



GENERAL

This form covers documents needed in order to re-accredit your community for Superior Tanker Shuttle Service. Re-accreditation will be applied for 5 years. You should notify our office should resources change within that time period that would affect the ability of the community to maintain the level of accredited service. Please note that additional tests may be requested by our office prior to granting this re-accreditation.

The intent of completing this form is to demonstrate the Fire Departments ability to maintain the accredited flow rate for the specified duration at a test site. The following limits apply:

- For a fire hall accredited under the Dwelling Protection Grade (DPG) system, 200 IGPM (achieved within 5 minutes) should be provided for a period of 2 hours at a location 5km from a water supply point AND 8km from the accredited fire hall (or a lesser distance limited by the Fire Protection Area boundary).
- For a fire hall accredited under the Public Fire Protection Classification (PFPC) system, the previously accredited flow rate (400 IGPM minimum achieved within 5 minutes and accredited flow rate within 10 minutes) should be provided for the specific duration at a location 2.5km from a water supply point AND 5km from the accredited fire hall (or a lesser distance limited by the Fire Protection Area boundary).

In a community with multiple accredited fire halls, test results need only be provided for the most difficult scenario/fire hall. Furthermore apparatus hold-off times for testing should reflect the travel time from the supporting fire halls to the test location assuming all participating fire halls leave at the same time. Should a community be re-accrediting for both the DPG and PFPC system, 2 separate test sheets should be completed. Please contact Fire Underwriter Survey if you need to confirm the testing location or scenario.

WHAT YOU NEED TO INCLUDE WITH YOUR APPLICATION:

Note: To avoid delays, please supply all of the information listed below in a complete and organized format.	Location	FUS USE ONLY
<input type="checkbox"/> Section 1: Completed application form	Form	<input type="checkbox"/>
<input type="checkbox"/> Appendix A: Completed FS4 form for each Fire hall in the Fire Protection Area and any contract fire halls used in the STSS accreditation	Form	<input type="checkbox"/>
<input type="checkbox"/> Appendix A: Dry Hydrant maintenance record for each dry hydrant used in the STSS Accreditation (see form WS7)	Form	<input type="checkbox"/>
<input type="checkbox"/> Appendix A: Completed Superior Tanker Shuttle Service Accreditation Test form	Form	<input type="checkbox"/>
<input type="checkbox"/> Fire department Standard Operating Procedures for water shuttle operations	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Records of past STSS training	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Records of past incidents where STSS was used (if available)	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Automatic Aid agreements (if applicable)	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Pictures of test site	Attachment	<input type="checkbox"/>



Section 1: Application form

1. Fire Department Information

Name of Fire Department:			
Fire Chief Name::		E-mail Address:	
Address:			
Province:	Post Code:	Phone: ()	Fax: ()

2. Authority Having Jurisdiction (AHJ) Information

Name of area:			
Contact Name:		E-mail Address:	
Address:			
Province:	Post Code:	Phone: ()	Fax: ()

3. Testing Site Information

GPS Location of test site:			
Latitude:	Longitude:	Datum:	
Fire hall Name:			
Address:			
Province:	Post Code:	Phone: ()	Fax: ()

4. General Information

Has there been any change to the Fire Protection Area (FPA)? (if yes, please provide updated map in GIS format)
Have there been any additions/removal/re-location of fire halls in the FPA?
Has the water system been expanded? (if yes, please provide updated map in GIS format)



Has there been a significant change in staffing?
Has there been a significant change in apparatus?
Has there been any change to agreements that could affect the STSS accreditation?

Declaration of Authority Having Jurisdiction (AHJ) or Fire Chief

I hereby declare that the information contained herein is true and accurate. I have read and understood this form. Superior Tanker Shuttle Service accreditation is designed to comply with the Superior Tanker Shuttle Service Accreditation Protocol. I understand that failure to comply with any or all items in the Protocol, or providing false information, renders this application and subsequent recognition null and void.

Authority Having Jurisdiction Signature:	Date:
Authority Having Jurisdiction Name (print):	AHJ Title:
Witness Signature:	Date:
Witness Name (print):	

LEAVE BLANK – FUS USE ONLY	
Date Application Received	Date Application Completed
Received by	

Please submit the application to:

Fire Underwriters Survey,
Unit 101, 3999 Henning Drive,
Burnaby, BC,
V5C 6P9.

For further information please contact admin@fireunderwriters.ca (1-800-665-5661).



Appendix A

Fire Underwriters Survey Outreach - Fire Station Form (FS4)



Please fill out this form, save and email the form back to our office, we may also request a signed hard copy.

Local Government Legal Name: _____

Fire Department Name: _____

Date Completed: _____

FUS Office Use Only: _____

Fire Hall Name	#	Address	Nearest cross street

Number of Fire Fighters dedicated to this Fire Hall					
Career Chiefs	Career Officers	Career Fire Fighters	Volunteer Chiefs	Volunteer Officers	Volunteer Fire Fighters

For career fire fighters on duty, what is the minimum on-duty staffing?

Type	Identifier	Manufacturer	Year	ULC #	Pump Capacity	Tank Capacity
					lgpm	l.Gal
1 st Line Pumper						
2 nd Line Pumper						
Reserve Pumper						
1 st Line Ladder						
Reserve Ladder						
1 st Line Tender						
2 nd Line Tender						
Initial Attack						

Within the response area of this fire hall, are there any Dwellings (SFR or duplex) beyond 8 km by road? _____

Within the response area of this fire hall, are there any structures other than Dwellings (SFR or duplex) beyond 5 km by road? _____

Western Canada 3999 Henning Drive Burnaby, BC V5C 6P9 1 (800) 665-5661	Ontario 150 Commerce Valley Drive West Markham, ON L3T 7Z3 1 (800) 268-8080	Quebec 1611 Cremazie Boulevard East Montreal, QC H2M 2P2 1 (800) 263-5361	Atlantic Canada 238 Brownlow Avenue, Suite 300 Dartmouth, NS B3B 1Y2 1 (800) 639-4528
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FIRE UNDERWRITERS SURVEY

A SERVICE TO INSURERS AND MUNICIPALITIES

Superior Tanker Shuttle Service Accreditation Test Form

Basic Information:

Test Conducted by: _____ Test Date: _____

Municipality: _____ Fire Department: _____

Automatic Aid Department: _____

Describe where aid comes from and travel distance: _____

Refill Sites used during test:

Refill Site Number	Distance from Test Site to Refill Site

Refill Sites Available to the Fire Department:

	Name	Location of Refill Sites	Type of Water Source available for refill	Water Available at Source	Road Travel Distance to Fire Station (km)
1					
2					
3					
4					
5					



Fire Underwriters Survey
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3999 Henning Drive
Suite 101
Burnaby, British Columbia
V5C 6P9

T: 604.609.4146
Toll Free: 1.800.665.5661
F: 604.688.6986

A Service provided by
Opta Information Intelligence
www.fireunderwriters.ca
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Test Sites Available to the Fire Department:

Test Site	Location of Test Sites	Distance to Fire Station (km)	Latitude & Longitude	Road Travel Distance to Fire Station (km)
1				
2				
3				
4				
5				

Location of Chosen Test Site:

Why was the Test Site Chosen?

Comments/Sketches

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Description of Refill site(s) used during the test (noting access issues, improper turnaround, signage, loading platforms)

If pressurized fire hydrants are used as a refill site, were flow tests conducted?	
--	--

Tanker Start Point for Chosen Test Site:

Tanker	Location	Distance from Start Point to Test Site (km)	Capacity at Start of Test	Port-a-Tank Equipped



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Refill Sites used during test:

Name	Location	Distance from Test Site to Refill Site	Type of Water Source	Water Available at Source

Roadway Information:

Posted Speeds of Roadway to Refill Site(s):	<input type="text"/>
Maximum Allowable Travel Speed during Test:	<input type="text"/>
RCMP Notified:	<input type="text"/>
Community Notified:	<input type="text"/>
Lights and Sirens used during test:	<input type="text"/>

Description of Roadway used during test:



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Test Data:

Initial Available Water at Test Site: _____

Test Start Time (on the day of the test): _____

Nozzle Diameter (orifice size): _____ Coefficient: _____

Time 200 IGPM was first flowed as read from the stopwatch: _____

Pitot reading: _____

Suction Hose Diameter: _____ Suction Hose Material: _____

Suction Hose Length: _____ Suction Hose Lift during test: _____

Portable Pumps and pumping capacity used during test (if any): _____

Describe how the department connects portable tanks together (if not known from Portable-Tank worksheet): _____



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Test Reading Data:

Time (minutes)	Pitot Reading	Calculated Flow Rate (IGPM)	Discharge Gauge Reading	RPM	Suction Gauge Reading	Engine Temp.	Handheld Pitot Reading
(when 200 Igpm was reached)							
+5							
+10							
+15							
+20							
+25							
+30							
+35							
+40							
+45							
+50							
+55							
+60							
+65							
+70							
+75							
+80							
+85							
+90							
+95							
+100							
+105							
+110							
+115							
+120							

Hazen-Williams Flow Calculation

Imperial results require inches and PSI. Metric measurements require mm and kPa.

$$\text{USGPM} - Q = 29.84cd^2\sqrt{P}$$

$$\text{IGPM} - Q = 24.84cd^2\sqrt{P}$$

$$\text{LPM} - Q = 0.0666cd^2\sqrt{P}$$



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T Unit #	Capacity	Station	Start Location	Refill Site

	Arrival	Departure	Quantity	Travel time	Drop time
1st Cycle					
2nd Cycle					
3rd Cycle					
4th Cycle					
5th Cycle					
6th Cycle					
7th Cycle					

T Unit #	Capacity	Station	Start Location	Refill Site

	Arrival	Departure	Quantity	Travel time	Drop time
1st Cycle					
2nd Cycle					
3rd Cycle					
4th Cycle					
5th Cycle					
6th Cycle					
7th Cycle					



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1st Cycle					
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3rd Cycle					
4th Cycle					
5th Cycle					
6th Cycle					
7th Cycle					

T Unit #	Capacity	Station	Start Location	Refill Site

	Arrival	Departure	Quantity	Travel time	Drop time
1st Cycle					
2nd Cycle					
3rd Cycle					
4th Cycle					
5th Cycle					
6th Cycle					
7th Cycle					



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In order for Fire Underwriters Survey to recognise a dry hydrant for fire insurance grading purposes, certain eligibility standards must be met. The following form should be completed and returned indicating that these standards are being adhered to. If you do not supply all the requested information, your application cannot be reviewed.

NOTE: Recognition of a dry hydrant by Fire Underwriters Survey implies that the dry hydrant is suitably designed to meet the minimum criteria as a water supply for fire insurance grading purposes.

WHAT YOU NEED TO INCLUDE WITH YOUR APPLICATION:

Note: To avoid delays, please supply all of the information listed below in a complete and organized format.	Location	FUS USE ONLY
<input type="checkbox"/> Section 1: Completed application form	Form	<input type="checkbox"/>
<input type="checkbox"/> Appendix A: Inspection and Maintenance Record (one initial copy and subsequently annually)	Form	<input type="checkbox"/>
<input type="checkbox"/> Photographs showing the entire site in relation to the water source, and photos of the water source.	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Flow test results demonstrating flow capacity through pumper apparatus. Flow tests will be carried out with a pitot gauge, which is calibrated annually, and witnessed by the AHJ or Fire Chief (these will be indicated on the "Inspection and Maintenance Record". Note that as required by NFPA 1142, 2007 edition, section 8.3.3 - <i>All dry hydrant systems shall be designed and constructed to provide a minimum flow of 3800L/min, i.e. 835IGPM.</i>	Form	<input type="checkbox"/>
<input type="checkbox"/> Fire department Standard Operating Procedures for use of static water supplies.	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Water Use Agreement	Attachment	<input type="checkbox"/>
<input type="checkbox"/> Dry fire hydrant drawings/plans/sketch (if available)	Plan sheet/ drawing	<input type="checkbox"/>



Section 1: Application form

1. Dry Hydrant Installation Information

GPS Location:				
Latitude:		Longitude:		Datum:
Date of Installation:			Name of Installation Company:	
Contact Name:			E-mail Address:	
Address:				
<input type="checkbox"/> City <input type="checkbox"/> Town <input type="checkbox"/> Village	Province:	Post Code:	Phone: ()	Fax: ()

2. Authority Having Jurisdiction (AHJ) Information

Name of Organization:				
Contact Name:			E-mail Address:	
Address:				
<input type="checkbox"/> City <input type="checkbox"/> Town <input type="checkbox"/> Village	Province:	Post Code:	Phone: ()	Fax: ()

3. Fire Department Information

Name of Fire Department:				
Fire Chief Name::			E-mail Address:	
Address:				
<input type="checkbox"/> City <input type="checkbox"/> Town <input type="checkbox"/> Village	Province:	Post Code:	Phone: ()	Fax: ()

As required by NFPA 1142, 2007 edition, section 8.7.1 – *Dry hydrants shall be inspected at least quarterly and maintained as necessary to keep them in good operating condition.* Fire Underwriters Survey (FUS) requires that all maintenance records from Appendix A be provided to your local FUS office on an annual basis in order to maintain recognition for fire insurance grading purposes.



4. Dry Hydrant Maintenance Information

Maintenance Frequency:		Name of Company/Organization responsible for maintenance:			
Contact Name:		E-mail Address:			
Address:					
<input type="checkbox"/> City <input type="checkbox"/> Town <input type="checkbox"/> Village	Province:	Post Code:	Phone: ()	Fax: ()	

5. Dry Hydrant Hardware description (Note that additional information may be required)

Diameter of all pipe sizes (inches):
Pipe material used:

Declaration of Authority Having Jurisdiction (AHJ) or Fire Chief

I hereby declare that the information contained herein is true and accurate. I have read and understood this form. This alternative water supply project is designed to comply with, and be maintained in accordance with all applicable standards and design specifications. I understand that failure to comply with any or all of the applicable standards, or providing false information, renders this application and subsequent recognition null and void.

The dry hydrant described herein will be made continuously accessible for fire-fighting apparatus year-round and without exception. The dry hydrant will be tested and maintained in accordance with the frequency specified in NFPA 1142, Water Supplies for Suburban and Rural Fire Fighting, 2007 edition.

The minimum capacity that is available on a year-round basis is 24,000 lgal or sufficient capacity to provide the maximum Required Fire Flow for the required duration (see Water Supply for Public Fire Protection, 1999 - Fire Underwriters Survey) of any building within 300m hose-lay of the dry hydrant.

All required planning, permits, design processes, and water use agreements were completed for the dry hydrant installation.

It is the responsibility of the AHJ to immediately notify the Fire Underwriters Survey of:

- any interruption in access to the dry hydrant, or
- any interruption in the access to apparatus with draft capacity, or
- any interruption in the available source of water supply (note that as required by NFPA 1142, 2007 edition:
 - o Section 7.1.5 - *To be acceptable, water supply sources shall maintain the minimum capacity and delivery requirements on a year-round basis, based on the 50-year drought cycle.*
 - o Section 8.5.1 - *There shall be not less than 2ft (0.6m) of water above the strainer and not less than 1ft (0.3m) below the strainer.*



The dry hydrant described herein is designed in accordance with NFPA 1142, Water Supplies for Suburban and Rural Fire Fighting, 2012 edition.

Authority Having Jurisdiction Signature:	Date:
Authority Having Jurisdiction Name (print):	AHJ Title:
Witness Signature:	Date:
Witness Name (print):	

LEAVE BLANK – FUS USE ONLY	
Date Application Received	Date Application Completed
Received by	



Appendix A



Dry Hydrant Inspection and Maintenance Record

GPS Location:	
Latitude:	Longitude:
	Datum:
Inspection Date:	By:
Depth of water from surface to top of strainer (ft):	Greater than 2 ft: <input type="checkbox"/> Yes <input type="checkbox"/> no
Environmental conditions affecting hydrant (silting, debris, vegetation growth, etc.):	
Erosion around hydrant, access road, bank of water supply:	
System back-flushed? <input type="checkbox"/> Yes <input type="checkbox"/> no <u>Problems found:</u>	
Flow available by actual test (IGPM):	
Weed control measures taken:	
Condition of access road, drainage:	
Sign present: <input type="checkbox"/> yes <input type="checkbox"/> no <u>Clarity of information on sign:</u>	
Maintenance performed, special observations, remarks:	
Signed AHJ or Fire Chief:	Date: