

Table 9.10: Automatic Deluge Water Spray System Requirements

ITEMS	REQUIREMENTS
8. DRAINAGE	<ul style="list-style-type: none"> i. All water spray system pipe and fittings shall be installed so that the system can be drained. ii. Drains shall discharge to a safe location, and drain valves, where provided, shall be accessible. iii. Drains shall not be directly interconnected with any sewer systems.
9. FIRE DETECTION AND ALARM SYSTEM	<ul style="list-style-type: none"> i. The selection, location, and spacing of automatic fire detectors for the actuation of fixed water spray systems shall comply with Chapter 8. Fire Detection and Alarm Systems. ii. The detection equipment requiring protection from the weather shall be provided with a canopy, hood, or other suitable protection. iii. Detectors shall be located so that no portion of the hazard being protected extends beyond the perimeter line of detectors. iv. When located out of doors or in the open, the spacing of fixed temperature or rate-of-rise detectors shall be reduced by at least 50 percent from the listed spacing under smooth ceilings. v. Any flow from a single automatic nozzle of the smallest orifice size installed on the system or flow from any group of nonautomatic nozzles, shall result in an audible alarm on the premises within 90 seconds after flow begins. vi. Where a separate detection system is used to activate the water spray system, the alarm shall be actuated independently of the system water flow to indicate the operation of the detection system. vii. The flammable gas detectors and radiant energy sensing fire detectors shall be installed as per their listing specifications.
10. PILOT SPRINKLERS	<ul style="list-style-type: none"> i. Where pilot sprinklers are used for fire detection in indoor locations, the maximum horizontal spacing shall not exceed 3.7 m. ii. Pilot sprinklers located outdoors, such as in open process structures, shall be spaced such that the elevation of a single level of pilot sprinklers and between additional levels of pilot sprinklers shall not exceed 5.2 m. iii. The horizontal distance between pilot sprinklers installed outdoors shall not exceed 2.5 m. iv. Pilot sprinklers shall be installed as per their listing specifications in special situations.
11. REMOTE MANUAL ACTIVATION	<ul style="list-style-type: none"> i. At least one manual actuation device independent of the manual actuation device at the system actuation valve shall be installed for all automatic systems installed in occupied areas.
12. BREECHING INLET	<ul style="list-style-type: none"> i. Breeching inlet connections shall be provided for all water spray systems, except for ultra high-speed water spray systems.
13. GAUGES	<ul style="list-style-type: none"> i. Pressure gauges shall be installed below and above the Deluge Valve, below the system actuation valve and on air or water supply to pilot lines.
14. STRAINERS	<ul style="list-style-type: none"> i. Strainers shall be provided for all water spray systems so as to be accessible for cleaning and flushing.