



**IDAHO STATE FIRE MARSHAL**  
 Department of Insurance  
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## FIRE SPRINKLERS HYDRAULIC CALCULATION SUMMARY

**PROJECT:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**HYDRAULIC CALCULATION DESIGN AREA NUMBER:** \_\_\_\_\_

### SYSTEM TYPE

Wet	Antifreeze	Single Interlock Preaction
Dry Pipe	Circulating Closed-Loop	Double Interlock Preaction
Deluge		

### DESIGN DESCRIPTION

Light	13D (Residential)	Attic Sprinklers
Ordinary Group I	13R (Residential)	High Piled Storage
Ordinary Group II	Extra Hazard I	Miscellaneous Storage
ESFR	Extra Hazard II	Other Special Application Sprinklers

### SPRINKLER INFORMATION

Area per Sprinkler: \_\_\_\_\_ Maximum Length & Width per Sprinkler: \_\_\_\_\_ X \_\_\_\_\_

Make, Model, Sin, K-Factor: \_\_\_\_\_

Number of Sprinklers Flowing: \_\_\_\_\_

### DESIGN METHOD APPLIED

Design Area (Indicate roof slope/pitch: \_\_\_\_\_ )

Using Quick Response Multiplier (Indicate ceiling height: \_\_\_\_\_ )

Room Design (Indicate wall ratings and self-closing doors: \_\_\_\_\_ )

Unprotected Combustible Concealed Space – Minimum 3,000 square feet for Remote Area  
*(This includes areas with composite wood joist)*

Residential Sprinklers

Other (Indicate Design: \_\_\_\_\_ )

**FLOW ALLOWANCES**

Hose Allowance: \_\_\_\_\_ Rack Sprinkler Demand: \_\_\_\_\_

Other: \_\_\_\_\_

**PRESSURE ALLOWANCES**

Backflow Preventer: \_\_\_\_\_ Water Meter: \_\_\_\_\_

Other: \_\_\_\_\_

**HYDRAULIC SUMMARY**

Static: \_\_\_\_\_ Residual: \_\_\_\_\_ GPM: \_\_\_\_\_ Date: \_\_\_\_\_

Total Design Operating Area: \_\_\_\_\_ Density: \_\_\_\_\_

Total Elevation Change (From Point of Water Purveyor Supply Information): \_\_\_\_\_

Total Flow Required (Include hose flow): \_\_\_\_\_ Total Pressure Required: \_\_\_\_\_

Available Pressure at Total Flow: \_\_\_\_\_

Available Pressure Cushion: \_\_\_\_\_ Pressure: \_\_\_\_\_ %

**COMMENTS:**

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