

Golden Valley Fire District



Daily Quick Drills

Volume 2 , Numbers 1-11



The daily quick drill is designed to assist the company officer in delivery of a quick review of a department policy or procedure. Reviews of basic firefighting, ems and special response situations should be referenced to appropriate SOG's.

- Quick Drill Subjects
- Extinguisher Inspections
- Fire Behavior
- Fire Ground Safety
- Foam Operations
- Hydrant Hook-ups
- Hydraulic Calculations
- Rural Water supply
- NIOSH Report
- Everyone Goes Home
- Street Stuff
- Critical Flow



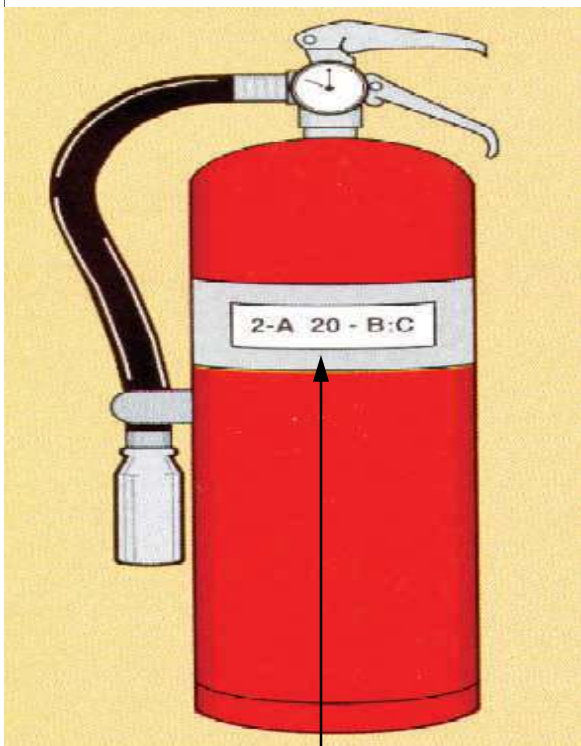
Golden Valley Fire District

Volume 2, Number 1

Extinguisher Inspections

**Refer To IFSTA or Firefighters Handbook:
Inspecting Fire Extinguishers.**

FIRE EXTINGUISHER INSPECTION AND MAINTENANCE GUIDELINES



What does the 2-A 20—B:C above mean?

Name the 4 classes of fire.....

What are the symbols used for each class of fire?

Describe the rating system.....

What types of extinguishers are on your apparatus?



Golden Valley Fire District

Volume 2, Number 2

Fire Behavior Terminology

BACK TO BASICS **FIRE and WATER** **"Phases Of A Fire"**

Review These Terms

INCIPIENT PHASE

FLAME SPREAD PHASE

HOT SMOLDERING PHASE

BACKDRAFT

FLASHOVER

STEADY STATE

CLEAR BURNING

WHAT IF:

Upon arrival at a house fire you find Heavy/Thick Gray
-Yellow smoke puffing from the edges of the structure, no flames visible, what is your immediate concern?





Golden Valley Fire District

Volume 2, Number 3

Fireground Decisions



DECISIONMAKING

Fireground Safety



DECISION MAKING INCLUDES: Risk vs. Gain.

SIZE UP	VALUE	TIME TO COMPLETE
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PROBLEMS

STRATEGY

TACTICS

a. Fire

Offensive/Defensive
Transitional

Handline/Master Stream

b. Smoke

Ventilation

Horizontal/Vertical

c. Rescue

Locate

Primary/Secondary



We May Within a Calculated Plan:

Risk a lot to save a lot
 Risk a little to save a little
 Risk nothing to save nothing

Potential victims come before property



Golden Valley Fire District

Volume 2 Number 4

Foam Operations

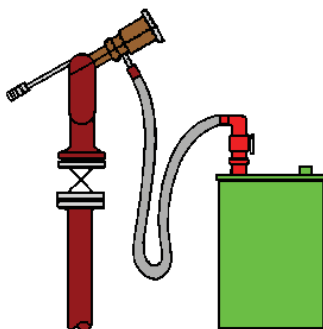
Foam Operations

What are the eductor ratings on the engine companies?

What is the maximum length of hose that can be used between the eductor and nozzle?

What PSI must be supplied at the pump in order to operate an in-line eductor?

What are the foam capabilities of the department apparatus?
(which lines, master streams, gallon capacity)





Golden Valley Fire District

Volume 2, Number 5

Hydrant Hook-Ups



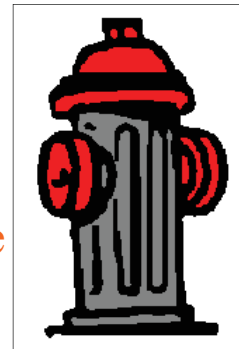
Hydrant Hook-ups

Perform a hydrant hook-up evolution for each engineer on your company. Spot apparatus and complete hook-up. Discuss the variety of water intake options available to you.

Discuss a poor water supply hook-up. (bad water main conditions)

Discuss a high pressure hook-up.

What pressure is a piston intake valve relief valve set at? How do you adjust it?



Review SOG on Hydrant Hook-ups.

Can you calculate available water for a given hydrant?

PRACTICE – PRACTICE – PRACTICE



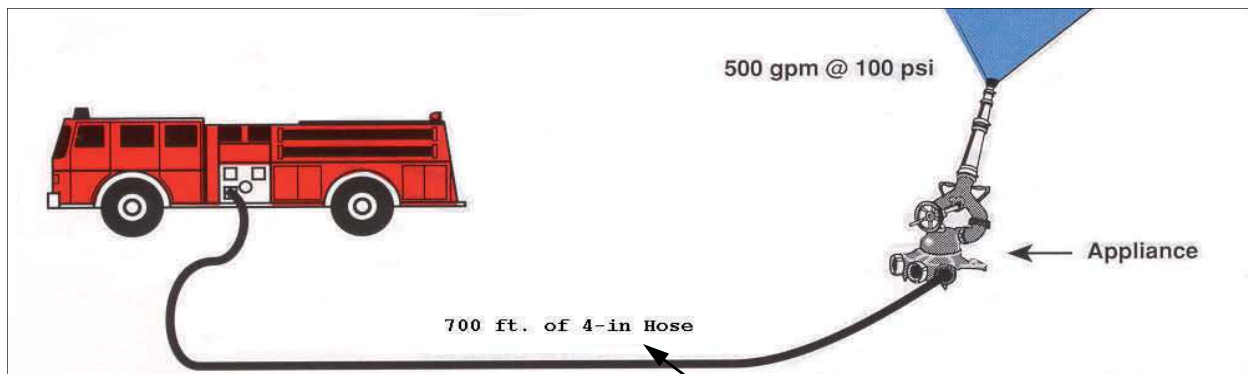
GOLDEN VALLEY FIRE DISTRICT

Volume 2, Number 6

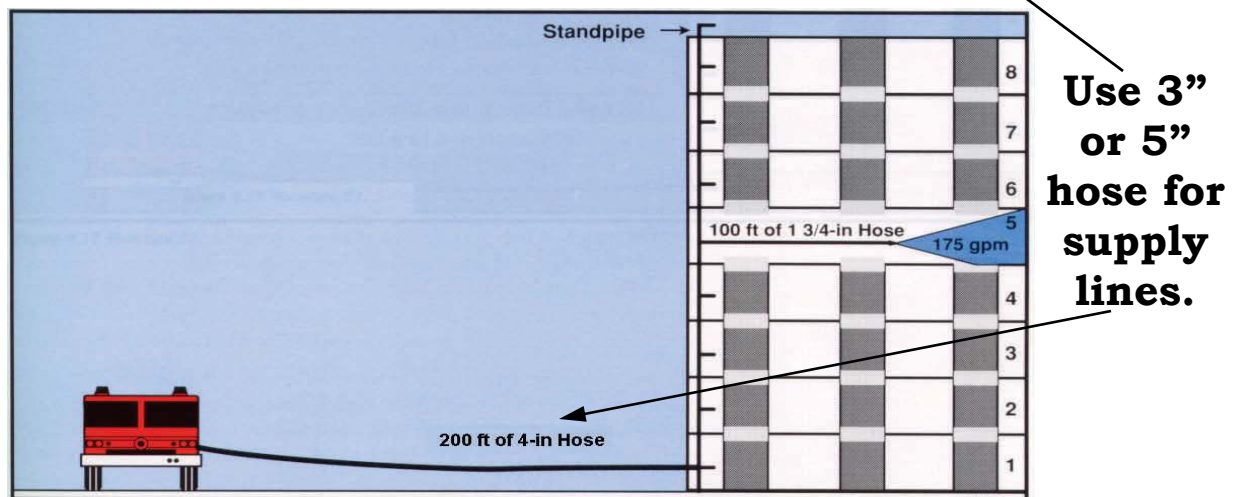
Hydraulic Calculations

Determine Friction Loss for this Layout

Refer to IFSTA *Fire Streams Practices*



Determine discharge pressure for this layout





Golden Valley Fire District

Volume 2, Number 7

Rural Water Supply

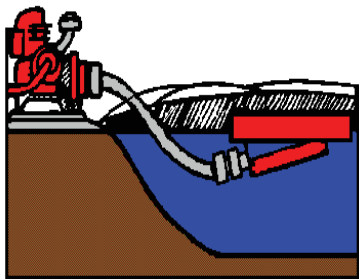
Rural Water Supply



Review tender equipment and

SOG's for Rural Water Operations

Portable pumps are also useful in some rural water situations. How many gallons per minute can the pumps flow?



What is the tank capacity of our portable tanks?

Review the procedures for linking 2 or more tanks together.



Golden Valley Fire District

Volume 2, Number 8



Review two NIOSH report's of Line of Duty Deaths

<http://www2a.cdc.gov/NIOSH-fire-fighter-face/state.asp?>





Golden Valley Fire District

Volume 2, Number 9



Watch This important video
and realize these impacts

[http://www.youtube.com/
watch?v=vODww1qwSuE](http://www.youtube.com/watch?v=vODww1qwSuE)





Golden Valley Fire District

Volume 2, Number 10

Street Basics

Street Stuff



Name all streets that completely cross the district from:

East to West
North to South

1. Name the streets that can be blocked by a train and identify an alternate route for each direction of travel.
2. Name the entrance locations for the highways with direction and approximate milepost information.
3. Identify the district boundary streets.





Golden Valley Fire District

Volume 2, Number 11

Critical Fire Flow

Critical Fire Flow

Cubic Area Involved

L x W x H

Divided by:

100

= GPM

This is for a 30 second knockdown

Length x Width x Height / 100 = GPM needed

This is a conservative formula and is effective when fire flow into the involved zone is well distributed and penetration by stream patterns are successful.

Don't forget that if you have an exposure it will require it's own fire flow formula in addition to the main involvement.

Fast way to determine fire flow for 5-10 lb/ft fuel load is

L x W x .1 = GPM

The .1 factor represents a 10 foot height per floor, plus the division of the entire formula by 100. As a result, you do not have to multiply the height factor and divide by 100.

Calculate the critical flow rate for 3 interior rooms in the fire station.
Calculate the critical flow rate for the entire station.
Select some typical single family dwelling dimensions in your district and calculate flow rate.

**Golden Valley Fire District
JPR PERFORMANCE
REQUIREMENT
Company Training Program**

DESCRIPTION: This JPR Training Guideline follows the format identified in NFPA 1001, Standard for Firefighter Professional Qualifications 1997 Edition. Knowledge, skill, performance and topic description are referenced from the Certified Firefighter II & III Instructor Reference. Other materials are referenced as needed.

JPR Duty Area: Apparatus Driver/Operator Subject: Driver Evaluations

Job Performance Requirement: Operate a fire department vehicle, given a vehicle and a predetermined route on a public way that incorporates the maneuver and features specified by the a/h/j in conditions that the driver/operator is expected to encounter during normal operations, so that the vehicle is safely operated in compliance with all applicable state and local laws, departmental rules and regulation and the requirements of NFPA 1500 section 4-2.

Skill / Knowledge / Performance / Topic Description	NFPA #	Standard	Validated
The Fire Apparatus Engineer shall be licensed to drive all vehicles they are expected to operate in accordance with applicable state and local laws	(1-3.1)	Pass/Fail	√
The Fire Apparatus Engineer shall identify all applicable state and local laws of the authority having jurisdiction, including rules and regulations governing the safe driving and operating of fire department vehicles.	(2-3.1)	Pass/Fail	√
During non-emergency travel, drivers of fire department vehicles shall obey all traffic control signals and signs, and all laws and rules of the road of the jurisdiction for all the operation of motor vehicles.	(4-2.5)	Pass/Fail	√
The fire department shall develop written standard operating procedures requiring drivers to discontinue the use of manual brake limiting valves, frequently labeled as "wet road/dry road" switch, and requiring that the valve/switch remains in the "dry road" position.	(4-2.10)	Pass/Fail	√
Drivers of fire department vehicles shall be directly responsible for the safe and prudent operation of the vehicles under all conditions. When the driver is under the direct supervision of an officer, that officer shall also assume responsibility for the actions of the driver.	(4-2.3)	Pass/Fail	√
During non-emergency travel, drivers of fire department vehicles shall obey all traffic control signals and signs, and all laws and rules of the road of the jurisdiction for the operation of motor vehicles	(4-2.5)	Pass/Fail	√

GENERAL TASK STATEMENT:

- Drive all apparatus assigned by department over road course determined by Authority Having Jurisdiction

Prerequisite Knowledge

- Operating functions of apparatus
- Weight/height restrictions
- Functions of auxiliary braking devices
- Proper driving techniques
- Department S.O.G.'s and applicable state and local laws regarding response

Prerequisite Skills

- Driving skills for each apparatus
- Use of mirrors
- Proper backing and spotting
- Pre-trip apparatus inspections

Validation Synopsis

1. Drive apparatus according to manufacturer, department and applicable state and local laws in non-emergency response over a given road course.

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JPR Duty Area: Apparatus Operator; Operations Subject: Calculating Discharge Pressure

Job Performance Requirement: Produce effective hand or master streams, given the sources specified in the following list, so that the pump is safely engaged, all pressure controls and vehicle safety devices are set, the rated flow of the nozzle is achieved and maintained, and the apparatus is continuously monitored for potential problems. *1. Internal tank, 2. Pressurized source, 3. Static source, 4. Transfer from internal tank to external source*

	Skill / Knowledge / Performance / Topic Description	NFPA #	Standard	Validated
	The Fire Apparatus Engineer shall identify and demonstrate the use of proportions in mathematical calculations as required to solve fire department pumper hydraulic problems.	1002 3-2.1	Pass/Fail	√
	The Fire Apparatus Engineer shall mentally calculate the engine pressure required to supply elevated streams.	"	Pass/Fail	√
	The Fire Apparatus Engineer shall identify GPM flows at standard tip pressures.	"	Pass/Fail	√
	The Fire Apparatus Engineer shall identify the elements of friction loss.	"	Pass/Fail	√
	The Fire Apparatus Engineer, given a series of fire ground situations, shall mentally calculate pump pressure, GPM, friction loss and nozzle pressure.	"	Pass/Fail	√

GENERAL TASK STATEMENT:

- Calculate pump discharge pressure for a variety of scenarios
 - Calculate within +/- 10 psi

Prerequisite Knowledge

- Hydraulic calculation methods
- Friction loss standards
- Standard pressure & G.P.M. factors
- Functions of valves and controls

Prerequisite Skills

- Apply calculation methods to practical skill evolutions
 1. Practical optional for this training module

Validation Synopsis

1. Given a series of simulated fire problems, calculate the proper discharge pressure for each scenario.

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JPR Duty Area: Apparatus Driver/Operator

Subject: Operations; Relay Pumping

Job Performance Requirement:

Skill / Knowledge / Performance / Topic Description	NFPA #	Standard	Validated
Demonstrate the loading of large diameter hose as illustrated in IFSTA	3-12.4a	Pass / Fail	
Demonstrate the proper procedure for making hydrant connections with intake hose 4 1/2 or larger	3-19.1	Pass / Fail	
Demonstrate a hand lay of 300 feet or more of LDH supply line	3-12.7	Pass / Fail	
Given a series of fireground situations, mentally calculate correct pump discharge pressure, gpm, friction loss, and nozzle pressure using formulas specified by the a/h/j		Pass/Fail	√
Perform relay pumping evolution so that intake residual pressure on engine being supplied does not do below 20psi		Pass/Fail	

GENERAL TASK STATEMENT:

- Perform relay pumping operation between two engines. Residual pressure at either engine not to go below 20psi.

Prerequisite Knowledge

- Operation of fire pumps
- Friction loss calculations
- Maximum hose lead out lengths
- Hydrant operations

Prerequisite Skills

- Operating valves and controls
- Hose intake and discharge connections
- Radio communications

Validation Synopsis

1. Perform relay pumping operation in tandem pumping scenario so that proper gpm's and pressures are maintained without >20psi residual pressures.
 - Evolution will require several changes +/- in flow requirements
 - Evolution to be performed to satisfaction of officer/instructor in charge

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DESCRIPTION: This JPR Training Guideline follows the format identified in NFPA 1001, Standard for Firefighter Professional Qualifications. Knowledge, skill, performance and topic description are referenced from the Certified Firefighter Basic & Advanced Instructor Reference Manual. Other materials are referenced as needed.

JPR Duty Area: Apparatus Driver/Operator

Subject: Rural Water Supply

Job Performance Requirement: Establish a water shuttle dump site, given two or more portable water tanks, low-level strainers, water transfer equipment, fire hose and a fire apparatus equipped with a fire pump, so that the tank being drafted from is kept full at all times, the tank being dumped into is emptied first, and the water is transferred from one tank to the next; supplying the required fire flow as indicated by nozzles and appliances being used. (NFPA 1002; 8-2.2)

	Skill / Knowledge / Performance / Topic Description	NFPA #	Standard	Validated
	Identify apparatus, equipment, and appliances required to provide water at rural locations via mobile water supply apparatus (tender) shuttle	5.3.15B	Pass/Fail	
	Demonstrate the procedure for assembling and connecting equipment necessary for drafting from a static water supply source.	5.3.15B	Pass / Fail	√
	Identify guidelines to follow when deploying portable water tank	5.3.15B	Pass / Fail	√
	Demonstrate assembling and connecting the equipment necessary for the transfer of water between portable tanks	5.3.15B	Pass / Fail	√
	Demonstrate as part of a team, the deployment of a portable water tank	5.3.15B	Pass / Fail	√
	Perform drafting operation using a static source (portable tank) and required equipment to satisfy flow requirements for scenario presented. <i>Evolution must utilize at least 1 engine for drafting and a tanker.</i>	3-2.1 (NFPA 1002)	Pass / Fail	√
	Demonstrate nurse operations from a tender to an attack engine			
	Utilize the jet siphon to transfer water from one porta tank to another			

GENERAL TASK STATEMENT:

- Perform rural water supply drafting operation from portable tank using tanker apparatus and Engine Company to flow water for fire suppression.

Prerequisite Knowledge

- Hydraulic calculations
- Drafting operations
- Equipment requirements
- Problems with static source use
- Safety in operations with tanker operations

Prerequisite Skills

- Pump operation
- Set up of portable tank and drafting equipment
- Use of suction hose & strainers
- Recirculation of water techniques
- Transfer operations from tank to static source

Validation Synopsis

1. Perform drafting operation using 1 engine, 1 tanker, 1 portable tank to flow minimum of 300 g.p.m.'s.
 - a. May use nozzles to flow required g.p.m. or supply another engine with same g.p.m. requirement.
 - b. Recommended time of 5 minutes. Is timed from departure from staging area until all lines are properly supplied



Apparatus Operator Training

Suggested Driver Evaluation Course

COMPETENCY COURSE

