2000 Urban Water Management Plan
Demand Management Measures
Checklist and Worksheets

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February 18, 1999
Introduction

In our experience, we have found that developing and reviewing an urban water management plan are complex tasks. The Department of Water Resources has developed this set of checklist and worksheets for two purposes. The first is to aid a water supplier preparing its urban water management plan. The second is to guide DWR staff with the review of submitted plans.

The Urban Water Management Planning Act does not require a water supplier to use either the checklist or the worksheets. The use of these tools is completely optional.

The checklist and worksheets may not completely meet the planning needs of your agency or your community. DWR has tried to excerpt provisions of the statutes to provide general information for a water supplier to assist with the creation of its UWMP. However, the obligation to prepare and implement an UWMP is governed by the California Water Code, Division 6, Part 2.6., Urban Water Management Planning. This law is complex and subject to change. In case of any conflict between the representation of the law in these checklists and worksheets, and the Water Code, the Water Code shall have precedence.

The Department suggests a water supplier using these worksheets review the whole package before beginning.

Contents of Package

There is one checklist contained in this package. This checklist contains the 16 demand management measures from section 10631 (f) of the Act. The checklist is a useful organization tool to check at-a-glance if the various provisions of the law have been addressed in the plan.

There are 20 pages of worksheets. Two pages are for the demand management measures not implemented or scheduled for implementation. Two pages are of law, quoted directly from the UWMPA. Last, are 16 pages, one for each demand management measure.

A water supplier can satisfy Sections 10631 (f) and 10631 (g) of the Act in two ways. Any water supplier can address the 16 demand management measures. Signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), have the option of submitting a California Urban Water Conservation Council Best Management Practices (BMP) report as an alternative to completing the requirements as specified in the Act.

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In September 1997, the California Urban Water Conservation Council revised its list of BMPs from 16 to 14. The reporting requirements include detailed implementation or exemption information for each BMP.

The worksheets are organized according to the sequence of the UWMPA. If you do not like the organization of the worksheets, feel free to re-arrange them in another order.

The format of each page is the same. Each page contains one demand management measure. The topic has the demand management measure segment of the law quoted at the top of the page. Checkboxes follow the law. Each checkbox highlights one of the several provisions of the law that apply to each DMM.

At the end of each page are suggestions of information that a water supplier could provide to address points related to the DMMs. Many of these suggestions come from the MOU guidelines for Best Management Practices. A copy of the MOU and other helpful information is available from the California Urban Water Conservation Council at its internet web site address: http://www.cuwcc.com.

The Demand Management Measure Worksheets can be used in conjunction with the Urban Water Management Plan Worksheets. The demand management measures are not part of the UWMP Worksheets. DWR developed this second set of worksheets to aid a water supplier with preparing an Urban Water Management Plan.

**UWMP Review**

The UWMPA requires DWR to submit a report to the legislature summarizing the status of submitted UWMPs. DWR will not judge or critique the responses or discussions in the UWMPs. DWR will summarize information provided in UWMPs using the checkboxes supplied in the worksheets.

DWR has created a Microsoft Excel file that contains the tables from these worksheets. Electronic completion of the worksheets will expedite your planning process and expedite DWR's review of your plan. This file and other related documents are available on the internet at http://wwwdpla.water.ca.gov/urban/water_management/waterman.html.
<table>
<thead>
<tr>
<th>Page #</th>
<th>Section</th>
<th>Items to address</th>
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<tbody>
<tr>
<td></td>
<td>10631 (f) (1) (A)</td>
<td>Interior and exterior water audits and incentive programs.</td>
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<td>10631 (f) (1) (B)</td>
<td>Plumbing fixture efficiency standards and programs to retrofit less efficient fixtures.</td>
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<td>10631 (f) (1) (C)</td>
<td>Distribution system water audits, leak detection, and repair.</td>
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<td>10631 (f) (1) (D)</td>
<td>Metering with commodity rates for all new connections and retrofit of existing connections.</td>
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<td>10631 (f) (1) (E)</td>
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<td>10631 (f) (1) (F)</td>
<td>Landscape water conservation requirements for new and existing commercial, industrial, institutional, governmental, and multifamily developments.</td>
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<td>10631 (f) (1) (G)</td>
<td>Public information.</td>
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<td>Conservation pricing for water service and conservation pricing for sewer service, where the urban water supplier also provides sewer service.</td>
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<td>10631 (f) (1) (L)</td>
<td>Landscape water conservation for new and existing single-family homes.</td>
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<td>Financial incentives to encourage water conservation.</td>
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<td>10631 (f) (1) (P)</td>
<td>Ultra-low-flush toilet replacement.</td>
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</tbody>
</table>
Exemption Worksheet
Urban Water Management Planning Act
Demand Management Measures
Not Implemented or Scheduled for Implementation

Law
(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, which offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:
(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.
(2) Include a cost-benefit analysis, identifying total benefits and total costs.
(3) [Found on the "Exemption Worksheet – High Unit Cost Projects"]
(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

Copy this page as necessary.

Agency: ________________________

Demand Management Measure: ________________________

Evaluation
☐ Evaluated legal authority to implement the specified measure
☐ Evaluated economic factors
  Conducted a cost-benefit analysis

<table>
<thead>
<tr>
<th>Example Table E1</th>
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<tbody>
<tr>
<td>Costs Benefit Analysis</td>
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<tr>
<td>Total Costs</td>
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<tr>
<td>Total Benefits</td>
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<tr>
<td>Discount Rate</td>
</tr>
<tr>
<td>Time Horizon</td>
</tr>
<tr>
<td>Cost of Water</td>
</tr>
<tr>
<td>Water Saved</td>
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</tbody>
</table>

☐ Evaluated non-economic factors:
☐ Described efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation
☐ Described funding available to implement any planned water supply project that would provide water at a higher unit cost (Completed Table E2)

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Exemption Worksheet – Unit Cost of Projects

Law
10632 (g) (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

Use Example Table E2 once for all planned water supply projects

☐ Described funding available to implement any planned water supply project that would provide water at a higher unit cost

Suggestions (Optional)

<table>
<thead>
<tr>
<th>Example Table E2 Higher Unit Cost Water Supply Projects</th>
</tr>
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<tbody>
<tr>
<td>Name of Water Supply Project</td>
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</table>

Units of Measure (Circle): Acre-feet Million Gallons Hundred Cubic Feet

February 18, 1999
Urban Water Management Planning Act
Demand Management Measures Provisions
Sections 10631 (f), (g), & (h)

Below are the sections of law that pertain to the 16 demand management measures listed in this set of worksheets. Items 10631 (f) (1), (2), (3), (4), and 10631 (g) apply to each of the DMMs listed in Section 10631 (f) (1).

Law
10631. A plan shall be adopted in accordance with this chapter and shall do all of the following:

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:

(A) Interior and exterior water audits and incentive programs for single-family residential, multifamily residential, governmental, and institutional customers.
(B) Enforcement of plumbing fixture efficiency standards and programs to retrofit less efficient fixtures.
(C) Distribution system water audits, leak detection, and repair.
(D) Metering with commodity rates for all new connections and retrofit of existing connections.
(E) Large landscape water audits and incentives.
(F) Landscape water conservation requirements for new and existing commercial, industrial, institutional, governmental, and multifamily developments.
(G) Public information.
(H) School education.
(I) Commercial and industrial water conservation.
(J) New commercial and industrial water use review.
(K) Conservation pricing for water service and conservation pricing for sewer service, where the urban water supplier also provides sewer service.
(L) Landscape water conservation for new and existing single-family homes.
(M) Water waste prohibitions.
(N) Water conservation coordinator.
(O) Financial incentives to encourage water conservation.
(P) Ultra-low-flush toilet replacement.
(2) A schedule of implementation for all water demand management measures proposed or described in the plan.

(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.

(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of such savings on the supplier's ability to further reduce demand.

(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, which offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:

(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.

(2) Include a cost-benefit analysis, identifying total benefits and total costs.

(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.

(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.

(h) Urban water suppliers that are members of the California Urban Water Conservation Council and submit annual reports to the council in accordance with the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated September 1991, may submit the annual reports identifying water demand management measures currently being implemented, or scheduled for implementation, to satisfy the requirements of subdivisions (f) and (g).

The following passage is for the water suppliers that will cooperatively implement a demand management measure with one or more other water suppliers.

10620 (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

February 18, 1999
Water Audits and Incentives

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (A) Interior and exterior water audits and incentive programs for single-family residential, multifamily residential, governmental, and institutional customers.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier’s ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Directly contact single family accounts and multifamily accounts, and governmental and institutional customers.
Quantify the number of single family accounts and multifamily accounts.
Quantify the number of governmental and institutional customers.
Quantify the number of surveys offered, accepted, and completed by each customer type.
Quantify the number of follow-ups conducted for each customer type.
Measure currently landscaped area or total irrigable area.
Describe marketing strategy to promote program.

Components of the program:
Check meter, toilets and faucets for leaks.
Check toilet flow rates and offer to install or recommend installation of displacement device, replace leaking toilet flapper or direct customer to ULFT replacement program, as necessary.
Check aerator flow rates, and showerhead flow rates and offer to replace or recommend replacement, as necessary.
Check irrigation system and timers, and review or develop customer irrigation schedule.
Measure landscaped area and total irrigable area.
Provide the customer with evaluation results and water-saving recommendations.
Plumbing Standards and Retrofits

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (B) Enforcement of plumbing fixture efficiency standards and programs to retrofit less efficient fixtures.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of pre-1992 single family accounts and multifamily accounts.
Quantify the number of retrofit kits and toilet displacement devices completed.
Quantify the number of follow-ups performed with these residences.
Describe a marketing strategy to distribute or directly install high-quality low-flow showerheads, toilet displacement devices, toilet flappers, and faucet aerators.

Components of the program:
Contact local building departments and provide information to inspectors.
Contact major developers and plumbing supply outlets to inform them of the requirement.
Deliver and offer to install retrofit kits including high-quality low-flow showerheads, toilet displacement devices, toilet flappers, and faucet aerators to pre-1992 homes that do not have them.
Distribution System

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (C) Distribution system water audits, leak detection, and repair.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR
☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR
☐ Another agency is implementing.

Suggestions (Optional)
Determine total water supply.
Determine other system verifiable uses.
Determine metered sales of water.
Complete audits at least once every three years.

Components of the program:
Perform distribution system leak detection when warranted and cost-effective.
Repair leaks when found.
Advise customers whenever it appears possible that leaks exist on the customer's side of the meter.
Maintain in-house records of completed audits.
Maintain in-house records of audit results.
Commodity Rates

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (D) Metering with commodity rates for all new connections and retrofit of existing connections.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of new accounts in the service area.
Quantify the number of new accounts that are metered.
Quantify the number of unmetered accounts.
Provide number of unmetered connections retrofitted during reporting period.
Identify intra- and inter-agency disincentive or barriers to retrofitting mixed use commercial accounts with dedicated landscape meters.
Quantify the number of commercial, institutional and industrial accounts with mixed-use meters.
Provide the number of commercial, institutional and industrial accounts with mixed-use connections retrofitted during reporting period.

Components of the program:
Prepare a meter retrofit plan.
Require meters for all new accounts and bill by volume of use.
Establish a program for retrofitting any existing unmetered connections.
Conduct a feasibility study to assess the merits of a program to provide incentives to switch mixed use accounts to dedicated landscape meters.
Complete a feasibility study examining incentive programs.
Confirm that all new connections are metered.
Require that all connections be retrofitted at or within six months of resale of the property or retrofitted by neighborhood.
Large Landscapes

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (E) Large landscape water audits and incentives.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of dedicated irrigation meter accounts, dedicated irrigation meter accounts with water budgets, and number of mixed-use accounts.
Determine aggregate water use and water budgets for dedicated accounts.
Quantify the number of surveys completed during the reporting period.
Quantify the number of surveys completed during the reporting period with follow-up.
Quantify the number and dollar value of rebates, loans and grants offered and accepted.
Measure total landscaped and total irrigable area.

Components of the program:
Identify and contact all irrigators of non-residential landscapes of at least three acres (golf courses, cemeteries, parks, schools, etc.).
Assign ETo-based water use budgets equal to no more than 100 percent of reference evapotranspiration per square foot of landscape area.
Provide notices each billing cycle to accounts with dedicated irrigation meters and water use budgets showing the relationship between the budget and actual consumption.
Actively market landscape analysis/surveys and follow-up surveys.
Provide financial incentives to improve irrigation system efficiency.
Provide multilingual and/or irrigation system training and information.
Provide information on climate-appropriate landscape design, efficient irrigation equipment/management to new customers and change-of-service accounts.
Install dual metering.
Review or develop irrigation schedules.
Landscape Requirements

**Law**
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (F) Landscape water conservation requirements for new and existing commercial, industrial, institutional, governmental, and multifamily developments.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

**Suggestions (Optional)**
Measure total landscaped and total irrigable area.

Components of the program:
- Enact and implement a landscape water conservation ordinance that is consistent with the State Model Landscape Ordinance, or one that uses a water budget approach with water allowances for landscaping needs, or one that has rules and regulations that promote water conservation without tracking usage.
- Cooperate with cities, counties, and the green industry in the service area to develop and implement landscape water conservation ordinances.
- Provide guidelines, information and incentives for installation of more efficient landscapes and water-savings practices.
- Review or develop irrigation schedules.
Public Information

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (G) Public information.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Describe conservation information provided to customers.
Quantify the number of paid announcements, public speaking and media events.
Describe the program's annual budget.

Components of the program:
Coordinate with other agencies, industry and public interest groups.
Provide programs promoting water conservation and conservation related benefits.
Provide public information:
Provide speakers to media, community groups, to water agency employees.
Provide paid and public service announcements (public or private).
Use water conservation bill inserts.
Provide daily water use comparisons on customer's bills.
School Education

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (H) School education.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of teacher training, classroom, and in-service presentations.
Quantify the number of students reached.
Describe curriculum materials developed and confirm that the materials meet state education framework and are grade-level appropriate.
Quantify the number of each type of material developed.
Describe annual budget for program.

Components of the program:
Work with school districts and private schools to provide instructional assistance, educational materials, and classroom presentations.
Provide easy-to-read leaflets, pamphlets, or brochures regarding water conservation to schools.
Commercial and Industrial

Law
Refer to the beginning of the worksheets for the body of the law.

1063* (f) (1) (l) Commercial and industrial water conservation.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR
☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR
☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of commercial, institutional and industrial customers.
Quantify the number of commercial, institutional and industrial customers accounts with mixed-use meters.
Quantify the number of surveys offered and completed by commercial customers, and industrial customers.
Quantify the number of follow-up surveys completed for commercial customers, and industrial customers.
Quantify the number of water-saving recommendations implemented by customers.
Estimate annual water savings by customer class.
Document how savings were realized and calculated.
Quantify customer incentive budget.
Develop a customer targeting and marketing strategy to provide water use surveys and customer incentives to commercial, industrial, and institutional accounts.

Components of the program:
Identify and rank commercial, industrial, and institutional customers according to use.
Contact customers and offer water use surveys and customer incentives.
Evaluate water-using apparatus and processes, and recommend measures.
Identify available incentives and expected payback for efficiency measures.
Follow-up via phone or site visit with customer regarding facility water use.

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New Commercial and Industrial

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (J) New commercial and industrial water use review.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier’s ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of new permitted projects during the reporting period.
Quantify the number of reviews of the permitted projects during the reporting period.

Components of the program:
   Develop a program to review new commercial and industrial water uses.
   Make recommendations for improved water use efficiency.

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Conservation Pricing

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (K) Conservation pricing for water service and conservation pricing for sewer service, where the urban water supplier also provides sewer service.

- Describe the implementation or scheduled implementation of this demand management measure.
- Provide a schedule of implementation.
- Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
- Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR
- Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR
- Another agency is implementing.

Suggestions (Optional)
Describe the agency's water and sewer service.
Determine the annual revenue requirement by customer class.
Determine the annual revenue derived from each customer class.

Components of the program:
- Eliminate non-conservation pricing and adopt conservation pricing.
- Bill for water service based on metered water use.
- Design rates to recover the cost of providing service.
- Attach rate structure(s) by customer class.
Single-Family Landscapes

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (L) Landscape water conservation for new and existing single-family homes.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.
OR
☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.
OR
☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number of outdoor water surveys distributed.
Quantify the number of new homes built.

Components of the program:
Provide guidelines, information, and incentives for installation of more efficient landscapes and water savings practices.
Encourage local nurseries to promote the sales and use of drought resistant and drought tolerant plants.
Provide landscape water conservation materials in new homeowner packets and water bills.
Enact and implement landscape water conservation ordinances.
Cooperate with cities, counties, and the green industry to develop and implement landscape water conservation ordinances.
Water Waste Prohibitions

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (M) Water waste prohibitions.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR
☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR
☐ Another agency is implementing.

Suggestions (Optional)

Components of the program:
   Adopt an ordinance prohibiting water waste.
   Enact and enforce measures prohibiting gutter flooding.
   Enact and enforce measures prohibiting single pass cooling systems in new connections.
   Enact and enforce measures prohibiting nonrecirculating systems in all new conveyer car wash and commercial laundry systems.
   Enact and enforce measures prohibiting nonrecycling decorative water fountains.
   Support efforts to develop state laws to allow sale of more efficient water softeners.
   Support efforts to develop state laws to develop minimum efficient standards for water softeners.
   Support efforts to develop state laws to allow local agencies to set their own standards.
   Include water softener checks in home water audit programs.
Conservation Coordinator

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (N) Water conservation coordinator.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Date conservation coordinator position was created by agency.
Provide the water conservation coordinator's name.
Provide the water conservation coordinator's staff position title.
List how many years this person has held the water conservation coordinator position.
Quantify the number of conservation coordination staff.

Components of the program:
Designate a water conservation coordinator position.
Communicate and promote water conservation issues to agency senior management.
Coordinate agency conservation programs with operations and planning staff.
Prepare annual conservation budget.
Coordinate the oversight of conservation programs and BMP implementation.
Participate in the CUWCC.
Financial Incentives

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (O) Financial incentives to encourage water conservation.

☐ Describe the implementation or scheduled implementation of this demand management measure.
☐ Provide a schedule of implementation.
☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.
☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR
☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR
☐ Another agency is implementing.

Suggestions (Optional)
Quantify the number and dollar value of rebates, loans, grants, and other financial incentives offered and accepted.

Components of the program:
Offer financial incentives to facilitate implementation of conservation programs.
Offer financial incentives to improve the efficiency of landscape water use.
Wholesale water suppliers can provide financial incentives, or equivalent resources, as appropriate and beneficial, to their retail water customers.
Identify and remove potential disincentives to long-term conservation.
Ultra-Low-Flush Toilets

Law
Refer to the beginning of the worksheets for the body of the law.

10631 (f) (1) (P) Ultra-low-flush toilet replacement.

☐ Describe the implementation or scheduled implementation of this demand management measure.

☐ Provide a schedule of implementation.

☐ Describe the methods, if any, used to evaluate the effectiveness of this demand management measure.

☐ Provide an estimate, if available, of existing conservation savings on water use and the effect of such savings on the supplier's ability to further reduce demand.

OR

☐ Prepare required evaluation if the demand management measure will not be implemented or is not scheduled for implementation.

OR

☐ Another agency is implementing.

Suggestions (Optional)
Resale rate for single family and multifamily accounts.
Average number of persons living in a single family and multifamily residence.
Average number of toilets per single family and multifamily residence.
Number of ULFT installations during the reporting period.
Estimated cost per ULFT replacement.
Estimated water savings.

Components of the program:
- Implement programs for replacing existing high-water-using toilets with ultra-low-flush toilets.
- Require replacement of high-water-using toilets with ultra-low-flush toilets at time of resale.
Supply and Demand Comparison Provisions

Law
10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from the state, regional, or local agency population projections within the service area of the urban water supplier.

☐ Compare the total water supply to total projected water use over the next 20 years in 5-year increments.

☐ Compare the total water supply to total projected water use for a normal water year, a single dry water year, and multiple dry water years.

• You may wish to consider cross-referencing this section with Section 10631 (b), Example Table 3, Current and Projected Water Supplies and Section 10631 (c), Example Table 8, Supply Reliability, Multiple Dry Water Year supply values.

Suggestions (Optional)

You may wish to provide an explanation describing why information was not available, or why it was not practicable to provide, if necessary.
Supply and Demand Comparison to 20 Years

Suggestions (Optional)

Example Table 16, Water Supplies Summary, identifies forecasted supply production volumes. The volumes you provide here could be different from the volumes previously provided in Example Table 3. There are at least two reasons this table may have different values. The first is if the volumes given in Example Table 3 are not current and predicted production, but instead are entitlement volumes. These volumes may also be different if the previous tables did not include non-potable supplies.

From your response, DWR should be able to complete this table.

<table>
<thead>
<tr>
<th>Example Table 16. Water Supply Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Supply</td>
</tr>
<tr>
<td>Units of Measure (Circle): Acre-feet/Year Million Gallons/Day Hundred Cubic Feet/Day</td>
</tr>
</tbody>
</table>

Example Table 17, Water Demand Summary, identifies forecasted demand volumes. These volumes will be different from the subtotals in Example Tables 4, 5, 6 and 14 to the extent that demand for non-potable recycled water was not included in those tables.

<table>
<thead>
<tr>
<th>Example Table 17. Water Demand Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Demand</td>
</tr>
<tr>
<td>Units of Measure (Circle): Acre-feet/Year Million Gallons/Day Hundred Cubic Feet/Day</td>
</tr>
</tbody>
</table>

Combine Example Tables 16 and 17 into 18 for the supply and demand comparison.

<table>
<thead>
<tr>
<th>Example Table 18. Projected Supply and Demand Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Supply totals</td>
</tr>
<tr>
<td>Demand totals</td>
</tr>
<tr>
<td>Difference</td>
</tr>
<tr>
<td>Units of Measure (Circle): Acre-feet/Year Million Gallons/Day Hundred Cubic Feet/Day</td>
</tr>
</tbody>
</table>
Supply and Demand Comparison (Continued):  
Three Scenarios

Suggestions (Optional)

| Example Table 19.  
Supply Reliability and Demand Comparison |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Average/Normal Water Year</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Supply totals</td>
</tr>
<tr>
<td>Demand totals</td>
</tr>
<tr>
<td>Difference</td>
</tr>
</tbody>
</table>

Units of Measure (Circle):  
Acre-feet/Year  Million Gallons/Day  Hundred Cubic Feet/Day
Water Shortage Contingency Plan:
Preparation for Catastrophic Water Supply Interruption

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

☐ Provide actions toward the preparation and implementation of a catastrophic interruption of water supplies.
No specific data is requested.

Suggestions (Optional)

Identify any of the actions your agency uses. Add more if necessary.

Example Table 20.
Preparation Actions for a Catastrophe

<table>
<thead>
<tr>
<th>Examples of Actions</th>
<th>Check if Discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine what constitutes a proclamation of a water shortage.</td>
<td></td>
</tr>
<tr>
<td>Stretch existing water storage.</td>
<td></td>
</tr>
<tr>
<td>Obtain additional water supplies.</td>
<td></td>
</tr>
<tr>
<td>Develop alternative water supplies.</td>
<td></td>
</tr>
<tr>
<td>Determine where the funding will come from.</td>
<td></td>
</tr>
<tr>
<td>Contact and coordinate with other agencies.</td>
<td></td>
</tr>
<tr>
<td>Create an Emergency Response Team/Coordinator.</td>
<td></td>
</tr>
<tr>
<td>Create a catastrophe preparedness plan.</td>
<td></td>
</tr>
<tr>
<td>Put employees/contractors on-call.</td>
<td></td>
</tr>
<tr>
<td>Develop methods to communicate with the public.</td>
<td></td>
</tr>
<tr>
<td>Develop methods to prepare for water quality interruptions.</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
Water Shortage Contingency Ordinance/Resolution

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (h) A draft water shortage contingency resolution or ordinance.

☐ Attach a copy of the draft water shortage contingency resolution or ordinance. 
Attach a copy of an action consistent with your bylaws where the board of directors adopts the water shortage contingency plan.

Suggestions (Optional)

It would be helpful if the copy of the adoption resolution is bound inside the plan to ensure that it will remain with the plan.

If a water shortage contingency resolution or ordinance has already been adopted, attach a copy of the most recent version.
Water Shortage Contingency Plan:
Stages of Action

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.

☐ Provide at least one stage of action.
There is no required number of stages.

☐ Provide the water supply conditions for each stage.

| Example Table 21.                        |
| Water Supply Shortage Stages and Conditions |

| RATIONING STAGES |                                 |
|                  | (No required number of stages)   |
| Stage 1 | Stage ___ | Stage ___ | Stage ___ | Final Stage |
| %       | %          | %         | %         | %          |

<table>
<thead>
<tr>
<th>WATER SUPPLY CONDITIONS (%Total Reduction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
</tr>
</tbody>
</table>

Suggestions (Optional)

Water supply conditions by type of supply source.

Describe the events that would trigger your agency to move into a particular stage
This could involve:
- Reductions in specific water supplies
- Dropping groundwater level
- Changes in water quality
- Political decision
- Requested by the wholesaler

Describe how stages were developed. This could involve:
- Priorities for various uses
- Health and safety reasons
- Length of a water shortage
Water Shortage Contingency Plan: Prohibitions

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

☐ List the mandatory prohibitions against specific water use practices during water shortages.
   No specific data is requested.

Suggestions (Optional)

Define when prohibitions are voluntary and when they are mandatory.

Identify any of the prohibitions your agency uses. Add more if necessary.

<table>
<thead>
<tr>
<th>Example Table 22. Mandatory Prohibitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of Prohibitions</td>
</tr>
<tr>
<td>Street/sidewalk cleaning</td>
</tr>
<tr>
<td>Washing cars</td>
</tr>
<tr>
<td>Watering lawns/landscapes</td>
</tr>
<tr>
<td>Non-permanent agriculture</td>
</tr>
<tr>
<td>Uncorrected plumbing leaks</td>
</tr>
<tr>
<td>Gutter flooding</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

February 18, 1999
Water Shortage Contingency Plan: Penalties

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the
following elements which are within the authority of the urban water supplier:

10632 (f) Penalties or charges for excessive use, where applicable.

☐ List excessive use penalties with a discussion of how they are applicable.
   No specific data is requested.

Suggestions (Optional)

List the triggers that activate the penalties.

Identify any of the penalties your agency uses. Add more if necessary.

Example Table 23.
Penalties and Charges

<table>
<thead>
<tr>
<th>Examples of Penalties and Charges</th>
<th>Stage When Penalty Takes Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penalties for not reducing consumption</td>
<td></td>
</tr>
<tr>
<td>Charges for excess use</td>
<td></td>
</tr>
<tr>
<td>Flat fine</td>
<td></td>
</tr>
<tr>
<td>Charge per unit over allotment</td>
<td></td>
</tr>
<tr>
<td>Flow restriction</td>
<td></td>
</tr>
<tr>
<td>Termination of service</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

February 18, 1999
Water Shortage Contingency Plan: Consumption Reduction Methods

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

☐ List the consumption reduction methods the water supplier will use to reduce water use in the most restrictive stages.
No specific data is requested.

Suggestions (Optional)

Provide an explanation of how the methods can achieve water use reductions.

Identify any of the consumption reduction methods your agency uses. Add more if necessary.

<table>
<thead>
<tr>
<th>Example Table 24. Consumption Reduction Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of Consumption Reduction Methods</td>
</tr>
<tr>
<td>Demand reduction program</td>
</tr>
<tr>
<td>Reduce pressure in water lines</td>
</tr>
<tr>
<td>Flow restriction</td>
</tr>
<tr>
<td>Restrict building permits</td>
</tr>
<tr>
<td>Restrict for only priority uses</td>
</tr>
<tr>
<td>Use prohibitions</td>
</tr>
<tr>
<td>Water shortage pricing</td>
</tr>
<tr>
<td>Per capita allotment by customer type</td>
</tr>
<tr>
<td>Plumbing fixture replacement</td>
</tr>
<tr>
<td>Voluntary rationing</td>
</tr>
<tr>
<td>Mandatory rationing</td>
</tr>
<tr>
<td>Incentives to reduce water consumption</td>
</tr>
<tr>
<td>Education Program</td>
</tr>
<tr>
<td>Percentage reduction by customer type</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

February 18, 1999
Water Shortage Contingency Plan: Revenue and Expenditure Impacts

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier...

☐ Describe how actions and conditions impact revenues.
☐ Describe how actions and conditions impact expenditures.
No specific data is requested.

Suggestions (Optional)
Identify any of the components of your description. Add more if necessary.

<table>
<thead>
<tr>
<th>Example Table 25.</th>
<th>Components of Revenue Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of Components</td>
<td>Check if Discussed</td>
</tr>
<tr>
<td>Review of rate adjustment</td>
<td></td>
</tr>
<tr>
<td>Development of reserves</td>
<td></td>
</tr>
<tr>
<td>Change in quantity of sales</td>
<td></td>
</tr>
<tr>
<td>Impact on customer’s bill</td>
<td></td>
</tr>
<tr>
<td>Distribution of customer impacts between customer types</td>
<td></td>
</tr>
<tr>
<td>Impacts to water supplier of higher rates and penalties</td>
<td></td>
</tr>
<tr>
<td>Cost recovery reviews</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

Identify any of the components of your description. Add more if necessary.

<table>
<thead>
<tr>
<th>Example Table 26.</th>
<th>Components of Expenditure Impact Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples of Components</td>
<td>Check if Discussed</td>
</tr>
<tr>
<td>Change in quantity of sales</td>
<td></td>
</tr>
<tr>
<td>Cost recovery reviews</td>
<td></td>
</tr>
<tr>
<td>Increased staff salaries/overtime</td>
<td></td>
</tr>
<tr>
<td>Increased costs of new supplies, transfers or exchanges</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
Water Shortage Contingency Plan: Measures to Overcome Impacts

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (g) [An analysis of the impacts of each of the] proposed measures to overcome those [revenue and expenditure] impacts, such as the development of reserves and rate adjustments.

☐ Describe proposed measures to overcome the revenue and expenditure impacts.
   No specific data is requested.

Suggestions (Optional)

A measure that may be appropriate to overcome revenue and expenditure impacts is to recover fixed costs through fixed charges and to recover variable costs through variable charges.

Identify any of the methods your agency uses. Add more if necessary.

Example Table 27.
Methods to Overcome Revenue and Expenditure Impacts

<table>
<thead>
<tr>
<th>Examples of Methods to Overcome Impacts</th>
<th>Check if Discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve fund</td>
<td></td>
</tr>
<tr>
<td>Change rate structure</td>
<td></td>
</tr>
<tr>
<td>Reduce overhead</td>
<td></td>
</tr>
<tr>
<td>Decrease capital expenditures</td>
<td></td>
</tr>
<tr>
<td>Revise planning estimates</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>
Water Shortage Contingency Plan: Reduction Measuring Mechanism

Law
10632. The plan shall provide an urban water shortage contingency analysis which includes each of the following elements which are within the authority of the urban water supplier:

10632 (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

☐ Provide a mechanism or mechanisms for determining actual reductions.
No specific data is requested.

Suggestions (Optional)

Identify any of the mechanisms your agency uses. Add more if necessary.

Example Table 28.
Mechanisms for Determining Actual Reductions

<table>
<thead>
<tr>
<th>Potential Mechanisms</th>
<th>Check if Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use normalized or average water use baseline to determine reductions</td>
<td></td>
</tr>
<tr>
<td>More frequent review of production</td>
<td></td>
</tr>
<tr>
<td>More frequent meter reading at customer location</td>
<td></td>
</tr>
<tr>
<td>More frequent leak detection and repair</td>
<td></td>
</tr>
<tr>
<td>More frequent meter checking and repair</td>
<td></td>
</tr>
<tr>
<td>System audit</td>
<td></td>
</tr>
<tr>
<td>Automated sensors and telemetry</td>
<td></td>
</tr>
<tr>
<td>Monitor utility actions</td>
<td></td>
</tr>
<tr>
<td>Penalties for customers</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>