

# **APPENDIX 1**

## **SCIENTIFIC DIVING FOR THE BUFFALO STATE COLLEGE (BSC) GREAT LAKES FIELD STATION**

Scuba diving at the Great Lakes Field Station (Field Station) is allowed and encouraged for purposes of research and course work. Diving privilege and use of this facility is conditional upon adherence to the BSC EH&S Diving Safety Program Policy and Procedure, DIV-008-001.

Facilities for diving include a scuba locker room with showers, equipment storage areas, and boats.

1. All divers must complete the BSC diving certification process annually. This certification process, consists of classroom work, in-water demonstration of skills (Appendix 5), and three dives. Faculty or staff who dive at the Field Station on an annual basis and who have completed the full certification process at least once, may, with the approval of the certifying instructor, fulfill the annual certification process by: a) demonstrating a minimum of six logged dives in the past 10 months, and b) participating in at least one of the certification dives. In certain instances, temporary certifications, not exceeding 8 months may be offered to divers from other institutions where equivalent certification, as determined by the DCB or DSO, is held by the diver. Successive temporary certifications are not available unless the diver demonstrates he has completed the equivalent certification from his/her originating institution or completes the BSC certification process.
2. Diving for recreational purposes is not allowed off Field Station property.
3. A scuba checkout board is located next to the scuba locker room. Each diver must complete a SCUBA DIVE FORM (Appendix 7), to obtain the signatures specified on the form, to post the form on the checkout board prior to each dive, and to complete the form upon completion of the dive.
4. All dives are to be tended by a boat manned by a qualified adult, who is at least 21 years of age and possessing a NYS boating license, or equivalent as determined and approved by the DCB. The boat is to remain near the divers' surface-exhaust bubbles at all times.
5. Night dives are allowed only for those who have successfully completed an approved night dive certification. Each diver must have a proper dive light. The designated dive safety officer must be notified upon departure and return of each night dive.

**APPENDIX 2**  
**SCUBA RELEASE OF LIABILITY**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

**PLEASE READ AND BE CERTAIN YOU UNDERSTAND THE IMPLICATIONS OF SIGNING. BY SIGNING THIS DOCUMENT YOU WAIVE CERTAIN LEGAL RIGHTS, INCLUDING THE RIGHT TO SUE.**

**EXPRESS ASSUMPTION OF THE RISKS ASSOCIATED WITH DIVING AND RELATED ACTIVITIES**

I, (print your full name) \_\_\_\_\_, do hereby affirm and acknowledge that I have been fully informed of the inherent hazards and risks associated with SCUBA diving. I fully understand that these risks can lead to severe injury and even death. I understand that diving operations may be conducted at a site that is remote from a recompression chamber, nevertheless, I choose to proceed even in the absence of a recompression chamber. Additionally, I understand that there are also risks associated with dive travel, including, but not limited to, the possible injury or loss of life as a result of dive boat accident, as well as travel to and from dive sites. Despite the potential hazards and dangers associated with the activity of diving, I wish to proceed and I free accept and expressly assume all risks, dangers, and hazards that may arrive from diving activities and which could result in personal injury, death, and property damage to me.

**RELEASE OF LIABILITY, WAIVER OF CLAIMS, AND INDEMNITY AGREEMENT**

In consideration of being allowed to participate in SCUBA diving activities as well as the use of any of the facilities and the use of the equipment of the below listed releasees, I hereby agree as follows:

6. TO WAIVE AND RELEASE ANY AND ALL CLAIMS that I may have in the future against any of the following named persons or entities (hereinafter referred to as Releasees):

*State University of New York College at Buffalo (BSC)*

*(Others):* \_\_\_\_\_

7. To release the releasees, their officers, directors, employees, representatives, agents, and volunteers, from all liability and responsibility, whatsoever, for any claim or cause of action that I, my estate, heirs, executors, or assigns may have for personal injury, property damage, or wrongful death arising from SCUBA diving activities whether caused by the active or passive negligence of the releasees or otherwise. By executing this document, I agree to hold the releasees harmless for any injury or death which may occur to me during SCUBA diving activities and/or instruction.

8. By entering into this Agreement, I am not relying on any oral or written representations or statements made by the Releasees, other than what is set forth in this Agreement. I further agree that this Agreement shall be governed by and interpreted in accordance with the laws of the State of New York, United States of America. I hereby certify that I am a qualified SCUBA diver, being certified by (agency) \_\_\_\_\_ and my card number is \_\_\_\_\_, dated \_\_\_\_\_. I have completed approximately \_\_\_\_\_ hours or \_\_\_\_\_ dives in open water since certification. I have been given a copy of the BSC Diving Safety Program Policy and Procedure, and having read it, agree to follow said rules when diving under the auspices of BSC and the Great Lakes Center.

I hereby declare that I am of legal age and am competent to sign this Agreement or, if not, that my parent or legal guardian shall sign on my behalf, and that my guardian or parent is in complete understanding and concurrence with this Agreement.

**I HAVE READ THIS AGREEMENT, I UNDERSTAND IT, I AGREE TO BE BOUND BY IT.**

Signature of Participant \_\_\_\_\_ Date \_\_\_\_\_

Witness (Name ) \_\_\_\_\_ Signature \_\_\_\_\_

SIGNATURE OF PARENT OR GUARDIAN IF PARTICIPANT IS A MINOR, and by their signature they, on my behalf, release all claims that both they and I might have.

(Parent/Guardian signature) \_\_\_\_\_ Date \_\_\_\_\_

**APPENDIX 3**  
**SCUBA HEALTH HISTORY FORM**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

Name \_\_\_\_\_ Date \_\_\_\_\_

Gender \_\_\_\_\_ Date of Birth \_\_\_\_\_ Age \_\_\_\_\_

**INSTRUCTIONS: Check each item "Yes" or "No". Every "Yes" must be explained in the Comments section below.**

- Yes  No Have you had previous diving experience? (If yes, list number of years and level of expertise)
- Yes  No When driving through mountains or flying, do you have trouble equalizing pressure in your ears or sinuses?
- Yes  No Have you ever been involved in a diving accident? (If yes, explain below)
- Yes  No Have you ever had bends (decompression sickness) or air embolism? (If yes, explain below)
- Yes  No Do you smoke? (If yes, how much?)
- Yes  No Are you receiving treatment for an illness or injury? (If yes, please explain below)
- Yes  No Are you pregnant?
- Yes  No Have you had an EEG, CAT Scan, or MRI test? (Reason and results of test?)

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**APPENDIX 3**  
**SCUBA HEALTH HISTORY FORM**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

<b>Do you have or have you had any of the following:</b>	<b>MEDICATIONS</b> <b>Place an "X" next to each of the medicines that you use</b>
<input type="checkbox"/> Yes <input type="checkbox"/> No Hay fever?	<input type="checkbox"/> Aspirin, Bufferin, Anacin, Tylenol
<input type="checkbox"/> Yes <input type="checkbox"/> No Running ear, mastoid trouble, or ruptured eardrum?	<input type="checkbox"/> Blood pressure pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Hearing loss?	<input type="checkbox"/> Cortisone (steroids)
<input type="checkbox"/> Yes <input type="checkbox"/> No Asthma?	<input type="checkbox"/> Cough medicine
<input type="checkbox"/> Yes <input type="checkbox"/> No Wheezing with exercise or on breathing cold air?	<input type="checkbox"/> Digitalis, heart pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Shortness of breath after moderate exercise?	<input type="checkbox"/> Hormones
<input type="checkbox"/> Yes <input type="checkbox"/> No Collapsed lung (pneumothorax)?	<input type="checkbox"/> Insulin or diabetic pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Persistent cough?	<input type="checkbox"/> Iron or poor blood medications
<input type="checkbox"/> Yes <input type="checkbox"/> No Frequent bronchitis?	<input type="checkbox"/> Sleeping pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Chest pain?	<input type="checkbox"/> Thyroid medicine
<input type="checkbox"/> Yes <input type="checkbox"/> No Tire easily?	<input type="checkbox"/> Breathing medicine
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No Spells of fast, irregular, or pounding heartbeat?	<input type="checkbox"/> Antihistamines, allergy pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Hernia?	<input type="checkbox"/> Nose sprays, decongestants
<input type="checkbox"/> Yes <input type="checkbox"/> No Angina or myocardial infarction?	<input type="checkbox"/> Pain medication
<input type="checkbox"/> Yes <input type="checkbox"/> No Rheumatism, arthritis, or other joint trouble?	<input type="checkbox"/> Chemotherapy
<input type="checkbox"/> Yes <input type="checkbox"/> No Hemolytic or sickle cell anemia?	<input type="checkbox"/> Tranquilizers
<input type="checkbox"/> Yes <input type="checkbox"/> No Severe or frequent Headaches?	<input type="checkbox"/> Weight reduction pills
<input type="checkbox"/> Yes <input type="checkbox"/> No Migraine headaches?	<input type="checkbox"/> Dilantin
<input type="checkbox"/> Yes <input type="checkbox"/> No Head injury causing unconsciousness?	<input type="checkbox"/> Water pills, diuretics
<input type="checkbox"/> Yes <input type="checkbox"/> No Dizzy spells, fainting spells, or seizure disorder?	<input type="checkbox"/> Antibiotics
<input type="checkbox"/> Yes <input type="checkbox"/> No Received treatment or professional counseling for nervous or emotional problem or depression?	<input type="checkbox"/> Barbiturates
	<input type="checkbox"/> Birth control pills
	<input type="checkbox"/> Phenobarbital
	<input type="checkbox"/> Other medications not listed

**APPENDIX 4**  
**SAMPLE SCUBA MEDICAL EXAMINATION REPORT**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

Scuba Applicant's Name: \_\_\_\_\_ Examination Date: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

**MEDICAL HISTORY**

(Refer to applicant's Scuba Health History form and to the attached Information for Medical Personnel.)

*Is there a significant past history which would disqualify the applicant from scuba diving?*

**Yes**  **No** If "Yes", no need exists to complete the physical examination or special tests.

**PHYSICAL EXAMINATION**

Height \_\_\_\_\_ Weight \_\_\_\_\_ Blood Pressure \_\_\_\_\_ Pulse \_\_\_\_\_

Uncorrected Vision R \_\_\_\_\_ L \_\_\_\_\_ Corrected Vision R \_\_\_\_\_ L \_\_\_\_\_

**Please check the following items. If ABNORMAL, give details in the Comments section.**

General appearance (including obesity, gross defects, postural abnormalities) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Skin (eruptions or reactions) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Head and Neck <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Neurologic <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Nose and Sinuses <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Psychiatric (including apparent motivation for diving, emotional stability, claustrophobia) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Ears (including hearing, otitis, perforation, mobility of T.M.) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	CBC <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Mouth and Throat <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Blood glucose <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Spine <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Urinalysis (dipstick for glucose and protein) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Lungs and Chest (include test for end- expiratory wheeze) <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Chest X-ray (OPTIONAL: see the attached "Information for Medical Personnel") <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Heart <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	12 Lead ECG (OPTIONAL: see the attached "Information for Medical Personnel") <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal
Abdomen <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	Urine HCG (OPTIONAL: see the attached "Information for Medical Personnel") <input type="checkbox"/> Negative <input type="checkbox"/> Positive
Extremities <input type="checkbox"/> Normal <input type="checkbox"/> Abnormal	

**IMPRESSION OF APPLICANT'S MEDICAL HISTORY, PHYSICAL EXAM, AND TEST RESULTS:**

- Satisfactory**
- Questionable**
- Unsatisfactory**

**APPENDIX 4**  
**SAMPLE SCUBA MEDICAL EXAMINATION REPORT**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

**IMPRESSION OF APPLICANT'S SCUBA DIVING HEALTH:**

- Approval.** I find no defects which I consider incompatible with diving.
  
- Disapproval.** This applicant has defects which in my opinion clearly would constitute unacceptable hazards to his/her health and safety in diving.

**Comments:**

Signature of examining physician \_\_\_\_\_ Date \_\_\_\_\_

Print Name: \_\_\_\_\_

## APPENDIX 4

### INFORMATION FOR MEDICAL PERSONNEL PROVIDING THE STATE UNIVERSITY COLLEGE AT BUFFALO SCIENTIFIC DIVING MEDICAL EXAMINATION

Most people are able to meet the physical requirements of scientific diving; however, a careful elicitation of the medical history and careful performance of the exam may prevent serious accident or even death. The medical forms are derived from the requirements of the American Academy of Underwater Sciences, Divers Alert Network (DAN), and the recommendations contained in the Medical Examination of the Sports SCUBA Divers, Jefferson C. Davis, M.D., Editor. The forms include information necessary to meet these requirements. Final approval to dive shall be granted by the Buffalo State College Diving Control Board or DSO. A “fit-for-duty” report (“yes/no”) report based on the medical examination should be forwarded to:

Director, Environmental Health and Safety  
Clinton Center, Rm  
State University College at Buffalo  
1300 Elmwood Avenue  
Buffalo, NY 14222-1095

- A. Frequency of Physical Examination:** A physical exam will be required prior to initial diving exposure and then at three-year intervals up to age 40 and every two years after age 40. More frequent diving physical examinations may be required if conditions exist that the physician or BSC Diving Control Board wishes to monitor.
- B. Health History:** All medical items from the Scuba Health History form with a positive response must be commented upon in detail. Special attention should be given if the diver has suffered any recent injury, illness, or surgery requiring hospital admission or resulting in debilitation, any episode of unconsciousness, or any diving accident resulting in injury to the diver.
- C. Tests for Diving Physical Examination:** Additional tests may be indicated for individuals with medical conditions needing clarification for diving.

#### **Required Testing:**

1. Visual acuity.
2. Complete blood count.
3. Blood glucose.
4. Urinalysis

#### **Optional Testing:**

1. Chest X-ray. Posterior-anterior, lateral views with radiologist comment. A chest X-ray is recommended for any diver with:
  - a personal medical history of serious or recurrent infection
  - a personal medical history of a disease with possible respiratory complications
  - a family history of tuberculosis
  - a smoking history of ten pack years or more
  - an occupational history with a high risk of lung disease
  - previous medical history of mechanical lung ventilation
  - symptoms or signs of lung disease
  - asthma
  - unexplained abnormal lung function tests
2. Resting ECG, 12 lead. An ECG is recommended for all male divers 45 years or older or female divers 55 years or older, or younger divers with numerous risk factors for coronary artery disease, or any diver with cardiac symptoms.
3. Urine HCG. Recommended for any female diver who is late for her menstrual period and could be pregnant.

## APPENDIX 4

### INFORMATION FOR MEDICAL PERSONNEL PROVIDING SCIENTIFIC DIVING MEDICAL EXAMINATIONS FOR THE STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO

#### D. Physical Examination:

1. **Visual Acuity** - Corrected near visual acuity adequate to see tank pressure gauge, watch, decompression tables, and compass underwater (20/50). Uncorrected visual acuity adequate to see the diving buddy or locate the boat in case corrective lenses are lost underwater.
2. **Cardiovascular** - Diseases which might prevent active exercise should be cause to reject the applicant. Peripheral vascular disease which might interfere with gas exchange in an extremity should also be cause to reject the applicant. Disqualifying conditions would include second or third degree heart block, Wolf-Parkinson-White syndrome with associated arrhythmia left bundle branch block, and cardiomyopathy. Angina pectoris and a history of myocardial infarction is disqualifying in nearly all patients.
3. **Ear, Nose, and Throat** - Applicants having acute or chronic sinus trouble should not dive unless free drainage of the sinuses is assured. Congestion secondary to upper respiratory infection (URI) or hay fever is a contraindication to diving until free passage of air is possible. Applicants with acute or chronic ear trouble should not dive until the drum has normal appearance. Scarring from childhood otitis is not a contra-indication to diving. Healed perforations of the drum of at least two months duration should not be harmed by diving if special care is taken to keep the ears well-cleared during dives. Applicants with acute URI may be passed, but should be cautioned strictly against diving until the URI has completely cleared. Decongestants which work well on land have been known to fail in the water, and severe squeeze can result. Bridgework or dentures should fit solidly.
4. **Respiratory** - Applicants with evidence of chronic lung disease, interference with free passage of air, or with poor gas exchange should be rejected. A chest X-ray should be taken. On examining the chest, the patient should be instructed to expire forcefully to assess for wheeze or cough.
5. **Gastrointestinal** - Applicants having chronic gastrointestinal disease, including ulcer, should not dive if symptoms are present. History of bleeding ulcer is a contra-indication to a saturation diving situation where isolation is required for a week or more. If the process is quiescent, as judged by a physician, diving can be undertaken, especially in a area where medical assistance is available. Examine each patient for hernia. Due to change in pressure, a hernia can strangulate on ascent.
6. **Neuropsychiatric** - This area is the most difficult to evaluate. If the response of the applicant to stress is questionable, seriously consider disqualification. Emergencies under water require cool judgment. It is estimated that the majority of diving deaths result from failure to react properly in emergency situations due to neuropsychiatric abnormalities. Baseline neurological exams may be used for comparisons in case of an accident.
7. **Drugs** - In addition to the obvious dangers of diving under the influence of alcohol or psychotropic drugs, prescribed medications must be considered. In general, it is not only the side effects of the drug with the unknown potentiating effect of nitrogen narcosis which represent hazards, but also the underlying disorder requiring medication. Tranquilizers not only dull alertness, but if anxiety is of such a degree to require their use, the patient should not dive.

## APPENDIX 4

### INFORMATION FOR MEDICAL PERSONNEL PROVIDING SCIENTIFIC DIVING MEDICAL EXAMINATIONS FOR THE STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO

#### **E. Contra-indications for Diving Absolute Contra-indications to Diving:**

1. Persons subject to spontaneous pneumothorax.
2. Persons subject to epileptic seizure or syncopal attacks.
3. Lung cysts or definite air-trapping lesions on chest x-ray.
4. Perforated ear drum.
5. Exercise or cold induced bronchial asthma. Currently inactive childhood asthma patients may be cleared after thorough pulmonary workup.
6. Drug or alcohol addiction.
7. Diabetes requiring medication.
8. Middle ear surgery with placement of plastic strut in air-conduction chain.
9. Cardiac arrhythmias, especially if associated with W.P.W. syndrome.
10. Significant valvular heart disease.
11. Migraine, if accompanied by nausea, vomiting, visual distortions, or dizziness.
12. Pregnancy.
13. Angina or myocardial infarction.
14. Severe depression or psychosis.
15. Prior chest surgery-thoracotomy.
16. History of diving pulmonary over-pressure accident.
17. Sickle-cell disease.

#### **F. Relative Contra-indications to Diving:**

1. Decreased pulmonary reserve from any cause.
2. Gross obesity in diving requiring decompression.
3. Cardiac abnormalities (e.g., pathological heart block, intra-ventricular conduction defects other than right bundle branch block, arrhythmia, coronary artery disease).
4. Chronic inability to equalize sinus and/or middle ear pressure.
5. Conditions requiring medication for control (e.g., antihistamines, anticonvulsants, bronchodilator, decongestants, motion sickness, diuretics, or insulin).
6. Meniere's disease.
7. Inguinal hernia.
8. Juxta-articular osteonecrosis.
9. Personality or psychiatric abnormalities.
10. Recent fractures or sprains.
11. Poor physical fitness.
12. Sickle-cell trait.

**APPENDIX 5**  
**SCUBA FITNESS TEST**  
**STATE UNIVERSITY OF NEWYORK COLLEGE AT BUFFALO**

In order to be a Buffalo State College (BSC)-certified scuba diver for scientific diving operations, each person must satisfactorily perform the following skills while fully geared. Performance will be evaluated by a dive instructor approved by the BSC Diving Control Board.

- Enter and exit the water.
- Clear a mask.
- Buddy breathe both as a donor and recipient.
- Orally inflate and purge a buoyancy compensating device.
- Level of comfort with one's own gear, and ability to independently don, doff, locate, and operate all equipment.
- Snorkel 300 yards at the surface while wearing full scuba gear (minus weight belt).
- Perform rescue skills:
  - Retrieve simulated unconscious diver from at least eight feet of water.
  - Simulate artificial respiration on the surface.

**APPENDIX 6  
SCUBA DIVING CERTIFICATION  
STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO  
GREAT LAKES CENTER**

]	Diver's Name _____	Date _____	
Address _____			
Phone _____	Birth Date _____	Age _____	
Height _____	Weight _____		

<b>EMERGENCY CONTACT</b>	
Name and Relationship _____	
Address _____	Phone _____

SCUBA CERTIFICATION: Agency _____	Number _____
Level _____	Date Certified _____
FIRST AID: _____	_____
<small>Certifying Agency</small>	<small>Date of Expiration</small>
CPR: _____	_____
<small>Certifying Agency</small>	<small>Date of Expiration</small>
DIVE LOG: Dives within the last year: _____ Total hours within last year: _____	
DAN (Divers Alert Network) #: _____ Membership Type: _____	

CONSENT AND RELEASE: _____	CURRENT MEDICAL EXAM: _____
SKILLS: <input type="checkbox"/> Shore Entry	<input type="checkbox"/> 300 yd. Snorkel/full gear (minus weight belt)
<input type="checkbox"/> Boat Entry	<input type="checkbox"/> Rescue Skills
<input type="checkbox"/> Buddy Breathe	<input type="checkbox"/> Attend to Buddy's Needs
<input type="checkbox"/> Buoyancy Control	<input type="checkbox"/> Comfort with Equipment
<input type="checkbox"/> Low Visibility Dive (optional)	<input type="checkbox"/> Night Dive (optional)
<input type="checkbox"/> APPROVAL <input type="checkbox"/> APPROVAL WITH RESTRICTIONS <input type="checkbox"/> DISAPPROVAL	
Comments/Restrictions:	

Certifying Officer	Date	Diving Safety Officer	Date	Director	Date
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**APPENDIX 7  
SCUBA DIVE FORM  
STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO  
GREAT LAKES CENTER**

**INSTRUCTIONS:** Each diver must fill out this form and obtain the proper authorization signatures for each dive. Upon return, each diver must complete this form and provide it to the DSO. Failure to comply with this procedure will result in revocation of diving privileges at the BSC GLC. Each diver must have successfully completed the BSC/GLC diving certification process at the beginning of the dive year, and must be on the approved list of divers. All dives using BSC and GLC equipment, facilities, or property must be for research, class work, or training dives for scientific diving; diving for recreational or commercial purposes is not allowed. Dives must be authorized by (1) the instructor of the class/project for which you are making the dive, AND (2) a BSC/GLC designated dive safety officer.

<p><b>Your Name:</b> _____</p> <p><b>Buddy's Name:</b> _____</p> <p><b>Today's Date:</b> _____</p> <p><b>Specific Destination:</b> _____ _____</p> <p><b>Purpose of Dive:</b> _____ _____</p>	<p><b>Departure Date:</b> _____</p> <p><b>Departure Time:</b> _____ <input type="checkbox"/> am <input type="checkbox"/> pm</p> <p><b>Expected Return Time:</b> _____ <input type="checkbox"/> am <input type="checkbox"/> pm</p> <p><b>Actual Return Time:</b> _____ <input type="checkbox"/> am <input type="checkbox"/> pm</p> <p><b>Planned Depth and Bottom Time:</b> _____</p> <p><b>Actual Depth and Bottom Time:</b> _____</p> <p><b>Boat #</b> _____ (Remember to complete Boat Trip Record form.)</p>
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<b>AUTHORIZATION (Required):</b>		
_____	_____	_____
Print Name	Signature	Date
<b>Dive Safety Officer:</b> _____		
Print Name	Signature	Date
Diving prohibited unless authorized by Dive Safety Officer.		
<b>COMMENTS/LESSONS LEARNED (damage, problems, entanglements, malfunctions, etc.) :</b>		

**APPENDIX 8**  
**SCUBA EMERGENCY PROCEDURES**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**  
**GREAT LAKES CENTER**

**PURPOSE AND SCOPE:**

To provide information for emergency assistance to all persons engaged in any educational/scientific diving operations under Buffalo State College (BSC)/Great Lakes Center (GLC) auspices. This information is presented as recommendations for dive location emergency aid and/or assistance, and for the summoning of medical and/or law enforcement agency assistance for the injured as rapidly as possible. Accidents and incidents require the same course of action; that is, prompt rescue and first aid, and the summoning of medical assistance to the dive location and/or arrangement for transportation, for hospital treatment, or for recompression chamber facilities.

It shall be the responsibility of all divers to examine all the emergency information in this manual and assure that it remains applicable to the planned diving operation, and to update or supplement the information as required.

**COMMUNICATIONS:**

Emphasis should be placed on the importance of obtaining rapid access to emergency care and treatment facilities. In view of the fact that hospital treatment, and particularly hyperbaric (recompression) facilities, may be limited or located at some distance from the dive location, it is mandatory that some type of communication be located at or near the dive location. This is to allow for immediate contact with some mode of transportation for emergency treatment. Contact the appropriate authorities immediately and (if conditions allow) concurrently with any rescue operations.

**In case of a diving emergency at the Great Lakes Station telephone 911 first, then notify the Station Manager and University Police (716-878-6333). In other state areas telephone the nearest law enforcement agency or recognized emergency aid unit, typically 911. State your exact location and the nature of the emergency. If the telephone line is busy, call the operator and state that you have a life or death situation and request a clear line. In case of shore based, small boat, or ship-at-sea diving emergencies with marine radio (VHF) availability, call the Coast Guard (U.S. and Canadian) on channel 16 for emergency assistance. A CB radio (channel 9) also may be capable of contacting an emergency agency such as the sheriff, highway patrol, fire paramedics, or other known rescue units. The Coast Guard can be reached with a cellular phone by dialing \*CG.**

In all occurrences of diving emergencies, contact the Dive Control Board as soon as possible.

**RECOMMENDED EMERGENCY PROCEDURES:**

The following emergency procedures are based on the premise that all dive team members will be trained in cardiopulmonary resuscitation (CPR), oxygen provider, and first aid. It is well recognized that the essential element in providing a diver subject to a serious accident with the best chance of survival is the prompt initiation of appropriate first aid measures, particularly basic CPR and oxygen in the event of decompression illness. The major diving medical emergencies are listed in Table 1.

**APPENDIX 8**  
**SCUBA EMERGENCY PROCEDURES**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**  
**GREAT LAKES CENTER**

TABLE 1  
Major Diving Medical Emergencies

Drowning and near-drowning	Cardiac arrest
Bone fractures (limbs, chest, head)	Pneumothorax
Decompression sickness (bends)	Carbon monoxide poisoning
Spinal injuries	Severe bleeding
Air embolism	

1. DIVER-IN-TROUBLE PROCEDURES:

The majority of diving accidents occur at or near the surface so the dive team member should be prepared to effect an in-water rescue. If possible, emergency aid should be sought concurrently, but if alone, the rescuer should not leave the injured. Dependent on circumstances, including water and weather conditions, available surface swimmers or boats should be directed to or from the locations of the emergency to render assistance where such directions will not compromise their safety or that of the injured.

Normally, emergency procedures will require dropping weighted equipment, and getting to shore or to a boat as quickly as possible. However, do not drop weighted equipment if it endangers the immediate rescue or any necessary artificial respiration in the water.

Look for vital signs, and monitor (respiration, pulse, excessive bleeding, in this order) on way to shore. Rescuers should be reminded that CPR attempted in the water may be extremely difficult and may endanger the injured's life. Float the injured horizontally to aid in maintaining the airway. Use the injured's flotation equipment to maintain the injured's buoyancy, if possible. If spinal damage or other serious fracture is indicated, do not aggravate the injury. Use rigid support under the injured, if available. Landings should be made in a manner to disturb the injured as little as possible. Do not attempt recompression in the water.

The main concern is for the injured, so do not overexert yourself unnecessarily in attempted rescue, and complicate the situation. On reaching shore, continue to monitor vital signs and administer first aid and CPR, as required. In most accidents, the injured should be treated for shock and kept warm. If alone, do not leave the injured but as soon as possible request emergency assistance at the scene, or transport for medical treatment.

Continue CPR as long as is necessary, and attend to the injured until the injured revives or competent help arrives. If decompression sickness or an embolism is indicated or suspected, the injured should be kept lying down in a head low position with elevation of the lower extremities where possible. Keep the airway open, but administer nothing by mouth.

If available, the administering of oxygen to the decompressive-sickness-injured will increase the chances of survival. Experience has shown that the first four to six hours following a decompression accident are critical.

**APPENDIX 8**  
**SCUBA EMERGENCY PROCEDURES**  
**STATE UNIVERSITY OF NEW YORK COLLEGE AT BUFFALO**

Carbon monoxide poisoning may be difficult to recognize, but in the event of convulsions, the injured should be prevented from self-harm. Carbon monoxide poisoning will require hospital treatment.

When medical assistance and/or transportation for hospital or recompression treatment does arrive, if possible, the attending dive team member or person-in charge should accompany the injured to the treatment center to assist in maintaining life support, and to tell attending medical personnel the circumstances of the accident.

**2. MISSING DIVER PROCEDURES:**

In the event of a missing diver or presumed fatality, notify the appropriate law enforcement agency immediately, and organize a search. Do not undertake a search where weather, current, or depth conditions may compromise the safety of the search group. BSC GLC personnel should not participate in the search and recovery group, unless specifically authorized.

All diving equipment involved in a BSC GLC diving accident shall be impounded for inspection and test.

**RECOMPRESSION CHAMBERS:**

The listing of the Great Lakes shore-based recompression chambers may change without notice. **ALWAYS PHONE 911 OR OTHER APPROPRIATE EMERGENCY NUMBER IN AN EMERGENCY; DO NOT DIRECTLY CALL THE CHAMBER FACILITY. If possible, contact DAN (Divers Alert Network) at 1-919-684-4326 to coordinate recompression chamber availability.**



NEW GROUP	A	B	C	D	E	F	G	H	I	J	K	L
← A	24:00 0:10	24:00 3:21	24:00 4:50	24:00 5:49	24:00 6:35	24:00 7:06	24:00 7:36	24:00 8:00	24:00 8:22	24:00 8:51	24:00 8:59	24:00 9:13
← B		3:20 0:10	4:49 1:40	5:48 2:39	6:34 3:25	7:05 3:58	7:35 4:26	7:59 4:50	8:21 5:13	8:50 5:41	8:58 5:49	9:12 6:03
← C			1:39 0:10	2:38 1:10	3:24 1:58	3:57 2:29	4:25 2:59	4:49 3:21	5:12 3:44	5:40 4:03	5:48 4:20	6:02 4:36
← D				1:09 0:10	1:57 0:55	2:28 1:30	2:58 2:00	3:20 2:24	3:43 2:45	4:02 3:05	4:19 3:22	4:35 3:37
← E					0:54 0:10	1:29 0:46	1:59 1:16	2:23 1:42	2:44 2:03	3:04 2:21	3:21 2:39	3:36 2:54
← F						0:45 0:10	1:15 0:41	1:41 1:07	2:02 1:30	2:20 1:48	2:38 2:04	2:53 2:20
← G							0:40 0:10	1:06 0:37	1:29 1:00	1:47 1:20	2:03 1:36	2:19 1:50
← H								0:36 0:10	0:59 0:34	1:19 0:55	1:35 1:12	1:49 1:26
← I									0:33 0:10	0:54 0:32	1:11 0:50	1:25 1:05
← J										0:31 0:10	0:49 0:29	1:04 0:46
← K											0:28 0:10	0:45 0:27
← L												0:26 0:10

**TABLE 2 - SURFACE INTERVAL TIME (SIT) TABLE**

TIME RANGES IN HOURS : MINUTES © 1989 NAUI  
 ACTUAL DIVE TIME SHOULD NOT EXCEED THIS NUMBER #30033(Rev.1/97)

M. FT.	12	15	18	21	24	27	30	33	36	39	NEW GROUP
7	6	5	4	4	3	3	3	3	3	3	← A
123	74	50	41	31	22	19	12	9	5		← B
17	13	11	9	8	7	7	6	6	6		← C
113	67	44	36	27	18	15	9	6			← D
25	21	17	15	13	11	10	10	9	8		← E
105	59	38	30	22	14	12	5				← F
37	29	24	20	18	16	14	13	12	11		← G
93	51	31	25	17	9	8					← H
49	38	30	26	23	20	18	16	15	13		← I
81	42	25	19	12	5	4					← J
61	47	36	31	28	24	22	20	18	16		← K
69	33	19	14	7							← L
73	56	44	37	32	29	26	24	21	19		← A
57	24	11	8								← B
87	66	52	43	38	33	30	27	25	22		← C
43	14										← D
101	76	61	50	43	38	34	31	28	25		← E
29	4										← F
116	87	70	57	48	43	38	AVOID REPETITIVE DIVES OVER 100 FEET				← J
138	99	79	64	54	47						← K
161	111	88	72	61	53						← L

**TABLE 3 - REPETITIVE DIVE TIMETABLE**

00 LIGHT FACE NUMBERS ARE RESIDUAL NITROGEN TIMES (RNT)  
 00 BOLD FACE NUMBERS ARE ADJUSTED MAXIMUM DIVE TIMES (AMDT)