

WATER CONSERVATION AND DROUGHT OR
WATER SUPPLY EMERGENCY MANAGEMENT PLAN REPORT
FOR PUBLIC WATER SUPPLY SYSTEMS

PERMITTEE: _____ PROGRAM INTEREST NO.: _____

CONTACT NAME: _____ DATE: _____

ADDRESS: _____

EMAIL ADDRESS: _____

TELEPHONE NO.: _____

Submit to: Mail Code 401-04Q
Bureau of Water Allocation & Well Permitting
P.O. Box 420
Trenton, New Jersey 08625-0420

See your Water Allocation Permit for your submittal schedule

NOTE: You must read and complete all sections of the worksheet. Your Water Allocation Permit requires water conservation and water management activities that you may not usually consider in this context but no section may be omitted.

Please discard your file copies of the previous worksheets and/or delete or update computerized forms. Your report must be submitted on an exact replica of this worksheet, either a photocopy or a computerized version, with the original kept on file for future reference. An incomplete worksheet will be returned to you. If there is not enough space provided for your information, additional pages should be used.

I. WATER CONSERVATION COMPONENTS

A. WATER SYSTEM

1. Allocation: _____ mgm, _____ gpm, _____ mgy
2. Sources of water:
number of wells _____
number of surface intakes _____
bulk purchase _____ mgd, _____ mgm, _____ mgy
3. Metering: (circle one)
raw water source Yes No
finished water Yes No
delivered water Yes No

4. Date of last source meter calibration: _____

5. System Capacity:

treatment _____ mgd

delivery _____ mgd

storage _____ mg

6. Customer Base:

| | # of Connections | # of Meters | % of overall use |
|--------------|------------------|-------------|------------------|
| Residential | | | |
| Commercial | | | |
| Industrial | | | |
| Municipal | | | |
| <i>Total</i> | | | |

7. Interconnections:

existing/size _____

under construction _____

planned (5 year) _____

Interconnection Use (circle one) Bulk Emergency Other (describe)

Agreements for use (circle one) Yes (give details) No

8. Map or diagram of the system (submit only once unless there are changes).

B. ANALYSIS OF WATER USE

1. Demand: Report demand from the most recent year for which you have complete data as the "Base Year". Note the years the data refers to where indicated.

| USAGE | PEAK MONTH (mgm) | ANNUAL (mgy) |
|-------------------------------|---------------------|-----------------|
| Base Year 20____ | | |
| Previous Year 20____ | | |
| Peak Year (of last 5) 20____ | | |
| Peak Year (of last 10) 20____ | | |

| PROJECTED USAGE | PEAK MONTH (mgm) | ANNUAL (mgy) |
|------------------|---------------------|-----------------|
| Next Year 20____ | | |
| 5 Year 20____ | | |

2. Customers:

Estimated population _____ (20__ year)

Names of municipalities served _____

3. Per Capita Use

To produce standardized data, please use the following calculations, using data from the years identified under B.1 - Demand.

$$\text{Average Use} = \frac{(\text{Total annual usage* in gallons} \times \% \text{ Residential Use}) \div 365}{\text{Number of People Served}}$$

$$\text{Minimum Use} = \frac{(\text{Minimum month usage in gallons} \times \% \text{ Residential Use}) \div 31^*}{\text{Number of People Served}}$$

$$\text{Maximum Use} = \frac{(\text{Maximum month usage in gallons} \times \% \text{ Residential Use}) \div 31^*}{\text{Number of People Served}}$$

**Usage = Total Diversion + Total Purchased – Bulk Sales. Divide by 28,30 or 31, depending on number of days in minimum/maximum month*

| | Current Year 20__ | Last Year 20__ |
|---------|----------------------|-------------------|
| Average | | |
| Minimum | | |
| Maximum | | |

Calculation based on (circle one) total pumpage or residential use only

4. Management of Peaks (describe approach):

5. Projections of Growth:

| | Service Connections |
|--------------------|---------------------|
| new in past year | |
| expected this year | |
| projected 5 year | |

C. UNACCOUNTED-FOR WATER

1. Leak Detection & Repair Program

- a. frequency of surveys (performed on a regular schedule, as conditions require, etc.)

- b. miles of mains surveyed per year _____

valves tested _____

hydrants tested _____

- c. methods employed _____

- d. equipment used _____

- e. equipment owned/rented/borrowed/consultant employed

2. Leak Repair Activities (for last calendar year)

- a. Leaks detected

| | Number | Size | Repaired |
|----------|--------|------|----------|
| Mains | | | |
| Valves | | | |
| Hydrants | | | |

- b. estimate of water saved _____

- c. manpower/equipment available to make repairs _____

3. Long-range plans to reduce unaccounted-for water (for example, over the next three years) _____

4. Service Meter Repair/Replacement Procedures

- a. regular schedule or as needed basis _____

- b. average age of meters in use _____

- c. approximate number of direct read _____

- d. approximate number remote read _____

5. Calculate Unaccounted-for Water (UFW) for past two years
(DO NOT INCLUDE ANY ESTIMATED WATER USE)

$$100 - \left(\frac{\text{gallons of water billed} *}{\text{gallons of water entering distribution system}} \times 100 \right) = \text{UFW}\%$$

$$100 - \left(\frac{\text{gallons}}{\text{gallons}} \times 100 \right) = \text{ } \% \text{ (20 \text{ })}$$

$$100 - \left(\frac{\text{gallons}}{\text{gallons}} \times 100 \right) = \text{ } \% \text{ (20 \text{ })}$$

*Water billed may include unbilled metered water and/or unbilled authorized consumption (e.g. fire fighting)

6. Estimate water supply used for fire fighting and unmetered municipal buildings.
_____ mgy

7. Water Loss Audit (optional) /Water Loss Control

“Water loss control represents the efforts of water utilities to provide accountability in their operation by reliably auditing their water supplies and implementing controls to minimize system losses.”

The following is a link to the American Water Works Associations’ free water audit software: <http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx>

Software outputs meaningful indicators:

gpd / connection _____

gpd / mile mains _____

ILI (infrastructure leakage index) _____

Questions? Contact **AWWA's Water Loss Control Committee** directly.

D. WATER RATES

1. Attach a copy of your rate schedule or a summary of schedule.
2. Note any planned or proposed changes in rates.
3. Meter reading and billing schedule _____

E. PUBLIC EDUCATION/AWARENESS

List efforts undertaken to date and those planned

1. Assess public awareness of local and regional water supply problems.

2. Describe and/or include samples of information distributed to water users.

3. Describe activities undertaken in the past 3 years to meet with environmental committees and watershed associations to explore the concept of water conservation education.

4. Describe the assistance given to schools and civic organizations to promote the best use of local water resources.

II. DROUGHT OR WATER SUPPLY EMERGENCY MANAGEMENT COMPONENTS

A. Management of Localized Water Supply Problems

1. Storage, backup supplies, equipment and interconnections on standby status:

NOTE: The following section refers to local restrictions, which may be voluntary or mandatory, as decided by local officials when necessary, to manage local shortages only. The restrictions that apply when a drought emergency is declared by the Governor are not to be included here.

2. List ordinances that have been adopted to promote water conservation and provisions for their enforcement:

3. Indicate which of the above ordinances are implemented during the following local conditions:

- a. Drought warning _____
- b. Drought emergency _____
- c. Precipitation deficits _____
- d. Reservoir storage deficits _____

4. Distribution of water conservation devices/retrofit program/rebate program:

5. Regulations requiring reuse or recycling of water:

B. Voluntary Transfers Via Interconnections

1. Describe conditions under which voluntary transfers of water into your system are made via existing interconnections: _____

2. Describe existing interconnections and agreements for their use during temporary emergencies and during localized drought emergencies:

3. Give schedule for exercising interconnections: _____

- C. Purveyors with Water Supply Reservoirs with Capacity over 2.0 Billion Gallons ONLY;
1. Attach a rule curve that can be used to establish storage level thresholds for your reservoir or note that there is one on file with the Bureau of Water Allocation & Well Permitting.
 2. Explain the management steps to be taken as drought conditions progress approaching drought warning or drought emergency levels of the rule curve.