

# FWCB SMALL BOATS & DIVING EMERGENCY TELEPHONE NUMBERS

In any life-threatening emergency, the correct procedure is to call 911.

## References for Diving Emergencies

EMS - 911

Divers Alert Network (DAN):

- Diving Emergency (919) 684-9111
- Nonemergency (919) 684-2948

Nearest Hyperbaric Chamber:

- Hennepin County Medical Center  
701 Park Ave.,  
South Minneapolis, MN  
Chamber Phone: 612-873-7420  
24 Hour Phone: 612-873-313

Nearest Hospital:

## **EMERGENCY CALL-IN SCRIPT** *(speak clearly, calmly, slowly)*

"I am calling to report a diving-related emergency requiring immediate medical assistance. The victim is a *(age)* year old *(gender)* who is *(conscious/unconscious)*, with the following symptoms.....*(describe signs/symptoms)*. We are at the following location....*(address, landmarks, etc.)* We have initiated care *(first aid/CPR/O2)*, and the last vital signs were as follows.....*(pulse, respirations, B/P)*. We are requesting immediate transport to.....*(receiving facility of choice)*, via *(air/ground)* transport.

NOTE: DO NOT TERMINATE CALL! The receiving unit will end the call.

*The following is supplementary information only. It is subject to change.*

## **DIVING & BOATING EMERGENCY PHONE TREE**

*(call until you reach a human after calling appropriate emergency response)*

FWCB Department Head\*: Sue Galatowitsch: (w) 612-624-3242

FWCB Safety Officer: Jay Maher: (c) 612-850-0810 (w) 612-625-3183

Project PI:

FWCB Main Number: 612-624-3600

\* FWCB Department Head is responsible for contacting emergency contacts when appropriate

\*\* remember all accidents must be reported to the Dive Control Board within 24 hours

NON-EMERGENCY BOAT ISSUE: If you need assistance and are not in immediate danger contact:  
Steve Ziertman (UMN Farm Shop mechanic) at 612-625-5730  
or Hannays Marine (boat dealer) at 612 781-7411

## MISSING DIVER PROTOCOL

1. Mark starting point of dive OR last known location - Use GPS or anchored buoy (weightbelt, line & life jacket)
2. Note current direction/speed when diver last seen - Use floating object to help in determination - Note sea and weather conditions
3. Note time when dive began, current time & depth of dive to determine when air supply should be depleted. Note time diver was last seen.
4. Note visual reference points above & below the water of last known location
5. Look down-current and towards shore for diver
6. Question dive buddy - anything unusual about dive?
7. CALL 911
8. Contact FWCB & Diver's Supervisor /PI or someone on Diving Emergency Personnel list, you must speak to a person.

## MAN OVERBOARD PROTOCOL

1. Immediately throw float & yell "man overboard", continue to point toward person, note color of clothing of person
2. If Needed - Note vessel heading and speed and take visual sightings as well as GPS location
3. If Needed - Note sea and weather conditions at time of loss overboard
4. If Needed - Check time of day for daylight hours remaining
5. If Needed - Call 911
6. If Needed - Contact FWCB & Diver's Supervisor or PI

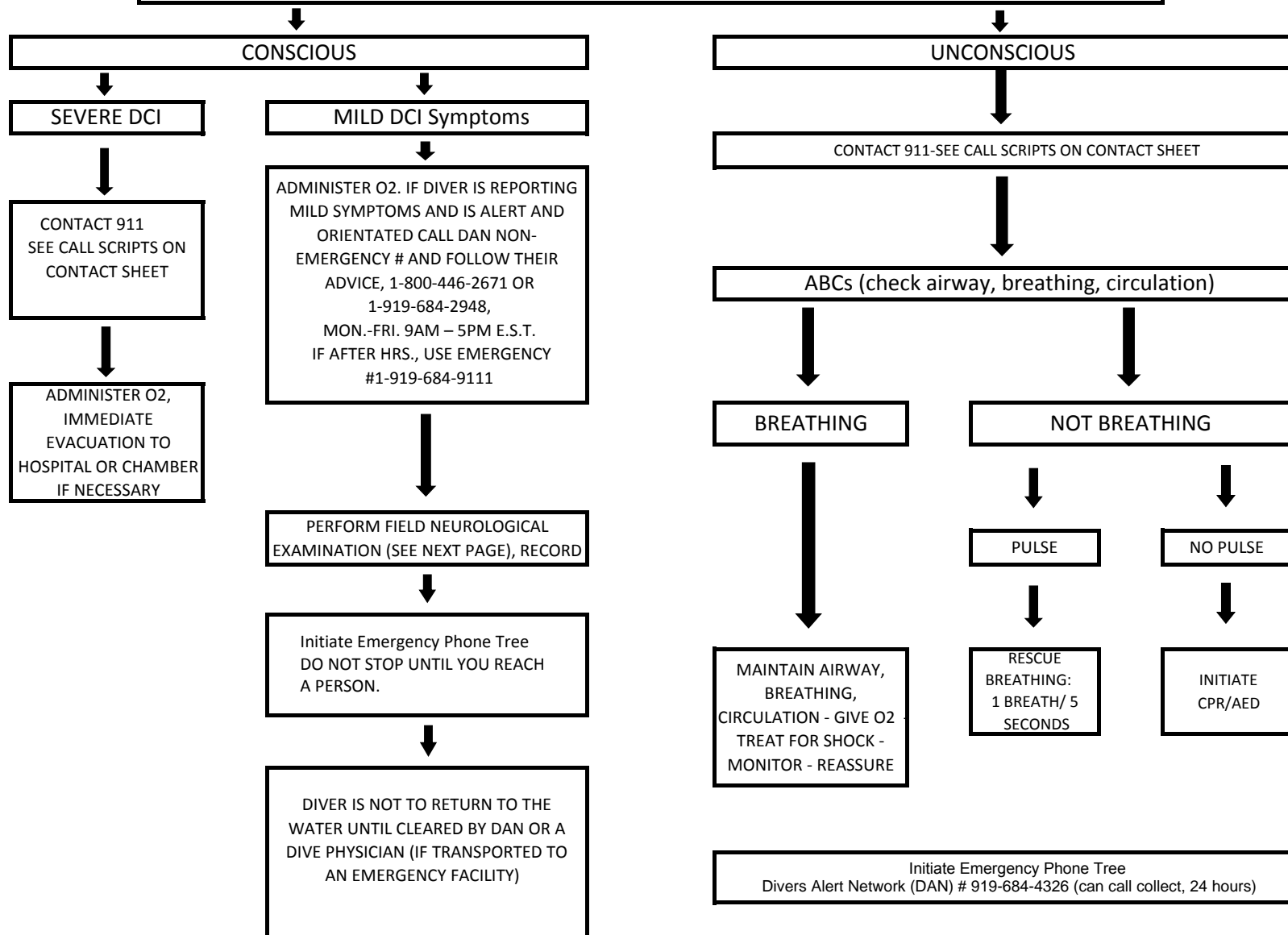
## **FWCB SCUBA DIVING INJURY PROTOCOL**

1. Protect yourself and victim from further injury.
2. Assess victim, follow **EMERGENCY FLOWCHART**- next page
3. Contact EMS, and DAN for diving emergencies.
4. Administer CPR/First Aid and Oxygen as needed, begin transport unless EMS recommends otherwise  
If victim is a member of DAN and you are more than 50 miles from campus, you can call 1-800-DAN-EVAC  
You can call 911 and request an ambulance  
You can use a private or university vehicle
5. Check and monitor victim's dive buddy for any signs or symptoms of DCI. Administer CPR/First Aid, Oxygen and treat for shock as needed.
6. If victim is unstable, check and record vital signs every 5 min during transport/while awaiting care.  
Check: pulse/min, blood pressure, respirations/min  
If stable, check and record every 15 minutes
7. Begin filling out **PATIENT INFORMATION** sheet, to give to EMS.
8. If conscious, perform **FIELD NEUROLOGICAL EXAMINATION**, record results
9. Contact Supervisor/PI:  
See **EMERGENCY TELEPHONE NUMBERS** sheet.
10. Retain victim's diving equipment:  
Leave gear assembled, turn off air (count number of turns it takes to close valve), and rinse with fresh water (do not exhaust air from reg)
11. Gather dive history and other important information, fill out PATIENT INFO sheet:  
Take note of any dive data from a computer, depth gauge, timing device, SPG.  
Get the names, phone numbers and addresses of any witnesses.  
Note time and list first aid procedures initiated.
12. Collect victim's belongings.
13. Arrange for return transportation or any necessary phone calls for victim if needed
14. Report Accident to the Department Safety Officer within 24 hours of Accident

# FWCB SCUBA DIVING EMERGENCY FLOWCHART

Protect yourself & victim from further harm, transport victim to safer location if necessary

ASSESS VICTIM





# 5 minute Neurology Exam for Divers

Diver's Name.....  
Date of Birth.....Contact Number.....  
Examiner's Name.....Date and Time.....

**Work through the following examination, put a cross next to any abnormal findings. There is further space to record results overleaf**

**When Testing Sensation: With diver's eyes closed, lightly touch their skin, ask them to say "yes" each time they feel it.**

## 1. Orientation

- a. Person: Diver can tell you their own name and DOB.
- b. Place: Diver is aware of where they are.
- c. Time: Time to nearest hour.

## 2. Eyes

- a. Eye Movements: Diver can follow your finger as you draw an "H" shape, eye movements should be smooth and not jerky.
- b. Vision: Diver can count fingers held up in front of them. Test each eye in turn.
- c. Pupils: Check they are equal in size and shrink in response to light.

## 3. Ears

- a. Hearing: Rub your thumb and finger together 30cm from diver's ear, check they can hear this on each side.

## 4. Face

- a. Sensation: Test several points on both sides of the face.
- b. Movements: Get diver to do the following in turn -
  - Raise eyebrows
  - Screw up eyes tightly
  - Show teeth

## 5. Mouth

- a. Movements: Get diver to do the following -
  - Stick out tongue (tongue should not deviate to either side).
  - Can the diver swallow a sip of water? If they choke keep them nil by mouth.

## 6. Torso

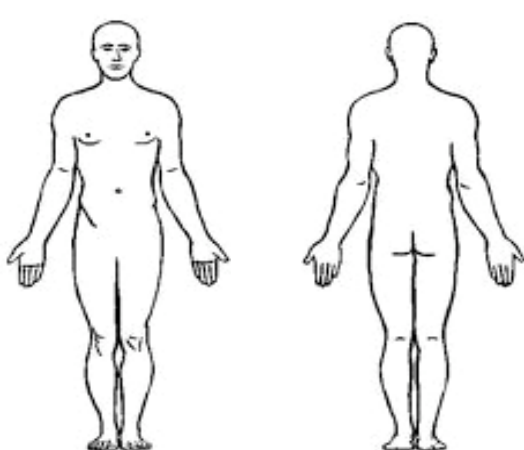
- a. Sensation: Test several points on both sides of the torso.

## 7. Upper limb

- a. Sensation: Test several points on both arms and shoulders.
- b. Movements: Get diver to do the following in turn, note any difference in strength between sides -
  - Shrug shoulders against resistance
  - Straighten and bend the elbows against resistance
  - Squeeze fingers

## 8. Lower Limb

- a. Sensation: Test several points on both legs.
- b. Movements: Get diver to do the following in turn, note any difference in strength between sides -
  - Raise and lower the entire leg against resistance
  - Straighten and bend the knee against resistance
- c. Coordination/balance: If no symptoms since dive and normal examination so far, ask diver to -
  - Walk normally.
  - Walk heel to toe.
  - Stand with feet together, arms outstretched and eyes closed.
  - (Ensure diver does not fall and look for any loss of balance)

<b>Examination Findings:</b>	
Normal exam <input type="checkbox"/> Abnormal exam <input type="checkbox"/>	
<b>If exam abnormal:</b>	
<b>Were any abnormalities found in examining the eyes, ears or mouth?</b>	
Yes <input type="checkbox"/> No <input type="checkbox"/>	
<b>If "yes" specify.....</b> ..... ..... ..... .....	
	
	<b>Shade any areas of sensory loss on the diagram</b>
<b>Was there any muscle weakness?    Yes <input type="checkbox"/>    No <input type="checkbox"/></b>	
<b>If "yes" specify.....</b> ..... ..... .....	
<b>Was coordination/ balance normal?    Yes <input type="checkbox"/>    No <input type="checkbox"/></b>	

**PATIENT INFORMATION**

PLEASE FILL OUT TO THE BEST OF YOUR ABILITIES

DATE & TIME OF ACCIDENT:

NAME, GENDER & AGE:

EMERGENCY CONTACT:

CURRENT MEDICATIONS:

KNOWN ALLERGIES:

KNOWN MEDICAL CONDITIONS:

LOCATION OF ACCIDENT:

NATURE OF ACCIDENT:

SIGNS & SYMPTOMS:

TIME 02/CPR/First Aid STARTED:

ANY CHANGES IN SIGNS/SYMPTOMS AFTER ONSET OF CARE:

LAST FOOD/FLUID INTAKE:

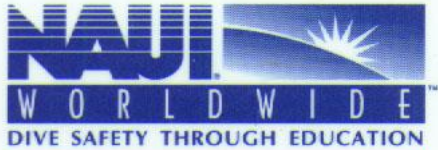
DIVE PROFILE:

		SIT:			SIT:			SIT:	
	1st Dive	LG:	LG:	2nd Dive	LG:	LG:	3rd Dive	LG:	
<u>Time In</u>		<u>Time Out</u>	<u>Time In</u>		<u>Time Out</u>	<u>Time In</u>		<u>Time Out</u>	
	<u>Depth/BT</u>			<u>Depth/BT</u>			<u>Depth/BT</u>		
		SIT:			SIT:				
	4th Dive	LG:	LG:	5th Dive	LG:	LG:	6th Dive	LG:	
<u>Time In</u>		<u>Time Out</u>	<u>Time In</u>		<u>Time Out</u>	<u>Time In</u>		<u>Time Out</u>	
	<u>Depth/BT</u>			<u>Depth/BT</u>			<u>Depth/BT</u>		

Please use the reverse side to document specifics of the incident. Please be sure to include:

- (1) Events leading up to incident
- (2) Time patient was transferred to EMS/Emergency room care
- (3) Statements from dive buddy/other witnesses





**WARNING: EVEN STRICT COMPLIANCE WITH THESE TABLES WILL NOT GUARANTEE AVOIDANCE OF DECOMPRESSION SICKNESS. CONSERVATIVE USAGE IS STRONGLY RECOMMENDED.**

**RNT** RESIDUAL NITROGEN TIME  
**+ADT** ACTUAL DIVE TIME  
**TNT** TOTAL NITROGEN TIME

(USE THIS FIGURE TO DETERMINE END-OF-DIVE LETTER GROUP.)



# DIVE TABLES

## TABLE 1 - END-OF-DIVE LETTER GROUP

START DEPTH		00 MAXIMUM DIVE TIME (MDT)										00 DIVE TIME REQUIRING DECOMPRESSION NO. MINUTES REQUIRED AT 15' STOP (5M)													
M	FEET	5	15	25	30	40	50	70	80	100	110	130	150	5	10	15	20	25	30	35	40	45	50	60	70
12	40																								
15	50																								
18	60																								
21	70																								
24	80																								
27	90																								
30	100																								
33	110																								
36	120																								
39	130																								

M.	12	15	18	21	24	27	30	33	36	39	NEW GROUP	A	B	C	D	E	F	G	H	I	J	K	L		
FT.	40	50	60	70	80	90	100	110	120	130															
	7	6	5	4	4	3	3	3	3	3	← A	24:00 0:10	24:00 3:21	24:00 4:50	24:00 5:49	24:00 6:35	24:00 7:06	24:00 7:36	24:00 8:00	24:00 8:22	24:00 8:51	24:00 8:59	24:00 9:13		
	17	13	11	9	8	7	7	6	6	6	← B		3:20 0:10	4:49 1:40	5:48 2:39	6:34 3:25	7:05 3:58	7:35 4:26	7:59 4:50	8:21 5:13	8:50 5:41	8:58 5:49	9:12 6:03		
	25	21	17	15	13	11	10	10	9	8	← C			1:39 0:10	2:38 1:10	3:24 1:58	3:57 2:29	4:25 2:59	4:49 3:21	5:12 3:44	5:40 4:03	5:48 4:20	6:02 4:36		
	37	29	24	20	18	16	14	13	12	11	← D				1:09 0:10	1:57 0:55	2:28 1:30	2:58 2:00	3:20 2:24	3:43 2:45	4:02 3:05	4:19 3:22	4:35 3:37		
	49	38	30	26	23	20	18	16	15	13	← E					0:54 0:10	1:29 0:46	1:59 1:16	2:23 1:42	2:44 2:03	3:04 2:21	3:21 2:39	3:36 2:54		
	61	47	36	31	28	24	22	20	18	16	← F						0:45 0:10	1:15 0:41	1:41 1:07	2:02 1:30	2:20 1:48	2:38 2:04	2:53 2:20		
	73	56	44	37	32	29	26	24	21	19	← G							0:40 0:10	1:06 0:37	1:29 1:00	1:47 1:20	2:03 1:36	2:19 1:50		
	87	66	52	43	38	33	30	27	25	22	← H								0:36 0:10	0:59 0:34	1:19 0:55	1:35 1:12	1:49 1:26		
	101	76	61	50	43	38	34	31	28	25	← I									0:33 0:10	0:54 0:32	1:11 0:50	1:25 1:05		
	116	87	70	57	48	43	38	AVOID REPETITIVE DIVES OVER 100 FEET			← J									0:31 0:10	0:49 0:29	1:04 0:46			
	138	99	79	64	54	47							← K											0:28 0:10	0:45 0:27
	161	111	88	72	61	53							← L												0:26 0:10

## TABLE 3 - REPETITIVE DIVE TIMETABLE

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

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

TIME RANGES IN HOURS : MINUTES  
 ACTUAL DIVE TIME SHOULD NOT EXCEED THIS NUMBER

© 1989 NAUI  
 #30033(Rev. 1/97)