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Backflow Prevention Program

I. PURPOSE

The purpose of this policy is to define the minimum requirements for all connections to the University potable water system. Compliance with these requirements will prevent the contamination of University drinking water and will protect the health, safety and welfare of the University's students, faculty, staff, and visitors. The Facilities Management is responsible for providing a safe domestic water supply to the campus. One of the ways in which the water supply can become unsafe is by water flowing from a water connection backwards into potable water supply pipe.

II. GENERAL

For the purpose of this policy, the following definitions shall apply.

APPROVED CONTAINMENT BACKFLOW PREVENTION ASSEMBLY***:*** An assembly listed by the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California or another listing agency, acceptable to the New Mexico Environment Department and approved by the UNM FM Utilities Division.

ISOLATION BACKFLOW PREVENTION ASSEMBLY***:*** An assembly listed by the International Association of Plumbing and Mechanical Officials and approved by the UNM FM Utilities Division.

CERTIFIED BACKFLOW PREVENTION *(CBPA)* ASSEMBLY TESTER: A person whom has demonstrated competence in the testing of backflow prevention assemblies by attending and passing the written and performance examinations administered as part of a training course approved by the Utilities Division. A backflow certification from the City of Albuquerque is the required credential for those who test and repair backflow devices.

CERTIFIED BACKFLOW PREVENTION ASSEMBLY (CBPA) REPAIRMAN: A CBPA tester whom is cognizant of all applicable federal, state and local laws, rules and regulations; and is licensed by the State of New Mexico Regulations and Licensing Department, Construction Industries Division, to perform the necessary repair work. Backflow certifications from the City of Albuquerque are approved for this requirement.

CONSUMER: The party responsible for the water system downstream from the service connection. This is typically one of the FM Areas for buildings, FM Environmental Services for irrigation and custodial, and Safety and Risk Services (SRS) for fire protection systems.

HAZARD, DEGREE OF: Determined based on an evaluation of conditions. Hazards are classified as follows:

(1) HEALTH HAZARD: An actual or potential threat of contamination of a physical or toxic nature to the water system that could be a danger to public health.

(2) NON-HEALTH HAZARD: An actual or potential threat of pollution of a physical nature to the water system, but which would not constitute a health hazard. The

maximum degree or intensity of pollution to which the potable water system could be degraded under the definition would be that which would cause a nuisance or be aesthetically objectionable.

(3) SYSTEM HAZARD. An actual or imminent threat of contamination to the University's water system which presents an imminent danger to public health.

INDUSTRIAL FLUIDS: Fluids or solutions that would constitute a hazard if introduced into a potable water system.

SERVICE CONNECTION:

(1) The boundary for domestic water is the last single valve that isolates service to the building.

(2) The boundary for irrigation water is the supply side of each backflow prevention assembly.

(3) The boundary for atmospheric vacuum breakers, AVB's, is the last single valve that shuts off service to the AVB isolation valve.

III. PROCESS

1.0 Responsibilities

1.1. It shall be the responsibility of the FM Utilities Division Associate Director to administer and enforce the provisions of this policy. This policy also assigns responsibilities to consumers as well as to certified backflow prevention assembly testers and repairmen as described in this section.

1.1.1. **FM-Utilities Division**. The Water Systems Supervisor of the Utilities Division shall be responsible for the protection of the University potable water system from contamination or pollution due to the backflow of contaminants or pollutants through the water service connections. The Water Systems Supervisor (the Enforcement Authority) shall enforce all the provisions of this policy that relate to cross-connection control by containment; shall administer a continuing cross-connection control program; and shall not install or maintain a water service connection unless the University potable water system is protected as required by this policy. The Utilities Division will also catalog, service, inspect and repair all backflow devices which isolate the UNM main distribution system (North, Main or South campuses) from the City of Albuquerque system. Similarly the Utility Division will be responsible for backflow devices that isolate utility plant operations and processes from the UNM domestic water distribution system. Accurate records of all inspections, tests, repairs, overhauls and replacements of backflow prevention assemblies shall be maintained for a period of at least four years. The Utilities Division will be responsible to send a report to the New Mexico Environment Department on all back flow compliance issues.

1.1.2. **FM-Facilities Maintenance Division.** The Facilities Maintenance Division will service, inspect and repair backflow devices that assure appropriate isolation of buildings from the campus water distribution system and from the city system where individual campus facilities have a direct service connection. The Facilities Maintenance Division will also catalog, test, and maintain backflow preventive devices which are installed to isolate building heating and cooling systems from

other domestic water uses. Accurate records of all inspections, tests, repairs, overhauls and replacements of backflow prevention assemblies shall be maintained for a period of at least four years with copies of the report forwarded to the Utilities Water Systems Supervisor.

1.1.3. **FM-Environmental Services Division.** The Environmental Services Division will catalog, service, inspect and repair all backflow devices which protect the campus water system, city water system or a building water system from UNM irrigation systems. Accurate records of all inspections, tests, repairs, overhauls and replacements of backflow prevention assemblies shall be maintained for a period of at least four years with copies of the report forwarded to the Utilities Water Systems Supervisor.

1.1.4. **FM-Engineering and Energy Services Division.** The Engineering and Energy Services Division shall be responsible for reviewing plans and insuring the backflow prevention assemblies are installed according to the code requirements.

1.1.5. **Safety and Risk Services Department (SRS).** The SRS Department is responsible for securing contract support for the periodic testing of backflow protection devices that isolate campus building fire protection systems from the building system, or from the Campus Water Distribution System, or where necessary from The City of Albuquerque water distribution system. For the purpose of consolidated inspection documentation, the Physical Plant Department will track the status of the testing of fire protection isolation devices which SRS will maintain and test by contract

2.0 Connection Requirements

2.1. **All Connections.** All connections to the UNM Water System will have a backflow prevention assembly. Facilities that pose a greater risk of contamination will be required to install and maintain a containment backflow prevention assembly. These facilities are: hospitals and clinics; nursing and convalescent homes; dental offices; laboratories; mortuaries and cemeteries; photographic film processing facilities; hazardous waste storage & handling facilities, veterinary and animal grooming clinics; food and beverage processing facilities; water services dedicated solely to landscape irrigation systems; greenhouses; premises with auxiliary water supplies; and buildings with a height greater than 30 feet.

2.2. **Installation of backflow prevention assemblies.** All backflow prevention assemblies shall be installed by a CBPA REPAIRMAN. If the installation is for a new building, the contractor shall be responsible for obtaining all required approvals, such as approved plans, permits and inspections.

2.3. **Tests and maintenance of backflow prevention assemblies**. All approved containment and isolation backflow prevention assemblies shall be tested at least once per year. The Utilities Division may require tests at more frequent intervals, if the Utilities Division deems the hazard in the premises to be great enough or if previous tests have failed. Tests shall be performed by CBPA testers. Assemblies that fail a test shall be repaired, overhauled, or replaced and retested promptly by a CBPA Repairman. Tests and repairs shall be at the expense of the Consumer. Backflow prevention assemblies must be tested in accordance with the test procedures set forth in the City of

Albuquerque's technical specifications. All records of inspections, tests, repairs, overhauls, and replacements must be maintained by the consumer for a period of at least four years. The test report form shall be provided by the Utilities Division and copies of the test results shall be given to the Water Supervisor.

3.0 Mitigation of Hazards

3.1. If a service connection is determined to be an actual or potential backflow contamination source, the Utilities Division shall evaluate the degree of hazard and proceed in accordance with the following criteria:

3.1.1. In the event a system hazard is determined to exist, the Utilities Division shall immediately terminate water service to the premises. The Utilities Division shall restore water service to the premises once the system hazard has been controlled or eliminated.

3.1.2. In the event an actual or potential cross-connection presents a substantial endangerment to the University water system, the Utilities Division shall enlist the assistance of the consumer to immediately control or eliminate the hazard. If the immediate hazard is not resolved within one day, water service to the premises shall be terminated until the hazard has been eliminated.

3.1.3. In the event no system hazards or substantial dangers are determined to exist, but actual or potential cross-connections require control by containment, the Utilities Division shall give the consumer written notice to submit a design and plan of implementation to the Utilities Division within 60 days and have an approved backflow prevention assembly(s) installed, inspected and tested within an additional 60 days.

4.0 Disconnection of Water Service

4.1. Notwithstanding any other provision of this policy, in the event a system hazard is determined to exist, the Utility Water Systems Supervisor shall immediately terminate water service to the premises. If reasonably possible, the Utilities Division shall notify the respective FM Area Manager prior to the termination and of the system hazard in the premises, and if not, after the termination as soon as practical. The water service will be restored to the premises once the consumer has controlled or eliminated the system hazard.

5.0 Revision and Approvals

5.1. The Associate Director of the Utilities Division shall be responsible for maintaining this policy. The Associate Directors for Environmental Services, Engineering and Construction, and Facilities Maintenance shall have the opportunity to review any revisions prior to approval by the Director of the FM.

IV. REFERENCES

None

V. ATTACHMENTS

Utilities Back Flow Test Form

Service connection drawings: Containment / Isolation Points of Jurisdiction

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Approved By: Associate Director for Utilities Digital signature of Lawrence J. Schuster at 08/03/2019 15:42, most recent revision 2019.03.08 15:42:14 -07'00' Date: _____
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