

WILDWOOD CREST FIRE DEPARTMENT HI-RISE HOSELINE FLOWS

2-1/2" Pack

Maintain Standpipe Inline Gauge Pressure @ **100 p.s.i.**

Inline Gauge - (4) 50' lengths of 2-1/2" hose - 2-1/2" Nozzle w/ 1-1/4" smooth bore tip = **325 g.p.m.**

$$FL=24/100 = \mathbf{48}$$

$$\text{plus NP} = \mathbf{50}$$

$$\text{total} = \mathbf{98 \text{ psi. (100 p.s.i.)}}$$

Nozzle Reaction:

$$R=1.57d^2P$$

$$R=1.57 \times (1.25)(1.25) \times 50$$

$$R=123 \text{ lbs.}$$

Nozzle Reaction with comparable Fog Nozzle:

$$R=0.0505 \times F(\text{gpm}) \times \text{sq.rt. of } P$$

$$R=0.0505 \times 325 \times 10$$

$$R=164 \text{ lbs.}$$

1-3/4" Pack

Maintain Standpipe Inline Gauge Pressure @ **100 p.s.i.**

Inline Gauge - (2) 50' lengths of 2-1/2" - (1) 10' 2-1/2" length - Gated Wye - (2) 50' lengths 1-3/4" hose -
1-1/2" Nozzle w/ 15/16" smooth bore tip = **180 g.p.m.**

$$FL=8/100 = \mathbf{8}$$

$$FL=8/100 = \mathbf{1}$$

$$FL= \mathbf{5}$$

$$FL= 36/100 = \mathbf{36}$$

$$\text{plus NP} = \mathbf{50}$$

$$\text{total} = \mathbf{100 \text{ psi. (100 p.s.i.)}}$$

Nozzle Reaction:

$$R=1.57d^2P$$

$$R=1.57 \times (.9375)(.9375) \times 50$$

$$R=69 \text{ lbs.}$$

Nozzle Reaction with comparable Fog Nozzle:

$$R=0.0505 \times F(\text{gpm}) \times \text{sq.rt. of } P$$

$$R=0.0505 \times 180 \times 10$$

$$R=91 \text{ lbs.}$$

Two (2) 1-3/4" Hoselines

Maintain Standpipe Inline Gauge Pressure @ **130 p.s.i.**

Inline Gauge - (2) 50' lengths of 2-1/2" - (1) 10' 2-1/2" length - Gated Wye - (2) 50' lengths 1-3/4" hose
(on each line) - 1-1/2" Nozzles w/ 15/16" smooth bore tips = **360 g.p.m.** (180 g.p.m. ea. hoseline)

$$FL=30/100 = \mathbf{30}$$

$$FL=30/100 = \mathbf{3}$$

$$FL= \mathbf{10}$$

$$FL= 36/100 = \mathbf{36}$$

$$\text{plus NP} = \mathbf{50}$$

$$\text{total} = \mathbf{129 \text{ psi. (130 p.s.i.)}}$$