

# **New York State Children's Camps Fact Sheet**

## **Acceptable Annual Water Supply Start-up Procedures**

**(Required by Section 7-2.6(d) of Subpart 7-2 of the NYS Sanitary Code)**

**January 4, 2005**

An operator of a children's camp with an on-site potable water system that is not subject to continuous water use must ensure that an acceptable annual start-up procedure is completed. An operator of a camp with a potable water distribution system that is not subject to continuous water use, which receives water from an off-site public water system, may be required to implement a start-up procedure when the Permit-Issuing Official determines it to be necessary to ensure the satisfactory quality of the potable water.

The camp operator is required to use the start-up procedure contained in section 7-2.6(d)(1)(i) or an alternate procedure approved by the Commissioner of Health as stated in section 7-2.6(d)(1)(ii). Start-up procedures including required sampling must be completed at least 15 days prior to opening for the season.

Approved alternative procedures for start-up disinfection are described below. Only the start-up procedure(s) that are specified for the camp's potable water system type may be used. Facility operators that annually disinfect on-site well(s) as part of their routine start-up procedures should use procedure "C. Well Disinfection."

### **A. Water System Type: On-site Water System Using Chlorine Disinfection.**

1. Flush the well (when applicable) and chlorine contact tanks by running water from a tap nearest the water supply source until the water appears to be free of particulates and discoloration.
2. Install the chlorination equipment and ensure that it is operational.
3. Flush all water lines thoroughly utilizing continuous chlorination until a free chlorine residual of at least 2.0 ppm is measured at all taps in the distribution system. Shut off all taps and allow the water to remain undisturbed in the water lines for 24 hours. Evaluate the system for leaks and pressure loss.
4. If the pressure (20 psi minimum) and chlorine residual (minimum 0.2 ppm) are acceptable, flush the distribution system again until the water appears to be free of particulates and discoloration. Confirm that a free chlorine residual of at least 0.2 ppm is present and then shut off all taps and allow the water to remain undisturbed for another 24 hours.

\*If the system was unable to maintain adequate pressure or a free chlorine residual, correct the problem and repeat steps 2 and 3 before continuing.

5. After 24 hours (total 48 hours), flush each tap and confirm that a free chlorine residual of at least 0.2 ppm but less than 4.0 ppm is present. Collect at least one water sample for Total Coliform analysis from a representative point in the distribution system for each water source. Submit the sample(s) to a laboratory certified by the New York State Department of

Health. Water sample analysis reports must be submitted to the permit-issuing official prior to permit issuance.

**B. Water System Type: On-site Water System Using Ultra-violet (UV) Disinfection.**

1. Flush the well by running water from a tap nearest the well until the water appears free of particulates and discoloration.
2. Install the ultra-violet disinfection equipment and ensure that it is operational.
3. Flush all water lines on the system with UV treated water until the water appears to be free of particulates and discoloration, and the distribution system is completely filled with treated water. Shut off all taps and allow the water to remain undisturbed in the water lines for 24 hours. Evaluate the system for leaks and pressure loss.
4. If the pressure (20 psi minimum) is acceptable, flush the distribution system again until the water appears to be free of particulates and discoloration.

\*If a problem was discovered regarding maintaining adequate pressure, correct the problem and repeat steps 2 and 3 before continuing.

5. Collect at least one water sample for Total Coliform analysis from a representative point in the distribution system and submit the sample to a laboratory certified by the New York State Department of Health. Water sample analysis reports must be submitted to the permit-issuing official prior to permit issuance.

**C. Well Disinfection: On-site Well Water System Using Chlorine or Ultra-violet (UV) Disinfection**

1. Run water until clear, using an outdoor faucet closest to the well or pressure tank.
2. Flush all water lines on the system with water until the water appears to be free of particulates and discoloration, and the distribution system is completely filled.
3. Mix one quart of unscented household bleach containing about 5% chlorine in 5 gallons of water in a large bucket or pail in the area of the well casing.
4. Turn electrical power off to the well pump. Carefully remove the well cap and well seal if necessary. Set aside.
5. Place the hose connected to outdoor faucet inside well casing. Turn electrical power back on to the well pump and turn water on to run the pump.
6. Carefully pour the water and bleach mixture from the bucket or pail down the open well casing. At the same time, continue to run the water from the hose placed inside the well casing. Mix a second solution of one quart of 5% household bleach to 5 gallons of water in a large bucket or pail and repeat this step.
7. At each indoor and outdoor faucet, run the water until a chlorine odor is present, then shut each faucet off.

8. Continue running water through the hose inside the well casing to recirculate the chlorine-treated water. Use the hose to wash down the inside of the well casing.
9. After one hour of recirculating the water, shut all faucets off to stop the pump. Disconnect power supply to pump. Remove recirculator hose from well.
10. Mix one quart of 5% household bleach in 5 gallons of water and pour mixture down the well casing. Repeat this process with a second mixture. Disinfect the well cap and seal by rinsing with a chlorine solution. Replace well seal and cap. Allow the well to stand idle for at least eight hours and preferably 12 to 24 hours. Avoid using the water during this time. Evaluate the system for leaks and pressure loss.
11. If the pressure (20 psi minimum) and chlorine residual (minimum 2.0 ppm) are acceptable, flush the distribution system again until the water appears to be free of particulates and discoloration then run the water using an outdoor faucet and garden hose in an area away from grass, shrubbery and waterways until the odor of chlorine disappears.  
  
\*If the system was unable to maintain adequate pressure or a free chlorine residual, correct the problem and repeat step 10 before continuing.
12. When the system has been flushed (0.2 ppm to 4.0 ppm for chlorine disinfected systems or 0.0 ppm for U.V. disinfected systems), install the chlorination or ultra-violet disinfection equipment and ensure that it is operational.
13. Collect at least one water sample for Total Coliform analysis from a representative point in the distribution system for each water source. Submit the sample(s) to a laboratory certified by the New York State Department of Health. Water sample analysis reports must be submitted to the permit-issuing official prior to permit issuance.

#### **D. Water Source: Off-site Public Water System.**

- 1) Flush the seasonal use distribution lines with water from the approved off-site system until a detectable free chlorine residual\* is present and the water appears to be free of particulates and discoloration. Shut off the taps and allow the water to remain in the lines undisturbed for 24 hours.
- 2) After 24 hours, flush each tap until the water appears to be free of particulates and discoloration and confirm that a detectable free chlorine residual\* is present. Shut off the taps and allow the water to remain in the lines undisturbed for another 24 hours.
- 3) After 24 hours (48 hours total), flush each tap and confirm that a detectable free chlorine residual\* is present. Collect at least one Total Coliform water sample from a representative point in the distribution system and submit it to a laboratory certified by the New York State Department of Health. Water sample analysis reports must be submitted to the permit-issuing official prior to permit issuance.

\*If no residual appears after continued flushing, please notify the operator of the public water supply and the local health department.