

# Residential Water Systems and Flooding

Flooding can interrupt power and damage property. Floodwater may damage equipment as well as cause structural damage. With the possibility of flooding in your area, your private well or water pumping system may be impacted and could potentially affect the safety of the water coming into your home. Below are some helpful tips to assist you before, during and after a flood.

## Before a Flood

Wellhead protection on your private well can prevent the well from becoming contaminated regardless of whether or not flooding or another disaster strikes. Securing the wellhead means making sure there are no openings or loose fittings at the top of the well that can allow water, debris or insects to get inside. The tightening bolts, distribution line, electrical conduit and chlorination port are all potential points of entry into the well that should be kept water-tight and insect-proof. The concrete pad around the well should also be free of cracks, splits and debris. In case of flooding in the area, the ground around the well should slope away so that surface water, which may be contaminated will not pool around the top of the well.

Understand how to shut off power to your water well or pump system before a potential flood by locating your breaker box or contacting your local electrical service provider. Turning off power to these systems before they are taken over by flood waters can save you the expense of having to replace them after the event if they are shorted out due to a power failure. Your local electrical service provider can provide valuable information on power safety to ensure you and your family are safe.

## During a Flood

Even if your well is not directly affected by floodwaters, a potential loss of electrical power is a concern. Without electricity, the pump in the well will not operate and alternate sources of drinking water will need to be found until power is restored. It may be necessary to ration what drinking water is on hand. Plan for a minimum of two (2) gallons of water per person per day for drinking, cooking, and personal hygiene.

If you have a residential water system that pumps water from the Kern River, make sure to frequently check the location of the pump. As the water rises and currents increase the pump may be pulled downstream or be damaged. To help prevent this from happening, you should move the pump closer to your home and closely monitor any electrical connections to your pump. If the pump is connected to a generator or is hardwired, you want to make sure your generator or live power lines are away from rising water. If the water level rises to these connections, it is recommended that you disconnect power to your pump.

For residential water systems that have a filter and disinfection system, make sure that you frequently check your system as water levels rise. If the system could be impacted by flood waters, you should shut off your system and disconnect its power supply to avoid electrical issues.

## After a Flood

Once the flood has subsided, you need to make sure that your well was not affected and will produce safe, potable drinking water. If the well or your water pumping system was inundated with water or if power was

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lost, it is recommended that they are disinfected and tested to make sure that bacteriological organisms did not infiltrate the water supply. Please also take caution when restoring electricity to pumps.

You can disinfect a contaminated system yourself, if you have a few tools and some household bleach solution. Any ordinary liquid household bleach can be used if it contains 5.25 percent sodium hypochlorite. Clorox, Purex, Sani-Clor, and Vano are some of the trade names for liquid bleaches commonly sold in grocery stores.

To disinfect your well, here are some steps that can be taken.

1. Pump water from the well until it looks relatively clean.
2. After the water flowing from the well looks clear, stop the pump.
3. The bleach may now be added to the well. It may be necessary to lift the pump, but some wells have openings that can be used for this purpose. Bleach should be added between the casing and suction pipe of the pump. See the table below for the amount of bleach that should be used.
4. Do not operate the pump for 30 minutes. After the 30-minute period, surge the well by starting and stopping the pump several times.
5. Next, open every tap, faucet or hydrant in the water piping system, start the pump, and let water flow until clean water with a strong smell of chlorine comes out of each tap.
6. Stop the pump and close all taps, faucets and hydrants. Do not operate the pump for 24 hours.
7. After the 24-hour period, open all taps, faucets and hydrants, start the pump and pump water until all the chlorine odor is gone. Stop the pump and close all taps, faucets and hydrants. The water should now be ready for use as drinking water and for cooking. Bacteriological testing should be conducted determine the effectiveness of the disinfection procedure.

<b>Amount of Chlorine Bleach Needed</b>				
<b>Depth of Well</b>	<b>Well Diameter</b>			
	<b>3 in.</b>	<b>6 in.</b>	<b>9 in.</b>	<b>12 in.</b>
50 ft.	3 oz.	8 oz.	25 oz.	50 oz.
100 ft.	6 oz.	20 oz.	50 oz.	100 oz.
150 ft.	8 oz.	30 oz.	75 oz.	150 oz.
8 oz. = 1cup	25 oz. = 3 cups	50 oz. = 6 ¼ cups	100 oz. = 12 ½ cups	150 oz. = 19 cups, 1 ¼ gals

To receive the most current information on potential flooding, subscribe to ReadyKern emergency alerts at [www.readykern.com](http://www.readykern.com).