manager and Diving Safety Officer, and would retain these titles in addition to that of Director of Diving Programs, with a commensurate salary increase. See “Supporting Document - Consortium Professional Positions” for more information. Once the Consortium expands to more than 3 member institutions, the need to shift DOM and DSO duties to regional support staff is anticipated.

<sup>7</sup> This assumes a modest 2-5 memberships, an increase of Chris’ base salary to \$80,000, and shifting the currently part-time Scientific Diving Assistant to full-time as membership increases.



**SUPPLEMENT 1- AAUS BOD Service Letter**

**--in progress; J. Hayward, AAUS President**