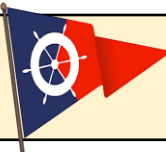


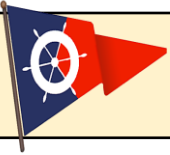
Rescue / Lifesaving – Project Data

Title:	Rescue and Lifesaving essentials
Objective:	Discuss rescuer and rescuing procedures, skills and techniques for recreational boaters
Speaker(s):	Kevin Jones, Ben Davidson, Nancy Oppegaard, Sgt Mark Rorvik
QYC Only?:	No
Date:	16 Nov, 2016
Time:	7 – 9 PM
Duration:	120 minutes
Location:	Vashon Library
Space Required:	Room with tables, chairs and projection screen
Supplies to bring:	Laptop and power cable, projector and power cable, laptop to projector cable
Tools to bring:	None
Props & Examples:	None
Advertising plan:	Advertise tech talk w/ flyer at QMM, library, grocery store, HW store, Burton Boat, QYC (Meyers Hut, top of hill bulletin board, dock gate), preview at QYC meeting



Rescue / Lifesaving – agenda

- 7:00 Welcome / Overview / Experts
- 7:15 Rescuing and Lifesaving – Boating risks
- 7:25 Rescue response steps
- 7:35 Rescue / Lifesaving – MOB / First Aid Basics / First Aid Kit
- 8:00 Rescuer Point of View
- 8:15 Calling for help
- 8:30 Surviving / Getting Found
- 8:45 Complete surveys / Review boating risks on white board / Handouts
- 8:50 Start teardown
- 9:00 Depart



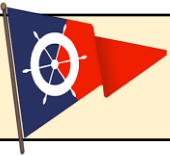
QUARTERMASTER YACHT CLUB – Tech Talk Introduction

WELCOME to QYC Tech Talks!

- A Tech Talk is...
 - An exchange of information, ideas and experience
 - More dialogue than “teaching”
 - A little structure
- We encourage...
 - Listening, learning & contributing
 - Discussion and debate
 - Questions
- Our next Tech Talk is:
 - 7 December at 7PM – VHF Radio Use



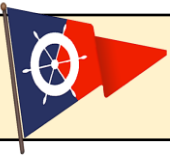
Together, to Learn From Each Other



Rescue / Lifesaving Essentials - Overview

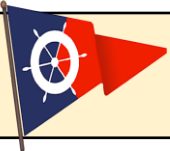
- Rescuing and Lifesaving
- Being rescued
- Survivor Traits
- Additional equipment
- Additional training





Rescue / Lifesaving Tech Talk Series

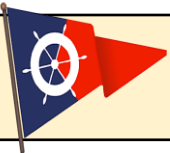
- VHF radio use Tech Talk – 7 Dec
- Anchoring techniques – basics and beyond Tech Talk – 11 Jan
- Boat handling in adverse conditions Tech Talk – 8 Feb
- What's in your dinghy ditch kit Tech Talk – 8 Mar
- Safe trip planning and what to do if things go wrong Tech Talk – 10 May
- Man overboard LifeSling rescue procedures Tech Talk – 20 May



Rescue / Lifesaving Essentials - Experts

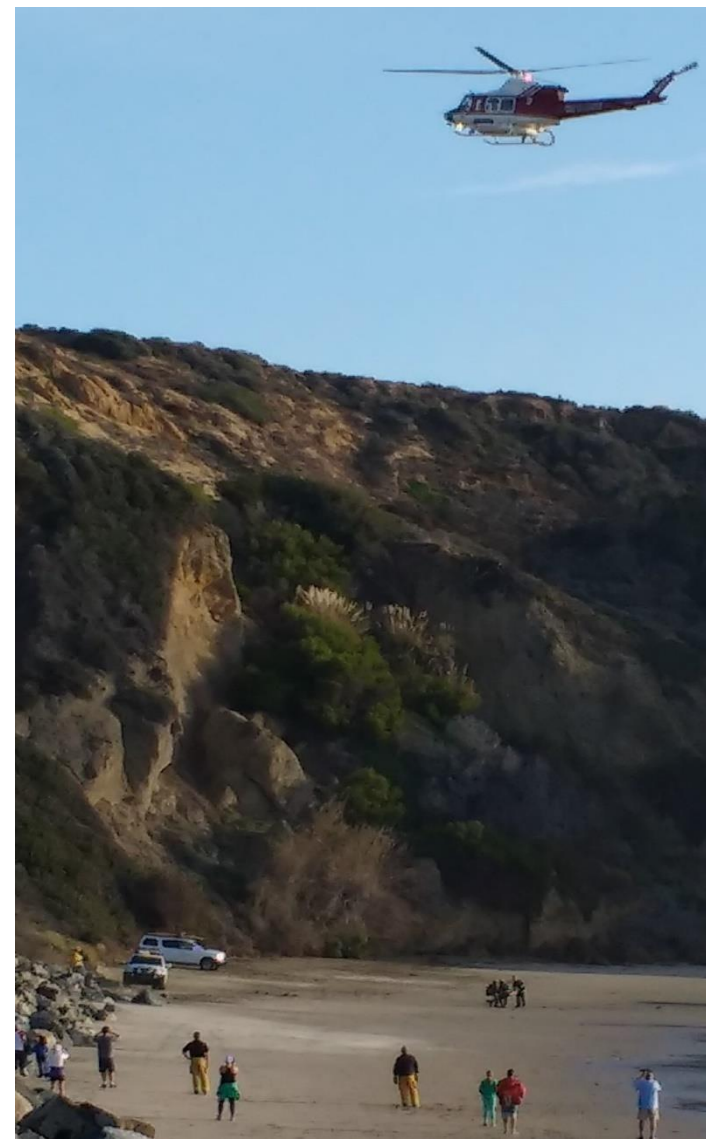
- Ben Davidson - Vashon Island Fire & Rescue
- Nancy Oppegaard – LPN
- Sgt Mark Rorvik - King County Sheriff Marine Rescue Dive Unit

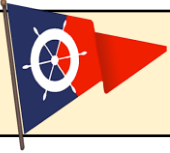




Rescue / Lifesaving Essentials - Overview

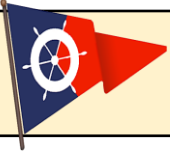
Who has rescued or been rescued?





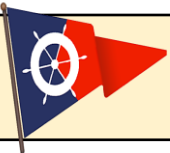
Rescue / Lifesaving – Boating Risks

- What risks do we encounter as recreational boaters?
 - Write them on the white board....



Rescue / Lifesaving – Boating Risks

- What risks do we encounter as recreational boaters?
 - Write them on the white board....
 - We will discuss these throughout the Tech Talk



Rescue / Lifesaving – Rescue Response

American Red Cross

Emergency Action Steps

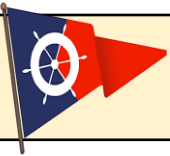
- Check
- Call
- Care

- Two different sets of rules
 - How are they different?
 - Why are they different?

Mountaineers: Freedom of the Hills

7 steps of incident response

- Take charge of the situation
- Guard against another incident
- Render life saving measures
- Protect the patient
- Establish extent of problem or injury
- Develop a plan
- Carry out the plan



Rescue / Lifesaving – Rescue Steps

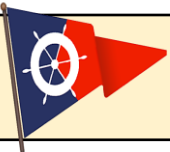
Incident response steps

- Take charge of the situation
- Guard against another incident
 - How to safe the boat...?
- Render life saving measures
- Protect the patient
- Establish extent of problem or injury
- **Develop a plan**
- Carry out the plan



Develop a plan

- Can you handle this, or do you need help?
 - If need help call ASAP
- How urgently does the patient need care?
- How frequently does the patient need care?
- How much time do you have before...
 - dark?
 - you can get to medical help?
 - medical help can get to you?
- Do not try to improvise

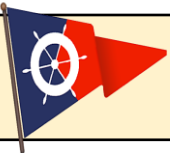


You are In The Water ~ Now What?

- Swim toward throwable device if possible
- Activate your strobe light if equipped
- Blow your whistle if equipped / possible
- Stay warm techniques (delay hypothermia)
- How to put on LifeSling
- How to secure rescue device to your body or PFD
- How to position yourself along side the boat for retrieval



While underway, if you are not in the cabin or the cockpit, wear your PFD!



Rescue / Lifesaving – MOB Recovery

Water Temperature		Expected Time Before Exhaustion or Unconsciousness	Expected Time of Survival
(°F)	(°C)		
32.5°	0.3°	< 15 minutes	45 minutes
32.5–40°	0.3–4.4°	15 – 30 minutes	30 – 90 minutes
40–50°	3.3–10°	30 – 60 minutes	1 – 3 hours
50–60°	10–15.6°	1 – 2 hours	1 – 6 hours
60–70°	15.6–21.1°	2 – 7 hours	2 – 40 hours
70–80°	21.1–26.7°	3 – 12 hours	3 hours – indefinite
> 80°	> 26.7°	Indefinite	Indefinite

winter

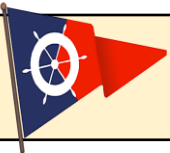
Sp/fall

summer

Source 1 (survival time):
http://seagrant.umn.edu/coastal_communities/hypothermia#time

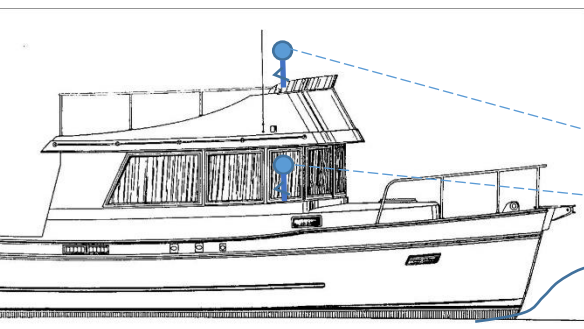
Source 2 (water temp):
http://www.psp.wa.gov/downloads/psemp/PSmarinewaters_2012_overview.pdf

Fall, winter, spring hypothermia risk is significant!

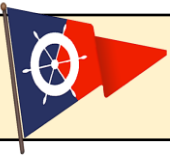


Rescue / Lifesaving - MOB Recovery

- Throwable / MOB flag
- Chart plotter MOB mark
- Maneuvering the boat to retrieve MOB
- Get on the fly bridge if wave height obscures MOB
- Swim step / boarding ladder / boarding ladder on dinghy / lifesling



Do not expect to haul the person into the boat by yourself!

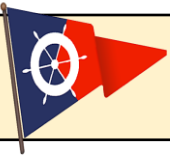


Rescue / Lifesaving – First Aid

- There are many excellent First Aid courses available
 - American Red Cross – basic first aid
 - Marine specific First Aid courses
 - Wilderness First Aid – Assumes help is 4 to 48 hours away
- Recommend at least First Aid / CPR training
- AED training is very valuable, if you have an AED



There are many very good First Aid courses, if you have not had this training

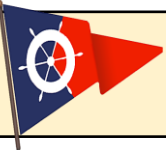


Rescue / Lifesaving – First Aid Basics

- Stop any bleeding – direct pressure, pressure bandage, tourniquet
- Bandage application – Gauze / tape, triangle bandage
- Splint application – Flexible splint, anything rigid
- Cardio Pulmonary Resuscitation (CPR)
- Taking vital signs and what is OK / not OK
 - Pulse: 60 – 120bpm, Respiration: 6 – 10 per min
 - Skin color, skin temp, skin moisture
- Shock symptoms and responses
- Hypothermia symptoms and responses



These are the primary First Aid skills you are likely to need



QUARTERMASTER YACHT CLUB – Rescue / Lifesaving Tech Talk

Rescue / Lifesaving – First Aid Checklist

Advanced First Aid
– from Alpine First
Aid by Remote
Medical Inc.

Scene Assessment

- Hazards
- # of Patients
- Resources Needed
- Protect Self (gloves)
- General Impression

CONSENT!

Primary Survey

- Airway
- Breathing
- Circulation
- Disability (symptom) + Spine Assessment + A & O x ____
Name, Place, Time, Event
- Environment

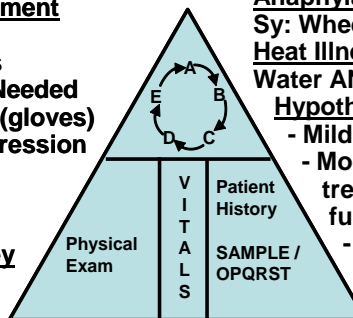
Secondary Survey

- ? Name
- ? What happened
- ? Number of people
- ? Where hurt
- Skull
- Eyes (pupils, motion)
- Discharge (ears, etc)
- Chest
- Abdomen
- Extremities
 - Circulation
 - Sensation (tap/pinch)
 - Movement
- Pelvis
- Genitals
- Back / Spine
- Pain Response (pinch)

VITALS

- Time taken
- Pulse
- Respiration
- Skin color
- Skin temp
- Skin moisture

X 15 min if stable
X 5 min if unstable



Anaphylaxis

Sy: Wheezing: Benadryl (cogent) / EPI Pen

Heat Illness

Water AND Electrolytes

Hypothermia

- Mild: Sy: shivering: Prevent heat loss
- Mod: Sy: VITALS low, nonresponse: treat gently, warm up slowly, prevent further heat loss
- Severe: Sy: no sign of life: check for pulse / breathing, 3 min of rescue breathing, recheck for 60 sec, ventilate 1 breath / 10sec

Medical History

- Age
- Chief Complaint
- Symptoms
- Allergies
- Medications
- Past Med History
- Last intake / output
- Events leading to incident

Shock – Symptoms

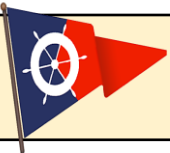
- Anxiety
- Altered consciousness
- Pulse / Respiration elevated
- Face red raise head / face pale raise tail

NEXUS – Spine assessment – all true?

- A & O x 3 or 4
- No “distracting” injuries
- No drugs / alcohol
- Feeling / Motion all 4 limbs
- No spine palpation pain

Abdominal Pain

- Onset – how did pain start?
- Provokes – what makes it better/worse?
- Quality – Patient describe
- Radiates – moving?
- Severity – scale from 1 to 10?
- Time – How long been going on?



Rescue / Lifesaving – What's on your boat?

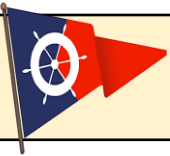


PERFECT KIT TO PUT IN YOUR GLOVE BOX TO HANDLE COMMON MINOR MISHAPS. INCLUDES ADHESIVE STRIPS AND WOUND DRESSINGS (16 ITEMS), ANTICEPTICS AND MEDICINALS (21 ITEMS) AND FIRST AID INSTRUCTIONS.



CRUISER KIT, 6 PER CASE. PERFECT FOR THE LARGE BOAT CRUISER TO PROTECT FAMILY AND GUESTS. THE WALL MOUNTED WATERPROOF CASE HOLDS A LARGER SELECTION OF THE ITEMS TO HANDLE EMERGENCIES FOR THE ACTIVE BOATER. 23 DIFFERENT ITEMS/158 TOTAL PIECES. CONTAINS: ADHESIVE STRIPS (66 ITEMS), WOUND DRESSINGS (19 ITEMS), ANTISEPTICS & MEDICINALS (67 ITEMS). ADDITIONAL ITEMS INCLUDE, COLD PACK, SCISSORS, FORCEPS, FIRST AID INSTRUCTIONS AND LATEX EXAM GLOVES.

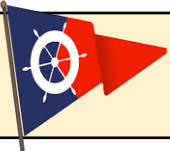
Buy a First Aid kit that matches the type and location of boating you do



Rescue / Lifesaving - Being Rescued

- Responders Point of View
- Calling for help
- When to leave the boat
- Getting found
- Staying alive until found

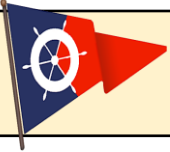




QUARTERMASTER YACHT CLUB — Rescue / Lifesaving Tech Talk

Rescue / Lifesaving - Responders POV

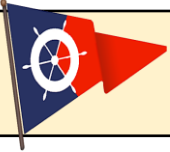
**King County Sheriff Marine
Rescue Dive Unit Speakers**



Rescue / Lifesaving – Calling for help

- How
 - Typically VHF radio – why?
 - Maybe cell phone – when?
 - Pan-Pan Pan-Pan Pan-Pan – urgent, help needed
 - Mayday Mayday Mayday – loss of life risk
- When
 - Injury beyond your ability to treat
 - Boat damage beyond your ability to repair

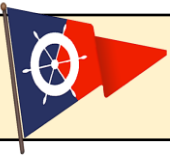
Also: Personal Locator Beacon, EPIRB, SatPhone...



Rescue / Lifesaving – Calling for help

- Pre-Emptive – heard on the VHF radio
 - Pan-Pan, Pan-Pan, Pan-Pan
 - 38 ft sailing vessel “Orion”, blue hull, white deck
 - Taking on water, bilge pumps keeping up
 - Current location S of Sutil Pt on Cortez Island
 - Heading for Lund via Baker Passage
 - ETA 1430, 90 minutes from now
 - Single male on board, no injury, wearing PFD

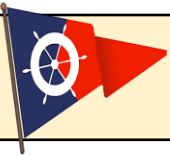
Coast guard called back every 30 min to monitor progress / change of status



Rescue / Lifesaving – If you call for help

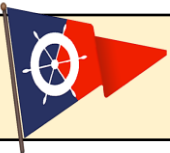
- Location
- Situation
- Specific help needed
- Urgency
- How can you be reached?
- Number of people hurt /
number of people not hurt
- Your plan
 - Where are you planning to go from your current location?
 - Your ETA
- How can you be identified?
 - Boat length
 - Name, Type, Color
 - Distinguishing features

Coast guard will prompt you for any additional info they need



Rescue / Lifesaving – When to Leave the Boat

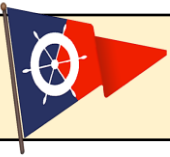
- “When you have to step UP into the dinghy”
 - The boat will take more than you think it can
 - The boat will usually take more than you can



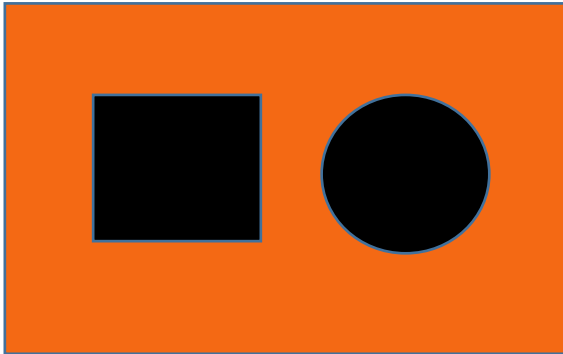
Rescue / Lifesaving — What to take if you leave



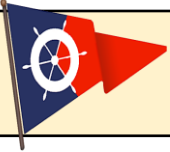
Detailed discussion at the “What do you have in your ditch kit?” Tech Talk



Rescue / Lifesaving – Getting Found



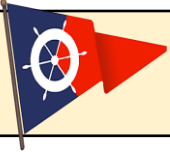
These devices can help you contact rescuers and allow rescuers to locate you



Rescue / Lifesaving - Staying Alive

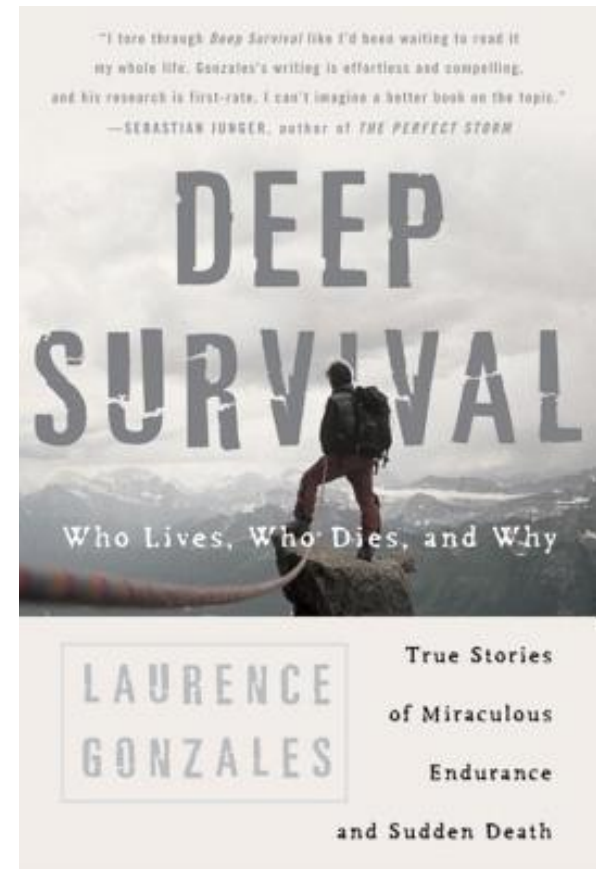
- First priority: Shelter
 - Protect against hypothermia
- Second priority: Water
 - Can live for 48 hours without water
- Third priority: Food
 - Can live for a week without food

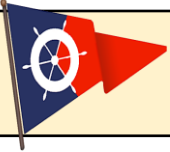
Shelter is your first priority after landing your dinghy



Rescue / Lifesaving – Survivors...

- Believe what they see, not what they hope to see
- Stay calm
- Think, analyze, plan
- Do something
- Celebrate success – even small steps
- Count their blessings
- Play, have fun, sense of humor
- Are optimistic
- Appreciate the beauty of their world
- Do what has to be done, don't give up

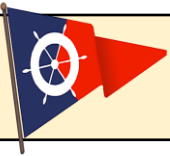




Rescue / Lifesaving – More Equipment

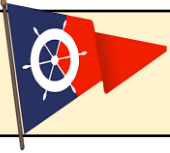
- First aid kit
- Automatic External Defibrillators (AED)
- Communications
 - Digital Selective Calling (DSC) VHF radio
 - Personal Locator Beacon (PLB)
 - Emergency Position Indicating Radio Beacon (EPIRB)
 - Satellite Phone

On-Board equipment should match your risk environment



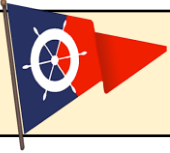
Rescue / Lifesaving – More Training

- First aid / CPR / AED
- Wilderness first aid - Recommended
- VHF radio use Tech Talk – 7 Dec
- Anchoring techniques – basics and beyond Tech Talk – 11 Jan
- Boat handling in adverse conditions Tech Talk – 8 Feb
- What's in your dinghy ditch kit Tech Talk – 8 Mar
- Safe trip planning and what to do if things go wrong Tech Talk – 10 May
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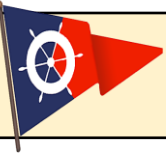
Rescue / Lifesaving - Handout

- First aid / CPR / AED courses - \$91 (may vary by provider)
 - American Heart Association Heartsaver First Aid CPR AED
 - http://cpr.heart.org/AHA/ECC/CPRAndECC/Training/HeartsaverCourses/HeartsaverFirstAidCPRAED/UCM_473182_Heartsaver-First-Aid-CPR-AED-Online.jsp
- American Red Cross Adult First Aid, CPR & AED - \$90 to \$110
 - <http://www.redcross.org/ux/take-a-class>



Rescue / Lifesaving - Handout

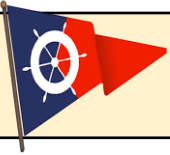
- Wilderness first aid providers
 - Remote Medical Inc
 - <https://www.remotemedical.com/training/wilderness-first-aid-wfa/>
 - Cost: \$200
- REI and Wilderness Medicine Institute (WMI)
 - <https://www.rei.com/outdoorschool/wilderness-medicine-classes.html>
 - \$225 (member) - \$255 (non-member)
- The Mountaineers
 - Must be a member. Cost not known.



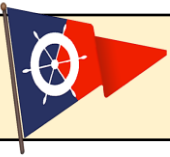
QUARTERMASTER YACHT CLUB — Rescue / Lifesaving Tech Talk

Rescue / Lifesaving Essentials

QUESTIONS?



BACKUP CHARTS



Rescue / Lifesaving – Preventive Measures

- Crew Resource Management
 - Crew resource management (CRM) is a set of training procedures for use in environments where human error can have devastating effects. Used primarily for improving air safety, CRM focuses on interpersonal communication, leadership, and decision making.
- Essentially “if you see something, say something”, but much more...