4. Dry Suit Ops

4.1 Introduction

The ERDI Dry Suit Ops Component is designed to develop the knowledge and skills necessary for dry suit diving operations in emergency response diving.

4.2 Student Prerequisites

1. ERD I or equivalent
2. Minimum age 18
3. CPR 1st or equivalent
4. CPROx or equivalent

4.3 Qualifications of Graduates

Upon successful completion of the ERDI Dry Suit Ops Component, students will have developed the knowledge and skills necessary to plan and execute dry suit diving operations

4.4 Who May Teach

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

4.5 Administrative Requirements

1. Have the students complete the:
    a. *ERDI Liability Release and Express Assumption of Risk* Form
    b. *ERDI Medical History* Form
2. Communicate the schedule of the course to the students
3. Ensure that the students have the required equipment

Required Manuals

1. The *SDI Dry Suit Diving* Manual is required for the ERD II Dry Suit Ops Component

Certification

1. Upon successful completion of an ERDI course the instructor must 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.

4.6 Student to Instructor Ratio

Academic

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

Confined Water

1. A maximum of 6 students per ERDI Instructor
2. ERDI Instructors have the option of adding 2 additional students with the assistance of an active ERDI Supervisor
3. The maximum number of students an ERDI Instructor may have in confined water is 8 with the assistance of active ERDI Supervisors

Open Water

1. A maximum of 4 students per ERDI Instructor; it is the instructor's discretion to reduce this number as conditions dictate
2. The ERDI Instructor has the option of adding 2 more students with the assistance of an active ERDI Supervisors
3. The total number of students an ERDI Instructor may have in the water is 8 with the assistance of 2 active ERDI Supervisors

4.7 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. Open water dives (required): Two dives are required with complete briefs and debriefs by the instructor. Dive plan must include surface interval, max no-decompression time, etc. to be figured out and logged

4.8 Required Equipment

1. Same equipment as required for ERD I Diver
2. Dry suit with inflator hose
3. *SDI Dry Suit Diving* Manual

4.9 Approved Outline

Instructors may use any additional text or materials that they feel help present these topics. The following topics must be covered:

Environmental Issues

1. Nuclear, Biological, Chemical
    a. Medical concerns
        i. Water sample
        ii. Team health and safety
    b. Sources
2. Dangers to Diver, Scene, Team Members, Family

3. Suit Permeation
4. Protecting Potable Water Supply
5. Post Dive Observations
6. Decontamination Procedures

Dry Suit

1. Types of Dry Suits
    a. Shell style
    b. Crushed neoprene
    c. Neoprene
    d. Types of seals
        i. Latex
        ii. Neoprene
2. Features
    a. Self don
    b. Rear entry
    c. Boots
    d. Zipper guard - protect waterproof zipper from chaffing
    e. Warm neck collar
    f. Suspenders
3. Dive Wear Insulation
    a. Cut to be close to skin
    b. Compression-resistant
    c. Dive wear is primarily made of polyester fibers or polypropylene
4. Dry Suit Valves
    a. Inflator
        i. Push to inflate
        ii. To maintain the air space created by the dry suit
    b. Deflator
        i. Push to dump an adjustable
        ii. Simple open and close system
5. Buoyancy Control
    a. Proper weighting
        i. Cylinders and weights
        ii. Weight integrated buoyancy compensator device (BCD)
        iii. Harness system.
    b. Maintaining neutral buoyancy underwater
    c. Dry suit is not a substitute for proper BCD
6. Maintenance and care
    a. Flush with fresh water
    b. Dry inside first

c. Avoid heat, chemicals and oils
d. Zipper care
    i. Clean inside and out (toothbrush)
    ii. Use only paraffin wax never Silicon spray
e. Minor repairing
    i. Repair from inside out
    ii. 50/50 mix Cotol-240 and Aquaseal ™
f. The use of water-soluble lubricants inside wrist seals to ease wear and tear on wrist seals while donning the suit

7. Dry Suit Emergencies
    a. Excessive air in suit
    b. Inflator valve stuck open or leaking air
    c. Exhaust valve stuck closed.
    d. Accidentally dropped weights
    e. Excessive air in feet
    f. Dry suit flooded

4.10 Required Skill Performance and Graduation Requirements

Confined water training is not required but highly recommended. It would consist of:

1. Pool Session One:
    a. Plan dive
    b. Proper donning of dry suit
    c. Review functions and features of dry suit
    d. Enter water
    e. Buoyancy check
    f. Get comfortable
    g. Descend
    h. Practice dry suit skills
    i. Inflating and deflating suit
    j. Roll from inverted position
    k. Buoyancy skills / hovering
    l. Ascend and exit

Students are required to successfully complete the following in open water:

1. Open Water Dive 1 (ERDI recommends that the first dive be no deeper than 6 metres / 20 feet)
    a. Plan dive
    b. Proper donning of dry suit
    c. Review functions and features of dry suit
    d. Enter water from back of boat or shore entry
    e. Buoyancy check

f. Get comfortable
g. Descend
h. Practice dry suit skills
i. Inflating and deflating suit
j. Roll from inverted position
k. Ascent with safety stop
l. Exit / log dive

2. Open Water Dive 2:
    a. Plan dive
    b. Enter and descend
    c. Practice dry suit skills
    d. Inflating and deflating suit
    e. Roll from inverted position
    f. Emergency procedures for dry suit malfunctions
    g. Enjoy the sites
    h. Ascend w/ safety stop
    i. Exit / log dive