



PHOTO COURTESY OF THE AGASSIZ-HARRISON OBSERVER

Necessity leads to accreditation

B.C. department uses ingenuity and muscle to attain FUS rating

By GERALD BASTEN

Firefighters from Agassiz and Popkum, B.C., used large-diameter hose lay delivered up to 600 metres from an accredited water source to protect residents whose homes are not on municipal water.

For years, the Agassiz Fire Department in British Columbia struggled to protect its residents. With just half of the town on municipal water, Agassiz's single fire station used ingenuity and a fair bit of muscle to become the first Canadian department to receive the Fire Underwriters Survey accreditation for alternative water supplies using large diameter hose lay (LDHL) delivered up to 600 metres from an accredited water source.

Using two engines and one tender from the Agassiz Fire Department, supported with one engine and one tender from neighbouring Popkum Fire Department, Agassiz's firefighters were able to deploy 600 metres

of four-inch LDH, flow 265 imperial gallons per minute (ipgm), from a ground monitor within five minutes, and boost the discharge pressure to 500 ipgm within 10 minutes. Although this doesn't quite meet the hydrant-protection rating, it is the next best designation, and is far better than the fire-department only designation.

As early as the mid 1960s, fire hydrants were installed in strategic locations throughout Agassiz to support firefighting efforts and help meet insurance regulations, so affordable rates could be offered to citizens. The hydrants were not connected to any positive pressure water system; they were simply six-inch casings, drilled down 30 to 60 feet, or until good water volume was reached. The

KEEP YOUR FIREFIGHTERS SAFE!

**BEST in Turnout Gear
Cleaning, Decontamination,
Conditioning, Repair,
Alterations and Assessments.**

**FireTrack PPE Data Base
Management Available
On-Line 24/7**

ISO 9001:2000 / NFPA 1851
Compliant / ETL ® Verified

BEFORE
USING FIRE
SERVICE
MANAGEMENT



AFTER
USING FIRE
SERVICE
MANAGEMENT

www.fireservicemanagement.com



Central Canada (TORONTO)

1-888-731-7377

Western Canada (CALGARY)

1-403-279-5095

Mid-West USA (DETROIT, MI)

1-866-877-8688

Quebec (MONTREAL) 1-514-312-3708



hydrants, or well heads, proved to be very labour intensive and accelerated wear on pumps and related equipment. Fine sand and silt was being drawn up and run through the pump and valves causing expensive repair issues. Through time, the hydrants were used less and less, and were eventually replaced with tender shuttles. In 2005, a community water system was introduced into the town, bringing fresh, clean, regulated water for domestic use, as well as a pressurized fire-hydrant system. Unfortunately, there was only enough funding to complete half of the town. While this measure was better than nothing, it left half the town without proper fire-hydrant protection, which, in time, led insurance brokers to focus on and levy dramatic rate increases.

At that point, the Agassiz Fire Department developed a plan to use a four-inch diameter hose lay from the nearest pressurized fire hydrant to encompass all properties within 600 metres. The plan was presented to the Fire Underwriters Survey and approved in principle, pending successful demonstration and timed tests. Over a couple of months, a plan was developed using information from municipal utilities regarding water-main infrastructure, available equipment and resources, friction loss and flow calculations, and training required to become proficient. All the hose required was pressured tested and inspected. Hose loads on the engines were adjusted to allow for a 300-metre compliment of four-inch LDH. Firefighters trained week after week to fine tune operations and develop the most efficient methods to reach the goals. Joint training sessions with the Popkum Fire Department were initiated. Finally, a plan was set in stone and a standard operating guideline was written.

The first-in engine would stop and tag the nearest hydrant with a two-inch line, and two 2.5-inch gate valves. The engine would lay 300 metres of supply line and then continue on to the incident. The second-in engine would respond directly to the incident, lay 300 metres of four-inch supply line back to where the first engine's line ended, and begin to relay pump to boost pressure lost due to friction. When the tender arrives on scene, it supplements the attack engine until the hydrant supply is secured and able to deliver the required volumes. The Popkum engine is directed to the hydrant to connect to the two gate valves and steamer port, and boost the water supply at the source. The Popkum tender works in conjunction with the Agassiz tender, maintaining a water cushion in case flow requirements increase and additional water is required.

On Oct. 23, 2010, Sunjeeve Sodi from Fire Underwriters Survey came to witness a practise run of the procedure. After meeting with Agassiz's chief and company officers to ensure all key points were understood and could be met, the demonstration began. Once the scenario was complete and all the objectives met, a debriefing followed to identify areas of concern. Sodi worked with the fire departments to tweak the plan to reach maximum efficiency. The test was done for the final time the following weekend and recorded. The test was a resounding success and is now an important part of the Agassiz Fire Department's suppression tactics. The joint effort and working relationship between the FUS and the department was second to none.

In a letter addressing alternative water supplies. Michael Currie, the Fire Underwriters Survey director for Western Canada, says; "The Agassiz Fire Department, within the District of Kent in British Columbia, under the leadership of Fire Chief Wayne Dyer, have adapted their training and equipment specifically to receive this accreditation, and are congratulated as the first community to receive accreditation for alternative water supplies using Large Diameter Hose Lay (LDHL) in Canada."

The Agassiz Fire Department comprises one career fire chief and 30 paid on-call firefighters. It operates two engines, one heavy rescue, one four-by-four light rescue, one 3,200-imperial gallon tender, one utility/air squad and one duty chief truck, out of one fire hall, serving a population of more than 5,000 people over 259 square kilometers. The department responds to approximately 275 emergency runs a year.

Gerald Basten is the deputy chief of the Agassiz Fire Department. Contact him at deputychiefbasten@shaw.ca or 604-796-2614.