



Public Works/Engineering
Environmental Services Division

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Fire Sprinkler Test Water

Source Control for Fire Sprinkler Test Water

1. Fire sprinkler test water shall discharge to the sanitary sewer following Dublin San Ramon Services District connection and discharge requirements. If it is infeasible to drain to the sanitary sewer, fire sprinkler test water shall discharge to an appropriately-sized landscaped area (not to a stormwater treatment measure).
2. If discharge must flow to a landscaped area, discharge to a turfgrass area is preferable to limit erosion of exposed soils. If test water can be discharged to turfgrass, use guidelines below to determine required area for discharge.

*The weekly recommended irrigation water application during dry months is approximately 1 inch or greater per the *Lawn Watering Guide for California (University of California ANR Publication 8044; Central California Coast region, cool-season turfgrass)*. Using this Guide it is assumed that up to one inch of fire sprinkler test water can be applied to turfgrass areas during testing periods (if evenly distributed across the landscape).*

For a five-minute test, the appropriately sized turfgrass area for a range of flow rates is provided in the table below. For tests longer than 5 minutes, areas must be scaled up appropriately:

Flow Rate		Minimum Turfgrass Discharge Area Required for 5-min Fire Sprinkler Test (sq-ft)
gpm	cfs	
10	0.02	80
25	0.06	200
50	0.11	400
75	0.17	600
100	0.22	800
125	0.28	1,000
150	0.33	1,200
175	0.39	1,400
200	0.45	1,600
225	0.50	1,800
250	0.56	2,000

3. If a turfgrass area is not available within the vicinity of the fire sprinkler, other landscaped areas may be used if specific measures are taken to avoid erosion and overwatering. Consult a landscaping professional to determine the allowable irrigation for the plant palate within the discharge area. Overwatering of native plants can be harmful.

Discharge of Fire Sprinkler Test Water to Landscaped Areas (Operational Best Management Practices)

The following has been adapted from the "Water-Based Fire Protection Systems Discharge Best Practices Manual" (California State Fire Marshal, 2011):

1. Conduct flows for the shortest duration possible.
2. If at any point, test water begins to run off landscaping onto surrounding pavement or other area that could drain to a storm drain inlet, regardless of whether area is appropriately sized per the table above, stop testing immediately. Test water is not allowed to be discharged to the storm drain.
3. To prevent erosion or scouring, the following measures should be implemented:
 - a. Begin the flow slowly, increasing flow gradually so as not to damage any equipment or property.
 - b. Inspect the discharge path as the flow increases. Make sure that no scouring, erosion, or undercutting of pavement is occurring. If concerns arise immediately take corrective action which could include:
 - i. Reduce the flow rate of the discharge.
 - ii. Adjust the angle of the discharge.
 - iii. Stop discharge altogether.
 - c. If possible, discharge should be directed onto a concrete splash pad or similar erosion control measure located within the landscaped area.
4. Evenly distribute the test water over the entire landscaped area to the extent possible.
5. It is recommended that fire sprinkler tests that discharge to landscaped areas occur during the dry season (May through September) to avoid applying additional water to saturated soils. During the rainy season (October through April), testing after rainfall should be avoided (recommend 72 hours of antecedent dry weather).