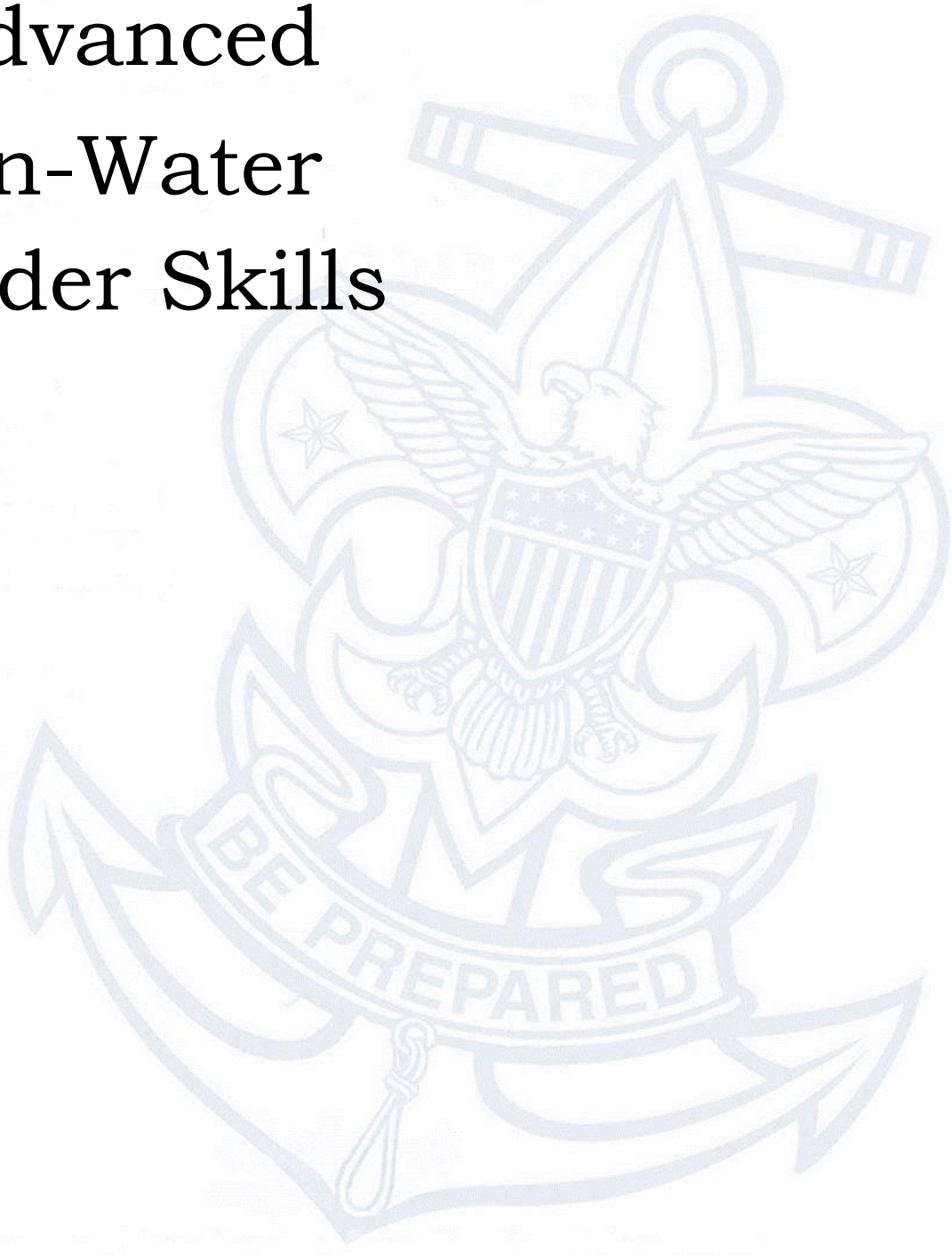
Advanced On-Water Leader Skills



Boy Scouts of America
National Sea Scout Support Committee

Contents

INTRODUCTION

Welcome to **Advanced On-Water Leader Skills (AOWLS)** training. This program models how adult leaders can step back from the helm, set performance expectations for the youth in their unit, and safely conduct an effective Sea Scout program underway.

Just as patrols are the building blocks of a Boy Scout troop, a Sea Scout crew is a small group of youth working together as a team and sharing the responsibility for successful on-water adventures. The youth gain confidence by serving in positions of leadership while enjoying the friendship, sense of belonging, and achievements of the crew and of each of its members.

The material and training presented in **AOWLS** closely follows the *Sea Scout Manual,* the *Guide to Safe Scouting,* and the principle that the growth and well-being of the youth is our focus. Adult leaders model, teach, and support so youth can develop and apply critical thinking, decision making, problem solving and leadership.

Hands-on participation makes the best learning tool, so participants should leave the training experience knowing they can show their Sea Scouts how to accomplish necessary skills while fulfilling rank requirements. Back home, we want Skippers, mates and adult leaders to feel comfortable working with and instructing their Sea Scouts. They should feel confident in helping their youth officers plan and carry out their own ship outings and exciting programs using these skills.

Mission Statement:

It is the mission of this course to model the methods and objectives of delivering the Sea Scout program while underway (long cruise), and to teach adult leaders how to support youth as they advance in rank, prepare for SEAL, and conduct quartermaster cruises.

Financing the Course

The course director must consider the vessel, the venue, available time, and the participant pool when planning the course. Items that may need to be budgeted include:

- Course handouts
- Fuel
- Food
- Slip fees
- Any other items necessary for course success

It is assumed that many of the items necessary to conduct the course will not have to be purchased. Ideally, experienced Skippers or mates will be using Sea Scout experience and equipment to run the course. Any participant fees should be reasonable.

Scheduling the Course

This schedule of skills sessions and other events can be taught over a weekend, beginning at midday on Friday all day Saturday, and Sunday until evening, or as a series of two one-day weekend sessions.

Training Techniques

AOWLS training helps leaders gain confidence in their ability through hands-on, practical application of skills and proven methods of influencing growth in positive ways to achieve the purposes of the Boy Scouts of America.

This course uses familiar techniques to help convey the fun and fellowship of Scouting, to demonstrate the knowledge Skippers, mates and adult leaders need to fulfill their roles successfully, and to reinforce safety issues. Participants will feel reassured knowing that others have the same interests, needs, and concerns in delivering the best possible Sea Scout program to their ships.

In this course, each participant will be using the skills a youth needs to be an effective crew member while participating in an on-water adventure. They will establish watches, serve as boatswain, navigator, helmsman, lookout and deck hand.

Course Structure

This course can be conducted by the council, district, multiple districts, region or a group of experienced Sea Scout leaders with permission from their district, council, or regional training chair. Participants can include Skippers, mates, committee members or other registered Scouters over the age of 21.

This course has classroom components as well as vessel components. For the on-the-water skills instruction, it is recommended that two instructors teach and monitor four to six participants. If the course is running multiple vessels, crews can be combined for the classroom portions of the training.

The delivery of this course is flexible enough to be offered, on a regularly scheduled, year-round basis, as needed to new leaders who join existing ships, and for newly organized ships.

Course Prerequisites

- Registered as a member of Boy Scouts of America and 21 years of age or older
- Completed Introduction to On-Water Leader Skills (IOWLS)
- Completed a piloting course with USPS, USCGAux or the equivalent

Comments and questions regarding Advanced On-Water Leader Skills are welcome and should be addressed to:

Director, Sea Scouts
1325 West Walnut Hill Lane
P.O. Box 152079
Irving, Texas 75015-2079

COURSE ORGANIZATION

A sample schedule for a weekend course is included, but the course is specifically designed to be flexible in delivery so participants can achieve specific objectives appropriate to the vessel the course will be using. A two-day sample schedule follows. If the course is run with more than four participants, a half day needs to be added for each additional person. Note: It is imperative that course directors know the skills and knowledge of the participants prior to setting the schedule for the course so they can adjust to the needs of the learners.

Sample Schedule for a Weekend Course (4 Participants)

FRIDAY	
1200:	• Review course expectations. • Review course schedule. • Introduce vessel pre-sail checklist and complete a tour of the vessel.
1300:	• Module 1: Vision of AOWLS • Navigation review • Module 2: Preparing to Get Underway • Review responsibilities of the boatswain, navigator, and deckhands. (Appendix A). • Determine order of boatswains and navigators. (It is recommended that the boatswain and navigator serve as a team that flips responsibilities mid-day. This will make more efficient use of their planning time.) • Team 1 plan Saturday's sail. Team 2 plan Sunday's sail.
1700	• Begin meal preparation
1900	• Continue planning for tomorrow's sail.
2200:	• Prepare for rest
2300:	• Lights out
SATURDAY	
Boatswain 1 **0600:**	• Reveille • Prepare breakfast • Boatswain/Skipper review of day's plan (both Boatswains)
0700:	• Breakfast • Cleanup • Boatswains present plan of day to course director/Skipper

0800:	• Colors
0810:	• Get underway.
1200:	• Set anchor. • Lunch (Something simple – sandwich, chips, fruit) • Boatswain 1/Navigator 1/Crew review: (thorns and roses) What worked, what needs to be tweaked, etc.
Boatswain 2 **1300:**	• Get underway.
1700:	• In slip. • Prepare dinner.
1800:	• Dinner • Clean up. • Boatswain 2/Navigator 2/Crew review: (thorns and roses) What worked, what needs to be tweaked, etc.
Sundown:	• Retire colors.
2000:	• Module 2: Preparing to Get Underway • Module 3: Bridge Management • Module 4: Leadership Training
2200:	• Prepare for rest.
2300:	• Lights out
SUNDAY	
Boatswain 3 **0600:**	• Reveille • Prepare breakfast • Boatswain/Skipper review of day's plan (both Boatswains)
0645:	• Breakfast • Cleanup • Boatswains present plan of day to course director/Skipper
0800:	• Colors
0810:	• Scout's Own (Interfaith Worship)
0830:	• Get underway.
1200:	• Set anchor.

	• Lunch (Something simple – sandwich, chips, fruit) • Boatswain 3/Navigator 3/Crew review: (thorns and roses) What worked, what needs to be tweaked, etc.
Boatswain 4 1300:	• Get underway.
1700:	• In slip. • Boatswain 2/Navigator 2/Crew review: (thorns and roses) What worked, what needs to be tweaked, etc. • Secure the vessel.
1830	• Introduce participants to a local eatery favored by your youth. Relax, network, and enjoy then head home.

Course Site Selection and Physical Arrangements

This course requires access to water and berthing for all participants. Vessels should reflect the program of the participant units.

Other necessary site considerations include lodging, parking, refrigeration and storage area for food, a source for adequate drinking water, first-aid station, and if possible, toilet and bathhouse facilities.

PROMOTING THE COURSE

When a need is identified, a course should be scheduled as soon as is practical. In areas where there are limited numbers of units, councils may want to collaborate. Contact a council or area commodore to help promote your course.

THE TRAINING TEAM

Selection

The Scout Executive, council training committee, or team assigned to leadership training is responsible for the training team for this course and seeing that the instructor staff is trained and that the course is planned and conducted effectively. If a multiple-council course is being planned, or a leader mentoring program established, they will likewise be accountable to the council and the same selection procedures. The council should also select a professional staff adviser to help and serve as liaison to the course and its needs. The course staff should include the council's most experienced and competent Sea Scout trainers.

Responsibilities

The vessels that are to be used must be sea-worthy and have current Vessel Safety Check credentials. Appropriate gear and materials must be collected, and the proper techniques with safety foremost in mind practiced to set a good example. What the participants see, hear, and

do while attending this course will be taken back to their ships and duplicated by them, to the best of their abilities, in their ship outings. It is essential that this course set a top-quality example and give accurate information. Staff members should not use shortcuts or poor presentation techniques that will ultimately surface in the quality of training that ship leaders give our youth.

Once the course is completed, the course director must issue training cards and make sure the training is recorded properly in BSA records for each participant.

Module 1 – The Vision

Objectives

- Participants will review the purpose of the course.
- Participants will apply the principles of the Scout Oath and Law to the actions and experiences of Sea Scouts.

Method of Instruction
Instructor lecture and group discussion

The Vision
When a person undertakes the task of designing a course of study, the first question must be, "What are we attempting to teach?" To find an answer for this course we must return to the roots of Sea Scouts and question, "What are we really attempting to teach our youth involved in the Sea Scout program?"

The person who expressed this best was Dr. William C. Menninger, M.D. of Topeka, Kansas. Dr. Menninger was recognized as one of the world's leading psychiatrists. In addition, he was an Eagle Scout, a Skipper of a Sea Scout ship and a Regional Commodore in 1933. He was the author of the *Handbook for Skippers*, published by the Boy Scouts of America in 1935. While the writings of Dr. Menninger are somewhat dated, his philosophy is solid and absolutely applies to the Sea Scout program today.

Dr. Menninger wrote:

> *What is Sea Scouting. . .Sea Scouting is one of the divisions of the Boy Scout Movement-a program for the older Scout, inculcating the ideals of Scouting as expressed in the Scout Oath and Law and built around the lure of water activities.*
>
> *The purpose of the organization is to instill in the young men a code of ethics for their future use in life, through an organized program, in which their previous Scout experiences are continued, deepened and polished. It is carried on from fifteen years of age through three, four and five years-as long as the contacts prove helpful-and during a period of formative life when an individual is facing an increasing number of new adjustments to life problems.*
>
> *While the Sea Scout Program unquestionably has a vocational value, its chief purpose is not to make sailors or seamen. Nor is it even remotely associated with any marine organization or to be regarded as a feeder for the US Navy. Its chief emphasis is placed on the Scout and not the sea. The best ships in Sea Scouting are making SCOUTS – young men who will be marked for their courtesy, their reliability and their alertness and shipshapeness.*
>
> *The occasional ship or patrol which lays all stress on sailing and seamanship invariably fails; it may succeed in making sailors but does not produce Sea Scouts.*

Sea Scouts must be safe on the water; therefore, we teach subjects such as navigation, seamanship, rules of the road, aids to navigation, and the endless list of topics that allow

people to operate vessels safely. However, we must never forget that our real objective in Sea Scouts is the teaching of the principles of the Scout Oath and Law.

Sea Scouts have been developing leadership through seamanship for over 100 years. Every time your ship gets underway you have a floating leadership laboratory. The good Skipper is the person sitting on the bridge and saying nothing. The Skipper of a Sea Scout Ship is not the commanding officer of that vessel; rather the Skipper is the teacher, mentor and advisor to the membership of that ship. When the Skipper has done the job well, the youth run the entire operation with only a watchful eye toward safety being exercised by the adult leaders.

This state of perfection is not achieved by accident or overnight. When you start a Sea Scout ship you begin with raw material. Young people join Sea Scouts for a variety of reasons. It may be that they have an interest in water activities, because their friends joined, or because they actually want a career in the maritime industry.

The Vessel Leadership Laboratory
(Instructor Note: The following covered by guided discussion. **E**ncourage the participants to think of other examples of how to apply the Scout Oath and Law in everything they do with their units.)

1. **BE PREPARED:** Prior to getting underway the boatswain must perform a pre-sail check and sign off on a checklist. The boatswain must check the stores, menu, and supervise the navigator to be sure the course planned is safe and accomplishes the objectives. The watch must be set, and all must understand what their specific duties will be during each watch and their position's specific responsibilities during drills.
2. **DO A GOOD TURN DAILY:** The boatswain must prepare the crew to respond to emergencies on the water, and to be prepared to assist if someone is in distress.
3. **TRUSTWORTHY:** The adult leadership must instill in all that the lives of all on the vessel are dependent on everyone doing his or her job. This is not a video game, and people can be injured or killed at sea. Sea Scouts must understand and commit the principle of being present and not distracted by cell phones and other devices.
4. **COURTEOUS:** Each Scout is taught to respond to commands and show courtesy to the youth leaders and to the adults. In Sea Scouts we use the words, "Yes, sir," "Please," and "Thank you," a lot.
5. **HELPFUL:** If a crew member is having trouble learning material, a fellow Sea Scout should step up and assist.
6. **OBEDIENT:** At sea one person must be the quarterback. The Skipper or Skipper's designee must give the orders and everyone must immediately respond. The safety of the vessel depends on this system working well.
7. **BRAVE:** At sea, it is sometimes necessary to put personal safety at risk to save the life of another.
8. **CLEAN:** We teach Sea Scouts to keep the vessel shipshape, the galley spotless, and to keep their gear orderly. "It's either in your bag, or in your hand."
9. **REVERENT:** Anyone who has spent much time at sea is impressed by the vastness and power of the sea. A 50 foot sailboat seems very large when you are in the slip, but on big water everything seems small. Faith in the "Great Skipper" is a necessity.

Module 2 - Preparing to Get Underway

Objectives

- Participants will review possible solutions for common malfunctions on a vessel.
- Participants will perform a pre-sail checklist for the training vessel.

Method of Instruction

- Instructor led discussion

Every vessel used by a ship needs a customized pre-sail checklist, and youth should be taught to carefully go through each step. An extensive checklist can be found in your materials that can serve as a starting point if your ship has not developed checklists for your vessels.

The boatswain is responsible for conducting the pre-sail check list. Crew members can assist, however the boatswain should not just delegate this task to other crew members.

Youth need to begin making observations about the vessel before they even board. As they approach the boat, teach them to look at the boot top. If the vessel is low in the water, a bilge pump may have failed. Have them visually check dock lines and lifelines for wear.

Some things on a pre-sail checklist are required by law and rarely change from sail to sail. Emergency equipment will expire and need to be replaced, and it is not a bad idea to teach your youth if there is anyone onboard that has not been onboard before, they need to get an overview of safety equipment and its proper use. Other things on your checklist require a more discerning eye. It is one thing to check things off the list, and it is another to be observant enough to spot things with the potential to ruin a good outing.

What should youth be taught about the following?

1. **Engine Room**
    a. What are the basics of how a diesel engine works? While you can talk about intake, compression, ignition and exhaust, seasoned Skippers have found that youth never forget, “Suck, Squeeze, Bang, and Blow.” Once they understand the basic process, they will begin to learn what things can interrupt the process.
    b. Start the engine and check for leaks of oil, fuel, or water.
    c. Immediately after starting the engine, check for overboard discharge of cooling raw sea water. Why do we look for those things and what would they indicate?
    d. What if the engine is overheating? It could be a clogged strainer, closed sea cocks, or a bad raw water impeller. Show your youth where these are and how they work.
    e. What if you see oil or the engine is consuming too much oil? A likely suspect is the oil cooler.

    What do you look for when inspecting fuel filters? How do you take care of Racor filters?

    a. If the engine is missing at low RPM, ask the youth about the fuel level. If fuel is not low, there could be a problem with the fuel pump.

   b. What would indicate an air lock in the raw water cooling system? How do you prevent and treat?

2. **Standing Rigging**
   a. Look for rust which is a sign of failure.
   b. Check for meat hooks.
   c. Inspect all bolts.
   d. Inspect safety pins.

3. **Emergency Equipment**
   It needs to be accounted for and accessible.
   a. Flares or legal alternatives in date and correct type and numbers
   b. Life jackets and appropriate use policies.
   c. Horn
   d. Bell
   e. First aid kit
   f. Throwable device ready
   g. Etc.

4. **Lights and Signals**
   All need to be turned on and checked to see that they are working. If they are not working what can be the problem? Burned out bulb, bad wiring?
   a. Running lights
   b. Anchor light
   c. Power boat or sailboat lights
   d. Deck lights
   e. Lights, red and white, at the navigation station
   f. Raise the ensign, ship's colors and appropriate signal flags

5. **Electrical System**
   a. Check the water level in the batteries. What happens if you have dry cells?
   b. Disconnect shore power: Explain why it is imperative to first turn the battery switch from "All" to "Off." What will be damaged if this is not done? When disconnecting the power cord, you start at the electrical outlet on shore and handle the plug with great care. It must not fall into the water under any circumstance. Explain why.
   c. Check to see that the alternator is charging the batteries. Why?
   d. Is there drain on the batteries when the battery switch is "Off?" How do you know and what can it mean?

6. **Galley**
   a. Propane must be off at the source, the electrical switch off, and the valve on the stove is off. What can happen if someone is careless?
   b. The menu should be properly planned with list of stores and menu plan and posted.
   c. Is the galley clean and refrigeration system working? If there is airlock in the raw water, what do you do?

d. Is galley gear clean and stowed? Youth need to understand that gear becomes projectiles in rough seas.
e. It is always a good practice to make lunch before getting underway and place in fridge. It the water is rough, it can be dangerous to be down below preparing something as simple as a sandwich.
f. Stations for getting underway should be posted. If an emergency were to occur, the youth need to know their position and their responsibility. This makes for a more efficient crew and reduces the possibility of panic.

While not on a pre-sail checklist for the vessel, there are some important things that must be taught and in place before youth can effectively take charge of a vessel.

1. Oftentimes the reason we have a boat in our program is because the owner thought it was worth so little that they'd get more as a tax write-off than as a trade-in. Thus, our boats are mostly fairly old, tired, and worn out. Implication, pay careful attention to carrying spare tools, parts, etc. and knowing how to use them.
2. All hands must be trained in the precise language required for communication onboard. There are protocols for radio communication, for helm commands, for handling lines. Youth also need to have knowledge of specific nouns for parts of the boat.
3. The OOD must set the watch-helmsman, lookout, and navigator and assign positions on deck. Again, this makes for a more efficient crew.
4. Before leaving the slip or pier, discuss wind conditions and current. Talk through the best way to get underway. Which lines do you cast off first? Why? Will the springline be useful? Why or why not? Help youth visualize and think through multiple scenarios.
5. It is a good practice to rotate deck positions but keep the same navigator for the entire watch.
6. All hands need to be in life jackets when docking, anchoring, or getting underway.
7. Flag protocol should be taught and practiced.

Review the pre-sail checklist for the course vessel. If participants have not already done so, have them conduct the checklist.

Module 3 - Bridge Management

Objectives

- Participants will discuss how youth can be trained to take charge of the vessel.
- Participants will examine the expectations for a boatswain and discuss ways skills can be broken into instructional units for the ship.

Methods of Instruction

- Instructor lecture
- Group activity

In Sea Scouts, the ultimate objective is to have the boatswain function as the OOD. However, with a new ship or a ship where the youth have not been trained or encouraged to take charge, you must teach the youth what is expected.

The expectations of a Quartermaster candidate on their Quartermaster cruise is what a well-trained boatswain should be able to do.

Teach bridge management to all hands as part of your program during meetings, and let the boatswain slowly take command of the bridge in moderate conditions as he or she gains confidence.

For example, before the next sail, spend a meeting or two going through standing orders and helm commands. Work up a station bill and a watch schedule and go sailing. Give everyone on the vessel a chance to be at the helm during a man overboard drill. The Skipper should give the commands for the first few drills. The boatswain should be able to helm the vessel during a drill before being expected to give the commands to the helm; but when the Skipper feels the boatswain is ready, the boatswain should serve as OOD during the remaining drills.

Before the next sail, focus on navigation skills for several meetings. Part of the planning for the sail should be determining where to go. Together, develop the boatswain's "cheat sheet" listing all the courses, distances, waypoints, and hazards review with the ship's the expectations for the navigator. Go over the navigator report that is given to the boatswain. Discuss speed vs. accuracy for the navigator's report and which is most appropriate in different situations.

While preparing the crew with new skills, there are some areas of coaching you will not want to overlook with your boatswain. The boatswain needs to learn how to be out in front of the boat meaning that while dealing with what is currently happening; thought must be given to what happens at the next course change, when coming in, or after the sail. The boatswain is constantly thinking about what needs to be done and what needs to be said. Commands must be confident, clear and loud enough for all to hear. Encourage your boatswain to choose his strongest navigator, and then put the plan into action. Go sailing.

During the sail, the boatswain and crew will be adding a new layer of skills. Once the boat is tied up, the crew needs to debrief. One of the hardest things for a boatswain to do is to delegate. It is hard not to jump in and lend a hand, and it is just as hard for the crew to wait for orders. Help your ship to understand that the boatswain must have and keep the big picture.

There will be bumps along the way, but if you gradually introduce skills and immediately apply them; you are preparing your entire ship to serve as Skipper. Your youth will also be accomplishing skills for rank advancement, and they will be well-prepared to perform well in SEAL if they choose to participate.

Activity

Have participants look at the expectations for a Quartermaster cruise and the Boatswain, Navigator and Deck Crew rubrics from SEAL. Ask them to discuss possibilities for breaking expectations into instructional modules that can be used with their ship to prepare youth to take charge of the vessel.

Module 4 - Leadership Training

Objectives

- Review leadership training opportunities for Sea Scouts.
- Discuss best practices for quarterdeck training.
- Discuss tools youth need to effectively lead, plan, and conduct activities.

Method of Instruction

- Instructor lecture and group discussion

The best Skipper of a Sea Scout unit must insure that he trains his leaders in both seamanship skills and in management of the Sea Scout unit. Leadership skills are learned by observing, classroom training and implementation. Management skills are more easily taught. Leadership skills must be developed.

ILSS

In 2010, the BSA Training Committee developed a unit level training for Sea Scouts called Introduction to Leadership Skills for Ships. (ILSS) (Participating in this course is a rank requirement, Ordinary 3.a.) The course includes a review of officer responsibilities and some team building activities.

ILSS can be used in several ways. If you have a brand new ship or a unit with a lot of new recruits, ILSS is a fun way to get to know one another and learn about the responsibilities of youth officers.

Quarterdeck Training

Once your ship has elected officers, the Skipper and the boatswain need to conduct quarterdeck training. (Participating in this training is a rank requirement, Ordinary 3.b.) This is not a whole-ship activity. This is a training and planning event for the quarterdeck.

As you learned in Sea Scout Adult Leader Basic Training, quarterdeck training also includes identifying strengths and weaknesses of the unit and establishing goals to overcome weaknesses, setting up the ship's calendar for the year, developing the budget, and learning how to lead, plan and conduct activities. Another useful tool to introduce to the quarterdeck is the Green, Amber, Red system for determining when an event is good to go, or when the risks are too high. (Appendix B)

Some units will have a weekend retreat with the new officers and the corresponding adult committee members who serve as a mentor for the new officer. The Skipper mentors the boatswain; the treasurer mentors the purser, etc. A weekend retreat allows you to work hard, play and relax, and work some more. It is a very productive investment in your officers.

The quarterdeck should meet regularly to do the nitty-gritty planning for activities. This allows more time in your unit meetings for training. It is during the quarterdeck meetings that the Skipper provides the tools and the training to help the youth officers plan events. The Skipper should make available tools such as blank meeting agendas, activity planning sheets, and permission forms.

A highly-functioning quarterdeck means that meeting time can be used to teach every member of the ship the skills they need to safely operate a vessel and the skills they need for advancement.

NYLT

In 2010, National Youth Leadership Training became available to all Scouts – male and female. Make no mistake; unit leaders have the primary responsibility for training their youth leaders. The purpose of NYLT is not to assume that role, but rather support it. The NYLT week is filled with activities, presentations, challenges, discussions, and camping in a team and model unit environment. Participants learn and practice skills that are valuable at home, church, school, work and the Scouting unit. ILSS is a prerequisite for NYLT. (NYLT is a Level 1 advancement elective.)

NAYLE

The National Advanced Youth Leadership Experience course is for NYLT graduates who want to further enhance their leadership skills in the Philmont backcountry, Sea Base and selected regional venues. NAYLE offers Sea Scouts an unforgettable wilderness experience as they use leadership and team-building skills to resolve exciting and challenging wilderness situations. (NAYLE is a Level 2 advancement elective.)

SEAL

Sea Scout Experience Advanced Leadership Training (SEAL) is designed to teach leadership skills while underway. The course will jump start youth leaders from new ships and fine tune leaders from established ships. The course is a hard core, physically and mentally demanding, and extremely rewarding hands-on leadership experience. The course is taught every summer in multiple venues. Look for an application and more information at seascout.org. (Successfully completing the SEAL course is an alternative advancement requirement for the Quartermaster cruise.)

WOOD BADGE

Wood Badge focuses on leadership and “people” skills, not Scoutcraft or outdoor skills. Participants learn techniques to make them better leaders, and also how to lead groups to achieve objectives. (Wood Badge is a Level 3 advancement elective.)

POWDERHORN

The course is designed to help the pack, troop, ship or crew by teaching older Scouts, Venturers, Sea Scouts and adult leaders to safely conduct outdoor/high-adventure activities of a fun and challenging nature. (Powderhorn is a Level 3 advancement elective.)

Appendix A

Boatswain Preparation Checklist

Please consider the tasks on the following list and use this document as a checklist to assist you in the performance of your duties as boatswain.

I. Prior to Getting Underway Planning and Training

- ☐ Reviewed navigation and checked all courses for correctness and safety and submitted to Skipper for approval
- ☐ Made a personal checklist to be carried on person of all courses, hazards, and compass courses for Williamson turn (if appropriate) for each course charted
- ☐ Reviewed all tides, weather reports, and established exact time of sunset
- ☐ Scheduled all duties for watch including helmsman, navigator, lookouts, galley assignments, and posted schedule
- ☐ Conducted pre-sail check of vessel using checklist and noted and corrected problems including check for all equipment required by law, condition of life jackets, flares in date and demonstrated complete knowledge of required equipment.
- ☐ Conducted training regarding handling of lines to get underway, made specific line assignments, trained crew on commands to be used and correct responses of each crew member to each command
- ☐ Conducted training of helmsman, reviewing proper helm commands as per manual and proper responses
- ☐ Conducted training of navigator reviewing procedure for reporting every hour and half hour
- ☐ Conducted emergency procedure training for man overboard drill including review of the station bill and the duties of each crew member for that drill
- ☐ Conducted training for colors ceremony and demonstrated proper boatswain calls (*All Hands, Pipe the Side and Carry On*)
- ☐ Conducted ground tackle training including deployment of the anchor, staging of lines and proper handling of lines and commands to be used
- ☐ Established a written backup or contingency plan for such events as sudden bad weather, equipment failure, illness or injury of crew member, etc.
- ☐ Followed engine checklist, started engines and checked for any water or fuel leaks, checked that transmission is engaging both forward and back
- ☐ During all training checked for understanding, was clear in his training, training followed an outline made by boatswain, used aids if necessary
- ☐ Posted a s*tation bill* for the following emergency situations: man overboard, fire, damage control and abandon ship.

II. Executing Colors

- ☐ All hands at stations on time and colors ready, halyards ready
- ☐ All hands property executed colors ceremony
- ☐ Played all required calls property (All hands, Attention, Pipe the Side, Carry On)
- ☐ Executed all commands correctly

III. Getting Underway

- ☐ All hands at stations according to a written and posted plan
- ☐ Received permission to get underway from Skipper
- ☐ Briefed crew on proper way to disconnect electrical power, disconnected shore power, and supervised proper storage of electrical lines
- ☐ Proper commands given to helm and line handlers and all personnel responded properly
- ☐ Commands were clear and loud enough for all to hear
- ☐ Special sea and anchor detail posted and ready
- ☐ All hands wearing life jackets, in work uniform and all safety equipment ready

IV. Emergency Drills

Man Overboard Drill: At Skipper's discretion, Skipper places floatable object over the side.

- ☐ Within 5 seconds, boatswain gave the first order to the helm to execute an appropriate recovery turn and gave subsequent proper commands to helm to properly perform that turn
- ☐ Boatswain checked with navigator to be sure navigator fixed location
- ☐ Boatswain insured that lookout was tracking victim by pointing
- ☐ Boatswain gave proper engine commands
- ☐ Boatswain gave proper commands to deck crew to pick up victim (target)
- ☐ Boatswain insured that helmsman was calling out compass headings during turn

Second Emergency Drill- Without notice Skipper announces emergency drill (Boatswain's Choice: Fire, Abandon Ship or Damage Control)

- ☐ Within 5 seconds the boatswain gives the first order to implement his plan
- ☐ Boatswain orders navigation to fix position
- ☐ Boatswain directs navigator to place appropriate emergency call to USCG to monitor situation. Directed efforts but did not leave station
- ☐ Was able to accurately describe his plan following secure from stations

V. Underway Command Skills

- ☐ Used correct commands to helm and required correct response. Properly supervised navigator, required navigation report exactly as set out in SEAL manual on the hour and on the half hour
- ☐ Vessel always on course, but boatswain informed Skipper if vessel was off course, received Skipper approval for any course changes
- ☐ Before making any course change, obtained input from navigator, looked at chart personally, performed a 360 degree visual check of the area and gave clear command to helm and crew
- ☐ Ensured lookout schedule was followed
- ☐ Ensured that meals were served on time and all was clean
- ☐ Handled any emergency or change of plans
- ☐ Delegated well and did not leave the bridge
- ☐ All commands were clear and loud enough for all to hear

- ☐ Responses to all commands were correct or boatswain corrected crew member response
- ☐ *While underway, when the Skipper suddenly directed a change in course and plans*; boatswain directed navigator and crew members to make proper changes and then implemented changes properly giving all proper commands
- ☐ Conducted review and counseling of crew members and held after-action debriefing following watch end
- ☐ Anticipated problems and events and responded accordingly, while not becoming part of the action

VI. Coming along side or use of ground tackle.

If Anchoring

- ☐ Crew and anchor detail received review of procedure including safety briefing
- ☐ Ground tackle properly prepared, bitter end secure
- ☐ All hands wearing life jackets
- ☐ Proper commands given to helm and proper response received
- ☐ Proper commands given to crew and proper responses received
- ☐ Once deployed directed navigator to take fix and if necessary set anchor watch
- ☐ Crew did not secure from anchor stations until directed

If Coming Along Side

- ☐ Crew received review of procedures and safety briefing properly conducted
- ☐ All hands wearing life jackets
- ☐ Lines properly prepared well in advance and clear of life lines
- ☐ All crew members at proper stations: bow lines, spring lines, stern lines)
- ☐ Proper commands given to helm and proper helm responses received
- ☐ Proper commands given to crew
- ☐ Vessel did not impact any unintended object
- ☐ Approach was well planned taking into account capability of vessel, wind, current and vessel traffic
- ☐ Crew did not secure from docking stations until command given

VII. After Securing from Being Underway

- ☐ Ensured all equipment was properly stored
- ☐ Ensured all navigation equipment, lights and electronic gear was turned off
- ☐ Briefed crew on safe and proper way to attach electrical cords, made proper connection to shore power
- ☐ Briefed crew on activities to take place, training, etc. for remainder of day
- ☐ Ensured that mess crew is prepared, understood meal and how to prepare the meal
- ☐ Ensured that mess crew understood safety related to stove
- ☐ Ensured that mess is clean and all is cleaned up after meal

VIII. Debriefing of Crew

- ☐ Conducted a debriefing of the crew, asked for suggestions to do better as well as what went well during the day
- ☐ If necessary conducted counseling privately for individual crew members
- ☐ Praised the crew for what they did well and suggested improvements for things that did not go well
- ☐ Conducted additional remedial training if necessary

SAMPLE STANDING ORDERS

These sample standing orders should be modified for the vessel you are on.

GENERAL –Underway

A. All crew will give their reports directly to the boatswain and when given a command, will repeat the command loudly. The boatswain will acknowledge all reports.
B. All crew will wear a lifejacket at all times while underway; at night or in bad weather the Skipper or Boatswain may direct that the crew use a harness and jacklines to tie in.
C. The crew will assure that the anchor, steaming, and navigation lights are illuminated when required.

NAVIGATOR

A. The navigator will plot the course and course changes with the DR positions and fixes labeled on the chart, following the proper plotting standards. The DR Position will be plotted every hour on the hour, every fix, every course change, and every ½ hour if ordered by the boatswain.
B. The navigator will keep all chart entries in the deck log.
C. The navigator will provide a report to the boatswain every 30 minutes covering the following:
    - Position Relative to Course (Right or left of Track and the distance from course in nautical miles):
    - Time to go until the next course change:
    - Hazards near course and range to hazards:
    - ETA to next aid to navigation, description of aid and relative position to ship:
    - Report on any significant radio traffic:
    - Speed made good since last fix:
    - ETA to final destination:
D. The navigator will record at a minimum the following data in the cruise log:
    1. Engine running hours
    2. Oil pressure, water temperature, every hour on the hour.
    3. Battery readings for amp hours used.
    4. Any activities of interest
E. The navigator will ring the bell time and maintain watch over the VHF radio:

LOOKOUT

A. All crew are required to maintain a lookout. Depending on the vessel, one or more crew (e.g. foredeck) may be assigned primary lookout responsibilities.
B. When reporting the following, give the range and relative bearing of the objects being reported and await an acknowledgement response from the boatswain. Example: "*Power vessel bearing 030 relative, range 400 yards.*"
    - Any vessel or object in the water that could possibly be a hazard to the vessel.
    - All aids to navigation.
    - Underwater obstructions and shallow water.

HELM

A. The helmsman will steer a course as given to him by the boatswain and, when given an order to change course by the boatswain, will repeat the order in a loud voice.

RESPONSIBILITIES DURING DRILLS

The following training should be done by the Boatswain prior to getting underway. These should be modified for the vessel you are using.

MAN OVERBOARD

A. When anyone determines that someone has fallen overboard, that person will sound the alarm by shouting "MAN OVERBOARD." The crew will also shout "MAN OVERBOARD."
B. The lookout will maintain continuous eye contact with the person in the water and will continuously point to the person overboard. It is often advantageous for the lookout to climb to the highest point on the boat to maintain continuous eye contact.
C. The Boatswain will order an appropriate rescue maneuver (e.g. Quick Stop, Quick Turn, Williamson Turn, or figure 8).
D. The Boatswain will order all hands to their rescue stations.
E. The navigator will press the GPS MOB button to record the exact position of the person falling into the water and will fix the position on the chart. The navigator will keep the Boatswain advised as to the relative position of the person in the water to the ship.
F. The navigator will hail the US Coast Guard and advise them of the situation

FIRE FIGHTING

A. Anyone detecting the presence of smoke or fire will immediately sound the alarm and advise the Boatswain and Skipper.
B. Upon detecting that there may be a fire onboard, the Boatswain and crew will pass the word: "ALL HANDS FIRE STATIONS."
C. The navigator will contact the US Coast Guard giving the ship's position, name and description of vessel, number of persons aboard and nature of the emergency.
D. The Boatswain will direct the crew to:
    1. Determine the location of the fire and turn the boat placing the fire to leeward.
    2. Direct the crew in fire-fighting operation.
    3. Turn off engine and shut off fuel supply if the fire is located in the engine compartment.
    4. Shut off the propane tanks manually.
    5. Prepare to abandon ship.

COLLISION

A. Upon sounding the collision alarm, all hands will respond by moving on deck wearing their life jackets; At night all hands will have a small flashlight in their possession.
B. The Boatswain or Skipper will direct the crew to perform Damage Control, Rescue Stations or Abandon Ship.

DAMAGE CONTROL

A. If the bilge alarm sounds, the Boatswain will immediately determine the reason and location of high water and take immediate action to terminate the flow of water into the ship.
B. Prior to getting underway, damage control materials should be located and inspected by the boatswain.
C. The boatswain will conduct damage control training and damage control drills on a frequency of not less than once a day while underway.
D. Once it is determined that water is coming into the ship, the Boatswain will prepare to abandon ship while in the process of terminating the flow of water.

RESCUE STATIONS

A. Upon sounding the alarm and ordering all hands to rescue stations, the Boatswain will assure that:
    1. The lookout is doubled.
    2. First aid equipment is at the ready.
    3. All hands are wearing life jackets.
    4. Navigator is conducting frequent fixes and plotting courses during the emergency as required.

ABANDON SHIP

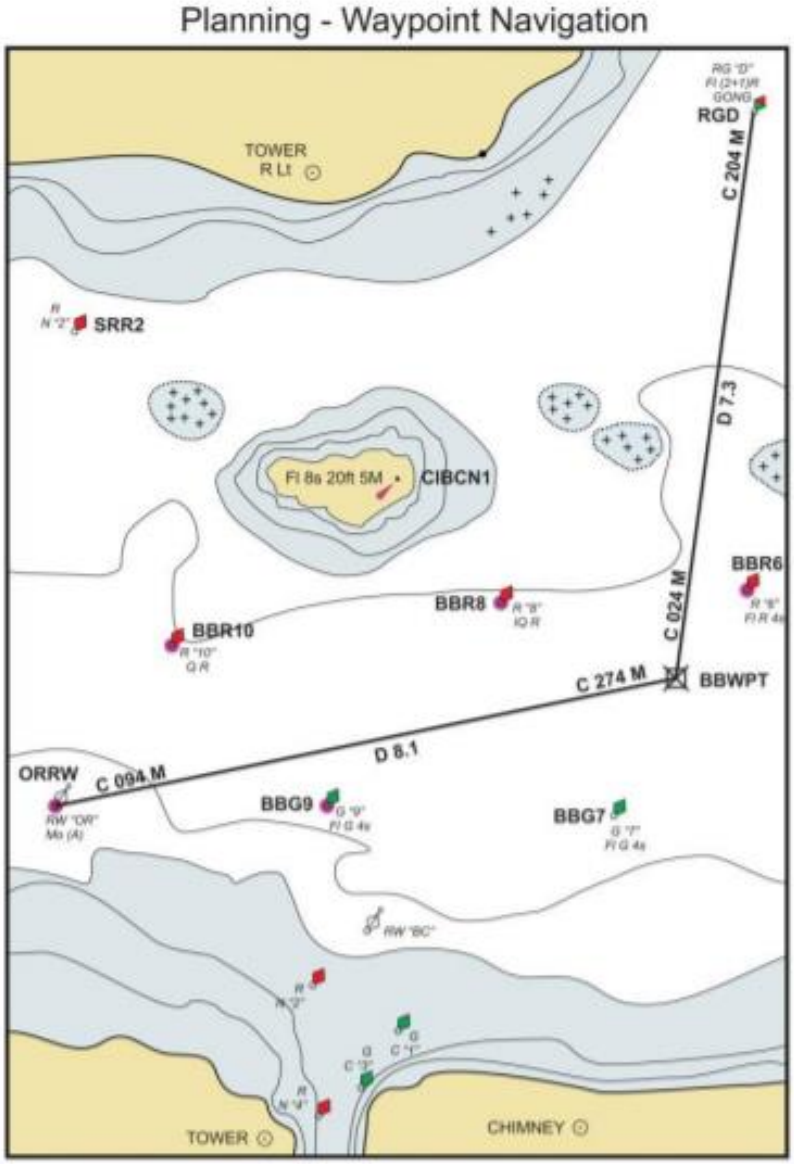
A. If the Boatswain or Skipper gives the order to ABANDON SHIP, the boatswain will assure that:
    1. The alarm is sounded and all hands are directed to abandon ship.
    2. The inflatable is launched.
    3. All hands are wearing type one life jackets.
    4. The navigator advises the US Coast Guard by radio of the ship's position, ship name, and description, number of persons aboard and nature of the situation. If the vessel is equipped with DSC, the distress signal should be sent. In the event that the USCG cannot be contacted, the navigator will attempt to contact other stations. If the navigator cannot contact other stations, the navigator will give a continuous broadcast of the ship's position, ship name repeating the words MAYDAY three times with each transmission until the navigator is ordered to leave his station.
    5. An abandon ship bag should contain:
        a. EPIRB or PLB if available

b. Portable hand held waterproof VHF radio
c. Portable lights and signaling mirrors
d. Two canisters of flares and flare gun
e. November/Charlie and orange flags
f. Small first aid kit
g. Portable GPS, charts and handheld compass
h. Three lengths of 3/4 inch line 50 feet in length
i. Portable water containers filled with fresh water
j. Emergency provisions

B. The Boatswain and Skipper will assure that all hands are accounted for prior to leaving the ship.

Navigator Instructions for Marking the Course

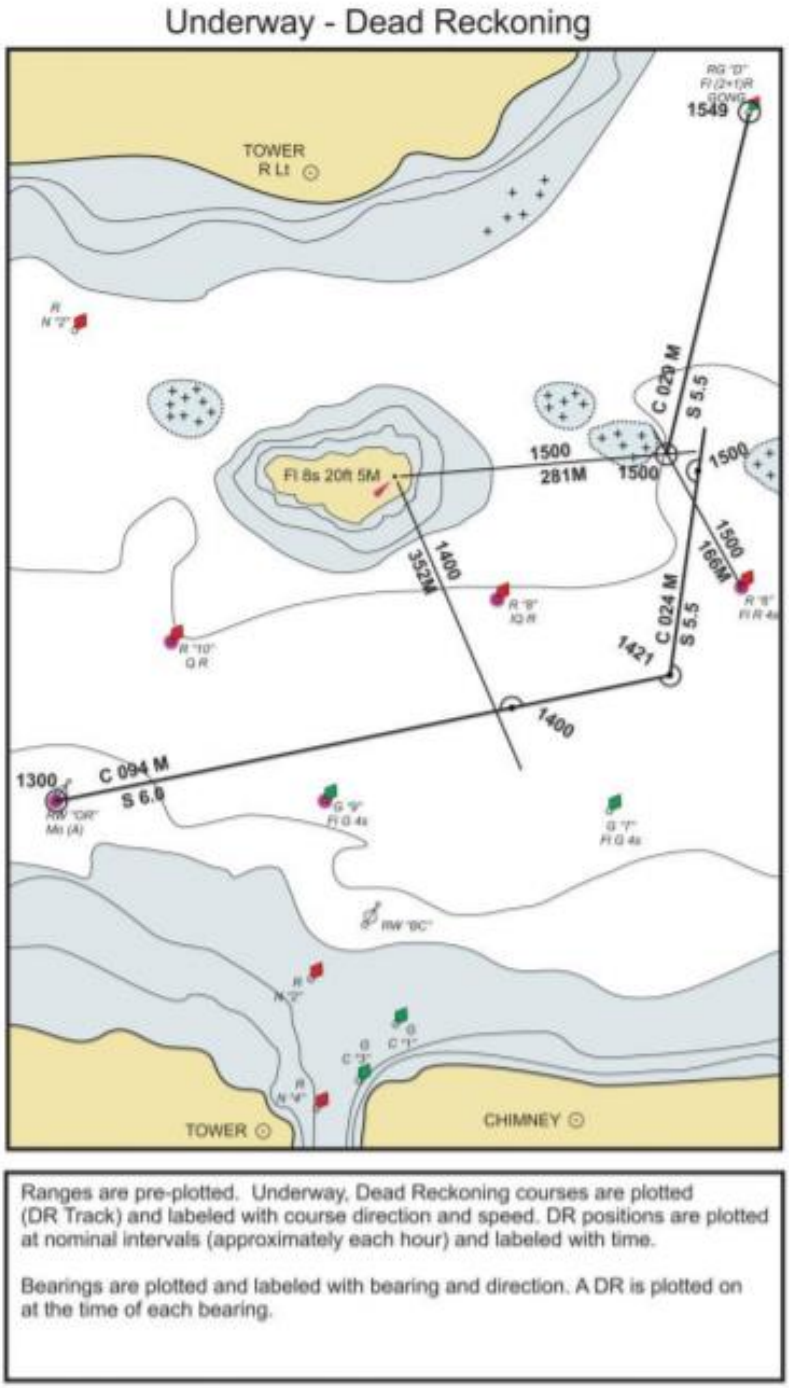
The navigator must prepare the course line on track in advance of getting underway. He must take care to avoid hazards and to select the most conservative course. The course is marked on top of the course line in degrees true preceded by the letter "C" near the start of each course (waypoint). The speed, "S," is noted under the course line in knots to the nearest tenth of a knot.



USPS Plotting and Labeling Standards, 2011

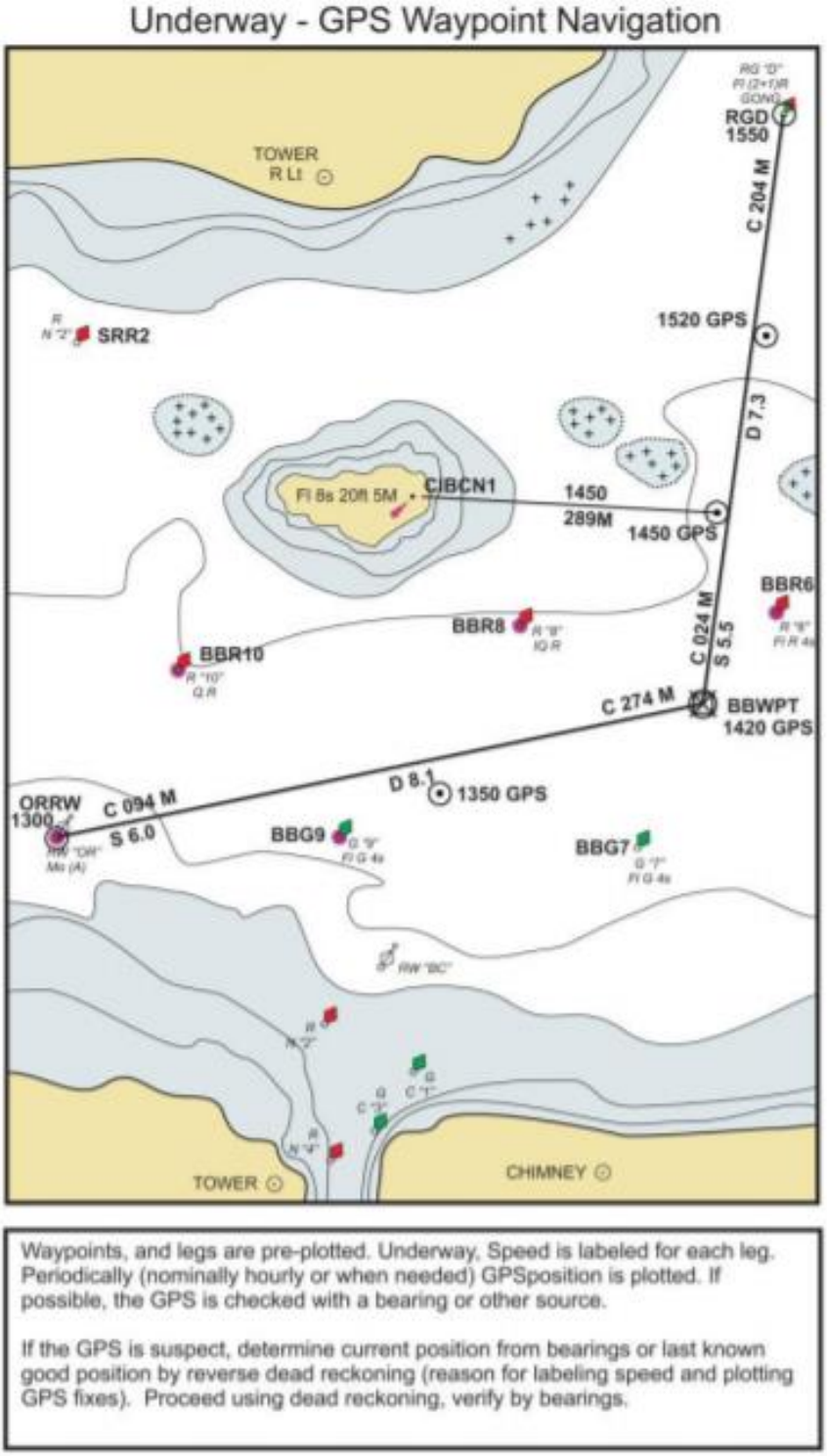
Once underway, the navigator will mark the entire day's course with an estimate of his position every hour on the hour (dead reckoning position) and denote by marking with a half circle on the course line with a dot in the center. Time will be written at an oblique angle to the bottom of the chart.

A fix is taken at least every hour and denoted with a circle with a dot in its center. The time is written parallel to the bottom of the chart.



USPS Plotting and Labeling Standards, 2011

A fix taken by GPS or radar is noted as a circle with a dot in the center and the type of fix written after the time written parallel to the bottom of the chart. Lines of position are marked with the time on top of the line close to the object used to take the line of position (LOP) and with the bearing to the object written underneath the LOP.



Waypoints, and legs are pre-plotted. Underway, Speed is labeled for each leg. Periodically (nominally hourly or when needed) GPSposition is plotted. If possible, the GPS is checked with a bearing or other source.

If the GPS is suspect, determine current position from bearings or last known good position by reverse dead reckoning (reason for labeling speed and plotting GPS fixes). Proceed using dead reckoning, verify by bearings.

USPS Plotting and Labeling Standards, 2011.

Navigator's Report to Boatswain

The Navigator's verbal report is to be given every 30 minutes on the hour and half hour and must include all items listed below.

Time:

Position Relative to Course (Right or left of Track and the distance from course in nautical miles)**:**

Time to go until the next course change:

Hazards near course and range to hazards:

ETA to next aid to navigation, description of aid and relative position to ship:

Report on any significant radio traffic:

Speed made good since last fix:

ETA to final destination:

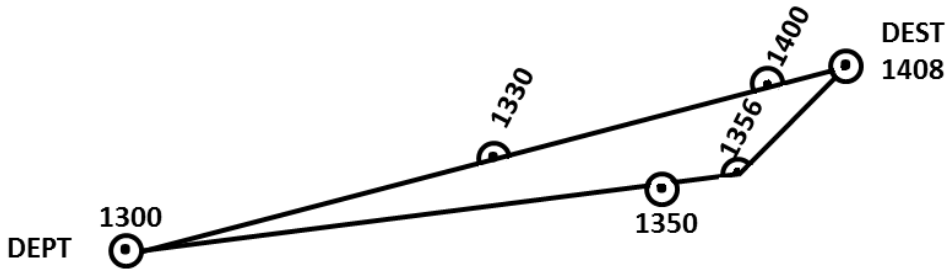
Example: *At 0830, a fix by GPS establishes our position 1.2 nautical miles left of track. I do not recommend that we change course now. I recommend that we change course to 235 at 0847, which is our next waypoint. There are no hazards left of course for 7 nautical miles. ETA to 31 foot tower #24 BF is 25 minutes, and this tower should appear 4.5 nautical miles on our starboard side. A disabled vessel should appear 12.5 nautical miles on our starboard side at approximately 1115 hours. Vessel is a 50 ton freighter that is not under command. Our speed made good since last fix is 6.8 knots. ETA to Catalina Harbor is 1415.*

Practical Navigation Underway

The following is designed to assist the navigator with practical suggestions.

Important Note: Do not forget to furnish the boatswain with the report as set out exactly in this manual every 30 minutes. Also, furnish the boatswain an update five minutes prior to any course change.

1. Experience has shown that the practice missions similar to those taught in the United States Power Squadrons (USPS) Piloting course and implied in the Sea Scout Ordinary and Able piloting requirements (and SEAL navigation exam) are a necessary basis for practical navigation, but additional tools are needed when transitioning to the practical arena.
2. Memorize some basic ideas for mental speed calculations:
    - At 4 knots, 15 minutes speed equals 1 NM traveled.
    - At 5 knots, 12 minutes speed equals 1 NM traveled.
    - At 6 knots, 10 minutes speed equals 1 NM traveled.
    - 30 minutes travel equals 1/2 your speed.
    - 20 minutes travel equals 1/3 your speed.
    - 15 minutes travel equals 1/4 your speed.
    - 12 minutes travel equals 1/5 your speed.
    - 10 minutes travel equals 1/6 your speed.
    - 6 minutes travel equals 1/10 your speed.
3. Sailing is a dynamic environment. Groundspeed and heading are changing constantly as the wind, tide and sail trim are changed. Motoring is more stable, but still variable. Navigators must monitor heading and speed to determine an average of each. Navigators can often round speed to the nearest knot or half knot. Sometimes, heading can be rounded to 5°.
4. After reaching the leg departure point, calculate an estimated time of arrival (ETA) to the leg destination. Pass it to the boatswain. Next calculate and plot the 30-minute dead reckoning (DR) positions for this leg. Next, plan on taking a fix (visual two-bearing) about 15-20 minutes prior to the destination. This gives time to plot the fix and alter heading to the destination. Mark a rough DR at the point for orienting yourself for fixing.
5. Take the fix at or near the planned time and prior to the planned waypoint. Plot it. This will take some time. Now “DR ahead” by six minutes. Extend your track (per the following illustration) for a distance of 1/10 of your groundspeed (see paragraph 2). Mark the DR.



6. Measure course and distance to destination. Calculate your new heading, pass it and the turn (DR) time to the boatswain. Then calculate the new ETA to destination, and pass it to the boatswain.
7. For legs longer than about an hour, it is appropriate to take fixes every 30 minutes as prescribed.
8. SEAL navigators are encouraged to fix by all means possible. This would include GPS, two or more lines of position and radar. Both the navigator and the boatswain should have brief notes giving all proposed courses, waypoints, times on each leg and hazards. It is suggested that the boatswain have these notes in his pocket for quick reference. Prior to giving an order to the helm to change course, the boatswain must receive the prescribed report from the navigator, look at the chart himself, take a 360 degree visual, form the order in his mind and then give the order in a firm and loud voice.
9. Remember: “The perfect is the enemy of the good.” A timely approximation is much better than a late perfect solution. If needed, you can improve an approximate answer later. Adjust your timing to your capabilities. Always use the “reasonableness test.” For instance, if you are making six knots and have traveled for 80 minutes and you calculate that you have traveled 14 miles, is this answer reasonable?

Sample Deck Log

Date 06/02/02 Time on 0800 Time off 1200

DECK LOG

VESSEL SSS SEA HAWK NAVIGATOR JOHN JONES FROM DUCK KEY TO BOOT KEY

Time	Position	Latitude	Longitude	Course True	Course Var.	Course Dev.	Course Comp.	Speed Made gd	Oil	Eng	RPM	
0800												WIND 10-15 WEST SEA 1-4, CLEAR
0810									50	180	1100	UNDERWAY FROM DOCK DOWN CHNL
0825	FIX								50	180	1100	G#1 CLOSE STAR SIDE
0830	FIX GPS	24°49.7N	080°55.2W	212	4W	0	216	6.0	60	185	1600	HAWK ON COURSE FOR CHNL
0900	FIX GPS	24°43.3N	080°57.6W	212	4W	0	216	6.2	60	185	1600	ON DR TRACK .2W OF COURSE
0915	DR			212	4W	0	216	6.2				ON COURSE + TRACK .4W OF COURSE
0930	FIX RADR	24°41.5N	081°01.4W	212	4W	0	216	6.1	60	185	1600	RAK 60BH TOWER
0941	R.FIX											SHOWS .8W OF COURSE RFIX ON ABROTWR
0945	FIX GPS	24°40.2N	081°02.4W	212	4W	0	216	6.3	60	185	1600	ON TIME .4W OF COURSE
1000	FIX GPS	24°36.4N	081°07.3W	244	4W	0	248	6.2	60	185	1600	NEW COURSE
1030	FIX LOP	24°38.4N	081°09.1W	244	4W	0	248	6.5	60	185	1600	185 ON #17 / 090 ON #94 ON COURSE TRK
1044	FIX GPS	24°32.6N	081°11.2W									MOB DRILL W. TURN RECOVERY
1100	FIX GPS	24°34.1N	081°12.6W	251	4W	0	255	6.2	60	185	1600	NEW COURSE
1130	FIX GPS	24°28.8N	081°14.2W	251	4W	0	255	6.6	60	185	1600	.3 NM RT OF COURSE 11 MIN AHEAD OF DR
1137	FIX GPS	24°26.1N	081°15.8W									WEST SIDE DROP HOOK BOOT KEY
1200	FIX GPS	24°26.6N	081°15.7W									CHECK POSITION EVERY HR PERIOD

Sample Checklist for Getting Underway

1. **Ground Tackle and Mooring Lines:**
   _____ Anchors in position ready for use
   _____ All parts of anchor & rode in good condition
   _____ Bitter end secure (look inside anchor locker)
   _____ Shackles moused
   _____ Anchor rode cleated; safety shackle on
   _____ Mooring lines in proper places

2. **Survival Equipment:**
   _____ Lifelines connected and undamaged
   _____ Horseshoe ready (starboard stern)
   _____ Life sling ready
   _____ Life jackets fitted and ready
   _____ Flares in date & ready; on deck ___; below ___
   _____ First aid kits: aft head ___; forward head ___
   _____ Emergency tiller located and ready
   _____ Horn working
   _____ Bell working
   _____EPIRB in date & operating

3. **Standing Rigging:**
   _____ Stays proper tension
   _____ Spars in good condition
   _____ Booms secure
   _____ Chain plates tight & no leaks

4. **Running Rigging:**
   _____ Sheets ready for use & secure:
   Jib S ___ P ___; Main ___; Stay S ___ P ___
   _____ Halyards ready for use & secure:
   Jib ___; Main ___; Stay ___
   _____ Sails in good condition:
   Jib ___; Main ___; Stay ___
   _____ Sail cover off and stowed: Main ___ Stay ___
   _____ Deck covers off and stowed
   _____ Jib furling line cleated & secured

5. **Dinghy:**
   _____ Dinghy secured to boat lift
   _____ Plug removed from drain
   _____ Cover secured to dinghy
   _____ Motor aboard & secured
   _____ Fuel for dinghy secured to open deck aft

6. Scuba Gear:

_____ Tanks secure
_____ Gear stowed and secured

7. Lighting (switches on DC board):

_____ DC interior lights: Port ___ Stbd ___
_____ Navigation lights operational
_____ Anchor light operational (top of mast)
_____ Steaming light operational (front of mast)
_____ Spreader lights operational
_____ Spotlight (plugs in cig. Lighter, large light stowed over nav table)

8. Bilge pumps (under galley floor):

_____ Bilge pumps operating and in auto position
_____ Bilge alarm operational
_____ Location of manual bilge pump and handle: _____

9. Electrical:

_____ Generator operational
_____ Fresh water pump working (turn on water & listen)

On DC Board:

_____ Battery in **both** position
_____ Battery condition good (gauge on DC board)
_____ VHF switch on
_____ VHF radio tuned to Channel 16
_____ Log & sonar on (depth & speed)
_____ Radar on
_____ Fresh water pump off
_____ GPS on

10. Navigation:

_____ Ship compass operating
_____ Compass light operating (DC board & compass binnacle)
_____ Check navigation table for:
- _____ Parallel rules
- _____ Hand-held compass
- _____ Dividers
- _____ Pencils & erasers
- _____ Notepad
- _____ Charts of area to sail
- _____ Binoculars in working order
- _____ Deviation table aboard (if appropriate)

11. Galley:

_____ Menu posted
_____ Food stowed
_____ Fresh water tanks full: Port ___ Stbd ___
_____ Galley clean
_____ Refrigeration system operational (plates cold)

12. Firefighting (Fire extinguishers in date & charged):

_____ Forward cabin
_____ Main cabin – closet
_____ Main cabin – by stairs
_____ Aft cabin – port side

13. Propane fuel:

_____ Propane tanks: left amt. ___; right amt. ___
_____ Tanks shut off
_____ LPG breaker off at DC panel
_____ LPG switch off
_____ Stove switch off

14. Diesel engine:

Fuel compartment – aft side of cockpit:

_____ Diesel fuel level – port tank ___ gal.; stbd. Tank ___ gal.
_____ Diesel RETURN valve on Port or Starboard (circle which)
_____ Diesel ENGINE FUEL valve on Port or Starboard (circle which)
_____ Fuel shut-off in ON position

Engine room:

_____ Oil level okay
_____ Transmission level: F ¾ ½ ¼ E (circle which)
_____ Raw water strainers clean
___ Main engine
___ Gen set
___ Fwd A/C
___ Aft A/C
___ Refrigerator
_____ Seacocks open
_____ Hoses & clamps in good condition
_____ Through hull fittings watertight
_____ Cables in good condition

Start engine:

_____ Low oil pressure alarm operational
_____ Engine temp alarm operational
_____ Engine start & oil pressure okay
_____ Cooling water discharge okay
_____ Water temp okay
_____ Engine systems watertight
_____ Hoses and clamps not leaking
_____ Diesel FUEL filters clean (RACOR)
_____ Engine compartment fire extinguisher green light on (see compass binnacle)

15. Signals & Flags:

_____ U.S. flag ¾ up backstay
_____ Steaming cone hoisted – port side (if appropriate)
_____ Ship's flag on starboard spreader
_____ Proper signal flags port halyards (if appropriate)
_____ Jack stowed

16. Final check:

_____ Checklist on boat completed
_____ Navigator and course ready

Crew assignments posted on bulletin board:

_____ Crew watches assigned – 24 hour schedule
_____ Running rigging hands assigned and instructed
_____ Ground tackle hands assigned and instructed
_____ Mooring lines assigned and instructed
_____ Mess crew assigned

Final duties:

_____ Flags properly hoisted
_____ Cleared of all items not secured
_____ Hatches closed
_____ Passageway cleared
_____ All shore power switches off on AC board
_____ Disconnect shore power
_____ Stow shore power cords in bags in lazaret
_____ Secure fenders
_____ Crew in assigned places to get underway
_____ Diesel engine started and warmed

Boatswain Evaluation Form

To be completed by the course director, Boatswain, and all members of the class at the completion of each day's activities.

Name of Boatswain: _____

I. Planning

- [ ] A. Navigation checked by Boatswain
- [ ] B. Boatswain's notes made on route, hazards, navigation aids, course changes
- [ ] C. Checked weather, tides, sunrise/sunset and applied to day's plans
- [ ] D. Schedule of deck duties made and posted
- [ ] E. Schedule of Galley assignments made and posted
- [ ] F. Pre-sail checklist completed and approved by Skipper prior to sailing
- [ ] G. Schedule of day's activities beyond transit planned
- [ ] H. Had backup plans in case of changes

II. Executing Colors

- [ ] A. All hands at stations on time and ready
- [ ] B. All hands properly trained for duties
- [ ] C. Knew and executed proper pipe calls
- [ ] D. Made proper commands that could be heard

III. Ship's Evolutions

- [ ] A. Had seamanship skills necessary to manage this activity
- [ ] B. All hands at stations and ready
- [ ] C. All hands properly trained for duty
- [ ] D. All hands briefed on procedure
- [ ] E. Procedures executed properly
- [ ] F. Safety procedures planned, reviewed and executed

IV. Communicating

- [ ] A. Spoke with commanding voice, could be heard
- [ ] B. Spoke clearly and concisely, commands understandable
- [ ] C. Used correct verbiage
- [ ] D. Concise

V. Implementing

- ☐ A. Crew understood assignments, drill positions
- ☐ B. Demonstrated rules of the road, navigation skills
- ☐ C. Safely took ship from point A to point B

VI. Supervising/Commanding

- ☐ A. Led by example
- ☐ B. Had "big picture," was aware of all activities taking place
- ☐ C. Anticipated sequence of events
- ☐ D. Supervised/commanded every aspect of operation
- ☐ E. Did not become part of the action
- ☐ F. Maintained level of command at all times
- ☐ G. Inspired confidence
- ☐ H. Adhered to chain of command
- ☐ I. Took suggestions into account

VII. Problem-Solving

- ☐ A. Knew where crew was at all times
- ☐ B. Made sure tasks completed properly
- ☐ C. Took changes in stride
- ☐ D. Continued to reevaluate/ follow-up on situations

VIII. Motivating

- ☐ A. Was able to positively motivate crew
- ☐ B. Recognized needs of crew
- ☐ C. Encouraged team spirit
- ☐ D. Maintained a good attitude

IX. Counseling

- ☐ A. Used praise in presence of group
- ☐ B. Discussed problems privately
- ☐ C. Was objective, not personal

X. Delegating

- ☐ A. Was fair and impartial
- ☐ B. Selected the best people for the job
- ☐ C. Gave clear task direction
- ☐ D. Followed up to see that tasks were properly completed

Practical Navigation Evaluation

To be completed by the course director as the leader's final evaluation of the participant's performance as navigator.

Participant: _____

I. Preparation

- ☐ A. Skipper/boatswain consulted for next day's sail plan
- ☐ B. Trackline plotted accurately
- ☐ C. Courses, length labeled
- ☐ D. Aids to navigation characteristics listed
- ☐ E. Navigational obstacles identified and labeled
- ☐ F. Tides computed
- ☐ G. Weather, sunrise/sunset times obtained
- ☐ H. Chart and prep work reviewed by Skipper and Boatswain
- ☐ I. Logs prepared and understood
- ☐ J. Fix information report ready and understood
- ☐ K. Use of any equipment unique to ship learned

II. Skills demonstrated

- ☐ A. Fixes plotted and reported to Boatswain in timely manner
- ☐ B. Good communications with Boatswain
- ☐ C. Accurate recommendations made
- ☐ D. Scales read properly
- ☐ E. Chart/nav aid characteristics read properly
- ☐ F. DST formula understood and used properly
- ☐ G. Variation computed and applied correctly
- ☐ H. DRs plotted in advance, every 30 minutes
- ☐ I. Chart properly labeled

III. Flexibility Took changes of plan in stride

- ☐ A. Able to re-plot courses with minimal disruption of vessel's operation
- ☐ B. Able to pace self, take breaks for meals and nausea as needed
- ☐ C. Asked for help if needed

Practical Deck Seamanship Evaluation

To be completed by the course director as the leaders' final evaluation of the participant's performance as a member of the deck force.

Participant: _____

I. Procedural knowledge

- ☐ A. Knew or learned and then demonstrated the following procedures:
  - ☐ 1. Drills
  - ☐ 2. Anchoring
  - ☐ 3. Sailing or ship's maneuvering
- ☐ B. Demonstrated knowledge of rules of the road, aids to navigation
- ☐ C. Understood mooring and unmooring (doesn't have to demonstrate)
- ☐ D. Tied appropriate knots as needed
- ☐ E. Executed proper cleanups
- ☐ F. Pointed out any deficiencies with ship noticed during day's activities

II. Communications

- ☐ A. Used standard commands
- ☐ B. Used command voice
- ☐ C. Asked for clarification when needed
- ☐ D. Ensured own messages heard and understood

III. Customs & courtesies

- ☐ A. Demonstrated pride in uniform
- ☐ B. Understood or learned how to use boatswain's pipe
- ☐ C. Understood or learned proper procedures for colors
- ☐ D. Properly used chain of command

IV. Ability to work with others

- ☐ A. Got along well with other members of the team
- ☐ B. Performed own share of work
- ☐ C. Helped other members of the team when able
- ☐ D. Maintained positive attitude
- ☐ E. Promoted team's goals

Appendix B

ORM/GAR

Operational Risk Management (ORM) asks and answers these questions:

- What hazards exist?
- How can the mission be completed safely?

In mission analysis you consider:

- Accept no unnecessary risk.
- Accept necessary risk only when the benefits outweigh the costs.
- Make risk decisions at the appropriate level.

Green-Amber-Red Model

Using GAR helps you answer:

- Are the risks acceptable or unacceptable?
- Can we modify our plan to reduce risk?
- Are there any safeguards missing?
- What new options should we consider?

Risk Calculation Worksheet
Calculating Risk Using GAR Model (GREEN-AMBER-RED)

To compute the total level of risk for each hazard identified below, assign a risk code of 0 (For No Risk) through 10 (For Maximum Risk) to each of the six elements. This is your personal estimate of the risk. Add the risk scores to come up with a Total Risk Score for each hazard.

SUPERVISION

Supervisory Control considers how qualified the supervisor is and whether effective supervision is taking place. Even if a person is qualified to perform a task, supervision acts as a control to minimize risk. This may simply be someone checking what is being done to ensure it is being done correctly. The higher the risk, the more the supervisor needs to be focused on observing and checking. A supervisor who is actively involved in a task (doing something) is easily distracted and should not be considered an effective safety observer in moderate to high-risk conditions.

PLANNING

Planning and preparation should consider how much information you have, how clear it is, and how much time you have to plan the evolution or evaluate the situation.

TEAM SELECTION

Team selection should consider the qualifications and experience level of the individuals used for the specific event/evolution. Individuals may need to be replaced during the event/evolution and the experience level of the new team members should be assessed.

TEAM FITNESS

Team fitness should consider the physical and mental state of the ship. This is a function of the amount and quality of rest a ship member has had. Quality of rest should consider how the ship rides, its habitability, potential sleep length, and any interruptions. Fatigue normally becomes a factor after 18 hours without rest; however, lack of quality sleep builds a deficit that worsens the effects of fatigue.

ENVIRONMENT

Environment should consider factors affecting personnel performance as well as the performance of the asset or resource. This includes, but is not limited to, time of day, temperature, humidity, precipitation, wind and sea conditions, proximity of overhead or navigational hazards and other exposures (e.g., oxygen deficiency, toxic chemicals, and/or injury from falls and sharp objects).

EVENT or EVOLUTION COMPLEXITY

Event/Evolution complexity should consider both the required time and the situation. Generally, the longer one is exposed to a hazard, the greater are the risks. However, each

circumstance is unique. For example, more iterations of an evolution can increase the opportunity for a loss to occur, but may have the positive effect of improving the proficiency of the team, thus possibly decreasing the chance of error. This would depend upon the experience level of the team. The situation includes considering how long the environmental conditions will remain stable and the complexity of the work.

Assign a risk code of 0 (For No Risk) through 10 (For Maximum Risk) to each of the six elements below.

Supervision _____

Planning _____

Team Selection _____

Team Fitness _____

Environment _____

Event/Evolution Complexity _____

Total Risk Score _____

The mission risk can be visualized using the colors of a traffic light. If the total risk value falls in the GREEN ZONE (1-23), risk is rated as low. If the total risk value falls in the AMBER ZONE (24-44), risk is moderate and you should consider adopting procedures to minimize the risk. If the total value falls in the RED ZONE (45-60), you should implement measures to reduce the risk prior to starting the event or evolution.

GAR Evaluation Scale
Color Coding the Level 0f Risk

10 20	30 40	50
GREEN (Low Risk)	AMBER (Caution)	RED (High Risk)

The ability to assign numerical values or “color codes” to hazards using the GAR Model is not the most important part of risk assessment. What is critical to this step is team discussions leading to an understanding of the risks and how they will be managed.