



STANISLAUS COUNTY OPERATIONAL AREA WATER RESCUE RESPONSE PLAN

March 2009



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STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

INTRODUCTION

Purpose

This plan was developed to provide a comprehensive policy on swiftwater rescue, flood rescue and water rescue for Stanislaus County. The plan is designed to allow each agency to determine its level of service and then provide the recommended/required training, equipment and Standardized Operating Procedures (SOPs) to adopt. This plan delineates the minimum qualifications for participation on the Water Rescue Response Team within Stanislaus County. The plan also identifies how teams will operate and coordinate with local emergency responders.

Acknowledgement

The re-writing of the 1998 Swiftwater Rescue Policy to include flood rescue and water rescue utilized the knowledge of local experts within Stanislaus County and experts with partner state and local agencies. The most recent codes and laws have been incorporated in this policy. The following individuals are acknowledged for their contribution to this plan:

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Executive Summary

After the devastation of the 1997 floods, the Stanislaus County Fire Chiefs' Association authorized the development of a Swiftwater Rescue Policy. The original plan identified the need for specialized training, equipment and experience to perform water rescue and swiftwater rescue. The fire chiefs also recognized that not all fire agencies in Stanislaus County could or should meet the standards and a multi-agency, multi-jurisdictional response was the business model they used. A minimum number of teams were developed and made available countywide on a mutual aid basis. The original plan addressed procedures, training and equipment standards that met or exceeded California Occupational Health and Safety (CalOSHA) requirements and state and federal standards for performing Swiftwater Rescue.

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At the request of the Stanislaus County Fire Authority, this plan is broadening the scope of the original policy. This plan now incorporates water rescue and flood rescue. The plan is updated to meet current CalOSHA standards, state and federal requirements and the industry's best practices. This plan is based on the functions and principles of the Standardized Emergency Management System (SEMS), which is based on the Incident Command System (ICS) and may be used as assets of the Fire and Rescue Mutual Aid System. The requirements contained within this plan meet or exceed National Fire Protection Association (NFPA) 1670 Guidelines 2004 Edition and meet the requirements from CalOSHA, Title 8, Sec 3203.

Definitions

Following is a list of terms that will be used throughout the document. For the purpose of this policy, and to provide clarity of language, terms used in this document are defined in this section.

Mutual Aid – is an agreement in which two or more parties agree to furnish resources and facilities and to render services to each and every other party of the agreement to prevent and combat any type of disaster or emergency.

Automatic Aid - is assistance dispatched automatically by contractual agreement between two communities or fire districts. That differs from mutual aid or assistance arranged case by case.

Incident Command System (ICS) - is a national protocol used for managing emergencies. Initially created for use by the United States Forest Service and United States Bureau of Land Management to manage wild fires, ICS has become the benchmark by which all disasters are managed in the United States. ICS is based upon a flexible, scalable response organization providing a common framework within which people can work together effectively. These people may be drawn from multiple agencies that do not routinely work together, and ICS is designed to give standard response and operation procedures to reduce the problems and potential for miscommunication on such incidents.

Authority Having Jurisdiction

The fire agency and /or Authority Having Jurisdiction (AHJ) within Stanislaus County should evaluate their risk and needs when addressing water rescue. The agency or AHJ must determine what level of service they wish to provide to their respective response area. Due to probability, risk, fiscal issues and other concerns, each agency may determine a different level of service it wishes to provide. However, minimum requirements outlined in this document must be met for participation on the Swiftwater/Flood Search and Rescue Response Team or to work with the water rescue teams.

The following response levels must be identified by the AHJ and communicated to the Fire and Rescue Mutual Aid Coordinator for the Stanislaus Operational Area:

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1. **Non – Response:** Agency policy clearly states that water rescue is not within the scope, training or practices of the agency. Therefore, this agency would not respond to water rescues or be mandated to meet **minimum** training requirements.
2. **(Type 4) Water Rescue Response: Awareness and Operational Level** - Agency policy clearly states that the agency will respond to water rescues, but will have a limited capability and expectation. First Responders will be trained to meet the minimum standard for this level of response. This level of training is required for any agency that would request assistance from the Operational Area Swiftwater/Flood Search and Rescue Teams and support the teams in the rescue efforts according to this program. Further capabilities are outlined in the Concept of Water Rescue Operations section of this document.
3. **(Type 3) Water Rescue Response: Technician Level** - Agency policy clearly states that the agency will respond to water rescues with the capabilities outlined in the Concept of Water Rescue Operations section of this document. It will have an Emergency Medical Technician assigned. Members must be certified and qualified Swiftwater/Flood Rescue Technicians and be Technical Animal Rescuers or equivalent. Team members at this level may enter water to perform a water rescue.
4. **(Type 2) Water Rescue Response: Technician Level** - Agency policy clearly states that the agency will respond to water rescues with the capabilities outlined in the Concept of Water Rescue Operations section of this document. It will have an Emergency Medical Technician assigned. Members must be certified and qualified Swiftwater/Flood Rescue Technicians and be Technical Animal Rescuers or equivalent. It will have two Power Craft Operators per type of craft on the team. It will also have a Rope Rescue Technician assigned and may have the capabilities to work with aquatic rescue helicopters.
5. **(Type 1) Water Rescue Response: Technician Level** - Agency policy clearly states that the agency will respond to water rescues with the capabilities outlined in the Concept of Water Rescue Operations section of this document. Type 1 teams will have all of the capabilities assigned in Type 2 plus paramedics. They will also have a total of four Power Craft Operators per type of craft on the team. Type 1 teams require the highest level of technical training.
6. **Flood Rescue:** Personnel shall be trained to the standards set for rescue in a flood situation. They shall meet the standard for boat operators. Further capabilities are outlined in the Concept of Water Rescue Operations section of this document.

Any agency wishing to be a member of the Swiftwater/Flood Search and Rescue Teams, shall meet the following criteria outlined in this document:

1. Training requirements;
2. Equipment standards including inspection and demonstration;

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3. Agreement to respond in accordance with this policy anywhere within the Operational Area when requested, understanding that it will not negatively impact their jurisdiction due to staffing, current or predicted activity, equipment issues or any other extraordinary concerns that may arise at the time of request; and
4. Agreement to meet and maintain this policy and standards for safe and efficient operations.
5. Must meet or exceed this locally accepted document.

Pre-Incident Dispatch Guidelines

Agencies that plan to utilize the services of the Swiftwater/Flood Search and Rescue Response Team need to inform the Operational Area Coordinator. This will enable the Operational Area Coordinator to inform the agencies and dispatch regarding the jurisdictions who will request the services of the Team. If a fire agency determines that the need may exist for the team to assist them in water rescues, the following action(s) should be taken;

1. Contact the Operational Area Coordinator and express the interest and need for Team response.
2. Determine if Mutual Aid and/or Automatic Aid is appropriate for the level of response that is needed. Note that second alarms or run cards that build a progressive response level shall be pre-approved by all agencies that may potentially respond as a team member. The closest two authorized boats will be dispatched at the time of the request.
3. The Operational Area Coordinator shall report to the Fire and Rescue Operational Area Coordinator with the list of certified and qualified "swift water rescue" teams and will make that list available to the various dispatch centers.
4. The Operational Area Coordinator will notify all certified and qualified agencies that provide Swiftwater/Flood Search and Rescue teams of a request for Mutual Aid and/or Automatic Aid by an AHJ for team response.

Most team responses will be multi-agency, multi-jurisdictional to meet the team minimum requirements. Swiftwater technical rescue teams have adopted the "two in and two out" concept for team response, meaning that while one boat may actually perform the rescue, a second team boat will be on scene to provide emergency back up and support should the rescue team in the water find themselves in need of rescue. The team will only utilize a certified and qualified team, equipment and supplies as the second boat.

RESCUE OPERATIONS

Water Rescue

National Fire Protection Association (NFPA) discusses the types of water rescue as Dive, Ice, Surf and Swiftwater. FIREScope recognizes Swiftwater and Flood Rescues. However, we in Stanislaus County believe there is another type of rescue that is not discussed in either NFPA or

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FIRESCOPE. That would be the rescue from any other body of water that is not listed anywhere else. It would include ponds, lakes, swimming pools, canals or any unclassified body of water.

Flood Rescue

Flood Rescue is a subset of the technical rescue group. While Flood Rescue may not seem to be as dangerous as Swiftwater Rescue, there is an inherent danger when working in stagnant, possibly toxic water. Flood Rescue should be approached with the same caution and respect for the dangers that we give to Swiftwater Rescue. There are many items that cannot be seen from the surface of the water, such as power equipment, propane tanks, septic systems, etc.

There is also the possibility of dead animals being found in the water as well as live ones that need to be rescued. Animal Rescue is an important part of Flood Rescue. All certified and qualified rescuers must have a working knowledge on how to manage animals, either dead or alive.

Swiftwater Rescue

Swiftwater Rescue (also called whitewater rescue) is a subset of technical rescue that involves the use of specially trained personnel, ropes, and mechanical advantage systems often much more robust than those used in rope rescue because of the added pressure of moving water. The main goal is to use or deflect the water's power to assist in the rescue of the endangered person(s), as in most situations there is no easy way to overcome the power of the water. Swiftwater Rescue incorporates the use of Rescue Systems 1 and Rescue Systems 2 into the techniques used to rescue victims from fast moving water.

As a Swift Water Rescue Scene evolves, the Incident Command System (ICS) will emerge. All rescue operations demand vigilance with regards to safety. ICS provides that a Safety Officer be present to monitor and address all safety issues.

CONCEPT OF WATER RESCUE OPERATIONS - FIRESCOPE BASED

There are four levels of operational capability identified for the Swiftwater/Flood Search and Rescue Response Teams. Those levels are outlined below. The Stanislaus County Water Rescue Team will be comprised of certified and qualified individuals from throughout Stanislaus County.

To be certified and qualified a person must either be a paid or volunteer Firefighter or a paid or reserve Law Enforcement Officer within Stanislaus County and meet the training requirements set forth in the four levels of operational capability; skills, training and equipment matrixes; and attachments to this document.

(Type 4) Water Rescue Response

Type 4 teams represent the minimum capability to conduct safe and effective rescue operations involving water or flood rescue. Personnel trained to the Awareness level are NOT allowed

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within 10 feet of the water. Personnel trained to the Operational level are allowed up to the edge of the water. Awareness and Operational level personnel are NOT allowed water entry to perform a rescue. Qualifications of Type 4 teams include:

- Low Risk
- Land Based
- HazMat
- EMS-BLS
- Capable of 24 hr operations

Minimum team skills, training and equipment are further outlined in Taskforce Types and Equipment. Type 4 teams are required to have 3 members.

(Type 3) Water Rescue Response

Type 3 represents the minimum capability to conduct safe and effective rescue operations involving water or flood rescue. Personnel within this level may enter the water to perform a rescue. Qualifications of Type 3 teams include:

- In-water contact rescues
- Assist in search ops
- Non-power water craft
- HazMat
- Animal Rescue
- EMS-BLS
- Capable of 24 hour operations

Minimum team skills, training and equipment are further outlined in Taskforce Types and Equipment. Type 3 teams are required to have 4 members.

(Type 2) Water Rescue Response

Represents the minimum capability to conduct safe and effective rescue operations involving water, flood and swiftwater rescue. Qualifications of Type 2 teams include:

- Manage search ops
- Power vessels ops
- In-water contact rescues
- Helicopter operational
- Technical rope systems
- HazMat
- Animal Rescue
- EMS-BLS
- Capable of 24 hour operations.

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Minimum team skills, training and equipment are further outlined in Taskforce Types and Equipment. Type 2 teams are required to have 6 members.

(Type 1) Water Rescue Response

Represents the minimum capability to conduct safe and effective rescue operations involving water, flood and swiftwater rescue. Qualifications of Type 1 teams include:

- Manage search ops
- Power vessel ops
- Helicopter operational
- Technical rope systems
- HazMat
- EMS-ALS
- Communications
- Logistics
- Capable of 24hr operations.

Minimum team skills, training and equipment are further outlined in Taskforce Types and Equipment. Type I teams are required to have 14 team members.

Flood Evacuation Boat Teams

Represents the minimum capability to conduct safe and effective flood evacuation. Flood Evacuation Boat Teams are required to meet Type 3 minimum qualifications plus the skills, training and equipment outlined in Taskforce Types and Equipment specific to this team.

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TASK FORCE TYPES AND EQUIPMENT

SF/SAR Team Skills (FIRESCOPE, ICS-SF-SAR 020-1)

It is required that teams have the following skills. A number indicates the minimum number of members on the team with indicated skills. "X" indicates recommended skills for all team members.

	Swiftwater/Flood Search & Rescue Team				FEB
	Type 1	Type 2	Type 3	Type 4	
Animal Rescue	2	1	1		1
Class 3 Paddle Skills	X	X	X		
Communications Skill (Radios)	1				
Contact and Self Rescue Skills	X	X	X		
EMS-ALS Capability	2				
EMS-BLS Capability	X	X	X	X	X
Hazardous Materials	X	X	X	X	X
Helicopter/Aquatic Rescue Operational Skills	4	2			
Helicopter Operations Awareness	X	X			
Incident Command System (ICS)	X	X	X	X	X
Powered Boat Operator	4	2			
SF/SAR Management	X	X			
SF/SAR Operations	X	X	X	X	X
Technical Rope Rescue Skills	X	X			
SCUBA Support	4*				

* = **Optional**

FEB – Flood Evacuation Boat

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SF/SAR Team Training (FIRESCOPE), ICS-SF-SAR 020-1)

It is required that team personnel have completed the following training as indicated. A number indicates the minimum number of person(s) on a team with the indicated training. "X" indicates recommended training for all team members. Training curriculum shall meet or exceed the California State Fire Marshal's, California Emergency Management Agency (CalEMA), and USAR Team Standards. Questions regarding curriculum should be addressed to the California State Fire Marshal Training Division.

		SF/SAR Type 1 Team Manager	Swiftwater/Flood Search & Rescue Team				FEB
			Type 1	Type 2	Type 3	Type 4	
1	Annual skills proficiency demonstration (by agency)	X	X	X	X	X	
2	Annual swim demonstration (by agency)	X	X	X	X		
3	EMS-Advanced First Aid & CPR			X	X	X	X
4	EMS-Emergency Medical Technician		X	1	1		
5	EMS-Paramedics/ALS		2				
6	Hazardous Materials	X	X	X	X	X	X
7	Helicopter Operations Awareness*	X	X	X			
8	Helicopter/Aquatic Rescue or Equivalent*		4	2			
9	ICS	X	X	X	X	X	X
10	Power Craft Operators Training* per type of craft on team		4	2			2
11	Swiftwater/Flood Rescue Operational**					X	
12	Swiftwater/Flood Rescue Technician**	X	X	X	X		
13	Rope Rescue Technician**	X	X	X			
14	Search Management	X	X	X			
15	Technical Animal Rescue or Equivalent		2	1	1		1
16	Basic SCUBA w/equipment orientations recommended*		4				

* = Annual Refresher

** = Three (3) year refresher

FEB – Flood Evacuation Boat

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SF/SAR Team Equipment List (FIRESCOPE, ICS-SF-SAR 020-1)

Any equipment, beyond that listed herein brought by a responding agency, must be approved for use by the Incident Commander or designee. Should the responding agency fail to receive approval for use, or use of equipment without approval, the responding agency may be required to assume full responsibility for any damage or loss.

# = Minimum (#) = Preferred * = Optional	Swiftwater/Flood Search & Rescue Team				FEB
	Type 1	Type 2	Type 3	Type 4	
COMMUNICATIONS					
Aircraft radio	0 (2)	0 (1)	0	0	0
Bags, waterproof, radio	7 (14)	3 (7)	2	2	1
Battery, spare/charger	7 (16)	3 (6)	2	2	1
Headset, waterproof	0 (14)	0 (6)	0 (2)	0	0
Phone, cell	2	1	1*	1*	1*
Radio, portable (waterproof)	7 (16)	3 (6)	2 (4)	2 (3)	1
MEDICAL (Equipment to be Carried as per protocol of the Responding agency)					
Basic life support medical kit	0	Yes	Yes	Yes	Yes
Advanced life support medical kit	1-2*	0	0	0	0
Emergency blankets	Yes	Yes	Yes	Yes	Yes
Spine board (floatation back board)	2	Yes	0	0	0
Stokes Type litter (w/float kits)	2	Yes	Yes	0	0
PERSONAL EQUIPMENT					
Aerial flares	14 (28)	6	4	3	2
Dye markers	14	6	4	3	2
Dry gear bags	Yes	Yes	Yes	Yes	Yes
Dry suit with liner	14	6	Wet or Dry 4	0	Wet or Dry 2
Eye protection	14	6	4	3	2
Fins, pair	8	4	2	0	0 (1)
Flashlight	14	6	4	3	2
Gloves-water	14	6	4	0	2
Gloves-leather	14	6	4	3	2
Helicopter Emergency Escape Device-H.E.E.D.* (or equivalent)	0 (14)	0 (6)	0	0	0

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SF/SAR Team Equipment List (cont.)

# = Minimum (#) = Preferred * = Optional	Swiftwater/Flood Search & Rescue Team				FEB
	Type 1	Type 2	Type 3	Type 4	
Handheld flares	14 (28)	6	4	3	2
Handheld survival strobe light	14	6	4	0 (3)	2
Headlamps, waterproof	14	6	4	0 (3)	2
Helmet, swiftwater	14	6	4	3	2
Helo floatation vest* (USCG Approved)	14*	6*	0	0	0
Chemical Light Sticks	Yes	Yes	Yes	Yes	Yes
PFD, Type V, Tethered Swimmer (USCG Approved)	14	6	2	0	0
PFD, Type III/V (USCG Approved)	0	0	2	3	2
Rescue knives	14	6	4	3	2
Smoke marking device	14 (28)	6	4	3	2
Tennis shoes or appropriate water booties	14	6	4	3	2
Whistles	14	6	4	3	2
TEAM EQUIPMENT					
Admin. Kit/ICS-Agency Forms	1	1	1	1	1
Air Monitors	0 (2)	0 (1)	0	0	0
Axe/Handsaw	2	1	1	1	1
Bail-out system	0 (4)	0	0	0	0
Body Bag	4	2	2	2*	2*
Brake bar racks	4	2	1*	0	0
Carabiner, locking "D", steel	40	0	0	0	0
Carabiner, locking "D", aluminum	20	0	0	0	0
Carabiner, locking "D"	0	40	20	12	0
Chainsaw w/kit	1	1	1*	1*	1*
Collection rings	4	2	1*	0	0
Compass	2	2*	1	1*	1
Dust mask, disposable	2 box	2 box	1 box*	1 box*	1 box*
Edge protection	Yes	Yes	Yes	0	0
Eight plates	4	2	2	2*	0
Fire extinguisher	Yes	Yes	0	0	Yes
Filter, water, hand pump	Yes	Yes	Yes*	Yes*	Yes*

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SF/SAR Team Equipment List (cont.)

# = Minimum (#) = Preferred * = Optional	Swiftwater/Flood Search & Rescue Team				FEB
	Type 1	Type 2	Type 3	Type 4	
FLIR, hand	0 (2)	0 (1)	0	0	0
Flood/water/sleeping -24 hours	Yes	Yes	Yes	Yes	Yes
Forcible entry tool	2	1	1	1	1
Fuel cans, transportable	Yes	Yes	Yes	0	Yes
Generator with light attachment	0 (1)	0	0	0	0
GPS, hand held	4	2	2*	2*	2*
Hammer, sledge	2	1	1*	1*	0
Hand held spot	4	2	1	1*	1
Harness, Rescuer	14	6	4*	3*	1*
Helmet, victim	4	2	2*	2*	2*
Helo victim lifting device	2	1	0	0	0
Jacket, exposure	2 (12)	0 (6)	0 (4)	0 (3)	0 (2)
Inflatable hose kit (including hose)	2*	1*	1*	1*	0
Knot passing pulleys	2	1	0	0	0
Line Thrower	2	1	1*	1*	0
Mask, dive	4*	2*	2*	0	0
Megaphone/PA	1	1	1*	1*	1*
Night vision, hand	2*	1*	1*	1*	1*
Oils, Fuels	Yes	Yes	Yes	0	Yes
PFD, Type III, Victim assort. (USCG Approved)	Yes	Yes	Yes	0	Yes
Pick off straps	0 (4)	0 (2)	0	0	0
Pickets	12	6	6*	6*	0
Pole, reaching (pike or equivalent)	2	1	1	1	1
Prusik's, tandem	12	6	4	2	0
Pulleys	12	6	2	2	0
Repair kits	Yes	Yes	Yes	0	Yes
Rope 200' w/bag	4	2	2	1	0
Rope 300' w/bag	3	2	1	0	0
Rope 600' w/bag	1	1	0	0	0
Compressed air cylinder (Hose//IRB Inflation)	2*	1*	1*	1*	0
Search Dog floatation device	0 (1)	0 (1)	0	0	0

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SF/SAR Team Equipment List (cont.)

# = Minimum (#) = Preferred * = Optional	Swiftwater/Flood Search & Rescue Team				FEB
	Type 1	Type 2	Type 3	Type 4	
Shovel, hand	2	1	1	1	0
Snorkel	4*	2*	2*	0	0
Storage containers, as needed	Yes	Yes	Yes	Yes	Yes
Simmer Rescue Board	4	2	2	0	0
Throw bags	14	6	4	3	2
Throw-able Floatation Device (USCG Approved)	2	1	1	1*	1
Victim harness	2	1	1*	0	0
Water sample kit	0 (2)	0 (1)	1*	0	0
Webbing 1" x 5' Nylon tubular (green)	20	12	8	4	0
Webbing 1" x 12' Nylon tubular (yellow)	20	12	8	4	0
Webbing 1" x 15' Nylon tubular (blue)	20	12	8	4	0
Webbing 1" x 20' Nylon tubing (orange)	20	12	8	4	0
INFLATABLE RESCUE BOAT (IRB)					
Air, manual inflation pump	2	1	1	0	Yes
Boat, non-powered, 4 person minimum	0	0	1	0	Yes
Fuel, bladder / tank	2	1	0	0	Yes
IRB, 12' minimum	2	1	0	0	0
Kit, patch/Repair/Maintenance	2	1	1	0	Yes
Lanyard, wrist, kill switch	4 (14)	2 (6)	0	0	Yes
Motor, 30 HP (Minimum), prop w/guard	2	1	0	0	Yes
Motor flush kit, "rabbit ears"	2	1	0	0	Yes
Paddles	8	4	4	0	2
Prop, spare	2	1	0	0	Yes

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GENERAL

Deployment

Stanislaus County is divided up into Zones roughly based on geographic areas and hazard assessments. The Zones will be used to designate training groups of Swiftwater Rescue Teams that potentially work together on a regular basis.

Funding and Budgeting

Because of the regional approach to the provision of these rescue services, a number of grants may be available to help equip and operate this rescue team. Therefore, a section created in the Stanislaus County budget under the Fire Warden could accommodate the reception of such grant funds. Other funding through government sources could also be handled through this same budgetary process. A non-profit account may also be established for funds received by the team to help equip and operate this team.

The determination of where and how these funds will be spent will be the responsibility of a committee consisting of the County Fire Warden, a representative of the County Fire Chiefs, the Stanislaus County Fire Authority and the Swiftwater Rescue Coordinator. This same governing board will also determine priorities for expenditures, and group policies and procedures.

Training and Exercise

Training and exercising of the Team will be overseen by the Training Coordinating Agency Representative and by the Special Operations Coordinator who developed the plan. A training session will be conducted once a year and a rescue drill will be conducted once a year resulting in bi-annual training. Before the sessions, the training committee will send an information packet to each Swiftwater/ Flood Search and Rescue Team member so they may practice the skills needed to prepare for the upcoming training.

Training sessions will concentrate on review of current skills and the addition of new skills. The rescue drills will be based on real life scenarios. This mix of training and experience will add to the existing level of expertise throughout the County.

- All Swiftwater/Flood Search and Rescue Team members must meet or exceed all existing State and NFPA guidelines. Curriculum must meet or exceed the criteria used by the State for their Water Rescue Teams.
- Conduct additional training in related fields and areas for the purpose of maximizing on the skills and abilities of current team members.
- To be considered an active Swiftwater/Flood Search and Rescue Team member, all participants are required to attend a minimum of one training or drill session each year.

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- Must annually be certified and qualified and issued a Qualifications Card.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

ATTACHMENT A - STANDARD OPERATING PROCEDURES

Introduction

- I. Purpose - To provide standard operating procedures for Stanislaus County certified and qualified Water Rescue Teams.
 - A. Individual Swiftwater/Flood Search and Rescue Team members must meet or exceed all minimum requirements.
 - B. Rescue activities may be in response to imminent/actual flooding and dam failure, swift water and water rescue incidents.
 - C. At the scene of all incidents a Safety Officer will be appointed by the Swiftwater Technical Rescue Team Group Leader from the team personnel. The Safety Officer shall, at a minimum, be trained to the operational level at which the organization is operating.
 - D. All Departments and Districts are urged to have all personnel trained to the First Responder Operational for Swiftwater Rescue Standard to assist the Swiftwater Rescue Team when they respond.
- II. Scope - This document applies to all personnel who engage in water rescue with the Stanislaus County Water Rescue Team.
- III. Definitions - All definitions are standardized terminology as presented in the FIRESCOPE and/or NFPA documents.
- IV. Preplans – Rivers, canals and other bodies of water should be preplanned by local units to determine:
 - A. Travel routes and all access points to both sides (note locked gates and dirt sections where mud will impede progress)
 - B. Hazards such as low head dams, strainers, etc.
 - C. Underground sections
 - D. River crossing points
 - E. Helispots and aerial hazards (power lines, etc.)
 - F. Current speed and vector
 - G. Eddies and pools (good rescue points)
 - H. Downstream companies and staging locations
 - I. Place for spotters
 - J. Legitimate site to perform rescues
 - K. Other noteworthy features

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

Responsibilities

- I. First-In Officers shall be responsible for the following:**
 - A. The First-In Officer should respond to the point where the victim(s) was last seen
 - B. . Establish Command and the Command Post.
 - C. Other responding resources shall respond to Predetermined Downstream Rescue Locations (PDRL) as assigned or as directed by the incident Commander
 - D. Set up for *LOWEST RISK RESCUE ATTEMPTS*

- II. The Incident Commander shall be responsible for the following:**
 - A. Upon arrival assume command of the incident and set up a single Command Post at any convenient location and determine the need for the Stanislaus County Water Rescue Team.
 - B. Work with the Water Rescue Team Group Supervisor to coordinate the deployment of units to Predetermined Rescue Locations as per this plan, including downstream agencies.
 - C. Have the closest Advanced Life Support Helicopter respond to the scene and begin searching the involved waterway as soon as possible. Other helicopters may respond after that to assist with the search. The Incident Commander will establish an Air to Ground frequency to maintain contact with responding helicopters.
 - D. Dispatch an ALS ambulance to the incident.
 - E. Divide the incident into divisions with a separate division for each rescue location. Assign Division Supervisors.
 - F. Take necessary action to prevent loss of life in a manner consistent with this document.

- III. Recovery**
 - A. The Sheriff's Underwater Recovery Team will perform all body recoveries and evidence searches.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

- B. A water Search and Rescue Incident will be considered a Recovery after a 1+or- hour search of a known search area. (Witnessed Drowning)
- C. The Stanislaus County Swift Water Rescue Teams may assist the Sheriff's Underwater Recovery Team by attending the ropes and down stream watch for the Sheriff's Office.

Policy

I. Priorities

When dealing with any water rescue incident, the priorities of rescue shall be those listed below.

- A. Dispatch at least 2 certified and qualified boats with crews (minimum of 2 certified and qualified personnel) to any River or Lake Rescue in Stanislaus County
- B. The protection of life- rescue teams first, victims second
- C. Provide search, rescue and assistance to survivors
- D. Provide notification and assistance to other agencies (Fire agencies, county sheriff, city police and Army Corps of Engineers)
- E. Scene control as required to limit access within 10 feet of the water's edge to only those personnel who are properly trained (FRW/FRO minimum) wearing the appropriate personal protective equipment. This pertains to those with only an Awareness Level of skill and any civilian personnel.
- F. Fire Department Structural Turn-outs will not be allowed within 10 feet of the water. Wildland PPE's are allowed.

II. General Safety

Given the nature of Swiftwater Rescue emergency response, safety of the Team members is paramount. All members of the Team must agree to work in a safe manner and abide with the spirit and intent of the laws pertaining to Swiftwater Rescue emergency response.

It is the obligation of all Team members to report any unsafe activity taken by the Team or any one of the Team members. Once a safety issue is identified, the Team Steering Committee, or their designee, will change practices as necessary.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

A Safety Officer or Assistant Safety Officer will be appointed for every Team response and for any training or activity requiring "hands-on" acts by Team members. The Safety Officer or Assistant Safety Officer is responsible for ensuring the safe operation of the Team. The person filling this crucial role has the authority to suspend or alter Team activity to secure the safety of the Team.

Incident Site Safety

As stated above, the Safety Officer or Assistant Safety Officer must be activated for every Swiftwater Rescue Team response. Team members will address their safety concerns to the Safety Officer or Assistant Safety Officer. Team members who feel their safety concerns have not been adequately addressed may address their concerns with the Swiftwater Rescue Group Supervisor.

The Swiftwater Rescue Group Supervisor, Safety Officer, or the Assistant Safety Officer may suspend Team activity and/or remove the Team from the scene of a Swiftwater Rescue incident if one of the following occurs:

- A. The Team members are placed into a dangerous or life-threatening situation.
- B. The Team is directed to perform unsafe/illegal acts outside the scope of the Team Policies and Procedures Manual, the Stanislaus County Swiftwater Rescue Area Plan, or state and federal laws.
- C. The Incident Commander has failed to be identified and/or refused to accept the Incident Commander responsibilities,
- D. The Incident Commander has failed to meet the necessary basic requirements for Team actions at a Swiftwater Rescue incident (i.e. secure zones, water for decontamination, clear objectives, etc.).

III. Foot Search

After downstream units are in place and as soon as victim information has been provided to the I.C., the First-In First Responder Company should begin a foot search. This primary search, known as a hasty search, should follow the banks of the river or channel in the direction of the flow of water and, if possible, be performed on both sides of the waterway. When the first search team reaches the 1st rescue location, the crews assigned to the 1st rescue location will continue the hasty search in their Division until they reach the 2nd rescue location, where the next team will continue the search, etc. A secondary search should always be conducted.

Water Tactical Priorities

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

- I. **Standard Response to a Swiftwater Rescue**
 - A. REACH, THROW, ROW, GO, TOW, HELO, safest method first
 - B. A water rescue attempt will require multiple units set up at multiple rescue locations to ensure the safety of rescuers and increase the likelihood of a successful rescue.
 - C. Request the appropriate number of resources to meet the objectives. A minimum of two certified and qualified teams.
 - D. Strike teams will respond to staging area while the Rescue Group Leader or Division Supervisor report to the Incident Commander.
- II. **The Initial Size-Up** is particularly important when dealing with moving water. Conditions can vary drastically depending on the volume and speed of water, weather, time of day, etc. The size up should include:
 - A. Number of victim(s), point where last seen and what they were wearing
 - B. Conditions at point where victim(s) was last seen (water depth, speed, etc.)
 - C. Assessment of hazards to personnel (debris, low head dams, etc.)
 - D. Initial action and instructions to responding units. This shall be based on any preplans for the waterway and conditions at scene.
- III. **Aerial Search** - The nearest helicopter may be requested to begin an aerial search of the involved waterway. An ALS unit is preferred.
- IV. **Rescue- The Incident Commander** will obtain a report from Division/Groups to make insure that units are ready to conduct immediate rescue operations if the victim(s) is/are found.
 - A. Units should stand by with rescue systems ready until otherwise directed by the Rescue Group Supervisor.
 - B. Any resource spotting the victim shall notify the Incident Commander immediately.
 - C. If immediate rescue is not possible, personnel shall try to maintain visual contact with the victim and track his/her location as long as possible. Attempt to aid the victim with a floatation device.
 - D. Notify downstream units to prepare for rescue attempts.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

Communications

Standard Protocol

The goal will be to have the predetermined number of rescue units waiting at each rescue location down stream of where the victim entered the water. With this in mind, the following will be the communications protocol:

- I. After dispatching all the predetermined units from your jurisdiction, immediately notify ALL DOWNSTREAM AGENCIES that a water rescue incident is in progress; so that all downstream units can be deployed at all the preplanned downstream rescue locations in a timely manner.
- II. Identify the radio traffic channel(s) to be used during the water rescue operation. Make sure each agency involved has the capability of the channel(s).

Contact and activation of a Swiftwater Rescue Team will be initiated through the Stanislaus Regional 911. The dispatcher will then dispatch the appropriate the Swiftwater Rescue Team(s) assigned to the FDZ where the problem exists. In an attempt to maintain consistency, rescue teams will be handled with the same priority system which is now in place for in-county mutual-aid and out-of-county Strike teams and be classified as Initial Attack, Immediate Need, or Planned Need.

Swiftwater Rescue Teams responding to an incident will follow the Stanislaus County Frequency Sharing Policy concerning radio frequencies and operate on the frequency designated by the initial responding agency. The default frequencies will be Stanislaus County Channel 1 for Dispatch and an assigned Channel for Command Operations. Tactical Channels will be assigned by SR911.

Each Swiftwater Rescue Team leader will be equipped with a portable radio, cellular phone and alpha numeric pager thus giving the team three separate forms of communication. The Communications Plan will comply with the current Stanislaus County Fire Frequency Sharing Policy.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

ATTACHMENT B – Standard Water Rescue Procedures

Rescuers assigned to a Water Incident should take steps to make sure that the following guidelines are followed:

- I. Plan to use the lowest risk method first, while setting up for higher risk methods downstream, should the first attempt fail.
- II. All personnel assigned to the incident should make sure that they are prepared to do the following in order.
 - A. Rescue themselves first
 - B. Rescue their team member second
 - C. Recover any escaped watercraft used for the rescue (boat, IRB, personal watercraft)
 - D. Attempt to rescue the victim after A,B, and C are accomplished
- II. There are several types of acceptable rescue methods which are listed below from lowest risk to highest risk, and these methods are further broken down into two rescue categories:
 - A. Land Based Rescues (First Responders)
 - ❖ Talk- try to coach the victim through a self-rescue
 - ❖ Provide Flotation- give the victim some sort of flotation
 - ❖ Reach- reach the victim from shore using a pike pole, ladder, etc.
 - ❖ Throw- toss a throw bag with rope and pendulum the victim to the shore. Other items to consider are rescue rings, etc.
 - ❖ Tension Diagonal Line- by using a rope long enough to reach across the waterway and fastened on each side at an angle to the current, (45 to 60 degrees); you can use the force of the water to push the victim to the side of the side of the channel where the downstream end of the rope is attached
 - B. In-Water Rescues (Water Rescue Teams)

Go:

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The practice of entering the water to affect a rescue. The tactics employed might include contact rescue, shallow water crossing, or the use of a river board for rescue or river search. These tactics should be done in teams of at least two rescuers with downstream safety in place and a back up team on standby, if available.

Tow:

A live bait rescue attempt. A rescuer will have a rope attached to the release harness on their PFD and swim or be belayed to a victim. Once in contact with a victim they will be retrieved by the rescuers on shore. A Tow rescue implies more risk because of the use of a rope in water and the reason a live bait rescue was chosen. In conditions where a live bait system is required such as night rescue, swift current or a severe hydraulic, there is a greater risk to the rescuer and victim.

Row

Rescuers utilizing a watercraft will conduct a search; affect a rescue or transport victims, assist divers or transport rescuers or victims across a body of water. The watercraft can be either a paddle raft or powered boat. The personnel operating in that boat should be familiar with its operation and emergency procedures.

Helo:

A helicopter with properly trained crew can be used for both static water and swiftwater rescues. Rescuers should be familiar with helicopter operations and with emergency procedures specific to that helicopter.

Helicopters should only be used in an actual rescue as a last resort; and only with personnel who have been properly trained for this type of rescue.

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ATTACHMENT C – SF/SAR Company Standards

I. Capabilities

- ❖ High/low angle rope rescue
- ❖ Search management
- ❖ In-water contact rescues
- ❖ EMS – Paramedics / ALS
- ❖ Hazardous Materials First Responder
- ❖ Technical Animal Rescue
- ❖ Night operations
- ❖ Cold water operations

II. Staffing

- ❖ Minimum three (3) SRT or equivalent personnel
- ❖ Positions are as follows:
 1. 1 Boat Operator (in the boat)
 2. 1 Swiftwater/Flood Rescue Technician
 3. SWT Group Supervisor (on land)

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

ATTACHMENT D – RESPONSE CATEGORIES

Water Emergency Response Categories

I. First Responder, Operational Level

A. Training – 8 hours

B. Equipment

- ❖ Personal Flotation Device (PFD) Class III, Class IV or Class V
- ❖ Whistle
- ❖ Knife, straight, fixed blade with hard plastic sheath, blunt end
- ❖ Two flashlights
- ❖ 70 ft 3/8 poly rope throw bag
- ❖ Helmet
- ❖ A radio, cellular phone or some other form of communication device which allows responders to contact assistance.

II. All Technical rescue personnel Shall Have (SRT) or greater

A. Capabilities

- ❖ Shore based support
- ❖ Help search (Hasty)
- ❖ Notify and assess
- ❖ Establish command
- ❖ Should know hydrology
- ❖ Should know self-rescue
- ❖ Should know water rescue and rope rigging

B. Staffing

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

- ❖ Three (3) person minimum

C. Equipment

- ❖ SRT cache

III. Inflatable Rescue Boat (IRB)

A. Capabilities

- ❖ Contact rescues
- ❖ Cold water operations
- ❖ Night operations

B. Staffing

- ❖ Minimum two (2) personnel per boat (Both personnel shall be certified and qualified to SBO and SRT levels)

C. Equipment

- ❖ Minimum 10-foot inflatable rescue boat (IRB)
- ❖ Minimum 10 h.p. outboard motor
- ❖ Boat Cache
- ❖ Night Cache (if applicable)
- ❖ Cold water cache (if applicable)
- ❖ Appropriate boat safety equipment
- ❖ Victim PFD's (no knife)
- ❖ BLS
- ❖ Night Operations
 - Waterproof flashlight or headlamp
 - Chemical light sticks
- ❖ Cold Water Operations

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

- Wet or dry suit
- Gloves
- Thermal protection for dry suits
- Foot protection

IV. Inflatable Rescue Boat “Heavy” (IRB- Heavy)

A. Capabilities

- ❖ Contact rescue
- ❖ Cold water operations
- ❖ Night operations

B. Staffing

- ❖ Minimum two (2) personnel per boat (Both personnel shall be certified and qualified to SBO and SRT levels)

C. Equipment

- ❖ Minimum 30 h.p motor
- ❖ Inflatable rescue boat
- ❖ Boat cache
- ❖ Night cache (if applicable)
- ❖ Cold water cache (if applicable)
- ❖ Appropriate boat safety equipment
- ❖ BLS

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ATTACHMENT E – FLOOD WATER RESCUE OPERATIONS

Information in this attachment is from the CDF/State Fire Training Instructor Guide for Water Rescue Specialists, July 2001.

Flood Water Rescue Operations

I. Determining if an Area is Safe for Water Rescue Operations

A. Have dispatch call for a ground ambulance to stand by

B. Personal Protective Equipment

1. Full encapsulated suits (Dry Suits w/socks)
2. P.J.'s or Thermal underwear
 - a) Without thermal protection a person in water with a temperature of 70 degrees Fahrenheit will become hypothermic in as little as 5 minutes!
3. Booties with a good sole.
4. Gloves for warmth and protection
5. Water Rescue Helmet with a Head light
6. PFD w/ knife, whistle, light and/or strobe

C. Water Evaluation

1. Color of the water
2. Water temperature
 - a) Bacteria, Viruses, Chemicals respond differently in warmer water.
 - b) Warm water tends to open skin pores and soften open wounds on skin.
3. Is the water contaminated?
 - a) Sewer systems

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- b) Waste plants
- c) Agriculture land
- d) Nearby Industries
- e) Residential

4. What type of contamination?

- a) Waste byproducts
- b) Chlorine
- c) Insecticide
- d) Industrial contaminants
- e) Fuel and petroleum products
- f) Do Team Members have current immunizations?

D. Where has the flooding occurred?

- 1. Urban Streets
- 2. City Streets
- 3. Farmland
- 4. Combination of two or more

E. What has the flooding involved?

- 1. Businesses / Industrial Manufacturing
- 2. Hilly terrain
- 3. Only flat, flood plain areas
- 4. City/Urban areas
- 5. Rural Residential / Farming

ATTACHMENT F – Swiftwater / Flood / SAR Decontamination

DECONTAMINATION OF EQUIPMENT AND PERSONNEL:

The following are the recommended decontamination procedures for resources assigned to SF/SAR operations. Any resources exposed to flood waters during their operations should complete the appropriate level of decontamination. Consult with qualified Hazardous Materials personnel when available.

Basic Decontamination:

Personnel:

After completing assignments in floodwaters, hands and face should be washed with clean water and soap. All members should be required to wash hands before entering vehicles and eating areas. Hand washing is essential to reduce secondary contamination.

Equipment:

When the team's operational assignment is completed; equipment should be rinsed with clean water. Visible contaminants, mud and light oils, should be removed with soap.

Level 1 Decontamination:

Level 1 decontamination procedures should be used in areas where there is potential for exposure to general contaminants and the water is standing or moving slowly. Examples of areas where the use of this level of decon is needed would be residential and agricultural areas where there is no evidence of large releases of hazardous materials.

Personnel:

After completing assignment in floodwaters, hands and face should be washed with clean water and anti-microbial soap (i.e., Vionex or PhisoHex). All members should wash their hands before entering vehicles and eating areas. On completion of the day's operations, all members exposed to suspected or known contaminated water should shower and change into clean clothes.

Equipment:

When the team's operational assignment is completed, equipment should be washed with soap and clean water. This decon should be completed as soon as possible following the operations. Dry suits should also be washed before entering vehicles for trips from one work site to another.

Level 2 Decontamination:

Level 2 decontamination procedures should be used any time hazardous materials are identified or likely to be present. These include areas of sewage contamination as well as agricultural and chemical contamination. These areas should not be entered, if possible. Limiting the number of

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

personnel exposed to the water should be the top priority of the Team Leader. Support for decontamination should be arranged before units are committed to the contaminated area.

Water samples should be taken for testing from areas entered by the team. The Medical Unit should be notified if any personnel require this level of decontamination. All personnel exposed to the contaminates should have a one hour, twelve hour, and twenty-four hour medical check following their exposure.

Personnel:

After exiting the water, even for short periods during the operational period, members should go through a scrub gross decon* wash with soap and clean water. Remove gloves and wash hands and face with clean water and anti-microbial soap. At the end of the duty period, members should go through a gross decon scrub wash with soap and clean water before any safety gear is removed. Wash hands and face with clean water and anti-microbial soap after removing all safety gear. Shower, using antimicrobial soap, before leaving the scene if possible or as soon as possible thereafter and change into clean clothes.

Equipment:

All equipment should be sprayed with bleach solution** or other agents as recommended by on-scene Hazardous Materials personnel and allowed to stand a minimum of fifteen minutes. Thoroughly rinse all treated equipment with clean water and allow to dry before storing with other equipment. Bag any equipment that cannot be dried for the return trip to the base. Wipe with bleach solution** any surfaces inside vehicles that might have come in contact with wet safety equipment during the duty period. Units requiring Level 2 Decontamination should be taken out of service until all equipment has been cleaned and dried.

Gross Decon Wash: This is a two-stage process that is set up along a decontamination corridor. All run-off solutions are retained for proper disposal. Persons implementing the corridor should be protected by splash gear. It is recommended that qualified Hazardous Materials personnel be requested to implement this procedure.

Stage 1: Rescuer in safety gear is scrubbed with brushes using a clean water and soap solution. Any contaminated tools are left behind here for cleaning.

Stage 2: Rescuer is rinsed with clean water.

*** Bleach Solution: Bleach solution should be made using 30cc of Sodium Hypochlorite 5% (household bleach) for every one gallon of clean water. This will yield a 20,000 ppm solution of bleach.*

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ATTACHMENT G – STRUCTURE / HAZARDS MARKING SYSTEM

In this section we are going to discuss the techniques of flood rescue that are included in Chapter 16, Urban Search and Rescue, in ICS 420-1. While Flood Rescue involves the use of boats, the rescues themselves, more often than not, will take place in residential and commercial neighborhoods. Therefore, it is imperative that you have a working knowledge of the Structure/Hazards Marking System and the Search Marking System.

At incidents involving several structures or large areas of damage, the identity and location of individual structures is crucial. The use of existing street names and addresses should always be considered first. If due to damage this is not possible, use the existing hundred block and place all even numbers on one side of the street and all odd numbers on the other side. Mark the new numbers on the front of the structure with orange spray paint. If due to damage the name of the street is not identifiable start with the letter “A” using the phonetic alphabet “Alpha”, “Bravo”, “Charlie”, etc.

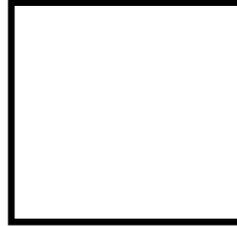
Structure hazards identified during initial size-up activities and throughout the incident should be noted. This Structure/Hazards Mark should be made on the outside of all normal entry points. Orange spray paint seems to be the most easily seen color on most backgrounds and line marking or downward spray cans apply the best paint marks. Lumber chalk or lumber crayons should be used to mark additional information inside the search mark itself because they are easier to write with than spray paint.

A large square box (approximately two feet) is outlined at any entrance accessible for entry into any compromised structure. Use orange paint for this marking. Specific markings will be clearly made adjacent to the box to indicate the condition of the structure and any hazards found at the time of this assessment. Normally the square box marking would be made immediately adjacent to the entry point identified as safe. An arrow will be placed next to the box indicating the direction of the safe entrance if the Structure/Hazards marking must be made somewhat remote from the safe entrance.

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

STRUCTURE/HAZARDS MARKINGS

Make a large (2' x 2') square box with orange spray paint on the outside of the main entrance to the structure. Put the date, time, hazardous material conditions and team or company identifier outside the box on the right-hand side. This information can be made with a lumber-marking device.



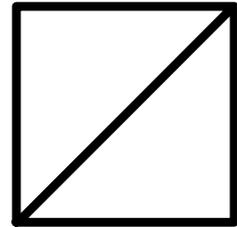
9/12/93
1310 hrs.
HM — nat.
Gas
SMA — E-1

Structure is accessible and safe for search and rescue operations. Damage is minor with little danger of further collapse.



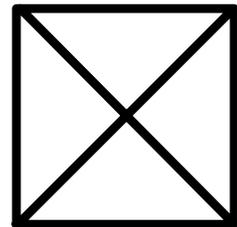
9/12/93
1310 hrs.
HM — none
Gas
SMA — E-1

Structure is significantly damaged. Some areas are relatively safe, but other areas may need shoring, bracing, or removal of falling and collapse hazards.



9/12/93
1310 hrs.
HM — nat.
gas

Structure is not safe for search or rescue operations. May be subject to sudden additional collapse. Remote search operations may proceed at significant risk. If rescue operations are undertaken, safe haven areas and rapid evacuation routes should be created.



9/12/93
1310 hrs.
HM — nat.
gas

Arrow located next to a marking box indicates the direction to a safe entrance into the structure, should the marking box need to be made remote from the indicated entrance.



SEARCH MARKING SYSTEM

Search Markings must be easy to make, easy to read and easy to understand. To be easily seen the search mark must be large and of a contrasting color to the background surface. Orange spray paint seems to be the most easily seen color on most backgrounds and line marking or downward spray cans apply the best paint marks. A lumber marking device may be used to write additional information inside the search mark itself when it would be difficult to write the additional information with spray paint.

A large distinct marking will be made outside the main entrance of each building, structure or area to be searched. This “Main Entrance” search marking will be completed in two steps. First, a large, single slash (approximately two feet) shall be made starting at the upper left moving to the lower right near the main entrance at the start of the search. The Search Team identifier and time that the structure was entered shall be marked to the left of the mid-point of the slash and the date shall be marked near the top of the slash on the opposite side.

When the search of the entire structure is complete and the Search Team exits the building, a second large slash shall be made in the opposite direction forming an “X” on the Main Entrance search marking. Additional information summarizing the entire search of the structure will be placed in three quadrants of the “X”. The left quadrant will already contain the Search Team identifier and time when the Search Team first entered the structure. In the top quadrant enter the time the Search Team exited the structure under the date. Change the date if different from date the structure was entered. The right quadrant is for any significant hazards located inside the structure. The bottom quadrant is for the number of live “V” or dead ∇ victims still inside the structure. Use a small “X” in the bottom quadrant if no victims are inside the structure.

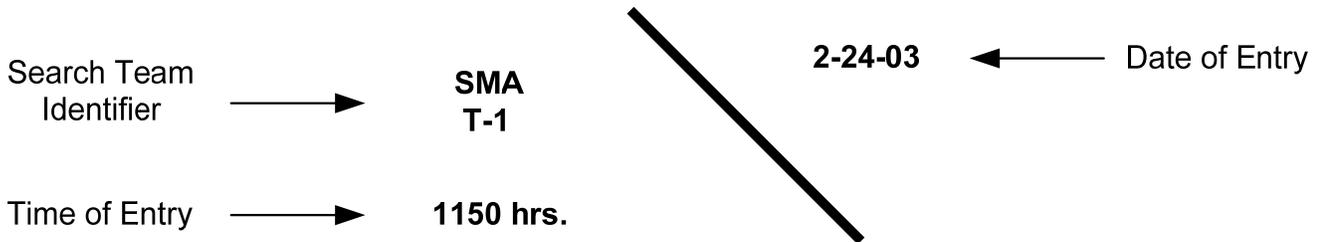
If the search of the entire structure is incomplete, make a circle (approximately 1’ diameter) in the middle of the single slash. The left side will already contain the Search Team identifier and time when the Search Team first entered the structure. At the top end of the slash enter the time the Search Team exited the structure under the date. Change the date if different from date the structure was entered. On the right side, mid-point of the slash, is for any significant hazards located inside the structure. The bottom end of the slash is for the number of live “V” or dead ∇ victims still inside the structure. Use a small “X” at the bottom if no victims are inside the structure.

During the search function, while inside the structure, a large single slash shall be made upon entry of each room, area or floor. After the search of the room or area has been completed, a second large slash shall be drawn in the opposite direction forming an “X”. The only additional information placed in any of the “X” quadrants while inside the structure shall be that pertaining to any significant hazards and the number of live “V” or dead ∇ victims, as indicated by “V” for live and ∇ for dead.

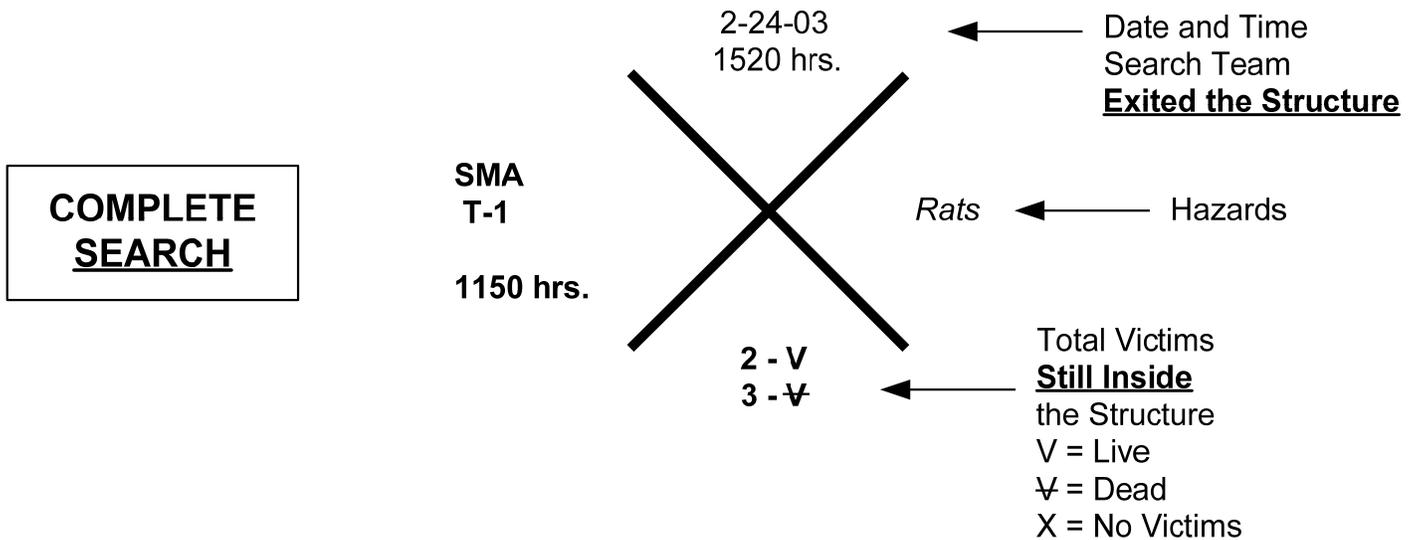
STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

SEARCH MARKINGS

Main Entrance Search Marking - WHEN YOU ENTER

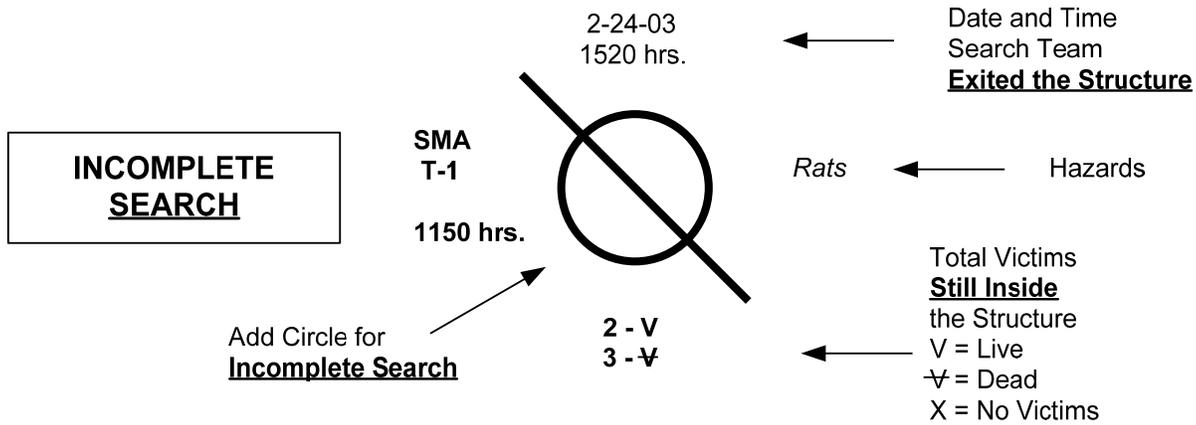


Main Entrance Search Marking - WHEN YOU EXIT

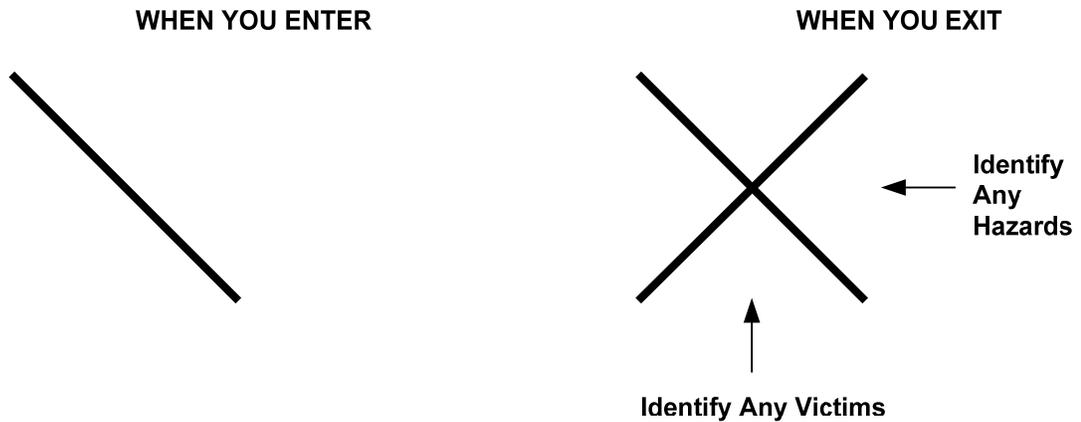


STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

Main Entrance Search Marking - WHEN YOU EXIT



Interior Search Markings - Each Room, AREA OR FLOOR



STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

EMERGENCY SIGNALING SYSTEM

Because of the high potential of secondary collapse, dangerous conditions, and the need to communicate other important information, an emergency signaling system should be adopted and in use by all personnel at the incident site. Emergency signals must be a loud and identifiable and sounded when conditions require immediate attention. Emergency signals can be made using devices such as a whistle, air horn, vehicle horn or bell. Each structure or larger area of operations may need to have its own distinct emergency signal device when multiple rescue operations are taking place in the same area to reduce confusion.

Supervisors should identify and inform assigned personnel of a designated place of assembly and/or safe zone for a Personal Accountability Report (PAR) to be conducted should an evacuation signal be sounded. A place of assembly is usually a safe location outside the evacuation area. A safe zone is usually a safe location within a building or disaster site that can be entered within the evacuation area. When an evacuation signal is sounded, all supervisors must conduct a roll call of their assigned personnel and communicate the results of the PAR to their supervisor.

Evacuate the area

Short signals repeated for 10 seconds, pause for 10 seconds, and repeat for 3 repetitions. Total signal time – 50 seconds.

Cease Operations/All quiet

One long signal (8 to 10 seconds).

Resume Operations

One long and one short signal.

GLOSSARY OF TERMS

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

AHJ- Authority Having Jurisdiction

Components of Search and Rescue- L.A.S.T

- (L) Locate the victim
- (A) Access the victim once found
- (S) Stabilize the victim and prepare for transport
- (T) Transport/Rescue the victim

BLS - Basic Life Support

F.E.B. – Flood Evacuation Boat

Flood – The overflowing of banks and dikes and the rising of water in areas where water is not normally found caused by excessive amounts of rain or inundation of a dam. Floods are inherently dangerous with the possibility of hazardous materials in the water. Floods have been called the leisurely disaster.

FRW- First Responder Water (annual Water Awareness Level training meets this requirement)

Hasty Search- A quick systematic search of the waterway and the embankment within ten (10) feet of the water (minimum 2 person teams)

Inflatable Rescue Boat (IRB)- Inflatable rescue boat that **CAN** be carried by crewmembers to the launch site by hand

Inflatable Rescue Boat- Heavy (IRB-Heavy) - Inflatable rescue boat that **CAN NOT** be carried by crewmembers to the launch site. IRB-Heavy must be transported on trailer and must be launched from a boat launch.

Leader- Rescue team supervisor needs to be knowledgeable of Search & Rescue techniques

Live Bait Rescue- Rescue technique where the rescue swimmer has rope attached to a special type of PFD. The rope is anchored by other rescue team members and the rescue swimmer then swims to the victim.

Night Operations Equipment Needed

1. Waterproof flashlight or headlamp
2. Chemical light stick(s)

PFD. – Personal Flotation Device (Type III, IV, or V, USCG Approved)

PDRL – Predetermined Downstream Rescue Locations

PDUBS -

STANISLAUS COUNTY WATER RESCUE RESPONSE PLAN

- (P) Personal protective equipment
- (D) Downstream protection
- (U) Upstream protection
- (B) Boundaries of search area
- (S) Search and rescue (SAR)

POD.- Probability of detection

PPE- Personal protective equipment

1. Approved PFD
2. Approved water helmet (self-draining)
3. Knife attached to PFD
4. Rescue whistle (attached to PFD)
5. Rescue throw bag

Rescuer- Worker, groups, divisions or team members that do the actual rescue

SAR- Search and Rescue

SBO- Swiftwater Boat Operator (SBO). Must maintain an SRT 1 plus successfully complete a recognized course or equivalent.

Secondary Search – Search done after initial hasty search is completed. This search is more methodical and thorough. (Also known as a GRID search)

SF / SAR – Swiftwater Flood/Search and Rescue

SRT- Swiftwater Rescue Technician (SRT must be a swimmer)

Strainer- Build up of debris (logs, branches, rocks, other) that allows water to flow through, however, it catches other debris (swimmers, rafts, etc.) causing these to be trapped

Swiftwater – Water that is moving fast enough to produce sufficient force to present a significant life and safety hazard to a person entering the water. The swiftwater classification scheme rates the complexity and danger of swiftwater from the easiest (Class1) to most difficult (Class6) (American Whitewater Affiliation)