
MODEL WATER VENDING MACHINE REGULATION



**An Association of Food and Drug Officials
Model Code**

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INTRODUCTION

At the October 1982 meeting of the National Automatic Merchandising Association (NAMA) Automatic Merchandising Health-Industry Council (AMHIC) a motion was made to begin the development of design standards which could be incorporated into the NAMA "Standard for the Sanitary Design and Construction of Food and Beverage Vending Machines." As a result of that activity, Section 900 Water Vending Machines was officially adopted and became a part of the NAMA Construction Standard at the 1984 AMHIC Annual Meeting.

Since AMHIC is comprised of regulatory officials, manufacturers and operators of vending machines, the regulatory officials on the Council mentioned that current food service regulations were not appropriate for regulating these new water vending machines. These same officials then called the Association of Food and Drug Officials (AFDO) and were referred to their Laws and Regulations Committee as to the feasibility of developing a model regulation for water vending machines. This resulted in the 1986 first model regulation for water vending machines in the country.

As with any technology, innovation and changes in components and treatments occur over the years. This is precisely what happened to water vending machines since 1984. Thus, NAMA suggested to AFDO Laws and Regulations Committee in 1995 that the current model water vending machine regulation should be revised to reflect the latest in technology for processing water along with updating the monitoring requirements based on 10 years of experience in the field. This 1997 model water vending machine regulation is the result of those deliberations.

SECTION I. PURPOSE

- A.** The purpose of this ordinance is to set forth requirements and controls for vending machines designed to dispense water intended for human consumption to assure:
- 1.** Consumers using such machines are given appropriate information as to the nature of the vended water;
 - 2.** The quality of the water vended meets acceptable standards for potability; and
 - 3.** The vending equipment is installed, operated and maintained to protect the health, safety and welfare of the consuming public.
- B.** No provision or penalty of this ordinance is intended or shall be construed as changing, modifying, amending, repealing, superseding or conflicting with any laws, statutes, provisions, sections, regulations or rules of the State of _____ or of the United States, but rather shall be construed as supplemental and additional and not as a substitute.

SECTION II. DEFINITIONS

As used in this ordinance:

- A.** "Advertised" means to make a public claim, either verbally or in writing.
- B.** "Approved" means acceptable to the regulatory authority based on a

determination of conformity with principles, practices and generally recognized standards that protect public health.

- C.** "Approved materials" means materials approved by the regulatory authority as being free of substances which may render the water injurious to health or which may adversely affect the flavor, color, odor or microbiological quality of the water.
- D.** "Competent staff" means a person or persons with experience or knowledge concerning the proper operation of water vending machines who are under the supervision of the operator.
- E.** "Corrosion-resistant materials" means a material that maintains acceptable surface cleanability characteristics and is non-contaminating under prolonged influence of the water to be contacted, the normal use of cleaning compounds and sanitizing solutions and other conditions of the use environment.
- F.** "License/Permit" means the document issued by the regulatory authority that authorizes a person to operate a water vending machine.
- G.** "Operator" means any person who owns or operates a water vending machine.
- H.** "Person" means an association, a corporation, individual, partnership, other legal entity, government or governmental subdivision or agency.

- I. "Potable water" means water which meets the requirements of (standards enforced in jurisdictions).
- J. "Purified water" (vended) means water intended for human consumption, produced by distillation, deionization, reverse osmosis or other method as defined in the latest edition of the *United States Pharmacopoeia*.
- K. "Regulatory authority" means the local, state or federal enforcement body or authorized representative having jurisdiction.
- L. "Sanitization" means the application of cumulative heat or chemicals on cleaned food contact surfaces that, when evaluated for efficacy, yield a reduction of 5 logs which is equal to a 99.999% reduction of representative disease approved by the regulatory authority prior to delivery into the customer's container.
- M. "Treated water" means water which has been subjected to one or more advertised forms of mechanical, electrical or chemical treatment for the purpose of enhancing quality, taste or odor of the water being dispensed. Treatment includes, but is not necessarily limited to, the use of filtration, deionization, distillation, reverse osmosis, activated carbon, ozonation, ultraviolet light or other methods to improve the quality of local water supply.
- N. "Vended water" means water dispensed by a water vending machine.

- O. "Water vending machine" means any self-service device connected to an approved water supply which, upon insertion of a coin, coins, paper currency, token, card or receipt of payment by other means, dispenses unit servings of treated water and/or other water products into a container without the necessity of refilling the machine between each operation.

- P. "Water vending machine location" means the room, enclosure, space or area where one or more vending machines are installed and operated and includes the storage and servicing areas on the premises that are used in conjunction with the vending machines.

SECTION III. LOCATION REQUIREMENTS

Each water vending machine operator shall:

- A. Operate and maintain all water vending machines in a sanitary manner;

- B. Maintain adequate water quality monitoring;
and

- C. Be located in an area that has a smooth floor that can be maintained in a clean condition and in a manner that avoids insect and rodent harborage.

SECTION IV. OPERATOR REQUIREMENTS

- A. Apply for and maintain a current license/permit issued by the regulatory authority for each water vending machine;
and

- B.** Take whatever investigative or corrective action is necessary to assure that potable water is supplied to consumers.

SECTION V. WATER VENDING MACHINE CONSTRUCTION REQUIREMENTS

Machines used to dispense vended water shall:

- A.** Comply with the construction and performance standards of a qualified standards-making organization, such as NAMA, NSF or equivalent, acceptable to the regulatory authority.
- B.** Be designed and constructed to permit easy cleaning and maintenance of all exterior and interior surfaces and component parts.
- C.** Have all parts and surfaces which come into contact with the water constructed of approved, corrosion-resistant, non-contaminating and nonabsorbent materials capable of withstanding repeated cleaning and sanitization.
- D.** Have a recessed or guarded corrosion-resistant dispensing spout.
- E.** Be designed so all treatment of the vended water by distillation, ion-exchange, filtration, ultraviolet light, reverse osmosis, mineral addition or any other acceptable process is done in an effective manner.
- F.** Have an effective system for collection and holding of drip, spillage and overflow of water.

- G.** Have a backflow prevention device approved by the regulatory authority for all connections with the water supply.
- H.** Include safety related disinfection treatment of the vended water by ultraviolet light or other effective method approved by the regulatory authority prior to delivery into the customer's container.
- I.** Be equipped with a monitoring device designed to shut down operation of the machine when the disinfection unit fails to function, or the ultraviolet light output falls below minimum dosage requirements.
- J.** Be equipped with a self-closing, tight fitting door on the vending compartment or enclose the vending spout when the machine is not in use if the machine is located in a non-protected (outside) location.
- K.** Be maintained in a clean and sanitary condition, free from dirt and vermin.
- L.** Be connected to a State approved and regulated public water supply.
- M.** Be equipped with a monitoring device designed to shut down the purified water delivery system if treatment of the water by the machine does not result in a total dissolved solids content of less than 10 milligrams per liter in the purified water, if the water dispensed is advertised as "Purified."

- N. Be placed in a vending machine location, be it inside or outside, that can be maintained in a clean condition and in a manner that avoids insect and rodent harborage.
- O. Display, in a position clearly visible to customers, the following information:
 1. Name and address of the operator;
 2. License/permit number;
 3. The water source;
 4. Description of the treatment process or processes used;
 5. The chemical names of any preservatives or additives used; and
 6. A local or toll free telephone number that may be called for further information, service or complaints.

SECTION VI. SERVICE, SAMPLING, AND RECORDS

- A. All parts and surfaces of the water vending machine shall be maintained in a clean and sanitary condition by the water vending machine operator. The vending area and vending nozzle shall be cleaned and sanitized each time the machine is serviced. All surfaces in contact with the vended water shall be maintained as a deposit free, visibly clean system. Periodic servicing shall be done no less often than recommended by the machine manufacturer, or as required by the regulatory authority. A record of cleaning

and maintenance operations shall be kept by the operator for each water vending machine and be available for inspection by the regulatory authority for two years.

B. Sanitizing solutions shall be used in accordance with the EPA approved manufacturer's label use instructions and shall be used as follows:

1. A chlorine solution shall have a minimum temperature based on the concentration and pH of the solution as listed in the following chart:

| Minimum Concentration | Minimum Temperature | |
|-----------------------|----------------------|---------------------|
| | pH 10 or less; C (F) | pH 8 or less; C (F) |
| Mg/L | | |
| 25 | 49 (120) | 49 (120) |
| 50 | 38 (100) | 24 (75) |
| 100 | 13 (55) | 13 (55) |

2 . A quaternary ammonium compound solution shall:

- a. Have a minimum temperature of 24° C (75° F),
- b. Have a concentration of 200 mg/L as indicated by the manufacturer's use directions included in the labeling, and

- c. Be used only in water with 500 mg/L hardness or less;
 3. Other solutions of the chemicals specified in Paragraph 1. and 2. of this section may be used if demonstrated to the regulatory authority to achieve sanitization and approved by the regulatory authority; or
 4. Other chemical sanitizers may be used if they are listed in 21 CFR 178.1010 Sanitizing Solutions and applied in accordance with the EPA approved manufacturer's label use instructions.
- C. The vended water from each water vending machine shall be analyzed at least once every three (3) months for total coliforms and, if required by regulations, other physical, chemical or microbiological parameters shall be analyzed at the frequency determined by the State. However, provided a satisfactory method of post-treatment disinfection is utilized and based on a sustained record of satisfactory total coliform analyses, the regulatory authority shall allow modification of the 3-month sampling requirement as follows:
 1. When three (3) consecutive 3-month samples are each found to contain zero coliform colonies per 100 milliliters of vended water, microbiological sampling intervals shall be extended to a period not exceeding six (6) months. Should a subsequent 6-month sample test positive for total coliform, the required sampling frequency shall revert to the

3-month frequency until three (3) consecutive samples again test negative for total coliform bacteria.

2. If any sample collected from a machine is determined to be unsatisfactory, the operator shall immediately notify the regulatory authority. Then the machine shall be cleaned, sanitized and resampled immediately. Until the sample results are known the machine shall remain out of service. If after being cleaned and sanitized, the vended water is determined to be positive for coliforms, the machine shall remain out of service until the source of contamination has been located and corrected and a negative sample obtained.
- D. The analysis shall be performed by a laboratory certified by the State. Records of sampling and analysis must be maintained on file for at least two (2) years and must be available for review by the regulatory authority.
- E. The vended water from each water vending machine utilizing silver impregnated carbon filters in the treatment process shall be analyzed once every six (6) months for silver. The analysis shall be performed by a laboratory certified by the State. Records of sampling and analysis must be maintained on file for at least two (2) years and must be available for review by the regulatory authority.

- F. Purified water from each water vending machine which advertises "Purified " water shall be analyzed by the operator for total dissolved solids by conductivity measurement each time the vending machine is serviced. Records of these measurements shall be kept on file and be available for inspection by the regulatory authority for two (2) years.
- G. A more frequent analysis of the above parameters may be required by the regulatory authority if there is evidence the vended water is subject to potential contamination because of the presence of undesirable elements, compounds, or materials caused by the passage of water through the machines or from the water supply.

**SECTION VII. LICENSE/PERMIT REQUIRED;
APPLICATION FOR LICENSE/PERMIT;
LICENSE/PERMIT DURATION;
LICENSE/PERMIT FEE**

- A. Each person desiring to operate a water vending machine in this jurisdiction, shall, prior to such operation, obtain a license/permit from the regulatory authority, for a specific number of vending machines.
- B. Application for a license/permit shall be in writing and shall contain the following:
 - 1. Name and address of applicant;
 - 2. Number of machines for which a license/permit is requested and the location of each;

3. Evidence each model of machine intended to be used meets all requirements of Section IV of this ordinance;
 4. Evidence that the water supplied to each machine is obtained from an approved public water supply;
 5. Evidence the person applying for the license/permit has:
 - a. A competent staff for the local supervision of the operation of the machines which shall consist of a person or persons with at least one (1) year experience in the proper operation of the make and model of the water vending machine they will operate or similar training or experience in this or related operations.
 - b. An acceptable maintenance program for the routine servicing of water vending machines which shall include written servicing instructions for the operator; technical manuals for the machine and water treatment appurtenances involved; and regularly scheduled service visits.
- C.** After a reasonable notice, the regulatory authority shall either grant or deny an application for licensure or permit. An

issued license/permit shall identify the number of machines subject to that license. Licenses/permits issued pursuant to the provisions of this ordinance shall not be transferable.

- D. Each license/permit issued in accordance with the provisions of this ordinance shall be valid for a period of one (1) year and shall remain in force and effect until terminated, suspended, revoked or canceled upon due notice and hearing. Upon expiration of the license/permit, the license/permit shall be promptly renewed according to the provisions set by the regulatory authority.
- E. Each person applying for a license/permit to operate water vending machines within the State shall pay an initial and an annual per machine license/permit fee in an amount set by the regulatory authority.

**SECTION VIII. REFUSING, SUSPENDING, OR
REVOKING LICENSE/PERMIT;
HEARING**

The regulatory authority may, after a hearing, deny issuance, renewal or temporarily or permanently suspend or revoke a license/permit for failure to comply with the requirements of this ordinance under the jurisdiction of the regulatory authority.

NOTES

***For additional copies of the Model Water Vending Machine
Regulation contact:***

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