

## WELL WATER DISINFECTION PROCEDURE

Disinfection is necessary when sampling has indicated the presence of bacteria in a domestic well. If appropriate, the well construction should be brought up to the current State standards so that it is properly drained, sealed and vented. Because reconstruction can introduce bacteria, disinfection must be completed before the well is put back into service. The procedure is as follows:

1. Remove the sanitary well cap. Pour into the well the appropriate strength solution of chlorine mixed with 10 gallons of water. See the charts below for calculation of the proper solution strength. Put the well cap into the empty solution container to keep it clean.
2. Connect one or more hoses from faucets on the discharge side of the pressure tank to the top of the well casing and start the pump. Place some chlorinated water into the empty solution container to cover the well cap and use some of this solution to clean the end of the hose. For 15 minutes recirculate the water from the hose back into the open well casing and wash down the interior of the casing and any piping or cables present. Agitating the well water may aid in the disinfection process. This may be accomplished by allowing the water to run 5 minutes then shutting the tap. Wait 5 minutes and then open the tap for 2 minutes and shut for 2 minutes. Repeat with 1 minute and 30 second intervals.
3. Close the tap and reseal the well casing.
4. Go to each additional outside outlet and open the tap until bleach is smelled, then shut the tap. Repeat this procedure at all inside points of discharge in the distribution, such as faucets, toilets, showers, etc. Chlorinated water should be distributed throughout the entire water system.
5. Allow the chlorinated water to remain in the system for at least 12 hours (or up to 24 hours). **DO NOT DRINK FROM THE SYSTEM OR DO LAUNDRY DURING THIS TIME.**
6. Return to the outside tap and flush water until there is no detectable chlorine odor. You may wish to have someone who has not been around the disinfection to smell for the chlorine for you. Shut the tap. Avoid flushing the chlorinated water through your sewage system! Repeat this procedure at all other points of discharge as previously described to flush clean the entire water system.

Resume normal water use, **EXCEPT FOR DRINKING OR FOOD PREPARATION.** After 7-10 days of normal usage, the water should be RETESTED.

**Quantity of Disinfectant Necessary for Well Water Disinfection**

Drilled Wells				
CASING SIZE	GALS. OF WATER PER FT. OF CASING	OUNCES OF PRODUCT NEEDED TO DISINFECT ONE FOOT OF WATER PER CASING SIZE		
diameter in inches	* see below to determine depth	5.25% to 6% Chlorine (liquid bleaches such as Clorox, Purex, or other brand)	10% Chlorine (liquid-bleach)	70% Chlorine (calcium hypochlorite in dry form)
2	0.16	0.041	0.021	0.0031
3	0.37	0.094	0.049	0.0071
4	0.65	0.165	0.087	0.0124
5	1.00	0.259	0.136	0.0194
6	1.50	0.381	0.200	0.0286
8	2.60	0.660	0.347	0.0495
10	4.10	1.036	0.544	0.0777
12	6.00	1.490	0.782	0.1118

1 cup = 8 oz measuring cup  
 1 oz = 1 heaping tablespoon granules

For example:

<b>Casing Diameter</b>	<b>Oz Bleach</b>	X	<b>Depth of Casing</b>	=	<b>Total Amount of Bleach</b>
5"	0.259	X	100 ft	=	25.9 oz

\* To determine the depth of the casing, use a string or cord at least 200 feet long and fasten a weight to one end. Lower the weight to the

bottom of the well and mark the cord to indicate the top of the casing. Pull up the cord, watching for the point where it became wet, and mark that point. Pull up the remaining string and measure the length which was wet.

<b>DUG OR BORED WELLS</b>							
Diameter of Well (in feet)	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>10</b>
Amount of 5.25% laundry bleach to use per foot of water (in cups)	1.50	3	4.25	6	9	12	18
Amount of 70% hypochlorite granules to use per foot of water (in ounces)	1	2	3	4	6	8	12



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Note: This publication is adapted from a publication of the Clark County, Illinois Health Department

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