# 11. Tender Ops

## 11.1 Introduction

This course is designed to introduce the public safety professional to the ERDI Tender skills necessary to participate in public safety diving operations in a non- diving roll. Successful completion results in the ERDI Tender certification.

The ERDI Tender course can be taught in conjunction with the ERD I course. While the ERDI Tender Course is a non-diving course, the tender student should have a working knowledge of diving physics, physiology, techniques and equipment.

## 11.2 Student Prerequisites

1. Minimum age is 18.
2. Current CPR, first aid and oxygen administration certification.

## 11.3 Qualifications of Graduates

Upon successful completion of this course, graduates are qualified to:

1. Tend public safety divers in open water.
2. Participate in the planning and execution of public safety diving operations.

## 11.4 Who May Teach

Any active ERDI Emergency Response Diver Instructor or ERDI Non-Diving Specialty Instructor may teach this course.

## 11.5 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 12 ERDI Tender students per ERDI Instructor.
2. ERDI Instructors have the option of adding 2 more students with the assistance of an active ERDI Supervisor.

3. The maximum number of students an ERDI Instructor may have at confined water is 16 with the assistance of active ERDI Supervisors.

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

1. A maximum of 12 ERDI Tender students per ERDI Instructor is allowed.

2. It is the instructor's discretion to reduce this number as conditions dictate.

3. ERDI Instructors have the option of adding 2 more students with the assistance of an active ERDI Supervisor.

4. The maximum number of students an ERDI Instructor may have at open water is 14 with the assistance of active ERDI Supervisors.

## 11.6   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.

## 11.7   Training Materials

**Required Materials:**

1. *ERDI Tender* student manual and Knowledge Quest or eLearning.

2. *ERDI Line Tender* Slates.

3. *ERDI Tender* Instructor Guide.

4. Texts, other than ERDI manuals, used for ERD Ops Components must be approved by ERDI Headquarters.

2. Execution and Structure

## *11.8  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 2 hours.

2.  Confined water: Approximately 4 hours.

3.  Open water: Approximately 6 hours.

**Open Water:**

1.  All open-water training must be completed during daylight hours.

## *11.9  Required Equipment*

1.  USCG approved personal floatation device (PFD).

2.  Cutting tools: 1 primary, 1 backup.

3.  Rescue signals: audio and visual.

4.  Gloves: latex and work.

## *11.10  Academic Outline*

**The Organization:**

1.  Recreational vs. Emergency Response Diving:

a.  Differences.

b.  Training specific.

c.  Why recreational diving is not adequate.

2.  Building the Team:

a.  Organizations: fire department, police department, rescue, volunteer, contract.

b.  Funding.

c.  Team structure:

      i.  Primary diver.

      ii.  Primary tender.

      iii.  Backup diver.

      iv.  Backup tender.

      v.  Incident commander.

      vi.  Incident commander aide.

3.   Attitudes:

a.  Professionalism.

b.  Responsible use of assets.

c.  Team cohesion.

d.  Physical fitness.

4.   Operations:

a.  National Fire Protection Association (NFPA) standards.

b.  Occupational Safety and Health Administration (OSHA) regulations.

c.  Standard operating procedures (SOP's), standard operating guidelines (SOG's) and protocols.

d.  Scene safety.

e.  Record keeping.

5.   Training:

a.  Increases safety.

b.  Increases abilities.

c.  May be required by law.

d.  Individual and team.

e.  Interagency.

f.  Keeping members stimulated.

g.  Frequency.

6.   Public Safety Diving Accidents:

a.  Lack of training.

b.  Exceeding abilities and training.

c.  Learning from others.

d.  Avoid through education.

e.  Go/No Go.

**Equipment:**

1.   Recreational vs. Emergency Response Diving.

2. Standardization:

a. Benefits.

3. Scuba Equipment:

a. Mask.

b. Fins.

c. Regulators.

d. Cylinder.

e. Buoyancy compensator device (BCD).

f. Instrumentation.

g. Pony cylinder.

h. Exposure protection.

i. Weight systems.

j. Cutting tools.

4. Specialized Equipment:

a. Hazardous material (HazMat).

b. Diver propulsion vehicle (DPV).

c. Tow sleds.

d. Metal detectors.

e. Communications.

f. Surfaced supplied air.

g. Remote operated vehicle (ROV).

h. Heavy lifting equipment.

i. Range finders.

5. Small Boats Ops:

a. Types.

b. Search patterns.

c. Handling.

d. Safety issues.

6. Record Keeping:

a. Service records.

b. Lines.

c. Air fills.

d. Team logs.

e. Diver logs.

f. Training records.

g. Court documentation.

**ERD Tender Skills:**

1. Value to Team.

2. Back-up Tender:

a. Responsibilities.

3. Mapping and Documentation.

4. Line Signals.

a. Tender to Diver:

      i. One (1) Pull = OK.

      ii. Two (2) Pulls = Stop, Change Direction, Take Out More Line.

      iii. Three (3) Pulls = Surface.

      iv. Four (4) Pulls = Stop, Standby.

b. Diver to Tender:

      i. One (1) Pull = OK.

      ii. Two (2) Pulls = More Line.

      iii. Three (3) Pulls = Object Found.

      iv. Four (4) Pulls = Help, Trouble.

5. Hand Signs.

6. Search Patterns.

7. De-con Procedures.

8. Evidence Recovery.

9. Required Equipment:

a. Personal floatation device (PFD).

b. Appropriate/Inappropriate clothing, protective equipment.

**Responding to the Call:**

1. Scene Evaluation: Rescue or Recovery:

a. Scene safety.

b. Control of scene.

c. Team SOP/SOG.

d. Set up, gear up, deploy.

2. Rescue:

a. Risk vs. benefit.

b. Witnesses.

c. Timeline.

d. Cold water near-drowning.

e. Rescue to recovery.

3. Recovery:

a. Crime scene recognition:

      i. Documentation.

b. Body recovery:

      i. Protecting evidence.

      ii. Bagging procedures.

      iii. Victim dignity.

4. After the Call:

a. Team debriefing and critique.

b. Counseling.

c. Leaving the scene.

**Search Patterns:**

1. Tools:

a. Lines.

b. Tow systems.

c. Metal detectors, magnetometers, side scan sonar, ROV.

2. Execution:

a. Simplicity.

b. Predetermined start point, area of coverage, documented end point.

c. Black water.

3. Search Types:

a. Sweeping arc.

b. Expanding circle.

c. Parallel pattern.

d. V-Pattern.

e. Jackstay.

4. Determining Which Pattern.

5. Boat Based Search Patterns:

a. Anchoring.

b. Global positioning system (GPS).

c. Anchored circle.

d. Tow sleds.

**Crime Scene Recognition:**

1. Securing Scene.

2. Interview Skills.

3. Scene Documentation:

a. Photography.

b. Videography.

c. Accurate diagramming.

d. Accurate description.

4. Evidence Recovery:

a. Proper handling.

b. Evidence containers.

c. Bagging procedures.

d. Continuity of evidence/chain of custody.

**Environmental/HazMat:**

1. Planning.

2. Recognition.

3. Equipment Issues.

4. Types:

a. Chemical.

b. Biological:

       i. Human.

5.   Decontamination Procedures:

a.  Personnel.

b.  Equipment.

c.  Patient/Victim.

6.   Water Sample:

a.  Proper container for laboratory analysis.

## 11.11  Confined Water Outline

**ERD Tender Skills**

1.   Line signals, communicating with diver through tether. *

2.   Performing search patterns, at least 2. *

*  These skills may be conducted concurrently.

**Students are to successfully complete the following waterman-ship skills:**

1.   200-Metre non-stop swim without aids.

2.   100-Metre non-stop buddy tow in PFD.

3.   10-minute survival-float.

## 11.12  Open Water Outline

The Open water training consists of 2 evolutions. Each dive activity should be conducted as closely as possible to an actual incident response. The number of evolutions may be increased if, in the opinion of the instructor, it is necessary to meet a minimum training standard or proficiency level.

During all open water training there will be an ERDI Supervisor, ERDI Instructor or ERDI Instructor Trainer present and equipped to respond to an in-water emergency at all times. During any open water training, NFPA 1006 and NFPA 1670 guidelines must be followed or for regions not governed by NFPA, any regulatory or legal requirements that apply to professional and/or volunteer public safety and emergency response divers.

The dive team will consist of:

* Primary diver
* Primary tender
* Backup diver
* Backup tender
*  Incident commander

Assistants may be used in the role of primary diver, backup diver, backup tender and incident commander.

Students are to successfully complete the following skills:

1. Assist in dressing primary diver.

2. Proper tether attachment.

3. Correctly perform at least 2 search patterns.

4. Communicate with primary diver through tether using line signals.

5. Assist in proper evidence handling procedures.

6. Assist in proper decontamination procedures.

## *11.13  Certification*

1. Score minimum 80 percent on the ERDI Tender written test with 100 percent remediation.

2. Satisfactorily complete all academic, confined water and open water requirements.

3. Satisfactorily complete swim evaluation requirements.