

In the Heat of the Day

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As the summer progresses and the temperatures rise, water system components become more susceptible to failure. The failure of any single part of a water system can place undue stress on the rest of the system, and in some cases can result in contamination of the system. The water operator can work to minimize the possibility of this contamination by ensuring that the system is maintained under the minimum required pressure, and that potential points of contamination are properly protected. With the adoption of Chapter 22 to Title 179, the minimum operating pressure of a system must be maintained at a minimum of 20 psi throughout the system, except under extraordinary conditions such as unusual peak fire flow demands or major distribution system breaks. In order to protect potential points of contamination, it is necessary that the operator make sure the cross connection control program for the system is up to date and that it meets the requirements of state regulations. There have been a few recent changes in the regulations that apply to the cross connection control program in the areas of customer surveys, on-going public education and record keeping. Operators should check to be sure they have made the necessary changes in the ordinances, rules and requirements of the system's cross connection control program.

The person in responsible charge of the cross connection control program is charged with making sure the consumer surveys are returned to the system. The state wants to see 100% of the surveys returned, and if the system does not have 100% of the surveys, the state will want to know what action the system is taking to get the other forms returned. Once the surveys have been returned to the system, they need to be reviewed to determine if there are any unprotected cross connections in the system. Any surveys that indicate possible cross connections should be verified, possibly with an on-site inspection to determine if the cross connection exists. If unprotected cross connections are discovered, the system should require adequate protection as described in Title 179. It should be noted that there have been a few changes on what are considered high or low hazards. Post mix bar carbonators have been considered to be a high hazard, requiring a reduced pressure backflow preventer to protect them. These will now be considered a low hazard, as they are protecting the drinking water system from carbonated water, which is consumed daily in soda pop, and can hardly be considered a high hazard. These will still need to be protected with an approved backflow preventer, but this can now take the form of a vented dual check valve or a reduced pressure backflow preventer. Residential dual check valves that are being used as a part of the system backflow program can continue to be installed as a part of that program, but systems that were not using residential dual check valves prior to May 1, 2004 will not be able to consider their installation as a part of the system's cross connection control program. Trough urinals have been removed from the list of possible cross connections, but will, in most instances, be considered high hazards. Hose bib vacuum breakers will only be required to be frost-free and self-draining if they are subject to freezing.

Ongoing public education is still required as a part of a system's cross connection control program, but it has been amended to at least annually. During the summer months is a good time to get some information out to system customers, as this is a time

when a lot of temporary cross connections are produced. Flood irrigating gardens and filling baby pools, swimming pools and hot tubs are all potential cross connections. Garden hoses are being pulled out and used for slippery slides for the kids and for washing cars and even houses, and these hoses need to be protected. Notifying your customers of the potential hazards of using unprotected hoses may make it easier to get them to install the proper protection.

Test records of all testable backflow preventers should be examined to insure that they are up to date. Any overdue customers should be sent a notice advising them of the need and importance of having their backflow preventers tested. Test records should be reviewed as they are submitted to the system to insure that the assemblies actually passed. When backflow preventers have been tested, the results need to be certified to the water supplier within 30 days of the testing date. Although current state regulations do not require the testing of underground lawn sprinkler systems, it is recommended that all water systems require sprinkler systems to be protected. Most customers who have underground sprinklers have nice lawns that are kept up with fertilizer and insecticides, and these are toxic and should not be allowed into the potable supply. Some systems require the installation of backflow prevention on sprinkler systems, but do not require that the preventers be tested. Other systems require testing at a reduced rate, such as every three, four or five years. Some type of protection should be required, as the system could be liable for any damages caused by lawn chemicals being sucked back into the system.

Although summer is the busiest time for most water operators, it is also the time when problems could cause system pressure to be lost or greatly reduced. Anytime a system sustains a loss or reduction in pressure below the required minimum, the system should disinfect the supply to insure that bacteriological contamination is controlled. This is one reason the regulation changes require a system to have a chlorine pump available that can be connected within 24 hours of a possible contamination. Each system is not required to own a pump, but they should have a written agreement with another entity or system to borrow an injection pump if needed. Certified operators will know and understand the importance of keeping the system running smoothly during the hot summer months, and even though this is a busy time of the year, some time should be set aside to insure that the system is as well protected as it can be in case there is a loss of pressure due to a well failure, a water main break, summer storms or other causes that come unexpectedly. A little time before there is a problem can save a lot of time after the problem has arrived.