

## **13. Night Ops**

### **13.1 Introduction**

The ERDI Night Ops Component is designed to develop the knowledge and skills necessary for night operations in emergency response diving.

### **13.2 Student Prerequisites**

1. Minimum age 18.
2. Certified as ERD I or equivalent.
3. CPR 1st or equivalent.
4. CPROX or equivalent.

### **13.3 Qualifications of Graduates**

Upon successful completion of the ERD Night Ops component, students will have developed the knowledge and skills necessary to plan and execute night diving operations within the scope of a team's operational guidelines.

### **13.4 Who May Teach**

An active ERDI Instructor that has been certified to teach this ops component.

### **13.5 Administrative Requirements**

#### **Administrative Tasks:**

1. Collect the course fees from all the students.
2. Ensure that the students have the required equipment.
3. Communicate the schedule to the students.
4. Have the students complete the:
  - a. *ERDI Liability Release and Express Assumption of Risk Form.*
  - b. *ERDI Medical Statement Form.*

**Upon successful completion of the course the instructor must:**

1. Issue the appropriate ERDI certification by submitting the ERDI Diver Registration form to ERDI Headquarters or registering the students online through member's area of the ERDI website.

### **13.6 Optional Materials**

1. *SDI Night and Limited Visibility* Student Manual or eLearning.
2. *SDI Night and Limited Visibility* Knowledge Quest or eLearning.
3. *SDI Night and Limited Visibility* Instructor Guide.

### **13.7 Student to Instructor Ratio**

#### **Academic:**

1. Unlimited, so long as adequate facilities, supplies and time are provided to ensure comprehensive and complete training of subject matter.

#### **Confined Water (swimming pool-like conditions):**

1. A maximum of 6 students per ERDI Instructor.

#### **Open Water (ocean, lake, quarry, spring, river, or estuary):**

1. A maximum of 6 students per ERDI Instructor.
2. It is the instructor's discretion to reduce this number as conditions dictate.

### **13.8 Course Structure and Duration**

#### **Course Structure:**

1. ERDI allows instructors to structure courses according to the number of students participating and their skill level.

#### **Duration:**

1. Classroom and briefing: Approximately 3 hours.
2. Confined water dives: Suggested simulation of reduced/zero visibility environment.
3. Open water dives (required): Two dives are required with complete briefs and debriefs by the instructor. The Dive plan must include surface interval, max no-decompression time, etc. to be figured out and logged. Night or limited visibility dive is defined as any dive requiring a light to enhance visibility.
4. Support dive: One dive is required in which the student will act as a surface support/tender asset.

### **13.9 Required Equipment**

1. Same equipment required for ERD I Diver.
2. Lights; primary and backup.
3. Whistle/Audible signaling device.

### **13.10 Approved Outline**

Instructors may use any additional text or materials that they feel help present these topics.

**The following topics must be covered:**

1. 1. Why Dive at Night:
  - a. Definition of "Night" operational environment.
  - b. Experience in limited visibility.
  - c. Why choose limited visibility operations.
  - d. Risk assessment, Go/No-Go.
2. Special Equipment:
  - a. Lighting types and needs:
    - i. Scene Lighting.
    - ii. Dive Lights.
    - iii. Tender Lights.
    - iv. Marker Lights (Location/Recognition).
    - v. Marker Lights.
    - vi. Color identification/recognition.
    - vii. Visual assistance systems (thermal/night/Dark-water Vision/etc).
  - b. Importance of diver/tender lights and backups.
  - c. Comparison of different styles.
3. Buddy/Tender:
  - a. Buddy contact:
    - i. Plausibility.
    - ii. Limited visibility, buddy line.
    - iii. Tender vs Buddy.
  - b. Communications:

- i. Types
    - 1. Electronic.
    - 2. Line signals.
    - 3. Touch.
    - 4. Audible.
    - 5. Visual.
  - ii. Light signals at distance (diver/tender):
    - 1. Attention/OK.
    - 2. Something's wrong.
    - 3. Location reference.
  - iii. Line pulls (Tender to Diver):
    - 1. Ok – One pull.
    - 2. Stop/Turn – Two pulls.
    - 3. Surface – Three pulls.
    - 4. Stop/Standby – Four pulls.
  - iv. Line pulls (Diver to Tender):
    - 1. Ok – One pull.
    - 2. More Line – Two pulls.
    - 3. Found Object – Three pulls.
    - 4. Help/Trouble – Four pulls.
  - v. Tactile Signals:
    - 1. Squeeze – Stop.
    - 2. Pull – Backup.
    - 3. Push – Go.
    - 4. Crossed Fingers – Entanglement.
    - 5. Rapid Squeezing – Out of Air Issue.
  - vi. Whistle on surface:
    - 1. Repetitive Blasts: Distress.
4. Navigation:
- a. Compass (surface/subsurface).
  - b. Line assisted.

- c. Marker light/strobe.
- 5. Disorientation:
  - a. Mental Aspects.
  - b. Surface reference points.
  - c. Constant communication.
- 6. Buoyancy considerations.
- 7. Emergency Procedures:
  - a. Disabled diver.
  - b. Lost diver.
  - c. Lost communications.
  - d. Light failure (all types).
- 8. Surface support operations:
  - a. Diver medical and rehab.
  - b. Diver decontamination.
  - c. Scene coordination/security.
  - d. Outside/Mutual Aid resources.
- 9. Contingency Planning:
  - a. Incident action plan.
  - b. Medical/Chamber support.
  - c. Communications.
  - d. Emergency gases.
  - e. Emergency procedures.

### ***13.11 Confined Water Outline***

**Students are suggested to successfully complete the following skills:**

#### **Scuba Skills**

- 1. Instructor evaluation of basic scuba skills including redundant air source use.

#### **Blacked out Simulation/Reduced Visibility**

- 1. Entanglement.
- 2. Out of air.
- 3. Search patterns.

4. Communications methods.
5. Lost/Diver in trouble.
6. Evidence recovery.
7. Victim recovery (bagging).

### ***13.12 Required Skill Performance and Graduation Requirements***

**Students are required to successfully complete the following:**

1. Open Water Dive 1:
  - a. Plan dive.
  - b. Safety procedures.
  - c. Enter and descent.
  - d. Remain submerged for at least 20 minutes.
  - e. Change direction several times while maintaining proper navigation.
  - f. Use properly: underwater light, submersible pressure gauge, compass, depth gauge, and computer.
  - g. Maintain buddy/tender contact throughout dive.
  - h. Recover and package one item.
  - i. Log dive.
2. Open Water Dive 2:
  - a. Plan dive.
  - b. Safety procedures.
  - c. Descend.
  - d. Two-minute swim without compass.
  - e. Surface and reorient.
  - f. Descend and navigate.
  - g. Perform response to one emergency scenario (out of air, entanglement, equipment malfunction, etc).
  - h. Log dive.

**Open Water Surface Support**

1. Plan dive.
2. Safety Procedures.
3. Provide tender/surface support role.
4. Respond to one emergency scenario as a surface support individual.
5. Log dive.