



Black Forest Fire Rescue Protection District

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“Always Ready, Always Forward, Always Learning.”

Office of the Fire Marshall

Guidance Document for Firefighting Water Supply

The Black Forest Fire Rescue Protection District as a title 32 Special Fire District which has the responsibility to oversee fire code adherence within its legal boundaries in accordance with current laws and standards established by the state and local county government. The purpose of these codes is to provide for the safety of the public and ensure that the fire district and its firefighters can safely and effectively perform their job to protect life, property and the environment.

Under current El Paso County (EPC) Land Development Code (LDC) effective date 01/09/2018 and International Fire Code (IFC) 2015, Black Forest Fire Rescue Protection District (BFFRPD) has a responsibility and duty to ensure that proper firefighting water systems are installed within the fire protection district as development occurs. Black Forest does not have a pressurized distributed water system (Hydrant System) that can be used for firefighting operations, we therefore must haul our water through the use of Tender apparatus (water haulers) and fixed water locations such as cisterns and ponds, utilizing either a dry hydrant system or a water pump installed at the source. Cisterns and ponds set up to use as a static fill site are not designed as primary fill sites for fire events such as wildfire, their primary use is designed for structural firefighting operations to establish a water shuttle system to provide water for primary firefighting apparatus.

Our goal with this document is to give developers or residents wanting to subdivide their property, guidance and information on the requirements of EPC and BFFRPD as it pertains to firefighting water availability.

The BFFRPDs current requirements for a firefighting water supply for a subdivision or development is in alignment with the EPC LDC. Developments/subdivisions that lack a NFPA compliant water source for firefighting operations within 1000 feet (road feet) shall adhere to the following:

A development/subdivision of 5 or more homes/parcels, but less than 10, shall have a firefighting water cistern of **30,000 gallons**. This number meets the Insurance Services Organization (ISO) requirements for allowable water source.

A development/subdivision of 10 or more homes/parcels shall meet with the Fire Marshal of the District, or their designee, to provide a firefighting water plan for approval of the development.

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Any water source shall have the following.

- A dry hydrant system with a 6-inch Fire department connection for drafting (see picture 1.2 and 1.3) or.
- A pumped cistern water supply having an electric water pump designed should be able to deliver water at a minimum flow rate of a least 250 gallons per minute.
- Signage that meets department specifications.

Cistern with Dry Hydrant System

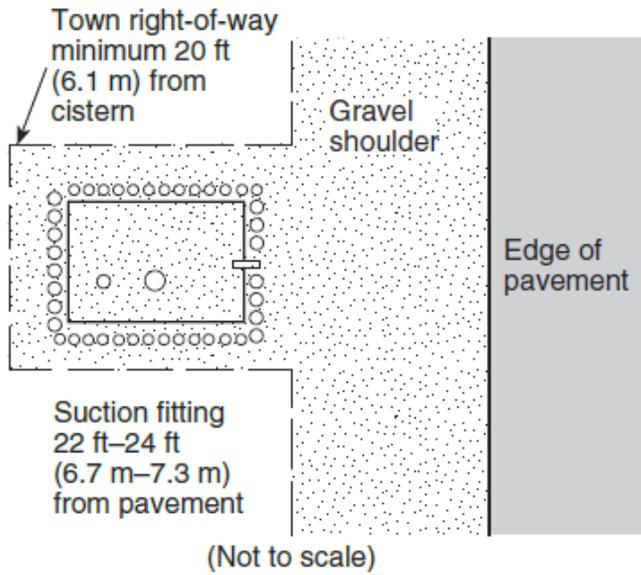
Cisterns with a dry hydrant system shall conform to the following parameters.

1. Cisterns shall conform to NFPA standards on water supplies for suburban and rural fire fighting.
2. A dedicated turnaround shall be placed no more than 50 feet from a cistern and the standpipe shall be within 8 feet of the nearest usable portion of the dedicated right-of-way or approved easement.
3. The dry hydrant access shall be located to be accessible under all weather.
4. Dry Hydrants shall have a minimum clearance of 10 feet on each side and be located a minimum of 100 feet from any structure. Highway or road traffic shall not be impaired during use of the dry hydrant.
5. Dry Hydrant locations shall be made visible from the main roadway during emergencies by reflective marking and signage approved by the Fire Marshal.
6. Vehicle access to the dry hydrant/Cistern shall be designed and constructed to support the heaviest vehicle, 75,000 lbs. (pic 1.1)

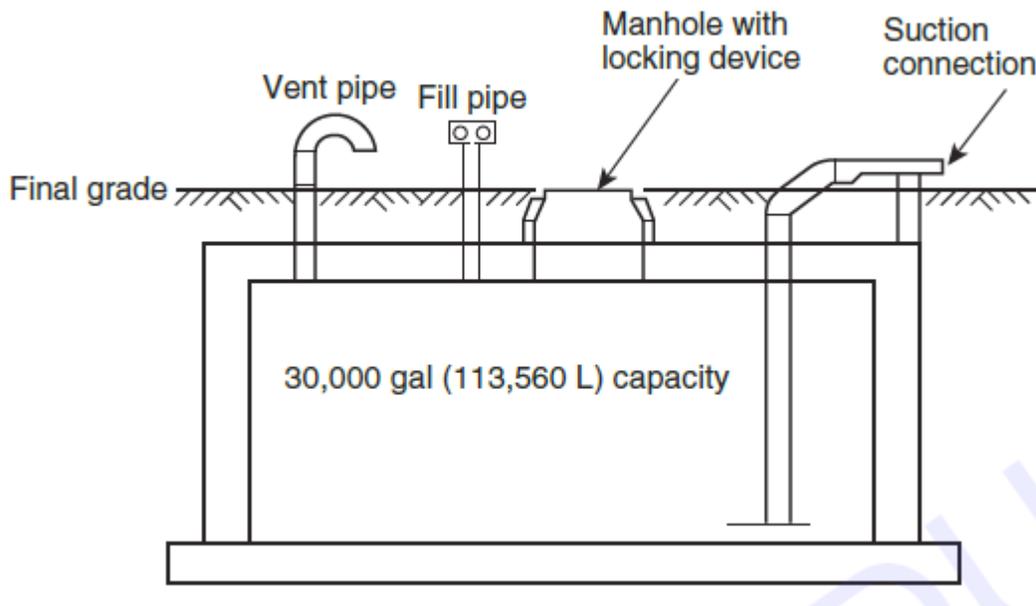
The following diagrams on the next pages show examples of cisterns, pond source dry hydrants. The Fire Marshall can help you decide what is going to best for your project.

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Picture 1.1 Cistern Site Layout

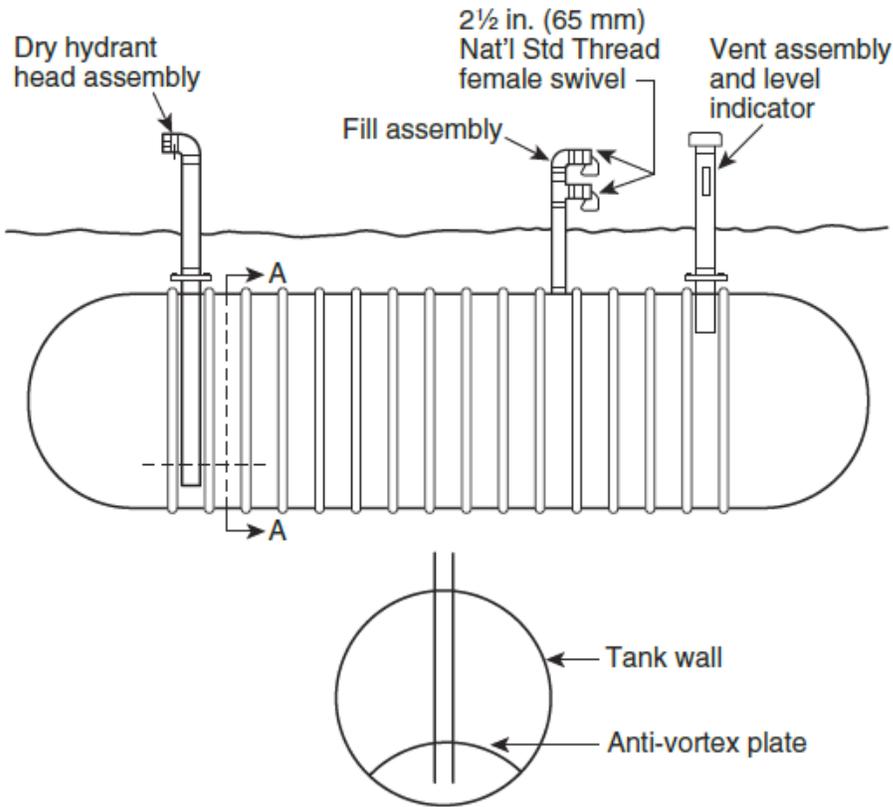


Picture 1.2 Typical Cistern

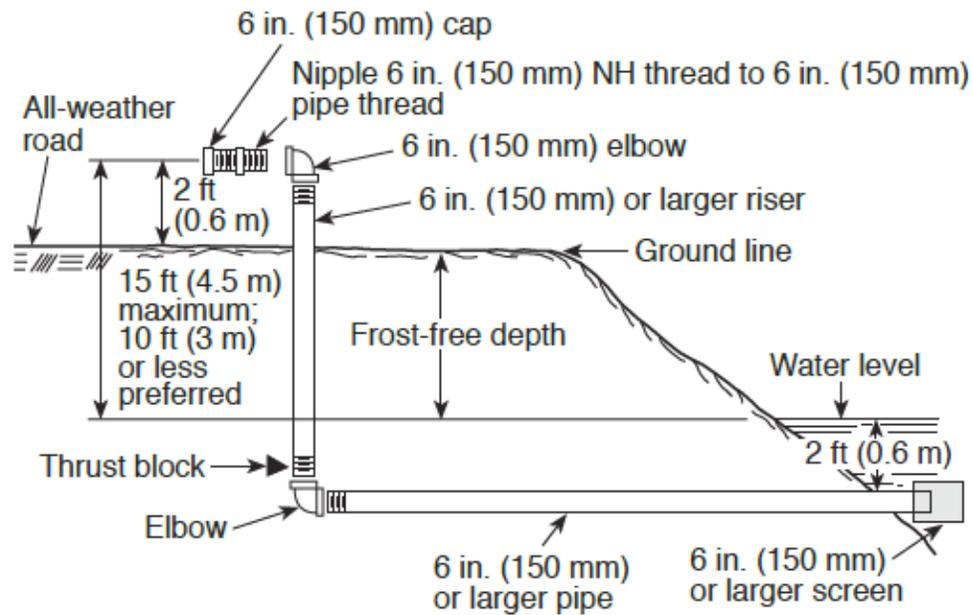


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Picture 1.3 Underground fiberglass storage tank



Picture 1.4 Pond water Source construction



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