BRITISH COLUMBIA
BC Wildfire Service

WFF1- PRACTICAL SKILL LESSON PLAN & PERFORMANCE REQUIREMENTS

2026

BCWS Fire Services
SPCO@gov.bc.ca

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WSPP-WFF1 Instruction Procedures

1. Course should take approximately 14-16 hours of instruction time including classroom and practical exercises. Break into modules to ensure students receive all course material.

2. On the practical skills day, If training a larger group, consider breaking different skill grouping into Skill Stations and having small groups work on skills at different times, in place of adherence to the expected timeline.

3. Send out the WSPP-WFF1 Student Manual and direct members to read prior to course delivery. (ensure adequate time is allocated for students to read the material)

4. Firefighters complete the full (2day) WFF1 program initially, subsequent years require the Annual Refresher and Practical day to stay current.

5. Upon completion, Fire Departments/Organization certified trainers will keep current and complete records of their membership certifications, internally. This applies to both the Core and Annual refresher programs.

6. If there are any questions send email to Fire Services, SPCO@gov.bc.ca and identify as "Question regarding SPP-WFF1".
    - The exam & answer key are available upon request, when requesting be sure to include a copy of your SPP-T-WFF1 Trainer, certificate

7. Online BCWS Danger Tree Awareness course should be competed annually as a best practice by all Firefighters (link is in the appendix)

WFF 1 Lesson Plan

WFF 1 Day 1 Lesson Plan (Theory)

Performance Objectives:

Following the Theory portion, Students will have a functional understanding of Fire Weather & Behaviour, Operational Safety, Strategy & Tactics on a Wildland Urban Incident.

Classroom Resources

- Internet
- Projector or Screen

Time	Instructor Activities	Student Activities
8:30	Welcome Class, Provide overview of program and expectation Run through classroom introduction with students	Introduce self and brief explanation of what they're trying hoping to learn
9:00	Begin PowerPoint Presentation	
10:30	Break (15min)	
12:30	Lunch (30min)	
13:00	Continue Power Point Presentation	
14:30	Break (15min)	
16:00	Test	

WFF1 Day 2 (Practical) Lesson Plan

Performance Objectives:

Following the Practical Session Fire Fighters will have a basic understanding of Water Supply, Hose Lays, Tool Use and Initial Fire Attack Skills on a Wildland Urban Incident.

Field Resources:

- Field Resources
- Fire Apparatus - Engine & Tender
- Hydrant
- Portable Tank (Bladder)
- Hand Tools
- Wildfire Hose / Nozzles
- Radios

Time	Instructor Activities	Student Activities
	Start with morning briefing and roll call: • Review Day 1, Questions • Safety Briefing • Set up requirements for Day 2.	

8:30	• Assign First Aid Plan • Confirm lunch and eating area. • Assign tender operator(s) and portable tank(s) location. • Establish water supply i.e., creek, lake, pond, hydrant, cistern, water shuttle. • All students must have proper PPE.	
09:00		
Field Discussions	**Field Discussions:** **Instructor(s).** Look over area prior to gathering students, this will allow you to note some of the following discussion points. • PPE. • Crew Leader T/L responsibilities • Interface/Occluded/Intermix, find examples in your immediate area • Power Line Safety • Terrain in the area • Local Fuels • Weather Conditions • Values that could be at Risk	Students engage in Field Discussion Ensure all students provide feedback in relation to Danger Tree Considerations Discuss Laces with Group, and how to engage in these consideration on site
10:00		
Safety	**<u>Laces</u>** Provide guidance and direction when receiving a briefing on what to listen for (refer to SPR sheet for guidance and description) Provide guidance / instruction / Review **Danger Tree Awareness** • Provide guidance and direction for available Vegetation • (refer to SPR sheet for guidance and description)	Student relay examples of Laces that you have mentioned in the briefing Ensure all students provide feedback in relation to Local Danger Tree Considerations

	• Provide guidance / instruction / Review	
Communications	**Radio Com's** Provide guidance and direction to perform Par and IFR – Assist with simulating **Radio Usage** Change Channels & Tones	Students break into groups and work / performs skill
11:00		
Water Supply	**Porta Tanks/Bladder** (refer to SPR sheet for guidance and description) Provide guidance / instruction / Review to perform **Wildland Pumps** • Provide guidance and direction for available portable Pump Set Up. (refer to SPR sheet for guidance and description) • Provide guidance / instruction / Review to perform – with Focus on Mrk 3 pump and anatomy if available **Standard Hose Lay** Review with students and instruct them on best practices	Students break into groups and work / performs skill students break into groups and work performs skill Once Pump Orientation is completed, Start and Fire pumps Students construct standard hose lay and test with water from wildland pump
12:00 Lunch		
13:00		
Initial Attack **&** **Structure Defense**	**Melon Rolls: Construct & Deploy** Provide guidance and direction-based wildland practices (refer to SPR sheet for guidance and description) **Bump & Run** Provide guidance / instruction / Review racking on apparatus with students. **Progressive Hose Lay**	Students to construct and Deploy Mellon Rolls on 1.5" wildfire hose Students will practice deploying off engine, pulling wildland racked hose off back, and deploying to attack spot

	Provide guidance / instruction / Review to perform, extend distance fire so that student are required to add section of hose when attack Spot fire	fire (pilon) near structure. And re-rack hose on engine
14:00		
Hand Tools & Operation	**Spot Fire Initial attack (Parallel Attack)** Provide guidance / instruction focusing on encircling fire (pilons) with water prior to attack centre of fire **Guard** Provide guidance / instruction to have other members of group begin guard construction to assist initial attack – digging small area of guard to mineral soil working in pairs **Black Lining** Provide guidance / instruction on hose handling technique (over shoulder) and select distance adjacent to constructed guard black line **Mop UP Cold Trailing** Discuss with group, use example in located in fire area Logs/exposed tree roots, provide examples. Discus carefully inserting hands when search for heat, and how using tool handles to check deeper holes on bigger hotter fires when searching for heat	Spot Fire: Students to extend hose to fire, encircle and attack using a standard hose lay Guard: using hand tools students construct guard to support fire attack demonstrating safe work distances Black Lining: once fire is contained students to demonstrate black lining adjacent to guard. Mop UP Cold Trailing: Have student patrol guard at an approximate width of 20feet, parallel to one and other, at arm's length. "Searching" for hotspots and discussing where they would anticipate finding any.
15:30		
Clean up & debrief		

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WFF1 - Skill Proficiency Requirement

Score 4	Demonstrates Proficient Skill Level
Score 3	Demonstrates Competent Skill Level
Score 2	Demonstrates Remedial Skill Level
Score 1	Unable to Demonstrate Skill

Water Supply	**Score #**
Mrk lll pump or Available Wildfire Pump: Components & Trouble Shooting	
Single Pump Set & Operations	
Parallel Pump Set & Operation	
Tandem Pump Set & Operation	
Porta Tank/ Bladder Operation - Deploy and repack	
Construct & Deploy Melon Roll	

Comments

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Hand Too Use & Operations	**Score #**
Hand Tool Use, Pulaski	
Hand Tool Use, McCleod	
Guard Construction	
Spot Fire Initial Attack (Parallel Attack)	
Black Lining & Mop Up	

Comments

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Value Defense	**Score #**
Deploy off Engine	
Harden Value	
Fire Attack	
Progressive hose lay for fire attack	
Communication / Raio	

Comments

Skills Appendix:

Danger Tree Awareness:

https://www.for.gov.bc.ca/ftp/HPR/external/!publish/StaffDev/Introduction%20to%20Dangerous%20Trees%20on%20Forestry%20Worksites/story.html

Melon Roll:

https://www.youtube.com/watch?v=gIkgiLsW1OM

https://youtu.be/gIkgiLsW1OM

Mrk lll:

General Information

https://www.youtube.com/watch?v=86Xn-OO5APU

Starting / Operating

https://www.youtube.com/watch?v=EjyOQ-xTD84

https://youtu.be/l0aXmP8MYs4

Trouble Shooting:

https://www.youtube.com/watch?v=ArZpfNY9IsM

Wildfire Operations:

https://www.youtube.com/watch?v=HDmGToDhgV4

https://www.youtube.com/watch?v=z1bCYuwvmEE

(American Operations – great examples of "scratching guard and fire behaviour - some differences in how Canada Operates)

Direct Attack:

https://www.youtube.com/watch?v=tEr3JLkEdP0

https://www.youtube.com/watch?v=wi7ocTcemvE

Stages of Attack Operations:

https://www.youtube.com/watch?v=VEP2tJEKTGw

https://www.youtube.com/watch?v=4vb2tclmz_w

Heavy Equipment:

https://www.youtube.com/watch?v=ndiPz8dn2HY

MRK III Parts & Anatomy:

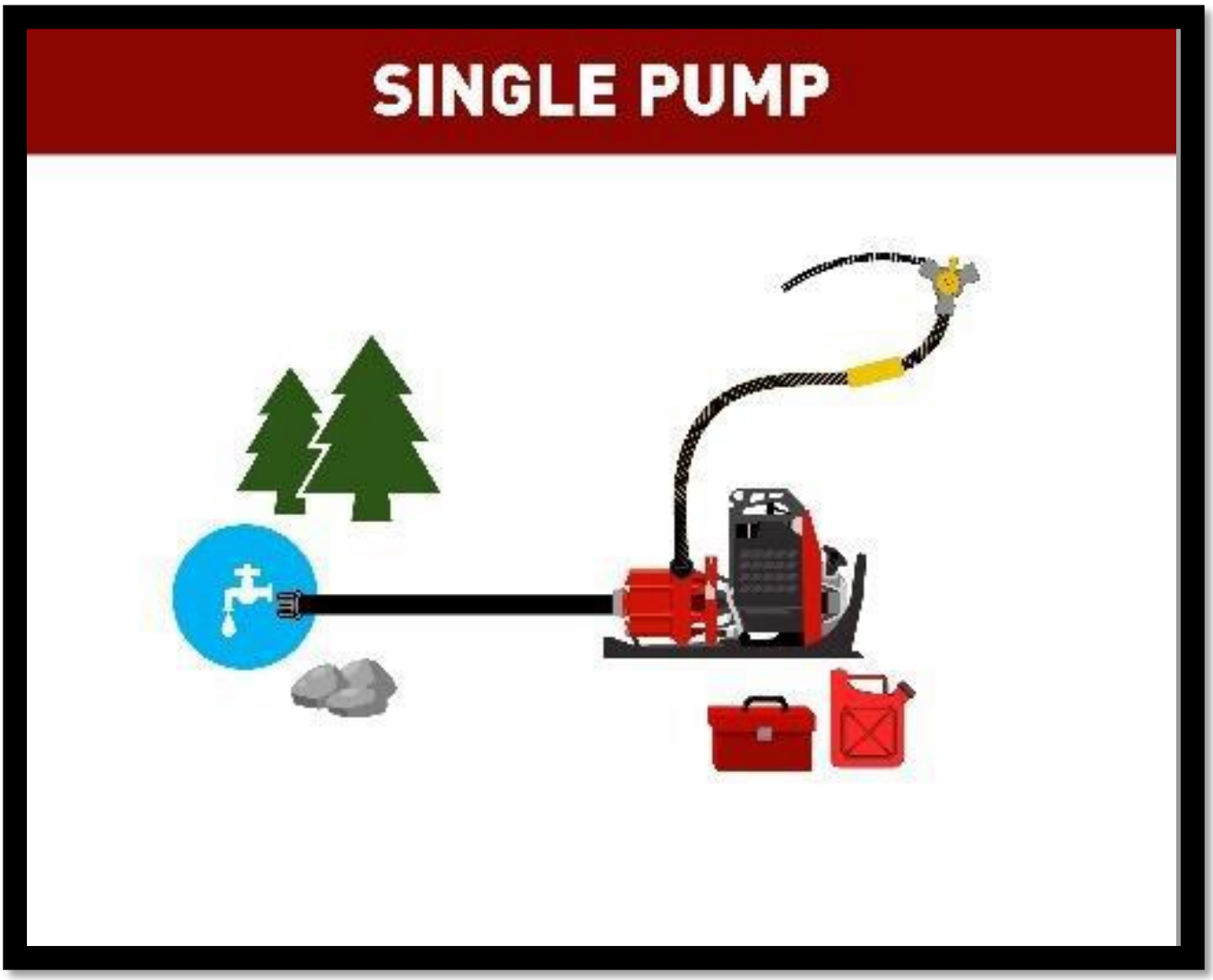
Mark III Considerations

- Pay special attention to securing suction hose and Priming Cap are tight, this pump is prone to air locks

- The exhaust manifold gets hot enough to ignite dry/cured grass. Ensure pump site is clear of long fine fuels.

- Letting the pump cool down on idle after use is recommended for pump longevity, this is an ideal time to disconnect the fuel line. On idle there will be enough fuel left in the pump to effectively facilitate cool down and drain the pump of residual fuel for storage.

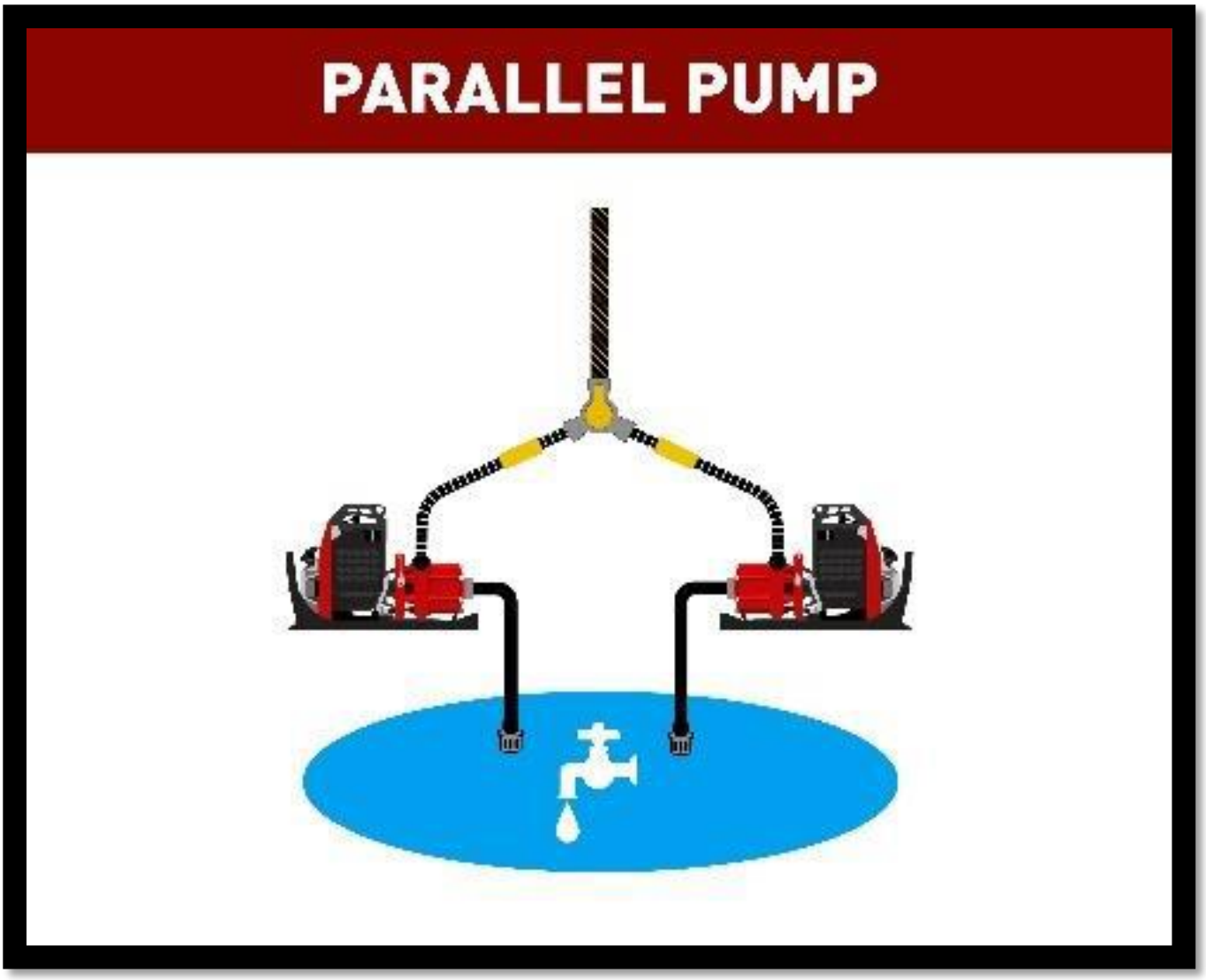
Pump Reference



Single Pump:

Pump Set Up. Crews to set up and start a Mark 3 pump(s) or department pump(s) next to portable tank and connect all accessories.

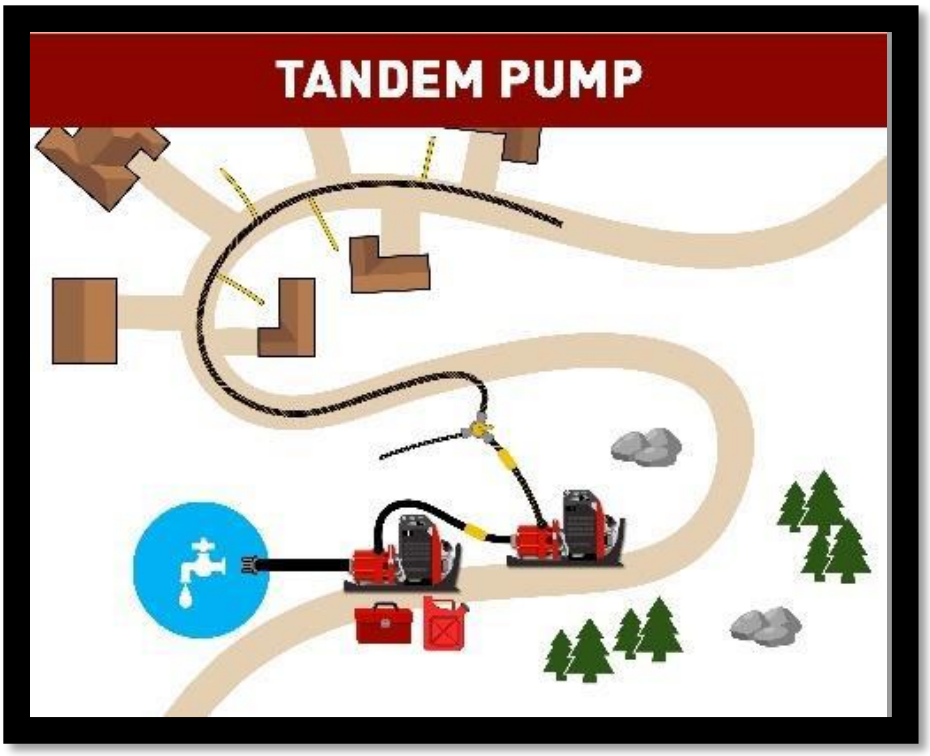
- Pump set up area.
- Pump Kit.
- Hard suction into portable tank.
- Fuel containers (shake to mix).
- Set up discharge side



Parallel Pump Set Up

With 2-1/2" hose, the most efficient way of moving water with multiple pumps is a parallel pump set-up, in flat rolling terrain. This set-up maximizes volume.

- One end of each pony length of 1-1/2" hose is connected to a pump discharge outlet and the other end is connected to the 1-1/2" ball check valve which has been attached to the gated wye.
- There is an arrow indicating inlet and outlet on the 1-1/2" ball check valve. The 1-1/2" hose from the pump connects to the inlet side of the ball check valve, and the outlet side of the ball check valve connects to the gated wye. Attaching the ball check valve backwards will not allow water to flow up the hose line.
- The pumps must be brought up to pressure at the same time by two operators



Tandem System Set Up

Instructor Notes.

- In some situations, where water must be moved up significant elevation (200+ [61+m] feet of vertical rise) a tandem pump set-up is most effective. Connect 10' 1-1/2' high pressure hose to the tandem coupling. The tandem pump is set up as far up the hose line as possible while still running the pump at full throttle.

Steps:

- **Pump 1 starts first and is left idling**
- **A crew member is located at Pump 2 only starts it when water is flowing from pump 1 starts second**
- **Pump 1 will begin to throttle up to high idle**
- **Pump 2 is idling, starts to throttle up to high idle and is watching the intake hose ensuring it does not begin to collapse. If Collapse occurs, Pump 2 is too close to Pump 1 and must be moved further along**

When both pumps are at high idle and the intake hose remains hard, the setup is complete.

Skill Descriptions

Hand Tool: Guard Construction Pulaski	Initial Attack (Parallel) & Guard	• Dig in soil/chop wood, clear organic soil to mineral layer • Cutting end clear our larger path through growth • Digging end, clear surface material creating fire line with • Used to expose embers from deep burning smudges in debris
Hand Tool : Guard Construction McLeod	Initial Attack & Guard Safe Work Distances 10ft/3M	• Help improve fire line, by removing additional surface fuel left behind by Pulaski • Rake edge can be used to remove loose debris (Pine cones/moss etc.) • "blade" side can be used to scrape down to mineral soil enhancing guard
Fire Attack Progressive Hose Lay	Advancing Hose Line Extending Charged Hose Lines	• FF extends charged hose line completely, clamps off end attached coupling and nozzle to new length of hose. Releases clamp, opens nozzle and continues progressing hose line for objective. • EB N/A • D/O Charges hose line and flows water to hose, monitoring pressure.
Fire Attack	Initial Attack of Small Spot Fire (Parallel)	• FF 1: extends hose line to fire, encircles fire with water to limit spread. Begins attack from flank/heal of fire • FF 2/3: bring appropriate hand tools and supports moving hose line to fire, begins constructing guard on Flank/Heal of fire while hose operations are underway to contain fire • EB/CL supports ground operations, hose and guard construction. Acts as look out. • D/O or Mrk 3 Pump Operator: Operates pump and water supply.
Containment (Mop Up)	Black Lining Standard Hose Lay	• FF Black lining: spraying down assigned determined depth along fires edge of guard, cooling potential fire activity along guard. • FF Mop Up: Used to expose embers from deep burning smudges in debris,

		patrol in grid pattern, looking / smelling for hot spots. Actioning / unearthing embers to extinguish preventing re-ignition/growth of fire by mixing Ember, fuel/soil/vegetation with water and air to release heat

Bump & Run Intro:

Students to deploy off apparatus, performs rapid hardening of structure in immediate zone. Deploy uncharged attack lines in appropriate locations relative to Area of Operation, and then re rack hose on back of engine - Engine boss to coordinate activities/provide direction for crew

Incorporate progressive hose lay (with uncharged hoseline) Radio for additional hose and clamp in attacking fire (Pilon)

Instructor(s) Note.

If time permits instructors can review and demonstrate hand tool use.

Instructors can also review types of sprinklers and the two basic set ups. Dead end and Loop system.

Communication:

- PAR: CONNECT: "Engine #105 (your call sign) from TFL #4"
- "TFL #4 this is Engine #105" (critical step) (do not say go ahead)
- CONVEY: TFL #4 delivers message "Engine #105, PAR/Time Check"
- CLARIFY: Engine #105 replies "Engine #105 PAR of (number of crew members), All Ops Normal"
- CONFIRM: TFL #4 replies "Affirmative, Engine #105 Par of #, All Ops Normal"