

**Thatcher Chemical Plant Site**  
**245 Hazen Road, DeLand, Florida**  
**Draft Health Report Now Available**  
**August 2015**



**View of Thatcher Chemical site from Hazen Road**

**Site History**

In 2007, Thatcher Chemical built a plant on a 37-acre site at 245 Hazen Road in DeLand. They began making chemicals for food supplements and to treat water.

In January 2011, 8,000 gallons of acidic water spilled from the plant with 3,000 pounds of dissolved ferrous (iron) sulfate in it (a type of iron used in food and vitamins). In February 2011, Thatcher's consultants began to study the spill's effects. They found high levels of iron, pH, and sulfate in on-site groundwater using standards set by the Florida Department of Environmental Protection (DEP) for contaminants in drinking water. Tests since the spill have shown decreasing levels of iron, pH and sulfate in groundwater. All now meet drinking water standards.

At first, the consultants also found high levels of iron in on-site soil. After the spill, DEP got a tip about waste chemicals buried in the woods behind the plant. As a result, in December 2013, a consultant dug up 800,000 pounds of production waste and soil from seven on-site pits. They hauled it away, along with some soil, to a landfill.

In March 2014, DEP fined Thatcher \$230,000 for improper chemical waste disposal. People living nearby then reported a number of health concerns. These included asthma, cancer, and other illnesses. They also complained that toxic air releases from Thatcher caused things to rust and killed birds.

Last spring, the Florida Department of Health (DOH) began assessing the health risk from the spill. In April and November 2014, DOH tested nearby private drinking water wells. They did not find any chemicals linked to the Thatcher site. DOH now has a draft health report ready for public review and comment.

**Conclusions:**

- DOH does not expect levels of iron, sulfate, and pH to harm health even if people put in new drinking water wells southwest of the site (the direction the groundwater flows).
- DOH finds that on-site workers and nearby residents are not at risk from contact with chemicals in soil.
- DOH does not expect the levels of iron and sulfate measured in 2014 in off-site private drinking water wells to harm health. Water in these wells met standards for taste, odor, and color.

**Recommendations:**

- DOH has no further advice about the Thatcher Chemical Plant.

**Please give your comments on the DOH draft report.**  
**Comments are due by September 10, 2015!**

**Future DOH Plans:**

- DOH will address public comments or health concerns in a final report.

### **Nearby Drinking Water Sources**

Testing found chemicals from the Thatcher Chemical Plant spill mainly in a stormwater retention pond in the southwest corner of the site. The property closest to that area is a large cell tower site. People who live in the Mallory Square area just north of the site use municipal water, which undergoes regular tests. Other residents near the site get their water from private wells. Twice in 2014, DOH-Volusia County tested nearby private drinking water wells and found the water was safe.

### **Iron, pH, and Sulfate in Drinking Water**

#### ***Iron***

In October 2011, the highest level of iron in the groundwater under the site was 21.8 milligram/liter (mg/L). This is 72 times higher than the drinking water standard of 0.3 mg/L. However, no one would drink water with that amount of iron in it because of the taste. By June 2013, however, the highest level found in groundwater both on and off the site (0.135 mg/L) was well below the drinking water standard (0.3 mg/L).

Iron is a metal that occurs in nature. As a rule, it does not harm health when found in drinking water. Too much iron in water, however, causes a rusty color or cloudiness. It can make water taste like metal. Sometimes it leaves a reddish or orange stain on clothes and household fixtures. Because iron helps transport oxygen in the blood, we need a certain amount in our daily diet. Most tap water in the United States supplies about 5 percent of what our bodies need each day. Therefore, for health reasons, food and dietary supplement manufacturers often add iron.

#### ***pH***

In June 2012, the lowest pH in groundwater under the site was 3.8. In 2013, however, the pH was 6.0; only slightly lower than what The U.S. Environmental Protection Agency (EPA) recommends.

The pH scale (0 to 14) shows how acidic or alkaline water is. A pH of 7 is neutral. A low pH (below 7) means water is acidic. A high pH (above 7) means the water is alkaline.

Drinking water can safely fall within a broad range of pH values. However, low pH may increase dissolved metals. EPA advises public water systems to keep pH between 6.5 and 8.5. This is also a good guideline for private drinking water wells.

#### ***Sulfate***

In October 2011, the highest level of sulfate in groundwater under the site (909 mg/L) was 3.6 times higher than DEP standards (250 mg/L). Again, however, no one would drink water with that amount of sulfate because it would taste too bad. By June 2013, the highest sulfate level (205 mg/L) was below DEP's standards.

Sulfate is a mineral commonly found in well water. It gives water a salty taste. When certain types of bacteria digest sulfate in water, they produce a sulfur odor. This may smell unpleasant, but it does not harm health. The DEP standard for sulfate is 250 mg/L. When sulfate is at levels greater than 500 mg/L (twice the DEP standard), it can cause a bitter taste and may cause diarrhea. Diarrhea can lead to dehydration.

### ***For More Information***

**About health or to comment on the draft report:**

- Connie Garrett, Florida DOH: call (toll-free): 877-798-2772 or email her at: [PHToxicology@FLHealth.gov](mailto:PHToxicology@FLHealth.gov)

***Give your comments on the draft health report. To get a copy or send comments, please:  
Call us toll-free at 877-798-2772, visit our website at: [hazwaste.floridahealth.gov](http://hazwaste.floridahealth.gov)  
Or send an email to: [PHToxicology@FLHealth.gov](mailto:PHToxicology@FLHealth.gov)  
Comments are due on the draft report by September 10, 2015!***



**Comments are due by September 10, 2015**  
**Thatcher Chemical Site, DeLand**

**PLEASE CIRCLE ONE ANSWER FOR EACH QUESTION:**

1. I learned that a spill in 2011 at the Thatcher Chemical plant did not cause lasting harm to the nearby soil or groundwater.

**Yes                      Mostly                      Some                      No**

2. I learned that a draft health report about the soil and groundwater on and near the Thatcher Chemical site is ready for review and comment.

**Yes                      Mostly                      Some                      No**

3. I learned that iron, sulfate, and pH were the main concerns from the spill.

**Yes                      Mostly                      Some                      No**

4. I learned more about the DOH's health assessment process.

**Yes                      Mostly                      Some                      No**

5. I learned more about the DOH's plans at this site.

**Yes                      Mostly                      Some                      No**

My health concerns about the Thatcher Chemical site are:

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What health topics would you like to learn about? (Please list)

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**Optional (so we can contact you later, if needed)**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_  
Address: \_\_\_\_\_ DeLand, FL ZIP code: \_\_\_\_\_

Please fill this form out, fold in thirds, tape or staple shut, add a postage stamp and mail to the address on the back of this page. Or save a stamp by calling our toll-free number (877-798-2772) to give us your comments, or by sending them via e-mail to [PHToxicology@FLHealth.gov](mailto:PHToxicology@FLHealth.gov)

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Name \_\_\_\_\_  
Address \_\_\_\_\_  
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PLEASE PLACE  
FIRST CLASS  
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