

For small systems, additional assistance may be obtained from:

- Qualified personnel in nearby water systems with cross-connection control programs.
- Cross-Connection Specialists acting as consultants that provide program development and implementation services to water purveyors (such as hazard surveys).

The practice of *grandparenting* allows the current status of something pre-existing to remain unchanged, despite a present change in policy.

#### **Element 4: Hazard Assessments or Surveys**

**Existing Facilities:** Older plumbing systems found in many existing facilities tend to pose greater cross-connection risks. Therefore, retrofitting of existing plumbing will sometimes be required. Drinking water regulations do not usually allow *grandparenting* of unprotected facilities if they pose a public health risk. Unprotected cross connections within a facility constitute a health hazard, regardless of the age of the facility or the existence of any previous policies.

When surveying existing facilities:

- Compile a list of all existing facilities (both purveyor-owned and customer-owned) and categorize them by suspected degree of hazard and hydraulic condition. The list should be prioritized according to health risk, beginning with the highest risk categories. Facility categories are listed in Appendices E and H.
- Establish and prioritize a list for the initial survey and periodic repeat surveys of facilities. Include the list in the purveyor's written program plan. Follow the list, except in circumstances that require a special survey of a facility, such as a response to a water quality complaint or a backflow incident.
- Initiate a survey by setting up an appointment to meet the owner or owner representative of the facility to be surveyed. Explain the customer's responsibility to protect the public water supply, the purveyor's conditions for service and the applicable state (or local) regulations. Establish a date for the survey. Request that the customer or maintenance person familiar with the plumbing system accompany the purveyor's staff.
- Explain to the customer that the purveyor must protect the public water system from contamination. Clarify that the purpose of the survey is to assess the overall risk to the water system and not to perform a plumbing inspection.

- Locate cross connections and explain the purveyor's concern about the potential health risk. Take photographs (if allowed) and notes to document all high hazard cross connections so they are easily located in subsequent surveys.
- Complete a survey report form and provide a copy to the customer as soon as possible. The survey report should state the following:
  - Assessed hazard
  - Reason for the assessed hazard
  - Required backflow protection (type of preventer) to protect the public water system
  - Where to install the backflow preventer, for example, at the meter (premises isolation) or at the fixture (in-premises protection) if allowed under the purveyor's cross-connection control program

The survey report should include a copy of the purveyor's installation standards and provide a resource for a list of approved assemblies. In the survey report, remind the property owner that the goal of the survey was to protect the distribution system and not to address in-premises protection.

**New Construction and Remodels:** Including the purveyor in the building plan review process can be very beneficial in addressing backflow protection for both new and existing services. By reviewing plans at the time of new construction, remodels, fire sprinkler upgrades or water service upgrades, the water purveyor can identify and stipulate the needed backflow protection before construction is completed.

For new construction and remodels:

- All applications for new services and resizing existing services should be routed through a staff position trained in the cross-connection control program.
- The plot plan, mechanical plan and the plumbing fixture schedule should be checked for actual and potential cross connections and appropriate backflow protection.
- When reviewing the plans for cross connections, reference your requirements and any additional applicable publications, such as the plumbing code and this manual.

- Once the plans have been reviewed, list the hazards found including potential cross connections and the backflow prevention required. Fire protection systems and water harvesting systems may not appear on the building plans.
- The location and type of backflow assemblies required by the water purveyor to protect the water distribution system should be noted on the final plans before the plans are approved.

If the purveyor accepts assemblies within the customer's premises in lieu of premises isolation, or as a condition of accepting a lesser degree of backflow prevention for premises isolation, those assemblies should be clearly identified.

The purveyor should state that the plan approval does not relieve the customer of the responsibility to comply with the requirements of other agencies having jurisdiction. This could include a requirement to install additional backflow assemblies or make other modifications deemed necessary in the final survey of the facilities prior to providing water service. If changes in the customer's water use increase the degree of risk to the purveyor, additional backflow prevention may be required.

- It is important that the purveyor provide the customer with the following information:
  - Thermal expansion information when premises isolation is required (to be noted on the plans)
  - Clear guidelines on the type of backflow prevention assembly, device or method required
  - The water purveyor's installation standards for assemblies and assembly test requirements
  - A resource where the customer can find a list of backflow prevention assemblies that are approved in their jurisdiction
- If water is needed for construction, a temporary service should be provided that is equipped with an approved method of backflow prevention acceptable to the purveyor.
- When construction is completed, the purveyor should conduct a follow-up survey of the facility and notify the customer of any changes needed for compliance. The purveyor should document any requests for changes through a survey report or letter to the customer.