



Introduction

Many noncommunity water systems (system) with treatment installed may also have a bypass line(s) with a valve (bypass valve) to maintain water supply to the facility during emergencies when the treatment process unit fails and/or is under maintenance. Though this bypass valve may be necessary, on several occasions after the completion of maintenance, the system returns the treatment to service while leaving the bypass valve open. The system, therefore, continues to supply untreated water to its consumers unnoticed until the next compliance sample is collected, results are elevated, and in some cases, the system is out of compliance. Though bypass valves are necessary, the implementation of a New Jersey Department of Environmental Protection, Division of Water Supply and Geoscience (Department) policy is required in the interest of public health.

Regulations Regarding Bypass Valves in Noncommunity Water Systems

- An ultra-violet disinfection unit for a system must be installed in a manner such that it cannot be bypassed.
- A treatment train including water softeners where the bypass valve is required to operate partially opened to maintain supplied water hardness within the optimal range of 50-250 mg/liter by blending raw water with cation exchanger effluent is permitted. This shall be properly documented in the system's Operation and Maintenance (O&M) Manual.

Noncommunity Water System Responsible Parties

- Nontransient: the water system (owner) and the licensed operator of record.
 - Licensed operator of record is responsible to operate the water treatment and report all breakdowns, problems, pump failures, and emergencies to the Department and maintain record of all remedial actions taken.
- Transient: the water system (owner).

Requirements

The following shall be followed by the system and licensed operator of record to operate a bypass valve to a treatment process:

- The raw water to finished water bypass line valve shall be permanently labeled as "Do Not Touch" and provided with a lock to prevent any accidental or unauthorized opening of the valve. In situations where the water system has received Department approval to operate the bypass valve to maintain water quality in accordance to the [New Jersey](#) and [federal](#) Safe Drinking Water Acts, a lock is not necessary. However, the approval must be maintained in the system's O&M Manual.
- Only the licensed operator of record, the back-up licensed operator or the system owner may unlock and operate the bypass valve.
- The O&M Manual shall be revised, signed, and dated by the licensed operator of record establishing criteria when and how the bypass valve is operated and/or adjustments are made, and those responsible for taking these actions.
- All information for the operation of the bypass valve shall be noted in the daily bounded logbook with time, date, and signature of the licensed operator or the system owner.

To maintain water quality in accordance with the Safe Drinking Water Acts:

- The system may be allowed to operate the bypass line to a treatment process on a continuous basis only if raw water from the well has no contaminant for which a maximum contaminant level (MCL) or action level (AL) is established (if the well water has high hardness levels and is treated by a cation exchanger that may need raw water to be blended with the cation exchanger effluent to maintain water hardness at 50-250 mg/liter). In these situations, written approval (permit) from the County Health Department (CEHA) or Department is required and must be documented in the state's records.

Emergency Situations:

- The bypass valve may be unlocked and operated only by the licensed operator of record, the back-up licensed operator or the system in an emergency.
- Per N.J.A.C. 7:10-2.4, "A supplier of water shall notify the NJDEP by telephone at (609) 292-5550 during business hours or calling hotline (877) WARN-DEP during non-business hours within six hours of the occurrence of an emergency."
- **Under no condition shall raw water of non-potable quality be supplied to the system for sanitary purpose without "Do Not Drink" signs posted at all locations (taps).**
- To lift the "Do Not Drink", the system must certify to the CEHA or Department that the isolation valve is closed and locked, all non-treated water is no longer within the distribution system (system properly flushed), and in cases of bypassing disinfection, provide a negative total coliform sample collected from the distribution system following the closing of the bypass valve.
- A public notice is required to be issued to all consumers and a copy of the public notice shall be submitted to the Department along with a [Public Notice Certification Form](#) within 10 days of issuance.