LINCOLN COUNTY TECHNICAL ROPE RESCUE TEAM

Reference Manual
and
Procedural Guide

January 2013

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The purpose of this manual...................

...is to give guidance and reference material to all Lincoln County Rope Rescue Team members in order to assist them when they respond to a rope rescue incident.

The goal at a rope rescue incident is to operate in the safest, most efficient and most expedient manner possible.

All technical rescue personnel at a rope rescue incident are governed by:

- the situation at hand
- OR-OSHA
- NFPA Standards 1006-1670
- Resources Available
- Responding Mutual aid units and their protocols

This Manual will attempt to identify:

- Mandatory Practices
- Preferred Methods
- Acceptable Alternatives
- Good, Better, Best ways of Operating

Rules we must follow....

In regards to rope rescue ..... we are governed by, and must comply with:

NFPA 1983 – Standards on Fire Service Life Safety Rope, Harness and Hardware.

NFPA 1006 - Standard for Fire Fighter Professional Qualifications.

NFPA 1670 - Standard on Operations and Training for Technical Search and Rescue Incidents.

OR-OSHA - Division 7, Forest Activities, (Subdivision P Tree Climbing)

Responding Fire Departments and Their Protocols.

Yearly Training Requirements

Good Judgment.

Some Definitions we need to understand.......

- **Technical Rescue** – The application of special knowledge, skills and equipment to safely resolve unique and or complex rescue situations.

- NFPA further defines Awareness, Ropes Level I and Ropes Level II.

- **Awareness Level** – Can conduct a non-entry rescue such as coaching a victim without putting personnel in harms way. Prevent anyone else from becoming a victim through scene management. Recognize and identify the need for higher trained personnel such as an operations or technician levels rescue teams.

- **Ropes Level I**- is defined as Operations level. This level applies to individuals who identify hazards, use equipment, and apply limited techniques specified in this standard to perform technical operations which include.

  - Construct a multi point anchor system using load sharing and load distribution techniques.
  - Construct a compound mechanical advantage system capable of moving rescue loads and use it in a high-angle system.
  - Construct a fixed rope system to be used for descending.
  - Ascend and descend a fixed rope system a minimum of 20 feet.

- **Ropes Level II** – is defined as Technician Level. This level applies to individuals who identify hazards, use equipment, and apply advanced techniques specified in this standard to perform technical rescues which include.

  - Complete an assignment attached to a rope system.
  - Move a victim on a high-angle rope system.
  - Act as a litter attendant in a high-angle rescue environment.
  - Direct the use of a lowering system that will be used for victim removal.
  - Direct a team in the construction of a tensioned rope system.
  - Direct a team in safe and efficient operation of a tensioned rope system.

When do we need rope rescue technicians?

Rope rescue operations are used in a variety of victim rescues ranging from a simple belay line on a stokes on a sandy beach, to an ice covered street, to an intricate call off the side of a building. A general rule of thumb is that most calls can be handled at an operations level for anything with a terrain pitch of 40 degrees or less. Technicians should be required for any terrain over 40 degrees, or where a more complex rescue system is required.

The Ten Commandments

1) Rope rescue responses require common sense and good risk management. Because we are in the life saving business we know there is a lot of gray area during rescue operations. We must be realistic about the risks and benefits of performing rope rescue operations. We must place the odds in our favor.

2) If you chose to operate outside of this policy and have accepted "good" practices during a rope rescue be prepared to accept personal responsibility for that decision.

3) Base your rope rescue decisions on realistic, objective thought processes.

4) The goal at a rope rescue incident is to operate in the safest, most efficient and most expedient manner possible.

5) All members should attempt to make every rope rescue as simple as possible. What works for one rescue may not be the best course of action for another rescue.

6) Belay lines are **mandatory** in all training scenarios.

7) Belay lines are **mandatory** in all rescues for each rescuer.

8) In regards to rope rescues, all members are governed by, OR-OSHA, NFPA 1983, NFPA 1001, NFPA 1670, current training and current SOG's.

9) Class III Life Safety Harnesses shall be worn for all edge protection personnel. Class III Life Safety Harnesses shall be worn for all rappelling operations.

10) Protocols are useful when discretion is allowed at the scene. A successful rescue is a mixture of training, practice and judgment. We all must remember that self-rescue is the priority. Rescue of our team mates is second and the rescue of the victim is the final outcome. Self sacrifice benefits neither the rescuer nor the victim if both are lost.

What are the hazards we may face with a rope rescue call?

- Improperly worn equipment

- Heights

- Obscured vision

- Bystanders

- Intricate techniques rarely used

- Trip hazards

- Weather

- Lack of training

- Lack of equipment maintenance

- More than one team leader

- Tunnel vision

- Communications

- Lack of accountability

How to approach a Rope Rescue call.........................

Lots of information follows. Some of it may or may not apply. Please review and decide which pertains to the situation you are faced with, as it may be a simple low angle call or it may be a more intricate call.

Activation of the Rope Team:

The Rope Team can be activated using the Special Events Page as well as Everbridge. Units responding to staging locations should coordinate using cell phones. This will greatly reduce unnecessary radio traffic. Staging locations will very based on incident location.

Responding to the call:

The division the incident is in will respond (code 1 or 3 based on situation) to the scene to begin size-up for rescue operations. This team can begin formulating a plan to perform the rescue until enough personnel have arrived to conduct the rescue at hand. Someone MUST take Rescue Group Supervisor role and announce it.

The next closest division will also assemble and respond (code 1 or 3 based on situation) to the scene. The remaining division will move up (code 1) to the next divisions' closest responding station and stand by.

Enroute to the call:

-We have rope technicians in our department and all around us. Don't hesitate to get them coming.

-simple rope rescues in terrain of 40 degrees or less can be handled by most operational personnel.

-complex rope systems and those in terrain over 40 degrees require rope rescue technicians.

-consider asking for a Law Enforcement response.

When you arrive:

-recognize the type of incident you are at

-give a size up and establish command.....

-what you have, what you're doing, what you need and 'who is in command'

-what is the pitch of the terrain? Can Ops folks handle it or do you need rope techs?

-consider requesting a 'County Technical Rope Rescue Team' response and where you want them to report to.

-consider asking for a mutual aid response for additional personnel for any hauling operations, set up staging location for responders

-give an apparatus base location, typically 100'-150' away, unless needed for an anchor, if used as an anchor, consider posting someone with the apparatus to ensure it is not moved

-ask dispatch for 15 minute status checks

CAN THE VICTIM STABILIZE THEIR POSITION?

-gather information   -what is the problem?

-what are the hazards?   -how many people are trapped?

-what are their conditions?   -is there a responsible person to give you more information?

Update dispatch / responding units

-give additional information to dispatch and responding units

-do you have adequate resources enroute?

-declare whether we are in RESCUE or RECOVERY mode

-Isolate the scene and control the hazards

-lock out / tag out?

-set up hot-warm-cold zones

-shut down adjacent traffic

Perform initial company actions which include:

-Find a responsible person

-lighting?

-hazard mitigation

Establish an action plan:

-use IMS

-designate a Rescue Group Supervisor A.S.A.P.

-designate a radio frequency for the rope team (this should be for the rope team ONLY)

-get ahead of the game and designate a Safety Officer

-do you have enough resources, especially rope technicians?

-donning of IMS vests lessens confusion

Prepare for the incident:

-crowd control, deny entry to unauthorized persons

-identify the hazards present and how to best control them

-start the process of gaining access to the victim
-be prepared to provide the resources your RGS is going to ask for (rigging, entry team, edge person, etc)

-can a ladder truck be used in the evolution?
-support personnel within 15' of the edge shall be fitted with fall protection

Tricks of the trade: Getting two rescuers to the victim and solidifying his location asap has proven to be a great stress reducer in these types of situations!

'Entry team' prepares for access:
-They gear up

-Rope systems are set up and safety checked

-Edge person, rigging team leader and RGL are all on the same page

The entry team accesses the patient area:

-after they are safety checked

-after the systems and anchors are all safety checked

-after all rescuers know the plan

-after the Safety Officer concurs

-after they understand whether we are in RESCUE or RECOVERY mode

-after they are told the hazards and how those hazards have been mitigated

-taking appropriate victim gear with them

Tricks of the trade: it's going to take longer than you anticipate. Do they need warmer clothes? Are their radios working properly?

Termination:

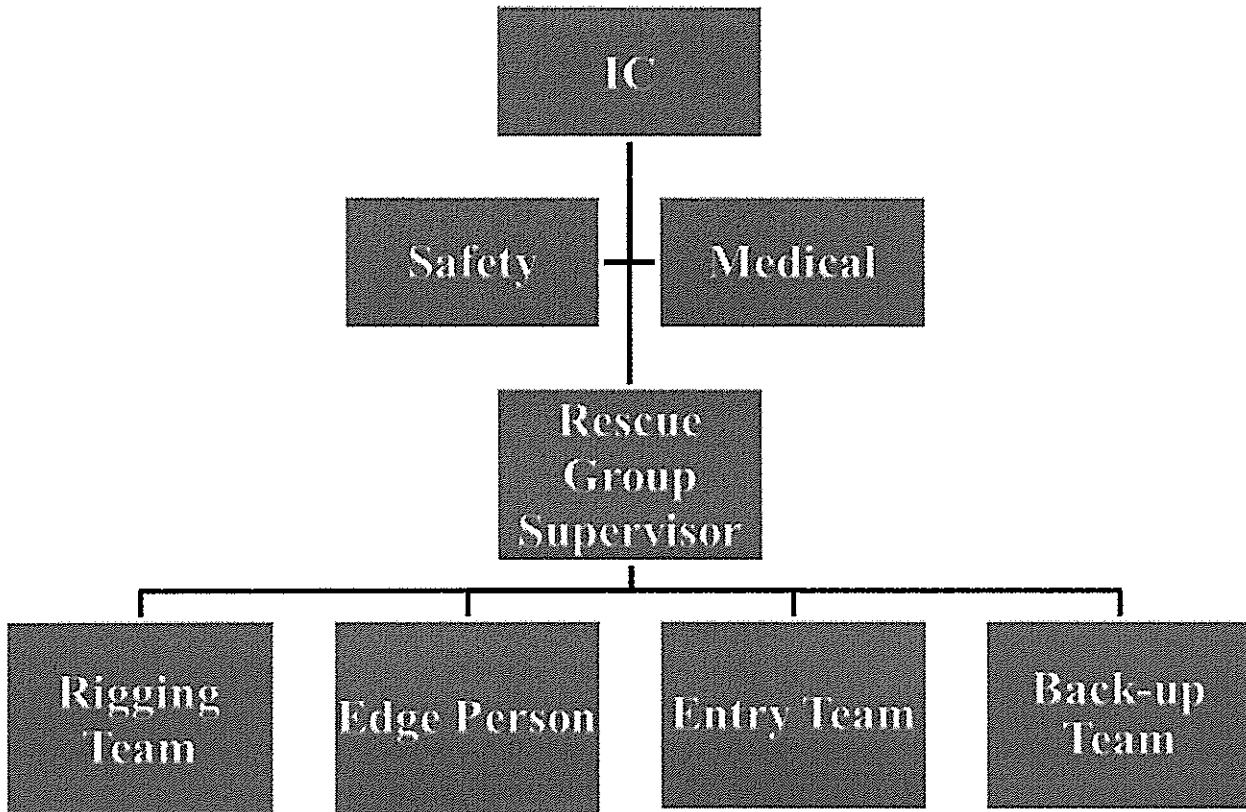-stop and rehab all workers. Decon if necessary

-brief personnel on the termination/take down plan. Remind them of safety hazards.

-consider taking photos prior to removing rope equipment

-put equipment in service in reverse order of installation, unless there has been a fatality

-perform a short on site incident critique -secure the scene. Consider Law Enforcement, PIO, etc

ICS Chart

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                        ┌──────────┐
                        │    IC    │
                        └────┬─────┘
                             │
          ┌──────────┐       │       ┌──────────┐
          │  Safety  │───────┼───────│ Medical  │
          └──────────┘       │       └──────────┘
                             │
                    ┌────────────────┐
                    │     Rescue     │
                    │     Group      │
                    │   Supervisor   │
                    └────────┬───────┘
        ┌────────────┬───────┴────────┬────────────┐
  ┌───────────┐┌───────────┐┌───────────┐┌───────────┐
  │  Rigging  ││   Edge    ││   Entry   ││  Back-up  │
  │   Team    ││  Person   ││   Team    ││   Team    │
  └───────────┘└───────────┘└───────────┘└───────────┘
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Roles and responsibilities at a Rope Rescue incident

At a minimum you'll need **5 rope rescue technicians** for any **intricate rope rescue** or one involving a terrain over 40 degrees.

Key roles will most likely include:

-Command – IC for the incident in his/her district.

-Safety – Reports to Command, responsible for overall scene safety.

-Rescue Group Supervisor - Responsible for the tactical operations of the rope rescue team.

-Edge person - responsible for the safety and management of the entry team.

-Entry team - performs the actual rescue

-Rigging team or Team Leader - manages the rigging or rigging team

Additional roles may help the incident run more efficiently. Those roles may include:

-support team leader   -backup team   -rescue equipment team leader

Incident Commander

-Size up

-determine RESCUE vs. RECOVERY

-ensure that a RISK vs. BENEFIT analysis is done (with assistance from the RGS)

-requests additional resources

-command and control using IMS procedures

-helpful if 'Rope Rescue Technician' level

Tricks of the trade: Get ahead of the game by getting 5 Rope Rescue techs enroute.
Make your most competent Rope technician the Rescue Group Supervisor. Don't let him/her get inundated with 'advice' from others. **Set up a Safety Officer asap.**

The Fire Chief of the district having the incident shall be the Incident Commander. The Rescue Group Supervisor may advise the incident commander but shall not take command of the scene. If unsafe conditions exist or develop, the Rescue Group Supervisor or Safety Officer may order a withdrawal of personnel and/or equipment. The Rescue Group Supervisor may also request through command additional resources to ensure adequate personnel.

Safety

-responsible for overall scene safety

-reports to the IC and RGS

-ensures a RISK vs. Benefit analysis is done

-must identify all hazards and potential problems

-ensure that all personnel working at the site are wearing all necessary protective devices

-helpful if Technician but must be not lower then Operations Level.

-should be a company officer

Tricks of the trade: Check the anchors and rope systems yourself, even after they have already been safety checked by someone else. Don't let the entry team get overworked. Prompt the RGS to have a backup plan (and team) in place should the initial plan / team run into problems.

Rescue Group Supervisor

-responsible for the tactical operations of the rope rescue team

-reports to the IC

-assist the IC in determining RESCUE vs. RECOVERY

-assists in a RISK vs. BENEFIT analysis

-determines needs and requests additional resources (thru the IC)

-effective RGS's are 2-3 steps ahead of the actions taking place

-determines the action plan and ensures the plan is implemented

-ensures that all members know the action plan

-designates team leaders, coordinates efforts and communicates status of the incident to the IC

-coordinates with on-site responsible parties

-**Must** be rope technician level!

Tricks of the trade: Take a moment to size up the situation at hand. If that means telling everyone to leave you alone for a few moments then do so! Your next step is to get your rigging going. Get the most competent rope tech available to you and make him/her the 'Rigging Team Leader'. Then...get an action plan going, which typically means...stabilize the situation!

More often than not that means getting some sort of line to the victim so he/she can't fall or get in a worse situation! Also, have a backup plan and team in place once you get enough resources, in case your initial plan doesn't work out.

Edge Person

-responsible for the safety and management of the entry team

-reports to the RGS

-makes sure the entry team is prepared, outfitted and safety checked

-makes sure the entry team knows the plan, prior to them *'going over the edge'*

-all communications between the entry team and the rigging team are handled thru the edge person

-the edge person controls all the lowering and raising actions

-**Must** be rope technician level!

Tricks of the trade:
Develop a strong relationship and communications link with both the RGS and the rigging team leader asap. saves you grief down the road. Also, look at the entry team thoroughly. Are they competent and sure of themselves? If not, let the RGS know so another team can be inserted.

Entry Team

-performs the actual rescue

-communicates with the edge person

-dons appropriate gear

-gets safety checked

-do not begin the rescue without knowing the plan

-**Must** be rope technician level!

Tricks of the trade: Get the right gear. Safety check your partner. Have a working radio with a good battery. Know what channel you are working on. Consider taking a cell phone. Do you need victim gear? Don't let anyone rush you out until you know the plan and the entire system has been safety checked. Plan on being out for twice as long as you actually think it's going to be. That means protection from the elements! Also, consider taking a haul line that you can deploy so others can haul equipment up to you, which is going to happen! Do you need any light sources?

Rigging Team

-manages Mainline and Belay, this a 2-person job.

-reports to the RGS

-assists the RGS in determining the systems used for the rescue

-responsible for all systems used during the rescue

-communicates raising and lowering of the entry team thru the edge person

-approves all anchors and safety checks all systems

-must be rope technician level

Tricks of the trade: Set up the system you and the RGS have decided upon. Mainline, have Belay assist you in setting up.

Backup Team

-may have to assist the original entry team or may have to rescue the original entry team!

-communicates with the edge person

-dons appropriate gear

-knows the entry team's plan

-begins the thought process of assuming the entry team will need to be rescued

-(if activated) gets safety checked

-**Must** be rope technician level!

Tricks of the trade: Look at the big picture. You may need to assist the entry team with the rescue or you may have to rescue the entry team. What will each situation require in terms of equipment and tasks?

Support Team Leader

-manage the support team, if established

-report to the RGS

-lighting, weather recon and other multiple tasks can be expected of this crew

-helpful if rope technician level.

Tricks of the trade: Make sure you have enough people to do the job. Make sure you have the ability to communicate with them, perhaps on another frequency. Your team will need to be flexible and problem solvers.

Rescue Equipment Team Leader

-manages the rescue equipment team, if established

-reports to the RGS

-organizes the equipment resource area in a location easily accessible to the rope rescue site

-helpful if rope technician

Tricks of the trade: Blue tarps come in handy.
Recommend to the RGS that all incoming crews bring their equipment to the tarps that you are putting in place. Consider getting canopy to keep gear dry.

Initial and Annual Technical Rescue Team Training

All rescue training documentation and continuing education hours shall be documented by each agency and forwarded to the County Training Coordinator. No individual will receive credit for training unless signed by their department Training Officer or Chief.

New Members will be accepted to the team as probationary members until such time the initial training requirements are completed and documented. New members will also be required to train with the county team on Odd Months for a period of at **least (6) Team Trainings**. Our Goal is to have these trainings completed within a calendar year. The Team will review applicant status and make a determination, either to extend their probationary period or make them an active member of the team.

Any individuals not fulfilling the annual training requirements will be placed on an inactive status. Any member on an inactive status will not be allowed to participate in any rescue operations (as a technician) until all training hours have been met and successful completion of the skills check sheet evaluation.

Initial Training Requirements:
-   Current Certification as a Rope Rescue Technician
-   Initial Training shall be based on current NFPA 1006 & 1670 standards.

Annual Training:
-   A minimum of 24 hours of annual maintenance training with at least 12 hours of county team training.
-   Performance requirements based on NFPA 1670 & 1006 standards.
-   Annual completion of skills check list

Monthly Training:
-   Even months will be a Division Training.
-   Odd Months will be a County Team Training.
-   These are a minimum and can be adjusted due to weather.
-   **No** individual Department trainings can be substituted as a Divisional or County Team Training.

*Our training objective as the Lincoln County Rope Team is to train together as much as possible, not only as a division, but as an entire county team. County Team Trainings will build and support current and new skills while building trust and team cohesiveness. *

Equivalent training...i.e OVFA, DPSST, PEAK, CMC, or RESCUE 3, will be considered on an individual basis by the team.

Skills Check Sheet

Perform **10** of the following skills. Do them in front of any team member on your Division that's **not** on your department and have them initial and date the task.

a)   Demonstrate the family of knots and review definitions

b)   Perform a changeover from a raising system to a lowering system

c)   Perform a changeover from a lowering system in to a raising system

d)   Set up a belay line for a raising and lowering system

e)   Perform a short haul evolution

f)   Set up the Arizona Vortex

g)   Pass a knot thru a belay line system

h)   Pass a knot on a mainline raising system

i)   Pass a knot on a mainline lowering system

j)   Package a pt in the SKED

k)   Set up a 3:1, 5:1 simple and complex mechanical advantage systems

l)   Demonstrate tying off 3 anchors utilizing different methods

m)   Rappel, stop, tie off and continue descent

n)   Secure a patient into the stokes basket

o)   Set up the stokes basket for a horizontal and vertical raise

p)   Ascend a rope

q)   Lower some type of load with a brake rack

r)   Operate a radium release hitch

s)   Tie the radium load releasing hitch

t)   Class III harness, helmet, boots and gloves for time

MISSION BRIEFING

- Here is what I think we face:

- Here is what I think we should do:

- Here is why:

- Here is what we need to keep our eyes on:

- Now, tell me what you think:
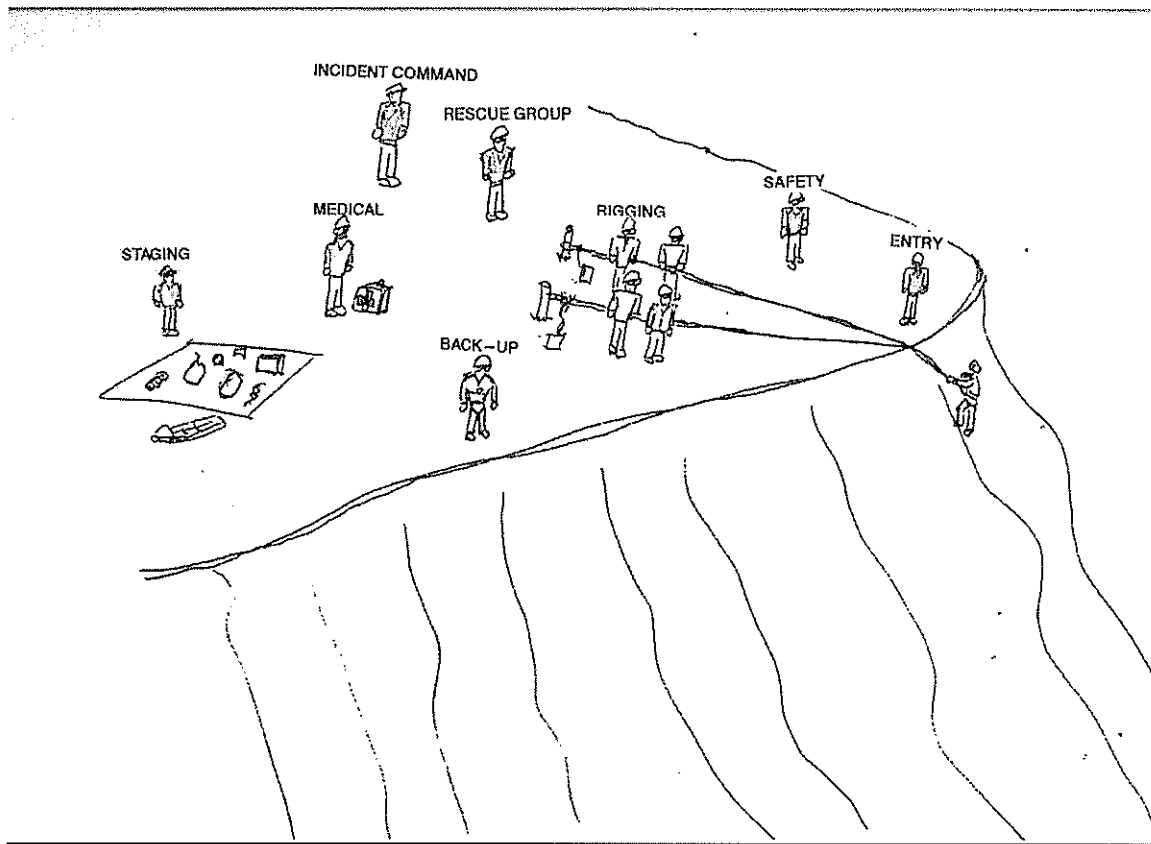
MISSION DEBRIEFING

- What was planned?

    - Were objectives met?
    - Did expected actions take place?

- What actually happened?

    - Identify effective and non-effective performance
    - Review any non-SOP actions and safety concerns

- Why did it happen? (safety issues)

    - Discuss reasons for ineffective or unsafe performance
    - Concentrate on WHAT, not WHO

- What can we do next time to be more efficient?

    - Determine how to apply Lessons Learned

Cheat Sheet Set-up

Safety Check Sheet

	Safety	RGS	Edge-man
Anchor(s)	☐	☐	☐
Carabineers	☐	☐	☐
Knots	☐	☐	☐
Belay	☐	☐	☐
Main Line	☐	☐	☐
Pulleys	☐	☐	☐
Rigging	☐	☐	☐
PPE for all members	☐	☐	☐

Ensure that the entire team knows and understands the primary rescue plan as well as the secondary plan.

List must be check by at least two people.

Signature Page

The parties below have hereunto approved these SOG's on the last date listed below.

Central Coast Fire Dist.

_____ / ___ / ___
Fire Chief William Clawson   Date

Depoe Bay Fire Dist.

_____ / ___ / ___
Fire Chief Joshua Williams   Date

Newport Fire Dept.

_____ / ___ / ___
Fire Chief Phil Paige   Date

North Lincoln Fire Dist.

_____ / ___ / ___
Fire Chief Don Baker   Date

Seal Rock Fire Dist.

_____ / ___ / ___
Fire Chief Tracy Shaw   Date

Siletz Fire Dist.

_____ / ___ / ___
Fire Chief Dave Lapof   Date

Toledo Fire Dept.

_____ / ___ / ___
Fire Chief Will Ewing   Date

Yachats Fire Dist.

_____ / ___ / ___
Fire Chief Frankie Petrick   Date