

# Deerfield Water System - Water Quality Report 2011

## Consumer Confidence Report

**An amendment to the Safe Drinking Water Act in 1996 required that water suppliers publish and furnish customers with a Consumer Confidence Report (CCR) every year beginning in 1999.** Deerfield Water System is committed to ensuring the quality of your water, and we're proud that your drinking water meets or exceeds all federal and state requirements. The water that Deerfield Water System provides to its customers is safe. As you will see in this report, which shows results of our monitoring for the period of January 1 to December 31, 2010, our system had **no water quality violations**. As with all water systems, monitoring did detect the presence of some contaminants in small quantities, none exceeded the acceptable levels established by the EPA. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants can be obtained by calling the EPA's Safe Drinking Water Hotline at 800-426-4791.

### **Where does my water come from?**

Your water comes from one of the 10 wells located within the boundaries of Deerfield Resort. These wells range in depth from 150 to 700 feet in depth. A well by definition is "A vertical bore hole into the earth's crust usually to a depth of less than 300 ft. for the purpose of accessing an underground water supply (aquifer). A pumping system generally of the submersible type is normally installed to bring the water to the surface under sufficient pressure to be used in a home." These 10 wells and the distribution lines comprise the Deerfield Water System. Each of these wells is considered by the State of Tennessee, Division of Water Supply to be not under the influence of surface water. What this means is that rainwater, surface runoff and the lake do not directly impact the water that is supplied to your home.

### **Is my drinking water safe?**

Yes. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. In order to ensure that tap water is safe to drink, EPA and the Tennessee Department of Environment and Conservation prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. We conduct numerous and continuous tests on the 10 wells that comprise the Deerfield Resort Water System. Chlorine samples are taken **daily** from each well, and ongoing water quality testing is scheduled and monitored by the Tennessee Division of Water Supply. Each month ten samples (one from each well) are tested by the State Lab for total coliform. Our goal at the Deerfield Water System is to protect our water from contaminants... and we continually work with the State to determine the vulnerability of our water supply to contamination. In the latest study conducted by the State, a score of "Low Susceptibility to Contamination" [to groundwater contamination] was given. This is excellent news since it means that according to all evidence given, our water source will continue to be safe from groundwater contaminants. The following wording, as with much of this report, is required by the EPA, and is not a response required by any of Deerfield Water Systems testing. All of Deerfield Water System's infrastructure was installed beginning in the mid 80's, and consists of PVC, Steel, Copper and Brass. "If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Deerfield Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Info on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426 4791) or at <http://www.epa.gov/safewater/lead>."

### **How is my water treated?**

Deerfield Water System is treated with chlorine. We have recently installed additional chlorine metering pumps in order to be in compliance with State regulations that specify that there must be a backup source of disinfection installed before the water is introduced into the water system. These additional chlorinators assure that if one chlorinator fails... the other will maintain an acceptable level of chlorination in your water. Those levels are regulated by the state to be maintained between the levels of 0.2 parts per million and 4.0 parts per million. Our goal at Deerfield Water is to maintain our chlorine residual at 1.0. This assures more than adequate disinfection with little or no taste or odor.

### **Why are there contaminants in my drinking water?**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426 4791).

### **Do I need to take special precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

### **Monitoring and reporting of compliance data violations**

From time to time, monthly coliform tests may show positive results. If a test receives a positive result, it is retested within 24 hours at the original location, as well as at two other locations in the immediate area. These positive results may be caused by mishandling of the test samples on our part, or by the lab personnel. Of the few times that positive results have been returned on Deerfield's water system, retesting has **always** netted negative results.

### **How can I get involved?**

If you have any questions, complaints, suggestions, or you would like to become involved in our water system, please come by the Deerfield Resort Office at 1235 Deerfield Way, La Follette, TN 37766.

### **Is our water system meeting other rules that govern our operations?**

The State and EPA require us to test and report on our water on a regular basis to ensure its safety. We have met these and all other requirements.

### **Contact Information**

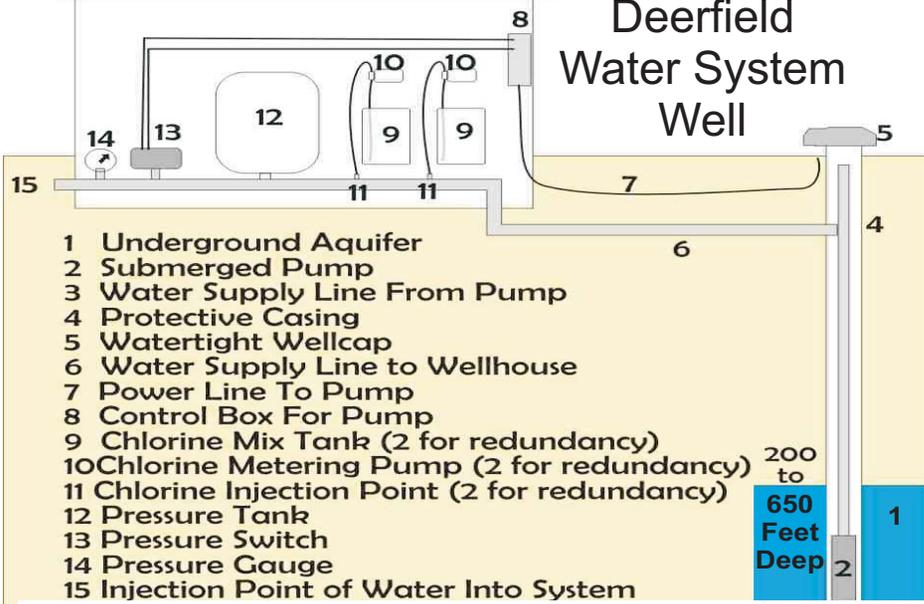
For more information about

- Contaminants and potential health effects, call the EPA's Safe Drinking Water Hotline at 1-800-426-4791.
- Deerfield Water System's water or this report, contact Scott Fields at 423-592-4222 or visit our Web site at [www.deerfieldresort.org](http://www.deerfieldresort.org).

Deerfield Water System is a Public Water System serving approximately 400 homes in the Deerfield Community of Campbell County.

# WELLHOUSE

## Typical Deerfield Water System Well



- 1 Underground Aquifer
- 2 Submerged Pump
- 3 Water Supply Line From Pump
- 4 Protective Casing
- 5 Watertight Wellcap
- 6 Water Supply Line to Wellhouse
- 7 Power Line To Pump
- 8 Control Box For Pump
- 9 Chlorine Mix Tank (2 for redundancy)
- 10 Chlorine Metering Pump (2 for redundancy)
- 11 Chlorine Injection Point (2 for redundancy)
- 12 Pressure Tank
- 13 Pressure Switch
- 14 Pressure Gauge
- 15 Injection Point of Water Into System

200 to  
650 Feet Deep

	Violation Y/N	Maximum Level Detected	Unit	Maximum Contaminant Level Goal	Maximum Contaminant Level	Likely Source of Contamination
<b>Organic &amp; Inorganic Contaminants</b>						
<b>Nitrate (as Nitrogen)</b>						
Well 1	N	1.12	MG/L	10	10	Runoff from fertilizer use;
Well 2	N	0.415	MG/L	10	10	leaching from septic tanks;
Well 3	N	1.13	MG/L	10	10	sewage; erosion of natural deposits
Well 4	N	0.543	MG/L	10	10	
Well 5	N	0.759	MG/L	10	10	
Well 6	N	0.299	MG/L	10	10	
Well 7	N	0.153	MG/L	10	10	
Well 8	N	0.29	MG/L	10	10	
Well 9	N	0.208	MG/L	10	10	
Well 10	N	0.741	MG/L	10	10	
<b>Sodium</b>						
Well 1	N	4.76	MG/L			Can be used in treatment process
Well 2	N	1.46	MG/L			
Well 3	N	0.911	MG/L			
Well 4	N	1.03	MG/L			
Well 5	N	0.706	MG/L			
Well 6	N	2.02	MG/L			
Well 7	N	2.65	MG/L			
Well 8	N	2.49	MG/L			
Well 9	N	1.68	MG/L			
Well 10	N	1.84	MG/L			
<b>MICROBIOLOGICAL CONTAMINANTS</b>						
<b>Total Chloriform Bacteria</b>	N			0	0	Naturally present in the environment.
<b>CHEMICAL MONITORING</b>						
<b>Chlorine-2010</b>						
Water additive used to control microbes						
Well 1	N	1.40	ppm	max 4ppm	min 0.2ppm	
Well 2	N	1.37	ppm	max 4ppm	min 0.2ppm	
Well 3	N	1.43	ppm	max 4ppm	min 0.2ppm	
Well 4	N	1.46	ppm	max 4ppm	min 0.2ppm	
Well 5	N	1.39	ppm	max 4ppm	min 0.2ppm	
Well 6	N	1.37	ppm	max 4ppm	min 0.2ppm	
Well 7	N	1.48	ppm	max 4ppm	min 0.2ppm	
Well 8	N	1.10	ppm	max 4ppm	min 0.2ppm	
Well 9	N	1.46	ppm	max 4ppm	min 0.2ppm	
Well 10	N	1.46	ppm	max 4ppm	min 0.2ppm	

# Deerfield Water System

Volatile Organic Compounds	Well 1A	Well 2B	Well 3C	Well 4D	Well 5E	Well 6F	Well 7G	Well 8H	Well 9I	Well 10J
	Condo A/B	Deer Lake	Condo C/D	Skyline	Big Pine	Pool	Deerwood	Bambi	Hilly	Deer Hill
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl-tert-Butyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	.0036mg/l	ND	.0077mg/l	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	.0008mg/l	ND	.0036mg/l	ND	ND	ND	ND	ND	ND
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	.0006mg/l	.0007mg/l	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND = Analyte NOT DETECTED at or above the reporting limit