



## **Gear**

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## I. Gear Overview

The WCGOP will provide you with the equipment you need to help safeguard your life and perform your job safely and efficiently. The following chapter includes a general overview of all gear, basic use and care instructions for many important pieces of equipment, addresses common problems observers encounter during their contract and provides some information on additional gear you may wish to obtain. Review this chapter carefully and use it as a reference to deal with any concerns prior to contacting the program for assistance.

Once your gear is checked out, you will be responsible for the proper care and use of approximately \$13,000 worth of scientific and safety equipment. Basic wear and tear and even the occasional accident is expected, but remember that you do not own the equipment. Should gear be lost, damaged, or stolen due to negligence, you may be required to pay to replace it. See the table on page 3 for a complete list of gear and replacement costs. You will not be charged for equipment damage or loss due to documented circumstances that were out of your control.



Gear List and Approximate Replacement Cost				
Category	Item	Unit Cost	Quantity	ITQ
Book	Beating the Odds	\$ 15.00	1	v
Book	Guide to the Coastal Marine Fishes of CA, Miller, Lea; 1976	\$ 35.00	1	v
Book	A Field Guide to Western Birds: Roger Tory Peterson; May 1998	\$ 13.60	1	v
Book	Guide to Marine Mammals of Alaska, Second Edition, Wynne; 97	\$ 25.00	1	v
Book	Pacific Coast Fishes, Eschmeyer	\$ 13.60	1	v
EPIRB	EPIRB	\$ 529.00	1	v
EPIRB	Personal Locator Beacon	\$ 365.00		
Forms	Various Forms	\$ 0.45	200-400	v
Knife	Knife, Victorinox	\$ 3.92	2	v
Manuals	Logbook	\$ 20.00	4	v
Manuals	Manual	\$ 70.00	1	v
Manuals	Field Manual	\$ 60.00	1	v
Manuals	WOGOP Species ID Manual Waterproof	\$ 40.00	1	v
Office Supplies	Calculator (10 Key)	\$ 15.00	1	v
Office Supplies	Office Supply Kit (full kits based on checkout form)	\$ 5.00	1	v
Other	5 Gallon Bucket & Lid	\$ 7.00	1	v
Other	Digital Camera and media possibly	\$ 300.00	1	v
Other	Disposable Camera w/flash	\$ 3.00	1	O
Other	Hand Cart	\$ 22.00	1	v
Other	Rope, polyester 25ft.	\$ 7.41	1	v
Safety Gear	Back Support Belt	\$ 14.00	1	O
Safety Gear	Immersion Suit Zipper Wax (Check in Suit) (BEES WAX)	\$ 2.76	1	v
Safety Gear	Earplugs, pairs	\$ 0.50	4	v
Safety Gear	Emergency Strobe-Hemilight	\$ 20.00	1 to 2	v
Safety Gear	Emergency Strobe-C	\$ 25.00	1	v
Safety Gear	Emergency strobe, Firefly	\$ 61.46	2	v
Safety Gear	First Aid Kit	\$ 16.58	1	v
Safety Gear	Hard Hat	\$ 13.28	1	O
Safety Gear	Immersion Suit:	\$ 300.00	1	v
Safety Gear	Knee pads	\$ 15.96	1	v
Safety Gear	PPD- Inflatable	\$ 270.00	1	v
Safety Gear	PPD- Non-inflatable	\$ 64.00	1	O
Safety Gear	PPD belt pouch	\$ 32.00	1	v
Safety Gear	Rescue Streamer	\$ 39.00	2	v
Safety Gear	Safety Glasses	\$ 4.00	1	v
Safety Gear	Whistle	\$ 2.21	3	v
Sampling Gear	Clipboard, Plastic	\$ 18.05	1	v
Sampling Gear	crab calipers	\$ 25.00	1	v
Sampling Gear	fish pick	\$ 3.75	1	v
Sampling Gear	Forceps, 4 1/2", Curved Tip	\$ 2.45	2	v
Sampling Gear	Satellite Phone	\$ 1,200.00	1	
Sampling Gear	Headlamp, Princeton Aurora	\$ 20.00	1	v
Sampling Gear	Length Frequency Board	\$ 55.00	1	v
Sampling Gear	Length Frequency Strips	\$ 5.00	3	v
Sampling Gear	Marine Mammal sample kit	\$ 2.00	1	v
Sampling Gear	Meter Stick	\$ 9.75	1	O
Sampling Gear	Plastic Deck Forms	\$ 10.00	2	v
Sampling Gear	Plastic vials	\$ 0.20	40	v
Sampling Gear	Sampling Basket	\$ 5.00	6	v
Sampling Gear	Sampling Basket Lid	\$ 7.18	1	v
Sampling Gear	scalpel blade	\$ 0.20	6	v
Sampling Gear	scalpel handle	\$ 2.50	1	v
Sampling Gear	Specimen Bags	\$ 0.25	30	v
Sampling Gear	Tally Counter	\$ 2.94	4	v
Sampling Gear	Tape Measure 15 M	\$ 16.50	1	v
Sampling Gear	Platform Scale Marel	\$ 5,640.00	1	v
Sampling Gear	Pelican Case for scale	\$ 440.00	1	v
Sampling Gear	5 kg. Calibration Weights	\$ 215.00	1	v
Laptop	Netbook	\$ 533.00	1	v
Laptop	Verizon broadband service	\$ 68.00	1	v
Laptop	Portable thermal Printer	\$ 350.00	1	v
Laptop	Pelican Case	\$ 169.00	1	v

## Gear Assignments

Gear is assigned at various points during training, starting with the first day of class. Two gear checkout sheets with staff and observer check fields are used to track what you receive and need. See examples of the forms on the following pages.

The first day of training your manuals, ID books, a logbook and an office supply kit are assigned to you. The “WCGOP CS Gear Sheet Day1” form will indicate the items you should receive with a “√” in the *Staff* column. Fill out your name, phone number and port assignment (if known) and check off all the items you have received by placing a checkmark “√” in the *Obs.* column under the *Check Out* heading. Check carefully as you will need all the items at various points during training. Notify the instructor if you are missing any items or the quantities listed do not match. Only check off items that you have actually received and accounted for. The *Staff* column is used by WCGOP staff members to verify that your items have been inspected prior to you receiving them. If an item is not checked in the staff column it will most likely not be in your gear set yet. The forms are collected and filed until you return the gear.

During training you will have a chance to try on various immersion suits and get an idea for any additional gear you may need based on your port assignment. Your debriefer/coordinator can give you some suggestions as well. During the gear lecture you will be introduced to all the equipment that will be provided to you and begin the official process for gear assignment. You have until the end of training to figure out if you would like to request any optional equipment, but if you think you would like something please indicate that as soon as you can by filling out the *Qty.* column under the *Check Out* heading.

Carefully go over everything in class, the gear you are looking at will most likely be yours. A gear sheet will be provided for you to review whenever you are assigned gear. Some items will only be assigned once you complete training to ensure proper fit so don't worry about missing items that you won't need during training.

## WCGOP CS Gear Sheet Day1

<b>Name (print):</b>		<b>Provider:</b>	
<b>Cell Phone:</b>		<b>Advanced Gear Arrangements:</b>	
<b>Port Assignment:</b>			
<b>Date Checked Out:</b>			
<b>PLEASE TAKE NOTES ON SEPERATE PAPER or USE STICKY NOTES UNLESS SPECIFICALLY TOLD TO WRITE IN ID GUIDES.</b>			
Staff	Check out(day 1) Obs. Qty	Item	Check in (end of contract) Qty Obs. Staff
V		1 Guide Books	
V		1 A Field Guide to Western Birds: Peterson	
V		1 Beating the Odds	
V		1 Guide to Marine Mammals of Alaska	
V		1 Guide to the Coastal Mar. Fishes of CA	
V		1 Pacific Coast Fishes, Eschmeyer	
V		1 WCGOP Specs ID Manual full	
V		1 Manual	
V		1 Logbook	
V		1 PHLB Deck Reference sheet	
V		2 ITQ Deck reference sheet	
V		Field Manual (if Ready)	
V		1 Office Supply Kit	
V		1 Clipboard, Storage	
V		1 Mech. pencil lead	
V		1 Calculator (10 Key)	
V		2 Mechanical Pencils	
V		1 Paper clips (bunch)	
V		1 Sharpie	
V		4 #2 Pencils	
V		1 Pen	
V		1 Eraser	
V		1 Pencil Sharpener	
<p><b>Immersion Suit Details: Please indicate the size and brand of suit you will need if you know already. You will get to try them on during training and make changes later if needed.</b></p>			
<b>Brand</b>		Stearns or Imperial	
<b>Size:</b>		Small(red) Universal(orange) Jumbo(green)	
<b>If you do not know your immersion suit size please complete:</b>			
<b>Height:</b>		<b>Weight:</b>	
<p><b>End of contract/Gear check in</b></p> <p><b>Date Checked In:</b></p> <p><b>Checked in By:</b></p> <p><b>Notes:</b></p> <p>Please note that if you do not have an assignment by the end of training you must turn in all books and equipment assigned to you at the end of training. Please be prepared to do so on the last day of class by bringing all items you have been assigned to room 113 after your final exam. If you are unsure about this please contact your coordinator in advance. Those not checking gear out at the end of training may not receive the same books used during training when they check out gear. All gear is expected to be picked up at the Newport field office unless other arrangements have been made during training. All arrangements must be made with you, the WCGOP gear tech and your coordinator.</p>			

Signature: \_\_\_\_\_

Assigned Pick up Time:

## WCGOP CS Gear Sheet

End of contract/gear check in

Name (print):

Provider:

Date Checked In:

Cell Phone:

Advanced Gear Arrangements:

Checked in By:

Port Assignment:

Notes:

Date Checked Out:

**Gear check out: Staff check mark in column 1, observer check mark in column 2, quantity in column 3. Fill out only the check out columns.**

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
1	Immersion Suit Serial # : _____ <i>Small(RED) Universal(orange) Jumbo(green)</i>	
	<i>Stearns or Imperial</i>	
1	Emergency Strobe <b>Exp.:</b> _____	
1	Whistle secured to Immersion suit	
1	Rescue Streamer secured to suit	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Sample Kit</b>	
	1 Otter Box	
	20 Barcodes and plastic vials	
	1 Pack Specimen Bags 5/M/L	
	5 Envelopes	
	2 Ethanol Vials	
	1 LCD Headlamp	
	1 Bees Wax/Zipper Wax	
	3 Ear plugs, pairs	
	2 Forceps, 4 1/2"	
	1 scalpel blade	
	1 scalpel handle	
	1 Scissors	
	1 Victorinox Knife	
	2 Pair Nitrile glove	
	2 Sponge	
	2 Tally Counter	
	1 Scale O-ring Grease	
	2 Large rubber bands	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Forms</b>	
	1 File folder 13 tab	
	1 Pack paper forms	
	20 Flatfish Species ID	
	10 Skate ID	
	25 Misc. Species ID	
	20 Rockfish Species ID	
	15 Fixed Gear Catch	
	100 Species Composition	
	70 Trawl/Prawn Catch	
	1 Spcm collection Sheet	
	1 Additional Logbook(s)	

1	Netbook PSMFC Prop # _____	
	<b>MEID-HEX#:</b> _____	
1	Pelican Case for netbook	
1	Power supply.	
1	Mini USB Mouse	
1	Flexible USB 10 Key	

1	Marel scale Serial # _____	
1	Pelican case with foam	
1	Marel Scale Test form turned in	
1	5 kg weight	
6	D batteries	
1	Quick Calibration sheet	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Optional Gear</b>	
	<b>PFD non-inflatable</b>	
	Size: S / M / L / XL / XXL	
	1 Emergency strobe	
	1 Whistle secured	
	1 Rescue Streamer	
	Back Support Belt	
	Hard Hat	
	Knee pads	
	Disposable Camera	
	Safety Glasses Clear	
	Safety Glasses Smoke	

1	EPiRB/PLB Serial (S/N)# _____	
	<b>Beacon #:</b> _____	
	<b>Battery Exp.:</b> _____	
	<b>Reg. Exp.:</b> _____	

1	<b>PFD - mustang/Stearns Inflatable</b>	
1	Rescue Streamer on PFD	
1	PFD belt pouch on PFD	
1	Whistle on PFD	
1	Emergency Strobe-Cand Clip On PFD	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Sample Gear</b>	
	1 Clipboard, Clear	
	1 gear dolly	
	1 5 Gallon Bucket & Lid	
	1 Sampling Basket Lid	
	1 Sampling Baskets (2-10)	
	1 crab callipers	
	1 First Aid Kit	
	1 Tape Measure 10-15M	
	Length board aluminum	
	Length strip corners	
	3 Length Frequency Strips	
	1 Meter Stick	
	1 Rope, polyester 25ft.	
	1 fish pick	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Specialty Assigned Gear</b>	
	GPS(Port dependent)	
	S/N: _____	
	VHS(Port dependent)	
	S/N: _____	

1	PFD - mustang/Stearns Inflatable	
1	Rescue Streamer on PFD	
1	PFD belt pouch on PFD	
1	Whistle on PFD	
1	Emergency Strobe-Cand Clip On PFD	

Check out Staff Obs. Qty	Item	Check in Qty Obs. Staff
	<b>Optional Gear</b>	
	<b>PFD non-inflatable</b>	
	Size: S / M / L / XL / XXL	
	1 Emergency strobe	
	1 Whistle secured	
	1 Rescue Streamer	
	Back Support Belt	
	Hard Hat	
	Knee pads	
	Disposable Camera	
	Safety Glasses Clear	
	Safety Glasses Smoke	

Signature: \_\_\_\_\_

## Books, Manuals and ID Guides

The books, manuals and ID guides you have received are valuable tools and will need special care to be used effectively in a marine environment. Paper books should be left inside or protected from wet conditions at all times. You have been given special waterproof ID guides to assist you in identifying species on deck. When you need to confirm or narrow down your ID's with a paper book, please do so only after removing gloves and moving to a location that ensures the book will not get wet or dirty. The paper books are not intended to be used as keys on deck. Put the organism to the side until you are done sampling and can clean up to perform a proper ID without ruining a book. Once a book gets wet it becomes very difficult to use. See the list below for reference.

Waterproof guides should be cleaned regularly. Simply wipe each page with a damp sponge and allow to dry. In extreme cases, fill a sink with a mild bleach and soap solution and swish the book around, refill the sink to rinse and toss in a dryer with several dry towels on low heat for short periods.

- Pacific Coast Fishes: Eschmeyer (Paper)
- Coastal Marine Fishes of California: Miller & Lea (Paper)
- Marine Mammals of Alaska: Wynne (Water proof plastic)
- A field Guide to Western Birds: Peterson (Paper)
- WCGOP Species ID Manual (Water proof plastic)
- WCGOP Manual (Paper)
- Field Sampling Manual (Write in the rain)
- Observer Logbooks (Paper)

Please do not write in books or ID guides unless directed to do so. During the species ID lectures you may be asked to make specific changes (errata) to the manuals in specific locations and with exact wording. Please write as clearly as possible using only the writing tool directed to use. If you need to add personal notes please use the post it notes provided. While the personal information you may add makes sense to you, it may not to someone else and has on occasion been found to be wrong.



### Primary Sampling Gear

- Motion Compensation Scale
- Length Frequency Board/Strips
- 15 m. Measuring Tape
- Tally Counters (lubricate with WD-40 or the like by spraying through knob.)
- Meter stick
- Baskets
- 5-Gal Bucket
- Fish Pick
- Knife/Scalpel/Scissors
- Crab Caliper (lubricate and slide often or it may seize up)
- Forceps
- Waterproof storage box
- Specimen Bags, Otolith Vials, Envelopes
- Forms, Clipboard, Pencils, Paperclips, etc
- Disposable Camera
- Rope, Gear Dolly
- Netbook Computer/Carrying Case



Above is a list of the basic gear you will need to do your job. Later in the chapter you will find detailed information on the scale and netbook. During lecture we will go over the specific care and use of each item. Your tools will need occasional lubrication and constant cleaning. Most vessels have some kind of spray lubricant on board that you can borrow from time to time. Some tools will only be used occasionally so it's important to check them periodically to ensure they will work when needed.

Keep all equipment as clean as possible. This will make it much easier for you to clean your equipment when returning it. Use deck hoses to rinse slime, scales, and blood off your baskets, deck sheets, length boards, clipboards, scalpel and knife after each use. Many vessels have high pressure hoses which are excellent for cleaning equipment.

Whenever you get a metal tool wet or dirty be sure to clean and rinse it with fresh water at the end of your trip. Rust and corrosion will quickly inhibit gear that is not well maintained. If you store your tools in a basket you will need to rinse them after every trip regardless of use. Use the bucket or waterproof box to keep rarely used items dry and available when needed.

## Rain Gear

WCGOP does not provide rain gear. You will need to acquire it on your own. The average cost for a new set of rain gear is \$300-\$400. Most gear in this price range will be fairly durable. Heavy duty pvc rain gear is recommended. High quality gortex is also an option but is much harder to keep clean. Check with your provider as they may be able to get discounts.

At a minimum you will need:

- **Rain gear:** bib overalls and jacket with hood (1 set)
- **Boots:** Xtra-tuff brand highly recommended (1 pair)
- **Boot insoles:** wool or felt insoles made for Xtra-tuffs (2 pairs)
- **Gloves:** heavy rubber gloves- strong enough for work, but flexible enough to write (6-8 pairs)

Some other options are:

- Hoodless or hooded lighter weight pull over rain coat.
- Neoprene cuffs to keep water out.
- Inner pockets on rain pants for knee pads



## Safety Gear

- Immersion suit
- Personal Flotation Device (PFD) Inflatable assigned
- Strobes
- Whistle
- EPIRB
- Safety Glasses/Ear Plugs
- First Aid Kit
- Optional Gear
  - Hard hat
  - Back brace
  - Kneepads
  - Non inflatable PFD



You will receive detailed instruction on the use and maintenance of most of your safety gear during training and later in this chapter. Please pay close attention and follow all procedures. WCGOP can provide you all the essentials, but when it comes down to it, it's all up to you. A basic first aid kit is included in your gear. You will be responsible for keeping it stocked so it is yours to keep once opened.

In addition to automatically assigned gear, we have a selection of optional safety gear available should you desire it. Most observers find these items of little use and rarely actually wear them, which is why we do not require you to take them. Please only request gear you will actually use. Hard hats are generally available anyplace they are required.

By default we assign you an inflatable PFD. Most observers find them much more comfortable, cooler, and easier to keep clean. We have selected them because they are more likely to float you face up should you end up in the water unconscious. If you desire a non-inflatable PFD you may check one out as well. Whichever you use, you are required to wear it at all times while working on deck.

## Cameras

You are required to take and submit images of certain species with your species ID forms to assist in confirming proper identification. Cameras are for species identification documentation only. Personal use is not allowed. Images of the vessel, crew or fishing activities should never be taken unless you have been specifically directed to do so (these are always noted in the log book). Having a camera on a vessel is always a controversial prospect. The crew may feel that you are trying to “catch them” at something and be very wary of your taking pictures. It is imperative that you follow instructions carefully and communicate clearly with the vessel if confronted. You may not publish images where a vessel or crew member may be identified. Misuse of images is grounds for decertification.

### *Camera Options and rules*

- Disposable camera from WCGOP
  - Apply a barcode to the camera if one is not attached.
  - Maintain a detailed log of all images in log book (page 108).
  - Write barcode and image number on the appropriate species ID sheet.
  - Send camera to debriefer for developing with a copy of the log.
- Personal camera
  - Write image numbers on the appropriate species ID form as you take them.
  - Print images out or send to debriefer for printing.
  - Attach printed image to Species ID Form.
  - Always include date and time stamp on image if possible.
- Catch Monitor camera
  - Place camera in a zip lock bag and cut a hole for the lens to fit out.
  - Write image numbers on the appropriate species ID sheet as you take them.
  - Print images out or send to debriefer for printing.
  - Attach printed image to Species ID Form.
  - Always include date and time stamp on image.
- WCGOP waterproof camera (available 2012)
  - Watermarking capabilities turned on the watermark should never be turned off.

- Write camera serial number on each species ID form.
- Write image numbers on the appropriate species ID form as you take them.
- Print images out or send to debriefer for printing.
- Attach printed image to Species ID Form.
- Always include date and time stamp on image.

### ***Basic Rules***

- All species images must be cataloged on the species ID forms. Just write the file name(s) on the top of the form.
- Special project images that have been requested must be logged (logbook page 108).
- All logs and images must be turned in.
- Only images of fish/samples to be taken unless otherwise specified.
- Misuse of images is grounds for decertification.
- A photo slip/specimen label should appear by each fish in the image which will identify the trip, haul, date and species as ID'ed. If necessary for image take one picture of form followed by the fish images.

### ***Taking pictures***

When photographing specimens, do not get too close and try to hold the camera at an angle to prevent glare or flash reflections. If digital, review each image and retake as needed. Wait to take pictures until the end of your sampling if possible. This will allow you to take time to take a good photo. Clear a spot and work slowly.

Document your pictures while you are taking them. Write up a species ID label or form and include it in the image next to the fish. The form should have the species name, trip number (or vessel name if not known yet), haul number, and date filled out prior to photographing the specimen. It is helpful to place the fish on a length strip for scale.

Take multiple pictures of each fish from different angles: top, side, front, and bottom (just roll the fish). Try to spread out fins and show special identifying characteristics. Close ups are helpful for small characteristics.

It is best to document each photo soon after taking the picture. Go through digital images and write the corresponding numbers/file names directly on the form. The form should match the one in your picture.

### **Sat Phone**

Observers covering the mothership catcher vessels will be issued satellite phones for communicating with the observer program. These phones are to be used for data transmission and/or emergencies only. Your provider should know if you need one and should contact:

**Russell Haner**

Russell.Haner@noaa.gov  
(541) 270-5007

You will need to either pick up a sat phone, or have it sent to you prior to boarding the vessel. For UPS delivery you must have a physical address.

### ***To use the phone***

1. Go outside and find a clear space (no overhead obstructions)
2. Turn the phone on by pressing the red on/off button
3. Wait for a satellite connection
4. Dial 001-(area code)-phone number. 001 is the US country code.
5. Make your report as described in training.

## II. Transporting and Securing Gear

More gear is lost or damaged while being transported or stored on deck than any other way. To mitigate this follow a few basic rules.

When hauling gear from car to boat use the most secure method possible. If the marina has carts with sides available these are the best option. They are usually designed to take the bumps often encountered on the docks. Be sure you can handle what you put in the cart. More trips are preferable to diving to recover your gear. When using the cart provided by WCGOP put the heaviest items on the bottom. Secure loose items to prevent them from falling out when passed to the vessel. If necessary tie the items to the cart, see an example below.



When passing gear to the vessel try to find someone to help. If no one is available, toss what gear you can safely toss. Balance items on the rail and step into the vessel and lift them the rest of the way on. If the deck is higher or lower than the dock you may need to crane your gear on or tie and lift/lower it. When using a crane ask the vessel crew to operate the controls. You should stabilize the gear with a guide line to help keep it from swinging and direct the landing. Be sure that you balance the load properly to avoid tipping gear. When transferring over water secure a line to your scale to assist with recovery should it fall in. Be sure the line is long enough to reach and either secured to something or held in a way that will not pull you in. 65lbs. dropped from any height can pull you off balance.

### *Storing gear on deck*



Best practice for gear that must be left on deck is to always assume there will be bad weather. Even on a clam day, the actions of the vessel can cause water to wash over the deck. Find a place to put your gear, packed in baskets, buckets, and cases, that does not have a scupper or open rail nearby if possible. Pack the gear as tight as you can. If your baskets can slide around in a bin, then a wave or sharp turn can knock it over and spill the contents. Gear that slides can easily end up overboard.

Always put away all your gear after each haul unless you will remain on deck to watch it. If you are going to sleep you should secure it as well. Store the scale and the weight in the case at all times when not in use. Find a place to tie your gear

down that is out of the way of the crew. If they have to move your gear it most likely will not be secured properly.

Always bring your pfd inside. There is usually a rain gear storage area for just that purpose. Even on the way in at the end of a trip you should keep items you want to be dry inside. There has been more than one instance of water covering the deck as the vessel goes over a sand bar or through a bay or marina entrance. Storing your rain gear and pfd in a basket with holes and leaving it on deck is a sure way to end up with soaking wet rain gear and an inflated life vest.



### III. Maintain Your Gear

Observer equipment is used in a very harsh environment and often subject to a great deal of abuse. Saltwater, dirt, fish slime, scales, moisture, transport, regular use, cold and heat will all have a deleterious effect on your sampling and safety equipment. To function properly, many items will need regular maintenance. You are responsible for keeping all of your gear clean and in good working order and safe while in the work environment. The WCGOP expects you to perform regular maintenance of the safety equipment on a monthly basis and record the details in your log book with the Observer Safety Equipment Checklist.

The Observer Safety Equipment Checklist is located in the Observer Logbook on page 55. Go through the checklist every month at a minimum (before every trip is recommended) with your gear in hand and check off each item on the list that passes inspection. Include in the comments expiration dates, any servicing you perform and general comments. If an item does not pass inspection bring it to the attention of your coordinator and the WCGOP gear technician immediately (see the section “Reporting a Problem” in this chapter). They will get you a replacement or assist you in repairing the item as quickly as possible. It is important to do timely inspections so that if replacement safety gear is needed it can be issued before your next trip. You should not board a vessel with malfunctioning equipment.

Again, it is very important to inspect your safety gear regularly as faulty gear may be of no help should you need it. Inspections are also a great time to practice using your safety gear, such as donning your immersion suit. It is the observer's responsibility to carefully inspect their safety gear and ultimately to ensure their own safety. Use the following sections of this chapter to learn how to properly inspect each item.

### Equipment Test Checklist

Checkers should maintain program issued safety equipment on a monthly basis to ensure its working properly. If any item does not pass the examination, notify your coordinator immediately so it may be replaced. Check your equipment at a minimum of once per month. **Check off only those items that pass.**

Inspection date #1: \_\_\_\_\_ Inspection date #2: \_\_\_\_\_  
 Inspection date #3: \_\_\_\_\_ Inspection date #4: \_\_\_\_\_

#### 406 EPIRBs

	1	2	3	4	Comments
No physical damage? (cracking, corrosion, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tested P/LB?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Battery expiration date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date 1: _____ Exp. Date 2: _____ Exp. Date 3: _____ Exp. Date 4: _____
Registration expiration date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date 1: _____ Exp. Date 2: _____ Exp. Date 3: _____ Exp. Date 4: _____
No antennae damage? (cables, window # base)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

#### Beacon ID: \_\_\_\_\_

#### PLB

No physical damage? (cracking, corrosion, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Tested P/LB?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Battery expiration date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date 1: _____ Exp. Date 2: _____ Exp. Date 3: _____ Exp. Date 4: _____
Registration expiration date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exp. Date 1: _____ Exp. Date 2: _____ Exp. Date 3: _____ Exp. Date 4: _____
No antennae damage? (cables, power switches, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

#### Beacon ID: \_\_\_\_\_

#### Immersion Suit

No rips/tear/holes in Neoprene?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Seam thread and inner seal glue intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
No grommeted strain/ handles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Zipper seems in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Zipper waist? (if necessary)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps attached securely?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Whistle securely attached?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Whistle tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

#### Inflatable PFD

No rips/tear/holes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Seams in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps and clips in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps attached securely?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
CO2 indicator green?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
CO2 cylinder seal intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Complete manual inflation test?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Date 1: _____ Test Date 2: _____

#### Workvest PFD

No moldew?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
No foam brittling?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
No foam water logging?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
No rips/tear/holes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Seams in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps and clips in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps attached securely?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Straps tested?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

## IV. EPIRB/PLB Basics

Distress beacons are your lifeline to rescue in the event of a life threatening emergency at sea. WCGOP will provide you with either a water activated EPIRB or a manually activated PLB. Be sure you are very familiar with the use and maintenance for the unit assigned to you by reviewing the appropriate section in this chapter. It's a valuable tool that you may never use but could save your life if you ever need it.

### How it works.



1. Distress radio beacons transmit signals during distress situations.
2. Instruments on board satellites in geostationary and low-altitude Earth orbits detect the signals transmitted by distress radio beacons.
3. Ground receiving stations, referred to as Local Users Terminals (LUTs), receive and process the satellite downlink signal to generate distress alerts.
4. Mission Control Centers (MCCs) receive alerts produced by LUTs and forward them to Rescue Coordination Centers (RCCs), Search and Rescue Points Of Contacts (SPOCs) or other MCCs.
5. The points of contact for your beacon are:
  - The owner of all WCGOP beacons Jim Benante/ Eric Brasseur
  - Your provider.
  - Your providers secondary contact.
  - You at the mobile number you gave to your employer.

## V. EPIRB Care and Inspection

The satellite<sub>2</sub> 406 EPIRB is a buoyant water and manually activated emergency locator beacon. While on a vessel keep your EPIRB in a location that makes the most sense to you. Always realize the most important aspect is that it be available to you and work properly when you need it. Carefully inspect your EPIRB often. Store and transport it appropriately. Contact your coordinator and the WCGOP gear technician with any problems immediately.

### Timing

The WCGOP suggest you visually inspect your EPIRB before and after every trip. This will ensure you have it and that it did not incur any damage or accidental activation while on the vessel or during transport. A physical inspection and communication test must be performed and logged every month.

### Activation

The beacon can be activated by placing the beacon in water OR by lifting the thumb switch to a vertical position, sliding it toward the antenna and pushing down to the opposite side of the beacon. Activating the beacon in this manner breaks off the Activation Indicator Plastic Pin and allows the switch to properly seat, showing the "■" symbol (ON).

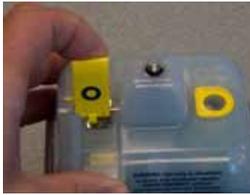
### Inspection

1. Physically inspect the body of the EPIRB for cracks. (see image below)
2. Check for missing screws. If screws are missing the internal workings may be compromised.
3. Check the spool of line for tangles.
4. Verify the beacon number. There are 2 locations for the beacon number. **they must match!**
  - The white sticker with the serial number usually on the clear part of the beacon. This is the Unit Identification Number (UIN) assigned by the manufacturer.
  - The NOAA sticker on the Yellow part of the beacon. This number indicates which beacon is registered.
5. Check the Registration Expiration date (located on the NOAA Sticker)

6. Check the Battery Expiration date (usually on the thin side of the yellow body)
7. Check the rubber seal on the antenna base (see picture) for cracking. Apply **silicon** grease if needed.
8. Check the antenna for cracks, corrosion, reflective tape, and that it is screwed securely to the base after inspection.
9. If the unit fails inspection at any point, contact your coordinator and the WCGOP gear technician immediately.



## Testing



*Please read all instructions before performing any of the tests.*

### Passing Test



1. Lift the yellow tab on top of the EPIRB HALF WAY up. The tab cannot be flipped all the way over due to design. Do not force the tab. See Activation.
2. Release the tab to its original position The O side should be up.
3. A red xmit LED and green test LED light will flash and beep once simultaneously.
4. The red and green lights will blink 3 times with 3 accompanying beeps. The 3<sup>rd</sup> is slightly late.
5. The green will stay lit one second on the 3<sup>rd</sup> beep
6. Finally the strobe will flash while the green light remains lit.

### Failed Test

1. The test stops at any point other than step six.
2. The green light and strobe do not fire.
3. Call your coordinator and the WCGOP gear technician immediately.

TEST	SUCCESS	FAIL
Initial Test Start	🟢🔴 Green, Red LED	
Check Data Integrity	Beep, 🟢🔴 Green, Red LED	Test stopped
Check 406 MHz Synthesizer	Beep, 🟢🔴 Green, Red LED	Test stopped
Check RF Power/Battery	Beep, 🟢🔴 Green, Red LED	Test stopped
Successful Test	🟢 Green LED, Strobe	

**\*NOTE:** The "beeps" are a very high-pitched tone that many people may not be able to hear.

### ***Accidental Activation***

1. First deactivate by drying or returning switch to the off position
2. **Reporting of False Alarms:** Should there be, for any reason, an inadvertent activation or false alarm, **it must be reported to the nearest search and rescue authorities.** The information that should be reported includes the EPIRB 15-digit Unique Identifier Number (UIN), date, time, duration and cause of activation, as well as location of beacon at the time of activation. **To Report False Alarms in the United States Contact any of the following:**
  - **Atlantic Ocean/Gulf of Mexico USCG Atlantic Area Command Center Tel: (757) 398-6390**
  - **Pacific Ocean Area / USCG Area Command Center Tel: (510) 437-3700**
  - **USCG HQ Command Center Tel: (800) 323-7233**
3. Immediately contact your coordinator.

### **Storage**

Keep your EPIRB in a secure location when not in use. You are responsible for the unit and will be required to pay the full replacement cost should negligence on your part result in the loss, damage, or theft of the EPIRB. Many observers store the 406 with their immersion suit. This can lead to damage as suits are often tossed around when boarding and disembarking a vessel. If you store it with your immersion suit, ensure it is well padded and will not fall out of the bag if it unbuttons. Transport your suit as you would your own laptop. The beacon can be accidentally activated if stored in a wet environment. If your suit gets wet in its bag or you have worn it in the water, remove the EPIRB to ensure it does not activate.



This unit was cracked while being kept in an immersion suit. The suit was tossed on deck from the dock resulting in the damage. This may be considered negligence on your part.

### **Collect information to report a problem**

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

1. Record the beacon number from the UIN label.
2. Write down the specific problem.
3. Contact required personnel.
4. If the issue is registration related the problem stop here.
5. Prepare the EPIRB for shipping by taping a note listing the issue to the unit. Tape down the activation switch.

## VI. PLB Care and Inspection

The WCGOP has several types of PLB's that may be issued to observers. Please review the section pertinent to the type of PLB you have been assigned. Personal Locator Beacons (PLB) are manually activated emergency locators, in an emergency situation you must trigger the PLB yourself. Keep your PLB readily accessible. You will be given a PLB pouch that attaches to your PFD so that you can wear your PLB while on deck. If you are in a situation requiring the donning of an immersion suit, remember to retrieve your PLB and bring it with you. Put it in the suit with you if necessary. The PLB needs a clear line of site. Once activated it must be kept in the correct orientation to function properly.

### Timing

The WCGOP suggest you visually inspect your PLB before and after every trip. This will ensure you have it and that it did not incur any damage or accidental activation while on the vessel or during transport. A physical inspection and communication test must be performed and logged every month.

### AquaFix™ 406 GPS PLB-200 (I and I/O)

#### Activation

To activate your PLB in an emergency situation, unfasten the antenna from the case or holster and move it into the upright position. Lift the holster cover revealing the keypad. Depress the “test” and “GPS I” or “GPS I/O” buttons simultaneously for at least 1/2 second and less than 5 seconds. Your PLB is now activated. While transmitting your emergency signal, the red LED will flash once every 2 seconds alerting you that your PLB is activated. If GPS data is present in the PLB via the **GPS I** or **GPS O** the red LED will turn off and the green LED will take over flashing once every 2 seconds.

#### Activation with GPS I/O (P/N 2797.4 Only)

The AquaFix™ 406 GPS I/O is also equipped with an Onboard GPS receiver. Once activated the AquaFix™ 406 GPS Onboard GPS engine will start up and search to find your LAT/LON and incorporate it into your 406 MHz signal.

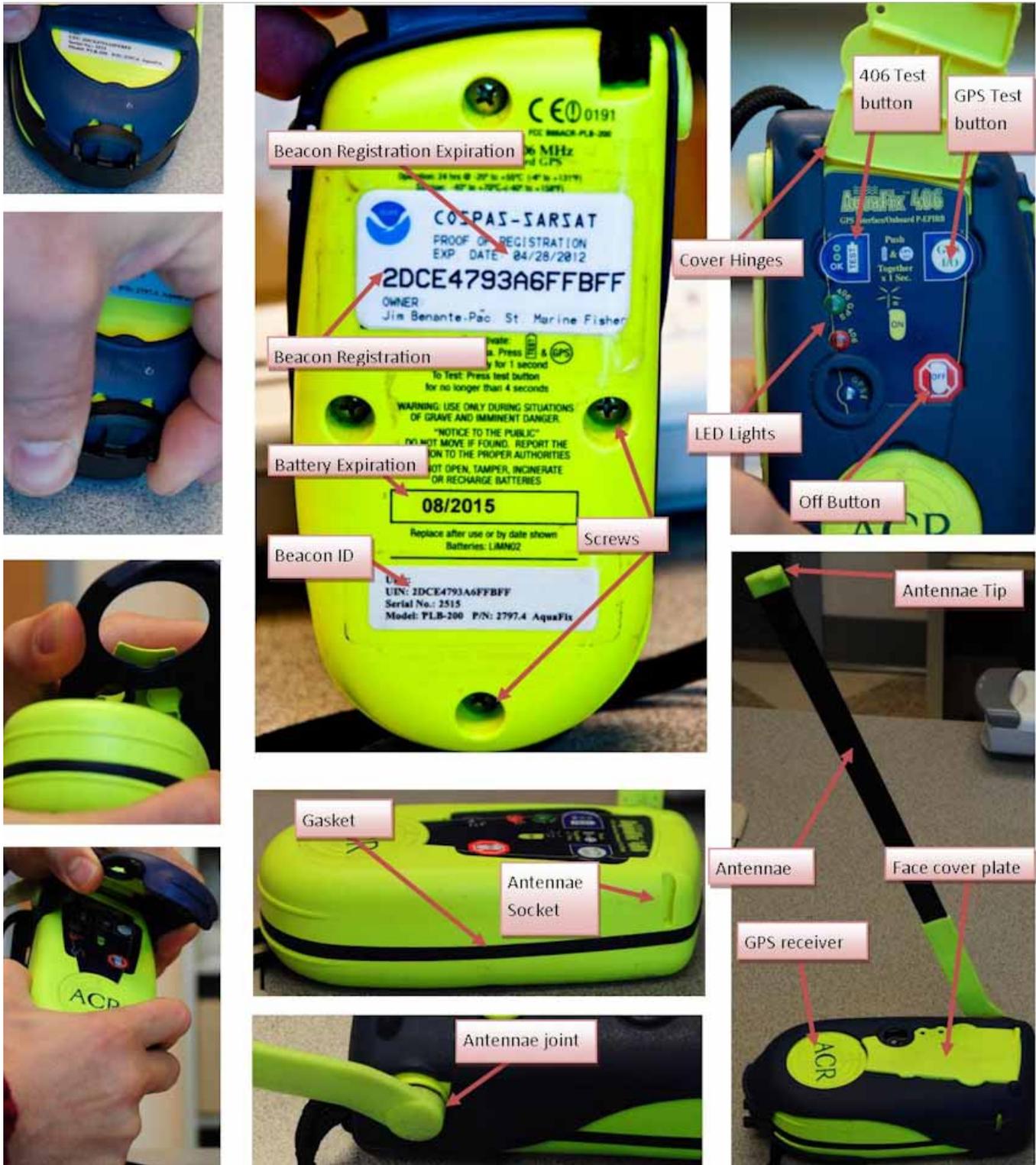


When the **AquaFix™ 406 GPS I/O** is turned ON, the **GPS Onboard** receiver is also immediately turned ON and will immediately begin acquiring data. As soon as the GPS receiver acquires good positioning data the red LED will stop blinking and the green LED will begin flashing once every 2 seconds. Once good global positioning data has been obtained, the GPS receiver waits for 20 minutes before looking for new positioning data again. If for any reason a time period of 4 hours passes without the GPS receiver being able to update the last good set of GPS coordinates, the message transmitted by the **AquaFix™ 406 GPS I/O** will revert to default data. At this point the green LED will stop blinking and the red LED will flash once every 2 seconds. If at any time after this good GPS data is obtained, this data will be transmitted, the red LED will stop blinking and the green LED will begin flashing again.

#### ***Antenna position***

For maximum performance you must deploy the beacon antenna into the proper position as shown. If at all possible, be sure the antenna is positioned facing the sky and avoid submerging in water. This device is intended to operate on or above the ground or while attached to your person above the water line.





## Inspection

1. Remove the case completely to inspect the body.
  - To open the case release the antennae and then press the tabs on the bottom together while lifting up.
  - To remove completely gently lift up the front of the case and rotate it to the upper right or left while firmly grasping the unit.
2. Physically inspect the body and case of the PLB for cracks. If the case is cracked double check the unit.
3. Check for missing screws. If screws are missing the internal workings may be compromised.
4. Inspect the gasket that surrounds the body. It should feel soft and be unbroken.
5. Verify the beacon number. There are 2 locations for the beacon number. ***They must match!***
  - The white sticker with the serial number is usually on the bottom of the back. This is the UIN or Unit Identification Number assigned by the manufacturer.
  - The NOAA sticker is usually on the upper part of the back of the beacon. This number indicates which beacon is registered.
6. Registration Expiration date (located on the NOAA Sticker)
7. Battery Expiration date (on back near the middle screws in a blue outlined box)
8. Check the antenna rotation joint to be sure the antennae moves freely and clicks in the appropriate spots. It should feel like it clicks at about 90 degrees to the unit.
9. Check the antenna for permanent bends, corrosion, cracked plastic and the plastic tip that locks it down.
10. Wipe with a damp cloth if cleaning is required.
11. Replace the case and ensure the closure clicks in completely.
12. If the unit fails inspection at any point, contact your coordinator and the WCGOP gear technician immediately.

## Testing

### *Passing Test*

**PLEASE READ ALL INSTRUCTIONS BEFORE PERFORMING ANY OF THE TESTS.**

1. Hold the **406 test button** for at least ½ second and less than five seconds.
2. Your PLB will sound an initial beep and green LED flash to signify the test has begun.
3. The green LED will flash a second time to indicate that the test was successful.

**Note:** During a self-test your PLB will send a 406 MHz signal coded as self-test to the satellite system. The homing signal at 121.5 MHz is inhibited during a self-test; this allows you to test your PLB any time during the day without causing any false alarms.



### *Failed Test*

1. If you encounter only the initial green LED flash alone, your PLB has failed the test.
2. If your PLB flashes an initial Red LED at the beginning of the test, this indicates that your electronic battery witness seal life has been broken and you have used more than 1 hour of battery life.
3. Call your coordinator and the WCGOP gear technician immediately.

## **Aqualink™ 406 GPS PLB-350C and 350B & ResQfix 406 GPS PLB-300 with floatation pouch**



### ***Activation***

1. Unfasten the antenna from the case.
2. Move it into the upright position
3. Depress the ON/OFF button for 1 full second.

You will hear a “beep” and your beacon is now activated. While transmitting your distress signal, the red LED will flash once every 2 seconds, alerting you that your beacon is active. An additional “beep” will sound every time your beacon transmits data to the satellites (roughly every 50 seconds).

If your unit is activated, the GPS receiver will start up, search to find your LAT/LON and incorporate it into your 406 MHz signal. As soon as the GPS receiver acquires valid positioning data, the red LED will stop blinking and the green LED will begin flashing once every 2 seconds.

The same GPS data will be sent with each 406 MHz signal for the next twenty minutes. At that time the internal GPS will start up again, search to find your LAT/LON and incorporate it into your next 406 MHz signal. If for any reason the internal GPS cannot update your LAT/LON, your last position will be used for the next four hours. At that time the green LED will stop blinking and the red LED will flash once every 2 seconds until new GPS data is obtained.

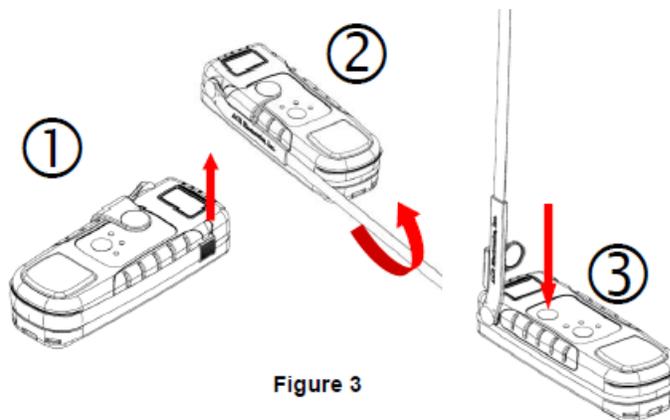


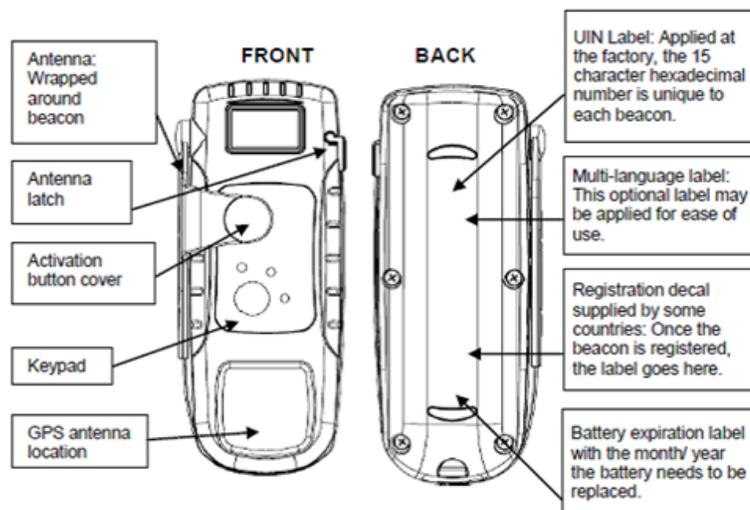
Figure 3

### ***Antenna position***

For maximum performance you must deploy the beacon antenna into the proper position as shown in figure 3. If at all possible, be sure the antenna is positioned facing the sky and avoid submerging in water. This device is intended to operate on or above the ground or while attached to your person above the water line.

## Inspection

1. Physically inspect the body of the PLB for cracks.
2. Check for missing screws. If screws are missing the internal workings may be compromised.
3. Inspect the gasket that surrounds the body. It should feel soft and be unbroken.
4. Verify the beacon number. There are 2 locations for the beacon number. THEY MUST MATCH!
  - The white sticker with the serial number is usually on the bottom of the back. This is the UIN or Unit Identification Number assigned by the manufacturer.
  - The NOAA sticker is usually on the upper part of the back of the beacon. This number indicates which beacon is registered.
5. Registration Expiration date (located on the NOAA Sticker)
6. Battery Expiration date (on back near the bottom)
7. Check the antenna rotation joint to be sure the antennae moves freely and clicks in the appropriate spots.
8. Check the antenna for permanent bends, corrosion, cracked plastic and the plastic tip that locks it down.
9. If the unit fails inspection at any point, contact your coordinator and the WCGOP gear technician immediately.

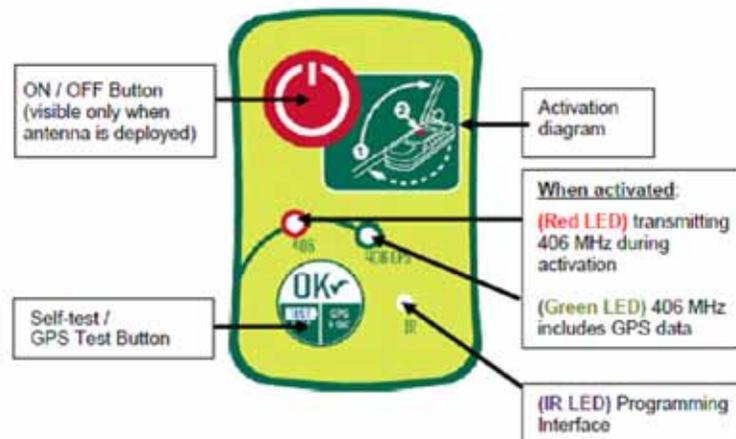


## Testing

### Passing Test

1. A Self-test is initiated by holding the Self-test button ( ) for at least 1 second and less than 5 seconds.

2. Your beacon will sound an initial “beep” and flash the green LED to signify the test has begun.
3. Four more beeps will follow.
4. The green LED will flash a second time to indicate that the self-test was successful.



Self-Test Sequences	Self-Test Guide (🟢 Green LED 🟡 Red LED)
🟢 Green LED with beep, 4 additional “beeps”, 🟢 Green LED, strobe flash	Successful Self-test
🟢 Green LED, Less than 4 “beeps”, 🟡 Red LED	Failed Self-test: Return unit to ACR for service
🟡 Red LED with beep, 4 additional “beeps”, 🟢 Green LED, strobe flash	Successful Self-test: Less than 24 hours of transmission life is left in the batteries.
🟡 Red LED with or without beep, Less than 4 additional “beeps”, 🟡 Red LED, strobe flash (PLB-350B only)	Failed Self-test: Return unit to ACR for service. Less than 24 hours of transmission life is left in the batteries.

**Failed Test**

1. If a red LED flashes at the completion of the Self-test, your beacon has failed. Repeat the Self-test.
2. If your PLB flashes an initial Red LED at the beginning of the test, this indicates that your electronic battery witness seal life has been broken and you have used more than 1 hour of battery life.
3. Call your coordinator and the WCGOP gear technician immediately.

## Accidental Activation

1. First deactivate by pressing the ON/OFF button for 1 second.
2. **Reporting of False Alarms** Should there be, for any reason, an inadvertent activation or false alarm, **it must be reported to the nearest search and rescue authorities.** The information that should be reported includes the EPIRB 15-digit Unique Identifier Number (UIN), date, time, duration and cause of activation, as well as location of beacon at the time of activation. **To Report False Alarms in the United States Contact any of the following:**
  - Atlantic Ocean/Gulf of Mexico USCG Atlantic Area Command Center  
Tel: (757) 398-6390
  - Pacific Ocean Area/USCG Area Command Center Tel: (510) 437-3700
  - USCG HQ Command Center Tel: (800) 323-7233
3. Additionally immediately contact your coordinator.

## Storage

Keep your PLB in a secure location when not in use. You are responsible for the unit and will be required to pay the full replacement cost should negligence on your part result in the loss, damage, or theft of the PLB. If you store it with your immersion suit, ensure it is well padded and will not fall out of the bag if it unbuttons.

## Collect Information to Report a Problem

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

1. Record the beacon number from the UIN label.
2. Write down the specific problem.
3. Contact required personnel.
4. If the issue is registration related the problem stop here.
5. Prepare the PLB for shipping by attaching a note listing the issue to the unit. Tape down the cover over the activation switch.

## VII. Immersion Suit Care and Inspection



### Select a Suit that fits

A good fit is essential to the function of an immersion suit. You should have room to fit in a suit fully clothed as you would be on deck, with a secure seal around your face. If a suit does not seal around your face it will fill with water easily.

Choose a suit that fits your frame best while providing a good seal. Try several suits on if more than one size/brand is indicated to find what works best for you.

Imperial suits tend to run a little larger than Stearns.

Chart Code	Brand/Size	Height Range	Weight Range
A	Imperial Intermediate	59"-70"	110 to 180 lbs.
B	Stearns Small	58" to 68"	110 to 250 lbs.
C	Imperial Adult	64"-75"	110 - 330 lbs.
D	Stearns Universal	59" to 75"	110 to 330 lbs
E	Imperial Jumbo	Over 75"	Over 220
F	Stearns Oversized	over 75"	220 to 375 lbs.

		Weight lbs.																																				
		110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	370										
Height in inches	58	B	B	B	B	B	B	B	B	B	B	B	B	B	B																						4'10"	
	59	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	BD	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	4'11"								
	60	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	BD	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	5'0"							
	61	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	BD	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	5'1"							
	62	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	BD	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	5'2"							
	63	ABD	ABD	ABD	ABD	ABD	ABD	ABD	ABD	BD	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	5'3"							
	64	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'4"																		
	65	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'5"																		
	66	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'6"																		
	67	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'7"																		
	68	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	ABCD	BCD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'8"																		
	69	ACD	ACD	ACD	ACD	ACD	ACD	ACD	ACD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'9"																			
	70	ACD	ACD	ACD	ACD	ACD	ACD	ACD	ACD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'10"																			
	71	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	5'11"	
	72	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	6'0"	
	73	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	6'1"	
	74	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	6'2"	
	75	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	CD	6'3"	
	76																EF	EF	EF	EF	EF	EF	EF	EF	6'4"													
	77																EF	EF	EF	EF	EF	EF	EF	EF	EF	6'5"												
78																EF	EF	EF	EF	EF	EF	EF	EF	6'6"														
79																EF	EF	EF	EF	EF	EF	EF	EF	6'7"														
80																EF	EF	EF	EF	EF	EF	EF	EF	6'8"														
81																EF	EF	EF	EF	EF	EF	EF	EF	6'9"														
82																EF	EF	EF	EF	EF	EF	EF	EF	6'10"														

## Timing

The WCGOP requires that you inspect your immersion suit on a monthly basis and record it in the equipment test checklist section of your logbook. WCGOP immersion suits are professionally inspected once every year beginning one year after the suit is first assigned to an observer, regardless of use. The suit you receive should be in excellent condition at the time it is assigned to you. Moving your suit from vessel to vessel, storing it, tossing it and using it for drills or in an emergency may cause wear or damage. Your safety relies on your attention to detail.

Immediately report any problems to your debriefer or coordinator so that a replacement may be issued.

## Donning Instructions

Your life may depend on your ability to quickly don your immersion suit in an emergency. It makes sense to have practiced beforehand. Monthly practice should reduce your donning time from minutes to seconds.

1. Remove suit from storage bag. Grasp handle on bottom of bag, give a quick tug up. Bag should release snaps and allow suit to slide out.
2. You should practice donning the suit, feet first, while lying or sitting on the deck. Vessel movement or list will often prevent donning the suit in a standing position.
3. Place your weaker arm into the sleeve of the immersion suit. Then using your free hand, reach up and place the immersion suit hood over your head. Then place your strong arm into the sleeve of the immersion suit.
4. Holding the zipper below the slider with one hand, fully close the zipper by firmly pulling straight up on the lanyard with the other hand. Secure the flap over the face/mouth.
5. Enter water feet first while protecting your airways with your hands.

## Warnings

- Do not inflate the air bladder until you are in the water to prevent damage or injury.
- There is a risk of entrapment in submerged vessel compartments due to suit buoyancy.
- Jumping into the water is a last resort. Ease/lower yourself into the water if possible.



Remove suit from bag



Pull on as you would a pair of coveralls



Insert arm into suit and adjust hood over head



Insert other arm and close zipper and face flap. Adjust wrist and ankle bands to fit.



Enter water feet first covering your airways.

## Inspection

Careful inspection will ensure the suit functions properly should you ever need it. Never board a vessel with a suit that shows signs of damage.

1. The storage bag:
  - Check the closures on the storage bag as well as its general condition.
  - Wax closure snaps on bag for ease of opening.
  - Ensure Donning Instructions are legible.
  - Be sure bag, size and manufacturer of suit labeling are correct.
  - Buttons often rip out of Stearns bags. If too many buttons are damaged to close the bag securely, request a new bag from your debriefer.
2. Lay suit on a flat clean surface. Visually check the suit's reflective tape, fabric and seams, inside and out, for damages.
  - Examine fabric for tears, rips, punctures, abrasions, grease, oil stains, mildew and burns.
  - Examine seams for ripped stitching on the outside and cracked glue seals on the inside.
  - Examine reflective tape. Is it yellowed, peeling, cracked or missing? There should be 16 square inches of reflective tape on the front and the back of every immersion suit.
  - Smell the suit. It should not smell like mold/mildew, gasoline or diesel fuel. If it does wash it as directed below.
  - Make a note of any defects found and their location on the suit. Follow cleaning instructions below if cleaning is needed.
3. The zipper used in an immersion suit is designed to provide a water tight seal. It is important that regular maintenance practices be performed.
  - Visually check zipper for wear, damage, corrosion (green color) and cleanliness. Debris and foreign matter can be removed by using a soft bristle brush and fresh water. Corrosion can be removed with baking soda and water. If zipper shows signs of wear or damage remove the immersion suit from service.
  - Check zipper by sliding up and down with a steady straight pull to check for ease of operation. Watertight zippers take a good deal of pull to operate but if the zipper is non-functional or extremely difficult to close while wearing the suit, remove the immersion suit from service.
  - Regular lubrication of the inner and outer zipper is essential. You will be issued a block or pencil of zipper wax for this purpose. This is the only lubricant to be used. Use of grease or non-approved lubricants can harm the zipper or suit. Lightly rub the wax along the zipper inside and out, and



Inner seam glue in good shape.



Use wax to lubricate the zipper.

then work the zipper up and down to spread the wax evenly. Remove excess wax from the suit.

4. Check head support/buoyancy ring for obvious damage and ensure that it is properly attached. Check inflation hose for kinks, deterioration or leaks. See that the lock screw is in open position. Be sure the valve moves in and out freely. Head support/buoyancy ring should be inflated and tested for leaks using one of the following two methods.
  - Orally inflate the bladder until firm then immerse in water looking for air bubbles. If bubbles are present, remove immersion suit from service.

**OR**

- Orally inflate until firm, let stand for 24 hours and check for firmness. If leaks are detected, remove immersion suit from service. A replacement airbladder can be ordered for an Imperial suit instead of replacing the suit.

Once testing is complete, deflate the pillow/air bladder by pushing in on the mouth piece. Ensure the locking ring is screwed away from the mouth piece of the inflator so you can blow air into the bladder.

5. Check whistle for audio function and ease of accessibility. The securing line should be long enough to reach your mouth easily when the suit is zipped up. The whistle may be attached to the zipper pull with heavy string as long as it will not interfere with the zippers operation.
6. Be sure an approved distress marker light with an unexpired battery is firmly attached to the suit. Test it if it is a manual strobe. Replace batteries or strobe if required. Be careful to position the manual strobe so that it will not turn on when the suit is rolled up.
7. If a rescue streamer is attached, be sure it is secured by the deployment hook and capable of being easily deployed with gloves on.
8. Make sure suit is dry inside and out before storing.

## Cleaning

**Washing:** In no case should the suit be dry-cleaned or exposed to any chemical solvents or cleaners. The suit should be hand washed with mild detergent and rinsed thoroughly with plenty of fresh water. Stains can be cleaned by gently rubbing with a soft bristle brush. If odors are present, soak the suit in a mild soap or shampoo safe for neoprene. Dive shops usually sell neoprene shampoo. It is very rare that you will need to clean your suit. If you have worn the suit in water at any time it should be rinsed thoroughly.



Corrosion around the inflation nozzle. Clean with a brush and baking soda and water



**Drying:** Hang suit inside out on large wooden or plastic hanger in a cool (65-75 degrees Fahrenheit), dry and well-ventilated area. Do not expose to sunlight or direct heat. Following the drying of the interior of the suit, it should be reversed to completely dry the outside. When the suit has thoroughly dried, it can be returned to the bag by following steps 1 to 4 for Storage Instructions.

### Storage

1. Lay suit out on flat, clean surface with arms out. Make sure zipper is almost fully open, leaving an inch or 2 to allow the zipper to be pulled down should it stick, initially. Make sure the lock screw on the inflatable tube is in the open position.
2. Roll suit, feet first, up to the chin area making sure not to crease the head support/buoyancy ring or inflatable tubes. Tuck face flap into neck area to prevent Velcro® from attaching to suit while in storage.
3. Fold arms over rolled up legs and across chest.
4. Tuck hood into the roll and place in storage bag. Secure the bag closures. Be sure suit is stored in clean, dry area and is immediately accessible in case of emergency. Do not compress the suit in storage as it may result in loss of buoyancy and thermal protection.
5. Store the suit in a secure location in your home when not in use. Heat from long term storage in a vehicle can damage the suit and leaving it in view in your vehicle increase the odds the suit could be stolen.



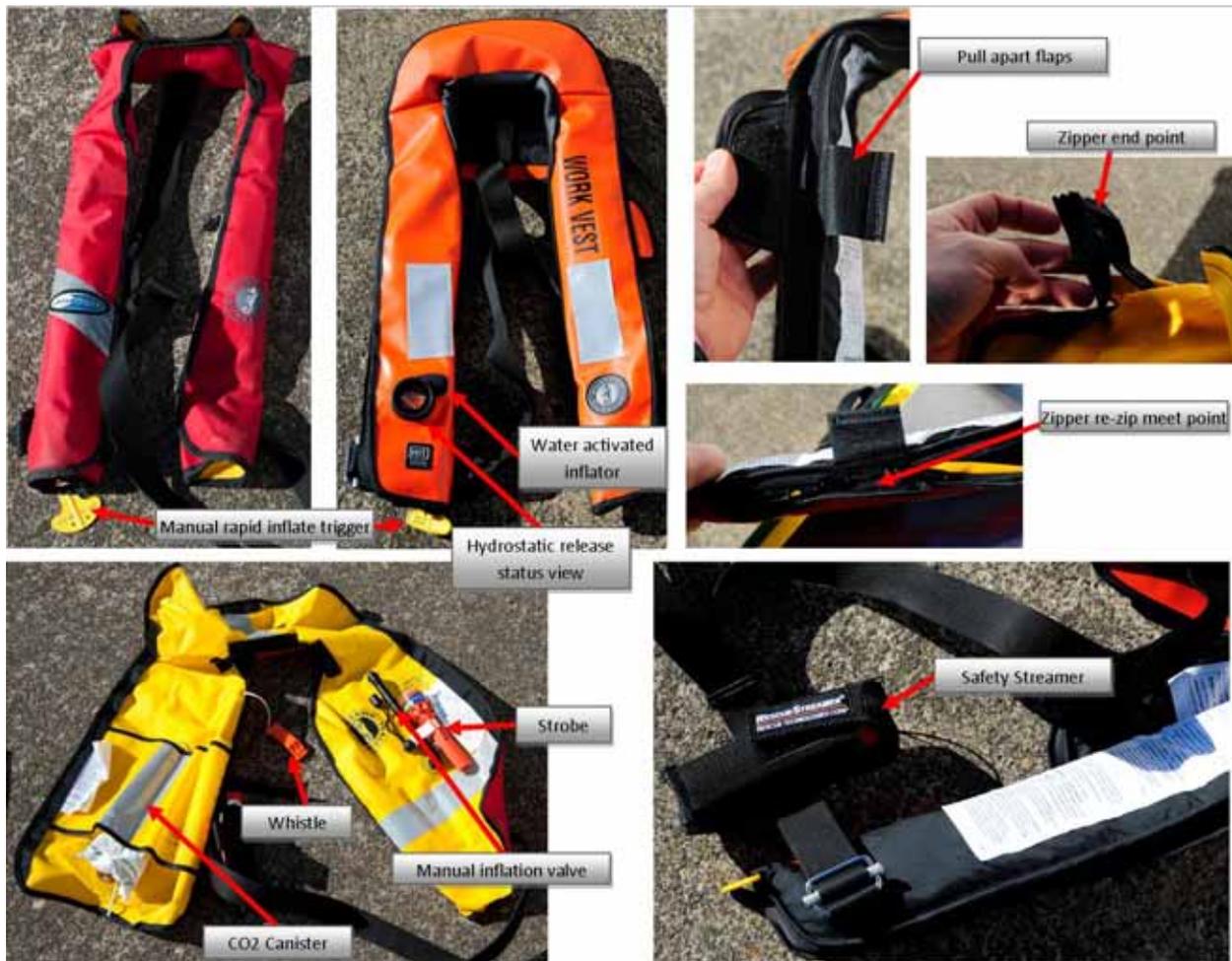
## Collect information to report a problem

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

1. Make a note of the serial number of the suit. This can be found in several locations on your immersion suit.
  - Written in large numbers on the back or floatation pillow.
  - Written on each shoulder.
  - On a small white tag near the Velcro on the face flap (Stearns)
  - Stamped on the inside of the back of the suit. (Imperials)
2. Write down what is wrong with the suit and the location of the problem. Use a diagram if needed.
3. Contact the required personnel.
4. Put a note in the bag with the suit describing any problems and their location on the suit.



## VIII. Inflatable PFD Care and Maintenance



### Timing

The WCGOP suggest you visually inspect your inflatable PFD before and after every trip. This will ensure that it did not incur any damage while in use on the vessel or during transport. A physical inspection and inflation test must be performed and logged every month.

### Donning Instructions

Inflatable PFD's are one size fits all. It is important that the Inflatable PFD is properly adjusted to fit the person wearing it. An incorrect fit or improper fastening of attachments could impede its effectiveness. The belt should fit below your rib cage adjusted to a tight personal fit. Check your Inflatable PFD and ensure

all of the checkpoints listed below are true before use. Put the Inflatable PFD on just like a jacket and fasten the front buckle. Adjust the waist belt using the side buckle on the belt and secure the belt's loose end is in the belt loop.

**WARNING:** Do not wear Inflatable PFDs under clothing as the inflation could be restricted or you could be injured.

### ***Checkpoints before donning***

- All belts and straps are already threaded correctly and only need to be adjusted for fit.
- Hydrostatic release status indicator is green.
- All zippers, Velcro and waist buckle are securely fastened.
- Inflatable PFD is not twisted.
- Ensure the inflation pull-tab is hanging on the outside.
- No rips, tears, excessive abrasion or holes; all seams are securely sewn; and the cover, straps and hardware are still strong.

### **Inspection**

1. Examine the exterior for holes, abrasions, stains, and rips.
2. Examine the seams. They should be tight and in good condition.
3. Examine the straps and clips and their attachment points.
4. Open the PFD by pulling it apart. For zipper secured PFDs, grasp the flaps and pull apart. The zippers are designed to give.
5. Examine the zippers or Velcro. Zippers can become corroded and Velcro can be excessively dirty. Clean as required.
6. Examine the single point status indicator through the window panel. Ensure the indicator is green. If the indicator is red, the mechanism has been fired or is incorrectly fitted. Do not attempt to repair if triggered.
7. Ensure the current date is not past the date on the inflator
8. Examine the manual inflation tube. Ensure the oral-inflation dust cap is on the tube and secured.
9. Check the strobe attachment and test the strobe. Replace batteries if necessary.
10. Check whistle attachment and test whistle.
11. Verify the presence of the CO2 cylinder and feel for damage. The cylinder is not usually accessible on newer models.

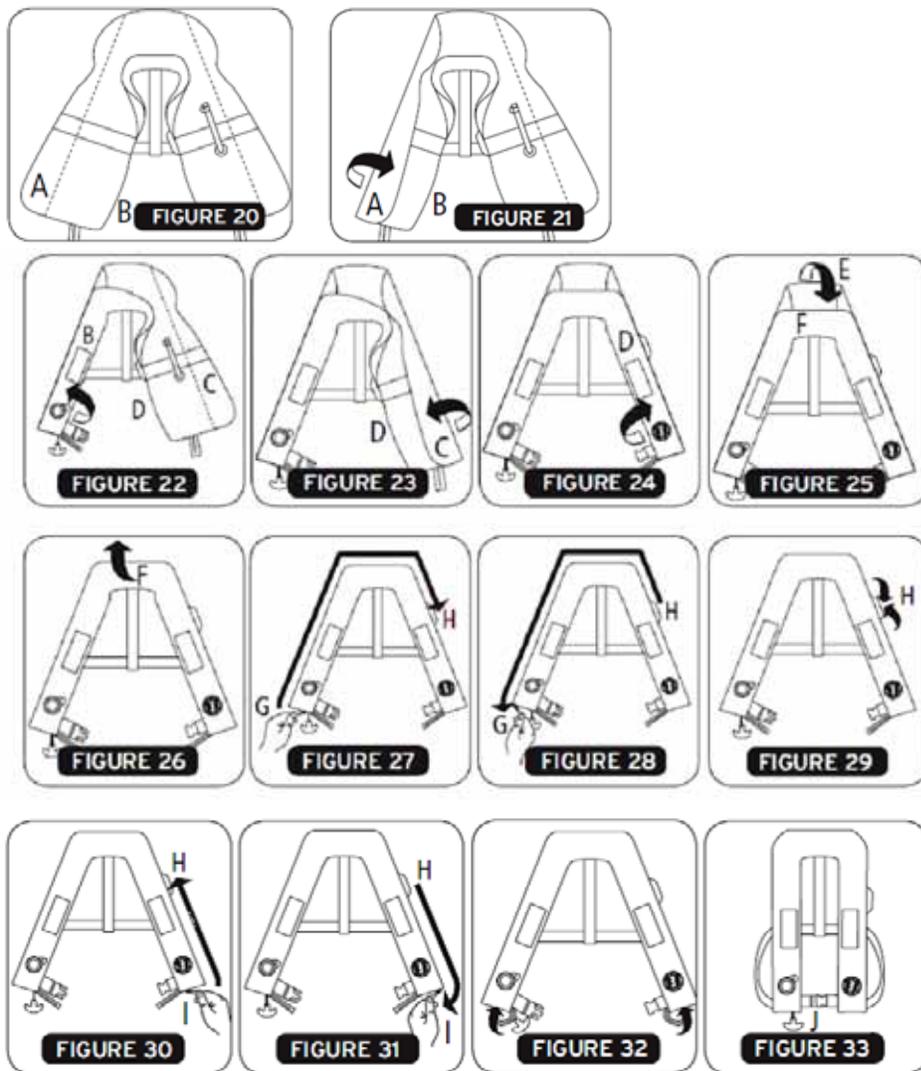


## Testing

1. Remove the dust cap from the oral inflator and manually inflate the PFD.
2. Let the pdf set overnight.
3. Test should be performed indoors.

## Repacking

1. If there are no signs of deflation, use your finger, or reverse the dust cap and depress the valve in the oral inflator, while gently squeezing the Inflatable PFD until all air or gas has been expelled. To avoid damage, do not wring or twist the Inflatable PFD.
2. Put the inflation tube dust cap back in its stowed position on the oral inflation tube.
3. Lay out the Inflatable PFD flat on a clean surface (Figure 20).
4. Fold side (A) inward along the full length of the dotted line (Figure 21). Fold cover (B) over; covering side (A) (Figure 22).
5. Repeat step 17 with side (C) (Figure 23), cover (D) (Figure 24).
6. Ensure the inflator body is still located within its protective cap cover and that the single point status indicator is visible through the inflator cap cover's window.
7. Fold over the top side (E) (Figure 25) and cover (F) (Figure 26).
8. If PFD uses zippers: Reset the long zipper by pulling the slider (G) around the top to the Velcro™ tab (H).
9. Close by pulling the slider (G) in the opposite direction to the end of the zipper (Figure 28). Ensure that the Inflatable cell does not get caught by the zipper when closing.
10. Fasten the Velcro™ tab (H) (Figure 29) to keep zipper closed.
11. Reset the short 2-step zipper by pulling the slider (I) to the Velcro™ tab (H).
12. Close by pulling slider (I) in the opposite direction to the end of the zipper (Figure 31). Ensure that the inflatable cell does not get caught by the zipper when closing
13. Use a finger to push the zipper ends into the openings at the bottom of the packed Inflatable PFD (Figure 32).
14. Ensure the pull-tab (J) is on the outside of the folded Inflatable PFD. Figure 33 depicts a correctly folded Inflatable PFD.



## Cleaning

- To avoid inflation, do not submerge the Inflatable PFD or directly spray the inflator. Clean only while the PFD is closed as you would normally wear it.
- Hand wash or sponge down the Inflatable PFD with warm, soapy water.
- If your PFD is made of nylon, clean slimy spots with a soft scrub brush or sponge and dish soap.
- If it is made of water proof PVC clean with a wet cloth or sponge and dish soap.
- Rinse the PFD with clean water, using a clean rinse cloth. Do not submerge or pour water on it.

- Do not get inflator wet.
- Hang the Inflatable PFD to dry on a plastic coat hanger.
- Do not dry clean.
- Do not use chlorine bleach.
- Do not iron or dry with direct heat.

### **Storage**

Always store your Inflatable PFD in a warm, dry place out of direct sunlight. Keep your equipment in a secure location. You may be responsible for the replacement cost should it be lost or stolen.

### **Collect Information to report a problem**

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

- If your PFD is triggered, request a replacement.
- Make a note of the specific problem with your PFD.
- Contact the required personnel.
- Attach the note to your PFD with a rubber band.



## IX. Work Vest PFD Care and Maintenance

### Timing

The WCGOP suggest you visually inspect your PFD before every trip. This will ensure that it did not incur any damage while in use on the vessel or during transport. A physical inspection must be performed and logged every month.

### Use

You will only be assigned a work vest style of PFD if you request it. You must select the appropriate size at gear check out. Take into account any additional clothing you will wear while on deck. Ensure the straps will buckle and your movement is not restricted.

**WARNING:** A work vest PFD may not float you face up if you are knocked unconscious.

### Inspection

1. Check for rips, tears, holes in fabric. These may be present and not cause the PFD to fail unless the floatation or fit is compromised.
2. Mold or mildew? Clean it.
3. Check the foam for water logging by squeezing it. If water comes out easily the PFD fails. The type of foam used should not retain water.
4. Ensure the foam is full and intact. Foam shrinkage may indicate heat damage and reduce floatation. This can happen if your PFD was left in a very hot place or hung on the wall next to the engine room.
5. Check the seams.
6. Check the straps and their attachment points.
7. Check the strobe attachment and test it.
8. Check the whistle attachment and test it.
9. Check the streamer attachment and assure the deployment hook is connected.



### **Cleaning**

Use soap and water and a soft scrub brush to clean your PFD. PFD may be submersed or sprayed with a hose. If mold or mildew is present use a diluted bleach solution and rinse thoroughly. You may occasionally wash it in a front loading washing machine on gental. Hang on a plastic hanger and dry before storing.

### **Storage**

Keep your PFD in a cool dry place. Long term exposure to heat may cause foam to degrade or shrink.

### **Collect Information to Report a Problem**

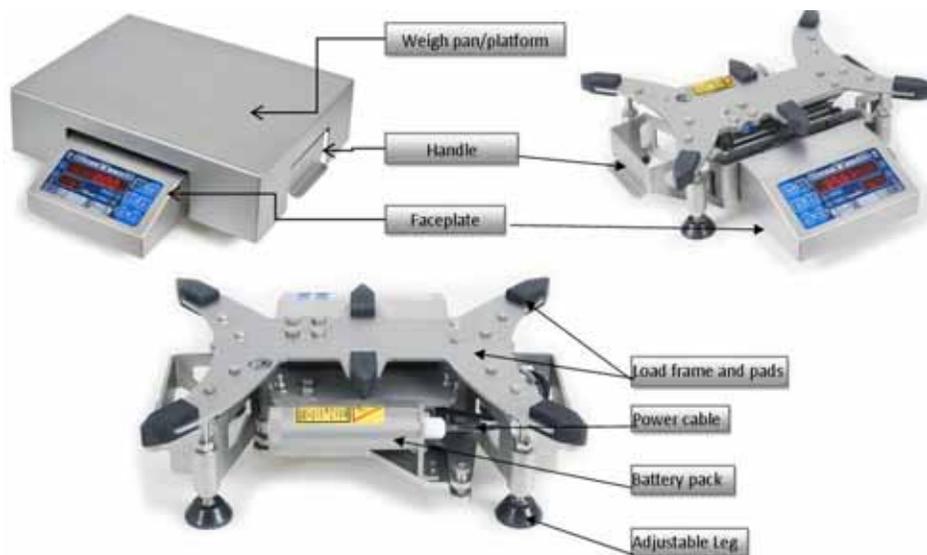
Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

- Make a note of the specific problem with your PFD.
- Contact the required personnel.
- Attach the note to your PFD with a rubber band or safety pin.

## X. Marel M-1100 Marine Scale



### About the Scale



The M1100 is an easy to operate, general-purpose packing and grading, motion compensated marine scale, designed especially for use on board fishing vessels. The stainless steel enclosure is water-resistant (IP67) and easy to clean. The scale has been specifically programmed for scientific use, rendering all packing and grading memories identical. For use in the WCGOP CS program, the scale is programmed with a 150 lb. capacity, reading in 0.05lb. increments.

## Indicators and Controls

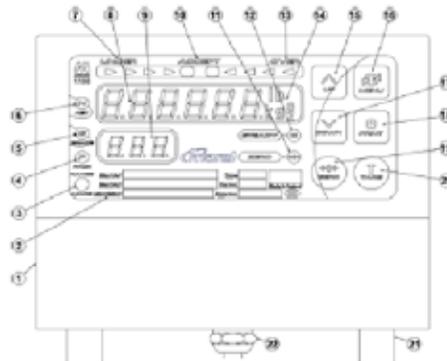


Figure 1 MI100 Indicator, front view.

1. Top cover	13. Over indicator
2. Rating plate	14. Unit of weight indicator
3. Mac2/Power down indicator	15. Keyboard, UP arrow
4. Packing indicator	16. Keyboard, MENU key
5. Grading indicator	17. Keyboard, DOWN arrow
6. Net indicator	18. Keyboard, PRINT key
7. Under indicator	19. Keyboard, ZERO key
8. Weight Display	20. Keyboard, TARE key
9. Config Display	21. Mounting pillar / cable conduit
10. Accept indicator	22. Cable entry (serial RS-232) or battery plug, optional
11. Zero indicator	
12. Steady indicator	

### Weight Display



Figure 2 The Weight Display

The Weight Display shows the weight on the platform. If tare is in use, the net weight is shown. To the right on the display a lighted indicator shows the current unit of weight.



Figure 3 Indicators.

### Zero and Steady Indicators

Below the Weight Display there are two indicators, Zero and Steady.

- The Zero indicator (green) lights up when the scale is at the zero point.
- The Steady indicator (green) lights up when the load indication is steady.

### Config Display



Figure 4 Config Display.

The Config Display is located below the Weight Display. This display shows which packing memory or grading memory is currently in use. Use the UP and DOWN arrow keys to select a memory. The Config Display is also used to display:

- configuration commands when the scale is in Setup Mode
- the blinking message, “marine calibration required”.

### **Weight Target**

The Weight Target indicator is located above the Weight Display. This indicator consists of three parts, the Under, Accept, and Over indicators. There are no limits in the WCGOP CS settings so these lights will not be used.



Figure 5 Weight Target indicator.

### **Net Indicator**

The Net indicator lights up whenever tare is in use.



Figure 6 Net indicator.

### **Grading Indicator**

The Grading indicator lights up to show that the scale is in grading mode.



Figure 7 Grading indicator.

### **Packing Indicator**

The Packing indicator lights up to show that the scale is in packing mode.



Figure 8 Packing indicator.

### **Max2 Indicator**

The Max2 indicator lights up on battery operated scales to show that the scale is in power down mode.



Figure 9 Max2 indicator.

### **Arrow Keys**

The arrow keys are used to select packing or grading memories. They are also used to enter numerical values and to select menu items when the scale is in Setup Mode.



Figure 10 UP Arrow, DOWN Arrow.

### **Menu Key**

The MENU key is used to enter the menu where you set the packing weights and the grade limits. In Setup Mode the MENU key is used to return from submitting commands.



Figure 11 MENU key.

### **Print Key**

The PRINT key is used for recording and printing weight results. It is also used for entering commands and for confirming new settings.



Figure 12 PRINT key.

### **Tare Key**

The TARE key is used to set the tare. When you press this key with a weight on the platform, that weight is used as a tare, and the Weight Display will show a zero.



The NET indicator lights up. The TARE key is also used to remove tare. Note: The TARE key cannot be used when Preset Tare is in operation.



Figure 14 zero key

### **Zero Key**

The ZERO key is used to take a new operational zero point, provided the operating zero stays within  $\pm 2\%$  of max weight from the initial zero point. The operating zero is the reference point for all weighing, and therefore a correct operating zero is necessary to ensure accurate weighing results.

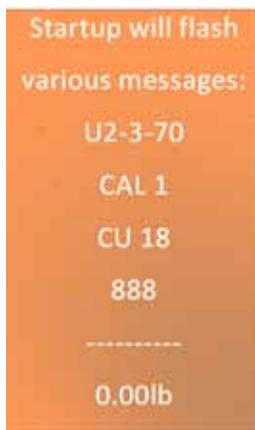
### **Power**

The M1100 scale can be used with alkaline batteries size D. Rechargeable batteries can also be used, but normally with reduced operating time. Using a set of two alkaline batteries provides operating power for approximately 85 hours of continuous usage, which equals 10 days if used eight hours a day. When the battery power gets low, a blinking warning, BAT, appears on the Config Display. The scale is still functional, until the power reaches its lowest operational point, which is when the scale will shut down.

### **Basic Operation**

#### ***Applying Power to the Scale***

The scale does not have an On/Off switch because it is preferable to keep power on the scale at all times. Constant power generates heat that will prevent moisture from condensing in the scale. Therefore, for initial start of the scale, simply attach the battery holder to the M1100 Indicator.



After power has been applied, the software version and the status of the Cal/Con event counters appear briefly on the Weight Display and a light test of the display is run. If the adjustment seal that prohibits modification of calibration and configuration parameters has been applied, the message appears briefly on the Config Display. The scale then sets the initial zero (the message appears on the Config Display), returns to Operating Mode, and is ready for use. *Note: You can manually power down the scale by pressing the MENU key and the DOWN arrow simultaneously.*

## Operation

The M1100 scale is very easy to use. The scale has been programmed for use to calibrate in kilograms and weigh in pounds. Once power has been applied to the scale and the start up sequence is complete it is ready for simple weighing. Before use in a WCGOPCS capacity a marine calibration should be completed.

Calibrating the M1100 marine scale's motion compensation feature ensures accurate and stable weighing results.

**IMPORTANT! For optimum marine calibration results, always calibrate the scale in the physical environment where it will be used for weighing, that is at sea and not on land or in the shelter of harbor.**

The scale must be calibrated at initial start-up. After that the message flashes in the Config Display at a fixed time interval (four to six hours), indicating that you should check the scale for stability and correct reading. The scale must also be calibrated:

- when the scale is unstable without the weighing platform being touched.
- when the displayed weight is inaccurate, even when the scale has a correct zero.
- when the scale is unable to assume the initial zero point, even with an empty platform.

*Tip: It is a good maintenance rule to check the calibration routinely by placing a weight on the weighing platform to verify that the Weight Display shows a steady and accurate weight.*

### Marine Calibration:

To ensure your scale is functioning properly it is a good practice to calibrate when you first get on a boat, before you leave the dock, when you first get under way, and when you begin fishing. This will give you ample time to address any problems and give the scale a good reference point for calibrations at sea.

#### To Calibrate the Marel M-1100:

1. Make sure the platform is clear and free of obstructions and the scale level as possible.
2. Turn on scale by pressing any button.
3. When the weight display shows 0.0lb the scale is ready.



- If the scale will not come to a ready state, check that the weigh pan is seated correctly.
  - If the scale read-out gets stuck on a non-weigh screen, the batteries probably need to be replaced.
4. Press the Zero and Menu Keys simultaneously.
  5. Wait for the readout to display: “Put 5 kg”
  6. Place the 5kg weight on the scale
  7. Press print
  8. When “FIT\_XXkg” is displayed calibration is complete (xx is a numerical value 00-99) Note “FIT\_XXkg” is a land calibration and “FIT XXkg” is a motion compensated calibration. The difference is the underscore.
    - A value in the range of 00 to 25 is acceptable in calm conditions and a value  $\leq 70$  is acceptable in rougher conditions.
    - Recalibrate if the value is above 25, rough seas may be difficult to calibrate in. Check that nothing is interfering with the scale top by removing and replacing the top and clearing under the scale. Try to block the wind from the scale. This can be done with a tote or your rain coat.
    - If a fit value below 25 cannot be achieved after 2 calibrations continue with normal scale use. While not desirable high values do not prohibit use.
  9. Record the fit on the appropriate deck form in the upper left hand corner.
  10. Remove the weight from the platform
  11. When the weight display shows 0.00 the scale is ready for use.

### ***Field Use***

Prior to taking the scale from training you should familiarize yourself with how to use it. Always transport the scale in its pelican case. Carry the scale by both handles when out of the case. Be careful of the weigh pan as it can fall off. Avoid dropping the sample basket on the scale or placing the basket on the scale in a harsh manner. Always carry 6 spare batteries in a dry location. Store batteries in a Ziploc bag in the scale case or in an alternate protected location.

1. Determine a good location to work that will allow the scale to be set up without being walked on or washed overboard. Tie it down if necessary using the holes in the handles.



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Saltwater is conductive. Store batteries in a dry location or they may be dead when you need them!

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1. Be sure there are no foreign objects that can interfere with the platforms movements.
2. The pelican case can be used as a scale platform or a seat. Just be sure it will not slide around.
3. Store the calibration weight safely (in the case is best). It's small and will roll when tipped.
4. Try to keep the scale out of direct wind (close to the deck or in a sheltered area) if possible.
5. Level the scale to the deck as best as possible, assuring the scale will not wobble.
6. **Calibrate the scale before each and every haul once you are ready to weigh your samples.** If you calibrate more than 25 minutes prior to sampling the



scale will shut off and you must recalibrate. The fit value must be recorded on your deck sheet.

7. If weather conditions change during your sample collection, recalibrate scale. A good indicator that recalibration is required is the steady indicator does not light up for long or the word CAL is flashing in the configuration display.
8. To tare the scale simply place basket on scale and press the tare key while the scale reads stable. The weight value should be zero once the tare is accepted.
9. To clear a tare, clear the weigh pan and press the tare key or the zero key.
10. To weigh place item on scale and read the value in the weight display while the green stable indicator is lit.
11. Remember to clear the tare when not using a basket, and to set it when using one.

### Fit Values

- Calm seas: Values between 0-25



- Rough seas: Values up to 70



12. When done, clean the scale as described later in this chapter.
13. Store the scale securely. Turn the scale off after you put it in the case to avoid accidentally turning back on. The motion of the vessel can prevent a scale from turning off if it has only been put to sleep in the case.

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**Your scale must be calibrated before each and every haul and the fit number recorded.**

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**Hint:** *Work Smarter. To weigh individual or small piles of fish in a series, start with a tared basket, weigh the fish, record the value, hit tare till you see a zero for weight and weigh the next fish. Continue process until done, then dump the basket and reset the tare.*

### ***Saving Battery Power***

Battery operated M1100 scales are equipped with a power saving feature that puts the scale in “power down mode” and makes the batteries last up to one year. The power down mode feature works in two ways:

**Light sleep:** when the scale has been inactive for 5 minutes it goes into power save mode for the next 25 minutes. The display shuts down, the decimal point scrolls slowly, and the Max2 indicator in the bottom left corner of the M1100 Indicator blinks while the scale is in this mode.

**Deep sleep:** after 25 minutes in power save mode, the scales goes into deep sleep. The display shuts down and the Max2 indicator blinks.

The difference between the two sleep modes is that while in power save mode (light sleep) the scale returns directly to where it left off in weighing mode, but to return from a deep sleep the scale must go through regular start-up.

The power save feature helps preserve the batteries, but you should nevertheless **remove** the batteries if the scale is not to be used for an extended period of time (more than a couple of months).

**Tip:** You can put the scale manually in power down mode (deep sleep) by pressing the MENU key and the DOWN arrow simultaneously.

To bring the scale back from power down mode:

- Light sleep: Press any key on the keyboard or lightly touch the platform.
- Deep sleep: Press any key on the keyboard.

## Dealing with Errors

You will encounter various errors while using the M-1100 due to the nature of the environment. Most common errors are caused by instability and/or wind and are easily resolved by pressing the menu key to escape. After pressing the key wait a moment for the error to clear. When clear the scale will display 0.00 lb in the main display. Once the error is clear, calibrate the scale.

At sea it may take a little time to escape an error or it may repeat several times until a valid calibration is achieved. Relax and keep trying. Take the scale inside to calibrate if wind issues cannot be overcome. It might be hard to get a good calibration in rough seas, but you will have less trouble once you do.

---

The scale buttons require little effort to use. You only need to apply light pressure to activate them.

---



Error code:	Description:	Action:
E-01	AD converter failure	Restart the scale, or else contact your Marel agent.
E-03	ADC over range	Reduce the weight on the platform
E-04	ADC under range	Increase the weight on the platform
E-05	Unstable weight (initial zero)	Stabilize the scale
E-06	Weight outside range (initial zero)	Make sure the platform is empty
E-08	Operation in progress (initial zero)	Wait until completed
E-11	Invalid initial zero	Remove or reduce the weight on the platform
E-13	Program failure (checksum)	Contact your Marel agent
E-14	ADC not responding	Contact your Marel agent
E-15	W&M setup checksum failure	Contact your Marel agent
E-23	24 V power voltage too high	Provide correct voltage
E-25	Low voltage to load cells	Check load cell
E-50	Parameter protection test failed	Restart the scale, or else contact your Marel agent.
E-81	Invalid static marine calibration. Fit value too high	Repeat calibration
E-82	Invalid static calibration. Calibration weight not detected	Repeat calibration
E-84	Marine static calibration not allowed	Scale requires motion
E-91	Invalid marine calibration. Fit value too high	Repeat calibration
E-92	Invalid marine calibration. Calibration weight not detected	Repeat calibration
E-93	Invalid initial zero	Make sure the platform is empty

If you are unable to escape an error with the menu key, try removing the batteries and replacing them. Allow the scale to start up without the weigh pan. Once on, calibrate without the weigh pan as well. If that is successful replace the weigh pan and recalibrate.

If your scale sustained damage from a slide across the deck, resulting in an impact, or by being dropped while in the case, the reference weight located inside the scale may be displaced enough to cause an inescapable error. Call the gear tech and you may be able to fix it with phone supported assistance. Do not attempt to take a scale apart without authorization from staff. You may be liable for damage to the scale in that case.

Some errors indicate a problem with the electronics and may not be overcome. Reference the above error chart (which is also provided as a water proof field guide) and contact the gear technician if encountered. Write down any error codes you encounter to assist in debugging.

When errors cannot be resolved and you are unable to take weights you must make visual estimates for the remainder of the sample and notify the captain of the equipment failure issue. Contact your debriefer by any means possible. The vessel must return to port within 36 hours if you are unable to sample. Other possible actions will be defined by your debriefer based upon current policy.

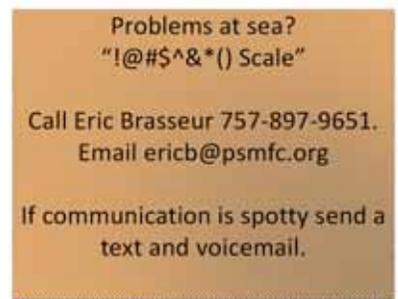
Remember to test your scale prior to deploying on each vessel. Replacing a scale is far simpler while you are still in port. A vessel cannot leave if your scale is not functioning.

## Care and Maintenance

Maintenance should be performed upon return after every trip to keep the scale in the best possible condition. Always carry your scale in either the pelican case, or by the two handles.

### *On vessel:*

- When boarding or disembarking a vessel always transfer the scale in a securely closed pelican case. Tie a line to the case, long enough to retrieve it if dropped when transferring over water. This is also useful when boarding a vessel lower or higher than the dock. You can make a lowering system by tying one end of the line to the dock or rail, passing it through the scale handle and slowly lowering the scale using the handle like a pulley, or tie it directly to the handle and lift/lower it hand over hand.
- Rinse scale with a **low pressure fresh water** hose between uses to remove the bulk of slime and scales between hauls. If a fresh water hose is not available use a deck hose. Direct deck hose stream to the weigh pan top only, avoiding the keypad
- If available, rinse with freshwater at the end of each day by pouring a bucket of water over scale or using a freshwater hose. Remove the weigh pan and rinse inside as well.
- Secure scale and calibration weight if you will not be on deck for a period of time and at all times during rough weather. Best practice is to put the scale and weight in the pelican case at the end of each haul.



- Always remove scale from line of traffic and keep away from scuppers. In bad weather place in pelican case and TAKE THE SCALE INSIDE or TIE IT DOWN.

***After your trip:***

- Wash scale with fresh water and dish soap. Use a sponge or cloth on the screen and buttons. A green scouring pad can be used on the **metal parts** to remove any brown spots if necessary. A sponge is preferred.
- Remove the weight pan to clean and rinse. Rinse scale inside and out.
- Let scale dry.
- Inspect the cables for any damage.
- Clean the pelican case as needed and allow it to dry. The foam can be washed with a hose, sponge, and bleach. Remove everything from case except the foam. Fill with water and ¼ cup of bleach. Allow to soak for 20 minutes. Empty and rinse thoroughly with fresh water. Allow to air dry open for 24 hours or more.
- Store scale in Pelican case but leave the case open if possible so moisture can escape.
- If you notice any condensation in the scale screens or damage to cables please contact the gear technician as soon as possible.

***Replacing the batteries***

1. If on vessel first remove your gloves and find a protected location. You must have clean dry batteries for the scale to operate properly.
2. Lift off the weigh platform.
3. Find the tube with the yellow warning label.
4. Twist to unscrew tube.
5. Shake out batteries.
6. Insert new batteries positive end towards open end of tube.
7. If needed, apply silicon grease to O-ring.
8. Hand-tighten battery pack.
9. Replace weigh pan.
10. Check scale performance.
11. For long periods of storage, remove the batteries from the pack.
12. Keep the battery pack, empty or full, connected to the scale at all times.
13. Store spare d-cell batteries in a dry Ziploc bag.



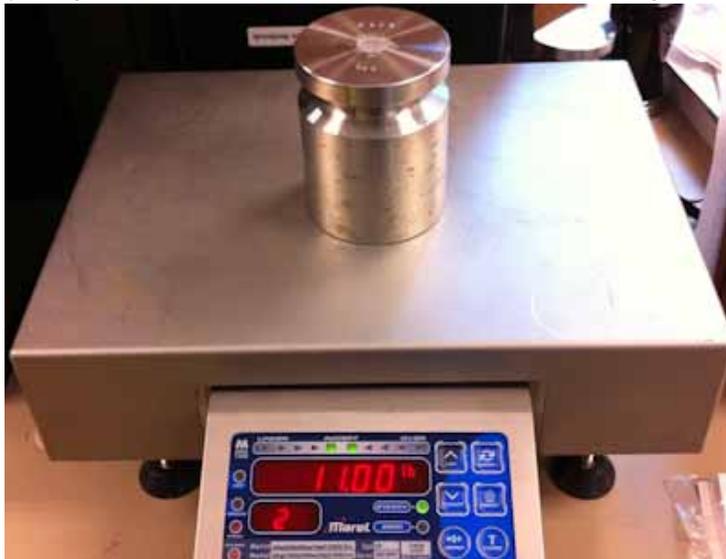
## Testing

Your scale should be calibrated before each and every test. The WCGOP requires you to test your M-1100 scale for basic accuracy every 5<sup>th</sup> observed day (defined as cumulative days at sea, irrespective of trip) at a minimum. Additionally a detailed weight test must be performed at check out, every 90 days and check in at one of the field offices using the certified weights WCGOP provides.

### *Five Day Testing Instructions:*

Test may be done on land or at sea as needed and must be done every 5th observed day at a minimum.

1. Record the serial number on the blue faceplate of your scale in the logbook.
2. Calibrate the scale.
3. Record the fit value in the logbook and remove the weight.
4. Place the same calibration weight back on the scale.
5. Record the weight to 2 decimal places in your logbook.
  - Accepted values: 11.0 lbs. and 11.05 lbs.
  - If value is out of range repeat all steps.
  - Record all tests regardless of pass fail.
6. Notify the gear technician if values continue to be out of range.



***Annual Detailed Weight test:***

Test must be performed at the closest field station at gear check out, check in and every 90 days. Testing forms are located at the testing sites.



- 1) Turn on scale by pressing any button.
- 2) Clear the platform.
- 3) Calibrate scale as above.
- 4) Record the fit value.
- 5) This test is done as an accumulating weight test up to capacity, overload and back to zero. Leave and remove each weight as indicated.
  - Record zero value (should be zero)
  - Place 5lb standard on scale. Verify and record value. Total 5 lb.
  - Place 20lb standard on scale. Verify and record value. Total 25lb.
  - Place 50lb standard on scale. Verify and record value. Total 75 lb.
  - Place 50lb standard on scale. Verify and record value. Total 125 lb.
  - Press on the scale until the weight field blanks (overload the scale)
  - Release pressure on scale and record the value. Total 125 lb.
  - Remove 50lb standard from scale. Verify and record value. Total 75 lb.
  - Remove 50lb standard from scale. Verify and record value. Total 25 lb.
  - Remove 20lb standard from scale. Verify and record value. Total 5 lb.
  - Remove 5lb standard from scale. Verify and record value. Total 0 lb.
  - If weight values are off of known by more than  $\pm 0.1$  lbs. repeat the test after placing all the weights on the scale and letting it sit for  $\sim 20$  minutes.
  - If scale continues to fail contact the gear technician immediately for assistance.
  - Turn in scale test form to gear technician via fax or email after test. A scale must pass before being issued and upon return.

## WCGOPCS Marel Scale Min/Max/Overload Test

Marel M-1100 PL3260: 60 KG Single Resolution

Scale Serial # \_\_\_\_\_

Date: \_\_\_\_\_

Observer: \_\_\_\_\_

Checkout \_\_\_\_\_ Mid Trip \_\_\_\_\_ Check in \_\_\_\_\_

Test 1		
Calibration (5kg)		
Fit Value:		
Standard	Expected Value (Lbs.)	Actual Value
Empty Platform	0	
5lb	5	
5lb+20lb	25	
5lb+20lb+50lb	75	
5lb+20lb+50lb+50lb	125	
5lb+20lb+50lb+50lb + press on scale until screen blanks	lines/blank	
5lb+20lb+50lb+50lb	125	
5lb+20lb+50lb	75	
5lb+20lb	25	
5lb	5	
Empty Platform	0	

Test 2 (If required)		
Calibration (5kg)		
Fit Value:		
Standard	Expected Value (Lbs.)	Actual Value
Empty Platform	0	
5lb	5	
5lb+20lb	25	
5lb+20lb+50lb	75	
5lb+20lb+50lb+50lb	125	
5lb+20lb+50lb+50lb + press on scale until screen blanks	lines/blank	
5lb+20lb+50lb+50lb	125	
5lb+20lb+50lb	75	
5lb+20lb	25	
5lb	5	
Empty Platform	0	

All values must be within  $\pm .05$ lbs of expected values. If any results are outside of that range complete the test and retest after a new calibration.

Turn in completed forms on the same day as testing, either to your debriefer if testing in person or via fax or email.

Fax form to Eric Brasseur: 541-867-0505

Scan and email to ericb@psmfc.org

Signature: \_\_\_\_\_

**Figure 11-1: Turn in scale test form to gear technician via fax or email after test.**

### Trouble shooting

Problem	Cause	Solution
Scale won't turn on	Weak batteries	Replace or insert batteries.
Screen is stuck during start up	Weak batteries	Replace batteries.
Keys no longer function	Bad Keypad	Call for a replacement
Keys misassigned (menu is print)	Bad Keypad	Call for a replacement
Weights off randomly and wildly even after several calibrations	Bad AD converter	Call for a replacement
Very difficult to calibrate, fails detailed weight test	Reference weight misaligned	Call for help with repair.
Random numbers in weight screen. Parts of numbers missing	Water in face plate.	Temporarily repair with phone support. Eventually replace.
Screen says U2-3-70	Start up	Nothing, just wait for it to start
Weigh pan looks crooked	Scale got dropped	If weights are fine use until you can come into an office to have it straightened.
Batteries never last	Scale might be coming on while in case	Turn scale off after putting it in the case. If continues to come on, take batteries out between trips. Bats last about 85 hours.
Fails detailed weight test repeatedly, but just barely	Load cell is stiff	Load with ~160 lbs. and let sit for 20 min. If you weigh less than 200lbs. Step on scale carefully and rock back and forth slightly.
Cannot calibrate at sea	Last calibration on land and it's probably windy and rough	Move inside to calibrate. Try calibrating when first leaving next trip.
My batteries are dead all the time	Discharging due to salt water or mixing up used batteries	Store batteries properly. Write dates on them when you put them in scale.
No power with fresh batteries	Loose power connection	Check spring in battery tube. Call for help with repair.
Fog in screen	Water in face plate.	Call for replacement.
Don't have any fresh batteries	You forgot them	Ask crew, check flashlights

### Collect information to report a problem

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. You can only go to sea with a properly functioning scale. See “Reporting a Problem” section for contact information and full procedures.

- Make a note of the serial number and the specific problem with your scale.
- Contact the required personnel.
- Fill out a WCGOP GEAR TECHNICAL ISSUE REPORT FORM and email it to ericb@psmfc.org.

If you have been asked to return the scale, attach a note directly to it indicating the problem.

### **Scale Return Instructions**

When you receive a replacement scale it will include a packet to use to return your old scale.

#### ***Included:***

- 1 manila envelope
- Instructions
- 1 Red zip tie
- 2 Heavy duty zip ties
- 1 return ups label
- 2 copies of a shipment receipt for return scale.

#### ***Instructions:***

1. Remove the calibration weight from your old scale and keep it with the new scale, unless the new scale came with a weight. Be sure you have a weight!
2. Place the red zip tie on the handle of the case and scale you are returning.
3. Clean the returning scale and case if you have not already done so.
4. Stick the return address label on the old scale case
5. Use the 2 white zip ties to seal the case.
6. Take the Scale and the copies of the receipts to a UPS Station and drop it off. Have someone sign one receipt accepting the scale. If they will not sign the receipt ask them to have the driver sign it and to call you when it has been signed. The other receipt stays with the scale for UPS.
7. Send the signed receipt to:

**Eric Brasseur**  
West Coast Groundfish Observer Program  
Hatfield Marine Science Center  
BFB Room 113  
2032 SE OSU Drive  
Newport, OR 97365

## XI. Netbooks

Trawl Catch Share observers will be assigned an encrypted netbook with Verizon broadband network access. This will allow you continual internet access for communication and online data entry while you are in range of a signal. There are 2 accounts that you will use while performing your data entry duties. Each is specific to the task they should be used for.

### Inventory

- 1 Pelican case
- 1 Shoulder carrying strap
- 1 Dell Inspiron Mini 1012 Netbook
- 1 Dell Power cord
- 1 Flexible number key pad
- 1 USB mini mouse



### Computer Access

You will have two user accounts on the netbook. The first one called “Data Entry” will be used to enter data. The second is “Observer” and is used for access to web based email for communication with WCGOP staff and affiliates. Before you begin using the netbook to enter data you need to configure it for your personal use. If you leave the settings as they are anyone who reads this manual can gain access to your data and personal information.

#### *User Accounts:*

Account: Observer

Password: Yelloweye



Account: Data Entry

Password: Lingcod



Account: PSMFC Administrator



### ***First Use***

Once you have received your netbook and left training, change the passwords for all user accounts. You will need to use a different password for each account due to the encryption software. Please note that a computer is only encrypted when you turn it off completely. Once you log on the encryption is released. Simply logging out does not protect your data. Turn off the computer when not in use.

When you first turn on the netbook the main encryption screen will come up. To log into the computer enter the password for the account you wish to open.

Log on using the password “lingcod” to take you to the data entry account. Once you have successfully logged onto the computer, change the password to something only you know and will remember (See: *Changing your password* in this chapter). Once the password has been changed, Logout of the “data entry account” and repeat the process for the “observer” account.

Since the computer has been logged onto already the screen will be different. The windows logon screen will be visible instead of the PGP encryption screen.

Click on the user Observer

- Password: yelloweye

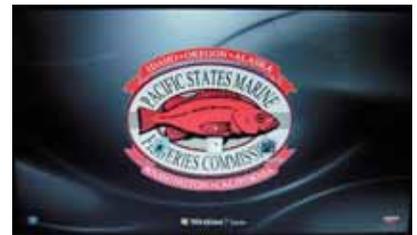
Once logged in proceed to change the password for this account as well.

**Note:** The computer is set to automatically log off the data entry account after 20 minutes of idle time to prevent others from tampering with your data.

The next thing you will need to do is active the broadband card if it is not already activated. New activations will generally be ready the Monday following the end of training. See “Activating your Broadband Card” in this chapter for instructions.

### ***Changing your password***

- Start
- Control panel
- User accounts
- Choose your account
- Create a password



1. Click Start: Control panel



2. Select User Accounts and Family Settings.



3. Select Change your windows password.



4. Select Change your password.



5. Enter the current password.
6. Enter your new password.
7. Enter your new password again.
8. Type a hint to help you remember it.
9. Click Change password.

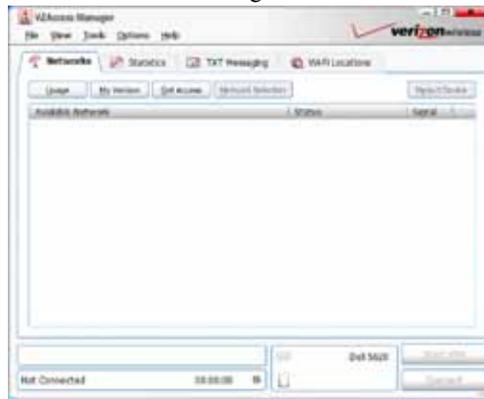


- Keep your password secret.
- Your netbook is wiped and reset upon return so even staff does not need to know your password.

### ***Activating your Broadband card***

If the netbook you received has never been deployed before you will need to activate the broadband network service to have internet access.

To begin, open the VZaccess manager.

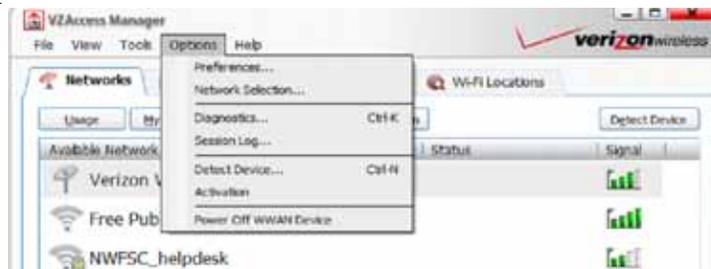


Once open VZAccess Manger will look for a signal. If Verizon Wireless is gray



your card in not activated yet.

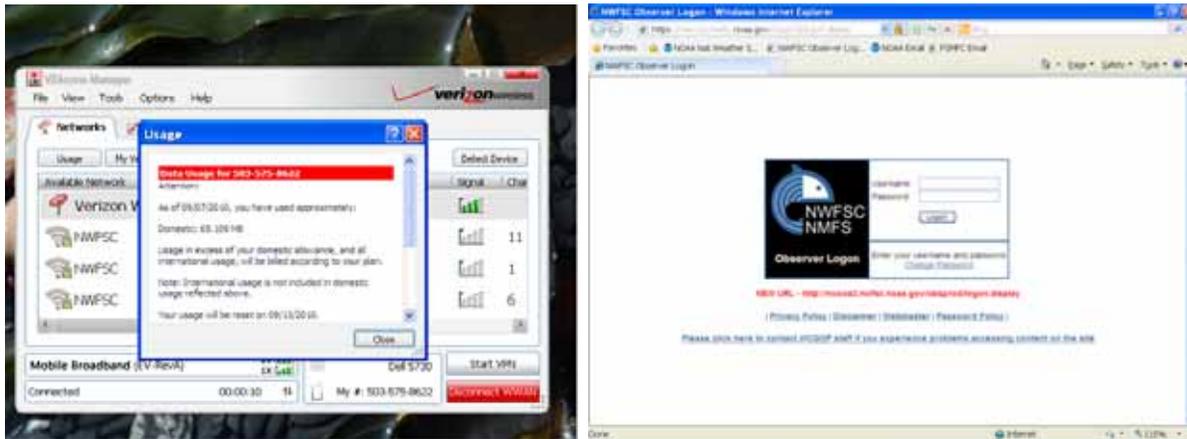
Click Options then Activation



The software will begin the activation sequence. Occasionally the netbook needs to be restarted if activation will not work. If activation is successful you are finished. If not, try again and then contact the gear technician for assistance.

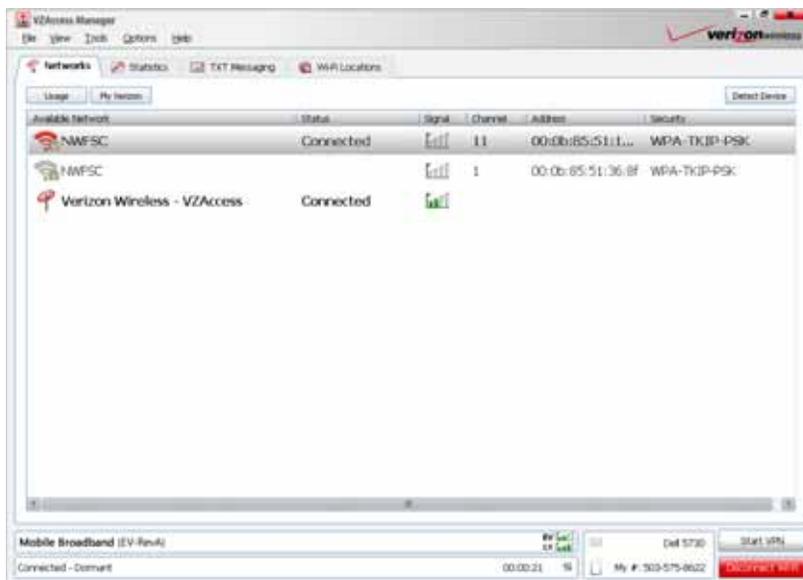
## The VZaccess Manager

When the “data entry” account starts, the program VZaccess manager will automatically load and the observer login page will launch in internet explorer.



- The initial screen will look like this above (different background).
- It's ok to close the usage screen.
- Before attempting to log in to the WCGOP Database verify that you are connected to the Verizon network or a secure Wi-Fi signal.

## General Network info



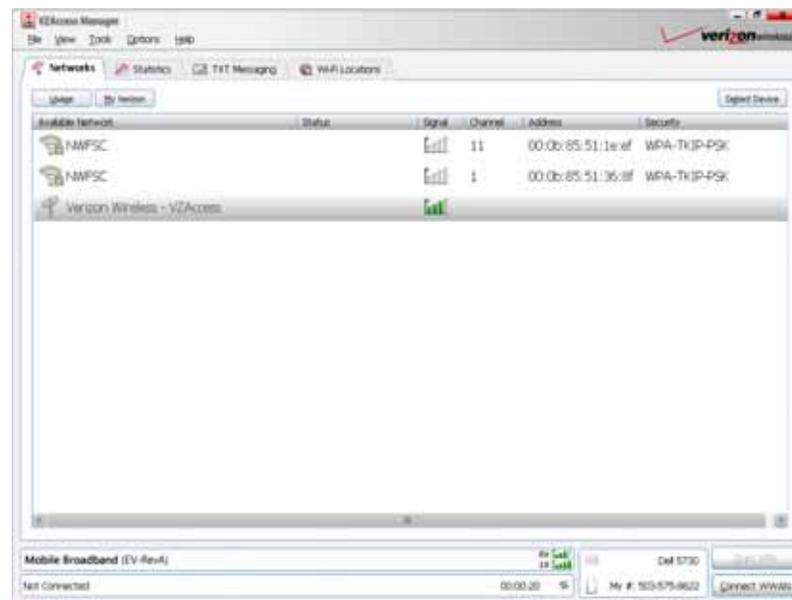
In this image, the laptop is connected to both a secure Wi-Fi signal and the Verizon Wireless signal.

For data entry you should only use a secure Wi-Fi connection or the Verizon wireless connection. If you are connected to a free public Wi-Fi account you will need to disconnect from it prior to entering data. Double click an item to connect or disconnect from it or by highlighting the connection and clicking the Disconnect (red)/Connect (Gray) button. To access a secure Wi-Fi account you must know the password. If you have a home wireless network that is secure please use it.



When you try to connect to a secure Wi-Fi connection a profile box will pop up. If you know the password, enter it, if not, click cancel and connect to a different network

- Connected networks have red icons on the left and a status of connected.
- Non connected networks have gray icons and a blank status.
- If the radar symbol has a lock on it, the WI-FI is secure and you will not be able to use it unless you know the password. At some fish houses or docks, we might be able to acquire the login. Just ask them.



You must highlight the Verizon Wireless connection by clicking on it once before the Connect WWAN button will work. In this image no networks are connected but 3 are available. The Wi-Fi Connections are both secure.

- If Verizon is not visible it is not available in your current location. Move somewhere else.
- If the WI-FI signal is free (radar symbol only) it might be the first one in the list and automatically connected as the default is set to use WI-FI first when available. Do not use it for data entry.

- If you are connected to an unsecure WI-FI instead of Verizon broadband or a secure Wi-Fi, disconnect from the unsecure Wi-Fi signal by double clicking on it, or highlighting the connection and clicking the disconnect Wi-Fi button then connect to Verizon Wireless instead.
- If you are connected to both an unsecure Wi-Fi and Verizon Wireless you will still need to close the Wi-Fi connection. Disconnect from the Wi-Fi signal by double clicking on it, or highlighting the connection and clicking the disconnect Wi-Fi button in the bottom right corner.
- If Verizon is **visible and not connected** hit the **Connect WWAN** button in the bottom right of the program, or double click the Verizon Wireless connection to connect.

### Transporting and Storage

Your computer is a valuable piece of equipment that contains sensitive information and should be treated as such. To protect the computer and the data it contains please use the following procedures.

- When not in use turn the computer off. Encryption only protects a computer that is not logged on to. Putting the unit to sleep is insufficient.
- Use the power supply whenever possible to conserve the battery and keep the unit charged for time when you may not have access to power.
- Carry the netbook in the pelican case.
- While on the vessel, put the computer back in the case when not in use. Close it up to help protect it from damage and moisture. Turn it off.
- Do not leave the computer in your car. Laptops are common targets of theft. Keep it out of view in the trunk if left temporarily for any reason.
- Do not let anyone else use your computer.

### Care and Maintenance

The netbook you are using is configured to automatically apply windows and antivirus updates. For these to take effect, you must be connected to the internet long enough for the updates to be installed. You must regularly log on and allow updates to run. They will run in the background while you check your email or do data entry. Follow the prompts restart the system when requested.

Use the “data entry” account to enter data. This is to protect your data and the computer.

Use the “observer” account to access the web and check your email and any other WCGOP tasks that require a computer.

Do not download or install programs on your computer. The only allowed software is already installed.

Do not store personal files on the computer. Use a thumb drive instead.

Do not visit porn sites or other potential virus distributing sites.

### **Administrator Access**

The PSMFC administrator account is for staff use only. Special software called LogMeIn has been installed on your computer and should never be turned off. The software will allow us to make changes to your computer, assist with problems, or install software remotely. You must have an internet connection for it to work.

### **Collect information to report a problem**

Problems should be reported to your coordinator and the WCGOP gear technician so they can advise you how to proceed or reassign your vessels if required, and get your replacement to you as quickly as possible. See “Reporting a Problem” section for contact information and full procedures.

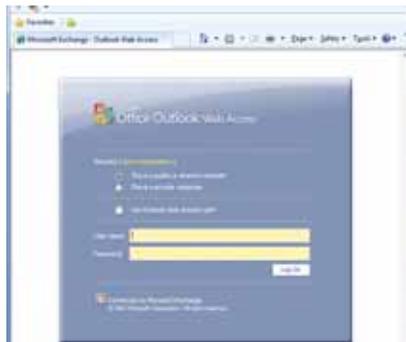
- Make a note of the PSMFC property number and the specific problem with your netbook.
- Contact the required personnel.

If you have been asked to return the scale, attach a note directly to it indicating the problem.

## **XII. PSMFC Email Account**

All WCGOP observers (Catch Shares and NON Catch Shares) will be assigned a PSMFC email account to use to communicate with WCGOP. This email should be checked for messages daily if possible. Your default user name is your first initialLastName@psmfc.org (JDoe@psmfc.org). The default password is Welcome1. Please change the password after you complete training.

## How to Access PSMFC email on the internet



1. Go to <https://swordfish.psmfc.org/owa>

2. Enter your PSMFC e-mail address for the user name (i.e. `jd@psmfc.org`)



3. Enter your PSMFC password (if this is your first login use Welcome1 for a password)

4. After you have entered your User Name and Password, click “Log On”.

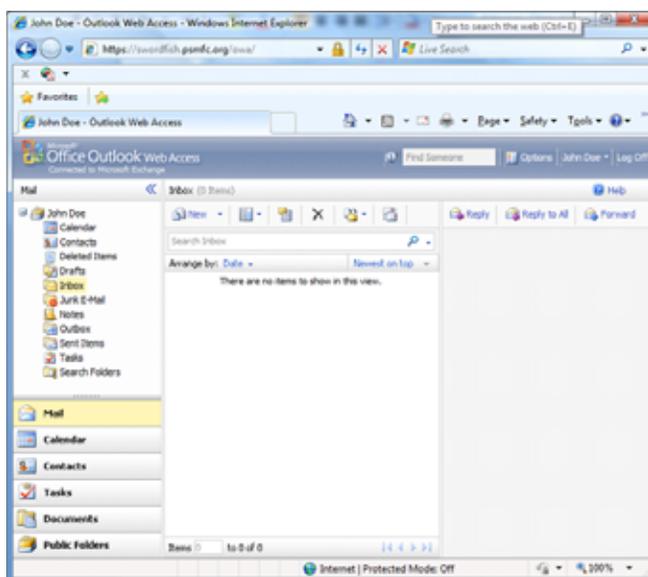


5. Upon initial login you will be prompted to choose the appropriate time zone for your area.

6. Make changes if needed and then click “OK”.

7. You have successfully logged into

the PSMFC web mail.



## Password Policy Rules:

### *Password Length*

Password must be at least 8 characters in length.

### *Password Complexity*

- CM Portal requirements are 8-20 characters with at least 1 upper case, 1 lower case and 1 number
- PSMFC Email requirements: password must contain characters from three of the following four categories:
  1. English uppercase characters (A through Z)
  2. English lowercase characters (a through z)
  3. Base 10 digits (0 through 9)
  4. Non-alphabetic characters (for example, !, \$, #, %)

### *Password Expires*

User password will expire 90 days from the last change.

### *Password Reuse*

The last 4 passwords cannot be reused.

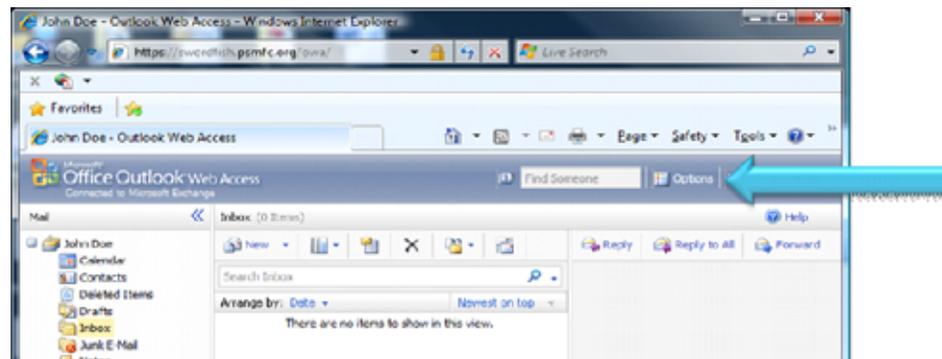
### *Passwords cannot contain:*

The user's account name or parts of the user's full name that exceed two consecutive characters

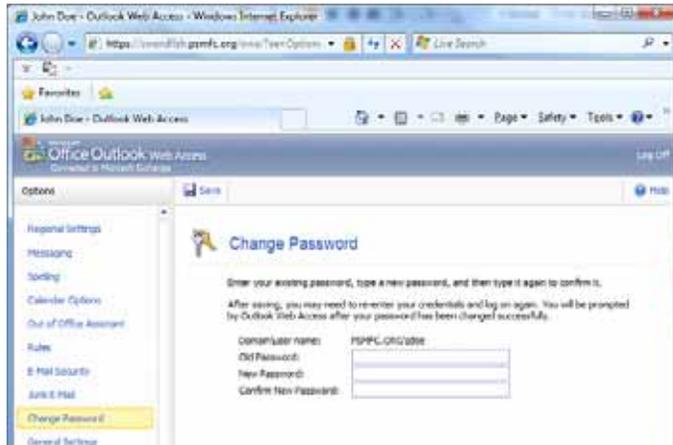
Complexity requirements are enforced when passwords are changed or created.

## Changing your password using web mail

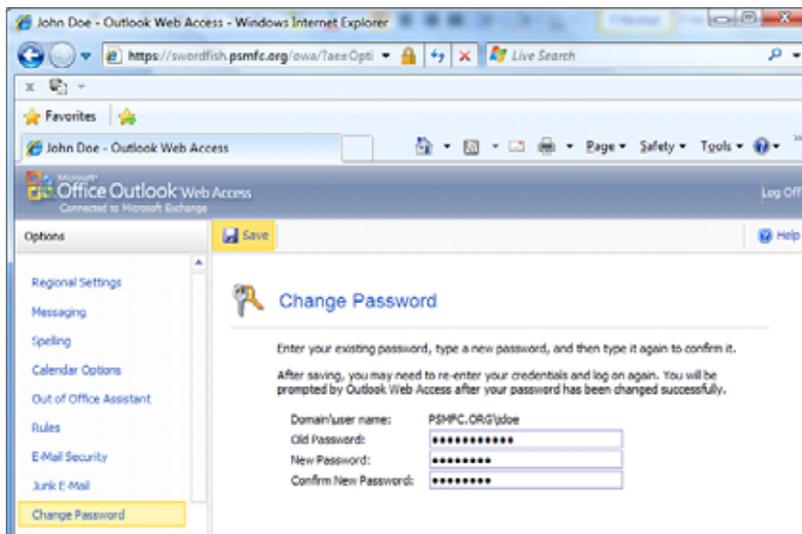
1. After logging into the webmail, click “Options”.



2. Click “Change Password” on the left hand navigation pane.



3. Enter your existing “old” password. Then enter your new password in both the “New Password” and “Confirm New Password” fields. Then Click “Save” your Changes.



4. You should then see the confirmation dialog, confirming the password change, you will then have to login using your new password. Simply Click “OK” to proceed.



### *The “I Can't Get Into My PSMFC Email” Essentials*

**Email passwords expire every 90 days, just like the WCGOP database passwords.**

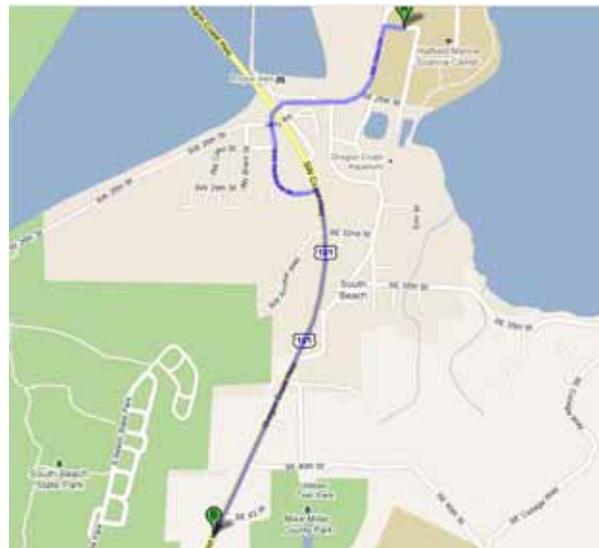
- Your initial password is Welcome1
- Your user name is almost always First initial last name (Ebrasseur). You will be told if it's not.
- You will need to change your PSMFC email password every 90 days.
- There is no emailed reminder.
- If you log in using the web site you will be prompted to change the password as the time gets close.
- If you use outlook, gmail, thunderbird etc, you will not receive a notice.

Set a calendar reminder the next time you change your password to remind you to change it again in 80 days. GOOD PRACTICE: IF THE DATABASE WANTS YOU TO CHANGE YOUR PASSWORD, GO CHANGE YOUR EMAIL PASSWORD.

- If you do not change it in time, you will be locked out.
- If you get locked out only one person can help you.
  - Contact Chris Mathews at PSMFC to reset your password.
  - [cmatthews@psmfc.org](mailto:cmatthews@psmfc.org)
  - 503-595-3100

### **XIII. Gear Pick Up: I'm An Observer Now!**

The last day of training you will receive your gear. Gear assignment usually starts in the Barry Fisher Building loading dock and is finalized at Lincoln Storage, an off site facility located at 4809 S Coast Hwy. South Beach, OR 97366, 1.5 miles north of Hatfield.



You must have a port assignment to receive gear. Your provider should tell you, if not please call them today. If you do not have a port you will not be checking out gear and must turn in all of your books and gear currently assigned. Bring all gear to be turned in with you to the 1:00 class.

Gear check out will be divided into two parts. Some gear will be given to you at BFB the rest at the storage site. Check in with the staff before beginning at either location

After you finish your final exam you may/should come over to BFB 113 to begin gear check out. The tech will give you your gear sheet and instructions so you can check out your scale, netbook and PLB up until 12:00. If you arrive late and the gear tech is not around, please go test a unmarked scale up until 1:00 pm. Be sure to put your name on your scale so noone else takes it. Keep the scale test form with you until asked for it.

**Note:** The scale test can only be done in the BFB loading bay.

Everyone will meet in BFB 101 at 1:00 for “What happens next”. You will be assigned a gear pick up time during that class. If you did not manage to see the gear tech prior to this time you will do so now before heading over to the storage facility for complete gear check out. Bring everything to the check out site.

To check out your gear you will need to bring the following:

- A vehicle to transport your gear (make room before you get there)
- Your Log Book
- Your clipboard
- The gear chapter from the manual, or the whole manual.
- A pencil

A staff member will show you where your gear is and explain how to start. Only take the gear you have been assigned. Many items have serial numbers and will be tracked for safety, reporting, or legal reasons. It is imperative that you take only those items assigned to you and that you verify all information on the gear sheet. Tables will be provided for you to go through the gear and carefully check everything off.

---

Gear Pickup

- Finish and pass exam before 12.
  - Go to BFB room 113
  - Get your forms.
  - Test a scale
  - Test netbook
  - Check EPIRB
  - 1:00 go to BFB room 101.
  - Get gear check out time
  - If not done, go test scale.
  - At your assigned time, go to storage site. Bring everything.
-

### ***Gear Checkout***

The quickest way to check out is to remove all the gear from the baskets and systematically check and place everything back in the baskets as you proceed. This will help keep your gear separate.

All safety equipment must be reviewed by a staff member after you have completed your inspections and set up. After you have set it up correctly, filled out all applicable information on the gear form and checked it off, ask a staff member to verify everything before you put it away. For speed, wait until you have several things ready before calling staff over. If the information is not complete on the gear check out sheet you are not ready to call a staff member. Fill everything out that applies to what you need checked. If you requested a non inflatable PFD in addition to the inflatable one provided by default you will need to get it and set it up as well. Staff will show you where everything is. This may be your first equipment inspection in the logbook as well. Fill out the appropriate sections in the logbook at the same time.

You will need to decide how many baskets you would prefer at this time. The minimum recommended is 3 however it is often useful to have 6 or more when working on trawlers. Ultimately your ability to transport your equipment may be the ruling factor. Note the number desired next to sampling baskets in the Qty. column under the Check Out heading. WCGOP recommends 10 if you have room as you can always leave some at home if you find you use less.

Staff will show you where any equipment you need is in the storage facility. Make sure you have everything on the list that you check off and that the quantities match. The back of the check out form has a list of “need to do” items. Be sure you complete all the tasks listed. Please remember to check with staff before putting things away. We will ask you to unpack it all if a staff member did not verify what you have received.

You must transport your gear yourself, or make arrangements with your provider to ship or store your gear. Please be prepared prior to leaving training.

***Verify all information and add any missing information on the gear sheet.***

**EPIRB/PLB (page 11-17)**

- Beacon number
- Battery expiration month and year
- Registration expiration month and year
- Test it
- Record in log book



**Immersion Suit (page 11-31)**

- Serial number matches bag and form
- Size (try it on if it doesn't fit request a new suit)
- Inspect the suit
- Check the whistle and its attachment.
- Check the strobe date and switch position (should be to the right). Hemilight Only!
- Check the attachment of the rescue streamer
- Record in log book



**Inflatable PFD (Page 11-36)**

- Check the whistle
- Check the strobe and it's batteries, use only a C-strobe (Round)
- Check rescue streamer attachment
- Attach gear pocket
- Record in log book



**Netbook (IFQ)**

- PSMFC #
- MEID-HEX #
- Power cord # matches
- Passwords
- Turns on, and you can log in (Check all user options)
- Verizon card works and you can log into WCGOP Database (May not be activated yet in first time assignments, make sure you know how to activate)



- Printer turns on and printer is recognized when connected to netbook (beginning 2012)

### Marel Scale



- Inspect for damage (report if found)
- Record Serial number on faceplate
- Turn on
- Calibrate (record in log book)
- Perform detailed weight test at the test station and record on scale test sheet
- Remove batteries for transport



### Tally Counters

- Make sure they work.

### Optional gear



- Do you have it
- Does it fit
- PFD work vest test attached safety equipment
  - Attach or check whistle
  - Attach or check strobe and it's batteries (Firefly, Square strobe or Hemilight in off position.)
  - Attach or check rescue streamer attachment.
  - Record in log book



### Headlamp

- Check batteries
- Make sure it works

Once you have completed your inspection notify a staff member of any problems, correct them and take your check out form to Eric Brasseur the gear technician. Sign the form, turn it in, load up your gear and head out. Request a copy if you desire it. When you finish your contract the same form will be used to check in your gear. BE SAFE!

## XIV. Getting Replacement Consumables

The program will provide replacements for items you will consume while doing your job. Each of the satellite WCGOP offices has a supply of goods to keep you stocked up. When visiting your debriefer make a list of what you need and notify them in advance so they can have it ready for you. You should copy paper forms as needed yourself. This can be done in the office as well. Ask for assistance if an access code is needed for the copier.

Consumables include:

- D Batteries
- Sample bags
- Otolith vials
- Waterproof forms

Always call your debriefer first for these items even if you need them shipped to you. If they are out, then contact the gear technician in Newport.

***Whenever you visit an office, take your scale and do a detailed scale test. We can use the extra data to see how they are performing.***

## XV. Reporting a Problem

It is very important that any equipment problems be reported right away so that if replacement gear is needed it can be issued before your next trip. Problems should be reported by phone and email to your coordinator and the WCGOP gear technician so they can communicate your request to the proper personnel and advise you how to proceed and reassign your vessels if required.

You should contact the gear technician if:

- Your gear malfunctions.
- You set off an EPIRB, PLB, non-serviceable strobe, or inflatable PFD.
- You are having a problem with a piece of gear.
- Something is missing, lost, washed overboard or stolen.
- Something breaks.
- You are having a computer problem.

For each item see the corresponding section in the Gear Chapter for specific details needed for reporting such as serial number. Have that information recorded and ready.

1. Call the gear technician and tell them what is wrong. They will advise you if you need to stop working while you await a replacement.
2. Fill out a WCGOP GEAR TECHNICAL ISSUE REPORT FORM located on the desktop of your netbook using adobe acrobat reader.
  - Save it locally on your computer by clicking file/print and print the file as a Microsoft XPS document.
  - The print command will ask you where to save it.
  - Rename the file using the following format:  
“WCGOP GEAR TECHNICAL ISSUE REPORT FORM-your name-date”
3. Send an email to your coordinator, debriefer and the gear technician with all details by attaching the .XPS file.
4. Label the equipment as noted in each section. Included specific notes as required.
5. Be sure your physical address is listed in the WCGOP database. We must have a physical address to ship to, a PO Box is not sufficient for Fed-Ex or UPS overnight deliveries.
6. Once reported a replacement will be shipped directly to you.



## XVI. Contacts

Gear Technician	PSMFC EMAIL
<p>Eric Brasseur Office: 541-867-0509 Cell: 757-897-9651 Email: <a href="mailto:ericb@psmfc.org">ericb@psmfc.org</a></p> <p style="text-align: center;">NOAA Coordinator</p> <p>Russell Haner Russell.Haner@noaa.gov (541) 270-5007</p>	<p>Chris Mathews Office: 503-595-3100 Email: <a href="mailto:cmathews@psmfc.org">cmathews@psmfc.org</a></p>

### Trawl Catch Share Coordinators

Your coordinator is your contact with the observer provider company that hired you.

- AOI
- MRAG
- Saltwater
- NWO
- Tech Sea

### Non-Trawl Catch Share Coordinators

#### Washington and Oregon

##### Allen Cramer

Office: (541)867-0527

Cell: (503) 791-2703

Email: [Allen.Cramer@noaa.gov](mailto:Allen.Cramer@noaa.gov)

##### Brian Perry

Office: 541-867-0527

Cell: 541- 961-3709

Email: [brian.perry@noaa.gov](mailto:brian.perry@noaa.gov)

#### California

##### John LaFargue

Office: (707) 443-3228

Cell: (530) 604-7386

Email: [John.Lafargue@noaa.gov](mailto:John.Lafargue@noaa.gov)

## XVII. Gear Check in Procedure

*All gear must be returned to the Newport office.*

### **When You Have:**

- Finished your contract and have no more trips,
- Entered all your trip and data,
- Scheduled your final debrief,

Contact Eric Brasseur via email at ericb@psmfc.org to schedule a gear check-in.

Gear check-in hours are generally 9-3 M-F. Be sure to allow 30-60 minutes to complete your check-in.

### **Before You Leave Your Port:**

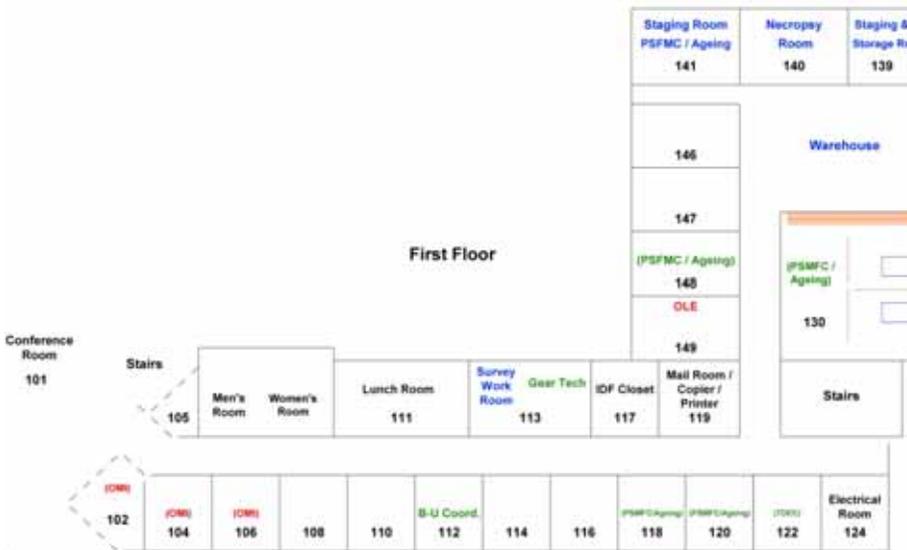
1. Request a check-out sheet if one has not been sent to you.
2. Review the check-out sheet to verify you have all your gear. Please USE IT to check everything off as you may be required to pay for missing or damaged gear.
  - If you received replacement or additional gear it may not be noted with the correct ID number; that is OK.
  - You are responsible for everything on the list and any additional items you may have received during your deployment such as a GPS or Satellite phone.
3. Perform all required maintenance and log book duties related to gear.
4. Thoroughly clean your gear as described below. See the gear chapter in the manual for additional tips and methods.
  - Baskets: Clean/scrub thoroughly with bleach and a scrub brush/scrubby. A car wash is a good place to power wash baskets.
  - Non inflatable PFD: Hand scrub with a mild bleach solution, rinse and air dry completely. Or wash in a front loading washing machine, gentle cycle and air dry.
  - Inflatable PFD: Hand scrub with dish soap and rinse with a damp rag. DO NOT IMMERSE OR SPRAY.
  - PLB: If it's dirty, remove the case from your PLB if it has one and wash it and the case with soap. Rinse and let dry.
  - NOTE: YELLOW EPIRBS are water activated PLEASE DO NOT WASH THEM.

- Marel M1100 scale: Clean with fresh water and soap. Scrub brown spots with a green scrubby. Rinse and dry completely. Perform a 5-day test record the results in your logbook.
  - Pelican scale case: Scrub the outside of the case. Remove everything from case except the foam. Fill with water and ¼ cup of bleach. Allow to soak for 20 minutes. Wipe as required. Empty and rinse thoroughly with fresh water. Allow to air dry open and upside down for 24 hours. Once dry return all items to the case for transport. Batteries should be in a zip lock bag. You will need to turn on the scale in Newport for testing.
  - Laptop/netbook: Remove any personal files you need from the laptop. Empty the laptop bag/case of everything personal and be sure the power cord, mouse and 10 key are in the bag. Check CD tray.
  - Immersion suit: Leave the whistles and strobe lights attached. Remove personal gear from bag.
  - Report any malfunctioning or damaged equipment. (You should have already filed the appropriate reports.)
  - Paper Books: Clean as best as you can. Let dry and air out.
  - Water-proof species guides: Wash with bleach if needed. Fill a sink with bleach water and soap and swish the book around. Sponge pages clean as needed. Repeat with clean water to rinse. Dry thoroughly. Can be dried in a dryer on low heat with a few towels.
  - If is October or later recycle the paper from your observer manual and turn in just the binder. You may keep the manual if desired.
5. Pack everything up after it is dry using the check off sheet to assure you have all gear. Put it in your vehicle and double check for items you may have left behind.
  6. The most common items people “forget” and end up paying for are:
    - Head lamps
    - Beating the odds
    - Calculator
    - The cart
  7. Consumables supplies are exactly that and you will not be charged for them (pencils, bags, vials, etc.)

**When you arrive in Newport:**

Bring gear to the loading bay in the Barry Fisher Building and notify Eric in Room 113 that you have arrived so he doesn't go to lunch or take off on you. Hint, call him at 757-897-9651 when you are about 30 minutes out. Then:

1. Unload your gear and arrange all the small gear on the red folding table in the loading bay near the freezers (First bay door). The table may be folded up, just find it and set it up.



2. Perform a detailed weight test (90-day) at the scale testing station. Note: it must pass the test so please see Eric if it does not. Scale test forms are on the blue clipboard.
3. Unroll your immersion suit and leave it out.
4. Double check you have everything.
5. Once ready, go get the gear guy.

### Missing gear?

Though rare, you may be required to pay for missing/damaged gear. See page 3 of the gear chapter for expected replacement fees. Consult the gear tech in advance if you know you are missing items. We will not clear you with a provider until everything is accounted for. Your final paycheck may be held up until all accounts are settled, but that is up to your provider. You may pay for missing gear by writing a check payable to PSMFC. If gear is found at a later date and returned, your payment will be refunded.

