

ARIZONA DEPARTMENT OF WATER RESOURCES

**Required Public Education Program and BMPs
in the Modified NPCCP**

Adapted from

May 2008 Modifications to Chapter 5
Municipal Conservation Program Third Management Plan
Appendix 5 –N. Water Conservation Measures

I. Public Education Program

A large municipal provider regulated under the Modified Non-Per Capita Conservation Program (Modified NPCCP) shall implement a public education program that includes the following components:

- **Communicate at least twice a year:** At least twice a year, the provider shall communicate to customers the importance of water conservation and inform them of the water conservation information available from the provider and how to obtain the information. Communication channels shall include one or more of the following: water bill inserts, messages on water bills, provider web page, post cards, newsletters or print pieces. Providers who do not have websites or conservation information on their website are encouraged to develop websites with conservation information.
- **Provide free written information:** The provider shall provide customers with free written information on water conservation (i.e., pamphlets, brochures). The information shall be available in the provider's office and the provider shall send information to customers on request. The provider is encouraged to distribute water conservation information at other locations as well.

II. Additional Best Management Practices (BMPs)

Large municipal providers regulated under the Modified NPCCP must select from the following list of additional BMPs to comply with the program. The Director may modify the list to include additional BMPs pursuant to the procedure set forth at the end of this appendix. A copy of the most recent the list of additional BMPs shall be posted on the department's web site and shall be on file in the Active Management Area offices.

CATEGORY 1: PUBLIC AWARENESS/PUBLIC RELATIONS

Programs in this category are designed to provide water users information on the need for and importance of water conservation, as well as information on the conservation services available to them. The following programs qualify in this category:

(1.1) Local and/or Regional Messaging Program

The water provider actively participates in a water conservation campaign with local or regional advertising. The campaign must promote ways for citizens to save water. Methods to promote a campaign may include media such as television and radio commercials, web sites, and utilization of promotional materials such as brochures (Spanish and English), vehicle signs (busses, garbage trucks, etc.), bookmarks, magnets, etc.

(1.2) Special Events/Programs and Community Presentations

At educational or promotional events, water conservation information is displayed and made available and/or presentations are given. Events may include home and garden shows, art shows, community celebrations, environmental shows, etc. To receive full credit for this measure, a provider must attend and staff at least three events per year.

(1.3) Market Surveys to Identify Information Needs/Assess Success of Messages

The water provider surveys customers to gather data regarding information needs, program preferences and/or response to conservation messages. Prior to designing a survey, the provider must set objectives for the survey and identify systematic methods for data collection, analysis, and communication of results. Survey results will be used to improve current water conservation activities and/or to plan future activities. This measure will be effective for only one year. In subsequent years, the provider must replace this measure with another BMP from categories 1 through 7 of this section. The new BMP must be appropriate for the provider's service area as reflected in the provider's approved Provider Profile.

CATEGORY 2: CONSERVATION EDUCATION AND TRAINING

Programs in this category are designed to assist users to better understand how to conserve water by providing written information and/or training in water conservation tools and techniques. The following programs qualify under this category:

(2.1) Adult Education and Training Programs

The water provider implements an adult education and/or training program. The program must include a combination of efforts to provide adults within the provider's service area with hands-on training. This may include, but is not limited to, regularly scheduled workshops for homeowners, a speaker's bureau, and/or training programs for landscape professionals. Programs can be targeted toward homeowners, landscape professionals, and/or non-residential users. A provider that implements multiple adult programs/efforts may be eligible to receive credit for more than one BMP if the programs/efforts can be shown to be separate and distinct from one another (i.e., a provider that maintains an active speakers bureau and offers a workshop series is eligible to receive credit for two BMPs).

(2.2) Youth Conservation Education Program

The water provider works with schools in its service area to increase students' understanding of water resources and to promote water conservation. The program may include, but is not limited to, a combination of providing instructional assistance, education materials, teacher education, classroom presentations, and field trips to water related facilities. A provider that implements multiple youth programs may be eligible to receive credit for more than one BMP if the programs can be shown to be separate and distinct from one another (i.e., a provider that offers free water conservation school assemblies with accompanying printed materials for elementary school students and also distributes a middle school student activity book and teacher guide is eligible to receive credit for two BMPs).

(2.3) New Homeowner Landscape Information

The water provider makes low water use landscape information packets available to all new owners of newly constructed homes, either through direct distribution (mail or delivery) or through delivery by the home builder. The provider also notifies new owners of existing homes (resale) that information on low water use landscaping is available and must provide such information on request. The number of notifications sent and packets mailed must be recorded and noted in the provider's conservation efforts report.

(2.4) Xeriscape Demonstration Garden

The water provider installs and maintains a water efficient demonstration garden. The garden must be available to the public and include interpretive signage and/or literature about low water use plants and/or water efficient landscape techniques.

(2.5) Distribution Plan for Water Conservation Materials

The water provider develops, maintains and utilizes a written distribution plan for marketing water conservation materials and programs. The plan must include the marketing channels that are available to promote water conservation programs and how those channels will be used. Communication modes used to promote water conservation programs may include water bill inserts, city cable, on-hold messages, e-mail messages, public events, water conservation workshops, water conservation web sites, and local publications. Distribution outlets for water conservation materials must be noted and may consist of partnerships with libraries, businesses (i.e., landscape architects, nurseries, realtors) or other related organizations (i.e., master gardeners). The plan must contain: (1) goals and objectives for distribution of materials over a two-year period, beginning the year following plan development; (2) a timetable for distribution; and (3) a mechanism for tracking distribution of materials. This measure will be effective for only one year. In subsequent years, the provider must replace this measure with another BMP from categories 1 through 7. The new BMP must be appropriate for the provider's service area as reflected in the provider's approved Provider Profile

CATEGORY 3: OUTREACH SERVICES

Programs in this category are designed to provide users with consultations, audits and/or retrofit information designed to improve water use efficiency. The following programs qualify in this category:

(3.1) Residential Audit Program

The water provider implements an audit program for residential customers. The audit can be self-audit (provider offers self-audit kits) or be conducted by the provider or its designated representative. Audits may include indoor and/or outdoor components, but must include a meter check. An audit may include, but would not be limited to, irrigation system, pool, water feature, toilets, faucets, and shower checks. The audit program must be offered to all homes within a provider's service area.

(3.2) Landscape Consultations (Residential and/or Non-residential)

The water provider or a designated representative offers landscape consultation services to residential and non-residential customers. The provider implementing this measure must focus on those portions of its service area with the greatest potential for savings. Services would include evaluation of irrigation system, controller programming/irrigation

scheduling and plant selection/turf conversion possibilities. A meter check also could be included. The individual providing the consultation must provide either on-site written suggestions or on-site verbal suggestions with written follow-up. Other related programs (i.e., rebates for turf removal/converting to xeriscape) could be offered during the consultation.

(3.3) Water Budgeting Program

The provider offers assistance to one or more non-residential water user groups (such as homeowner associations, industry, commercial properties, government facilities or parks) in developing monthly and/or annual water use target amounts for outdoor and/or indoor water use that reflect highly water efficient water use/application rates. These rates should meet or exceed water use efficiencies required for similar uses in the Department's Third Management Plan. If they are not addressed in the Plan, water use rates should be commensurate with state of the art water efficiency standards found elsewhere in the body of water conservation literature.

(3.4) Residential Interior Retrofit Programs

The water provider provides free or low cost plumbing fixtures and/or fixture retrofits, such as faucets, faucet aerators, low flow showerheads, toilets and toilet dams, to residential customers living in homes built prior to the adoption of the 1990 Uniform Plumbing Code requiring low flow plumbing fixtures. The provider must offer the fixtures/fixture retrofits to all residential customers meeting the above criteria unless the provider can demonstrate that targeting certain portions of its water service area is likely to yield the highest participation and/or potential water savings. The provider must select appropriate communication channels to advertise the program.

(3.5) Non-residential Interior Retrofit Programs

The water provider provides free or low cost plumbing fixtures and/or fixture retrofits, such as faucets, faucet aerators, low flow showerheads, toilets, urinals, and toilet dams, to non-residential customers with facilities built prior to the adoption of the 1990 Uniform Plumbing Code requiring low flow plumbing fixtures. The provider must offer the fixtures/fixture retrofits to all non-residential customers meeting the above criteria unless the provider can demonstrate that targeting certain portions of its water service area is likely to yield the highest participation and/or potential water savings. The provider must select appropriate communication channels to advertise the program.

(3.6) Customer High Water-Use Inquiry Resolution

The water provider assigns a designee(s) to assist citizens with their high water-use complaints. The program includes a site inspection to discover the cause of an increase in the water bill. To receive credit for this measure, the provider must follow up in some way on every customer inquiry and keep a record of inquiries and follow-up activities.

(3.7) Customer High Water Use Notification

The water provider monitors customers for high water use. To receive credit for this measure, the provider must contact the high water use customers via telephone, by email, by mail or in person. The notification must include information on provider services that could benefit the customer, such as audit programs, publications, and rebate programs.

The type of notification and the criteria used for determining which customers are notified must be recorded.

(3.8) Water Waste Investigations and Information

The water provider assigns a designee(s) to assist citizens with water waste complaints. A complaint investigation would typically include a site inspection and some type of follow-up action, such as education of the customer to prevent water waste or a letter of enforcement if applicable. To receive credit for this measure, the provider must follow up in some way on every water waste complaint and keep a record of complaints and follow-up activities.

CATEGORY 4: PHYSICAL SYSTEM EVALUATION AND IMPROVEMENT

These programs ensure that the water system is running at optimal efficiency (maintenance) or to improve water use efficiency in the physical water system by making one or more physical system improvements. The following programs qualify in this category:

(4.1) Leak Detection Program

The water provider implements a systematic evaluation of its water distribution system to identify and fix leaks. The provider must implement this program throughout its service area unless the provider can demonstrate that targeting certain portions of their water service area is likely to yield the highest potential water savings.

(4.2) Meter Repair and/or Replacement Program

The water provider implements a program to systematically assess the meters in its water service area to identify under-registering meters and to repair or replace them.

(4.3) Comprehensive Water System Audit Program

The water provider conducts a systematic audit of its water distribution system, systems control equipment, and water records to identify and quantify water losses. The audit must include an analysis of results that includes plans for corrective measures and can be a precursor to a leak detection and/or meter repair/replacement program. This BMP will be effective for only one year (unless the provider can offer justification for an ongoing or multi-year program). In subsequent years, the provider must replace this measure with another BMP from this list of additional BMPs to continue to meet its Modified NPCCP requirements.

CATEGORY 5: ORDINANCES / CONDITIONS OF SERVICE/TARIFFS

Programs in this category are designed to reduce water use within the service area and/or increase water use efficiency by limiting or reducing water used for specific purposes. Ordinances would apply to cities and towns and tariffs would apply to ACC regulated municipal providers (private water companies). A water provider that is not directly part of a municipality can get credit if it works with local or county jurisdictions to implement a new ordinance. Each ordinance/tariff/condition of service selected from the list below will be counted as one BMP.

(5.1) Low Water Use Landscaping Requirements for Residential, Multi-family, Non-residential, and/or Common Areas.

(5.2) *Water Tampering / Water Waste Ordinances*

(5.3) *Plumbing Code Requirements*-- if they are more restrictive than the 1990 Uniform Plumbing Code or its equivalent

(5.4) *Limitations on Water Features* (*fountains, waterfalls, ponds, water courses and other artificial water structures*) **and/or *Water Intensive Landscaping and Turf***

(5.5) *Ordinance for Model Homes in New Residential Developments*

Landscaping at model homes in new residential developments is required to be water efficient. Water-intensive landscaping is limited to functional areas and/or limited in size.

(5.6) *Graywater Ordinances* -- required onsite graywater/water harvesting features at residences and/or businesses

(5.7) *Requirements for Car Wash Water Recycling*

(5.8) *Landscape Watering Restrictions* (*time of day, etc.*)

(5.9) *Requirements for Hot Water Recirculation Devices for Residential, Multi-family, and/or Non-residential Sectors*

(5.10) *Retrofit on Resale*

As an ordinance or as a condition of service, the owner of a single-family home, a multi-family home complex, and/or a non-residential facility is required to replace all plumbing fixtures inside the housing unit/commercial unit that do not conform to current low water using standards. This could be done by the seller prior to sale or by the buyer subsequent to the sale. Retrofits would include replacement of toilets, showerheads, and faucets

(5.11) *Landscape Water Use Efficiency Standards for Non-residential Users*

(5.12) *Conservation Tariff* (*private water companies*)

(5.13) *Requiring a Water Use Plan*

A plan is to be submitted by all new commercial, industrial, and institutional users with a projected annual water use requirement of ten acre-feet or more per year. The water use plan must identify all water uses anticipated by the user, and the water efficiency measures associated with the uses. The water use plan must include at least three of the following:

- a. Statement of water efficiency policy.
- b. Water conservation education/training for employees.
- c. Identification of on-site recycling and reuse strategies.
- d. Total cooling capacity and operating TDS or conductivity for cooling towers.
- e. Identification of best available technologies used for process, cooling, and domestic water uses.
- f. Landscape watering system distribution uniformity and landscape water budget.
- g. Total annual water budget for the facility.

CATEGORY 6: REBATES/INCENTIVES

Programs in this category are designed to provide users with an incentive for implementing a water conservation practice. Program can include rebates or incentives such as fee reductions and/or waivers. The following programs qualify in this category:

A. INCENTIVES (INDOORS)

(6.1) Toilet Rebate Program

The water provider offers a financial rebate or incentive to all owners of residential and/or multi-family homes in the provider's service area that were constructed prior to adoption of the 1990 Uniform Plumbing Code for the replacement of high water use toilets with a ULF toilet.

(6.2) High Efficiency Flush Toilet Rebate Program

The water provider offers a financial rebate or incentive to all owners of residential and/or multi-family homes in its service area to replace a high use toilet with an hef toilet.

(6.3) Toilet Replacement Program

The water provider implements a program to replace high use toilets with ULF or HEF toilets in residential and/or multi-family homes in the provider's service area.

(6.4) Indoor Water Fixture Replacement/Rebate/Incentive Program

The water provider implements a program to retrofit indoor water fixtures, including showerheads, aerators and toilet flappers, in all homes and multi-family homes within its service area constructed prior to adoption of the 1990 Uniform Plumbing Code. The provider shall offer to replace the fixtures or shall offer a financial rebate or incentive for homeowners to replace the fixtures.

(6.5) Rebate for Hot Water Recirculating Systems/Instant Hot Water Systems

The water provider shall offer a financial rebate or incentive to residential, multi-family, and/or non-residential customers to install hot water recirculation devices or devices that provide instant hot water at the point of use.

(6.6) Water Efficient Appliance Rebate/Incentive Program

The water provider shall offer to customers a financial rebate or incentive for the acquisition of water efficient appliances.

B. INCENTIVES (OUTDOOR)

(6.7) Graywater Retrofit Rebate/Incentive

The water provider shall offer customers a financial rebate or incentive for the retrofit of an onsite graywater feature, along with education on how to retrofit and the benefits of using graywater onsite.

(6.8) Water Harvesting Retrofit Rebate/Incentive

The water provider shall offer customers a financial rebate or incentive for the installation of water harvesting features that may include gutters, downspouts, landscape designs, and containers, along with information about water harvesting techniques.

(6.9) Landscape Conversion Rebate/Incentive

The water provider shall offer customers a financial rebate or incentive for the conversion of landscape to reduce the overall outdoor water usage. This would most likely involve replacing turf with a xeriscape landscape. Information about landscape conversions must be provided to customers.

(6.10) Rebate/Incentive for Installing Xeriscapes in New Landscapes

The water provider offers customers with new landscapes a financial rebate or incentive for installing a xeriscape landscape.

C. NON-RESIDENTIAL

(6.11) Commercial and Industrial program

The water provider identifies commercial and industrial customers with the highest conservation potential and implements a water conservation program for those customers. The program may include toilet rebates or replacements, audits, incentives and grants.

(6.12) Large Landscape Conservation Program

The water provider implements a program to provide non-residential customers with support and incentives to improve their landscape water use efficiency.

(6.13) No/low interest loans for implementing BMPs

The water provider offers assistance to customers wishing to invest in projects intended to reduce existing water use or bring new uses in at high rates of efficiency.

CATEGORY 7: RESEARCH/INNOVATION PROGRAM

Programs in this category are designed to encourage water providers to conduct systematic evaluations of conservation measures already implemented, to implement state of the art water conservation technologies and techniques, and/or to develop and/or try new technologies and techniques. The following programs qualify in this category:

(7.1) Implementation of an Emerging Technology

To receive credit for this measure, the provider must submit with its Conservation Efforts Report documentation that includes a description of the technology, any available information on water savings, a description of how the technology was implemented within the provider's service area and a description of the results. This documentation shall also be made available for public distribution.

(7.2) Initiating Applied Research -- to enhance program decision making or provide financial support or in-kind services for such projects

To receive credit for this measure, a provider must describe its involvement/participation and method(s) of support. Upon completion of the research, the provider shall submit documentation of the analysis and results with its Conservation Efforts Report. This documentation shall also be made available for public distribution.

(7.3) Evaluation of New and Emerging Technologies and Practices

To receive credit for this measure, the provider must submit documentation with its Conservation Efforts Report stating the objectives of the evaluation, methods used to conduct the evaluation, and results of the investigation. This documentation shall be made available for public distribution.

(7.4) Conducting a Quantitative Analysis -- of a conservation measure that yields results regarding actual water savings

To receive credit for this measure, the provider must submit documentation with its Conservation Efforts Report stating the methods used to conduct the analysis and the results of the investigation. This documentation shall be made available for public distribution.

(7.5) Implementation of Smart Irrigation Technology

To receive credit for this measure, the provider must briefly describe the project location, implementation methods, and estimates of irrigation efficiency or water savings, if and when available, and submit the information with its conservation efforts report.

(7.6) Development of Industry Partnerships to encourage and implement collaborative efforts and activities designed to save water. To receive credit for this measure, a provider must describe the partnership, its objectives, its ongoing efforts and any efforts planned for the future, and submit the information in its Conservation Efforts Report.

(7.7) Providing Financial Support or In-kind Services for Development of New Conservation Technologies and Products

To receive credit for this measure, the provider must describe its involvement/participation and method(s) of support. Upon completion of the research, the provider must submit documentation of the analysis and results with its Conservation Efforts Report.

(7.8) Piloting a New Initiative, Project or Program

To receive credit for this measure, the provider must submit documentation with its Conservation Efforts Report that includes a description of the project/program, a description of how the project/program was implemented within the provider's service area, and a description of the results.

PROCEDURE FOR ADDING A BMP TO THE LIST OF ADDITIONAL BMPs

1. A large municipal provider may apply to the director to add a BMP to the list of additional BMPs set forth in this appendix.
2. Upon receipt of an application submitted pursuant to paragraph 1 above, the Director shall review the application and may request additional information from the applicant and may seek information from other sources as may be necessary to determine whether the BMP should be added to the list.
3. If the Director approves the application, the Director shall add the BMP to the list of additional BMPs set forth in this appendix. The Director shall post the modified list of additional BMPs on the Department's web site and shall file the modified list within the Active Management Area offices.