DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
3000 MARINE CORPS PENTAGON
WASHINGTON DC 20350-3000

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MCBul 1501
TECOM (PSD)
3 Mar 2023

MARINE CORPS BULLETIN 1501

From: Commandant of the Marine Corps
To: Distribution List

Subj: UNDERWATER EGRESS TRAINING SERVICE-LEVEL POLICY

Ref: (a) MCO 1500.52D
(b) MCO 3502.3C
(c) ALMAR 002/22
(d) SECNAV M-5210.1
(e) MCO 5210.11F
(f) 5 U.S.C. 552a
(g) SECNAVINST 5211.5F
(h) COMNAVAIRFOR M-3710.7

Encl: (1) Waiver Templates
(2) LPU-41 and EDB Briefing Slides

1. Situation. The Commanding General (CG) of Training and Education Command (TECOM) initiated an Operational Planning Team (OPT) in the fall of 2021 to explore potential updates to both the Marine Corps Water Survival Training Program (MCWSTP) and Underwater Egress Training (UET). Early in the problem-framing effort, the OPT determined that there was a lack of a clear, service-level guidance regarding UET standards. This Bulletin establishes interim, service-level policy until these changes can be incorporated into reference (a).

2. Cancellation. MARADMIN 293/18.

3. Mission. This Bulletin promulgates service-level policy that clearly identifies individual UET requirements in order to ensure that Marines and Fleet Marine Forces (FMF) Sailors can safely execute maritime operations. This Bulletin is in accordance with references (a) through (h).

4. Execution. This Bulletin establishes the service-level UET standard. In the near future, UET service-level standards will be incorporated into reference (a), which is currently under revision.

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) Purpose. To ensure that Marines and FMF Sailors can safely execute maritime operations.

(b) Method. Marine Expeditionary Force (MEF) Commanders will ensure that Marines and FMF Sailors complete UET before conducting any helicopter / tiltrotor aircraft overwater flight or amphibious vehicle waterborne operations. They will establish training priorities based on mission requirements and maximize the capacity of local UET resources.

(c) End State. Before conducting helicopter / tiltrotor aircraft overwater flight or amphibious vehicle waterborne operations all Marines and FMF Sailors are either:

1. UET qualified.

2. Waived by the appropriate authority outlined in paragraph 4.c.(5). Waivers should be used sparingly and only after all other options to qualify service members have been exhausted.

(2) Concept of Operations

(a) UET consists of progressive classroom instruction and practical application that is approximately 8 hours in duration. The practical application begins with student familiarization with the regulator in the shallow end of the pool. This activity increases the students' confidence in their equipment before advancing to inverted wall submersion drills. Next, students must demonstrate individual mastery of UET fundamentals in the Shallow Water Egress Trainer (SWET). During the final exercise, students must demonstrate individual mastery of UET fundamentals in a collective setting in either the Submerged Vehicle Egress Trainer (SVET) or the Modular Amphibious Egress Trainer (MAET). Marines and FMF Sailors must successfully complete all stages of the training to earn UET qualification.

(b) UET is scheduled through the Range Facilities Management Support System and is currently available at the following locations:

1. Marine Corps Base (MCB) Camp Pendleton, California

2. MCB Camp Lejeune, North Carolina

3. MCB Hawaii

4. MCB Camp Butler, Okinawa, Japan

(c) Subordinate commanders will determine prioritization of school seats provided by the MEF. They will also determine, by unit, which personnel will complete SVET and which personnel will complete MAET. Marines and FMF Sailors who are more likely to conduct waterborne operations in an amphibious assault vehicle, amphibious combat vehicle, or light armored vehicle — when compared to overwater flight operations — will complete the SVET. All others will complete the MAET.

(d) Marines and FMF Sailors that require UET must be qualified prior to:

1. Change of operational posture from their parent command to the gaining Marine Expeditionary Unit (MEU).

2. Deployment date for all other deployment types, e.g. unit deployment program.

3. The start date of an exercise involving amphibious shipping.

4. The start date of any training event involving shore-to-shore operations with amphibious vehicles.

(e) If an individual Marine or FMF sailor is unqualified in UET they may, at the O-5 (or higher) Commander's discretion, be authorized to deploy in support of Global Force Management (GFM) requirements. However, they are not authorized to conduct overwater flight or amphibious vehicle waterborne operations without a waiver.

(f) In cases where training cannot be completed prior to the deadlines in paragraph 4.a.(2)(d) commanders should continue to pursue qualification through any available United States Marine Corps (USMC) UET site or TECOM-approved equivalent training. See paragraph 4.c.(7) for current TECOM-approved equivalent training.

(g) Reserve units, or reserve personnel, requiring UET will coordinate with the appropriate MEF to accomplish MCWSTP and UET (to include SVET / MAET per paragraphs 4.a.(2)(d)) training during annual training or initial location training, if mobilized.

(h) See paragraph 4.c.(5) for all waiver authorities.

(i) Frequent rehearsals must be conducted whenever practicable on actual amphibious vehicles and aircraft. UET qualifications happen at UET sites or TECOM-approved equivalents. UET success—and increased probability of surviving a mishap—is achieved through rigorous integrated rehearsals in the FMF.

b. Subordinate Element Tasks

(1) MEF commanders are responsible for the scheduling and prioritization of school seats for all UET sites geographically aligned to their respective MEF.

(2) If the school seats provided by TECOM do not meet individual MEF throughput requirements, the shortfall shall be immediately communicated to CG, TECOM (Range and Training Programs Division) via the appropriate chain of command.

c. Coordinating Instructions

(1) Prerequisites for UET. Marines must have a current MCWSTP qualification to conduct UET. FMF Sailors must have a current MCWSTP or Navy swim qualification. The senior service member from each unit participating in UET shall provide the following, for all participants, to UET site managers prior to the commencement of training:

(a) Proof of current swim qualification.

(b) The required medical screening forms.

(2) UET qualifications expire four years after the certification date unless a shorter sustainment interval is directed by a military occupational specialty-specific Training and Readiness Manual (e.g. assault amphibian Marines qualification expires after two years).

(3) For Marines who are scheduled to deploy, UET and swim qualifications must remain current throughout the expected redeployment date.

(4) Both MAET and SVET teach the fundamentals of UET. As a result, service members are considered fully trained and qualified to conduct both overwater flight and amphibious operations if they have a current:

(a) MAET qualification, SVET qualification, or SWET qualification with the appropriate waiver.

(b) Swim qualification.

(5) Waiver Authorities. See enclosure (1) for waiver templates.

(a) The first O-6 commander in the chain of command can waive the sustainment interval if there is a shift in the expected re-deployment date. This one-time waiver will apply until the unit returns to home station. Commanders must notify the first general officer in the chain of command upon waiving the sustainment interval.

(b) The first general officer in the chain of command may waive the full UET requirement for individual Marines or FMF Sailors and units in accordance with the provisions of paragraphs 4.c.(5)(d)-(e). Unit waivers apply to every member of the unit and are only appropriate when unforeseeable circumstances force a unit to conduct amphibious operations (e.g. overwater flight or amphibious vehicle waterborne operations) on short notice. Commanders must notify CG, TECOM upon waiving the full UET requirement for units.

(c) For units without a general officer in the chain of command CG, TECOM retains the authority to approve or deny all unit and individual waivers.

(d) The SWET is a skill progression training aid intended for use in preparatory and remedial training. Successful completion of SWET chair training does not meet the standards for UET. By extension, SWET chair training does not qualify an individual to conduct overwater flight or amphibious vehicle waterborne operations. However, if the following conditions are met, O-6 commanders may approve a temporary SWET chair only waiver:

1. Personnel have previously qualified in the MAET or SVET, a verified record of which must be included in each individual’s official training record.

2. Full MAET or SVET are unavailable before a specific training event or short-notice operational requirement due to unscheduled maintenance, unexpected contractor non-availability, or another significant issue that prevents training from occurring as scheduled.

3. All reasonable efforts have been made to reschedule full MAET or SVET before overwater flight or amphibious vehicle waterborne operations are conducted.

(e) SWET waiver limitations

1. This waiver is only valid for one year and may not be used for subsequent qualification. A Marine or FMF Sailor may not have back-to-back SWET waivers.

2. Personnel must complete the full classroom instruction and SWET practical application at a USMC UET site or an Aviation Safety Training Center (ASTC).

(6) Drop on request is no longer authorized for UET students.

(a) Commanders will appropriately document Marines and FMF Sailors who refuse to train (RTT) with a minimum of a:

1. Page 11 entry for Marines.

2. Page 13 entry for Sailors.

(b) If a Marine or Sailor cannot adequately discharge their assigned duties as a result of UET failure or RTT, O-5 (or higher) commanders should consider the full range of administrative actions available.

(7) The USMC "non-aircrew" Egress Familiarization training, as defined by reference (h), is an approved equivalent to USMC MAET training.

(a) This training is offered at the Aviation Survival Training Centers (ASTCs).

(b) Support agreements are required to schedule this training at ASTCs. Such agreements can be initiated through the Naval Survival Training Institute (NSTI).

(c) I and II MEF are encouraged to establish support agreements with local ASTCs to address short-term deficiencies in USMC UET school seat availability.

(d) SWET-only training at an ASTC — referred to as the Modular SWET at ASTCs — is an approved justification for a temporary waiver in accordance with paragraphs 4.c.(5)(d)-(e).

(8) The following Marine Corps Training Information Management System (MCTIMS) codes shall be run once a Marine has successfully completed UET.

(a) EH - MAET or TECOM-approved equivalent.

(b) EB - SVET for amphibious vehicle passengers.

(c) ED - SWET; only valid for one year with waiver outlined in paragraphs 4.c.(5)(f)-(g).

(9) The following MCTIMS code shall be run if a Marine does not meet the training requirements during a UET attempt.

(a) EC – Attempted but Did Not Complete MAET.

(b) EA – Attempted but Did Not Complete SVET.

(10) The following MCTIMS code shall be run if a Marine refuses to train or is failed by an instructor while attempting MAET, SVET, or SWET: EF – Underwater Egress Training Failure.

(11) Marine aviators and aircrew will continue to complete egress training requirements in accordance with the Naval Aviation Survival Training Program (NASTP) in accordance with reference (h).

(12) Prior to overwater flight or amphibious operations, all passengers must receive a brief on the following items from the aircraft crew chief prior to takeoff, or the vehicle commander prior to waterborne operations in the case of amphibious vehicles:

(a) Proper brace positions for the specific aircraft or vehicle.

(b) The Helicopter Egress System for Passengers (HESP) or the Water Egress Capability (WEC). Crew chiefs and vehicle commanders must ensure the serviceability of the gear, brief individuals on their use, and ensure that each individual knows how to use the gear effectively. Both the HESP and the WEC include the following items, see enclosure (2) for HESP / WEC briefing materials.

(c) Identify and communicate primary, alternate, and tertiary egress points to passengers.

(d) Talk through the operation of any latches, handles, or other potential obstacles for all available egress points on the aircraft or amphibious vehicle.

(e) A full egress rehearsal shall be conducted prior to take-off, or splash in the case of amphibious vehicles, if any passenger has been waived from the full UET requirement.

(13) Provide a spreadsheet with the waiver request reflecting the below example.

					Last UET Qual		Last Swim Qual	
Rank	Last Name	First Name	MI	DOD ID	Type	Date	Level	Date

Figure 1-1.--Example for Waiver Requests

(14) In extremis — defined as a time constrained situation where a general officer is unable to provide a required waiver — commanders at the O-5 (or higher) level may waive any individuals from the UET requirement. Notification of such a waiver to the first general officer in the chain of command must be initiated as soon as practicable.

5. Administration and Logistics

a. Records Management. Records created as a result of this Bulletin shall be managed according to National Archives and Records Administration (NARA)-approved dispositions per SECNAV M-5210.1 to ensure proper

maintenance, use, accessibility and preservation, regardless of format or medium. Records disposition schedules are located on the Department of the Navy/Assistant for Administration (DON/AA), Directives and Records Management Division (DRMD) portal page at: https://portal.secnav.navy.mil/orgs/DUSNM/DONAA/DRM/Records-and-Information-Management/Approved%20Record%20Schedules/Forms/AllItems.aspx. Refer to MCO 5210.11F for Marine Corps records management policy and procedures.

b. Privacy Act. Any misuse or unauthorized disclosure of Personally Identifiable Information (PII) may result in both civil and criminal penalties. The Department of the Navy (DON) recognizes that the privacy of an individual is a personal and fundamental right that shall be respected and protected. The DON's need to collect, use, maintain, or disseminate PII about individuals for purposes of discharging its statutory responsibilities shall be balanced against the individuals' right to be protected against unwarranted invasion of privacy. All collection, use, maintenance, or dissemination of PII shall be in accordance with the Privacy Act of 1974, as amended (5 U.S.C. 552a) and implemented per SECNAVINST 5211.5F.

c. Forms. No forms are used in this Bulletin.

d. Recommendations. Recommendations concerning the contents of this Bulletin may be forwarded to CG, TECOM via the appropriate chain of command.

e. Cancellation Contingency. This Bulletin is cancelled when incorporated into reference (a).

6. Command and Signal

a. Command. This Bulletin is applicable to the Marine Corps Total Force.

b. Signal. This Bulletin is effective the date signed.

K. M. IIAMS
Commanding General
Training and Education Command
By direction

Distribution: PCN 10255303000

Waiver Template 1

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: First O-6 in the Chain of Command

Subj: REQUEST FOR UNDERWATER EGRESS TRAINING REQUIREMENT WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

Encl: (1) List of personnel requiring waiver

1. In accordance with reference (a) paragraph 4.c.(5)(a), I am requesting that the personnel listed in enclosure (1) be waived from the Underwater Egress Training currency requirement for the remainder of the current deployment.

2. This waiver is only being requested due to an unforeseeable shift in the expected redeployment date.

3. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

4. Further, it is understood that this waiver will expire when the last elements of my unit have redeployed to home station at which point retraining will be required.

5. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

*Note- When endorsed / approved at the O-6 level a copy must be forwarded to the first general officer in the chain of command.

Waiver Template 2

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: First General Officer in the Chain of Command

Via: (1) Title, name of activity (Code), location when needed
If Via line does not fit on one line it must look like this
(2) Same format as Via (1) above
(3) Delete Via line if not applicable

Subj: REQUEST FOR UNDERWATER EGRESS TRAINING REQUIREMENT WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

Encl: (1) List of personnel requiring waiver

1. In accordance with reference (a) paragraph 4.c.(5)(b), I am requesting that the personnel listed in enclosure (1) be waived from the Underwater Egress Training requirement.

2. This waiver is being requested to allow the personnel listed in enclosure (1) to conduct (circle one):

a. helicopter/tiltrotor aircraft overwater flight.

b. amphibious vehicle waterborne operations.

c. Both helicopter/tiltrotor aircraft overwater flight and amphibious vehicle waterborne operations.

3. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

4. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

Waiver Template 3

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: First General Officer in the Chain of Command

Via: (1) Title, name of activity (Code), location when needed
If Via line does not fit on one line it must look like this
(2) Same format as Via (1) above
(3) Delete Via line if not applicable

Subj: REQUEST FOR UNDERWATER EGRESS TRAINING REQUIREMENT UNIT WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

1. In accordance with reference (a) paragraph 4.c.(5)(b), I am requesting that all personnel assigned to my unit be waived from the Underwater Egress Training (UET) requirement.

2. This waiver is being requested to allow the personnel to conduct (circle one):

a. helicopter/tiltrotor aircraft overwater flight.

b. amphibious vehicle waterborne operations.

c. Both helicopter/tiltrotor aircraft overwater flight and amphibious vehicle waterborne operations.

3. All reasonable efforts have been made to obtain UET qualification. Due to (provide reasoning; e.g. unscheduled maintenance at the UET site, school seat availability limitations, short notice training opportunity, short notice deployment, etc) the majority of my unit does not have a current UET qualification but must complete the activity listed in paragraph 2 above.

4. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

5. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

Waiver Template 4

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: Commanding General, Training and Education Command

Via: (1) Title, name of activity (Code), location when needed
If Via line does not fit on one line it must look like this
(2) Same format as Via (1) above
(3) Delete Via line if not applicable

Subj: REQUEST FOR UNDERWATER EGRESS TRAINING REQUIREMENT INDIVIDUAL WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

Encl: (1) List of personnel requiring waiver

1. In accordance with reference (a) paragraph 4.c.(5)(c), I am requesting that the personnel listed in enclosure (1) be waived from the Underwater Egress Training (UET) requirement.

2. This waiver is being requested to allow the personnel listed in enclosure (1) to conduct (circle one):

a. helicopter/tiltrotor aircraft overwater flight.

b. amphibious vehicle waterborne operations.

c. Both helicopter/tiltrotor aircraft overwater flight and amphibious vehicle waterborne operations.

3. All reasonable efforts have been made to obtain UET qualification. Due to (provide reasoning; e.g. unscheduled maintenance at the UET site, school seat availability limitations, short notice training opportunity, short notice deployment, etc) the personnel listed in enclosure (1) do not have a current UET qualification but must complete the activity listed in paragraph 2 above.

4. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

5. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

Waiver Template 5

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: Commanding General, Training and Education Command

Via: (1) Title, name of activity (Code), location when needed
If Via line does not fit on one line it must look like this
(2) Same format as Via (1) above
(3) Delete Via line if not applicable

Subj: REQUEST FOR UNDERWATER EGRESS TRAINING REQUIREMENT UNIT WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

1. In accordance with reference (a) paragraph 4.c.(5)(c), I am requesting that all personnel assigned to my unit be waived from the Underwater Egress Training (UET) requirement.

2. This waiver is being requested to allow the personnel to conduct (circle one):

a. helicopter/tiltrotor aircraft overwater flight.

b. amphibious vehicle waterborne operations.

c. Both helicopter/tiltrotor aircraft overwater flight and amphibious vehicle waterborne operations.

3. All reasonable efforts have been made to obtain UET qualification. Due to... (provide reasoning; e.g. unscheduled maintenance at the UET site, school seat availability limitations, short notice training opportunity, short notice deployment, etc)... the personnel listed in enclosure (1) do not have a current UET qualification but must complete the action(s) indicated in paragraph 2 above.

4. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

5. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

Waiver Template 6

UNITED STATES MARINE CORPS
COMMAND NAME
ADDRESS LINE 1
ADDRESS LINE 2

SSIC
OffCode
DD Mmm YY

From: Commander Requesting Waiver
To: First O-6 in the Chain of Command

Via: (1) Title, name of activity (Code), location when needed
If Via line does not fit on one line it must look like this
(2) Same format as Via (1) above
(3) Delete Via line if not applicable

Subj: REQUEST FOR SHALLOW WATER EGRESS TRAINING IN LIEU OF FULL UNDERWATER EGRESS TRAINING WAIVER

Ref: (a) MCBul 1501 dtd 3 Mar 2023

Encl: (1) List of personnel requiring waiver

1. In accordance with reference (a) paragraph 4.c.(5)(f), I am requesting that the personnel listed in enclosure (1) be waived from the full Underwater Egress Training requirement.

2. This waiver is being requested to allow the personnel to conduct (circle one):

a. helicopter/tiltrotor aircraft overwater flight.

b. amphibious vehicle waterborne operations.

c. Both helicopter/tiltrotor aircraft overwater flight and amphibious vehicle waterborne operations.

3. I certify that all elements of paragraphs 4.c.(5)(d)1.-3. of reference (a) apply in this case.

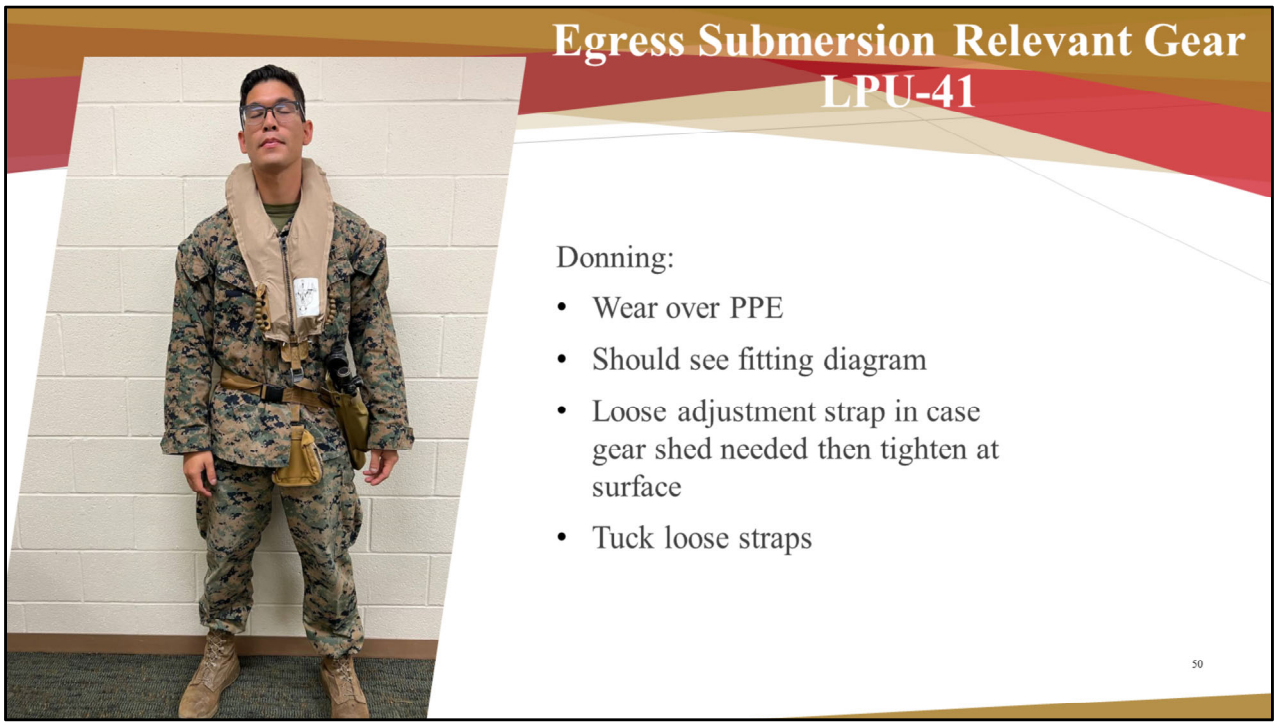
4. I acknowledge the limitations listed in paragraph 4.c.(5)(e).

5. I understand that this waiver results in an increase of risk to force and will ensure that all elements of reference (a) paragraph 4.c.(12) are enforced to mitigate this risk to the greatest extent practicable.

6. The point of contact in this matter is Rank Firstname MI. Lastname at xxx-xxx-xxxx or email@usmc.mil.

I. M. COMMANDING

LPU-41 and EDB Briefing Slides



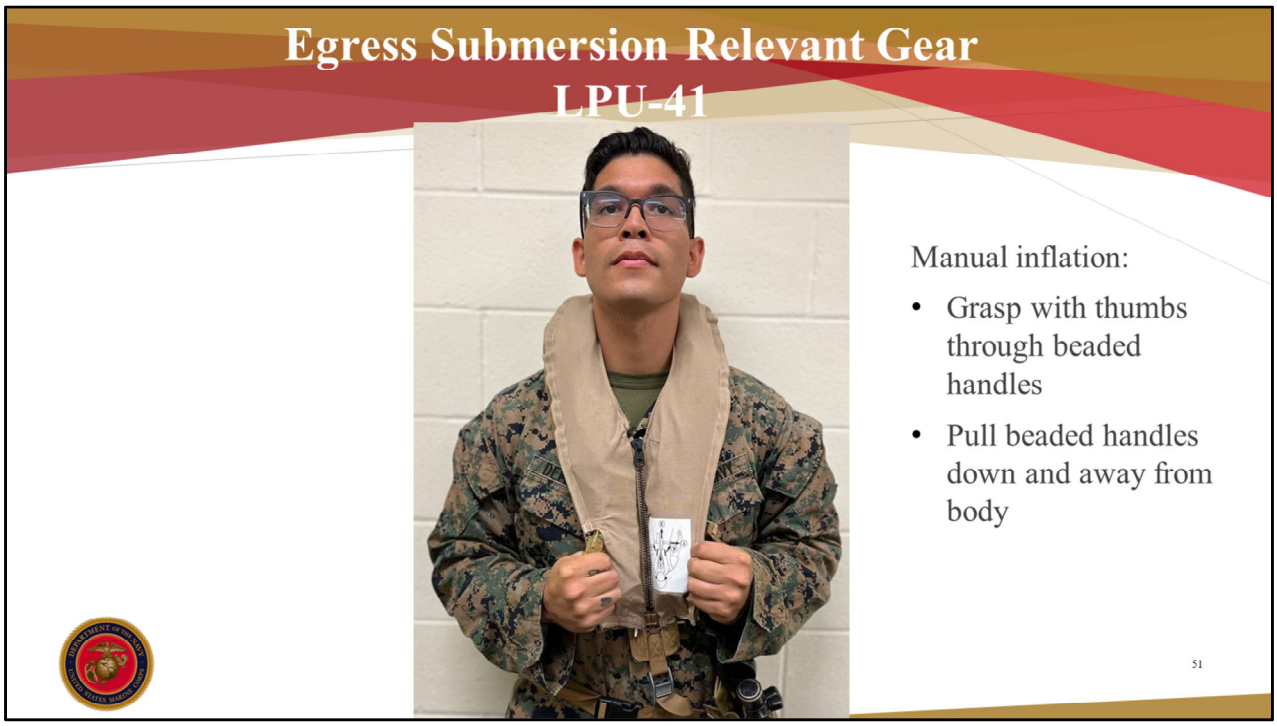
EGRESS SUBMERSION RELEVANT GEAR.
LPU – 41.
LPU-41 Donning.

INSTRUCTOR NOTE

- Show the Marines how to don and adjust the LPU-41 and explain what you are doing as you do it.
- The LPU-41 is designed to be worn over your PPE (i.e., body armor) and provide enough buoyancy to keep you afloat fully loaded.
- Following your inspection, place the yoke, or "horse collar" of the LPU over your head, keeping the EBD holster on the left and the waist strap buckle centered.
    - When you look down, you will be able to see a fitting diagram located on the left side of the LPU.
    - If you look down and see a bar code, the LPU is upside down and your EBD holster will be on the wrong hip.
- Fasten the waist buckle and adjust the height adjustment strap and the waistband for a proper fit, ensuring there are no twists in the straps.
- When donning the LPU-41 over your body armor, you should slightly loosen the

height adjustment strap just in case you have to shed this PPE for some reason (e.g., exit partially blocked or too small to use with PPE on). If this is the case, you should remember to tighten the height adjustment strap at the surface (ideally) before inflating your LPU.

- If you have loose strap ends hanging down, they should be tucked away so as not to become a snag hazard. Once the LPU is properly fitted to you, zip the zipper all the way up.



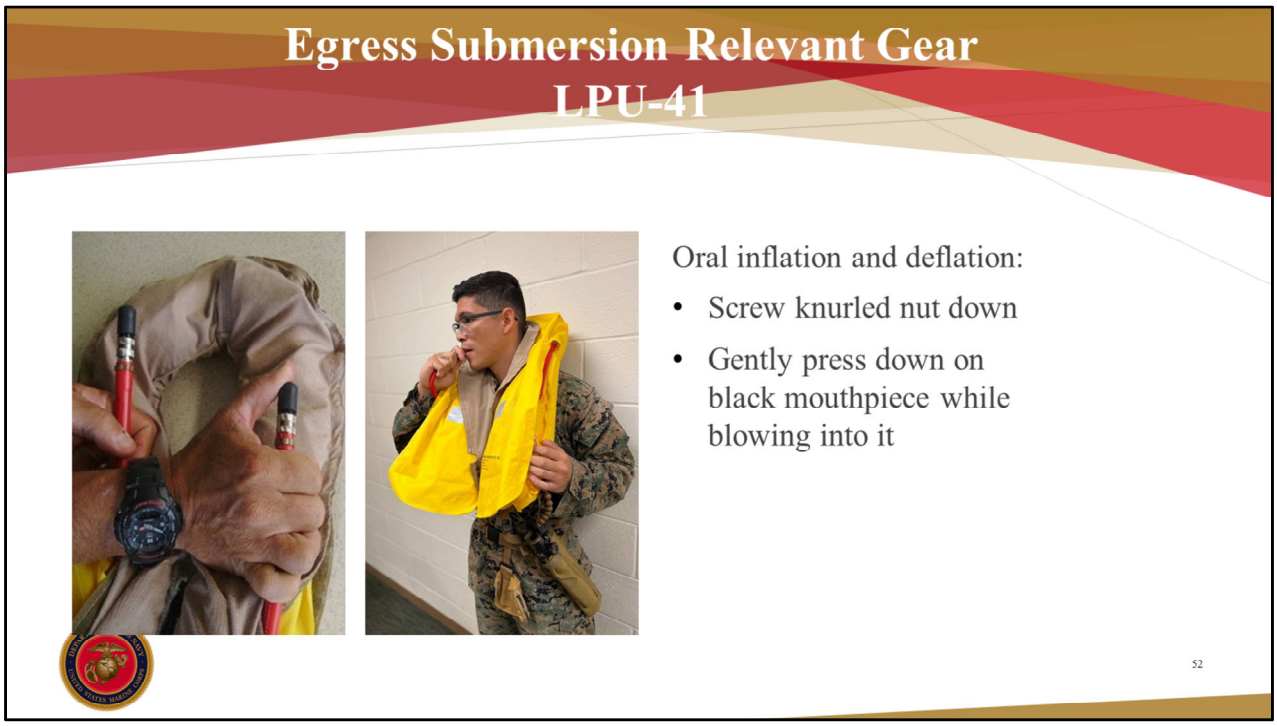
EGRESS SUBMERSION RELEVANT GEAR.

LPU – 41.

LPU-41 Manual Inflation.

Sometimes shock and/or injury can affect an individual's fine motor skills, so it is important to **use thumbs through the beaded loop handles** to overcome any loss of motor skills. For ease of memory, think of the phrase “nose to toes”.

- Place your hands, palms facing in, up high over the LPU lobes.
- Slide your palms down the lobes while feeling for the beaded handles.
- Insert your thumbs through the beaded loop handles to grasp the beaded handles.
- Pull sharply down to inflate.



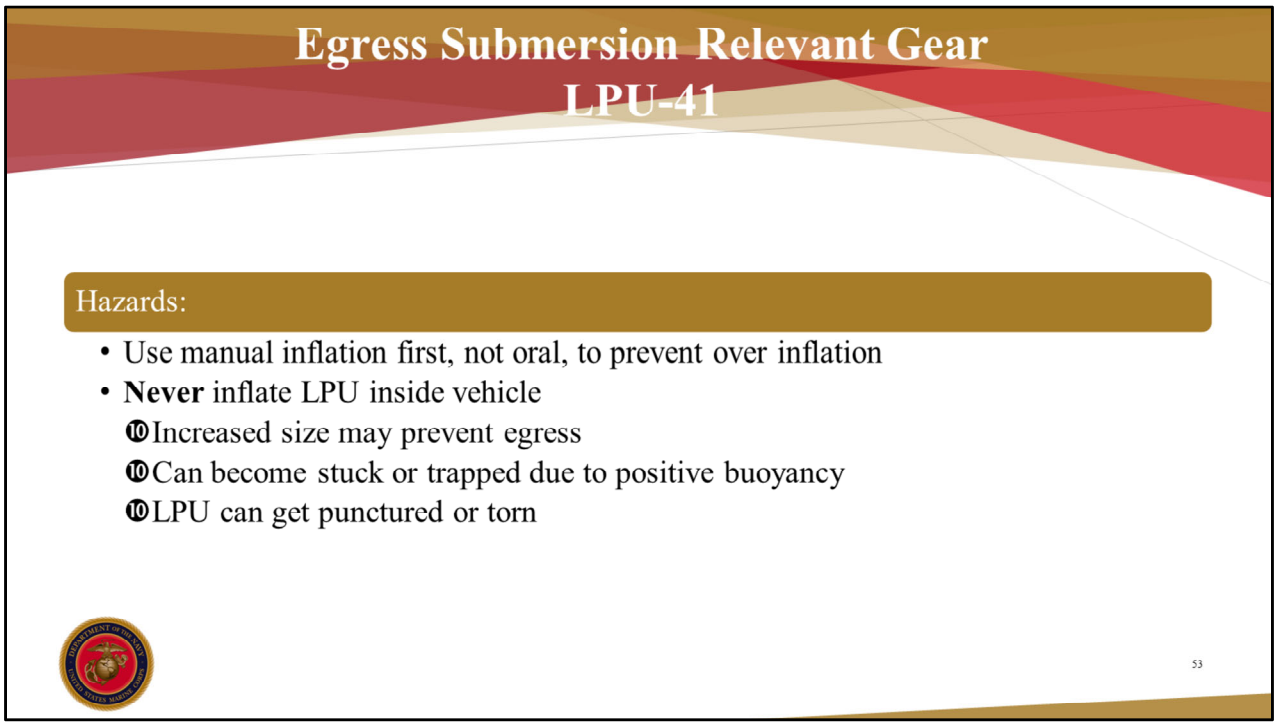
EGRESS SUBMERSION RELEVANT GEAR.
LPU – 41.
LPU-41 Oral Inflation and Deflation.
If the LPU does not inflate due to a malfunction of the CO_2 cartridges or actuators, or if the LPU loses air, becoming deflated, you can orally inflate it.

The LPU-41 has two oral inflation tubes, one for each bladder. These tubes are located on the outside edge of the LPU once the Velcro on the container cover is pulled open. The LPU-41 inflation tubes have a protected valve system to help prevent air from escaping once inflated.

To **inflate the LPU-41**:
- First screw the knurled nut down.
- Use your lips to press down on the black mouthpiece while blowing into it.
- Make sure to release the mouthpiece between breaths, or else the air will escape.
- If the tube is bent/kinked air will not go into the tube, so ensure you keep your head back and neck extended. Once you have fully inflated your LPU, release the

black mouthpiece and screw the knurled nut back to the top to prevent any leakage. One advantage of the LPU-41 is that if a Marine is hurt or unable to help himself, another Marine can easily reach the oral inflation tubes and assist with oral inflation.

To deflate the LPU-41, screw the nut down and pull the black mouthpiece down while simultaneously squeezing the air out of the bladders. Ensure that you do not cover the holes in the mouthpiece as you do.



EGRESS SUBMERSION RELEVANT GEAR.

LPU – 41.

LPU Hazards.

Always attempt to first inflate your LPU using the CO_2 cartridges, not oral inflation. If you orally inflate the LPU and then intentionally or unintentionally activate the CO_2 cartridges, the bladders could over-inflate and rupture.

Never inflate your LPU while inside the vehicle!!!

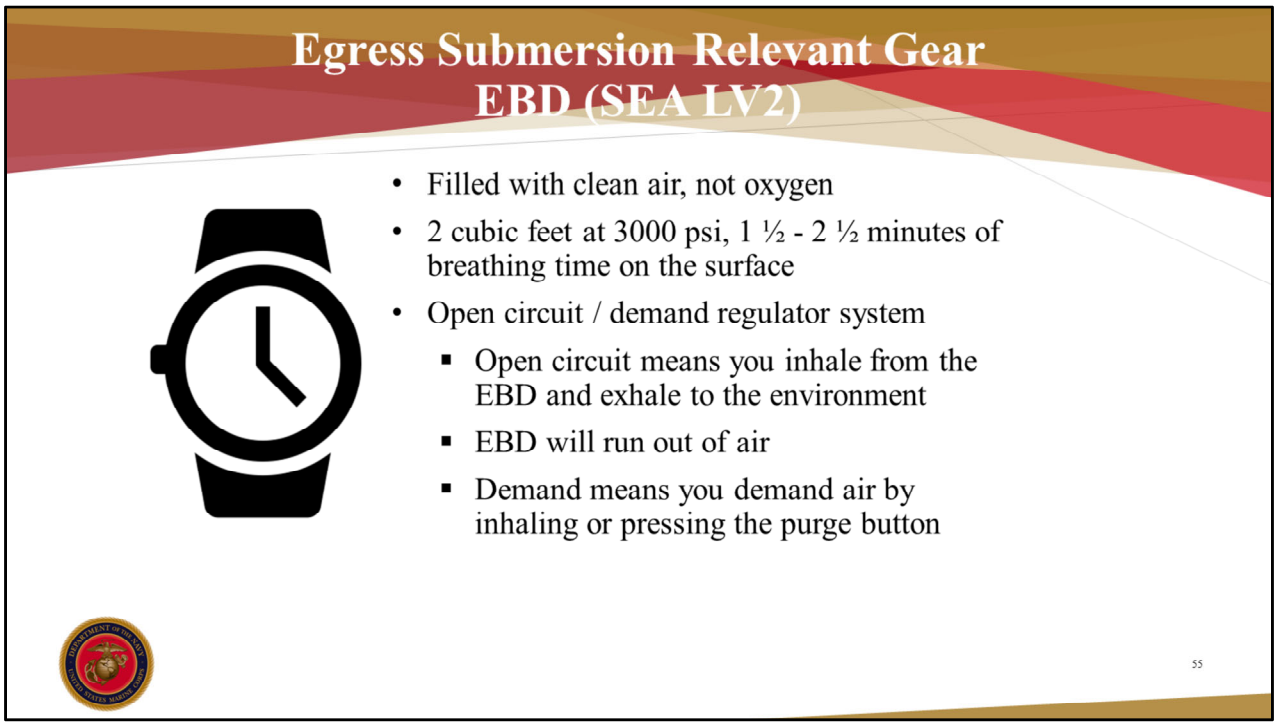
- The increased size of an inflated LPU may prevent your ability to egress through small/confined spaces or exits.
- You may get stuck or trapped inside due to positive buoyancy.
- Your LPU may get punctured or torn as you try and exit.

EGRESS SUBMERSION RELEVANT GEAR.

2. **EBD (SEA LV2).**

The components of the EBD (SEA LV2) are:

- Cylinder.
- 1st stage.
- Hose.
- 2nd stage (regulator and mouthpiece).



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2) (cont.).

The characteristics of the EBD (SEA LV2) are:

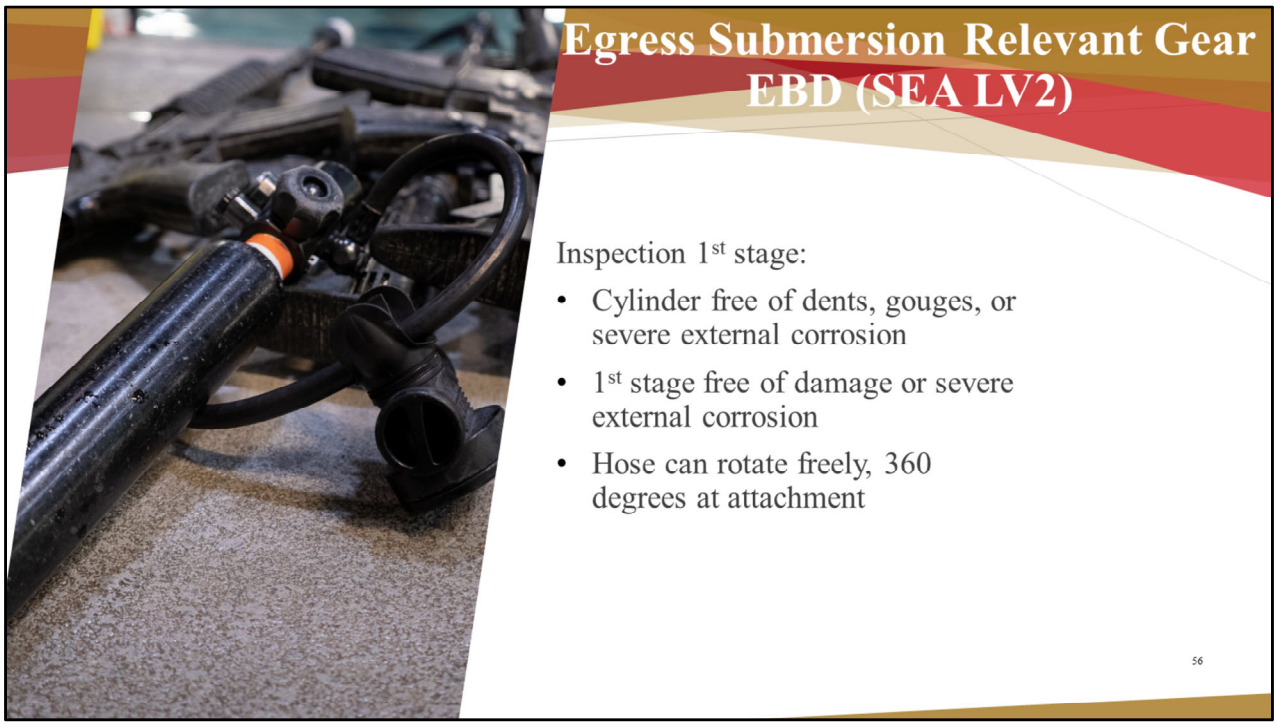
- Cylinders filled with clean air (NOT oxygen).
- EBDs contain the same composition of air as you are breathing right now since they are filled with a certified clean-air compressor system or a SCUBA cylinder
- Capacity is 2 cubic ft at 3000 psi.
- Provides **approximately 1 ½ to 2 ½ minutes** of breathing time on the surface.
    - As you'll learn shortly though, that breathing time is reduced when underwater. There are variables that affect this breathing time include body size, smoker, sickness BUT the biggest effect will be how calm an individual is. The calmer you are, the more controlled your breathing pattern, the longer your air will last.

EBDs use an **open circuit/demand regulator system** to deliver air.

- Air inhaled from the regulator is exhaled to the surrounding environment.
- In other words, it's gone forever and as you continue to breath your EBD will eventually run out of air.

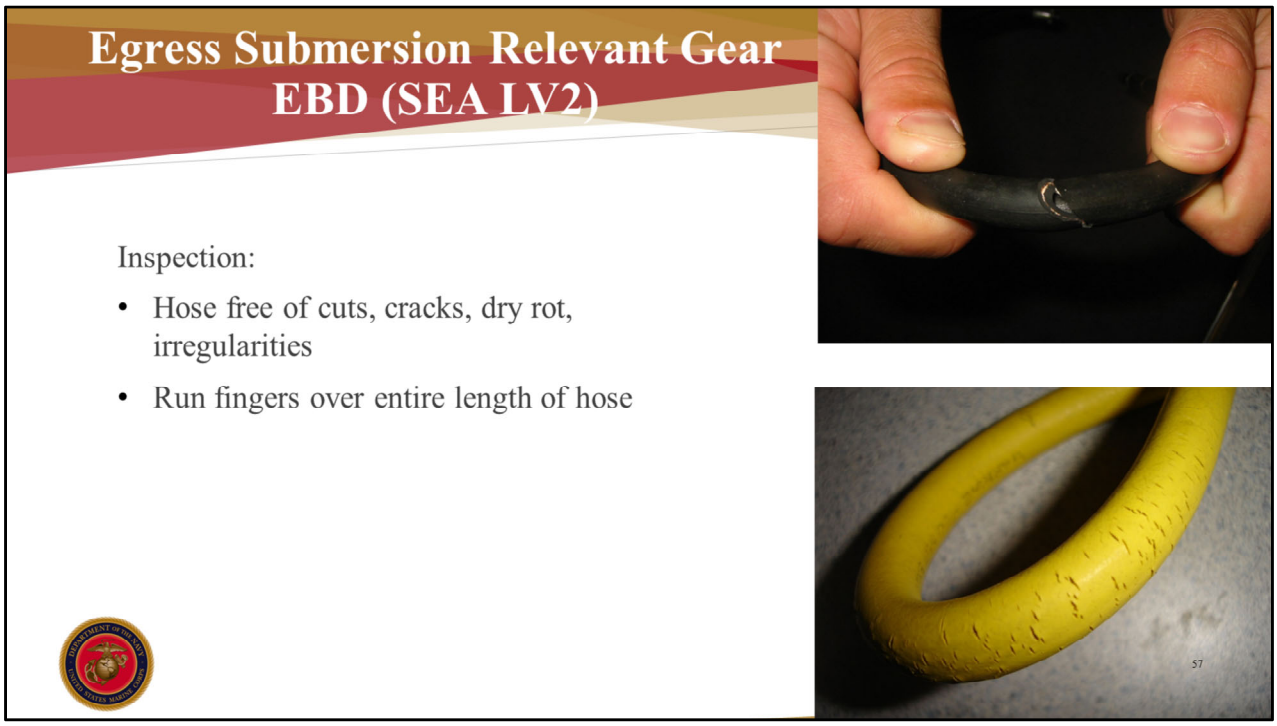
- Demand simply means you must demand air to flow, by inhaling or pressing the soft center spot called the purge button.

If you hear air leaking from the device as you inspect it, immediately report it!



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
EBD Inspection Procedures
As soon as you are issued your EBD, **inspect the device** to ensure it will work properly if needed. Should the device fail any portion of the inspection, you should return it for a replacement.

Cylinder.
- Inspect the cylinder for dents, gouges, cracks, or severe external corrosion.
- Inspect the 1st stage for damage or severe external corrosion and ensure the numbers on the pressure gauge can be clearly read.
- Verify that the hose can rotate freely, 360 degrees at the attachment to the 1st stage.



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
EBD Inspection Procedures (cont.)
Hose.
Inspect the hose for cuts, cracks, dry rot, and irregularities.

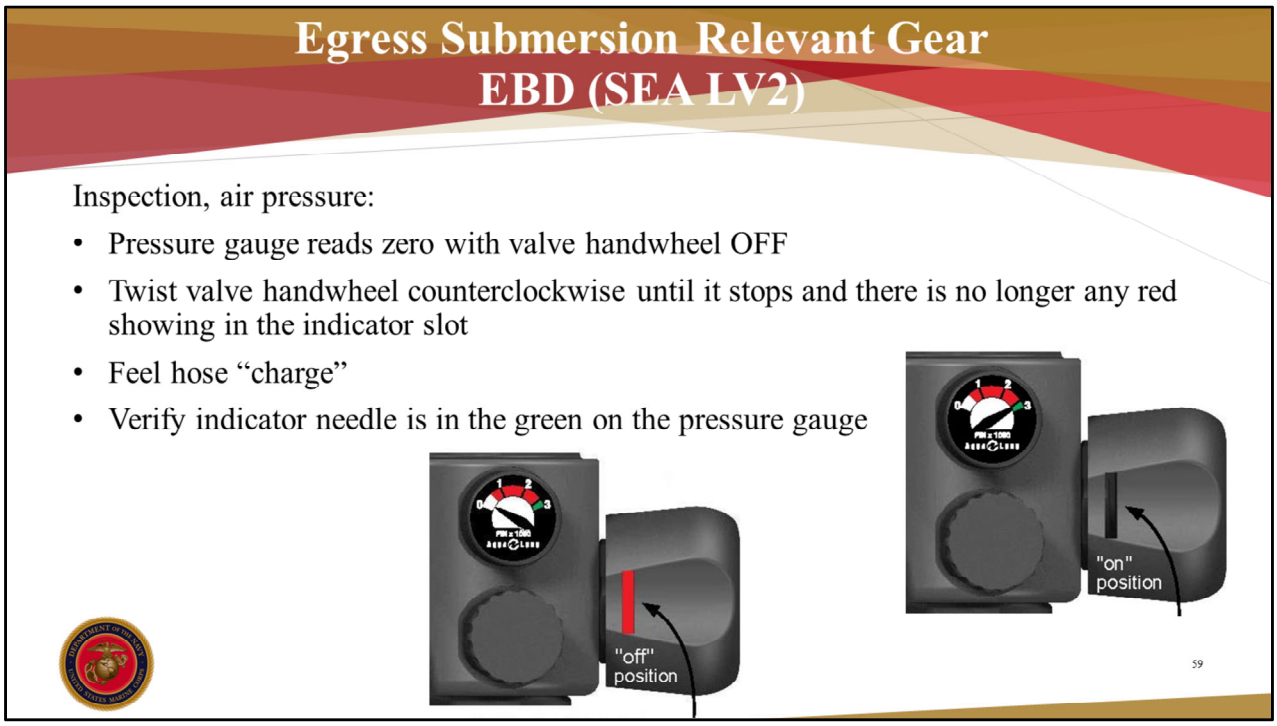
Once the EBD is turned on, the air in the hose will become pressurized. With that in mind, what might seem like a minor cut could be a serious problem resulting in a gradual bleeding-off of air from the bottle. You should carefully look at the hose to ensure there are no minor cuts or even cracks from dry rot.

Additionally, you should run your fingers up and down the length of the hose and feel for any irregularities that might suggest there is a problem with the hose that is not visible to the naked eye, especially as low light situations will often be the environment, you're in when you're issued the equipment.

EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
EBD Inspection Procedures (cont.)
2nd Stage Regulator and Mouthpiece.

- Inspect the 2nd stage regulator for cracks and damage.
- Ensure that the mouthpiece is securely fastened to the 2nd stage regulator with a plastic zip tie.
- The "buckle" on the zip tie should be rotated to the same side as the hose to make it easier to maintain a good tight seal with your lips when breathing.
- Inspect the mouthpiece for cuts, cracks, dry rot, and damage.
- Inspect the mouthpiece bite tabs to ensure they are present and have no tears or damage.

The mouthpiece bite tabs allow you to hold on to your air supply with your mouth, freeing up your hands for egress. It's possible to use an EBD without bite tabs, but it will make it difficult to keep in your mouth without using your hands which will impede egress.



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
Operation

At this point in the inspection, you can feel confident that the device is now safe to turn on. The easiest way to do this is to hold the cylinder and air hose in your left hand with the left thumb over the pressure gauge. **With your right hand, slowly turn the handwheel towards you (counterclockwise) (memory clue – you are the one that needs the air, that is why you turn the handwheel towards you).**

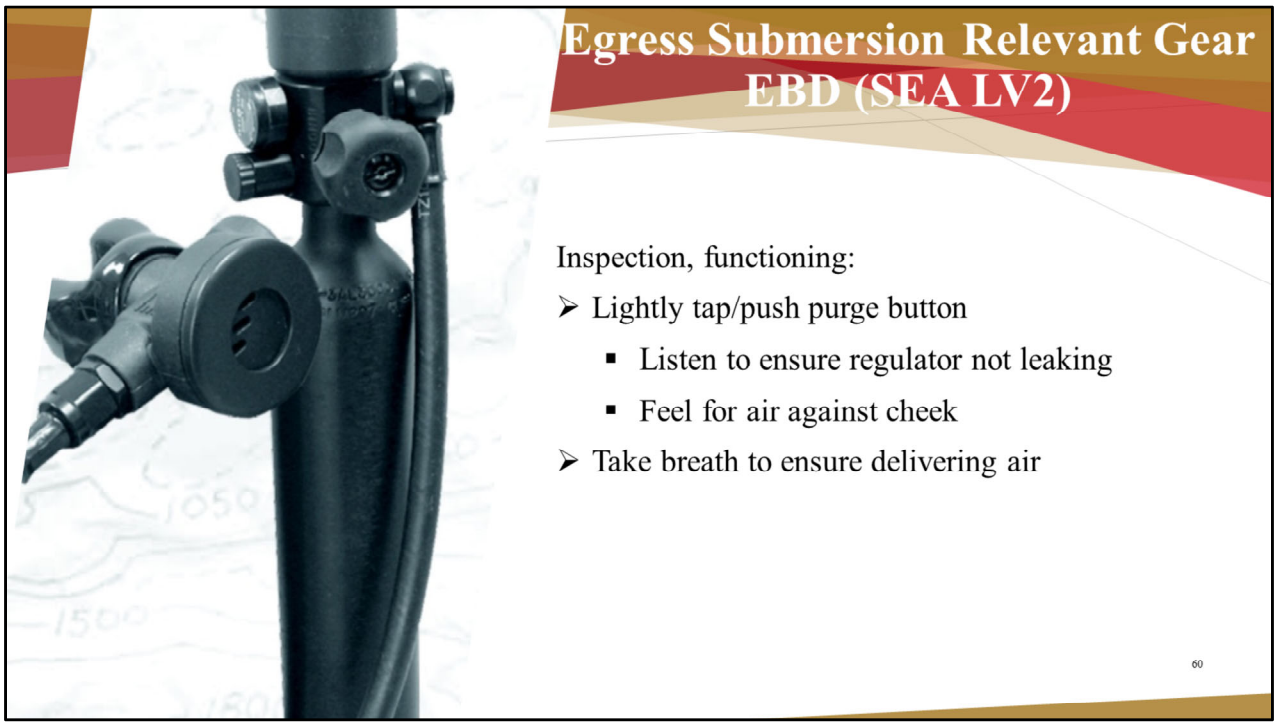
- Verify that you feel the hose "charge".
- Turn the handwheel until it completely stops and then back it off approximately 1/4 turn.

When you turn the EBD ON, you should feel the air pressurize the hose between the 1st and 2nd stage regulators.

- Verify indicator needle is in the green range on the pressure gauge.

When the pressure gauge reads in the green, it represents the safe operating range of 2700 to 3000 lbs. psi.

When someone hands you an EBD always go through all the steps to ensure the bottle is on, and **NEVER use the pressure gauge as an indicator** as a bottle can be off but still show in the green area on the pressure gauge due to line pressure.



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
Function Check.
At this point in the inspection, you are ready to conduct an **operational function check** of the SEA LV2 to verify that it is ready to use.

- Hold the 2nd stage regulator near your cheek.
- Manually purge the regulator by gently pressing and quickly releasing the purge button on the front of the 2nd stage.

You should hear a hiss of air escaping when you purge the 2nd stage regulator. Do not waste air; one light purge only. Remember, every time you push that button, you're using air that could be needed in a survival situation.

Continue to listen and feel to ensure that the regulator is not leaking or free flowing. If air continues to flow after releasing the purge button, quickly tap the regulator against the heel of the hand. This can often "reseat" the inner workings and stop the leakage. IF it continues to leak, immediately notify the Crew chief (or instructors during your training).

Again, if your EBD fails any inspection item or the function check, you should return it for a replacement.

EGRESS SUBMERSION RELEVANT GEAR.

2. **EBD (SEA LV2).**

d. **Donning**.

The LPU-41 EBD holster is designed to carry the SEA LV2. As mentioned earlier, the combination of the LPU-41 with the EBD (SEA LV2) is referred to as the HESP or WEC. Use the following procedure to don the EBD.

INSTRUCTOR NOTE. Remind Marines that, as indicated earlier, the LPU-41 is equipped with an EBD holster. Have them recall the earlier discussion on how to don their LPU.

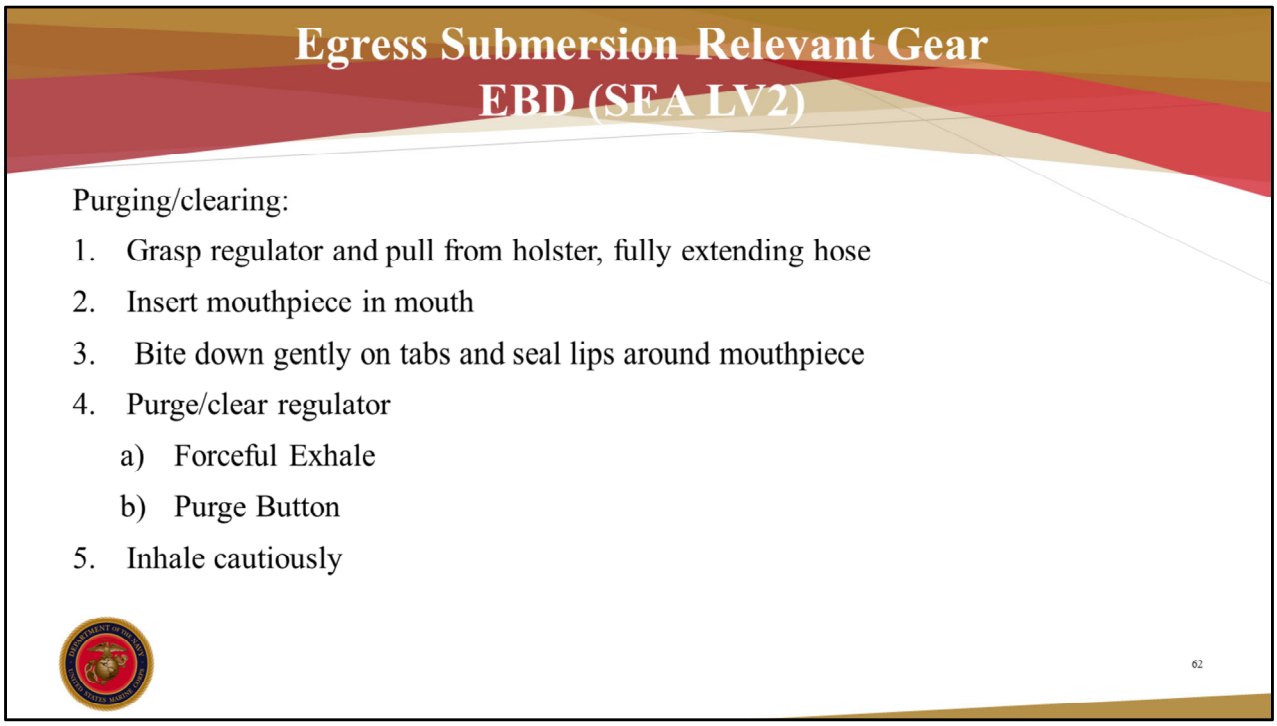
DEMONSTRATION

Show the Marines how to don an LPU and EBD and explain what you are doing as you do it.

- Don LPU ensuring the EBD holster is on the left and the waste strap buckle on the right.
- Verify the EBD holster is securely attached to the LPU.

- Insert the EBD into the holster and ensure it is securely stowed. Wrap the Velcro retaining straps at the top of the holster around the neck of the cylinder to prevent your EBD from falling out.
- Bend the hose in the middle and insert the hose into the second pouch on the holster. Push it completely in to reduce the chances of it catching on something and pulling it. Check and ensure you can easily grasp the 2nd stage at any time.

DO NOT ROUTE THE 2ND STAGE THROUGH THE LPU TO THE TOP OF THE ZIPPER. This used to be a common practice that is no longer allowed due to a known safety issue.



EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
Purging/Clearing.
Pull EBD regulator from the holster, fully extending the hose.

Insert mouthpiece in mouth.

Bite down gently on tabs and seal lips around mouthpiece - You should bite down firm enough to hold the regulator in your mouth, but not so hard as to bite through the tabs. Additionally, if you bite down too hard the jaw muscles can tighten enough to cause your mouth to slightly open which will allow water into your mouth. Using the bite tabs will free your hands up to complete egress tasks.

Purge/clear regulator - Your regulator will be full of water if you fail to put it in your mouth before your vehicle submerges. You will have to purge/clear the water out of your regulator before breathing from the EBD.

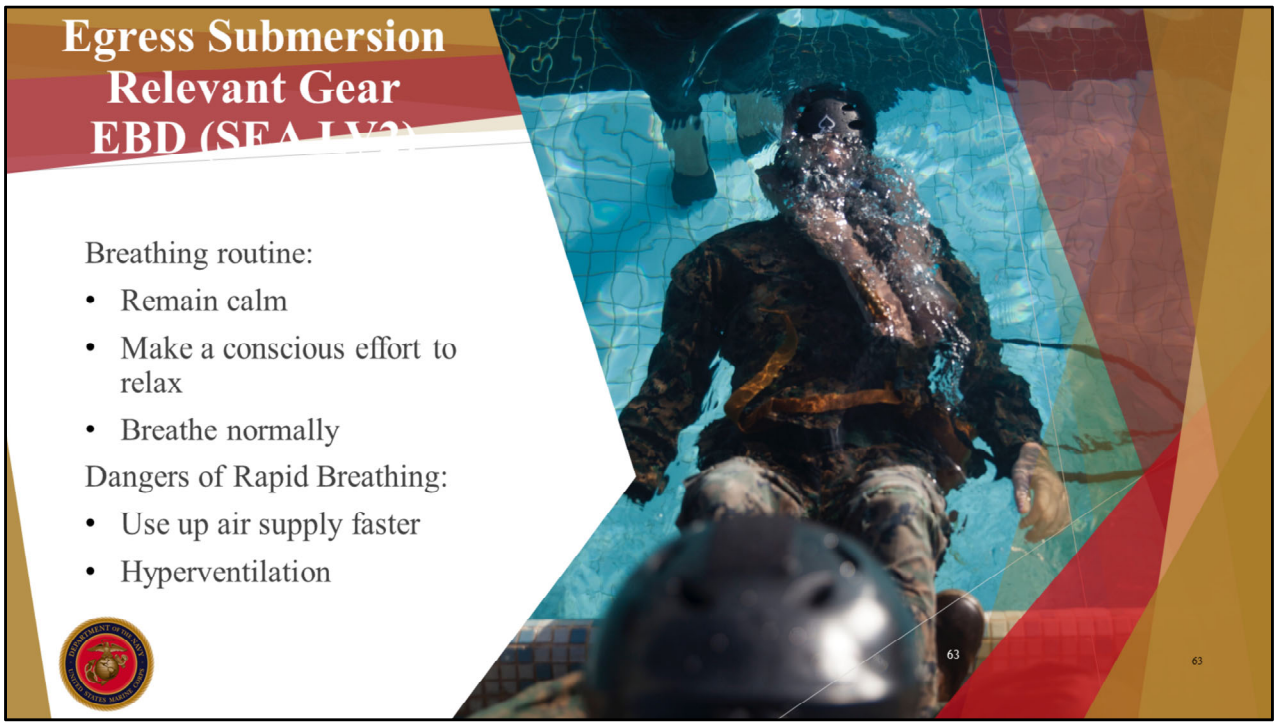
- Forceful Exhale - This method uses the air in your lungs to force any water out through the exhaust ports.

- Purge Button - This method uses the air that is in your EBD to force any water out, primarily through the exhaust ports, although some can come back into your mouth and throat.

You can also use a hybrid method and forcefully exhale at the same time as you push the purge button.

Inhale cautiously - No matter which method you use, you need to always make sure that your first breath is slow and cautious, as there may still be some water in your regulator. If there is still water in your regulator, you should not panic, but simply clear your regulator again.

There's not a right or wrong method, it all depends on the individual and what they feel comfortable with. During your practical app training you will be shown and practice all methods at least once, but after that you will need to choose which method you're going to use. In a real-world situation though, it would be very possible to have little reaction time to get a full breath of air so unless you're highly comfortable in the water or have lots of diving experience the **Forceful Exhale method might not be the preferred method**.



EGRESS SUBMERSION RELEVANT GEAR.

EBD (SEA LV2).

Breathing Routine.

After clearing your regulator, **remain calm and establish your normal breathing pattern**. Likely, this will not come naturally because you might be dazed and disoriented from the accident and submersion. One common trend among survivors of mishaps is that they talked to themselves in their head and make a conscious effort to relax, breathe normally, and get re-oriented. If you do not relax, you will not be able to think clearly and you may breathe too rapidly, which will use up your air supply faster and possibly cause hyperventilation.

EGRESS SUBMERSION RELEVANT GEAR.
EBD (SEA LV2).
Common EBD Issues.
The EBDs that you will be issued are very dependable pieces of equipment. There are, however, two possible issues that need to be discussed.

The first issue is a **Free-Flowing regulator**, which is an actual malfunction of the equipment itself.

- Occurs when air constantly flows from the 2nd stage.
- Detected because as soon as you breathe in, or push the Purge Button, the air will continue to come out and flow out of the exhaust which leads to a rapid depletion of the air supply and a possible over pressurization of the lungs.
- Usually corrected by quickly pressing and releasing the purge button but if you can't correct the problem, remain calm, continue to breathe normally, and complete your egress.

If the air is flowing too fast, allow some of the excess air to escape from the side of your mouth. The Free-Flowing regulator will also sometimes occur when you test

your EBD. If you push the Purge Button and air continues to flow after you release it, quickly and firmly tap the 2nd stage against the heel of your hand, and that will often "reset" it. If this happens ensure you double-check the pressure gauge to make sure the indicator needle is still in the green.

The second issue is a **flooding regulator**.

- Occurs when the regulator fills with water after you have conducted your clearing procedures.
- Clear the regulator again, inhale cautiously, and continue to follow your breathing routine.

This is almost always an issue resulting from operator error and not a malfunction of the equipment itself. Individuals will "smile" after breathing, opening the mouth a little or wriggling their bottom jaw trying to change the position of the bite tabs. Most of the time, this flooding can be prevented by ensuring that your lips maintain a good seal around the regulator. If the regulator continues to flood, you must "breathe around" the water. Continue to clear before each breath while using your tongue as a splash guard.

Instructor Note. Provide a detailed description of "breathing around" a flooded regulator.

In a real egress scenario you cannot afford to focus on a flooding regulator. Your sole focus should be getting out of the vehicle and reaching the surface of the water.

APPENDIX A

Glossary of Acronyms and Abbreviations

ASTC	Aviation Safety Training Center
ASTCs	Aviation Survival Training Centers
CG	Commanding General
DON	Department of the Navy
DON/AA	Department of the Navy/Assistant for Administration
DRMD	Directives and Records Management Division
FMF	Fleet Marine Forces
GFM	Global Force Management
HESP	Helicopter Egress System for Passengers
MAET	Modular Amphibious Egress Trainer
MCB	Marine Corps Base
MCTIMS	Marine Corps Training Information Management System
MCWSTP	Marine Corps Water Survival Training Program
MEF	Marine Expeditionary Force
MEU	Marine Expeditionary Unit
NARA	National Archives and Records Administration
NASTP	Naval Aviation Survival Training Program
NSTI	Naval Survival Training Institute
OPT	Operational Planning Team
PII	Personally Identifiable Information
RTT	Refuse to Train
SVET	Submerged Vehicle Egress Trainer
SWET	Shallow Water Egress Trainer
TECOM	Training and Education Command
UET	Underwater Egress Training
USMC	United States Marine Corps
WEC	Water Egress Capability