

Memorandum

Date: August 8, 2006

To: Selected Dive Team Members

From: **Department of Parks and Recreation**
Alex K. Peabody, Aquatic Safety Specialist
Diving Safety Board Chairman

Subject: 2006 Dive Team Refresher Training: September 19 – 21, 2006

You have been pre-selected to attend State Park Dive Team Refresher Training beginning on Tuesday, September 19 through Thursday, September 21, 2006. Training starts promptly at 0800 hours at the Environmental Health and Safety facility on the UCSB campus. Following the classroom training session, we will reconvene at the Recreation Center Pool (please see enclosed map in the area of the large red arrow).

On day one, lunch is on your own, so BYOL. Dinner will be at the El Torito restaurant located across from the wharf which is walking distance from the Sea Landing parking lot. We will board the Truth Aquatics dive boat and depart for the Channel Islands following dinner.

Please take a moment to review the enclosed course agenda. The training program will include lecture, safety review, confined and open water skills testing, and practical exercises. **A pre-training exam is included and must be completed prior to arriving at the refresher training.**

Please bring all of your diving equipment including a tank and weight belt (unless you are flying). Also bring any equipment or diving related materials that you would like to share with the class.

The course cost for the dive boat and meals while aboard is approximately \$400.00 per diver and **you will need to pay by personal check at the Truth Aquatics office located at the docks prior to boarding the vessel.** This cost will be covered by the Mott Training Center when you submit your travel claim. Your District must pay for the cost of travel to/from the training.

If you are planning to stay before, or after training, please remember that lodging in the UCSB area is limited. It is strongly recommended that you **make reservations immediately**. Suggestions for affordable lodging include: Motel 6 (five locations including Goleta, Santa Barbara and Carpinteria) at \$70-\$85 per night – 1-800-4-MOTEL6, and Super 8 Motel – Santa Barbara/Goleta at \$70-\$85 per night – 1-800-800-8000.

Please notify me immediately if you are unable to attend or if you have any questions at (831) 649-7132. Cell phone (831) 402-7805. Email me at apeabody@parks.ca.gov .

**2006 Dive Refresher
September 19 – 21, 2006**

ROSTER

Instructors:

- 1. Ken Kramer, Supt. II, Orange Coast**
- 2. Paul Milosch, LGS I, Orange Coast**
- 3. Loren Rex, SSPR, Monterey**

Students:

NAME	TITLE	DISTRICT
4. Adama, Dale	LFGD	Orange Coast
5. Brady, Kevin	LFGD	Monterey
6. Bruck, Jeff	LFGD	San Diego Coast
7. Bynum, Joshua	LFGD	Orange Coast
8. Foster, John	ARCH	Sacramento HQ
9. Serpa, Jim	SSPR	Orange Coast
10. Kummer, Brian	LFGD	Orange Coast
11. Raducanu, Dan	LFGD	Angeles
12. Rhee-Pizano, Eddie	LFGD	Santa Cruz
13. Tallman, Karl	LGS	San Diego Coast
14. Wood, Ashford	SPR	Russian River
15. Van Der Lief, Dion	LFGD	Channel Coast
16. Marshal, Kirk	SPT	Mendocino
17. Shelby, Jens	MAINT. MECH	Mendocino
18. Fuller, Terra	ENV. SCIEN. INTN.	Mendocino
19.		
20.		
21.		
22.		
23.		
24.		

2006 Dive Team Refresher Training

A G E N D A

Tuesday, September 19th

- Location UCSB Pool-Lot 20 and 21
- 0800-1200 Introductions
State Park Dive Team Mission, Purpose, and Policy
Medical Exams
Dive Team Extranet Site Use and Review
Use of dive computers and decompression tables
Equipment Standards, Equipment Review and Show and Tell
- 1200-1300 Lunch: BYOL! (Bring your own lunch!)
- 1300 Physical Skills – Swim Test
Practical Skills Rotations– Confined Water
- Basic Skills Review
 - Emergency Procedures / Skills Review
 - Entanglement Extrication
 - Search and Recovery Techniques
 - Low visibility and “black-out” mask practice
- 1800 Dinner at the El Torito Resturant. The location is across from the wharf which is walking distance from the Sea Landing parking lot.
- 2000 Board the Dive Boat Conception – Travel to Dive Site

Wednesday, September 20th

- Location: Channel Islands
- 0800-1100 Practical Skills Rotations – Open Water
- Basic Skills Review
 - Emergency Procedures / Skills Review
 - Entanglement Extrication
 - Search and Recovery Techniques
 - Low visibility and “black-out” mask practice
- 1300- 1500 Search and Rescue Dive Scenarios and Evaluations
- 2000- Night Dive

Thursday, September 21th


- Location: Channel Islands
- 0800-1000 Deep water dive (scheduled 80’-100’ dive with instructor)
- Plan
 - Dive
 - Debrief
- 1100-1300 Partner Dive
- 1400- Course Evaluations
- 1600- Back at the Dock

Directions to the UCSB Swimming Pool:

1
2
3
4
5

A
B
C
D
E
F
G

Central Stores, Receiving, Mail Services



Transportation and Parking Services

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

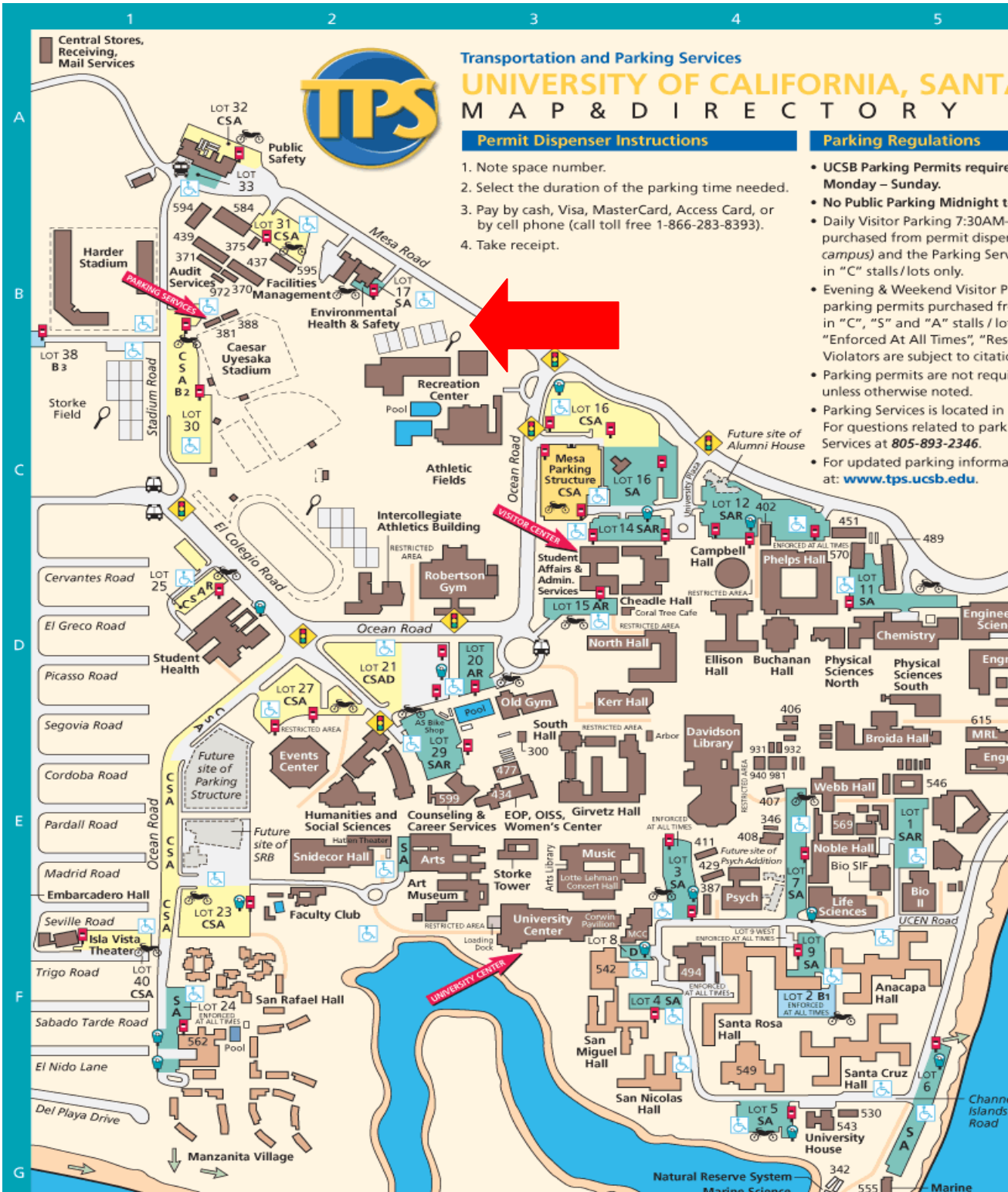
MAP & DIRECTORY

Permit Dispenser Instructions

1. Note space number.
2. Select the duration of the parking time needed.
3. Pay by cash, Visa, MasterCard, Access Card, or by cell phone (call toll free 1-866-283-8393).
4. Take receipt.

Parking Regulations

- UCSB Parking Permits require Monday – Sunday.
- No Public Parking Midnight to 5:00 AM.
- Daily Visitor Parking 7:30AM-5:00PM (not purchased from permit dispenser on campus) and the Parking Services office in “C” stalls/lots only.
- Evening & Weekend Visitor Parking permits purchased from “C”, “S” and “A” stalls / lots are “Enforced At All Times”, “Res” Violators are subject to citation.
- Parking permits are not required unless otherwise noted.
- Parking Services is located in the Transportation and Parking Services building.
- For questions related to parking permits call Parking Services at 805-893-2346.
- For updated parking information visit www.tps.ucsb.edu.



Visitor Center (indicated by red arrow)

Swimming Pool (indicated by red arrow)

University Center (indicated by red arrow)

Directions to the Dive Vessel *Conception* at the Santa Barbara Harbor:



Dive Team

REFRESHER TRAINING COURSE

PRE-TRAINING EXAM

Please complete prior to arriving at the refresher training.

Name: _____ Date: _____ Score: _____ / 35 pts.

True or False (15 Points)

1. T F Each individual diver is responsible for his/her personal safety.
2. T F The dive team leader responsible for the fitness inquiry, pre-dive briefing, equipment inspection, and debriefing during each dive.
3. T F Dives may be made in unsafe conditions if the majority of the divers agree.
4. T F Non-departmental certified divers may dive with department divers if they are certified and qualified to participate in the dive project.
5. T F Department divers may SCUBA dive alone if they do not exceed 15 feet in depth.
6. T F Repetitive dives should be plan so that the shallowest dives are first and the deepest dives are last.
7. T F The NOAA Dive Manual is the general procedural manual for all department divers.
8. T F A minimum of 12 dives per year must be made by each DPR diver to retain Departmental dive certification.
9. T F Dives requiring decompression should be avoided.
10. T F Department dive policies may be violated when danger to life exists.
11. T F The NAUI Dive Tables should be followed when you are doing repetitive dives.
12. T F As volume increases, pressure and density decrease.
13. T F Saltwater is denser (weighs more) than freshwater.
14. T F Bubbles will come out of solution faster as temperature increases.
15. T F Breathing pure (100%) oxygen when scuba diving is extremely dangerous.

Multiple Choice (10 Points)

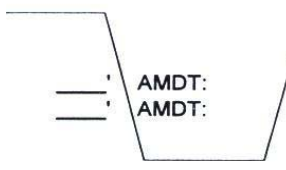
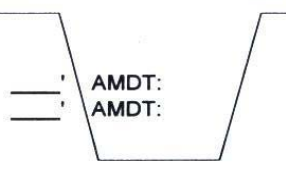
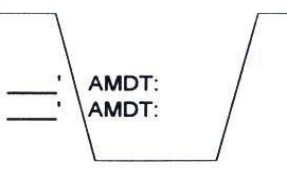
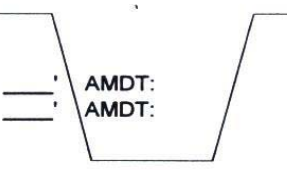
17. Department divers are required to surface with at least _____ psi remaining in their tank.
- A. 1,000 psi
 - B. 500 psi
 - C. 300 psi
 - D. 1500 psi
18. The maximum depth for recreational scuba divers is....
- A. 150'
 - B. 100'
 - C. 130'
 - D. 60'
19. The most applicable physics law in scuba diving is....
- A. Kenny's Law
 - B. The Milosch Rule of Diving
 - C. Loren's Law
 - D. Boyle's Law
20. Decompression sickness is caused when _____ is absorbed by the bodies tissues then released in the form of bubbles into the bloodstream.
- A. oxygen
 - B. carbon dioxide
 - C. helium
 - D. nitrogen
21. When contact is lost with a dive buddy, what should you do?
- A. Continue diving on a reciprocal course.
 - B. Make a quick 360 degree check, safely ascend to the surface and re-establish contact at the surface.
 - C. Return to the beach, or boat as soon as possible and wait for your partner there.
 - D. Call 9-1-1, or the Coast Guard immediately.
22. The proper ascent rate when diving is _____ feet per minute.
- A. 30' per minute
 - B. 60' per minute
 - C. 90' per minute
 - D. 15' per minute
23. A depth of 99' is equal to _____ atmospheres absolute (ATA).
- A. 3
 - B. 5
 - C. 6
 - D. 4

24. A balloon filled with 90 liters of air at 33 fsw will have a volume of _____ liters at 66 fsw.
- A. 4.5
 - B. 6
 - C. 12
 - D. 18
25. 55 fsw is equal to _____ATA.
- A. 3
 - B. 2.6
 - C. 6
 - D. 1.5
26. A cylinder of air filled at the surface (sea level) will have _____ the volume of air at 33' feet.
- A. $\frac{1}{4}$
 - B. $\frac{1}{2}$
 - C. $\frac{3}{4}$
 - D. the same

Dive Table Problem (10 Points)

A buddy pair dives their first dive to 80' for 15 minutes. They have a surface interval of 2 hours. Their second dive is to 55' for 30 minutes. They have a surface interval of 2 hour and 50 minutes. Their final dive of the day is to a wreck that is located at 50 feet. What will be their maximum bottom time without having to decompress?

DIVE PROFILE INFORMATION

DATE/DIVE NO.	DATE/DIVE NO.	DATE/DIVE NO.	DATE/DIVE NO.
 <p>AMDT: _____ AMDT: _____</p> <p>RNT: 0 ADT: _____</p> <p>TNT: _____</p>	 <p>AMDT: _____ AMDT: _____</p> <p>RNT: _____ ADT: _____</p> <p>TNT: _____</p>	 <p>AMDT: _____ AMDT: _____</p> <p>RNT: _____ ADT: _____</p> <p>TNT: _____</p>	 <p>AMDT: _____ AMDT: _____</p> <p>RNT: _____ ADT: _____</p> <p>TNT: _____</p>

NAUI DIVE TABLES



DIVE TABLES

TABLE 1 - END-OF-DIVE LETTER GROUP

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.)

START DEPTH		MAXIMUM DIVE TIME (MDT)										DIVE TIME REQUIRING DECOMPRESSION NO. MINUTES REQUIRED AT 15' STOP (5M)																						
M	FEET	00	05	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150		
12	40	5	15	25	30	40	50	70	80	100	110	130	150																					
15	50		10	15	25	30	40	50	60	70	80																							
18	60		10	15	20	25	30	40	50	55																								
21	70		5	10	15	20	30	35	40	45																								
24	80		5	10	15	20	25	30	35	40																								
27	90		5	10	12	15	20	25	30	35																								
30	100		5	7	10	15	20	25	30	35																								
33	110			5	10	13	15	20	25	30																								
36	120			5	10	12	15	20	25	30																								
39	130				5	8	10	15	20	25																								

M.	12	15	18	21	24	27	30	33	36	39	NEW GROUP
FT.	40	50	60	70	80	90	100	110	120	130	
7	6	5	4	4	3	3	3	3	3	3	< A
123	74	50	41	31	22	19	12	9	5	5	< B
17	13	11	9	8	7	7	6	6	6	6	< C
113	67	44	36	27	18	15	9	6	6	6	< D
25	21	17	15	13	11	10	10	9	8	8	< E
105	59	38	30	22	14	12	5				< F
37	29	24	20	18	16	14	13	12	11	11	< G
93	51	31	25	17	9	8					< H
49	38	30	26	23	20	18	16	15	13	13	< I
81	42	25	19	12	5	4					< J
61	47	36	31	28	24	22	20	18	16	16	< K
69	33	19	14	7							< L
73	56	44	37	32	29	26	24	21	19	19	
57	24	11	8								
87	66	52	43	38	33	30	27	25	22	22	
43	14										
101	76	61	50	43	38	34	31	28	25	25	
29	4										
116	87	70	57	48	43	38	AVOID REPETITIVE DIVES OVER 100 FEET				< J
14											< K
138	99	79	64	54	47						< L
161	111	88	72	61	53						

	A	B	C	D	E	F	G	H	I	J	K	L
24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00	24:00
0:10	3:21	4:49	5:49	6:35	7:06	7:36	8:00	8:22	8:51	8:59	9:13	
	3:20	4:48	5:48	6:34	7:05	7:35	7:59	8:21	8:50	8:58	9:12	
0:10	1:39	2:38	3:24	3:57	4:25	4:49	5:12	5:40	5:48	6:02		
0:10	1:10	1:58	2:29	2:59	3:21	3:44	4:03	4:20	4:36			
	1:09	1:57	2:28	2:58	3:20	3:43	4:02	4:19	4:35			
0:10	0:54	1:29	1:59	2:23	2:44	3:04	3:21	3:36				
0:10	0:46	1:16	1:42	2:03	2:21	2:39	2:54					
	0:45	1:15	1:41	2:02	2:20	2:38	2:53					
0:10	0:41	1:07	1:30	1:48	2:04	2:20						
	0:40	1:06	1:29	1:47	2:03	2:19						
0:10	0:37	1:00	1:20	1:36	1:50							
	0:36	0:59	1:19	1:35	1:49							
0:10	0:34	0:55	1:12	1:26								
	0:33	0:54	1:11	1:25								
0:10	0:32	0:50	1:05									
	0:31	0:49	1:04									
0:10	0:29	0:46										
	0:28	0:45										
0:10	0:27											
	0:26											
0:10	0:10											

TABLE 3 - REPETITIVE DIVE TIMETABLE

TABLE 2 - SURFACE INTERVAL TIME (SIT) TABLE

00 LIGHT FACE NUMBERS ARE RESIDUAL NITROGEN TIMES (RNT) TIME RANGES IN HOURS : MINUTES © 1990 NAUI
 00 BOLD FACE NUMBERS ARE ADJUSTED MAXIMUM DIVE TIMES (AMDT) - ACTUAL DIVE TIME SHOULD NOT EXCEED THIS NUMBER 89-0019