

**Table 5.1.1.2**  
**Summary of Sprinkler System Inspection, Testing, and Maintenance**

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b><u>Inspection</u></b>		
<u>Gauges (dry, preaction, and deluge systems)</u>	<u>Quarterly</u>	<u>5.2.4.2, 5.2.4.3, 5.2.4.4</u>
<u>Control valves</u>		<u>Table 13.1.1.2</u>
<u>Water flow alarm devices</u>	<u>Quarterly</u>	<u>5.2.5</u>
<u>Valve supervisory alarm devices</u>	<u>Quarterly</u>	<u>5.2.5</u>
<u>Supervisory signal devices (except valve supervisory switches)</u>	<u>Quarterly</u>	<u>5.2.5</u>
<u>Gauges (wet pipe systems)</u>	<u>Quarterly</u>	<u>5.2.4.1</u>
<u>Hydraulic nameplate</u>	<u>Quarterly</u>	<u>5.2.6</u>
<u>Buildings</u>	<u>(prior to freezing weather)</u>	<u>4.1.1.1</u>
<u>Hangers/seismic bracing</u>	<u>Annually</u>	<u>5.2.3</u>
<u>Hanger/seismic bracing in accessible concealed spaces</u>	<u>5 years</u>	<u>5.2.3.3</u>
<u>Pipe and fittings</u>	<u>Annually</u>	<u>5.2.2</u>
<u>Pipe and fittings in accessible concealed spaces</u>	<u>5 years</u>	<u>5.2.2.3</u>
<u>Sprinklers</u>	<u>Annually</u>	<u>5.2.1</u>
<u>Sprinklers in accessible concealed spaces</u>	<u>5 years</u>	<u>5.2.1.1.6</u>

<u>Spare sprinklers</u>	<u>Quarterly</u>	<u>5.2.1.4</u>
<u>Information sign</u>	<u>Annually</u>	<u>5.2.8</u>
<u>Fire department connections</u>		<u>Table 13.1.1.2</u>
<u>Valves (all types)</u>		<u>Table 13.1.1.2</u>
<u>Obstruction, internal inspection of piping</u>	<u>5 years</u>	<u>14.2</u>
<b><u>Test</u></b>		
<u>Water flow alarm devices</u> <u>Mechanical devices</u>	<u>Annually</u>	<u>5.3.3.1</u>
<u>Water flow alarm devices</u> <u>Vane and pressure switch type devices</u>	<u>Annually</u>	<u>5.3.3.2</u>
<u>Valves supervisory alarm devices</u>		<u>Table 13.1.1.2</u>
<u>Supervisory signal devices (except valve supervisory switches)</u>		<u>Table 13.1.1.2</u>
<u>Main drain</u>		<u>Table 13.1.2</u>
<u>Antifreeze solution</u>	<u>Annually</u>	<u>5.3.4</u>
<u>Gauges</u>	<u>5 years</u>	<u>5.3.2</u>
<u>Sprinklers — extra-high temperature</u>	<u>5 years</u>	<u>5.3.1.1.1.4</u>
<u>Sprinklers — fast-response</u>	<u>At 20 years and every 10 years thereafter</u>	<u>5.3.1.1.1.3</u>
<u>Sprinklers</u>	<u>At 50 years and every 10 years thereafter</u>	<u>5.3.1.1.1</u>
<u>Sprinklers</u>	<u>At 75 years and every 5 years thereafter</u>	<u>5.3.1.1.1.5</u>
<u>Sprinklers— dry</u>	<u>At 10 years and every 10 years thereafter</u>	<u>5.3.1.1.1.6</u>
<b><u>Maintenance</u></b>		
<u>Valves (all types)</u>		<u>Table 13.1.1.2</u>
<u>Low-point drains (dry pipe system)</u>		<u>13.4.4.3.2</u>
<u>Sprinklers and automatic spray nozzles protecting commercial cooking equipment and ventilation systems</u>		<u>5.4.1.9</u>
<b><u>Investigation</u></b>		
<u>Obstruction</u>		<u>14.3</u>

**Table 5.3.4.1****A.7.6.2.1** See Table A.7.6.2.1. from the California Fire Code (Title 24, CCR, Part 9, 2013)**TABLE A.7.6.2.1 PROPERTIES OF GLYCERIN AND PROPYLENE GLYCOL**

<u>MATERIAL</u>	<u>SOLUTION (by volume)</u>	<u>SPECIFIC GRAVITY AT 77°F (25°C)</u>	<u>FREEZING POINT</u>	
Glycerin (C.P. or U.S.P. grade)	<u>0%</u>	<u>1.000</u>	<u>32</u>	<u>0</u>
	<u>5</u>	<u>1.014</u>	<u>31</u>	<u>-0.5</u>
	<u>10</u>	<u>1.029</u>	<u>28</u>	<u>-2.2</u>
	<u>15</u>	<u>1.043</u>	<u>25</u>	<u>-3.9</u>
	<u>20</u>	<u>1.059</u>	<u>20</u>	<u>-6.7</u>
	<u>25</u>	<u>1.071</u>	<u>16</u>	<u>-8.9</u>
	<u>30</u>	<u>1.087</u>	<u>10</u>	<u>-12</u>
	<u>35</u>	<u>1.100</u>	<u>4</u>	<u>-15.5</u>
	<u>40</u>	<u>1.114</u>	<u>-2</u>	<u>-19</u>
	<u>45</u>	<u>1.130</u>	<u>-11</u>	<u>-24</u>
	<u>50%</u>	<u>1.141</u>	<u>-19</u>	<u>-28</u>
Propylene glycol	<u>0%</u>	<u>1.000</u>	<u>32</u>	<u>0</u>
	<u>5</u>	<u>1.004</u>	<u>26</u>	<u>-3</u>
	<u>10</u>	<u>1.008</u>	<u>25</u>	<u>-4</u>
	<u>15</u>	<u>1.012</u>	<u>22</u>	<u>-6</u>
	<u>20</u>	<u>1.016</u>	<u>19</u>	<u>-7</u>
	<u>25</u>	<u>1.020</u>	<u>15</u>	<u>-10</u>
	<u>30</u>	<u>1.024</u>	<u>11</u>	<u>-12</u>
	<u>35</u>	<u>1.028</u>	<u>2</u>	<u>-17</u>
	<u>40%</u>	<u>1.032</u>	<u>-6</u>	<u>-21</u>

C.P.: Chemically Pure; U.S.P.: United States Pharmacopoeia 96.5%.

**Table 6.1.1.2****Summary of Standpipe and Hose Systems Inspection, Testing, and Maintenance**

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b><u>Inspection</u></b>		
<u>Control valves</u>		Table 13.1.1.2
<u>Pressure regulating devices</u>		Table 13.1.1.2
<u>Piping hanger seismic bracing</u>	Annually	6.2.1
<u>Hose connections</u>		Table 13.1.1.2
<u>Cabinet</u>	Annually	NFPA 1962
<u>Gauges</u>	Quarterly	6.2.2
<u>Hose</u>	Annually	NFPA 1962
<u>Hose storage device</u>	5 year	NFPA 1962
<u>Alarm device</u>		
<u>Hose nozzle</u>	Annually and after each use	NFPA 1962
<u>Hydraulic design information sign</u>	Annually	6.2.3
<b><u>Test</u></b>		
<u>Water-flow alarm devices</u>		Table 13.1
<u>Valve supervisory alarm devices</u>		Table 13.1
<u>Supervisory signal devices (except valve supervisory switches)</u>		Table 13.1
<u>Hose storage device</u>	5 years	NFPA 1962
<u>Hose</u>	5 years/3 years	NFPA 1962
<u>Pressure control valve</u>		Table 13.1
<u>Pressure reducing valve</u>		Table 13.1
<u>Hydrostatic test</u>	5 years	6.3.2
<u>Flow test</u>	5 years	6.3.1
<u>Main drain test</u>		Table 13.1
<b><u>Maintenance</u></b>		
<u>Hose connections</u>	Annually	Table 6.1.2
<u>Valves (all types)</u>	Annually/as needed	Table 13.1

**Replace Table 6.1.2 as follows:**

<b>Table 6.1.2 Standpipe and Hose Systems</b>	
<b><u>Component/Checkpoint</u></b>	<b><u>Corrective Action</u></b>
<b><u>Hose Connections</u></b>	
<u>Cap missing</u>	Replace
<u>Fire hose connection damaged</u>	Repair
<u>Valve handles missing</u>	Replace

<u>Cap gaskets missing or deteriorated</u>	<u>Replace</u>
<u>Valve leaking</u>	<u>Close or repair</u>
<u>Visible obstructions</u>	<u>Remove</u>
<u>Restricting device missing</u>	<u>Replace</u>
<u>Manual, semiautomatic, or dry standpipe — valve does not operate smoothly</u>	<u>Lubricate or repair</u>
<b><u>Piping</u></b>	
<u>Damaged piping</u>	<u>Repair</u>
<u>Control valves damaged</u>	<u>Repair or replace</u>
<u>Missing or damaged pipe support device</u>	<u>Repair or replace</u>
<u>Damaged supervisory devices</u>	<u>Repair or replace</u>
<b><u>Hose</u></b>	
<u>Inspect</u>	<u>Remove and inspect the hose, including gaskets, and re-rack or re-reel at intervals in accordance with NFPA 1962, <i>Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose</i></u>
<u>Mildew, cuts, abrasions, and deterioration evident</u>	<u>Replace with listed lined, jacketed hose</u>
<u>Coupling damaged</u>	<u>Replace or repair</u>
<u>Gaskets missing or deteriorated</u>	<u>Replace</u>
<u>Incompatible threads on coupling</u>	<u>Replace or provide thread adapter</u>
<u>Hose not connected to hose rack nipple or valve</u>	<u>Connect</u>
<u>Hose test outdated</u>	<u>Retest or replace in accordance with NFPA 1962</u>
<b><u>Hose Nozzle</u></b>	
<u>Hose nozzle missing</u>	<u>Replace with listed nozzle</u>
<u>Gasket missing or deteriorated</u>	<u>Replace</u>
<u>Obstructions</u>	<u>Remove</u>
<u>Nozzle does not operate smoothly</u>	<u>Repair or replace</u>
<u>Solid bore nozzle</u>	<u>Replace with approved adjustable fog nozzle (See Section 905.3.4.1, California Fire Code (Title 24, CCR, Part 9 (2013))</u>
<b><u>Hose Storage Device</u></b>	
<u>Difficult to operate</u>	<u>Repair or replace</u>
<u>Damaged</u>	<u>Repair or replace</u>
<u>Obstruction</u>	<u>Remove</u>
<u>Hose improperly racked or rolled</u>	<u>Remove</u>
<u>Nozzle clip in place and nozzle correctly contained?</u>	<u>Replace if necessary</u>
<u>If enclosed in cabinet, will hose rack swing out at least 90 degrees?</u>	<u>Repair or remove any obstructions</u>
<b><u>Cabinet</u></b>	
<u>Check overall condition for corroded or damaged parts</u>	<u>Repair or replace parts; replace entire cabinet if necessary</u>
<u>Difficult to open</u>	<u>Repair</u>
<u>Cabinet door will not open fully</u>	<u>Repair or move obstructions</u>
<u>Door glazing cracked or broken</u>	<u>Replace</u>
<u>If cabinet is break-glass type, is lock functioning properly?</u>	<u>Repair or replace</u>
<u>Glass break device missing or not attached</u>	<u>Replace or attach</u>
<u>Not properly identified as containing fire equipment</u>	<u>Provide identification</u>
<u>Visible obstructions</u>	<u>Remove</u>
<u>All valves, hose, nozzles, fire extinguisher, etc., easily accessible</u>	<u>Remove any material not related</u>

## Replace Table 7.1.1.2 as follows

**Table 7.1.1.2**

**Summary of Private Fire Service Main Inspection, Testing, and Maintenance**

<b><u>Item</u></b>	<b><u>Frequency</u></b>	<b><u>Reference</u></b>
<b><u>Inspection</u></b>		
<u>Hose houses</u>	<u>Quarterly</u>	<u>7.2.2.7</u>
<u>Hydrants (dry barrel and wall)</u>	<u>Annually and after each operation</u>	<u>7.2.2.4</u>
<u>Monitor nozzles</u>	<u>Quarterly</u>	<u>7.2.2.6</u>
<u>Hydrants (wet barrel)</u>	<u>Annually and after each operation</u>	<u>7.2.2.5</u>
<u>Mainline strainers</u>	<u>Annually and after each significant flow</u>	<u>7.2.2.3</u>
<u>Piping (exposed)</u>	<u>Annually</u>	<u>7.2.2.1</u>
<u>Piping (underground)</u>	<u>See 7.2.2.2</u>	<u>7.2.2.2</u>
<b><u>Test</u></b>		
<u>Monitor nozzles</u>	<u>Flow, annually (range and operation)</u>	<u>7.3.3</u>
<u>Hydrants</u>	<u>Flow, annually</u>	<u>7.3.2</u>
<u>Piping (exposed and underground) (flow test)</u>	<u>5 years</u>	<u>7.3.1</u>
<b><u>Maintenance</u></b>		
<u>Mainline strainers</u>	<u>Annually and after each operation</u>	<u>7.2.2.3</u>
<u>Hose houses</u>	<u>Annually</u>	<u>7.2.2.7</u>
<u>Hydrants</u>	<u>Annually</u>	<u>7.4.2</u>
<u>Monitor nozzles</u>	<u>Annually</u>	<u>7.4.3</u>

# Replace Table 8.1.2 as follows:

Table 8.1.2 Alternative Fire Pump Inspection, Testing, and Maintenance Procedures

<u>Complete as Applicable</u>	<u>Visual Inspection</u>	<u>Check</u>	<u>Change</u>	<u>Clean</u>	<u>Test</u>	<u>Frequency</u>
<b><u>Pump System</u></b>						
<u>Lubricate pump bearings</u>			X			<u>Annually</u>
<u>Check pump shaft end play</u>		X				<u>Annually (change or recalibrate when 5% out of calibration)</u>
<u>Check accuracy of pressure gauges and sensors</u>		X	X			<u>Annually</u>
<u>Check pump coupling alignment</u>		X				<u>Annually</u>
<u>Wet pit suction screens</u>		X		X		<u>After each pump operation</u>
<b><u>Mechanical Transmission</u></b>						
<u>Lubricate coupling</u>			X			<u>Annually</u>
<u>Lubricate right-angle gear drive</u>			X			<u>Annually</u>
<b><u>Electrical System</u></b>						
<u>Exercise isolating switch and circuit breaker</u>					X	<u>Monthly</u>
<u>Trip circuit breaker (if mechanism provided)</u>					X	<u>Annually</u>
<u>Operate manual starting means (electrical)</u>					X	<u>Semiannually</u>
<u>Inspect and operate emergency manual starting means (without power)</u>	X				X	<u>Annually</u>
<u>Tighten electrical connections as necessary</u>		X				<u>Annually</u>
<u>Lubricate mechanical moving parts (excluding starters and relays)</u>		X				<u>Annually</u>
<u>Calibrate pressure switch settings</u>		X				<u>Annually</u>
<u>Grease motor bearings</u>			X			<u>Annually</u>
<u>Voltmeter and ammeter for accuracy (5%)</u>		X				<u>Annually</u>
<u>Any corrosion on printed circuit boards (PCBs)</u>	X					<u>Annually</u>
<u>Any cracked cable/wire insulation</u>	X					<u>Annually</u>
<u>Any leaks in plumbing parts</u>	X					<u>Annually</u>
<u>Any signs of water on electrical parts</u>	X					<u>Annually</u>
<b><u>Diesel Engine System</u></b>						
<i><u>Fuel</u></i>						
<u>Tank level</u>	X	X				<u>Weekly</u>
<u>Tank float switch</u>	X				X	<u>Weekly</u>
<u>Solenoid valve operation</u>	X				X	<u>Weekly</u>
<u>Strainer, filter, or dirt leg, or combination thereof</u>				X		<u>Quarterly</u>
<u>Water and foreign material in tank</u>				X		<u>Annually</u>
<u>Water in system</u>		X		X		<u>Weekly</u>
<u>Flexible hoses and connectors</u>	X					<u>Weekly</u>
<u>Tank vents and overflow piping unobstructed</u>		X			X	<u>Annually</u>
<u>Piping</u>	X					<u>Annually</u>
<i><u>Lubrication system</u></i>						
<u>Oil level</u>	X	X				<u>Weekly</u>
<u>Oil change</u>			X			<u>50 hours or annually</u>
<u>Oil filter(s)</u>			X			<u>50 hours or annually</u>
<u>Lube oil heater</u>		X				<u>Weekly</u>
<u>Crankcase breather</u>	X		X	X		<u>Quarterly</u>

<u>Cooling system</u>					
<u>Level</u>	X	X			Weekly
<u>Antifreeze protection level</u>				X	Semiannually
<u>Antifreeze</u>		X			Annually
<u>Adequate cooling water to heat exchanger</u>		X			Weekly
<u>Rod out heat exchanger</u>				X	Annually
<u>Water pump(s)</u>		X			Weekly
<u>Condition of flexible hoses and connections</u>		X	X		Weekly
<u>Jacket water heater</u>		X			Weekly
<u>Inspect duct work, clean louvers (combustion air)</u>	X	X	X		Annually
<u>Water strainer</u>				X	Quarterly
<u>Exhaust system</u>					
<u>Leakage</u>	X	X			Weekly
<u>Drain condensate trap</u>		X			Weekly
<u>Insulation and fire hazards</u>	X				Quarterly
<u>Excessive back pressure</u>				X	Annually
<u>Exhaust system hangers and supports</u>	X				Annually
<u>Flexible exhaust section</u>	X				Semiannually
<u>Battery system</u>					
<u>Electrolyte level</u>		X			Weekly
<u>Terminals clean and tight</u>	X	X			Quarterly
<u>Case exterior clean and dry</u>	X	X			Monthly
<u>Specific gravity or state of charge</u>				X	Monthly
<u>Charger and charge rate</u>	X				Monthly
<u>Equalize charge</u>		X			Monthly
<u>Clean terminals</u>				X	Annually
<u>Cranking voltage exceeds 9 volts on a 12 volt system or 18 volts on a 24 volt system</u>		X			Weekly
<u>Electrical system</u>					
<u>General inspection diesel</u>	X				Weekly
<u>General inspection electric</u>	X				Monthly
<u>Tighten control and power wiring connections</u>		X			Annually
<u>Wire chafing where subject to movement</u>	X	X			Quarterly
<u>Operation of safeties and alarms</u>		X			Semiannually
<u>Boxes, panels, and cabinets</u>				X	Semiannually
<u>Circuit breakers or fuses</u>	X	X			Monthly
<u>Circuit breakers or fuses</u>			X		Biennially
<u>Voltmeter and ammeter for accuracy (5%)</u>		X			Annually
<u>Any corrosion on printed circuit boards (PCBs)</u>	X				Annually
<u>Any cracked cable/wire insulation</u>	X				Annually
<u>Any leaks in plumbing parts</u>	X				Annually
<u>Any signs of water on electrical parts</u>	X				Annually



## Table 8.1.1.2 Summary of Fire Pump Inspection, Testing, and Maintenance

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b><u>Inspection</u></b>	<b><u>Diesel/Electric</u></b>	
<u>Pump house, heating ventilating louvers</u>	<u>Weekly/Monthly(1)</u>	<u>8.2.2 (1)</u>
<u>Fire pump system</u>	<u>Weekly/Monthly</u>	<u>8.2.2</u>
<b><u>Test</u></b>		
<u>Pump operation</u>		
<u>No-flow condition</u>		
<u>Diesel engine driven fire pump</u>	<u>Weekly</u>	<u>8.3.1</u>
<u>Electric motor driven fire pump</u>	<u>Monthly</u>	<u>8.3.3</u>
<u>Flow condition</u>	<u>Annually</u>	<u>8.3.3.5</u>
<u>Fire pump alarm signals</u>	<u>Annually</u>	
<b><u>Maintenance</u></b>		
<u>Hydraulic</u>	<u>Annually</u>	<u>8.5</u>
<u>Mechanical transmission</u>	<u>Annually</u>	<u>8.5</u>
<u>Electrical system</u>	<u>Varies</u>	<u>8.5</u>
<u>Controller, various components</u>	<u>Varies</u>	<u>8.5</u>
<u>Motor</u>	<u>Annually</u>	<u>8.5</u>
<u>Diesel engine system, various components</u>	<u>Varies</u>	<u>8.5</u>

**Table 9.1.1.2**  
**Summary of Water Storage Tank Inspection, Testing, and Maintenance**

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b>Inspection</b>		
<u>Water temperature - low temperature alarms connected to constantly attended location</u>	<u>Monthly</u>	<u>9.2.4.2</u>
<u>Water temperature - low temperature alarms not connected to constantly attended location</u>	<u>Weekly</u>	<u>9.2.4.3</u>
<u>Heating system - tanks with supervised low temperature alarm connected to constantly attended location</u>	<u>Weekly*</u>	<u>9.2.3.1</u>
<u>Heating system - tanks without supervised low temperature alarm connected to constantly attended location</u>	<u>Daily*</u>	<u>9.2.3.2</u>
<u>Control valves</u>		<u>Table 13.1</u>
<u>Water level - tanks equipped with supervised water level alarms connected to constantly attended location</u>	<u>Quarterly</u>	<u>9.2.1.1</u>
<u>Water level - tanks without supervised water level alarms connected to constantly attended location</u>	<u>Monthly</u>	<u>9.2.1.2</u>
<u>Air pressure - tanks that have their air pressure source supervised</u>	<u>Quarterly</u>	<u>9.2.2.1</u>
<u>Air pressure - tanks without their air pressure source supervised</u>	<u>Monthly</u>	<u>9.2.2.2</u>
<u>Tank - exterior</u>	<u>Quarterly</u>	<u>9.2.5.1</u>
<u>Support structure</u>	<u>Quarterly</u>	<u>9.2.5.1</u>
<u>Catwalks and ladders</u>	<u>Quarterly</u>	<u>9.2.5.1</u>
<u>Surrounding area</u>	<u>Quarterly</u>	<u>9.2.5.2</u>
<u>Hoops and grillage</u>	<u>Annually</u>	<u>9.2.5.4</u>
<u>Painted/coated surfaces</u>	<u>Annually</u>	<u>9.2.5.5</u>
<u>Expansion joints</u>	<u>Annually</u>	<u>9.2.5.3</u>
<u>Interior - tanks without corrosion protection</u>	<u>5 years</u>	<u>9.2.6.1.1</u>
<u>Interior - all other tanks</u>	<u>5 years</u>	<u>9.2.6.1.2</u>
<u>Temperature alarms - connected to constantly attended location</u>	<u>Monthly*</u>	<u>9.2.4.2</u>
<u>Temperature alarms - not connected to constantly attended location</u>	<u>Weekly*</u>	<u>9.2.4.3</u>
<u>Check valves</u>		<u>Table 13.1</u>
<b>Test</b>		
<u>Tank heating system</u>	<u>Prior to heating season</u>	<u>9.3.2</u>
<u>Low water temperature alarms</u>	<u>Monthly*</u>	<u>9.3.3</u>
<u>High temperature limit switches</u>	<u>Monthly*</u>	<u>9.3.4</u>
<u>Water level alarms</u>	<u>Annually</u>	<u>9.3.5</u>
<u>Level indicators</u>	<u>5 years</u>	<u>9.3.1</u>
<u>Pressure gauges</u>	<u>5 years</u>	<u>9.3.6</u>
<u>Automatic tank fill valve</u>	<u>Quarterly</u>	<u>9.5.3</u>
<b>Maintenance</b>		
<u>Water level</u>	<u>--</u>	<u>9.4.2</u>
<u>Control valves</u>	<u>--</u>	<u>Table 13.1</u>

**Table 10.1.1.2**  
**Summary of Water Spray Fixed System Inspection, Testing, and Maintenance**

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b><u>Inspection</u></b>		
<u>Backflow preventer</u>		<u>Chapter 13</u>
<u>Check valves</u>		<u>Chapter 13</u>
<u>Control valves</u>	<u>Quarterly (sealed)</u>	<u>Chapter 13</u>
<u>Control valves</u>	<u>Quarterly (locked, supervised)</u>	<u>Chapter 13</u>
<u>Deluge valve</u>		<u>10.2.2, Chapter 13</u>
<u>Detection systems</u>		<u>NFPA 72, National Fire Alarm and Signaling Code</u>
<u>Detector check valves</u>		<u>Chapter 13</u>
<u>Drainage</u>	<u>Quarterly</u>	<u>10.2.8</u>
<u>Electric motor</u>		<u>10.2.9, Chapter 8</u>
<u>Engine drive</u>		<u>10.2.9, Chapter 8</u>
<u>Fire pump</u>		<u>10.2.9, Chapter 8</u>
<u>Fittings</u>	<u>Annually</u>	<u>10.2.4, 10.2.4.1</u>
<u>Fittings (rubber-gasketed)</u>	<u>Quarterly</u>	<u>10.2.4.1, A.10.2.4.1</u>
<u>Gravity tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Hangers</u>	<u>Annually and after each system activation</u>	<u>10.2.4.2</u>
<u>Heat (deluge valve house)</u>	<u>Daily/weekly</u>	<u>10.2.1.5, Chapter 13</u>
<u>Nozzles</u>	<u>Annually and after each system activation</u>	<u>10.2.1.1, 10.2.1.2, 10.2.1.6, 10.2.5.1, 10.2.5.2</u>
<u>Pipe</u>	<u>Annually and after each system activation</u>	<u>10.2.1.1, 10.2.1.2, 10.2.4, 10.2.4.1</u>
<u>Pressure tank</u>		<u>10.2.10, Chapter 9</u>

<u>Steam driver</u>		<u>10.2.9, Chapter 8</u>
<u>Strainers</u>	<u>Manufacturer's instruction</u>	<u>10.2.7</u>
<u>Suction tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Supports</u>	<u>Annually</u>	<u>10.2.1.1, 10.2.1.2, 10.2.4.2</u>
<u>Water flow alarm devices</u>	<u>Quarterly</u>	<u>NFPA 72,</u>
<u>Valve supervisory alarm devices</u>	<u>Quarterly</u>	<u>NFPA 72,</u>
<u>Supervisory signal devices</u> <u>(except valve supervisory switches)</u>	<u>Quarterly</u>	<u>NFPA 72</u>
<u>Water supply piping</u>		<u>10.2.6.1, 10.2.6.2</u>
<u>UHSWSS — detectors</u>	<u>Monthly</u>	<u>10.4.2</u>
<u>UHSWSS — controllers</u>	<u>Each shift</u>	<u>10.4.3</u>
<u>UHSWSS — valves</u>	<u>Each shift</u>	<u>10.4.4</u>
<b><u>Operational Test</u></b>		
<u>Backflow preventer</u>		<u>Chapter 13</u>
<u>Check valves</u>		<u>Chapter 13</u>
<u>Control valves</u>	<u>Annually</u>	<u>13.3.3.1</u>
<u>Deluge valve</u>		<u>10.2.2, Chapter 13</u>
<u>Detection systems</u>		<u>NFPA 72</u>
<u>Detector check valve</u>		<u>Chapter 13</u>
<u>Electric motor</u>		<u>10.2.9, Chapter 8</u>
<u>Engine drive</u>		<u>10.2.9, Chapter 8</u>
<u>Fire pump</u>		<u>10.2.9, Chapter 8</u>
<u>Flushing</u>	<u>Annually</u>	<u>10.2.1.3, Section 10.3 (flushing of connection to riser, part of annual test)</u>
<u>Gravity tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Main drain test</u>	<u>Annually</u>	<u>13.3.3.4</u>
<u>Manual release</u>	<u>Annually</u>	<u>10.2.1.3, 10.3.6</u>
<u>Nozzles</u>	<u>Annually</u>	<u>10.2.1.3, 10.2.1.6, Section 10.3</u>
<u>Pressure tank</u>		<u>Section 10.2, Chapter 9</u>
<u>Steam driver</u>		<u>10.2.9, Chapter 8</u>
<u>Strainers</u>	<u>Annually</u>	<u>10.2.1.3, 10.2.1.7, 10.2.7</u>
<u>Suction tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Water flow alarm</u>	<u>Annually</u>	<u>Chapter 5</u>
<u>Valve supervisory signal devices</u>	<u>Annually</u>	<u>Chapter 13</u>
<u>Supervisory signal devices 13.2.6.2</u> <u>(except valve supervisory switches)</u> <u>13.3.3.5.1</u>	<u>Annually</u>	<u>Chapter 13</u>
<u>Water spray system test</u>	<u>Annually</u>	<u>Section 10.3, Chapter 13</u>
<u>Water supply flow test</u>		<u>7.3.1</u>
<u>UHSWSS</u>	<u>Annually</u>	<u>Section 10.4</u>
<b><u>Maintenance</u></b>		
<u>Backflow preventer</u>		<u>Chapter 13</u>
<u>Check valves</u>		<u>Chapter 13</u>
<u>Control valves</u>	<u>Annually</u>	<u>10.2.1.4, Chapter 13</u>
<u>Deluge valve</u>		<u>10.2.2, Chapter 13</u>
<u>Detection systems</u>		<u>NFPA 72</u>
<u>Detector check valve</u>		<u>Chapter 13</u>
<u>Electric motor</u>		<u>10.2.9, Chapter 8</u>
<u>Engine drive</u>		<u>10.2.9, Chapter 8</u>
<u>Fire pump</u>		<u>10.2.9, Chapter 8</u>
<u>Gravity tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Pressure tank</u>		<u>10.2.6, Chapter 9</u>
<u>Steam driver</u>		<u>10.2.9, Chapter 8</u>
<u>Strainers</u>	<u>Annually</u>	<u>10.2.1.4, 10.2.1.6, 10.2.7</u>
<u>Strainers (baskets/screen)</u>	<u>5 years</u>	<u>10.2.1.4, 10.2.1.7, A.10.2.7</u>
<u>Suction tanks</u>		<u>10.2.10, Chapter 9</u>
<u>Water spray system</u>	<u>Annually</u>	<u>10.2.1.4, Chapter 13</u>

**Table 11.1.1.2**  
**Summary of Foam-Water Sprinkler System Inspection, Testing, and Maintenance**

<b>System/Component</b>	<b>Frequency</b>	<b>Reference</b>
Discharge device location (sprinkler)	Annually	11.2.5
Discharge device location (spray nozzle)	Quarterly	11.2.5
Discharge device position (sprinkler)	Annually	11.2.5
Discharge device position (spray nozzle)	Quarterly	11.2.5
Foam concentrate strainer(s)	Quarterly	11.2.7.2
Drainage in system area	Quarterly	11.2.8
Proportioning system(s) — all	Quarterly	11.2.9
Pipe corrosion	Annually	11.2.3
Pipe damage	Annually	11.2.3
Fittings corrosion	Annually	11.2.3
Fittings damage	Annually	11.2.3
Hangers/supports	Annually	11.2.3
Water flow devices	Quarterly	11.3.1.3
Water supply tank(s)		Chapter 9
Fire pump(s)		Chapter 8
Water supply piping		11.2.6.1
Control valve(s)	Quarterly	Chapter 13
Deluge/preaction valve(s)		11.2.1, Chapter 13
Detection system	See NFPA 72, National Fire Alarm and Signaling Code	11.2.2
<b>Test</b>		
Discharge device location	Annually	11.3.2.6
Discharge device position	Annually	11.3.2.6
Discharge device obstruction	Annually	11.3.2.6
Foam concentrate strainer(s)	Annually	11.2.7.2
Proportioning system(s) — all	Annually	11.2.9
Complete foam-water system(s)	Annually	11.3.3
Foam-water solution	Annually	11.3.5
Manual actuation device(s)	Annually	11.3.4
Backflow preventer(s)	Annually	Chapter 13
Fire pump(s)	See Chapter 8	
Water flow devices	Annually	5.3.3
Valve supervisory alarm devices	Annually	Chapter 13
Supervisory signal devices (Except valve supervisory switches)	Annually	Chapter 13
Water supply piping	Annually	Chapter 10
Control valve(s)	See Chapter 13	
Strainer(s) — mainline	See Chapter 10	11.2.7.1
Deluge/preaction valve(s)	See Chapter 13	11.2.1
Detection system	See NFPA 72	11.2.2
Backflow preventer (s)	See Chapter 13	
Water supply tank (s)	See Chapter 9	
Water supply flow test	5 years	7.1.3
<b>Maintenance</b>		
Foam concentrate pump operation	Monthly	11.4.6.1, 11.4.7.1
Foam concentrate strainer(s)	Quarterly	Section 11.4

Foam concentrate samples	Annually	11.2.10
Proportioning system(s) standard pressure type		
Ball drip (automatic type) drain valves	5 years	5 years
Foam concentrate tank — drain and flush	10 years	11.4.3.2
Corrosion and hydrostatic test	10 years	11.4.3.3
Bladder tank type		
Sight glass	10 years	11.4.4.1
Foam concentrate tank — hydrostatic test	10 years	11.4.4.2
Line type		
Foam concentrate tank — corrosion and pickup pipes	10 years	11.4.5.1
Foam concentrate tank — drain and flush	10 years	11.4.5.2
Standard balanced pressure type		
Foam concentrate pump(s)	5 years (see Note)	11.4.6.2
Balancing valve	5 years	11.4.6.3
Foam concentrate tank	10 years	11.4.6.4
In-line balanced pressure type		
Foam concentrate pump(s)	5 years (see Note)	11.4.7.2
Balancing valve diaphragm	5 years	11.4.7.3
Foam concentrate tank	10 years	11.4.6.4
In-line balanced pressure type		
Foam concentrate pump(s)	5 years (see Note)	11.4.7.2
Balancing valve	5 years	11.4.7.3
Foam concentrate tank 10 years 11.4.7.4	Foam concentrate tank 10 years 11.4.7.4	Foam concentrate tank 10 years 11.4.7.4
Pressure vacuum vents	5 years	11.4.8
Water supply tank(s)	See Chapter 9 —	
Fire pump(s) See Chapter 8 —	Fire pump(s) See Chapter 8 —	Fire pump(s) See Chapter 8 —
Water supply	Annually	11.2.6.1
Backflow preventer(s)	See Chapter 13	
Detector check valve(s)	See Chapter 13	
Check valve(s)	See Chapter 13	
Control valve(s)	See Chapter 13	
Deluge/preaction valves	See Chapter 13	11.2.1
Strainer(s) — mainline	See Chapter 10	
Detection system	See NFPA 72	11.2.2

Note: Also refer to manufacturer's instructions and frequency. Maintenance intervals other than preventive maintenance are not provided, as they depend on the results of the visual inspections and operational tests. For foam-water systems in aircraft hangars, refer to the inspection, test, and maintenance requirements of NFPA 409, *Standard on Aircraft Hangars*, Table 11.1.1.

**Table 13.1.1.2**  
**Summary of Valves, Valve Components, and Trim Inspection, Testing and Maintenance**

<u>Item</u>	<u>Frequency</u>	<u>Reference</u>
<b><u>Inspection</u></b>		
<i>Control Valves</i>		
<u>Sealed</u>	<u>Quarterly</u>	<u>13.3.2.1</u>
<u>Locked</u>	<u>Quarterly</u>	<u>13.3.2.1.1</u>
<u>Tamper switches</u>	<u>Quarterly</u>	<u>13.3.2.1.1</u>
<i>Alarm Valves</i>		
<u>Exterior</u>	<u>Quarterly</u>	<u>13.4.1.1</u>
<u>Interior</u>	<u>5 years</u>	<u>13.4.1.2</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.1.2</u>
<i>Check Valves</i>		
<u>Interior</u>	<u>5 years</u>	<u>13.4.2.1</u>
<i>Preaction/Deluge Valves</i>		
<u>Enclosure (during cold weather)</u>	<u>Daily/weekly</u>	<u>13.4.3.1</u>
<u>Exterior</u>	<u>Quarterly</u>	<u>13.4.3.1.6</u>
<u>Interior</u>	<u>Annually/5 years</u>	<u>13.4.3.1.7</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.3.1.8</u>
<i>Dry Pipe Valves/ Quick-Opening Devices</i>		
<u>Gauges</u>	<u>Quarterly</u>	<u>13.4.4.1.2.4, 13.4.4.1.2.5</u>
<u>Enclosure (during cold weather)</u>	<u>Daily/weekly</u>	<u>13.4.4.1.1</u>
<u>Exterior</u>	<u>Quarterly</u>	<u>13.4.4.1.4</u>
<u>Interior</u>	<u>Annually</u>	<u>13.4.4.1.5</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.4.1.6</u>
<i>Pressure Reducing and Relief Valves</i>		
<u>Sprinkler systems</u>	<u>Quarterly</u>	<u>13.5.1.1</u>
<u>Hose connections</u>	<u>Annually</u>	<u>13.5.2.1</u>
<u>Hose racks</u>	<u>Annually</u>	<u>13.5.3.1</u>
<b><u>Fire Pumps</u></b>		
<u>Casing relief valves</u>	<u>Quarterly</u>	<u>13.5.7.1, 13.5.7.1.1</u>

<u>Pressure relief valves</u>	<u>Quarterly</u>	<u>13.5.7.2, 13.5.7.2.1</u>
<i><u>Backflow Prevention Assemblies</u></i>		
<u>Reduced pressure</u>	<u>Quarterly</u>	<u>13.6.1</u>
<u>Reduced pressure detectors</u>	<u>Quarterly</u>	<u>13.6.1</u>
<u>Fire Department Connections</u>	<u>Quarterly</u>	<u>13.7.1</u>
<b><u>Testing</u></b>		
<u>Main Drains</u>	<u>Annually</u>	<u>13.2.5, 13.2.5.1, 13.3.3.4</u>
<u>Water flow Alarms</u>	<u>Annually</u>	<u>13.2.6</u>
<i><u>Control Valves</u></i>		
<u>Position</u>	<u>Annually</u>	<u>13.3.3.1</u>
<u>Operation</u>	<u>Annually</u>	<u>13.3.3.1</u>
<u>Supervisory</u>	<u>Annually</u>	<u>13.3.3.5</u>
<i><u>Preaction/Deluge Valves</u></i>		
<u>Priming water</u>	<u>Annually</u>	<u>13.4.3.2.1</u>
<u>Low air pressure alarms</u>	<u>Annually</u>	<u>13.4.3.2.13, 13.4.3.2.14</u>
<u>Full flow</u>	<u>Annually/5 year</u>	<u>13.4.3.2.2, 13.4.3.2.3</u>
<i><u>Dry Pipe Valves/ Quick-Opening Devices</u></i>		
<u>Priming water</u>	<u>Annually</u>	<u>13.4.4.2.1</u>
<u>Low air pressure alarms</u>	<u>Annually</u>	<u>13.4.4.2.6</u>
<u>Quick-opening devices</u>	<u>Annually</u>	<u>13.4.4.2.4</u>
<u>Trip test</u>	<u>Annually</u>	<u>13.4.4.2.2</u>
<u>Full flow trip test</u>	<u>5 years</u>	<u>13.4.4.2.2.2</u>
<i><u>Pressure Reducing and Relief Valves</u></i>		
<u>Sprinkler systems</u>	<u>5 years</u>	<u>13.5.1.2</u>
<u>Circulation relief</u>	<u>Annually</u>	<u>13.5.7.1.2</u>
<u>Pressure relief valves</u>	<u>Annually</u>	<u>13.5.7.2.2</u>
<u>Hose connections</u>	<u>5 years</u>	<u>13.5.2.2</u>
<u>Hose racks</u>	<u>5 years</u>	<u>13.5.2.2</u>
<i><u>Backflow Prevention Assemblies</u></i>	<u>Annually</u>	<u>13.6.2</u>
<i><u>Check Valves</u></i>		
<u>Interior</u>	<u>5 years</u>	<u>13.4.2.1</u>



<b><u>Maintenance</u></b>		
<u>Control Valves</u>	<u>Annually</u>	<u>13.3.4</u>
<u>Preaction/Deluge Valves</u>	<u>Annually</u>	<u>13.4.3.3.2</u>
<u>Dry Pipe Valves/ Quick-Opening Devices</u>	<u>Annually</u>	<u>13.4.4.3</u>
<u>Alarm Valves</u>		
<u>Interior</u>	<u>5 years</u>	<u>13.4.1.2</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.1.2</u>
<u>Preaction/Deluge Valves</u>		
<u>Interior</u>	<u>Annually/5 years</u>	<u>13.4.3.1.7</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.3.1.8</u>
<u>Dry Pipe Valves/ Quick-Opening Devices</u>		
<u>Interior</u>	<u>Annually</u>	<u>13.4.4.1.5</u>
<u>Strainers, filters, orifices</u>	<u>5 years</u>	<u>13.4.4.1.6</u>