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:

<table>
<thead>
<tr>
<th></th>
<th># of Connections</th>
<th># of Meters</th>
<th>% of overall use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>USAGE</th>
<th>PEAK MONTH (mgm)</th>
<th>ANNUAL (mgy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Year 20____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous Year 20____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Year (of last 5) 20____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Year (of last 10) 20____</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROJECTED USAGE</th>
<th>PEAK MONTH (mgm)</th>
<th>ANNUAL (mgy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next Year 20____</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Year 20____</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

Average Use = \[
\frac{(Total \ annual \ usage* \ in \ gallons \times \% \ Residential \ Use)}{Number \ of \ People \ Served}
\]

Minimum Use = \[
\frac{(Minimum \ month \ usage \ in \ gallons \times \% \ Residential \ Use)}{Number \ of \ People \ Served}
\]

Maximum Use = \[
\frac{(Maximum \ month \ usage \ in \ gallons \times \% \ Residential \ Use)}{Number \ of \ People \ Served}
\]

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

<table>
<thead>
<tr>
<th></th>
<th>Current Year 20__</th>
<th>Last Year 20__</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td></td>
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</tbody>
</table>

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

4. Management of Peaks (describe approach):

__________________________________________________________________________________________

5. Projections of Growth:

<table>
<thead>
<tr>
<th></th>
<th>Service Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>new in past year</td>
<td></td>
</tr>
<tr>
<td>expected this year</td>
<td></td>
</tr>
<tr>
<td>projected 5 year</td>
<td></td>
</tr>
</tbody>
</table>
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)

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

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

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

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

\[\text{_______ mgy}\]

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](http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx)

Software outputs meaningful indicators:

- gpd / connection
  \[\text{______________}\]

- gpd / mile mains
  \[\text{______________}\]

- ILI (infrastructure leakage index)
  \[\text{______________}\]

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

\[\text{__________________________________________}\]

\[\text{__________________________________________}\]
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.