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Wheatland County Fire Services
Strathmore, Alberta

LDH/Relay Pumping Seminar
Hydrant Operations – Supply Pumper Setups
August 23, 2025
Summary Report

The Purpose

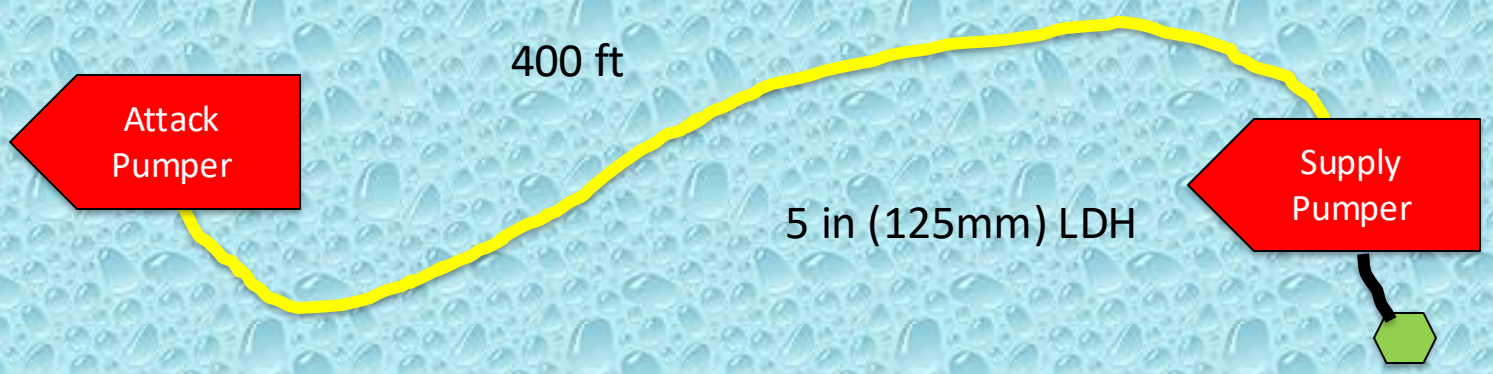
- The purpose of the seminar and drill was to review the basics of large diameter hose and its use in relay pumping operations.

The Relay Pumping Drill

- The focus of the relay pumping drill was supplying an attack pumper by using a supply pumper connected to a fire hydrant.
- For many of the seminar attendees, hydrant supply pumper operations are infrequently used given the rural areas their departments cover.
- This drill scenario presented a good challenge to each crew; it required the use of LDH and adaptors and problem-solving skills.
- Each crew did a great job solving their given scenario.

One unexpected issue that arose was the inability to use one of the 65mm (2-1/2”) outlets on the hydrant.

Drill Layout



Scenario	Attack	Supply	Flow
#1	Strathmore E2	Standard W75	900 gpm
#2	Strathmore E2	Sisika E1	1000 gpm
#3	Strathmore E2	Wheatland West E9	1250 gpm
#4	Wheatland West E9	Strathmore E2	1300+ gpm

Scenario #1

Standard W75 does not carry LDH so all connections were made using 65mm (2-1/2”) hose. While making the initial connections the crew discovered that the righthand 65mm outlet on the hydrant was OOS; hence the double, 65mm off the steamer outlet.

Scenario #1

The pumper operator pumped as much water as possible to the attack pumper while taking W75's intake pressure to 0 psi. The maximum flow achieved at the attack pumper (Strathmore Engine 2) was 900 gpm using this hydrant supply layout arrangement.

Scenario #2

Scenario #2 had Siksika Engine 1 use their 100mm (4-inch) LDH to get water from the hydrant. They had no adaptor for the 125mm (5-inch) steamer fitting so water had to come from a 65mm outlet.

Scenario #2

The operator flowed a maximum of 1000 gpm to the attack pumper all while taking E1's intake pressure to 0 psi. Twin, 65mm lines were used to feed the 125 mm LDH.

Scenario #3

For Scenario #3, Wheatland West Engine 9 operated as the supply pumper and used 125mm LDH for hydrant supply and three, 65mm lines to supply the LDH appliance. The operator was able to supply 1250 gpm to Engine 2 and had about 20 psi remaining on E9's intake gauge.

Scenario #4

Scenario #4 had Strathmore Engine 2 operate as the supply pumper and Wheatland West Engine 9 operate as the attack pumper. Engine 2's took in two, 125mm hydrant lines and used the high flow discharge to supply the 125mm line to Engine 9. The operator was able to produce a 1300 gpm flow with almost 40 psi residual pressure on the intake.

The Results

- As the scenarios progressed, each scenario produced a greater flow to the attack pumper.
- The final scenario could have produced flow in excess of 1300 gpm, but time was running short and the pre-piped deck-gun was maxed-out on flow.

The Lessons Learned

- The scenarios showed the value of large diameter hose in terms of hydrant supply and supply hose for attack pumpers.
- Even if rigs do not carry LDH supply hose they should be equipped with short lengths of LDH for hydrant connections.
- Every pumper should carry adaptors for hydrants in their regional response area.

Summary

- The drill was a success. The folks got to observe first-hand the impact of LDH on pumping operations.
- Everyone got a chance to solve problems with each scenario and figure out how best to make their pumper work for the scenario.
- Many thanks to Wheatland County Fire Services for sponsoring and hosting the seminar.

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For more information contact us at
thebigcamel@gotbigwater.com