

CITY OF ASHLAND WATER FLOWS FOR WILDFIRES DURING PEAK SYSTEM DEMAND PERIODS

The City of Ashland receives its water from Reeder Reservoir, located within the Ashland Watershed of the Rogue River National Forest. Approximately 850 acre-feet (277 million gallons) of high quality drinking water are retained behind Hosler Dam, a 110-ft high reinforced concrete arch dam located at the reservoir. Water from the reservoir is processed through the Ashland Water Treatment Plant facility in Ashland Creek Canyon. This plant has the capacity to produce 7.5 mg/day of treated water for consumption by the community of Ashland. Average demand ranges from 1.83 mg/day to 6.3 mg/day, depending on the time of the year. During the hotter weather of summer fire season, the plant will produce up to 7.2 mg/day.

Treated water from the treatment plant feeds into four aboveground reservoirs, with a combined capacity of over 7 million gallons. During peak periods of usage, water levels within the highest demand reservoirs may drop overnight to 50% capacity. Alsing reservoir is typically maintained at 50% capacity due to low usage and the need to keep water “turned over” in the system. Reservoirs are filled by gravity flow and water pressure is enhanced for the upper elevations of the City by pump stations located at Terrace Street, Ivy Lane and Ditch Road. Electrical power for these pump stations is located above ground. In the event of power loss in a wildfire emergency, the City maintains four trailer-mounted generators to provide emergency power as needed to water and wastewater pumps.

Static flow hydrant pressures above the Ashland Street elevation gradient between Tolman Creek Rd and Ashland Mine Rd. range between 20 psi and 145 psi, depending on the size of the branch main and proximity from the nearest pump station. A number of pressure relief valves are found throughout the system that will open when system pressures fall below a pre-determined level.

A breakdown of fire flow potential by geographical area is shown below:

Tolman Creek Rd. to Walker Avenue:	Static flows are sufficient enough to supply an average of 1,400 –2,200 gpm.
Walker Avenue to Beach Street:	Static flows are sufficient enough to supply an average of 1,500 – 2,200 gpm.
Beach Street to Terrace Street:	Static flows are sufficient enough to supply an average of 900 – 1,400 gpm.

Terrace Street to Granite Street:	Static flows are sufficient enough to supply an average of 800 – 2,300 gpm.
Granite Street to Ditch Road:	Static flows are sufficient enough to supply an average of 300 – 1,200 gpm.
Ditch Road to Westwood Lane:	Static flows are sufficient enough to supply an average of 1,000 – 1,600 gpm.

In a wildfire emergency, most hydrant areas within the urban-wildland fire zone will support the combined pumping capacity of the two first-due engine companies that will be responding. Water supply capability depends upon the location of the hydrant, the size of the water supply main line, distance from the pump station, and connectivity of the waterline grid. In a wildfire emergency it is foreseeable, however, that water system flows and associated pressures may be degraded by increased system demands created by homeowner use of domestic watering systems to defend their properties from the on-coming wildfire. In this event, water available for fire department use may be severely reduced.