Water Hardness

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My dishes have a residue after cleaning.

Recently, some water customers have noticed the presence of white spots, streaks, or scale on their dishes. This is frequently the result of water hardness, and in fact the Water Department has observed an increase in the level of water hardness in certain areas of town over the last few months. It appears that water from the recently on-line Stepinski well has contributed to an increase in general water hardness within some areas of town (areas served by the Nutting facility - mostly the northeast sections of town).

What is water hardness?

Hardness in drinking water is generally caused by the presence two non-toxic minerals: calcium and magnesium. The term "hard" comes from the fact that it is harder to create soap suds – and therefore harder to wash dishes. Conversely, "soft" water creates soap suds more easily. Another effect of hard water is the presence of whitish spotting, streaks, or scale on dishes.

Westford Water hardness levels.

Until recently, water treated by the Westford Water Department has generally been considered as "moderately hard" (between 61-120 mg/L), and this remains unchanged for areas of town served by the Forge Village treatment plant. However, due to the influence of the Stepinski well, hardness levels up to around 135 mg/L have been detected in tap water in some areas served by the Nutting Road facility. Water with hardness levels between 121-180 mg/L is characterized as "hard". Note that 135 mg/L is near the lower end of the "hard" range.

Is hard water safe to drink?

Yes. Although not aesthetically pleasing with regards to dishes, water hardness does not present a health issue.

What can I do to reduce the effects of hardness in my water?

There are several commercially-available products that can reduce the spotting, streaking, or scaling effects of hard water on dishes/dishwashers such as Glisten or Finish/Jet-Dry (to name a couple). Additionally, check the dishwasher manual for the appropriate type of detergent or setting to use. Many dishwasher manufacturers specify certain brands or types of detergent (powder or liquid)

and may have adjustable settings for the level of water hardness. Other cleaning products specifically formulated to address the effects of hard water are also available (for example, Jelmar makes the CLR products). It is important to note that the Westford Water Department does not endorse the use of any specific product brand. Also, it's critical to make sure prior to use that any product you use is compatible with the material or equipment it is to be used on - otherwise damage may occur.

A water softener can also help to reduce or eliminate the effects of water hardness. Softeners work by exchanging the hardness minerals with either sodium or potassium. Although the amount of sodium or potassium is relatively insignificant, you may want to check with your doctor if on a restricted diet. Water softener equipment can also be expensive to install and maintain, and will add salt to the environment. By installing the softener only on the hot water line you can save maintenance costs (by using less salt and extending the life of the softening resin).

What is the Water Department doing in response to the increased hardness?

Water hardness is naturally occurring, not a health risk, and large-scale treatment is currently cost prohibitive. However, we are monitoring the hardness level very carefully, and have noticed a downward trend in levels coming from the Stepinksi well – which may suggest a future decrease in your tap water hardness, and perhaps even a return to previous levels. We will continue to investigate possible solutions to the increased hardness levels, and update the Water Department website with any new information.

Current Hardness Levels.

Stepinski Well:

6/22/2011: 182 ppm
7/06/2011: 165 ppm
7/18/2011: 159 ppm
7/26/2011: 165 ppm
8/03/2011: 172 ppm
8/12/2011: 174 ppm
9/07/2011: 148 ppm
10/7/2011: 144 ppm
11/9/2011: 140 ppm
12/16/2011: 123 ppm
1/04/2012: 130 ppm
1/26/2012: 134 ppm
4/03/2012: 135 ppm
4/18/2012: 136 ppm
6/11/2012: 112 ppm
7/05/2012: 110 ppm

8/22/2012: 108 ppm
9/5/2012: 94 ppm
12/5/2012: 107 ppm
1/14/2013: 103 ppm
4/09/2013: 95 ppm
5/28/2013: 97.2 ppm
6/25/2013: 91.2 ppm
8/20/2013: 90.0 ppm
9/19/2013: 100 ppm
11/25/2013: 86.4 ppm
1/14/2014: 102 ppm

Distribution System (Nutting):

6/03/2011: 134 ppm
7/11/2011: 123 ppm
7/26/2011: 140 ppm
7/28/2011: 127 ppm
8/03/2011: 130 ppm (2 locations)
8/31/2011: 124 ppm
9/21/2011: 110 ppm
10/5/2011: 116 ppm
10/12/2011: 115 ppm
11/16/2011: 76 ppm
1/04/2012: 104 ppm
2/16/2012: 98 ppm
2/22/2012: 92.8 ppm
3/13/2012: 106 ppm
4/18/2012: 104 ppm
5/23/2012: 97 ppm
7/18/2012: 94.8 ppm
8/22/2012: 90.4 ppm
9/18/2012: 81.6 ppm
10/22/2012: 89.2 ppm
11/19/2012: 80.0 ppm
1/23/2013: 78.8 ppm
2/20/2013: 79.9 ppm
4/24/2013: 80 ppm
7/10/2013: 72.8 ppm
9/18/2013: 82 ppm
11/19/2013: 75.2 ppm
1/14/2014: 85.6 ppm