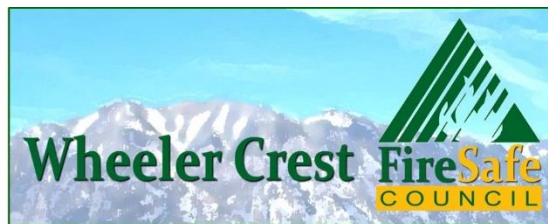


# Fact Sheet #1

## Emergency Water Storage



Since 2010, the Mono County General Plan<sup>1</sup> has required that emergency water for fire-fighting be provided when any new residence is constructed in Swall Meadows that is more than 1000 ft from a hydrant served by the Wheeler Crest Community Service District (Pinon Ranch area only). This requirement also applies to residences being rebuilt in the aftermath of the Round Fire of 2015.

The location and nature of the water-storage facility needs to be included in any construction plan submitted to the Mono County Building Department for permitting purposes. Legal authority for inspection and final approval of the storage facility lies with the CalFire Battalion Chief, or his/her designee (i.e., the Chief of the Wheeler Crest Fire Protection District).

Residents with existing homes that survived the Round Fire may want to consider installing comparable water storage capabilities to provide additional protection against fire, but there is currently no requirement to do so.

The required water storage is most often accomplished using a manufactured tank constructed of plastic, which can be located either above- or belowground. Other materials such as concrete or fiberglass may also be acceptable.

### **Requirements**

The storage tank should conform to the following guidelines (per residence):

**Volume:** 2500 gallons minimum.

**Placement:** At least 50 feet, but no more than 1000 feet from the building. Should be immediately adjacent to the roadway and, ideally, also the driveway.

**Connections:** A hydrant head (or fire-valve) connection is required, and must be **brass**, 2.5 inch, male thread, American National Fire Hose standard (NH). It should be 18 inches above grade, 8 feet from flammable vegetation, and between 4 and 12 feet from the roadway. A vent pipe of the same diameter is required.

**Availability:** Water must be available and usable year-round. Protection from freezing is best accomplished by complete or partial burial of the tank.

**Marking:** A blue reflective marker, at least 3 inches in size should be placed on a fire-retardant post within 3 feet of the fire valve, between 3 and 5 feet above ground, and visible from the street.

<sup>1</sup> Mono County General Plan 2013. Development Standards, Chapter 22, Section 22.130.

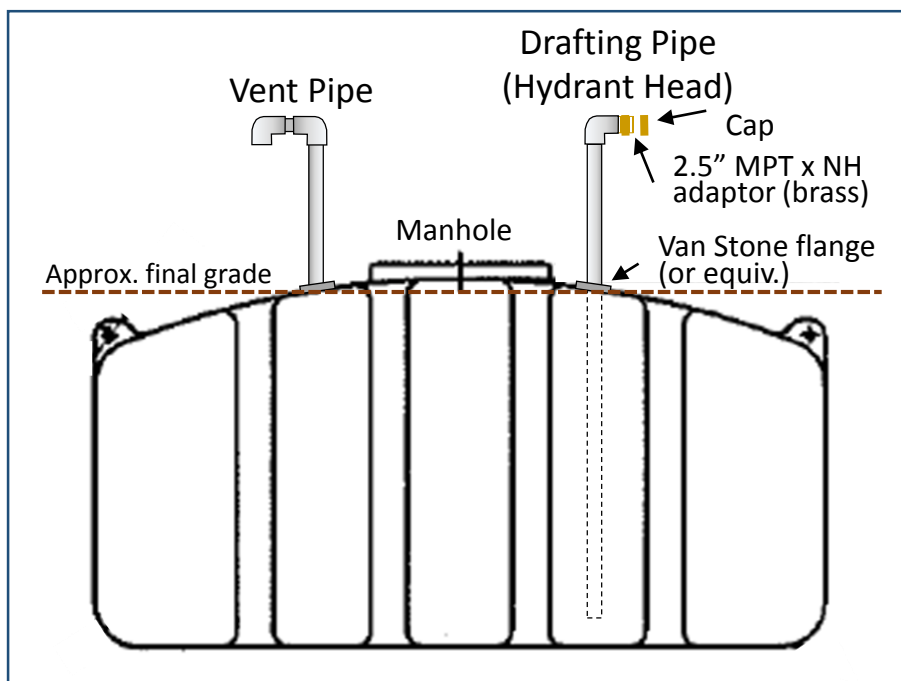
### **Belowground Installation:**

A belowground tank may be preferred for aesthetic reasons in that it is largely invisible, and it also provides convenient protection from freezing. A schematic for a typical belowground tank is provided in Figure 1. In general, the top of the tank need not be below the frost line (18" for Swall Meadows) as the large thermal mass of the water will prevent freezing as long as the tank is full.

A belowground tank should be carefully selected for adequate structural strength. The tank should be able to withstand the pressure generated by the overlying soil such that it can be backfilled while empty, and it will not collapse if drained by WCFPD personnel during a fire.

During installation, care should be taken to provide a smooth, flat bed of sand or fine gravel for the tank to sit upon. The same material should be used to backfill around the sides and over the top of the tank.

The cost of a belowground system will vary with the difficulty and depth of excavation, but owners should budget *at least* \$6000 to 7000 for a contractor-installed system. Suitable tanks are available on the internet, but freight charges from out-of-state suppliers can be prohibitive; a local retail supplier is recommended.



**Figure 1.** Typical belowground tank plumbed with 2-1/2" Schedule 80 PVC pipe.

### **Aboveground Tanks:**

These can offer considerable cost savings for both the tank and the installation. Adequate protection against freezing will be more challenging, but can sometimes be achieved by partial burial of the tank. The connection required for Fire District use is the same, but is typically provided by a valved outlet near the bottom of the tank.

### **For Additional Information:**

Please contact the Mono County Building Department (760-932-5420) or WCFPD Chief Dale Schmidt (760-920-9523).