



MABAS DIVISION 12

WATER RESCUE / RECOVERY MANUAL

Adopted February 1, 1995
Revised February 17, 2003

FORWARD

The following procedures are intended to serve as a base from which to perform different operations at water related emergencies. As in all standard operating procedures the Divisional Divemaster has the flexibility to make adjustments when and if he deems necessary to perform the emergency task, keeping Risk/Benefit in mind at all times.

TABLE of CONTENTS

FORWARD.....	2
TABLE OF CONTENTS.....	3
SECTION A - POLICY	5
DEFINITIONS	6
ORGANIZATION.....	8
ORGANIZATIONAL GOALS	8
TEAM REQUIREMENTS	9
TEAM MANAGEMENT (DIVISION 12)	9
DIVEMASTERS COMMITTEE (JOB DESCRIPTION)	10
DIVISION 12 OFFICERS DUTIES	11
CHAIRMAN	11
VICE - CHAIRMAN.....	11
SECRETARY.....	11
DIVISION SUBCOMMITTEES	12
TRAINING	12
QUALIFICATION	12
INCIDENT REVIEW.....	12
SOP REVIEW	12
SAFETY	12
NATIONAL GUIDELINE REVIEW.....	12
SCENE PROCEDURES.....	13
ACTIVATION OF MABAS RADIO NETWORK.....	14
CERTIFICATION REQUIREMENTS	15
MABAS DIVISION 12 QUALIFICATIONS CATEGORIES	15
PROBATIONARY:	15
LEVEL 1.	15
LEVEL 2.	15
LEVEL 3.	15
DEEP-WATER:	15
EVIDENCE RECOVERY:.....	15
ICE:	15
SWIFT WATER:	15
LEVEL 4.	16
ANNUAL TRAINING QUALIFICATIONS FOR DIVERS.....	17
ANNUAL TRAINING QUALIFICATIONS FOR DIVISIONAL DIVEMASTER.....	18
RECOMMENDED EQUIPMENT LISTING.....	19
INDIVIDUAL DIVER	19
Open Water Dive - (min. equipment to be a diver in MABAS Division 12).....	19
Night Dive Additions	19
Ice Dive Additions.....	19
Vehicle Rescue and/or Recovery Additions	19
Swift Water Rescue.....	19
ON SCENE TEAM EQUIPMENT AND SUPPORT.....	19
Open Water.....	19
Night Dive Additions	20
Ice Dive Additions	20
Vehicle Rescue and/or Recovery Additions	20
Misc. Additions	20
SECTION B - PROCEDURES	21
SCENE PROCEDURES.....	22
ACTIVATION OF MABAS RADIO NETWORK.....	24
STANDARD LINE COMMUNICATION SIGNALS	25
SWEEP AND CIRCULAR TYPE PATTERNS.....	25
“V” PATTERN WORK.....	25

<i>ICE DIVING</i>	25
<i>SPECIAL SITUATIONS</i>	25
SHORE ARC/PIVOT/SWEEP	26
ANCHOR PIVOT/BOAT BASED CIRCULAR PATTERN	27
SHORE BASED PARALLEL PATTERN	28
SNAG METHOD PATTERN.....	29
INVERTED “V” PATTERN	30
BOAT AND BAR COMBINATION.....	31
ICE DIVING	32
PROCEDURE FOR (LOST OR DISTRESSED) DIVER UNDER THE ICE.....	33
PROCEDURE TO RESCUE A (LOST OR DISTRESSED) DIVER UNDER THE ICE	34
ICE RESCUE	35
DAM RESCUE	36
SWIFT WATER RESCUE.....	37
SECTION C - TRAINING GUIDELINES	41
BASIC DIVEMASTER DUTIES.....	42
SHALLOW POND OR LAKE	44
<i>SHORE OPERATION</i>	44
<i>OPEN WATER OPERATION</i>	44
<i>OPEN WATER BOAT OPERATION</i>	45
<i>REMOTE LOCATION</i>	45
DIVE SAFETY OFFICER.....	46
BASIC SHOREMASTER DUTIES	46
DEEP DIVE SAFETY.....	47
DRY SUIT USE	48
UNDERWATER COMMUNICATIONS.....	50
INTEGRATED WEIGHT SYSTEMS.....	50
GENERAL SEARCH PROCEDURES	51
INITIAL DIVER PROCEDURES.....	53
INVERTED “V” PATTERN	55
LINE TENDER	56
DIVER TO LINE TENDER	58
PATIENT RESCUE PROCEDURES.....	60
SAFETY DIVER.....	62
<i>ANCHOR PIVOT/BOAT SEARCH</i>	62
<i>SHORELINE SEARCH</i>	63
<i>OFF SHORE: INVERTED “V” PATTERN</i>	63
SHORE ARC.....	64
SHORE WALK POND OR RIVER	67
<i>ON SHORE - SHORE WALK:</i>	68
IN WATER - SHORE WALK - RIVER:	70
UNDERWATER OBSTRUCTIONS	74
VICTIM RECOVERY PROCEDURES	75
SECTION D - FORMS	76
WITNESS INTERVIEW FORM.....	
WITNESS INTERVIEW FORM (PAGE 2)	
TACTICAL WORKSHEET	
WATER ACCIDENT REPORT FORM.....	
WATER ACCIDENT REPORT FORM (PAGE 2)	
NFIRS.....	
SECTION E - ADDENDUM	84



SECTION A - POLICY

DEFINITIONS

BOATMASTER

The sector officer in charge of all boat operations, at an incident. The Boatmaster reports directly to the Divemaster.

CERTIFICATION CARD

Nationality recognized Diving Instructional Agency

CERTIFIED

Indicates that an individual has received training and education from a national and/or international certifying agency, i.e. P.A.D.I., N.A.U.I., S.S.I., etc.

COLD WATER DIVING

Diving in water temperatures below 70 degrees F (21 degrees C) is considered cold water.

DIVEMASTER

The designation assigned to the head of a municipality's dive team.

DIVE TEAM

Refers to the group of divers governed by the MABAS Divisional 12 Underwater Rescue/Recovery Team policies and procedures.

DIVE TEAM COORDINATOR

See Divemaster

DIVE TEAM SAFETY OFFICER

The safety officer should be a member of Div 12 Divemaster's Council or at least senior diver 3 status. The safety officer shall be responsible for all divers and boat operations.

DIVISIONAL DIVEMASTER

The qualification earned through MABAS Division 12 Dive Team, in order to work within the Fire Ground Command system as a sector officer.

IC

Incident Commander

ICE DIVING

When diving in water in which the temperature is 45 degrees F or less.

LINE TENDER

The person directly responsible for guiding a submerged diver through the selected search pattern with the use of a rope and communication signals.

MABAS

Mutual Aid Box Alarm System.

MUNICIPALITY

An organized, governmental body. This includes Fire Departments, Fire Protection Districts and Forest Preserve Districts.

RESCUE

When the saving of a human life can possibly be accomplished, either underwater or surface, within one hour from the time of occurrence.

RECOVERY

When the possibility of saving a human life has exceeded the time frame. Or no matter what the time frame, the search is for property, or physical evidence.

SCUBA

Self Contained Underwater Breathing Apparatus.

SHOREMASTER

The sector officer directly in charge of all actively participating divers at an incident.

SHORE SUPPORT

Any non-diving personnel directly working at an incident, assisting in the operation.

SUBTEAM

Refers to the municipal dive team.

TEAM LEADER

The designated leader of a group of municipal divers, of which the team leader is a member.

ORGANIZATION

The MABAS Division 12 Underwater Rescue and Recovery Dive Team (Team) is an organization created for the sole purpose of providing trained personnel to accomplish various tasks at water related incidents. The team is organized and governed under the rules and regulations of MABAS Division 12 and operates through the authorization of the MABAS Division 12 Chiefs committee.

By activating the Mutual Aid Box Alarm System (MABAS), the requesting agency will receive various subteams of fire department and municipal personnel trained in SCUBA and qualified through the MABAS guidelines. These subteams will, in a combined effort, provide the necessary personnel to accomplish the tasks at a water related rescue and/or recovery incident.

Only those personnel who are qualified by the designated Divemaster of the subteam, as governed by the MABAS Division 12 policy and procedures, shall be allowed to participate. The training, qualification program, and policy that has been established herein, shall provide for safe and efficient incident management when dealing with the goals of the organization.

The team will also provide a qualified Divisional Divemaster to all MABAS Division 12 incidents for the purpose of guidance to the local Divemaster or to take command of the dive sector if requested by the authority having jurisdiction.

ORGANIZATIONAL GOALS

- To provide an immediate response of trained personnel and specialized equipment to the water related incident for the purpose of rescuing a human life.
- To provide trained personnel and specialized equipment to the water related incident for the purpose of recovering drowning or accident victim(s).
- To provide trained personnel and specialized equipment to the water related incident for the purpose of recovering property, i.e. cars, boats, evidence, etc. These requests for such assistance can be made by telephone. Utilization of the MABAS Division 12 alerting system shall not be allowed.

TEAM REQUIREMENTS

The MABAS Division 12 Dive Team shall be comprised of multiple Municipality subteams. The various subteams, and individuals of each, shall meet the following requirements:

- That the individual is an employee of a municipality that is a member of MABAS Division 12 and that said individual is a member in good standing with the Division 12 Dive Team.
- That said individual is a member in good standing with the municipality dive team.
- That said municipality has entered into the MABAS Division 12 system as prescribed through the MABAS Division 12 policies and procedures.
- That the individual is certified in SCUBA by a nationally recognized certification agency, i.e. P.A.D.I., N.A.U.I., S.S.I., etc.
- That the individual has met and maintains the annual training and qualification requirements as set down by the MABAS Division 12 Dive Team.
- That the local Divemaster has submitted the proper paperwork, as defined by the Divemasters committee Chairman, to the MABAS Division 12 Dive Team.
- That the municipality's dive team has appointed a Divemaster or Team Leader.
- That each municipality will have in place a set of responses, policies, and procedural guidelines approved by the municipality's administration.

TEAM MANAGEMENT (DIVISION 12)

The administrative management of the MABAS Division 12 Underwater Rescue and Recovery Dive Team (Dive Team) shall be accomplished by the creation of a committee, governed by the MABAS Division 12 Chiefs, comprised of one representative from each sub team. This committee shall be known as the MABAS Division 12 Divemasters Committee (Divemasters committee). The Divemasters committee shall elect a Chairman, a Vice-Chairman, and Secretary. The Divemasters committee will also delegate two representatives to participate in the Divemasters committee.

The purpose of this Divemasters committee shall be to formulate the team's purpose, safety and operational procedures, form subcommittees for training, qualification, communications, and evidence requests.

The election of officers for this Divemasters committee shall be done on an as needed basis. The election shall be performed by first, establishing that there is in fact a vacancy. Secondly, by presenting to the members of the Divemasters committee a ballot of nominees read at two consecutive monthly meetings. After the second reading of the nominees, a vote will be taken. The results of this vote will put forth the new officer, who will take his position at the next monthly meeting.

DIVEMASTERS COMMITTEE (Job Description)

DEFINITION

The MABAS Division 12 Divemasters Committee (Divemasters committee) is a subcommittee of the MABAS Division 12 Chiefs (MABAS Chiefs). The Divemasters committee is accountable to the MABAS Chiefs.

SCOPE AND PURPOSE

- 1) Coordination of all Division 12 Dive Teams to a common goal.
- 2) Develop a complete standard operating procedure manual.
- 3) Define state of the art techniques.
- 4) Schedule and monitor training of all Division 12 Dive Teams.
- 5) Develop qualification criteria for Division 12 Divers and Divemasters.
- 6) Review, recommend, and maintain equipment lists for the division teams.
- 7) Critique all water incidents within Division 12.
- 8) Maintain records of all Division 12 drills and incidents.
- 9) Make recommendations to the MABAS Chiefs' committee and other department dive teams.
- 10) Communicate and assist other local and regional divisions or teams.

The MABAS Division 12 Divemasters Committee consists of the Divemaster or designee from each municipality dive team within the division.

DIVISION 12 OFFICERS DUTIES

CHAIRMAN

It shall be the duty of the Chairman to preside over monthly scheduled meetings and to organize and finalize any and all information pertinent to the Dive team. This will be done on the basis of information presentation, discussion, and final decision. The Chairman will also pursue and follow up to individual municipalities for the purpose of information and communication. The MABAS Chiefs shall appoint the MABAS Chiefs representative.

VICE - CHAIRMAN

It shall be the duty of the Vice-Chairman to take over all of the Chairman's duties in his absence. It shall also be the duty of the Vice-Chairman to oversee all committee functions and to perform various functions as delegated by the Chairman.

SECRETARY

It shall be the secretary's duties to record, and distribute any and all information as created by the division to all of the individual municipalities. A permanent record of all information (ex: minutes of meetings, drills, incidents) shall be kept for future references.

DIVISION SUBCOMMITTEES
(To be assigned as needed from Divemasters committee)

TRAINING

The training committee is responsible for the recommending and overseeing the ongoing and qualification training that occurs at the monthly MABAS Division 12 sponsored dives.

QUALIFICATION

The qualification committee will have the responsibility to oversee the qualification process. This will include but is not limited to the issuance of Division 12 Passport Dive Tags to participating non-Division divers, to review the qualifications needed on an annual basis, and to communicate with the subteam Divemasters any changes that may occur.

INCIDENT REVIEW

It shall be the responsibility of the municipality where the incident occurred and box alarm initiated, to provide a representative at the next scheduled monthly meeting to present the incident. At this presentation, the Divemasters committee shall review the information presented to allow for us to provide opportunities to improve our operations.

A copy of the incident record shall be forwarded to the MABAS Division 12 dive records for the final follow up.

SOP REVIEW

It shall be the duty of this committee to continually review and update the sop manual. Any and all recommendations shall be presented at the April and October monthly meetings for final approval and distribution to the Division 12 Chiefs Committee.

SAFETY

It shall be the responsibility of this committee to review and recommend MABAS Division 12 Dive team safety policies and procedures on an as needed basis. Implementation of the recommendations is by a vote of the Divemasters.

NATIONAL GUIDELINE REVIEW

It is the responsibility of this committee to review any recommended national guidelines that are proposed, and to formulate an appropriate response to the recommendations.

SCENE PROCEDURES

As in any incident within MABAS Division 12, the Fire Ground Command system shall be utilized. The Fire Ground Commander (IC) is in overall charge of the water incident. It is the IC's responsibility to provide the needed resources on the scene and to organize and control the scene through sectoring. With this in mind, the IC will create the sector of Divemaster. The Divemaster sector is in control of all of the water functions, i.e. boats, divers, and assigned shore support. It is the Divemasters responsibility to organize and begin the water rescue or recovery. The Divemaster sector officer shall be knowledgeable in water rescue and recovery operations.

If the need for additional resources is required, the Fire Ground Commander (IC) shall utilize the Mutual Aid Box Alarm System (MABAS) by contacting the appropriate MABAS dispatch center, and request the pertinent box alarm needed. The following is a list of information that needs to be given to the MABAS dispatch center.

- 1) Who is requesting the alarm?
- 2) What is the type of box or number?
- 3) Where is the alarm location?
- 4) What is the box alarm for?
- 5) What level the box alarm is, i.e. box, second, etc.?
- 6) Where is the staging area, if any?

Upon the arrival of the various box alarm companies, the recognized MABAS Division 12 Divisional Divemasters shall report to the incident commander. The IC has the option of either placing the first in Divisional Divemaster in charge of the "Divemaster Sector" or to assign him to the current department "on scene Divisional Divemaster" in an advisory capacity. The Divisional Divemaster in charge of the "Divemaster Sector" shall have at all times the discretionary powers to suspend the diving operation for the reasons of risk/benefit.

Additionally, no diver shall be allowed to enter the water in a diving capacity unless that diver has completed the annual qualifications of MABAS Division 12 and can present a MABAS Division 12 Passport Dive tag with current qualification level as proof. If a diver doesn't have a current passport, a passport can be made using the makeup kit after the diver's level has been confirmed using a current, printed, divers list from the division.

Creation of the positions of Shoremaster, Safety, and Boatmaster shall take place immediately depending on the type of incident presenting itself. All sector and sub-sector officers shall don the proper sector vests for optimum visual awareness. See definitions for Shoremaster, Safety, and Boatmaster. At the completion of any water incident that involved MABAS, the IC and the Divemaster shall compile a comprehensive report (Incident Report) and submit the report to the MABAS Divemasters Committee Chairman. At the next scheduled committee meeting, the incident will be reviewed for future improvements that can be made. Some of the enclosures shall be the following:

- 1) Water Accident Report Form
- 2) State NFIRS report
- 3) MABAS dispatch alarm log
- 4) List of all personnel involved
- 5) Witness interview form as required

ACTIVATION OF MABAS RADIO NETWORK

The activation of the MABAS radio network for the purpose of an individual municipality to receive assistance, will include the following situations:

- 1) The rescue of a human life
- 2) The recovery of a human body
- 3) Any other request

Requests for assistance to perform property recovery can be made by telephone to the municipalities dive team department head, i.e. Chief or Deputy Chief. After these notifications are made, then and only then, can you activate the MABAS tones after calling the division dispatch center. This tone activation is for legal purposes.

Furthermore, only those towns that have a "water" box alarm card on file with the MABAS dispatch system, should activate the radio network. The IC should activate the radio network for assistance response as soon as additional help is deemed necessary. The incident commander must, through constant evaluation of the scene, upgrade the box alarm or cancel it and return all companies.

Once the radio network has been activated, each subteam shall make contact with the MABAS dispatch as soon as possible, to report the response status of the subteam. The report should include, but is not limited to; number of divers, Divisional Divemaster, shore personnel, and out of service equipment that may be due to respond.

MABAS dispatch shall not automatically upgrade the alarm to fill in out of service companies. The MABAS dispatcher shall advise the incident commander of the out of service companies, and the decision to upgrade the alarm shall rest with the commander.

The actual response by a subteam to an activated box card shall be governed by their team's procedures and will not be governed within this document.

A set of the MABAS Division 12 Team policies and procedures shall be kept available at the MABAS Division 12 dispatch center and for use and review at each incident scene.

CERTIFICATION REQUIREMENTS

Any diver from a subteam that is attempting to qualify for the Dive Team, shall hold a certification card from a nationally recognized diving instruction agency with the minimum of open water certification, for further advancement, certification will be required in advanced open water, ice, deep, swift, etc.

MABAS DIVISION 12 QUALIFICATIONS CATEGORIES

PROBATIONARY:

Usually a newly certified diver is qualifying for the Dive Team. This diver will have to be accompanied by a (fully qualified)? Team diver until the eighteen (18) points have been earned and the local Divemaster determine that the individual is ready for full qualification to the Dive Team.

This category could also be used for a diver who has not made a dive in sometime and has allowed his or her qualifications to drop.

LEVEL 1.

A level one diver has a nationally recognized C-Card and is qualified to dive on simple operations, as per the Divemaster discretion. Level One diver will be qualified to act as shore personnel on all incident scenes. *

LEVEL 2.

A level two diver has all the qualifications of a level one diver, and in addition is qualified to perform all MABAS Division 12 approved search patterns on all incidents.

LEVEL 3.

A level three diver has all the qualifications of a level two diver, and in addition, may be qualified in deep water, evidence recovery, swift water rescue, and ice.

DEEP-WATER:

The diver shall attend and perform a dive sponsored by MABAS Division 12 to a depth of 45' or deeper, and is deemed competent by the local Divemaster. This will give the diver a MABAS Division 12 qualification for deep-water diving.

EVIDENCE RECOVERY:

The diver shall attend and perform a dive sponsored by MABAS Division 12 for evidence recovery, and is deemed competent by the local Divemaster. This will give the diver a MABAS Division 12 qualification for evidence recovery.

ICE:

The diver shall attend and perform an ice dive sponsored by MABAS Division 12 and is deemed competent by the local Divemaster. This will give the diver an ice specialty qualification within MABAS.

SWIFT WATER:

The diver shall attend and perform a MABAS Division 12 sponsored training session

as it pertains to swift water work, or the diver shall have a certification covering this area of training from a nationally recognized instructional agency with continuing education within the division and is deemed competent by the local Divemaster. This will give the diver a swift water specialty qualification within MABAS.

LEVEL 4.

A level four diver is a Divisional Divemaster. A level four diver has all the qualifications of a level two diver, and in addition has met the annual Divisional 12 Divemaster qualifications and has been found competent to operate as a Divemaster sector officer. This qualification has been created to provide leadership personnel at all MABAS Division 12 dive incidents. This has its own set of annual qualifications that must be met by the individual and approved by the Divemasters' committee.

*NOTE; Regardless of qualification level, no MABAS 12 diver will be authorized or allowed to dive in ICE without the ICE (I) identifier or perform in SWIFT WATER environments without the SWIFT WATER (S) identifier on their MABAS Division 12 Dive passport tag in a MABAS 12 dive incident.

ANNUAL TRAINING QUALIFICATIONS FOR DIVERS

During the annual time frame for the MABAS TEAM, which is the calendar year, each MABAS qualified diver shall accumulate at least eighteen (18) points. At least six (6) of these points shall have been earned from a "wet" dive either at a MABAS sponsored training dive or incident. The additional minimum of twelve (12) points shall be earned by utilizing the following point schedule.

MABAS Division 12 training session	6
MABAS Division 12 box alarm dive	6
MABAS incident Divisional Divemaster	6
Specialty dive class completion (ice, advanced open water, etc.)	6
Other MABAS division training session or Box Alarm dive	6
Department training session - diving using MABAS Division 12 guidelines	6
Diving for recreation, maintained by log	1
Shore support at any MABAS training session or incident	6
Dive seminar attendance (per 8 hr. of class)	6

If you are specialty certified by a nationally recognized diving agency, and you wish to qualify in MABAS, you will need to perform one dive in the specialty at a MABAS sponsored training session or with your department, using MABAS training guidelines.

It shall be the responsibility of the local Divemaster of the team, to maintain training records for the team as well as individuals. It shall also be at the discretion of the local Divemaster, to determine if an individual diver has in fact qualified for MABAS team consideration.

Each year the local Divemaster shall submit a list of divers who have met the annual qualifications of the MABAS team to the Qualification Committee.

ANNUAL TRAINING QUALIFICATIONS FOR DIVISIONAL DIVEMASTER

MABAS Division 12 Divemasters Committee (Divemaster Committee) has designated the term of "Divisional Divemaster", as it pertains to MABAS Division 12 Passport Dive tag, Level 4, as an individual that has met the following annual qualifications and has been found competent to operate within the Fire Ground Command system as the Divemaster sector officer.

The annual qualifications are as follow:

1. Must meet the current division diver qualifications.
2. Must attend or send a representative to at least 50% of monthly Divemasters meetings.
3. Must manage or co-sponsor one training drill per year.
4. Must maintain an up to date dive logbook.
5. Must have a good working knowledge of MABAS Division 12 Water Rescue / Recovery Manual.
6. In addition, the completion of an upgrade in status from a recognized diving organization will be considered. (For example, obtaining Rescue Diver, Ice Diver, Night Diver, etc.)

Command Officers at the scene of a water-related emergency, when presented with a MABAS Division 12 Passport Dive tag bearing the designation of "Level 4", shall understand that this individual has been qualified to perform at the divisional Divemaster sector level.

In order to obtain this qualification, a letter of request must be submitted to the Divemasters Committee, with the attached documentation of fulfilling the requirements, requesting the approval of the qualification for the member. The letter will be read at a meeting and voted upon by the members of the committee present.

All MABAS Division 12 "Divisional Divemasters" shall be reviewed annually to ensure the above criteria has been met.

RECOMMENDED EQUIPMENT LISTING

INDIVIDUAL DIVER

Open Water Dive - (min. equipment to be a diver in MABAS Division 12)

- Complete dry suit including hood, boots, and gloves

- *Wet suits are no longer allowed after January 2004

- Weight Belt

- Knife - (min. of two) (one high, and one low attachment) or other means of cutting:
i.e. 1 paramedic shear & 1 knife

- Mask

- Fins

- Snorkel (optional)

- Tank with "k" valve or "j" valve in reserve position only

- Buoyancy Compensator with power inflator

- Regulator system that is environmentally protected

- Alternate air source

- Compass (optional)

- Watch (optional)

- Depth Gauge with maximum depth indicator

- Pressure Gauge

- Tethering Devices (harness, standard carabiners (x2), tether line)

- MABAS Division 12 Passport Dive tag

- Signal whistle

Night Dive Additions

- Flashlight

- Strobe Light, and/or Chemical Light Stick

Ice Dive Additions

- Full-Face Mask with environmental protection is highly recommended

- Rope set ups for search and safety (per Dive Rescue Inc.)

Vehicle Rescue and/or Recovery Additions

- Full-Face Mask with Environmental Protection is highly recommended

- Spring Loaded Center Punch

Swift Water Rescue

- Appropriate environmental protection as outlined in Division 12 training sessions

- Low volume mask

- Fins

- Knife

- Personal floatation device with at least 24 lb. of buoyancy

- Kayak type protective helmet

On Scene Team Equipment and Support

Open Water

- 1 – Location buoy with anchor line and weight

- 2 - 200' search lines

2 - 100' search lines
Complete Documentation Paperwork
Command and Sector Vests:
 Incident Commander
 Divemaster (x2)
 Shoremaster (x2)
 Boatmaster
 Safety
1000' of "fire line" ribbon
MICU Ambulance designated for divers
Boat
"Sav-A-Call" kit
Divers flag
Additional Personal Floatation Devices

Night Dive Additions

Floodlights on shore and all accessories.
Shore Strobe

Ice Dive Additions

1 - 100' Tether Line
1 - 200' Tether Line
Chain Saw with a min. 24" bar
Enclosed Heated Vehicle
2 - Tarps
2 - Shovels
2-4 - Ice Fastening Devices
6-12 - Carabiners
Salvation Army Canteen (as per box card or special request)
Inflatable Boat
Bucket of Sand

Vehicle Rescue and/or Recovery Additions

Lift Bags with air accessories.
Tow Truck
Extrication Equipment

Misc. Additions

Bull Horn
Binoculars

Compressed Air Alert Horn
Chicagoland Atlas



SECTION B - PROCEDURES

SCENE PROCEDURES

As in any incident within MABAS Division Twelve, the Fire Ground Command system shall be utilized. The Fire Ground Commander is in overall charge of the water incident. It is the commander's responsibility to provide the needed resources on the scene and to organize and control the scene through sectors. With this in mind, the commander will create the sector of Divemaster. The Divemaster sector is in control of all of the water functions, i.e. boats, divers, and assigned shore support. It is the Divemaster's responsibility to organize and begin the water rescue or recovery. The Divemaster sector officer shall be knowledgeable in water rescue and recovery operations.

If the need for additional resources is required, the Fire Ground Commander (Incident Commander) shall utilize the Box Alarm System by contacting the appropriate MABAS dispatch center, and request the pertinent box alarm needed. The following is a list of information that needs to be given to the MABAS dispatch center.

1. Who is requesting the alarm?
2. What is the type of box or number?
3. Where is the alarm location?
4. What is the box alarm for?
5. What level the box alarm is to, i.e. box, second, etc.
6. Where is the staging area, if any?

Upon the arrival of the various box alarm companies, the recognized MABAS Division 12 Divisional Divemasters shall report to the incident commander. The Incident Commander has the option of either placing the first in Divisional Divemaster in charge of the Divemaster Sector or to assign him to the current department "on scene Divisional Divemaster" in an advisory capacity. The Divisional Divemaster in charge of the "Divemaster Sector" shall have at all times the discretionary powers to suspend the diving operation for the reasons of safety.

Additionally, no diver shall be allowed to enter the water in a diving capacity unless that diver has completed the annual qualifications of MABAS Division 12 Dive Team and can present a MABAS Division 12 Passport Dive tag as proof.

Creation of the positions of Shoremaster, Safety, and Boatmaster shall take place immediately depending on the type of incident presenting itself. All sector and sub sector officers shall don the proper vests for optimum visual awareness. See definitions for Shoremaster, Safety, and Boatmaster.

At the completion of any water incident that involved MABAS, the incident commander and the Divemaster shall compile a comprehensive report and submit the report to the MABAS Divemasters Committee Chairman. At the next scheduled committee meeting, the incident will be reviewed for future improvements that can be made. Some of the enclosures shall be the following:

1. Water Accident Report Form
2. State NFIRS report
3. MABAS dispatch alarm log
4. List of all personnel
5. Witness interview form as required

ACTIVATION OF MABAS RADIO NETWORK

The activation of the MABAS radio network for the purpose of an individual municipality to receive assistance, will include the following situations:

- The rescue of a human life
- The recovery of a human body
- Additional requests

Additional requests for assistance to perform property recovery, can be made by telephone to the municipalities dive team department head, i.e. Chief or Deputy Chief. After these notifications are made, then and only then, can you activate the MABAS tones after calling the division dispatch center. This tone activation is for legal purposes.

Furthermore, only those towns that have a "water" box alarm card on file with the MABAS dispatch system, should activate the radio network. The incident commander should activate the radio network for assistance response as soon as additional help is deemed necessary. The incident commander through constant evaluation of the scene, upgrade the box alarm or cancel it and return all companies.

Once the radio network has been activated, each subteam shall make contact with the MABAS dispatch as soon as possible, to report the response status of the subteam. The report should include, but is not limited to: number of divers, divisional Divemaster, shore personnel, and out of service equipment that may be due to respond.

MABAS dispatch shall not automatically upgrade the alarm to fill in out-of-service companies. The MABAS dispatcher shall advise the incident commander of the out of service companies, and the decision to upgrade the alarm shall rest with the commander. The actual response by a subteam to an activated box card shall be governed by their team's procedures and will not be governed within this document.

A set of the MABAS TEAM policies and procedures shall be kept available at the MABAS Division 12 dispatch center and for use and review at each incident scene.

STANDARD LINE COMMUNICATION SIGNALS

SWEEP AND CIRCULAR TYPE PATTERNS

Tender to Diver

- 1 TUG - OK
- 2 TUGS - Change Direction
- 3 TUGS - Surface Carefully
- 4 TUGS - Stop and Wait
Followed by 2 tugs continue

Diver to Tender

- 1 TUG - OK
- 2 TUGS - GIVE MORE LINE
- 3 TUGS - FOUND OBJECT, MARK LINE
- 4+ TUGS - DIVER NEEDS HELP, MARK LINE
SEND SAFETY DIVER

“V” PATTERN WORK

Tender to Diver

- 1 TUG - OK
- 2 TUGS - Change Direction
- 3 TUGS - Surface
- 4 TUGS - Stop and Wait
Followed by 2 tugs continue

Diver to Tender

- 1 TUG - OK
- 2 TUGS - GIVE MORE LINE
- 3 TUGS - FOUND OBJECT, MARK LINE
- 4+ TUGS - NEED HELP, MARK LINE
SEND SAFETY DIVER

ICE DIVING

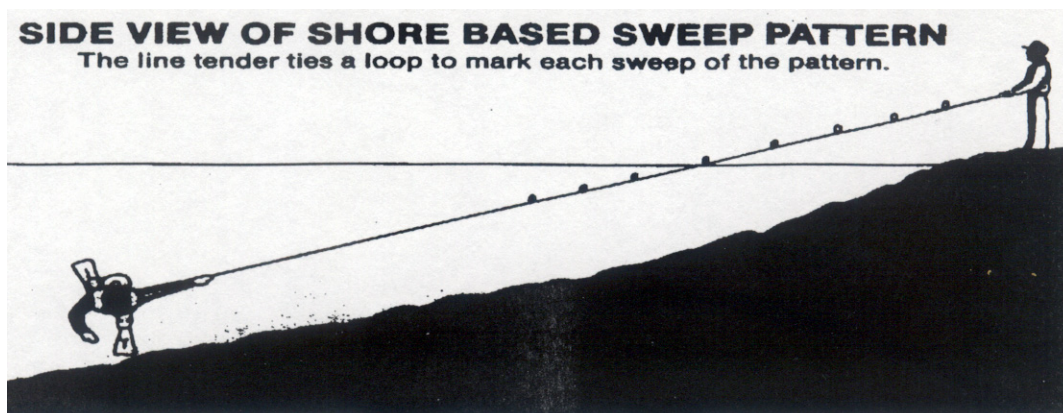
The signals used here are the same as the ones utilized in the sweep and circular pattern work.

SPECIAL SITUATIONS

This particular area is where the tender and the diver are clear about signals they will utilize.

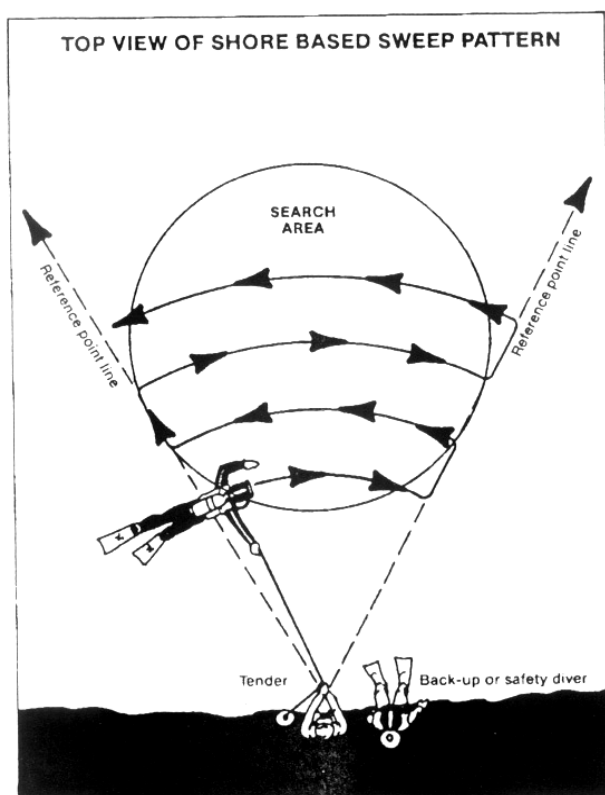
Special signals may be used between the tender and diver. A help signal will always be incorporated into the set of signals used. Try to stay with the signals commonly used if possible.

SHORE ARC/PIVOT/SWEEP

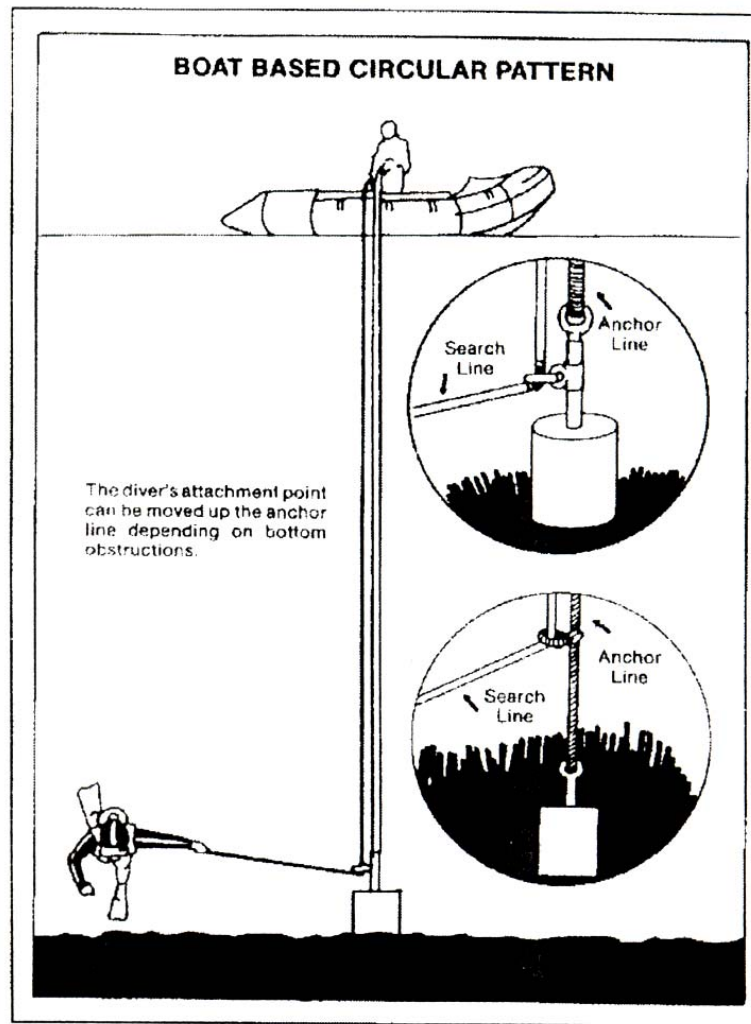


Purpose: Immediate search by one or more divers on the scene, or in conjunction with other divers to cover an area.

Technique: The line tender guides the search diver(s) in a semi-circular pattern in the area of search. The distance covered in ever increasing arcs is determined by the available information. At the end of each pass, the shoreline tender signals the search diver(s) to turn around, move out or in, and begins the next pass. This procedure will continue until the area is covered, the victim is found, or the predetermined distance of line is used up. A safety diver is required to be in attendance next to the shoreline tender. Please refer to the figures above and below.



ANCHOR PIVOT/BOAT BASED CIRCULAR PATTERN



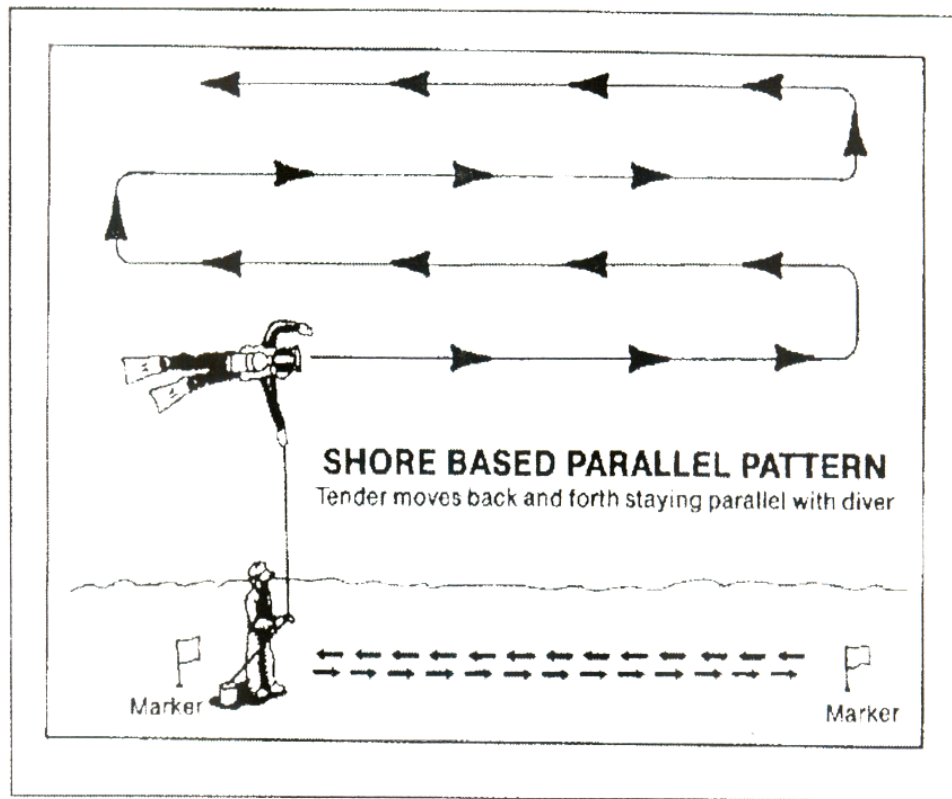
Graphics courtesy of Dive Rescue, Inc.

Purpose: To search an area far from shore in clean bottom water for the immediate rescue possibility.

Technique: The method to accomplish this pattern is the same as the Shore arc/pivot/sweep except the line tender's place is based within a boat. A safety diver is required for this operation and is to either be in the water monitoring the rope signals or in the boat next to the line tender(s). Please refer to the graphic.

Note: If bottom anchor is not available a second diver can be used in its place.

SHORE BASED PARALLEL PATTERN

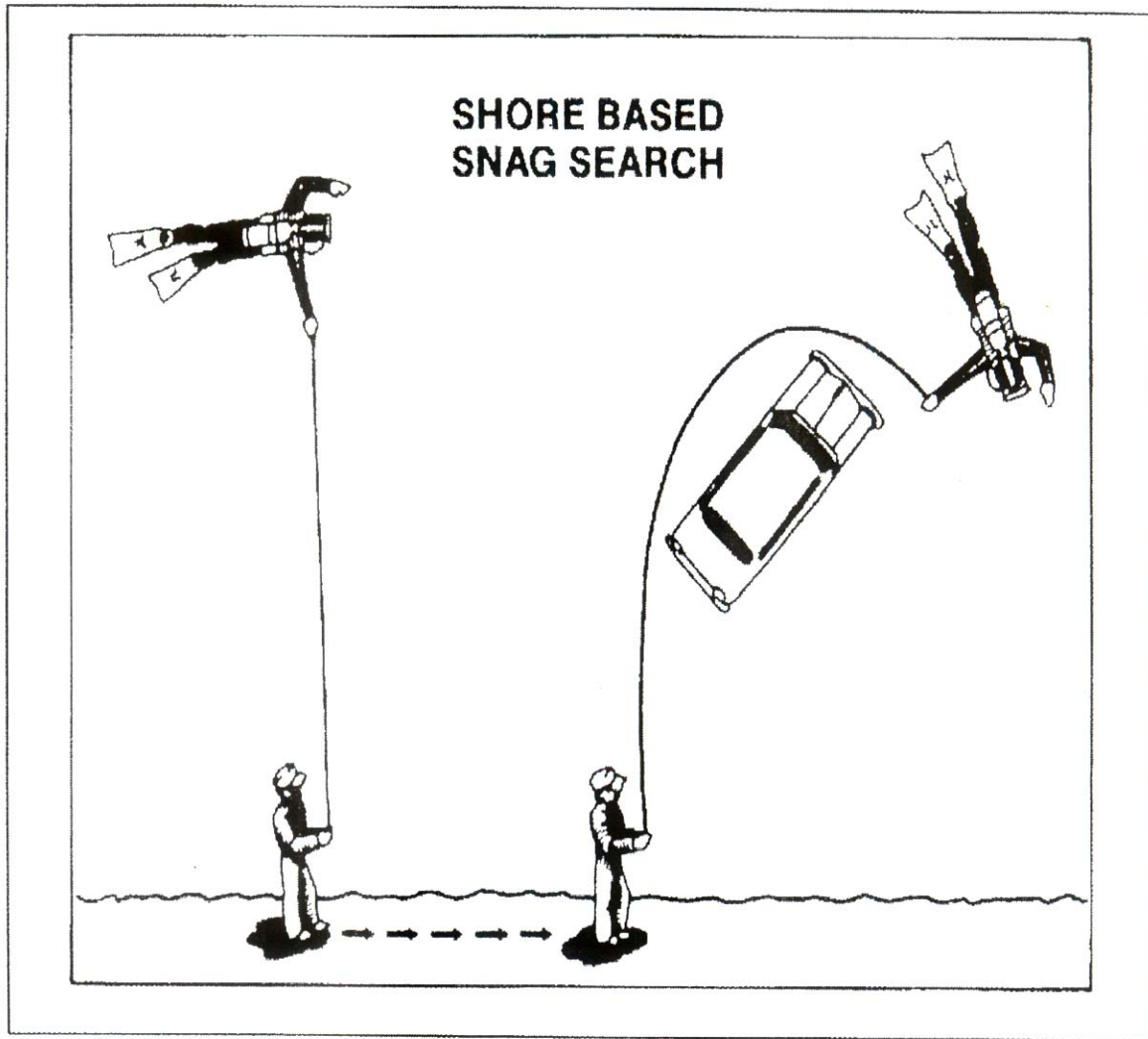


Graphics courtesy of Dive Rescue, Inc.

Purpose: To utilize a shore based pattern to search a relatively clean bottom area. This works extremely well when the victim is believed to be close to shore.

Technique: The shore line tender and search diver moving parallel with one another back and forth along the shore, and either the diver moving in or out at the ends of the search distance. Signals would remain the same as in previous patterns. A safety diver is required to be available at the midway point of the length of the pattern distance. Please refer to the graphic.

SNAG METHOD PATTERN



Graphics courtesy of Dive Rescue, Inc.

Purpose: To search a large area for a large object, i.e. a car. The method can be used either with the sweep pattern or the parallel shore pattern.

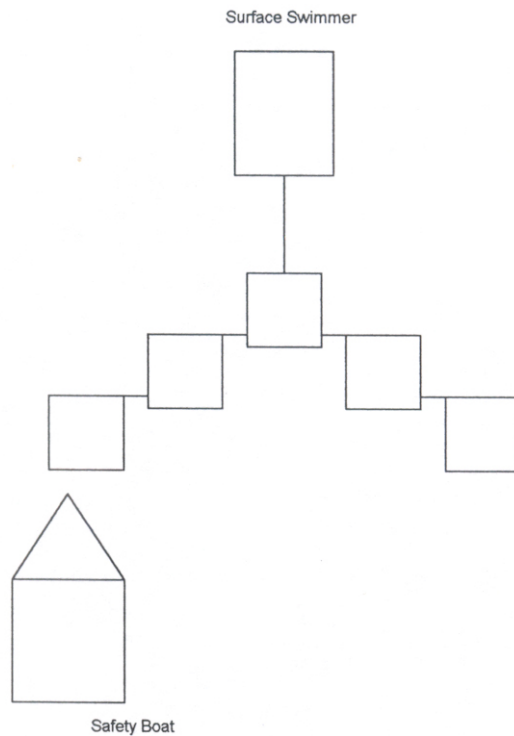
Technique: Utilizing either the sweep or parallel shore patterns, the search diver performs large sweeps and the shoreline tender allows a little slack. When the object is snagged, the search diver swims towards the object. A safety diver is required for the procedure. Signals are utilized as in previous patterns. Please refer to graphic.

INVERTED "V" PATTERN

Purpose: To search a large open water area without a shore based tender. This pattern is intended to replace the use of the boat and dive bar system.

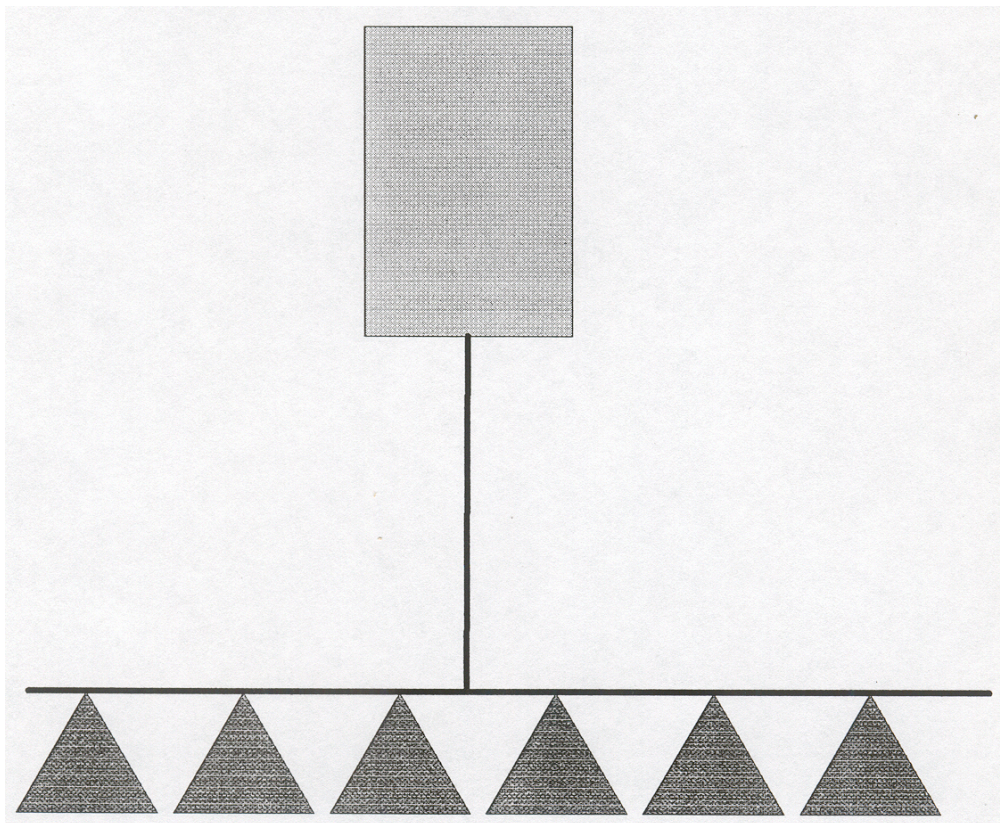
Technique: With the use of a surface swimming line tender/guide (surface guide / diver), a group of divers submerged on the bottom form an inverted "V" with the lead point of the "V" being the center (point) diver having the rope communication to the surface guide / diver. On each side of the point diver, additional divers hold onto each other for the purpose of guiding the pattern and communication back and forth to the surface. A safety boat with a safety diver will trail along at an angle to the pattern direction. If possible, a shore guide should be used for the surface guide/diver to get directions for proper pattern coverage. Please refer to graphic.

- For more information on the inverted "V" pattern, see pages 56-58 of this manual.



BOAT AND BAR COMBINATION

It is the procedural policy of MABAS Division 12 that no diver shall be utilized in a search riding on a boat and bar combination, where the boat is motorized. For interdivisional operations, Division 12 divers can be used for other functions.



ICE DIVING

Purpose: To search for a victim that has fallen through an ice covered body of water.

Technique: To perform this type of dive, there are two primary areas to be searched first. Search the area directly below the hole created by the victim falling through and/or the underside of the ice within 25 feet of the entry hole.

With this type of dive, you will probably use one of two types of search patterns. One is the "Anchor Pivot" and the second is the "Shore Arc/Sweep". Please refer to the appropriate procedures covered elsewhere in this book.

To create your entry hole, you will need to cut through the ice with a saw to create an equal sided triangle, a min. of 6 feet long on each side. A long side of the triangle should parallel the search area, with the line tender standing at the opposite point of the triangle.

The diver(s) shall be tethered on the line(s) with a locking carabiner.

The safety diver SHALL be tethered with a line of at least twice the length of the primary line. All of the lines used in the ice dive should be a minimum of 1/2" diameter line. Anchoring of the lines can be done many ways. However, probably the most efficient way is to utilize ice screws.

NOTE- search lines - maximum length of 100ft., safety lines - maximum length of 200 ft. All line tenders on the ice SHALL also be tethered, anchored, and wear proper floatation and exposure suits.

Special Precautions for Ice Diving:

1. Never dive near or under the ice without a line attached with locking carabiner.
2. Inspect all lines and knots prior to diving.
3. All lines SHALL be anchored.
4. A review of all signals to be used must be done.
5. A fully trained, suited, tethered, safety diver must be present.
6. Use of regulator free flow precautions must be done at all times.
7. A review of the lost diver procedure for ice must be done prior to the search diver submerging.

PROCEDURE FOR (LOST OR DISTRESSED) DIVER UNDER THE ICE

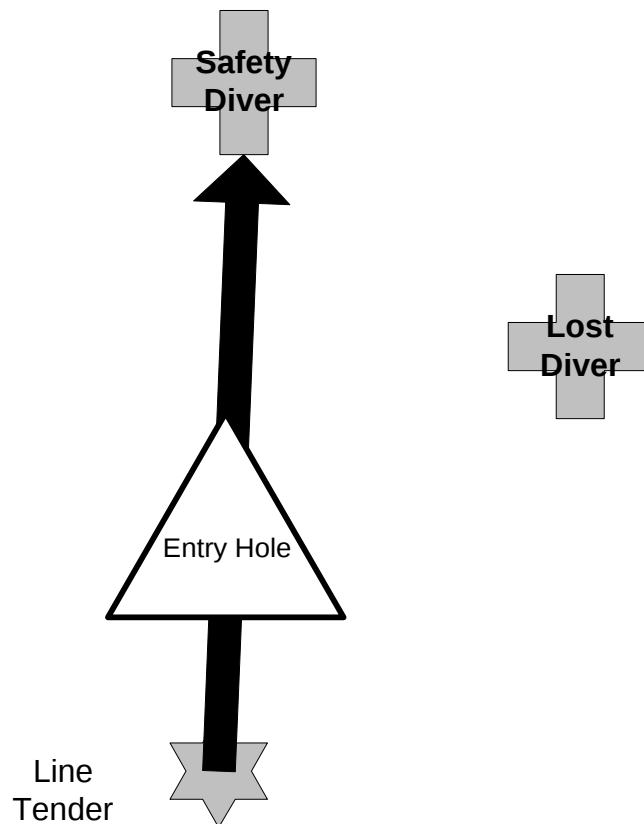
Purpose: To receive help / assistance as quickly as possible when lost / distressed under the ice.

Technique: The untethered / distressed diver shall immediately stop swimming and relax, look for the line (if lost). If not in sight, shall make a controlled ascent to the surface below the ice. The lost / distressed shall stay in a vertical position fully extended to increase the contact area with the line from the safety diver doing a snag search. Upon contact with the line, the lost / distressed diver shall secure the line to himself and pull three times in both directions to show contact has been made. He should then swim if possible in the direction the line is being pulled

PROCEDURE TO RESCUE A (LOST OR DISTRESSED) DIVER UNDER THE ICE

Purpose: To locate and rescue a lost / distressed ice diver on the underside of the ice.

Technique: A tethered safety diver enters the prescribed hole and swims a predetermined distance ($\frac{1}{3}$ greater than the last known distance of the search diver) from the hole directly on the underside of the ice. When the safety diver reaches the determined distance, the diver will turn right or left and begin a snag type of search pattern directly on the underside of the ice. If the lost / distressed search diver has in fact performed the way they should have, the safety diver will snag the search diver or victim with the line. Remember that the distance below the ice that you hold the line is directly proportional to the size of the search diver or victim.



ICE RESCUE

Purpose: To rescue a floating victim that has broken through the ice and their level of consciousness is rapidly deteriorating.

Technique: As in all water rescue situations, a rule of thumb should be followed:

- 1) REACH
- 2) THROW
- 3) GO

The following procedure is to guide you when you get to number 3 of the rule of thumb.

In our area, when we are forced to "GO", there are a few techniques that have worked for area departments. One is to suit up a rescuer in a buoyant water & ice rescue / exposure suit, use a locking carabiner to attach a line to the rescuer's harness, and have the rescuer safely move towards the victim. Once the victim is reached, the rescuer surrounds a positive means of retrieval around the victim and then signals the shore personnel by taps on his own head. The shore personnel retrieve the victim and rescuer by pulling in the line.

The second method that is employed follows the first but adds a floating platform for the victim to get up onto or hang onto when pulled back. The platform that is primarily used is called a "Holmatro board".

Additionally, departments have used, with success, an inflatable boat to "skim" across the ice to retrieve victims.

Many alternative methods are currently in use. Please remember, if one person fell through there, it is a good chance you will too. Distribute your weight across the ice, have proper floatation and exposure protection, and use a positive means to grab and keep the victim.

DAM RESCUE

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SWIFT WATER RESCUE

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DIVE REHABILITATION PROCEDURE

SCOPE:

This procedure shall apply to all emergency dive operations where strenuous physical or mental activity or exposure to extreme heat or cold exists.

PURPOSE

To ensure that the physical and mental condition of all dive team personnel operating at the scene of a dive incident do not deteriorate to the point which effects their own or any other person's safety.

RESPONSIBILITIES

The Incident Commander (IC) shall be responsible for evaluating the conditions of the incident and determine the need to establish a personnel rehabilitation (rehab) area. If the IC feels the conditions will in any way inhibit the safe and efficient performance of the dive operation personnel, a rehab area shall be established.

STAFFING

The rehab area shall be staffed by a minimum of two paramedics with advanced life support (ALS) equipment, and one Diver Medic (when available). When the ambulance crew is utilized for rehab, the attendant shall assume the role of "Rehab Officer". When an ambulance crew is not utilized the IC shall assign a Rehab Officer. The Rehab Officer shall don the appropriate command vest.

SITE LOCATION

If not previously established by the Incident Commander the Rehab Officer shall be responsible for establishing a rehab area and communicate the location to command.

SITE CHARACTERISTICS

- Rehab shall be stationed out of the weather
- The location shall be located safely away from the incident where crews can remove their equipment, have vitals checked, and receive fluid and rest.
- The location should be large enough to accommodate the needs of the incident.
- The location should be easily accessible by ambulance
- The location should allow for prompt re entry to the emergency operation
- Use of tobacco products in this area is strictly prohibited
- The Rehab Officer is not to be considered synonymous with Sector Officer. A Sector Officer is appointed only after sectoring is deemed necessary.

REHAB OPERATIONS

All dive operations personnel involved in emergency operations should be routinely evaluated at a rehab area. Company officers, divisional divemasters, team divemasters, team leaders, sector officers, safety officers and the IC may determine when crews are to be rotated through rehab. In most cases this shall occur at forty-five minutes to one hour intervals. However extreme weather or strenuous working conditions may decrease the interval.

Crews shall report to rehab utilizing the passport system. Vitals will be checked and recorded every fifteen minutes. A rapid field neuro exam shall be performed by the dive medic on all divers after every dive. At least two sets of vitals shall be taken on all personnel. After a fifteen minute rest and satisfactory evaluation, the crews shall be released and return to the staging area unless immediately needed to continue the operation.

Any person complaining of chest pain or shortness of breath, or found to have abnormal vital signs (see Vital Signs Guidelines) or any other emergent condition shall be removed from active duty for further evaluation. In these cases treatment should be initiated and EMS protocols followed.

The rehab officer will ensure that at least one ALS ambulance, staffed with two paramedics, is always dedicated to rehab for transport of personnel.

DOCUMENTATION

The names of all personnel passing through rehab shall be recorded on the Medical Rehab Check Sheet, as well as pertinent data. This documentation shall become part of the permanent record of the incident.

For all situations where medical treatment was or should have been initiated the appropriate ambulance report (s) shall be utilized following EMS system protocols.

Any personnel who fails to meet the criteria for being released from rehab, shall have their company officer notified on the scene as well as their fire chief at conclusion of the incident.

POINTS TO REMEMBER

- Dive operation crews shall be recycled through rehab on a regular basis
- Assigned crews shall stay together
- Crews at rehab shall receive fluids, rest and a medical evaluation.
- All sectors/officers should maintain an ongoing awareness of the condition of their personnel and use rehab to combat excessive fatigue and exhaustion
- Support members and other firefighters also need to be evaluated on a regular basis
- All personnel on the scene shall be evaluated at least once during an incident

VITAL SIGN GUIDELINES

When crews arrive at rehab, they should be given fluids immediately and a complete set of vitals taken. A rapid field neuro exam is to be done by the dive medic in rehab.

The following criteria serves as a guideline for transporting personnel involved in dive operations to the hospital for further evaluation. In these cases, treatment should be initiated according to EMS system SOP's and Medical control shall be contacted.

- Diastolic blood pressure of > 130
- Diastolic blood pressure of > 110 and symptomatic
- Diastolic blood pressure of < 110 and symptomatic
- Systolic blood pressure of > 200 and remains > 200 after (15) minutes of rest
- Heart rate > 140 or < 60 with accompanied hypotension
- Any other emergent condition not outlined above

The following criteria serve as a guideline for releasing personnel from rehab.

- Systolic blood pressure < 180
- Diastolic blood pressure < 100
- Heart rate < 110
- Temperature < 100.6 or > 97 degrees F.



SECTION C - TRAINING GUIDELINES

BASIC DIVEMASTER DUTIES

OBJECTIVES:

1. The Divemaster will have the training, knowledge and experience to command the dive in a safe operation.
2. The Divemaster will understand the condition under which the divers will be working.
3. The Divemaster will know and understand the hazards associated with diving in our area.
4. The Divemaster will understand the proper radio procedures and protocols.
5. The Divemaster will operate under the command of the officer in charge of the jurisdiction that the dive is located in.
6. The Divemaster will retain control of the water and shore activities at all times, including divers.

MOTIVATION:

Diver safety requires that there will be only one person in charge of the dive scene.

Divemasters are charged with the prompt and efficient search for a person in the water.

A life may be saved because you evaluated, triangulated and assigned the divers to the correct location or area.

GENERAL:

1. The first arriving diver is the Divemaster until the department Divemaster or a MABAS Divisional Divemaster arrives on the scene.
2. The Divemaster should report to the command post to be briefed on the problem and conditions.
3. The Divemaster (first arriving diver) should immediately proceed to triangulate for the location of the missing person.
4. The Divemaster should evaluate the known hazards of the location.
5. The Divemaster should, as soon as there is another trained rescuer / diver suited up, have him place a location buoy at last known site.
6. The Divemaster should request from command the status and number of responding divers and request any additional equipment or divers.
7. Determine if there is a need for specialty divers.

8. The Divemaster should evaluate the weather conditions.
9. The Divemaster should evaluate the underwater conditions.
10. The Divemaster should determine if fast water is a problem.
11. The Divemaster should determine if there is a current in the dive area and how it will affect body movement.
12. The Divemaster must determine what patterns will be most effective in finding the missing person or object.
13. If more than one distinct location is determined by triangulation, start operations at the other locations by assigning sector Divemasters and Shoremasters.
14. The Divemaster shall stop all operations and remove all divers from the water if any hazards develop.
15. Keep general track of the times the divers are down, especially in cold water. The Shoremaster does detailed time tracking.
16. Request air cascade systems when a dive appears to be going on for a long time.
17. Request, from command, that the Salvation Army be called if the dive will be going on for a long time.
18. In cold weather, have command make arrangements to get the divers out of the cold.
19. On operations- draw up a map of the area with some landmarks. Form # 1234

SHALLOW POND OR LAKE

SHORE OPERATION

1. Start two search divers using the shore arc pattern in the area of the location buoy. The first search diver should start his/her pattern 50 feet past the location buoy and work toward shore. The other search diver should start 50 feet on the shore side of the location buoy and work away from the shore.
2. Assign a safety diver.
3. If there is any current, or you suspect there is a current, start a third search diver on the down current side working out from shore.
4. Then start a fourth search diver on the opposite side from the first two working out from shore.
5. Have the patterns overlap.

OPEN WATER OPERATION

1. Start an inverted "V" in the area of the location buoy as soon as there are five divers ready to dive. Three divers are utilized below. Two are on the surface, one as a surface guide diver and the other as a safety diver.
2. Circle the location buoy in ever widening circles. Let the surface guide diver determine the pattern around the location buoy.
3. When more divers arrive, start an inverted "V" perpendicular to the shore on the down current side first.
4. Start the third team on the up current side perpendicular to the shore.
5. Have the circling pattern changed to a central pattern, perpendicular to the shore.
6. When the area that the teams have been searching is covered thoroughly, have them start a parallel pattern to the shore in three areas - over the location buoy, closer to shore, and farther from shore so as to cover the area again at right angles from the first set of patterns.

OPEN WATER BOAT OPERATION

1. Have sufficient boats on the scene.
2. Assign a safety boat, with a safety diver, and a Sector Divemaster in the area of the down person.
3. Assure that you have radio contact with all boats at all times.
4. Do not tolerate any radio interference.
5. For covering small areas, use surface guide divers to lead the inverted "V"s".
6. For large areas, use a boat, not under power, to lead the inverted "V" patterns.
7. One boat in one area only. No boat under power shall be operating where there are divers underwater.
8. Send a copy of the scene map to the on-scene Sector Divemaster so you both can coordinate the operation.

REMOTE LOCATION

1. Assign a Sector Divemaster to all separate locations.
2. Request sufficient boats and divers.
3. Assign sector names if you have more than one remote location.
4. Request maps of each remote location so you can coordinate the search operation.

DIVE SAFETY OFFICER

MOTIVATION:

The dive safety officer shall assist the incident safety officer in observing for those situations that could become harmful to the personnel working under the divemaster at an incident or training session. His scope of responsibility covers those activities that an incident safety officer may not be familiar with under the scope of his normal duties.

GENERAL:

The safety officer for the Division 12 Dive Team shall be one of the members of the Divemaster's Committee whenever possible. When this is not possible, the safety officer must be a senior diver of a minimum of level 3 status. The Dive safety officer shall operate as a sector officer under the stricken community's safety officer. The Dive safety officer shall be responsible for all divers and boat operations, from the shore as well as on the water. In the event there are multiple operations under way then the safety officer shall appoint an Assistant Safety Officer to be able to cover the operations adequately.

BASIC SHOREMASTER DUTIES

OBJECTIVES:

1. The Shoremaster will know how the Shoremaster activities assist the Divemaster in running the dive.
2. The Shoremaster will be able to set up the shore activities.
3. The Shoremaster will understand the various types of dive teams, the number of personnel needed for each team, and the equipment needed for each pattern.
4. The Shoremaster will know the proper radio procedures and protocols.
5. The Shoremaster is accountable for diver safety.

MOTIVATION:

Shoremaster takes the logistic burden off of the Divemaster, allowing the Divemaster to concentrate on the dive activities. The Divemaster can then be free to evaluate the information of witnesses, study the water conditions and currents, direct the dive teams and boat operators. The Divemaster will only have to communicate with the Shoremaster and command, which reduces radio traffic.

GENERAL, LESSON, TRAINING:

1. The next diver or Divemaster on the scene not needed to immediately enter the water will assume the Shoremaster duties.
2. The Shoremaster, in consultation with the Divemaster, will decide on the location of the shore

area.

3. The Shoremaster will then arrange to have the shore area secured. Establish a control point for entry of approved personnel.
4. The Shoremaster will immediately establish a roster of all divers present and maintain this roster during the whole dive. FORM # 1235
5. The roster will indicate the diver's name, department, time arrived, time and air pressure upon entry in the water, time and air pressure upon coming out of the water and the time the diver leaves the shore area.
6. The Shoremaster will collect each diver's MABAS Division 12 Passport Dive tag (Dive tag) and list the current level of the diver.
7. The Shoremaster will not let any diver who does not have a Dive tag enter the water or remain in the shore area, unless approved by the authority having jurisdiction.
8. The Shoremaster will keep all non-dive personnel out of the shore area except for boat operators and personnel of the department that has jurisdiction.
9. The Shoremaster will establish an equipment control area and keep all non-divers out of the equipment area.
10. The Shoremaster will establish a boat docking area, if boats are to be used, separate from the entry area of the pattern divers.
11. The Shoremaster will request that command provide any equipment needed that the dive teams did not bring with them.
12. The Shoremaster will establish a rehab and recovery area and have an ambulance located nearby designated for divers.
13. In consultation with the Divemaster, the Shoremaster will form the divers into teams of the proper number of divers for the patterns being used, and keep a record of the team composition.
14. The Shoremaster will appoint a team leader for each team.
15. The Shoremaster will check all teams into and out of the water and assure that all divers are accounted for as they leave the water.
16. The Shoremaster can and should assign assistant Shoremasters, as needed, and then supervise their activities.
17. Each separate sector area will have a separate Shoremaster who will establish a shore area and follow the Shoremaster duties.
18. When the dive is finished, the Shoremaster(s) will assure that all personnel are out of the water.
19. The Shoremaster will dismiss the divers and return their Dive tags as they leave the shore area to go to rehab. Rehab shall include all Division 12 rehab requirements plus a rapid neuro exam. A qualified med diver should do the rapid neuro exam if possible. Form # 1236
20. The Shoremaster will check the shore area after the dive is completed to be sure that no dive equipment was left on the shore.
21. The Shoremaster will remove all area and shore security materials and trash that was generated by the dive personnel.
22. The Shoremaster will give all records to the Divemaster.

NOTE: The Shoremaster has many responsibilities and it would be in the best interest of all concerned to delegate some of the areas.

DEEP DIVE SAFETY

OBJECTIVES:

1. The diver will be able to use the dive tables.
2. The diver will be aware of the cold.
3. The diver will know that he will be working in darkness.
4. The diver will plan the dive to stay in no decompression dive limits.
5. Diver will be aware of the slow signal reaction on a long shoreline.
6. The diver will trust and obey the line signal from shore.
7. When surfacing, the diver shall make a 5-10 minute safety stop at 10 feet to provide for adequate decompression. The diver shall go to rehab and the rehab shall include all division 12 rehab requirements plus a rapid neuro exam. A qualified med diver should do the rapid neuro exam if possible. Form # 1236

MOTIVATION:

The patient is in a cold environment, which means the chances of surviving are good. A quick descent with safety gives us more search time on the bottom.

GENERAL, LESSON, TRAINING:

1. Review the dive table limits and repetitive dive calculations.
2. Do not make a repetitive dive unless absolutely necessary. When deemed necessary stay within the current repetitive dive limits as established by conservative use of the dive tables.
3. Deep dives are always below the thermocline and the water is very cold.
4. Hypothermia is insidious and can be deadly.
5. The diver should have a second line with him to attach to the victim or object so the diver can surface as soon as possible.
6. Trust and obey your line signals, especially the three tugs requesting you to surface.
7. The search line will be up at a steep angle so the diver will have to swim down, as well as out, to keep the line taut.
8. When doing a circle pattern using the boat anchor, care must be taken to keep the line and its tie off from getting tangled in the anchor line.

SAFETY DIVER

1. Be in constant contact with the shoreline tender and when the search diver does not respond to the signal to surface. Have the shoreline tender bring up the search diver slowly.
2. Should the line become taut, immediately start down to assist the diver.
3. The safety diver will be on his own line and be tethered to the search diver's line.

DRY SUIT USE

OBJECTIVES:

1. The diver will be able to identify and explain the use of all fittings and controls on the dry suit.
2. The diver will be able to explain the conditions in which a dry suit will be used.
3. The diver will be able to explain the differences between a dry suit and a wet suit.
4. The diver will be able to explain the safety considerations specific to dry suit use.
5. The diver will be able to explain proper weighting considerations specific to dry suit use.
6. The diver will be able to explain the principles of buoyancy specific to dry suit use.
7. The diver will be able to explain the proper cleaning, storage and maintenance of the dry suit.
8. The diver will demonstrate the proper pre-dive inspection on the dry suit.
9. The diver will demonstrate the proper donning and doffing of the dry suit.
10. The diver will demonstrate the proper operation of the dry suit.
11. The diver will demonstrate the proper safety checks with the dry suit.
12. The diver will demonstrate the proper emergency procedures with the dry suit.

MOTIVATION:

Given the bodies of water in which we must perform rescue and recovery operations, the use of dry suits minimizes the risks associated with thermal, chemical, environmental, and biological hazards.

These benefits can be negated through a lack of familiarity, misuse, or unsafe acts being performed while wearing a dry suit during rescue/recovery operations.

It is only through proper initial and refresher training that we can maximize the benefits of dry suit use without sacrificing safety.

GENERAL:

1. Divers shall use the correct amount of insulation for water temperature you're diving in and exercise rate.
2. Don't weight yourself heavier than neutral buoyancy with an empty tank. Your weighting should allow you to make a precautionary decompression stop at ten feet upon completion of your dive with a tank containing 500 p.s.i. of air or less.
3. Ankle weights if chosen to use are recommended not to exceed 2.5 pounds per ankle.

TRAINING:

1. Prior to using a dry suit during any MABAS Division 12 dive operation (training or incident), the diver must have documented training from a nationally recognized educational organization in the use of dry suits.
2. Divers shall have available to them, the user's Guide for the dry suit that they will be expected to wear.
3. Divers must receive annual refresher training in the proper use and care of dry suits.

4. Prior to acting as a safety diver, the diver shall be familiar with the controls and operation of the dry suit worn by the search diver for whom they are standing by.
5. Prior to entering the water, the search diver shall review safety and emergency procedures with the safety diver.

UNDERWATER COMMUNICATIONS

PURPOSE

To ensure proper communications, either wireless or hard wired, with divers during any dive incident.

TECHNIQUE

The safety of the primary and safety diver conducting any search during an operation, drills or incident shall be the first concern of the Divemaster. The diver shall communicate with the line tender the type underwater communication unit that the diver will be using during the dive. The equipment will be checked prior to the start of the dive and both diver and tender shall be familiar with its use prior to the operation.

If during the operation the communications unit becomes non functional, the diver shall surface, attempt to fix the problem, or continue with the operation using the standard line communication signals.

INTEGRATED WEIGHT SYSTEM

It is mandatory for the diver who is using an integrated weight system to inform the Safety Diver and the Line Tender of its use by the diver. The diver should follow standard accepted safety practices for the weight system that is being utilized by the diver. It is imperative that the safety diver becomes familiar with the weight system in the event of an emergency.

GENERAL SEARCH PROCEDURES

OBJECTIVES:

1. The diver will understand the need to be thorough.
2. The diver will understand that he/she must be on the bottom when diving in black water or murky water.
3. The diver will be aware that there are no clear water ponds, lakes, or rivers in our diving area.
4. The diver will realize the need to quickly suit up and be ready to dive on a rescue response.
5. The diver will know the duties of the Shoremaster.
6. The diver will know the duties of the Divemaster.
7. The diver will know his responsibilities when he is under the authority of the Shoremaster.

MOTIVATION

A life is at stake and our sworn duty is to save lives. A family has lost a loved one and is always hoping until we find the body.

GENERAL, LESSON, TRAINING:

1. Response in private vehicles shall always be within the rules of the road of the State of Illinois.
2. Emergency vehicle response, when in the rescue mode, shall be at Department regulation speeds and driven with safety in mind.
3. Divers must know the amount of weight they need and have their belts ready upon arrival.
4. Report to staging officer if staging has been set up.
5. In a rescue response, Divers who are suited up when they arrive on the scene should report to the Shoremaster immediately with MABAS Division 12 Passport Dive tags (Dive tags), if they are ready to dive.
6. Divers who are not suited up, when they arrive on the scene, should send one diver with Dive tags to report to the Shoremaster and the rest of the divers should unload their equipment and suit up.
7. MABAS Division 12 Divers and Divemasters will give the Shoremaster their Dive tags when arriving on the scene.
8. Divisional Divemasters should report to the incident Divemaster when they arrive to determine if there is a need for assistant Divemasters. They should then report to the Shoremaster for logging onto the scene.

9. Any Divisional Divemasters not needed to assist the Divemaster of the incident should suit up and be ready to act as team leaders.
10. Divers and team leaders assigned by the Shoremaster as a team should stay together and be prepared for an assignment.
11. Divers will use extreme caution when entering the water either from the shore or from a boat.
12. Immediately upon entering the water-check that you have sufficient weight to be negatively buoyant.
13. Start the search pattern where the Divemaster indicates.
14. Submerge slowly to the bottom and start the search using your free hand to sweep back and forth in front of you on the bottom.
15. If there are weeds, stay in the weeds just above the weed growth and sweep down into the weed bed.
16. Do not rely on your visual skills unless the water is clear with five (5) feet of visibility at the bottom.
17. The diver's speed should be equated with the size of the object being searched for, and the type of bottom. In most cases, a slower pace is better.
18. It is most important to be thorough and not miss the object for which you are searching. The area will be considered clean and the search will be moved to another area.

INITIAL DIVER PROCEDURES

OBJECTIVES:

1. The first diver on the scene shall be aware that he is the Divemaster until the department Divemaster or a MABAS Divisional Divemaster arrives.
2. The first diver will understand that he must start triangulating, interviewing witnesses, and marking the location as soon as possible. This is also the responsibility of the fire department officer.
3. The first diver will know that he can only make a search or rescue attempt if he can suit up or reach the person without going into the water.
4. The first diver will understand the water safety procedures of reach, throw, row, and go.
5. The first diver will understand that he is to place a location buoy as soon as the location is established, as per Basic Divemaster Duties.

MOTIVATION:

The prompt and proper procedure of the first diver on the scene could save a life by making a rescue or in finding the person in time to resuscitate the person. Even when it's too late to save the person, a good location makes for a simpler dive and a safer dive.

GENERAL, LESSON, TRAINING:

1. The first diver on the scene must attempt to pinpoint, as close as possible, the last location of the person before he went under water.
2. This can be done using the direct observation of a witness when the location is close to shore.
3. More than one witness is preferred, if possible, in a short time frame.
4. When the last seen location is distant from the shore, then triangulation is required using the responding fire department personnel.
5. Once triangulation is accomplished or in process by the fire department officer, the first diver must suit up and prepare to place the location buoy.
6. An Ice / Water Rescue suit is sufficient to protect the diver when placing the location buoy.
7. At no time shall the first arriving personnel on the scene to enter the water unless the person is visible on the surface when he arrives on the scene, diver is tethered, and/or safety divers are ready.
8. When a rescue of a surface person is required, all safety precautions shall be observed, i.e., do not dive into the water; take something with you to reach to the person.
9. Additional safety precautions include cold-water hypothermia, untrained and not current in "in-

water" lifesaving certification and swift water situations.

10. If the previous situations do not apply then use the 'water safety' procedures of reach, throw, row, and go.
11. As required, when suited up, the first diver should swim out toward the location with a location buoy while the witness observes his progress, and stop or relocate according to the directions of the witness. A witness can be more accurate when observing an actual person in the water.
12. After placing the location buoy, the first diver may try some surface dives if risk/benefit has been weighed and all safeties are in place.
13. The first diver should then return to shore and assume the Divemaster duties until relieved.
14. The next diver, or the first diver if relieved, when fully suited up with tank, should then attempt a random circular search around the location buoy.
15. Always follow the standard dive safety procedures when searching under water.

INVERTED “V” PATTERN

OBJECTIVES

1. The diver will know the purposes of the inverted “V” pattern.
2. The diver will know the actions required of him in all positions:
 - a. Surface / guide diver
 - b. Center (point) diver
 - c. “V” diver
 - d. Safety diver
3. The diver will know how to follow the line.
4. The diver will know how to follow a pattern while guiding the “V”.
5. The diver will know the various patterns used to search an area using the “V”.
6. The diver will know the proper signals between divers, and between the point person and the guide diver or boat.

MOTIVATION:

There is a need to quickly cover a large area that is too far from the shore for a shore pattern.

GENERAL, LESSON, TRAINING:

1. The inverted “V” covers a large area quickly.
2. The inverted “V” can be used in any type of pond, lake or river.
3. The pattern of the “V” usually needs some type of direction from the shore.
4. The surface / guide diver should minimally wear his wet/dry suit, fins and Buoyancy Compensator Device (BCD), or a Coast guard approved personal flotation device.
5. The surface / guide diver must keep a tight line on the divers of the “V” and should be pulling them along.
6. The surface / guide diver, when turning, has to take up the line to keep it taut as the turn is made, and then play it out slowly after the turn.
7. The surface / guide diver has to sight on a shore object to guide him on a straight line.
8. The line should be at least three times as long as the depth of the area being searched.
9. The surface / guide diver checks the “V” divers for readiness to go down and then signals them to submerge feet first, and then follow the point man in assuming a head down normal search position.
10. The point diver controls the inverted “V” for direction and depth.
11. When all divers are on the bottom, the end most divers on each side gives one signal tug to the diver next to him; when the point diver receives the single tug from each side he gives one signal tug to the guide and they start.

12. The “V” divers should be right on the bottom or just above the heavy weeds.
13. The signals remain the same as in the 'Line Tender Outline', only two tugs mean stop.
14. The point diver on the “V” has the line looped around his wrist and the line under his index finger, with the diver's hand pointing straight in front of him.
15. When the line moves from under the finger either right or left, the point diver follows around in the direction that the line moves until the line again lines up with his finger.
16. The “V” should be balanced with an equal number of divers on each side of the point diver.
17. Each diver will hold onto the diver next to him with the hand on the point diver side, either onto the tank harness or the shoulder opening of the BCD.
18. Each diver and the point diver to insure full coverage will use his free hand to sweep back and forth in front of him continuously.
19. The “V” divers cannot kick hard or they will steer the “V” from underwater and not follow the pattern. Just a lazy waving is sufficient.
20. Each diver must recognize when he is no longer slightly behind the diver closer to the point diver. Let the diver you are holding on to pull you slightly.
21. When you touch the victim or object you are searching for, do not let go. Signal the diver you are holding on to with 3 tugs and secure the victim or object with both hands.
22. When you feel the 3 tugs on your strap or shoulder opening, you will know that the diver next to you has found something or has a problem. Give 3 tugs to alert the point diver to stop.
23. When you are on the “V”, be alert to any signal from the diver more remote than you on the “V”, and pass it on to the point man.
24. The point diver will signal the surface / guide diver. Three tugs.
25. All “V” divers, when the “V” stops, check around to determine if you are close to the diver who found the victim / object. If you are close, assist; if not near, stay still until the “V” resumes the search or surfaces.
26. If you feel the diver on the point diver side start to surface, follow him up.
27. If you are in trouble, signal to surface by 4 tugs on the strap or shoulder opening of the diver next to you.
28. The point diver, upon receiving 4 tugs, will surface immediately.
29. If the “V” should be stopped for any reason, the point diver will signal the surface / guide diver with 1 tug to stop until the problem is resolved. All V-divers will check to see what stopped the “V”.

LINE TENDER

OBJECTIVES:

1. The line tender (shore person) will understand the importance of his/her duties to the diver and the incident.
2. The line tender (shore person) will know the line signals.
3. The line tender will visualize the possible problems of the search diver in relation to the signals received.
4. The line tender will understand the line control needed to properly cover the search area.
5. The line tender will know her roll in guiding the search diver to shore after the search object is found.

MOTIVATION:

The success of the search is directly related to the ability of the line tender to properly direct the search diver to cover the search area.

GENERAL, LESSON, TRAINING:

1. The line tender needs to know the type of bottom that the diver is searching.
2. The line tender has to know the size of the object being looked for.
3. The line tender has to relate between the size of the object and the type of bottom, i.e., small object - rocky and/or boulder strewn; heavy object - soft deep mud; small child - deep weeds; so as to determine the increment of line pay out.
4. The line tender must mark his/her position on the shore and stay at that exact spot so we can accurately establish the location of the search object for legal purposes and will tie an overhand knot/loop/plastic tie for each pass the diver makes in the arc pattern.
5. The shore arc should extend well beyond the probable object location, in both directions, as well as from the shore out.

6. The line tender must know the line signals:

DIVER TO LINE TENDER

- 1 Tug - OK
- 2 Tugs - MORE LINE
- 3 Tugs - OBJECT FOUND, MARK LINE
- 4+ Tugs - DIVER NEEDS HELP, MARK LINE, SEND SAFETY DIVER

LINE TENDER TO DIVER

- 1 Tug - OK
- 2 Tugs - CHANGE DIRECTION
- 3 Tugs - SURFACE
- 4 Tugs - STOP and WAIT

FOLLOWED BY 2 TUGS, CONTINUE

- 7. The line tender, when receiving 1 tug, has to decide if the line was caught on an obstruction on the bottom, or if it was from the diver. A tug from the diver should be firm and move the line tender's arm.
- 8. The line tender should, after receiving 1 tug from the diver, after consideration, give 1 tug to acknowledge the signal from the search diver and have the diver resume the search in the same direction.
- 9. The line tender, upon receiving a signal of 3 tugs or 4 tugs from the diver, will mark the line with a knot and mark the shore with an arrow indicating the direction of the line going from line tender to diver; for legal reasons we need to know the distance and location of the find and / or problem.
- 10. After marking the line when 3 tugs are received, the line tender should be alert for the 2 tugs indicating that the search diver needs more line.
- 11. When the search area is completely covered, the line tender should report to the Divemaster for further orders.
- 12. If the new search area is adjacent to the previous search area, the line tender should establish the new line tender location so as to be able to overlap the previous search area; and again mark his location on the shore and stay there.
- 13. If the search diver should surface on his/her own, the line tender must mark the line with a knot so the search can be continued without leaving a gap in the search pattern.
- 14. Upon resuming the search, the line tender should shorten the line by two increments of the pay-out of the line, and have the search diver complete one full arc before continuing the pay out increment.
- 15. The line tender will note the time that the search diver started the search and bring the search diver up after 20 minutes to check the search diver's air supply.
- 16. The line tender at no time shall be distracted and/or be assigned additional duties that will interfere with the search diver that is assigned to him.

NIGHT DIVE

OBJECTIVES:

1. The diver will understand that a night dive is a safety concern.
2. The diver will know that a night dive is an emergency dive.
3. The diver will know that a night dive is a rescue dive only.
4. The Divemaster will know that a night dive is in the rescue mode for approximately one hour.

MOTIVATION:

The chance of finding a person who goes under water after dark, in time to resuscitate, is worth the small, risk that a night dive can put on the divers.

GENERAL, LESSON, TRAINING:

1. While in the normal underwater search, we have almost no visibility; when we surface we can see each other and any obstructions.
2. In a night dive, we still do not have underwater visibility, and we also do not have good surface visibility.
3. The beach area must be lit from the sides so as not to create a glare to the divers as they leave the water. The lights should be positioned so that both the beach and water are illuminated.
4. Each diver shall have some form of visible light on their person, at all times, while in the water.
5. At no time shall divers be tethered together regardless of visibility.
6. Searches that are remote from shore require greater safety precautions.
7. Boat operators must know where every diver is before they move the boat under power.
8. All other search diving procedures must be followed.

PATIENT RESCUE PROCEDURES

OBJECTIVES:

1. The diver will understand the mammalian diving reflex.
2. The diver will know that the patient is to remain in a facedown position until the shore or boat personnel take over the patient.
3. The diver and shore person will understand that time is important.

MOTIVATION:

The patient has only so much oxygen and, when it is gone, the patient dies. The mammalian dive reflex slows down the need for oxygen, but does not stop the need.

GENERAL, LESSON, TRAINING:

1. The mammalian dive reflex causes the brain to constrict the arteries in the legs, arms, and peripheral areas of the body; thus bringing all of the blood to the vital organs.
2. The mammalian dive reflex causes the brain to slow down the vital organs' activity in the brain, heart, and lungs, thus reducing the amount of oxygen needed to support them.
3. The mammalian dive reflex is triggered when water that is colder than the body's temperature suddenly strikes the forehead as the patient goes underwater. The colder the water or younger the patient, the better the chances for survival.
4. If the patient does not struggle, the chances for survival are better.
5. All submerged, non-breathing patients are to be considered in the rescue mode (savable) for one hour after initial submersion.
6. The savable patient must be kept in the face down position until CPR can be administered.
7. All divers and personnel on the dive must make a diligent effort to locate the patient in as short a time as possible.
8. This diligent effort is to be maintained for at least one hour.
9. After one hour of effort the incident becomes a recovery operation, although we may keep up the appearance of a rescue operation.
10. After one hour, diver safety becomes the driving factor in place of patient recovery.
11. If a diving accident is suspected in the incident, appropriate spinal immobilization techniques will be utilized where applicable.
12. The patient should be placed on a long board to facilitate CPR

SHORE ARC:

1. The search diver, upon finding the patient, will not let go of patient for any reason.
2. The search diver will signal the shoreline tender with three tugs when the patient is held securely.
3. The safety diver tethered safely will immediately follow the shoreline down to the search diver and assist in bringing the patient in to shore in a facedown position.
4. The shore person should keep a tight line after tying the knot and, when the line slacks, start to take up the line so as to guide the divers to shore.
5. The divers will follow the bottom as close as is safe, while keeping the patient's face out of the mud.
6. Upon reaching the shore, they will turn the patient over to the paramedics for CPR

INVERTED "V"

1. The "V" divers, upon contacting the patient, will not let go of the patient.
2. The "V" divers will assist each other in securing the patient.
3. The divers will signal the point diver with three tugs when prepared to surface with the patient.
4. The point diver will signal the surface guide diver or boat line tender with three tugs.
5. The point diver will start to bring the "V" divers to the surface with the patient.
6. The "V" divers will keep the patient facedown in the water, approximately one foot below the surface, until the rescue boat (CPR team) is alongside and ready to take the patient on board.
7. The rescue boat (CPR team) will not move to the "V" divers location until all of the "V" divers are on the surface and the surface guide diver or boat line tender signals the boat to approach.
8. The divers will assist the CPR team in getting the patient on a long board and onto the rescue boat.

SAFETY DIVER

OBJECTIVES:

1. The safety diver will understand the importance of the safety diver's duties.
2. The safety diver will understand the problems that can confront the safety diver.
3. The safety diver will know the proper signals.
4. The safety diver will be aware of the danger in assisting the trapped search diver.
5. The safety diver will know how to assist the search diver to bring in a victim or patient.

MOTIVATION:

The life of the search diver could depend on the safety diver's ability and knowledge.

GENERAL, LESSON, TRAINING:

1. The safety diver will be in full gear and ready to dive.
2. The safety diver has to use extreme caution as he/she follows the search diver's line down.
3. The safety diver should expect very little visibility on the bottom, and use his/her hands to determine the problem.
4. If the search diver is in trouble, the safety diver has to determine the problem without becoming a part of the problem.
5. The problems that the search diver can experience and encounter are:
 - a. The search line is fouled.
 - b. The diver is pinned under something.
 - c. The diver's equipment is caught on something.
6. If the search line is the problem, it could be wrapped around an object many times as the search diver was swimming, waiting for the line tender to turn him in the other direction.
7. If the search diver is pinned by an object, the safety diver must be careful that another shift of the object does not pin the safety diver.
8. If the diver's equipment is caught on something such as fishing line, rope, cable or wire, the safety diver must stay clear and disentangle/cut the material.

ANCHOR PIVOT/BOAT SEARCH

1. A safety diver is required for this operation and is to either be in the water monitoring the search line signals or in the boat next to the boat line tender(s).
2. The safety diver, when responding to a signal for assistance from the search diver, will be on his/her own safety line attached to his/her harness.
3. If possible the safety diver will have his/her own boat line tender.
4. If the search diver has found the search object and needs assistance, follow his/her search line down carefully until you reach him/her, and then grasp the object.
5. Do not release your hold on the object as the search diver may let it go after you take hold of it.
6. If the object is a rescue patient, assist in bringing him/her to the surface and keeping the face down

and underwater until the rescue boat (CPR team) takes the patient from you.

7. If the object is a recovery victim, bring him /her to the surface, face down and assist the boat personnel in getting the victim on ton the boat

SHORELINE SEARCH

1. The safety diver will be in the vicinity of the shoreline tender and in voice contact at all times when the search diver is in the water.
2. The safety diver, when responding to a signal for assistance from the search diver, will be on his own safety line attached to his harness.
3. The safety diver will have his own shoreline tender as soon as possible.
4. If the search diver has found the search object and needs assistance, follow his search line down carefully until you reach him, and then grasp the object and assist the search diver to bring it to shore.
5. Do not release your hold on the object as the search diver may let it go after you take a hold of the object.
6. If the object is a rescue patient, bring him to shore under water, face down, out of the mud, until the shore personnel take the patient from you.
7. If the object is a recovery victim, bring him to shore on the surface, face down.

OFF SHORE: INVERTED “V” PATTERN

1. A safety boat with a safety diver will trail along at an angle to the pattern if boat is present.
2. The safety diver and surface guide diver will arrange a set of hand signals to be used between themselves.
3. The safety diver will be watching the surface guide diver, whenever the “V” divers are down.
4. The safety diver will be alert for any diver that surfaces and needs help.
5. The safety diver will not let the boat approach the area of the search divers under power.
6. The safety diver will approach from behind the surface guide diver and leave the boat next to the surface guide diver when starting down the line.
7. The safety diver will not be used to assist the “V” divers very often since there are added divers down that can help.
8. The safety diver will account for all “V” divers when they surface.

SHORE ARC

OBJECTIVES

1. The diver will understand the need to search the area thoroughly.
2. The diver will be aware that he must be on the bottom.
3. The diver will know that he must keep a tight search line.
4. The diver will know and understand the line signals.
5. The diver will be aware that he/she must turn toward the shore when changing directions.
6. The diver must understand that, once contact is made with the search object, he/she will not let go of the object.

MOTIVATION

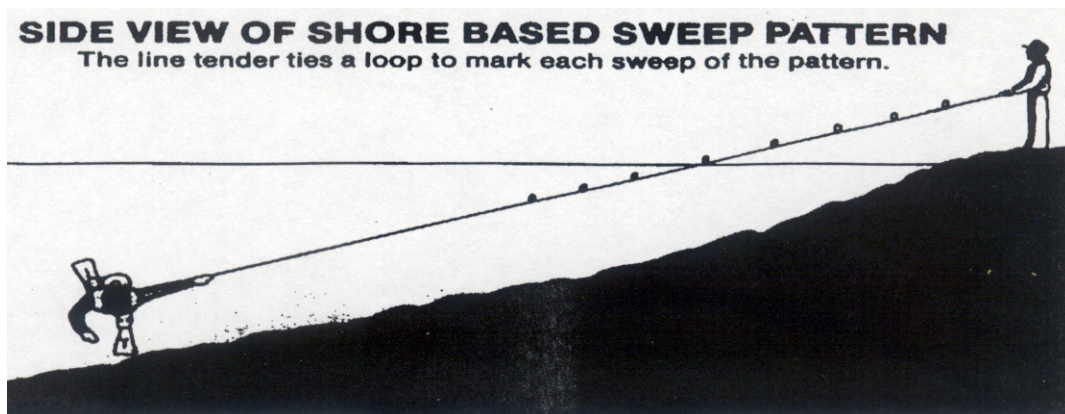
The prompt finding of a submerged person can mean the saving of the life, or delay, the death of that person. This is what Dive Rescue is all about.

GENERAL, TRAINING:

1. Describe the area covered by a shore arc sweep.
2. Explain the purpose of the search line pay out, short for small objects - larger for larger objects.
3. Explain the speed at which the diver swims, slow for small object, faster for larger objects.
4. Demonstrate and describe the extent of the free hand sweep of the bottom.
5. Enforce the need for thoroughness.
6. Explain that we will be working where there is almost no visibility, and all searching will be by feel.
7. Describe and explain the types of bottom we can encounter: weeds, gravel, large stones, deep mud, trash, light mud.

LESSON:

1. The diver will tie a figure 8 loop at the end and hold this loop in the hand closest to shore.
2. The diver, when ready and out at the starting point, will submerge to the bottom and start swimming across the area to be searched.
3. The diver will, with his free hand, sweep back and forth to search the bottom.
4. The diver, upon receiving two tugs, will change direction by turning in toward shore and, when fully turned, switch the loop to the hand now closest to shore. Swim away from shore until the search line is tight, then swim back across the search area.
5. The diver will continue this procedure until he/she finds the search object or is signaled to surface by three tugs.
6. The diver, when finding the search object, will grasp it firmly with both hands to assure that the object of the search is not released.
7. Once the object is secured, signal three tugs to inform the shoreline tender to mark the line and send the safety diver.
8. The diver will keep any rescued person facedown until the shore personnel take the rescued person from him. (See: Patient Rescue Procedures-Shore Arc)
9. The diver will keep the rescued persons face out of the mud.
10. On a recovery dive, the body should be brought in face down (See Victim recovery outline).



SAFETY:

1. Never get off of your search line.
2. Know your signals and what they indicate.
3. Request help/or assistance with 4 tugs when you think you will need it; don't wait until you are in trouble.
4. Do not involve yourself in a problem situation.
5. Trash type bottoms can have jagged and sharp parts; approach carefully, swim slowly.
6. Approach all submerged vehicles with a lot of caution as they may roll over on you.
7. Believe your search line signals and obey them.
8. Safety divers, when going in to assist a search diver in trouble, should proceed down the search line with caution.
9. Safety divers must be on their own safety line and be snapped onto the diver's search line.

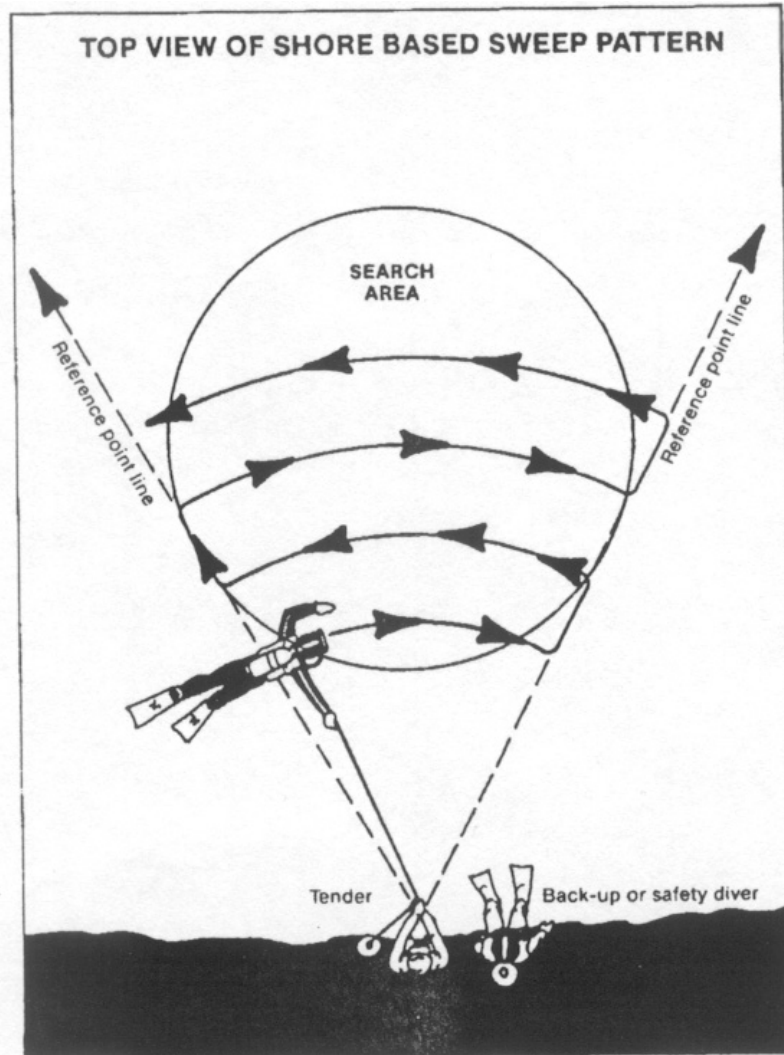
SIGNALS:

LINETENDER TO DIVER

1 tug OK
2 tugs CHANGE DIRECTION
3 tugs SURFACE
4 tugs STOP and WAIT
FOLLOWED BY 2 TUGS CONTINUE

DIVER TO LINETENDER

1 tug OK
2 tugs MORE LINE
3 tugs FOUND OBJECT MARK LINE
4+ tugs DIVER NEEDS HELP, MARK LINE,
SEND SAFETY DIVER



PRACTICAL:

1. Practice arm sweeps and staying on the bottom in clear water, if possible.
2. Practice turning toward shore and then tightening the search line before starting in the opposite direction.
3. Practice signal sending and receiving line signals in both directions, and then do them in a blacked-out mask.

SHORE WALK POND OR RIVER

OBJECTIVES:

1. The shore walk person will be aware that a shore walk is a fast but thorough check of the shore and shallow water near shore.
2. The shore walk person will understand that it is essentially a visual inspection of the area.
3. The shore walk person will understand that he/she is looking for an entry point or any other sign that the patient is in the water.
4. The shore walk person will be aware that there should be a second walk in the water, to a depth of three feet, to feel for and look for the patient.
5. The shore walk person will know that the second walk will be without any SCUBA gear.
6. The shore walk person will understand that, if any sign of entry is observed, the Divemaster will be informed of the location, and then he will continue the search along the shore.

MOTIVATION:

Many times small children, and adults will fall into the water at or near the shore and can be saved if found quickly.

ON SHORE - SHORE WALK: LESSON:

1. An "on shore" shore walk is done right at the edge of the water, and in the water right at the edge, if the bank is impassable at the water's edge.
2. We are looking for signs and/or indications of an entry into the water, i.e., tracks, footprints, clothes, toys, and residue of a drug or alcohol party.
3. An entry point found on the shore gives us a good starting place to search for the victim or patient if he/she is not found during the shore walk.
4. The shore walk must be fast and thorough if we are to save the patient.
5. The shore walk will extend beyond the probable area of entry, in each direction, until the way is blocked or the pond or lake is encircled.
6. On a river shore walk, the search must extend upstream and down stream, a reasonable distance as befits the age and condition of the patient or victim.
7. When a possible entry point is found, the Divemaster or incident commander must be informed and the shore walk continued until the whole area is covered.
8. The shore walk person or the Divemaster shall mark the entry location clearly.
9. If there is a possibility of a crime involved, the entry location should be preserved for evidence collection.
10. After-dark shore searches will require powerful hand lights.
11. After dusk, the shore persons should work in pairs.

IN WATER - SHORE WALK - LAKE OR POND:
LESSON:

1. The 'in water' shore walk will normally be for small or young children, but could be for an adult also.
2. If the visibility is good the shore walk person should walk out as deep as possible and still be able to see the bottom.
3. The shore walk person will have to start the in-water search immediately in whatever clothes or gear they have on, regardless if it is water resistant or not.
4. Powerful hand lights must be used at dusk, or for after-dark shore walks in good visibility water, and there should be a second person along with the first person, walking on the shore side.
5. An 'in water' shore walk should not be done in water deeper than three feet.
6. When the 'in water' walk is in an area that is shallow for a wide area out from the shore, a line of personnel should walk along feeling, or looking if the water is clear enough, from the shore out until the water is three feet deep.
7. The size of the patient or victim will determine how close the personnel in the line have to be spaced apart.
8. The line must be kept straight and the people in the line must move together slowly, so that if anyone steps in a hole they can recover and continue.
9. In winter, with no ice on the water, the line personnel will be in wet, dry, or water rescue suits.
10. If there is ice on the water, the search will be considered an ice dive.
11. Personal floatation devices shall be worn when performing in this capacity. Buoyancy Compensator Device is acceptable for this procedure.

IN WATER - SHORE WALK - RIVER:

1. There will be no 'in water' in a river when the current is more than five feet per second.
2. The 'in water' walk should start one hundred feet upstream from the probable entry point and work down stream slowly.
3. Line personnel should keep in a straight line and stay spaced closely together.
4. Line personnel will have to feel with their feet at the deep end of the line, or if they step into a hole.
5. Line personnel should be aware of the obstructions present on the bottom of a river or stream, i.e., tree stumps, branches and brush, and any conceivable trash.
6. Line personnel should be wearing gloves and have on sturdy shoes or SCUBA gear.
7. No 'in water' walk will be conducted within fifty feet of a low head dam, either above or below the dam.
8. In winter, with no ice on the water, the line personnel will be in wet, dry, or water rescue suit.
9. If there is ice on the water, the search will be considered an ice dive.
10. Personal floatation devices shall be worn when performing in this capacity. Buoyancy Compensator Device is not acceptable for this search.

TRIANGULATION

OBJECTIVES:

1. The department officer in charge will know the need for an immediate attempt to get a location of where the person was last seen.
2. The officer in charge will understand the purpose of triangulation.
3. The firefighters will know their responsibility to properly use the information of the witnesses.

MOTIVATION:

Distance estimation over water is almost impossible for accuracy. The location of a person, who went underwater, should be estimated from two or more points to obtain a fairly good position.

LESSON:

1. The first arriving officer will usually be at the location closest to the place where the drowning person went underwater.
2. The officer should immediately send a radio-equipped firefighter in both directions if there are possible witnesses in both directions.
3. The officer should then ask the witness to point out the location of the person when last seen, and mark the location of the witness and draw a line in the direction that the witness is pointing and, at the same time, note a stationary object in the line of sight of the pointing witness.
4. Do not let the witness leave, as we will need the witness to assess the distance when we can get a diver or trained person in the water.
5. The two firefighters will do the same thing as the officer when they locate a witness. They should try to get as far away from the officer as possible.
6. These two firefighters should also mark the location of the witnesses, the pointing direction, and a line of sight object. They should stay there and not let the witnesses leave until after a diver or trained person has set the location buoy and its position confirmed by the witnesses.

7. When a diver or trained person is in the water, the officer will direct him/her to the spot where his/her witness indicates the victim went down. He will then contact one or both firefighters to verify or adjust the divers or trained person location with their witness's line of sight location.
8. The officer will have to make an interpolation of the victim's location if the lines of sight do not converge on a single location or small area. He should then decide to mark more than one location.
9. If a location buoy, line, and anchor is available, the diver in the water should use it to mark the location.

UNDERWATER OBSTRUCTIONS

OBJECTIVES:

1. The diver will understand that in any water, when the visibility is less than 3 feet, the diver can become entrapped.
2. The diver will be aware that, in the waters in our area, underwater obstructions exist.
3. The diver will know the safety procedures for diving in black water with obstructions.

MOTIVATION:

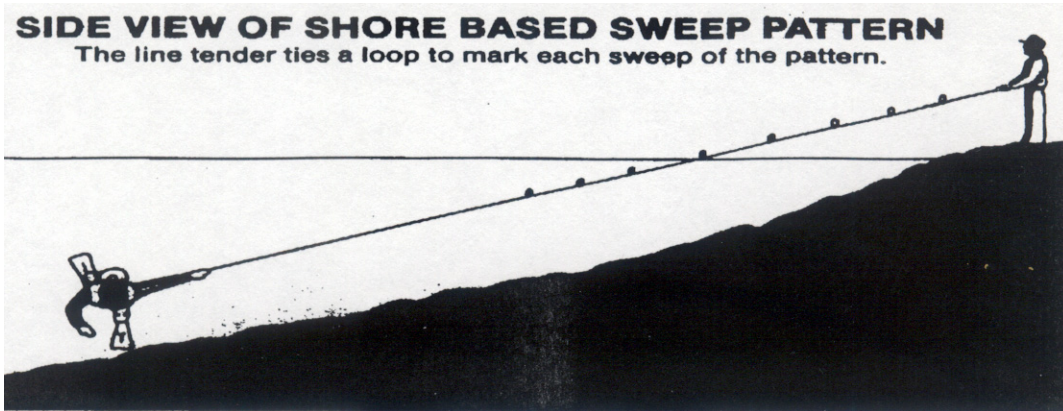
The diver's own health and safety is all the motivation that is needed.

LESSON:

1. Any water with 3 feet or less of visibility requires special diver precautions.
2. Swim slowly so as to approach any obstruction with care.
3. The diver will not be able to see most obstructions until he/she is right upon them or already involved with the obstruction.
4. Fishing line, fencing material, cables, wire, rope, boat rigging, bedsprings, and tree branches are some of the things that can trap a diver.
5. Glass shards, torn and jagged metals, and wire, can cut a diver's hands, knees and feet.
6. Wear gloves and boots at all times.
7. Submerged vehicles or boats can trap a diver searching on or inside, if the vehicle or boat moves.
8. Stabilize any vehicle that moves when you touch it, before proceeding with the operation.
9. Submerged large objects can roll or slide down on a diver checking around on the bottom near the object.
10. Check all large objects from the shallow side first.
11. In any water with a current, the diver can be trapped against a screen of branches or roots and be held there by the pressure of the current.
12. In any water with a current, a diver can be carried into sharp and jagged obstructions.
13. Approach all probable or known torn and jagged metal obstruction from the downstream side when a current is present.
14. Approach all river type screens of roots from the downstream side when a current is present.

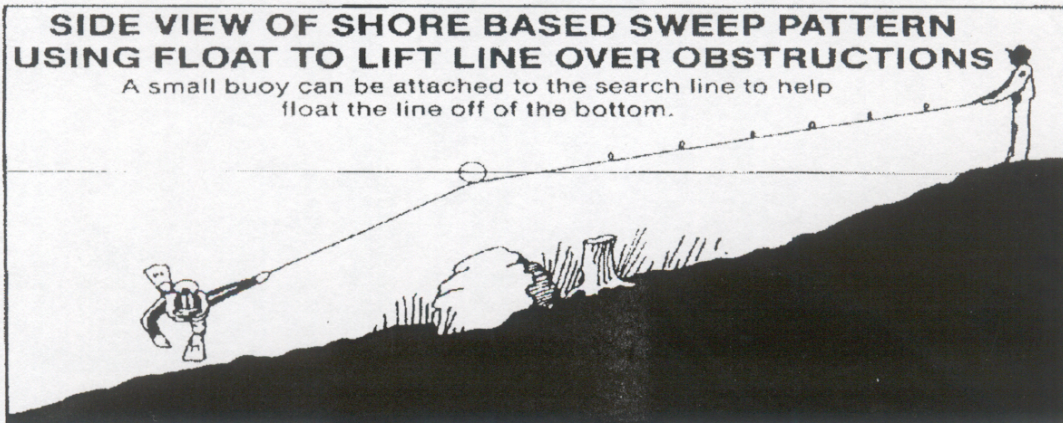
SIDE VIEW OF SHORE BASED SWEEP PATTERN

The line tender ties a loop to mark each sweep of the pattern.



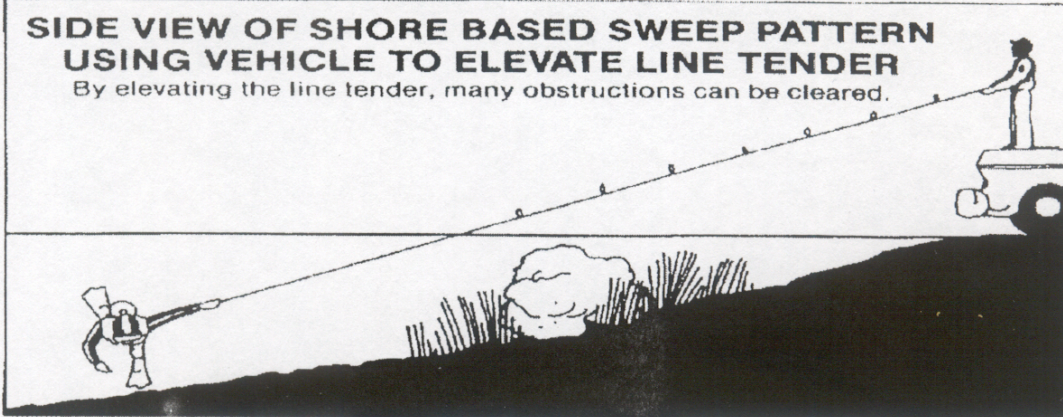
SIDE VIEW OF SHORE BASED SWEEP PATTERN USING FLOAT TO LIFT LINE OVER OBSTRUCTIONS

A small buoy can be attached to the search line to help float the line off of the bottom.



SIDE VIEW OF SHORE BASED SWEEP PATTERN USING VEHICLE TO ELEVATE LINE TENDER

By elevating the line tender, many obstructions can be cleared.



VICTIM RECOVERY PROCEDURES

OBJECTIVES

1. The diver will understand that diver safety is the foremost consideration in a recovery dive.
2. The diver will know that the victim will be brought into shore in a face down position and on the surface.
3. The diver will know that the victim will be given over to the custody of the Police or the Coroner.
4. The diver will be aware that his/her observation of the victim's location, depth, and appearance; if there is any visibility available, is needed for legal purposes.
5. The diver will understand that the victim's appearance or clothing will not be altered in any way.

MOTIVATION:

The family will be present and we must treat the victim with respect and dignity.

LESSON:

1. No recovery dive is to be started or continued when the diver's safety is compromised.
2. Unsafe conditions include: thunderstorms, fast current, darkness, boat traffic, exhaustion of divers, cold conditions.
3. Divers will search close to the bottom diligently when there are weeds present and on the bottom in the absence of weeds.
4. When contact with the victim is made, the diver will not let go of the victim for any reason.
5. The victim will be brought to the surface for ease of bringing the victim to shore.
6. The victim will be brought into shore in a face down position and placed on the stretcher in the same position.
7. The victim will be turned over to a police officer or a representative of the Coroner's office.
8. No attempt should be made to resuscitate a victim unless the victim falls within the parameters of the hospital system protocols.
9. If there is any visibility, the diver should be alert to the condition and position of the victim as found.
10. Do not alter the victim's appearance in any way.
11. When decomposition is a possibility, take a Stokes basket or other litter with you to handle the body.
12. In any recovery situation, an informed diver or educated staff person shall stay with the family any time they are on the scene.



SECTION D - FORMS

UNDERWATER RESCUE AND RECOVERY TEAM
WITNESS INTERVIEW FORM

Location of incident: _____ Date of Incident: _____

Time of incident: _____ Time of Interview: _____

Name of witness: _____

Address _____

Day Phone # _____ Evening Phone # _____

Where was the witness when the incident occurred?: _____

What is the relationship to victim/involvement in the incident?: _____

Does the witness know the victim's:

Name: _____

Address: _____

Phone #: _____

Physical description of victim: _____

What was the victim doing when the incident occurred?: _____

What did the witness observe (in his/her own words)?: _____

What was the last scene point?: _____

Additional information: _____

FORWARD THIS INFORMATION THE DIVE INCIDENT COORDINATOR

TACTICAL WORKSHEET – WATER INCIDENT

Location:					Box#						
Time Occurred		Alarm Time		On Scene		Recovery Mode		Victim Located		Terminated	
Date Occurred On:						Or Between:					
Weather Conditions		Temp.		Wind Speed		Wind Dir.		Water Temp.			
Command: Location:		Sector Assignments									
		Divemaster		Shoremaster		Boatmaster		Safety			
		Public Info.									
Staging											
Command: Location:		Priorities/Notification Checklist				☐ Coroner		☐ Canteen			
		☐ Assume Command		☐ Police		☐ Search Dogs		☐ Press Area			
		☐ Give Size Up		☐ Coast Guard		☐ Bar Boats		☐ Lighting			
		☐ Determine LSP		☐ Dept. Conservation		☐ Safety Boats		☐ Air Fills			
		☐ Primary Diver		☐ ESDA / EMA		☐ Sonar Boats		☐ Rehab Area			
		☐ Safety Diver		☐ Heavy Tow Truck		☐ Drag Boats		☐ Termination			
Diver Assignments					Boat Assignments						
Town	# Diver	Stag.	Assignment	Time	Town	Type	Stag.	Assignment	Time		
Unit Assignments											
Town	# Diver	Stag.	Assignment	Time							
					I=Inflatable A=Aluminum D=Deck J=John L= Liferamp F= Fiberglass H=Hovercraft Air=Airboat R=Res-Q-Deck						

Water Accident Report Form						-		
Where Occurred (Address or Location)				Month	Date	Year	Time	
			Occurred On:				: hrs	
			Or Between:				: hrs	
			Reported:				: hrs	
How Incident Was Reported to Dive Team (Agency, Name, Dispatcher, etc.)						On scene	: hrs	
						Recovery	: hrs	
						In Service	: hrs	
						Returning	: hrs	
						Quarters	: hrs	
Code: I-Informant V-victim W-witness SB- subject S- suspect								
Code	Name	Sex	D.O.B	Occupation	Home Phone	Work Phone		
none			- -		() -	() -		
Address:								
Code	Name	Sex	D.O.B	Occupation	Home Phone	Work Phone		
none			- -		() -	() -		
Address:								
Code	Name	Sex	D.O.B	Occupation	Home Phone	Work Phone		
none			- -		() -	() -		
Address:								
Code	Name	Sex	D.O.B	Occupation	Home Phone	Work Phone		
none			- -		() -	() -		
Address:								
Victim Info.	Name	Sex	D.O.B	Occupation	Home Phone	Work Phone		
			- -		() -	() -		
	Address:							
	Next of Kin:					Home Phone	Work Phone	
	Address:					() -	() -	
Victim Information - Missing body cases								
Height	Weight	Physical Condition			Recent Food Eaten	Last Seen Point		
Ft in.	lbs.	☐ Lean ☐ Medium ☐ Obese				Depth	Water Temp.	
Clothing Description								

Water Accident Form page 2.

Reason for Dive:

Witnessed car in water. _____
Unwitnessed car in water. _____
A possible drowning. _____
A missing person. _____
Evidence Recovery _____
Other: _____ Explain: _____

Conditions:

Weather: Sunny _____ Cloudy _____ Overcast _____ Stormy _____
Surface: Calm _____ Rough _____ Stormy _____ Icy _____
Current: None _____ Light _____ Stormy _____ Heavy _____
Water Visibility: _____
Water Temp: _____ Air Temperature: _____
Depth of water victim/vehicle found: _____

Diver #1 Time In: _____ Out: _____
Name: _____ PSI In: _____ Out: _____

Diver #1 Time In: _____ Out: _____
Name: _____ PSI In: _____ Out: _____

Diver #1 Time In: _____ Out: _____
Name: _____ PSI In: _____ Out: _____

Diver #1 Time In: _____ Out: _____
Name: _____ PSI In: _____ Out: _____

Type of pattern used to find object: _____

Compass reading of pattern boundaries: _____
Compass reading of object found: _____

Task performed: Rescue _____ Recovery _____

Number of victims rescued/recovered: _____

Injuries or Fatalities to any dive team members: Yes: _____ No: _____
Scene sketch and description attached: Yes: _____ No: _____

Officer in charge: _____
Dive Team Leader: _____
Member making report: _____

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings present.

Report #:

SKETCH should show the following; 1) Compass readings.

2) Location of auto or victim found.

3) Dive patterns used.

4) Water depth and temperature.

5) Any landmarks used in the search.

Sample NFIRS Report

STATE OF ILLINOIS OFFICE OF THE STATE FIRE MARSHAL 3150 EXECUTIVE PARK DRIVE SPRINGFIELD, ILLINOIS 62703 USE 'X' IN APPROPRIATE BOX. * ONLY ONE CODE PER FIELD OR SECTION										MUTUAL AID GIVEN/NON-FIRE REPORT Forward by the 15th of the following month. The OSFM is requesting disclosure of fire information that is necessary to accomplish the statutory purpose as outlined in Ill. Rev. Stat., Chap. 127 1/2, Par. 6. Disclosure of this information is required. Any officer who neglects to comply with this act shall be guilty of a petty offense. This form has been approved by the Forms Management Center.			
INCIDENT NO. EXP NO. MO. DAY YEAR DAY OF WEEK ALARM TIME TIME ARRIVED "IN SERVICE"										1. ☐ Delete 2. ☐ Change			
A	TYPE OF SITUATION FOUND					TYPE ACTION TAKEN		MUTUAL AID					
B	☐ 11 Arcing/Short Elec Eqp ☐ 45 ☐ 12 Lock-Out ☐ 51 ☐ 13 Unauthorized Burning ☐ 56 Trees/Brush/Grass ☐ 14 Smoke Scare ☐ 61 Refuse ☐ 15 Mal/Mis False Alarm ☐ 71 Emergency Medical Call ☐ 32 System Malfunction ☐ 73 Extrication ☐ 35 Unintentional ☐ 74 Spill/Leak With No Ign ☐ 41 Power Line Down ☐ 44					Extinguishment ☐ 1 Rescue Only ☐ 2 Investigation Only ☐ 3 Remove Hazard ☐ 4 Standby ☐ 5 Ambulance Service ☐ 7 Move-Up ☐ 8		None ☐ Received ☐ 1 Given ☐ 2					
C	FIXED PROPERTY USE					IGNITION FACTOR							
	Not Applicable ☐ 008 Vacant Lot ☐ 936 1-Family Dwelling-Year ☐ 411 Railroad Right of Way ☐ 951 2-Family Dwelling-Year ☐ 414 Limit Access/Divid Hwy ☐ 961 3-6 Unit Apt/Tenmt/Flat ☐ 422 Paved Public Street ☐ 962 7-20 Unit Apt/Tenmt/Flat ☐ 423 Paved Private Street/Way ☐ 963 + 20 Unit Apt/Tenmt/Flat ☐ 424 Unpaved St/Rd/Path ☐ 964 Resident Parking/Garage ☐ 881 Uncovered Parking Area ☐ 965 Vacant Property ☐ 915 Open Land/Field ☐ 931					Undetermined ☐ 00 Part Failure/Leak/Break ☐ 51 Incendary-No Civil Distrb ☐ 11 Shrt Crct/Grnd Fault ☐ 54 Suspicious-No Civil Distrb ☐ 21 Other Elec Failure ☐ 55 Abandoned Material ☐ 31 Lack of Maintenance ☐ 56 Inadqt Cntrl/Open Flame ☐ 34 Backfire ☐ 57 Child Playing ☐ 36 Unattended Operation ☐ 73 Combustbl/Too Close Heat ☐ 46							
D	CORRECT ADDRESS, CITY					ZIP CODE		CENSUS TRACT					
E	OCCUPANT LAST NAME					FIRST NAME		M.I. TELEPHONE		ROOM OR APT.			
F	OWNER LAST NAME, FIRST NAME, M.I.					OWNER ADDRESS, CITY		TELEPHONE					
G	METHOD OF ALARM FROM PUBLIC					CO INSP DIST		SHIFT		# ALARMS			
	Telephone Direct ☐ 1 Direct Verbal Report ☐ 5 Private Fire Alarm ☐ 3 Telephone Tie-Line ☐ 7 Radio ☐ 4												
H	NO. FIRE SERVICE PERSONNEL RESPONDED		NO. ENGINES RESPONDED		NO. AERIAL APPARATUS RESPONDED		NO. OTHER VEHICLES RESPONDED						
I	NUMBER INCIDENT-RELATED INJURIES †		NUMBER INCIDENT-RELATED FATALITIES †										
U	FIRE SERVICE		OTHER		FIRE SERVICE		OTHER						
	OFFICER IN CHARGE (name, position, assignment)					WEATHER		TEMPERATURE		WIND DIRECTION AND VELOCITY			
	INDIVIDUAL MAKING REPORT (if different from above)												



SECTION E - ADDENDUM