

# wellcare<sup>®</sup> information for you about **Wells & Fire Protection**

Well owners must take steps to ensure an adequate supply of water in the terrible event of a fire in their home.

## **Minimum Flows for Fire Protection**

Insurers demand very high water capacity for fire protection when they set their rating standards. For a high rating, Insurance Services Office, Inc. (ISO) requires fire flow to be no less than 250 gallons per minute for two hours (30,000 gallons) and that the home be no more than five miles by road from a recognized fire station.

Most household wells can't produce anywhere near that amount of water. Worse, adding a cistern or storage tank to hold 30,000 gallons of water could cost \$60,000! Luckily, well owners can choose from several options to prepare for a fire.

## **Residential Sprinkler Systems**

The National Institutes of Health (NIH) reports that 90 percent of fires can be contained by just one sprinkler in a residential system. An increasing number of communities in a dozen states require residential sprinklers in all new homes.

In Scottsdale, AZ, sprinklers were required in new homes in 1986 and can now be found in 50 percent of all houses. A recent study found that fires in Scottsdale homes without sprinklers did 21 times the damage, \$45,000 average per fire, compared to homes with sprinklers, \$2,100 average, according to the Home Fire Sprinkler Coalition.

Costs for home sprinklers have fallen dramatically, adding just one to two percent to the price of a new home, or about \$1 per square foot of new construction. In turn, residential sprinkler systems can qualify for a discount ranging from 10 to 50 percent in fire insurance premiums, according to NIH.

Innovations in plastic piping make residential systems easier to install, both in new homes and in the retrofit of an older home. The demand on your well is no greater than a lawn sprinkler network. Some systems can even be designed to cut off all other water use in the house when the system is activated, to focus the water supply on fire protection.

There is no reason to fear your entire home will be flooded, as the sprinkler will go off only in the room where fire is detected. The sprinkler water plug releases at a very high temperature.

A study in Scottsdale showed that fire sprinklers demand much less water than fire hoses and so do less damage, according to the Home Fire Sprinkler Coalition. The study indicated a sprinkler uses on average 341 gallons of water to control a fire, while firefighters using hoses consume 2,935 gallons.

If your well pressure or capacity is very low, some residential sprinkler manufacturers offer self-contained water tanks to supply their systems. The tanks can fit in the garage or another storage area.

Contact the Home Fire Sprinkler Coalition for a link to an online contractor referral service or look in the Yellow Pages under "Sprinklers – Automatic – Fire – Protection."

## **Dry Hydrants: An Alternative Water Source**

Another option is to find an alternative water source to fight fire. Farm ponds, lakes or even a river can provide water through the use of a dry hydrant.

Dry hydrants offer several benefits to the homeowner. They reduce the time needed to fill fire department tanker trucks fighting the fire. They conserve drinking water. They also can lower insurance premiums.

A dry hydrant is a six-inch diameter pipe connected to a pipe in the pond to allow the water to be pumped into a fire truck. The cost of installation ranges from \$500 to \$900, but is much less if it is done when the pond is constructed. ISO reports that any property within 1,000 feet of a dry hydrant may qualify for lower insurance premiums, provided the home is also within five miles of a fire station.

Many states recommend locating dry hydrants every three miles in rural communities and offer cost share grants to local fire departments to fund installation of the devices. Location of the water source is important, as the tanker truck must be able to access the site and turn around.

Ask your local fire department if a dry hydrant would work on your property or if there is another appropriate site nearby. The local fire department also should be able to recommend installers.

## Homeowner Fire Protection Steps

The U.S. Fire Administration offers the following tips for making your property more fire resistant:

- Store flammable materials, liquids or solvents in metal containers outside the home at least 30 feet away from structures and wooden fences.
- Keep lawns trimmed, leaves raked and the roof and gutters free from debris.
- Stack firewood at least 30 feet away from the home.
- Create a low impact fire zone around the house by thinning trees and brush within 30 feet.
- Post home address signs that are clearly visible to fire station staff from the road.
- Ask your local fire department or county government for a home fire safety inspection.

## For more information on wells and fire protection

Checklist for rural fire safety, U.S. Fire Administration, Federal Emergency Management Agency: [www.usfa.fema.gov/dhtml/public/ruralcheck.cfm](http://www.usfa.fema.gov/dhtml/public/ruralcheck.cfm)

The Home Fire Sprinkler Coalition, residential sprinkler systems, a list of contractors and the Scottsdale report: 888-635-7222 or [www.homefiresprinkler.org](http://www.homefiresprinkler.org)

Dry hydrants fact sheet, University of Ohio Extension Service: <http://ohioline.osu.edu/aex-fact/0422.html>

For general information:

ISO (Insurance Services Office, Inc.): [www.iso.com](http://www.iso.com) National Fire Protection Association: [www.nfpa.org](http://www.nfpa.org)

## For more information on your drinking water

The following sites provide up-to-date information on efforts to protect public water supplies and steps you can take as a private well owner:

Home*A*Syst Program	<a href="http://www.uwex.edu/homeasyst">www.uwex.edu/homeasyst</a>
Water Quality Association	<a href="http://www.wqa.org">www.wqa.org</a>
The Groundwater Foundation	<a href="http://www.groundwater.org">www.groundwater.org</a>
American Water Works Association	<a href="http://www.awwa.org">www.awwa.org</a>

## For more information about wells and other wellcare® publications

wellcare® is a program of the Water Systems Council (WSC). WSC is a national nonprofit organization dedicated to promote the wider use of wells as modern and affordable safe drinking water systems and to protect ground water resources nationwide.



Contact us at 888-395-1033 or visit [www.wellcarehotline.org](http://www.wellcarehotline.org) or [www.watersystemscouncil.org](http://www.watersystemscouncil.org)

This publication was developed in part under Assistance Agreement No. X-82849101-1 awarded by the U.S. Environmental Protection Agency. It has not been formally reviewed by EPA. The views expressed in this document are solely those of WSC. EPA does not endorse any products or commercial services mentioned in this publication.