

1401 WILDLAND FIRE RESPONSE

PURPOSE:

The department routinely responds to wildland fires. This SOP defines the procedures for responding to and extinguishing wildland fires.

The information provided in this SOP is in addition to the general information provided during training, and that available in the fireline handbook.
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1401-1 TRAINING AND RESPONSE

1. There are three classifications of personnel for wildland fire response:
 - a) Wildland Firefighter: A firefighter who is certified at the Wildland Firefighter II level or higher including completion of the *arduous* pack test.
 - b) Support Personnel: Personnel that have previously been certified as wildland firefighters and have completed a *moderate* pack test.
 - c) Structural Firefighter: Qualified structural firefighters in good standing.
2. Wildland Firefighters may perform any duties that they are trained in and capable of.
3. Support personnel can: provide water supply using structural engines or tankers, direct traffic, provide logistical support ..
4. Structural firefighters may fight structure fires or assist in supply operations part of an interface response at the discretion of the incident commander.

1401-3 APPARATUS AND EQUIPMENT

- 1401.1. Definitions: Apparatus are classified by pump and tank capacity.
- a. All pumping apparatus have the capacity to produce Class A foam solution.
 1. The department's Type 1 engines have a 1000 GPM pump and carry 750 gallons of water.
 2. The department's Type 2 engines have 500 GPM pumps and carry 500 gallons of water.
 - a. The department's Type 2 apparatus also have Compressed Air Foam (CAFS) capacity.

Close doors, windows, garage doors

3. The department's Type 6 engines have 120 GPM pumps and carry 300 gallons of water.
 4. The department's tenders have 500 GPM pumps and carry 2500 gallons of water.
 - a. Tenders are not considered pumping apparatus
1. All wildland apparatus carry the following tools:
 - a) 2 fire shovels
 - b) 2 McLeods
 - c) 2 pulaskis
 - d) 1 sandvik
 - e) chain saw and kit
 - f) 2 drip torches
 2. Type 6 apparatus carry, in addition to the above:
 - a. 2 adze hoes
 - b) 1 combi tool
 - c) 1 peavy pole
 3. All wildland apparatus carry the following hose and appliances:
 - a. 2 gasner packs
 - b. 400' 1 inch hose with nozzles
 - c. complete green bag inventory
 4. Type 6 apparatus carry, in addition to the above:
 - a. Additional 200' of 1 inch hose with nozzles

1401-4 TACTICAL PRIORITIES

1. The tactical priorities on wildland fires are:
 - a) Rescue-Life Safety

- b) Structure Protection
- c) Containment
- d) Extinguishment

1401-5 SIZE UP

1. Upon arrival, the initial radio report for a wildland fires should include:
 - 1) location of fire and access
 - 2) size of fire
 - 3) fuel type
 - 4) rate of spread (include flame lengths as appropriate)
 - 5) wind
 - 6) exposures
 - 7) initial actions

1401-6 STRUCTURE PROTECTION

1. Structure Triage

Triage is normally performed from several days prior to a fire up to only minutes before a fire. During triage, the assigned personnel should look at firefighter safety first. Structures should be rated as follows:

 - a. Safety Factor 1 (green): the structure has a sufficient survivable space that would serve as a safety zone during a fire. It would be safe to stay at the structure during a worst-case fire.
 - b. Safety Factor 2 (yellow): The structure does not have a survivable space that would be an adequate safety zone, but does have an adequate escape route to a safety zone located a reasonable distance away.
 - c. Safety Factor 3 (red): The structure has neither a survivable space nor an adequate escape route.
2. Structure Preparation

Prepping a structure involves reducing the risk of a structure catching fire. Some task examples would include:

 - a. Close doors, windows, garage doors.
 - b. Leave lights on inside and outside structure.
 - c. Close venetian blinds or heavy drapes
 - d. Move woodpiles, combustibles away from structure
 - e. Cleaning gutters
 - f. Shut off LP gas at tanks
 - g. Place homeowners ladders, if available against structures for access to roofs.
 - h. Clear understory vegetation out as far as feasible.
 - i. Cutting fireline
3. Structure Pre-treatment

- a. Foaming may be effective when a fire may threaten a structure within 1 to 2 hours. Usually structures are only foamed when insufficient resources or high risk to firefighters dictate that resources will not be on site to defend the structure.

4. Defending:

- 1) When the decision is made to defend a structure or structures, resources are assigned to stay at the structure or in the vicinity of multiple structures to prevent the structures from igniting or to extinguish structure fires when they do occur.
- 2) Patrol the assigned area and extinguish spot fires as they occur
 - a) using pre-connected lines
 - b) bumper line on Type 2 or hose basket on Type 6
 - c) figure eight charged lines on the posts front or rear of apparatus for stowage between sites
- 3) Retain 100 gallons of water on board for engine protection
- 4) Remain mobile, refill tank at drop point or specified location

Evacuation Signal

1. A single blast on the air horn indicates that the firefighters are to pull back and reload.
2. **Two or more sustained blasts on the air horn are a signal to retreat. The firefighters should immediately drop their hose and retreat to the engine. The driver will shut off the hoselines after the crew is accounted for, disconnect, and prepare to immediately leave the area.**

1401-7 FIRE CONTROL

1. Command determines the strategy used (i.e. direct or indirect attack; scratch line or wet line).
2. The engine crew or hand crew has the responsibility for determining the techniques used to implement the control method. .
3. The crew boss will assign the order of tools employed.
4. Only personnel trained and certified as sawyers shall be permitted to fell trees.

1401-7 HOSE EVOLUTIONS

These evolutions would normally be performed by brush engines (type 3-7).

Mobile Attack

Purpose: Fast extinguishment of fires in open terrain in light fuels, such as grass.

O	Order: Mobile attack.
O,3	Dismount, pull mobile attack lines.
3	Start pump, set at 100 psi, Set foam injection to .1%
3	Extinguish perimeter of fire, wetting burned and unburned fuel, while walking alongside engine.
D	Drives forward slowly, at Officer's command.
O	Follows 3, extinguishing hot spots.

Note:

- Normal operation for mobile attack is from within the black.
- If multiple engines are used, space the engines 200 feet apart.
- The driver should keep the window rolled down during the attack to allow better communication.

Preconnect

Purpose: Extinguishment of fires in all fuel types that can be reached adequately with 200' hose lines.

O	Order: Pull preconnect
D	Place truck in park, chock wheels.
3	Dismount, pull preconnect.
D	Start pump and charge line when preconnect fully deployed from bed. Charge to 100 psi., Set foam injection to .1%
3	Operate hose as needed.

Progressive Lay

Purpose: Establishment of a control line along a fire perimeter. The hose lay may be used to establish a trunk line encircling the fire.

O	Order: Progressive Hose Lay
O,D 3	Deploy Preconnect.
4	Take hose pack and hose clamp.
3	When end of hose is reached, call "Hose".
O	Drop 100' of hose from pack
4	Clamp hose. When clamped, call "Clamp".
3	Remove nozzle from preconnect. Attach nozzle to 100' section from hose pack.
O	Connect 100' section to preconnect. When connected, call "Water".
4	Remove clamp.
3	Continue extinguishing fire
O,3 4	Repeat when more hose is needed.

Gasner Pack for progressive hose lay

Load: The hose pack is two 100' 1-1/2" single jacket lines in a gasner pack. The sections are rolled around a 48" long board then the board is removed. A tee with toy hose adaptor on the discharge is attached to the end of the hose on the outside of the rolled hose. The hose is then folded in half with the tee enclosed in the center of the fold. The U shaped fold of hose is inserted into the Gasner pack open end down.

Lateral Attack

Purpose: Extend lines outward from preconnect or progressive lay for mop up or extinguishment of hot spots on line during containment.

O	Order: Laterals (indicate location)
5	Remove a lateral from engine.
5	Connect lateral at specified location.
6	Pulls lateral nozzle outward to deploy.
5	When deployed, charges lateral.

Load: Laterals are 100' of 1" hose in a self locking donut secured with straps.

1401-9 EXTINGUISHMENT

1. Standard practice is to mop up the entire area. Very large fires may have only the perimeter mopped up.

2. Fireline may be constructed after control is completed to prevent escaping rekindles.

1401-10 Mutual Aid / Incoming Mobilization

Resources

1. Major fires are those fires that exceed the capability of the resources available on San Juan Island to control. The IC will make the determination to notify and or request additional resources.
2. Mutual aid agreements exist between San Juan County Fire Districts 2, 3 and 4
 - a) Inter county mutual aid may be requested through dispatch.
3. Mutual Aid agreements exists between San Juan County Fire District 3 and the WA State Department of Natural Resources (DNR) - Notification may occur through the DNR fire line or by DNR duty cell phone.
 - a) Unified command will be established with incoming DNR resources.
4. Regional aid in the form of a mobilization is requested through the NW Region and WSP/EMD operations. The completed “request for mobilization” form should be faxed to both offices.
5. The Command officer must be prepared to give a status report to incoming resources over radio or telephone. This should follow the guidelines on page 7 of the Fireline Handbook.
6. Incoming resources will communicate of RedNet until assigned to a tactical frequency.

1402. OUT OF DISTRICT WILDLAND RESPONSE

PURPOSE:

Personnel from San Juan Fire District #3 may respond to fires outside of the district. This SOP defines the procedures for responding to out of district wildland fires.

1402-1 DEFINITIONS

1. “Mobilization” refers to a regional or statewide request for assistance.
2. “Mutual Aid” refers to a request for assistance from a department or agency with which the department has a pre-existing agreement to provide assistance.
3. “Outer Islands” are those areas within the county that are not part of a fire district or municipality.

1402-2 INTERAGENCY CREW

1. The department has entered into an agreement with the Department of Natural Resources to maintain a wildland response crew. In the event of a DNR requested

response, the crew members who respond will remain under coverage by BVFF as outlined in RCW 52.12.112.

1402-3 CREW SELECTION

1. Crew members will be selected by the Duty Officer, or assigned crew leader.. All personnel must meet the current Washington-Oregon Interface qualifications for any position on a state mobilization. The “qualification matrix” is attached. Preference will be given to persons with additional wildland training, experience, and the ability to commit to responses that may exceed 72 hours.

INTERFACE POSITION QUALIFICATION MATRIX

POSITION	2000	2001	2002	2003	2004 ¹	2005 ²	SUMMARY	RECOMMEN DED TRAINING
Firefighter (FFT2)	FFT2** S-130/S-190 ³						FFT2** S-130/S-190	I-100 FFT1**/S-131
Single Resource Boss (ENGB/Co. Officer)	FFT1** S-205/S-215	S-290		ENGB**	S-131	S-230	FFT1**/ S-131 S-205/215 S-230 S-290 ENGB**	I-200 S-270 S-234
Strike Team/Task Force Leader (STEN/TFLD/Co. Officer)	FFT1** S-205/215 S-290	ENGB**	S-336 OR S-330		ST/TFLD**		FFT1**/ S-131 S-205/215 S-290 ENGB** S-336/S-330 ST/TFLD**	S-390 I-300
Division/Group Supervisor (DIVS)	ST/TFLD**	I-300	S-390			S-339	ST/TFLD** I-300 S-339 S-390 DIVS**	

By the year noted, experience and training requirements for a position must be met before an individual is eligible to participate in a Conflagration/Mobilization assignment.

¹By the year 2004, S-131 (8-hr. class) is required to be able to complete the FFT1 task book.

²By the year 2005, tactics and safety classes are required for Single Resource Boss and Div/Group Sup positions (previously only recommended).

³Equivalent mobilization and State Mob Plan awareness may be substituted for S-130/S-190.

** This indicates the position task book that must be completed as part of the experience requirement for the position.

1402-4 OUTER ISLAND RESPONSE

1. If a report of a wildland fire is received by Dispatch, the dispatcher will record the pertinent information, and notify Department of Natural Resources. The dispatcher will page all stations and request an “off-island crew response”. Notification should include: location of incident, size and nature of incident.
2. The designated crew leader should make arrangements for transportation. Once transportation has been determined, the crew leader should request that dispatch announce the staging location. If no staging location is announced, the crew should assemble at Station 31.

1402-5 MOBILIZATION RESPONSE

1. All mobilization requests should be referred to the duty officer. Upon receipt of a mobilization request, the person receiving the request should record the following information:
 - a) name and phone number of the person making the request
 - b) type of event
 - c) location of incident
 - d) incident order number
 - e) the type of resource being requested
 - f) the resource request number
 - g) reporting location and reporting time
 - h) radio frequency
 - i) an estimate of the duration of the need.
- 2.

1402-6 EQUIPMENT: OUTER ISLAND

1. Crew members are required to use department issued PPE and certain other equipment. Mandatory equipment includes:
 - a) Full PPE and web gear for each member.
 - b) Radio for crew boss and squad boss.
 - c) First Aid Kit
 - d) One gallon drinking water per person.
2. Recommended equipment list for a five person response:
 - a) 3 pulaskis
 - b) 2 shovels
 - c) 2 backpack pumps
 - d) chainsaw and equipment
3. Additional equipment to be considered during initial response:
 - a) Mark 3 pump and pump kit
 - b) 600' 1" hose
 - c) "green bag" from engine
4. Coast guard certified vessels should be used for transportation to outer islands.

1402-7 EQUIPMENT: MOBILIZATION

1. Apparatus should be inventoried prior to departure
2. Single resource trainee and more highly certified firefighters should have available all forms and documentation appropriate to their level or responsibility.
3. Personnel should have the following:

Required Equipment

Leather boots, 8", lug soles

Nomex or FR cotton pants (2pr. recommended, jeans or BDU style preferable to over pants)

Nomex or FR cotton shirt (2 recommended)
Leather gloves (2pr. recommended)
Hardhat
Nomex shroud
Goggles and/or safety glasses (both recommended)
Earplugs, disposable
Web Gear
Fire Shelter
2 canteens, 1 qt. each
Headlamp
AA batteries

Recommended Equipment

Bandanas, 2
Compass
Pocket notepad
Flagging, assorted
Multi-tool
Radio pouch (engine boss)
Radio, field programmable Bendix/King (engine boss)

Personal Equipment

T Shirts, 7
Underwear, 7
Socks, boot, 7
Sweatshirt
Raingear
Sunglasses
Shower sandals
Shower kit
Shaving kit
Sleeping bag
Pillow
Sleeping pad
Tent
Towel (2 rec.)
Personal care items
Pain reliever
Medicine
Hydrocortisone cream
Sunscreen
Insect repellent
Chapstick
Moleskin
Band aids

Vitamins
EQUIPMENT: Drinking water, 1 gallon minimum

1403 AIRCRAFT OPERATIONS

PURPOSE:

Personnel from San Juan County Fire District 3 may work in the area of retardant performing this function safely.

1403.1 REFERENCE

WAC 296-305-07015, Fireline Handbook, NEAMSPA pamphlet "Preparing A Landing Zone", Statutory Authority: RCW 49.17.010, .050, .060. 96-11-067 (Order 94-27), §296-305-07015, filed 05/10/96, effective 01/01/97.

1403.2 DEFINITIONS

1. Fixed Wing Aircraft- Also referred to as air tankers. Can carry water, retardant, or foam/water mixes for control and/or extinguishment of fires. Designated by ICS type 1-4 depending on capacity.
2. Rotary Wing Aircraft- Helicopters equipped with on-board tanks or suspended buckets for application of water to control and/or extinguish fires. Designated by ICS type 1-4 depending on water capacity.
3. Retardant- Retardant likely carried in air tankers is a liquid concentrate consisting of water, ammonium polyphosphate, clay, a corrosion inhibitor and iron oxide for color. The substance is non-toxic and acts as a chemical catalyst to change the burning characteristics on cellulose based fuels.
Helispot- A temporary landing area for rotary wing aircraft.

1403.3 Communications

1. Whenever fixed wing and rotary wing aircraft are being utilized on an incident, personnel trained in air operations management, if available, shall be assigned by the incident commander/operations section chief.
2. Prior to the initiation of air operations, all personnel operating in close proximity to an air drop shall be notified of such activity. Communications will be verified with ground teams in the drop area.

3. Members shall not intentionally operate in an area where it can reasonably be expected that they may be hit with retardants or suppressants from fixed wing or rotary aircraft. Ground teams should avoid positions directly in line with final approach and initial departure paths of retardant drops.
4. Radio communications shall be maintained between an aircraft/air attack officer and the appropriate ground officer. Air to ground radio frequencies are:
 - Department of Natural Resources 159.270 MHz
 - US Forest Service 166.675 MHz
5. Members assigned to ride in rotary wing aircraft shall be briefed in the correct approach, riding, off-loading and emergency procedures for the particular type of aircraft.

1403.4 Aerial Retardant Operations

Personnel can be injured by the impact of material dropped by aircraft. Clear personnel out of target area when drop is to be made. If an individual is unable to retreat to a safe place, the safest procedure is to :

1. Hold on to your handtool away from your body.
2. Lie face down, with head toward oncoming aircraft and hardhat in place. Grasp something firm to p
3. Do not run unless escape is assured.
4. Get clear of dead snags, tops, and limbs in drop area.
5. Working in an area covered by wet retardant or foam should be done with due to slippery surfaces.

1403.5 Requesting Air Operations

In the event Incident Command makes the decision to request air tanker assistance, the following procedure will be adhered to:

1. The Incident Commander will request air attack by directing Sheriff's Dispatch to order needed air resource through DNR. **Incident Command will not order**
2. The contact numbers are:
 - During normal working hours 360.856.3500
 - After normal working hours 1.800.562.6010
3. Incident Command will request direct contact from a Department of Natural Resources representative through Sheriff's Dispatch. Either a cellular number or common radio frequency will be provided so that he/she may be contacted.
4. Be prepared to provide the following information:

- Fire Name (location, nearest landmark)
- Latitude & Longitude
- Geographic Location
- Fire Size
- Behavior
- Fuel
- Elevation
- Aspect
- General weather info, i.e., winds, overcast, visibility, etc.
- Ground forces at fire
- Call Sign of Incident Commander
- Radio Frequency
- Hazards, i.e., other aircraft in area, powerlines, snags, etc.

5. The Department of Natural Resources will handle requests to Air Traffic Control

1403.6 Establishing Helispots

A helispot is any designated landing spot for helicopters. It is less adequate than a helibase and may lack road access for fueling or facilities for storage of supplies. Road turnouts or wide road areas may be used as temporary helispots. A helispot may also need to be established to support the aid unit in the event a transport is necessary from the scene, rather than an established airport.

1. Points to consider in locating and constructing helispots are:
 - Locate on exposed knobs and ridges, allowing takeoff and landing from all directions.
 - Choose a spot where a dropoff exists for helicopter takeoffs. A helicopter making a vertical takeoff uses more power, must be downloaded (carrying capacity reduced), and may not have an adequate margin of safety if power loss or other problems occur during takeoff.
 - **Note- The establishment of a helispot for support of the Aid Unit shall be at the direction of the ranking paramedic or EMT on scene. Most medical evacuation helicopters can monitor the aid frequency (155.250MHz) or HEAR (155.350).**
 - Locate helispot so takeoffs and landings can be made into the prevailing wind.
 - In general, an area at least 75 feet in diameter is needed for safe operations. This should be increased to 125 feet at night. This area may need to be increased accordingly if larger aircraft are used.
 - Remove all loose material from the area. A wet down of dusty areas can assist with keeping flying debris down. Use caution in meadows or pastures with high grass which tends to dissipate the helicopter ground cushion and hide logs, rocks, or swampy areas. Dry grass can also be a fire hazard.

- If possible, an engine with a charged hoseline should be on site during helispot operations on unpaved ground.
- Personnel should be in full protective clothing with eye protection in place during aircraft operations.

2. Helispot Safety

- A. Keep spectators at least 200 feet from the touchdown area.
- B. Assure that all personnel working near the helicopter have and are wearing proper eye and hearing protection.
- C. Wet down the area if it is extremely dusty.
- D. During night operations, assure that spotlights, floodlights and handlights used to define the area are not pointed toward the helicopter.
- E. The landing site should be clear of people, vehicles, obstructions such as trees, poles and wires.
- F. The landing site must be free of stumps, brush, posts, and large rocks.

3. General Helicopter Safety Rules

- A. When working around helicopters, never approach from the rear.

eye

contact with the pilot.

- B. Keep low to avoid main rotor, winds can cause the rotor to flex down.
- C. If the aircraft is landed on a slope, approach and depart from the down-

1404 WILDLAND FIREFIGHTER ACCOUNTABILITY

Purpose:

An effective communication system is used to track individuals and crews at a wildland incident. Because of possible travel distances, rough terrain, and time delays, tracking personnel is of utmost importance to promote safety and ensure crew integrity.

References: WAC 296-305-07007 ICS-1200/1300 NFES, Fireline Handbook NFES #0065

1404-1 CONCEPTS

1. Each firefighter working at a wildland fire will belong to a crew.
2. Each crew will be assigned a crew boss equipped with a radio. Once crews are established, integrity should be maintained.

3. It is the crew boss' responsibility to maintain awareness of the location and condition of each of his or her crewmembers.
4. Crew bosses will have the option to split assignment "squads". Each squad should be equipped with a radio. Individual assignments such as lookout, etc., may require separation from crew.
5. Crews will be identified by their crew boss' name, not by a numeric designator.

1414-2 HARDWARE

1. Each firefighter is issued a passport name tag
2. A passport should be assembled while enroute to the fire
 - a. The crew boss' name tag should be at the top of the passport
 - b. Numbered helmet shields are not used in wildland response
 - c. The passport should be delivered to the IC or IC aide.
3. Later arriving firefighters should present their passport of individual nametag to the IC when an assignment is received.
4. The IC or their aide will arrange the nametags on a status board according to crew assignment.

1404-3 INITIAL RESPONSE

1. The individual riding in the front right seat of the first responding apparatus by default will be the initial incident commander.
2. It is the responsibility of the incident commander to know who is on the fire ground and their location
3. If command is transferred the responsibility for accountability is also transferred
4. Personnel responding POV will report directly to the Incident Commander. If no crew is to be made up or they are not assigned to an existing crew, they will be assigned to Staging.

1404-4 ASSIGNMENT

1. When an individual or group is assigned to an existing crew by IC, the crew boss receiving the additional members(s) will be advised by radio that they are en-route.
2. The crew boss shall report back to the IC the arrival of the assigned personnel. A tracking record shall be kept by the IC or their aide. Delays in arrival shall be investigated immediately.

1404-5 STAGING ESTABLISHED

1. On larger or extended attack incidents a Staging Officer may be appointed.
2. On locally managed incidents incoming resources should report to staging for check in and assignment.