

DIVE AND MARITIME SAFETY SURVEY CHECKLIST

INTRODUCTION

Diving safety survey/inspection/review checklist is a guide that can be used by all of DNR Managers for their diving activities. The review checklist has been compiled from the most frequently noted discrepancies from U.S.Navy, the L&I investigation and the recommendations from the Professional Dive Review Panel.

This review checklist will be revised and updated periodically as required. Recommended changes may be submitted to Diving Program Manager. The following codes are used for the marking of individual items of the safety survey checklist:

For items that are complete or in effect a place a check mark in the OK column.

For items not in a “complete/in effect” status, enter the applicable code in the OTHER column.

R = REQUIRES FURTHER ACTION

2 = REPEAT “OFFENDER”

N = NOT APPLICABLE

U = UNABLE TO INSPECT

The DNR diving safety inspection/review checklist is broken down into the following parts:

- A. ADMINISTRATION
- B. TRAINING
- C. SCUBA EQUIPMENT
- D. AIR SYSTEMS & STOWAGE
- E. SUPPORT BOAT
- F. OPERATIONS

PART A - ADMINISTRATION

#	ITEM	OK	Other
ADMINISTRATION			
A.	PUBLICATIONS & INSTRUCTIONS		
A.1.	DOES THE PROGRAM HAVE A DIVING OPERATING INSTRUCTION (CURRENT VERSION) READILY ACCESSIBLE TO THE DESIGNATED PERSON IN CHARGE? REF: WAC 296-37-530		
A.2.	IS THE MASTER DIVER DESIGNATED IN WRITING?		
A.3.	ARE THE DESIGNATED PERSONS IN CHARGE QUALIFIED AND DESIGNATED IN WRITING BY THE AQUATICS RESOURCES MANAGER?		
A.4.	IS A COPY OF WAC 296-37 READILY ACCESSIBLE TO THE MASTER DIVER/DESIGNATED PERSON IN CHARGE? (CHECK FOR LATEST CHANGE)		
A.5.	ARE HAZARDOUS MATERIAL STORAGE LOCKERS CLEAN, ORGANIZED, AND THEIR CONTENTS PROPERLY LABELED?		
A.6.	ARE AIR SAMPLES TAKEN, ANALYZED EVERY 6 MONTHS, AND DO THEY MEET THE PURITY REQUIREMENTS OF THE WAC? REF: WAC 296-37-570 EQUIPMENT		
A.7.	IS THERE A MAINTENANCE PROGRAM IMPLEMENTED FOR ALL DIVING EQUIPMENT? REF: WAC 296-37-570 EQUIPMENT		
A.8.	ARE ALL MEDICAL EXAMINATIONS GIVEN WITHIN THE PRECEDING 12 MONTHS AND THE EMPLOYER HAS OBTAINED THE RESULTS OF THE EXAMINATION AND AN OPINION FROM THE EXAMINING PHYSICIAN OF THE EMPLOYEE'S MEDICAL FITNESS TO DIVE OR TO BE OTHERWISE EXPOSED TO HYPERBARIC CONDITIONS;. REF: WAC 296-37-525		
A.9.	IS THERE A TAGOUT / LOCKOUT SYSTEM IN EFFECT FOR DIVING EQUIPMENT AND SYSTEMS MAINTENANCE? REF: WAC 296-37-570		
A.10.	IS A COMPLETE FILE OF DIVING VARIANCES, NOTES OR DIRECTIONS FROM DNR ACCESSIBLE TO THE DESIGNATED PERSONS IN CHARGE		

A.11.	ARE ALL MAINTENANCE PERSONNEL ASSIGNED OR ATTACHED TO THE DIVE MAINTENANCE FACILITY QUALIFIED TO PERFORM MAINTENANCE ON EQUIPMENT ASSIGNED TO THE DIVING TEAM?		
A.12.	DOES THE DIVE TEAM MAINTAIN A DEPTH TIME PROFILE LOG (MAINTAINED FOR EACH DIVE, PRIOR YEARS LOGS MUST BE MAINTAINED IN BINDER FOR REVIEW) REF: WAC 296-37-545		
A.13.	ARE DIVING SAFETY PUBLICATIONS KEPT READILY AVAILABLE FOR ALL DIVERS TO READ ?		
A.14.	MATERIAL SAFETY DATA SHEETS (MSDS) FOR EQUIPMENT MAINTENACE AVAILABLE?		
A.15.	IS THE EMERGENCY AID CHECKLIST FROM THE DIVE SAFETY MANUAL OR AN APPROPRIATELY TAILORED EMERGENCY RESPONSE CHECKLIST BEING USED TO SUPPORT DIVE OPERATIONS? REF: WAC 296-37-535		

PART B – TRAINING

#	ITEM	OK	Other
TRAINING			
B.	TRAINING		
B.1.	ARE ALL DIVERS QUALIFIED AND CURRENT WITH THEIR REQUIRED DIVES? REF:		
B.2.	ARE DIVERS TRAINED IN ACCORDANCE WITH THE TEAMS TASK, CONDITIONS, STANDARDS? REF:		
B.3.	ARE LESSON PLANS AVAILABLE TO CONDUCT DIVER, DESIGNATED PERSON IN CHARGE TRAINING (TABLES, CPR, SIGNS AND SYMPTOMS, ETC.)? REF		
B.4	ARE ALL DIVERS QUALIFIED AND CURRENT FOR CPR? REF:		
B.5.	IS THERE DIVE CONTINUING TRAINING PROGRAM, INCLUDING DRILLS IN EMERGENCY PROCEDURES IN EFFECT AND BEING USED? REF:		
B.6.	ARE THE FOLLOWING SUBJECTS COVERED IN THE DIVE BRIEF WITH A DOCUMENTED ORM ASSESSMENT: ENTRAPPED DIVER, UNCONSCIOUS DIVER, LOST DIVER, LOSS OF BREATHING GAS, ABORTED DIVE, BLOW-UP, FLOODED RIG, SURFACE EMERGENCIES, EQUIPMENT MALFUNCTIONS, AND INJURED DIVER/MISHAP PLAN? REF:		
B.7.	ARE TRAINING EVENTS RECORDED INTO THE LEARNING MANAGEMENT SYSTEM REF:		
B.8	HAS TRAINING BEEN COMPLETED AND DOCUMENTED FOR EMERGENCY OXYGEN ADMINISTRATION FOR DIVING ACCIDENTS		

PART C – SCUBA

#	ITEM	OK	Other
SCUBA			
C.	SCUBA EQUIPMENT		
C.1.	DOCUMENTATION		
C.1.1	IS A COPY OF ALL MANUFACTURER'S INSTRUCTION MANUALS FOR ALL DIVING EQUIPMENT READILY ACCESSIBLE? REF:		
C.1.2.	IS ALL SCUBA EQUIPMENT COVERED BY THE MAINTENANCE SYSTEM? REF:		
C.1.3.	IS A DESIGNATED PERSON INCHARGE PRE-DIVE CHECK-LIST BEING USED FOR SCUBA? REF:		
C.1.4.	ARE SCUBA CYLINDER MANIFOLDS VALVES AND RELIEF VALVE MECHANISMS PROPERLY MATCHED TO CYLINDER WORKING PRESSURE TO ENSURE THE RELIEF VALVE (BLOW OUT PLUG) IS THE WEAKEST POINT IN THE SYSTEM. REF:		
C.1.5.	ARE DIVER'S LIFE PRESERVERS OR BUOYANCY COMPENSATORS OF THE APPROPRIATE TYPE FOR COMMERCIAL DIVING OPERATIONS? REF:		
C.1.6.	ARE THE STRAPS AND BACKPACKS IN GOOD CONDITION AND DO THEY HAVE A QUICK RELEASE FEATURE? REF:		
C.1.7.	IS AN EFFECTIVE MEANS OF INVENTORYING AND TRACKING OF ALL EQUIPMENT REQUIRING CALIBRATION IN PLACE AND AVAILABLE FOR REVIEW? REF:		
C.1.8.	ARE THE SCUBA BOTTLE RESERVE (J-VALVE) PRESSURE SETTINGS CHECKED EVERY 24 MONTHS AND WITHIN THE RECOMMENDED PRESSURE RANGE (SINGLE MIN-500 PSI)? REF:		

#	ITEM	OK	Other
C.1.9.	IS THE MAINTENANCE BEING PERFORMED ON THE INTERNAL SURFACE OF THE SCUBA BOTTLES? REF:		
C.1.10.	ARE CRITICAL DIVING GAGES CALIBRATED EVERY 12 MONTHS (I.E. OVER-BOTTOM GAGE, SUBMERSIBLE BOTTLE, PRESSURE TEST CHAMBER AND COMPRESSOR OUTLET (SCUBA CHARGING) GAGES)? REF:		
C.1.11.	IS MAINTENANCE BEING CONDUCTED ON LIFE PRESERVERS/BC'S? MANUFACTURE SERVICE REPAIR ON BLACK DIAMOND BC'S COMPLETED? REF:		
C.1.12.	ARE APPLICABLE REQUIREMENTS BEING ACCOMPLISHED ON SCUBA AND ARE THEY PROPERLY DOCUMENTED? REF:		
C.1.13.	DOES A DESIGNATED PERSON IN CHARGE PRE-DIVE INSPECTION CHECK-OFF SHEET EXIST FOR THE FFM? REF:		
C.1.14.	ARE APPLICABLE MAINTENANCE REQUIREMENTS BEING ACCOMPLISHED ON THE FM, AND ARE THEY DOCUMENTED? REF: PMS		
C.2.	MAINTENANCE		
C.2.1.	IS HYGIENIC MAINTENANCE BEING PERFORMED ON REGULATORS? REF:		
C.2.2	ARE ALL DIVER'S SCUBA REGULATORS COMMERCIAL TYPE? ARE COLD WATER CONVERSION KITS INSTALLED WHERE APPLICABLE? REF:		
C.2.3.	IS THE 1ST STAGE OF THE SINGLE HOSE REGULATOR SET AT THE MANUFACTURER'S RECOMMENDED PSI? REF: MANUFACTURER'S TECH MANUAL		
C.2.4	ARE WRIST/CONSOLE DEPTH GAGES COMPARED EVERY 12 MONTHS AND RESULTS RECORDED? REF:		
C.2.5.	ARE ALL SCUBA BOTTLES WITHIN HYDRO DATE, TESTED AND MARKED? REF:		

#	ITEM	OK	Other
C.2.6.	ARE THE LIFE PRESERVER/BC'S RELIEF VALVES WORKING AND IN GOOD REPAIR? REF:		
C.3	FULL FACE MASK		
C.3.1	ARE THE FFM COMMUNICATION COMPENENTS CLEAN, DRY, AND FREE FROM TEARS, CUTS AND BROKEN WIRES? REF:		
C.3.2	HAS HYGENIC MAINTENANCE BEEN PERFORMED ON THE FFM? REF:		
C.3.3	IS THE FFM MASK FREE OF ALL LOOSE SCALE, RUST, GRIT, FILINGS, OTHER FOREIGN DIRT, AND DETERIORATION? REF:		
C.3.4	IS THE ORAL-NASAL IF USED FREE OF CRACKS OR DETERIORATION? REF		
C.3.5	IS THE HEAD HARNESS IN GOOD CONDITION?		
C.3.6	ARE BOTH THE TEST KIT AND REQUIRED REPAIR TOOLS AVAILABLE?		

PART D - AIR SYSTEMS & STOWAGE

#	ITEM	OK	Other
AIR SYSTEMS & STOWAGE			
D.	AIR SYSTEMS & STOWAGE		
D.1	AIR COMPRESSORS		
D.1.1.	ARE TECH MANUALS AVAILABLE FOR ALL AIR COMPRESSORS? REF		
D.1.2.	ARE INTERSTAGE COOLING TUBING AND CRANKCASE FINS CLEAN AND IN GOOD CONDITION? REF:		
D.1.3.	IS THE CORRECT COMPRESSOR OIL BEING USED? (1) 2190 TEP FOR NORMAL OPERATION OR 2135 FOR COLD WEATHER OR (2) SYNTHETIC BASED OIL THAT IS MANUFACTURER RECOMMENDED? IF NOT, IS THERE A WAIVER? REF:		
D.1.4.	ARE COMPRESSOR RELIEF VALVES TESTED AND SET AT REQUIRED PRESSURE EVERY 24 MONTHS? REF:		
D.1.5.	ARE CHARGING WHIPS SECURED TO PREVENT WHIPPING? REF:		
D.1.6.	ARE CHARGING WHIPS PROOF TESTED PRIOR TO INITIAL INSTALLATION? ARE RUBBER CHARGING WHIPS REPLACED AT THE MANUFACTURERS RECOMMENDED PERIODICITY OR SERVICE LIFE? REF:		
D.1.7.	ARE PULLEY FANGUARDS INSTALLED ON THE AIR COMPRESSOR(S)? REF:		
D.2	GAGES AND VALVES		
D.2.1.	HAVE ALL CRITICAL PRESSURE GAGES BEEN CALIBRATED IN THE PAST12 MONTHS (I.E. FINAL OUTLET "DISCHARGE" PRESSURE "SCUBA CHARGING/COMPRESSOR OUTLET" GAGES)? REF		
D.2.2.	ARE ALL GAGES LABELED AND NUMBERED? REF:		

#	ITEM	OK	Other
D.2.3.	ARE ALL VALVES LABELED AND NUMBERED? REF:		
D.3	INSTALLED CHARGING SYSTEM		
D.3.1.	HAVE ALL SYSTEM RELIEF VALVES BEEN TESTED DURING THE LAST 12 MONTHS AND TAGGED? REF:		
D.3.2	HAVE ALL VERTICALLY MOUNTED AIR FLASKS WITH DRYER AND BOTTOM BLOW DOWN INSTALLED BEEN HYDROSTATICALLY TESTED IN THE PAST 12 YEARS? HORIZONTAL FLASKS AND FLASKS WITHOUT A DRYER 6 YEARS? DOT3A OR3AA INDUSRIAL GAS CYLINDERS EVERY 5 YEARS? REF:		
D.3.3	HAVE APPLICABLE HP MOISTURE SEPARATORS AND FILTER HOUSINGS BEEN INSPECTED AND TAGGED		
D.3.4	IS THE COMPRESSOR AREA FREE OF CLUTTER, DEBRIS AND HAZARDOUS MATERIAL		
D.3.5	HAVE ALL AIR FLASKS BEEN VISUALLY INSPECTED IN THE PAST 12 MONTHS? REF		
D.3.	IS THE COMPRESSOR INTAKE PROPERLY LABELED		
D.3.7	IS THE COMPRESSOR INTAKE LOCATED SO THAT THERE IS NO DANGER OF TAKING IN EXHAUST FUMES FROM THE ENGINE, STACK GAS OR OTHER CONTAMINATED AIR FROM LOCAL SOURCES? REF:		

PART E - SUPPORT BOAT

#	ITEM	OK	Other
SUPPORT BOAT			
E.	BOAT		
E.1	IS THERE A DNR OPERATING INSTRUCTION (O/I) FOR SMALL BOAT OPERATIONS AND TRAINING QUALIFICATIONS PROCESS AND IS IT BEING UTILIZED REF:		
E.2.	IS THERE A BOAT SAFETY CHECKLIST (LOCALLY GENERATED)? REF:		
E.3.	ARE BOATS MAINTAINED IN ACCORDANCE WITH DNR POLICIES AND PROGRAMS?		
E.4.	IS BOAT EQUIPPED WITH AN INSTALLED/PORTABLE BILDGE PUMP AND DO THEY OPERATE SATISFACTORY? REF:		
E.5.	IS A FIRE EXTINGUISHER INSTALLED AND PROPERLY MAINTAINED? REF		
E.6.	IS BOAT EQUIPPED WITH A SECONDARY SOURCE OF PROPULSION (I.E.SECOND ENGINE, PADDELS)? REF:		
E.7	IS AN AMBU BAG OR ALTERNATE METHOD AND FIRST AID KIT AVAILABLE FOR SMALL BOAT OPERATIONS? REF:		
E.8.	IS THE BOAT EQUIPPED WITH A VHF RADIO? REF:		
E.9.	IS EMERGENCY LIGHTING (FLASH LIGHT) AVAILABLE? REF: USCG RULES OF THE ROAD		
E.10.	ARE BOATS WITH OUTBOARD ENGINES EQUIPPED WITH EMERGENCY ENGINE CUT OFF SWITCHES? REF:		
E.11.	IS A SOUND PRODUCING DEVICE INSTALLED AND OPERABLE? REF: USCG RULES OF THE ROAD		
E.12.	ARE NAVIGATIONAL AND TASK LIGHTS INSTALLED, AND ARE THEY IN THE PROPER CONFIGURATION? REF: USCG RULES OF THE ROAD		

#	ITEM	OK	Other
E.13.	ARE LIFE JACKETS AVAILABLE FOR ALL MEMBERS OF THE CREW AND PASSENGERS AND ARE THEY FULLY FUNCTIONAL? REF: USCG BOAT SAFETY REGS		
E.14.	DOES THE BOAT HAVE A TYPE 4 THROWABLE DEVICE AVAILABLE? REF: USCG BOAT SAFETY REGS		
E.15.	ARE INFLATABLE BOATS IN SATISFACTORY CONDITION AND HAS APPLICABLE MAINTENANCE BEEN PERFORMED? REF:		
E.16.	ARE INFLATABLE BOATS HIGH OR LOW PRESSURE INFLATION SYSTEMS IN SATISFACTORY CONDITION, HOSES INSPECTED PERIODICALLY AND CYLINDERS WITHIN DOT HYDROSTATIC TEST DATES?		
E.17.	ARE BOAT TRAILERS IN SATISFACTORY CONDITION AND HAS APPLICABLE MAINTENANCE BEEN PERFORMED?		

PART E - OPERATIONS

#	ITEM	OK	Other
OPERATIONS			
F.	DIVING OPERATIONS		
F.1	<p>IS THE EMPLOYEE BRIEFING TAKING PLACE AND DOES IT COVER THE FOLLOWING. (1) DIVE-TEAM MEMBERS SHALL BE BRIEFED ON: (I) THE TASKS TO BE UNDERTAKEN; (II) SAFETY PROCEDURES FOR THE DIVING MODE; (III) ANY UNUSUAL HAZARDS OR ENVIRONMENTAL CONDITIONS LIKELY TO AFFECT THE SAFETY OF THE DIVING OPERATION; AND (IV) ANY MODIFICATIONS TO OPERATING PROCEDURES NECESSITATED BY THE SPECIFIC DIVING OPERATION.</p>		
F.2.	<p>ARE THE DIVERS BEING ASKED IF THEY ARE FIT TO DIVE FOR THE DAY AND MADE AWARE THEY ARE REQUIRED TO REPORT ANY CHANGES IN THEIR CONDITION THROUGHOUT THE DIVE?</p>		
F.3.	<p>DOES THE DPIC PERFORM A HANDS ON CHECK OF ALL DIVERS PRIOR TO THE DIVE?</p>		
F.4.	<p>ARE THE DIVERS FLAGS PROPERLY DISPLAYED?</p>		
F.5.	<p>IS THERE A LADDER IN THE WATER TO ALLOW FOR THE EXIT OF THE DIVERS AND DOES IT EXTEND BELOW THE SURFACE OF THE WATER?</p>		
F.6.	<p>IS A METHOD OF REMOVING AN INJURED DIVER DISCUSSED AND AVAILBLE BEFORE THE DIVERS ENTER THE WATER?</p>		
F.7	<p>ARE THE DIVE TABLES AVAILABLE AT THE DIVE SITE?</p>		
F.8.	<p>ARE DIVE PROFILES INITIATED PRIOR TO THE DIVE?</p>		
F.9.	<p>DO THE DIVERS HAVE A RESERVE AIR SUPPLY?</p>		
F.10.	<p>ARE THE DIVERS EQUIPPED WITH A SEPARATE INFLATION SOURCE FOR THEIR BCD AND DRY SUIT?</p>		
	<p>DOES THE STANDBY DIVER HAVE A 300' TENDING LINE AND IS IT FREE OF KINKS AND READY TO DEPLOY?</p>		

F.11.	DO THE DIVER COMPLETE THEIR IN WATER CHECKS (CHECK EACH OTHER FOR LEAKS, PERFORM COMM CHECK) BEFORE LEAVING THE SURFACE?		
F.12.	DO THE DIVERS LEAVE THE SURFACE TOGETHER?		
F.13.	DO THE DIVER RETURN TO THE SURFACE TOGETHER?		
F.14.	DOES THE CRW MONITOR THE DIVERS BUBBLES WHILE IN THE WATER		
F.15	ARE THE DIVERS THE DIVERS QUESTIONED ABOUT THEIR CONDITION AFTER EXITING THE WATER?		
F.16.	ARE THE DIVERS MADE AWARE OF THE NEAREST RECOMPRESSION FACILITY AND REQUIREMENTS FOR FLYING AFTER DIVING?		
F.17.	IS THE DIVE PROPERLY RECORDED?		
F.18.	IS THE GEAR RINSED WHEN AVAILABLE AND MADE READY FOR THE NEXT DIVE AND OR IS HYGENIC MAINTENANCE BEING PERFORMED?		

OVERALL ANALYSIS

UNIT NAME: _____

LOCATION: _____

DATE: _____

SURVEYOR(S): _____

NO. COMPLETE: _____ NO. REQ ACTION: _____ (REPEAT OFFENDERS: _____)
 NO. UNABLE TO INSPECT: _____ NO. NOT APPLICABLE: _____

PART	TOTAL COMPLETED	TOTAL REQ ACTION/RPT OFFENDER	TOTAL UNABLE TO INSPECT	TOTAL NOT APPLICABLE
A - ADMIN		/		
B - TRAINING		/		
C - SCUBA		/		
D - AIR SYSTEM & STOWAGE		/		
E-SUPPORT BOAT		/		
F-OPERATIONS		/		