

DRAFT

Agreement for  
Consulting Services for  
Preparation of the 2010 Urban Water Management Plan Water  
Demand Analysis [and Water Conservation Measures](#) Update

Scope of Work

Consultant shall perform the following tasks for preparation of the 2010 Urban Water Management Plan demand analysis [and water conservation measures](#) update.

**Task 1 – Preliminary Work**

This task consists of initial preparatory work to set up and manage the project.

1.1 **Data Needs Meeting.** Attend a meeting with representatives from the water contractors to discuss data needed to prepare the 2010 Urban Water Management Plan (UWMP) demand analysis [and water conservation measures](#) update.

1.2 **Timeline.** Prepare a timeline which includes, but is not limited to, the following:

- a. Timeline for water contractors to submit data.
- b. [Detailed Timeline](#) for the demand analysis update report [indicating project milestones to complete work by August 1, 2010](#). Water contractors require delivery of final demand analysis update report [within six months of Notice to Proceed or](#) by ~~July~~ [August 1](#), 2010.

**Task 2 – Information and Data Collection**

This task consists of collecting and reviewing relevant data. Pertinent information needed to prepare the Urban Water Management Plan Demand Analysis Update shall be collected and reviewed.

2.1 **Data Request.** Prepare written data request and submit to the water contractors.

2.2 **Previous DWR Comments.** Review DWR comments on the [demand and conservation section of the 2005 UWMP](#) for each of the **eight** water contractors [and the Sonoma County Water Agency](#).

2.3 **New DWR Requirements.** Review new DWR requirements for the 2010 [UWMP](#) [and provide summary of new requirements that need to be addressed and any recommended changes to scope of work](#)<sup>[jb1]</sup> [for review by Contractors](#).

2.4 **Planning Documents Review.** [Provide summary list of planning documents needed to Contractors. Contractors will provide consultant with the latest General Plan and relevant background reports per summary list.](#) Review the water contractors' General Plans and **any** other relevant planning documents [to establish forecasted growth to 2035.](#) [If specific forecasts are not available for all contractors, individual contractor will instruct consultant to use an alternate source, such as projections made by the Association of Bay Area Governments for this study.](#)

2.5 **Data Review.** Collect and review data required for the 2010 UWMP demand analysis update from the water contractors and customers. Review and organize the data.

~~2.6 **Information and Data Report.** Prepare and submit a memo report that lists all data requests, DWR 2010 UWMP requirements and relevant planning documents~~<sup>[jb2]</sup>.

### **Task 3 – Demand Analysis Update**

This task consists of preparing an updated water demand analysis [through 2035](#) for individual water contractors from those prepared in the 2005 Urban Water Management Plan and the Water Project EIR. The water demand analysis shall include the following water contractors:

the **City of Rohnert Park, City of Santa Rosa, City of Sonoma, City of Petaluma, Town of Windsor, North Marin Water District, Valley of the Moon Water District and City of Cotati**[and the](#)

[Marin Municipal Water District](#)<sup>[jb3]</sup>. The update shall reflect adopted General Plan population

[and employment](#) projection, changes in water use and/or demand hardening patterns, and savings from water conservation measures and recycled water use.

3.1 **Demographic Data.** ~~Document~~ Contractors will provide data on the future connections, population, dwelling units, land use, and employment for each of the contractors based on the most recently adopted applicable General Plans, ~~as~~. The number of historical and existing customers broken down by customer category shall be provided by the contractors ~~resented~~. This demographic information shall serve as the basis for evaluating water use demands and trends in the subsequent subtasks. Changes since 2005 in the sphere of influence and proposed sphere of influence of each incorporated municipality within the study area shall be identified. Each contractor will specify the demographic forecast to be used or concur with the analysis before work proceeds on the subsequent subtasks.

3.2 **Water Use Characteristics.** Describe historical and existing water use characteristics and water demands for each of the water contractors. Existing and historical municipal water use shall be defined in terms of annual ~~demand~~ total production and consumption by user class (residential, commercial, industrial, institutional, parks, other, as per the existing billing systems). Unit water demands (gallons/~~capita~~ account ~~per~~ day) for each major user class (residential, commercial industrial, public), and indoor and outdoor water use shall be presented. The 2004 work will be reviewed and modifications made in concert with the contractors. Recent water billing data may ~~shall be requested~~ reviewed by the consultant for use in the review of ~~determine~~ determine appropriate water demand factors for the demand analysis. ~~use in the Study.~~ At the contractors request, and if ~~if~~ documented by recent water billing data, provided by same, u ~~U~~ unit water use trends shall be evaluated to define the different (higher or lower) unit water use factors to apply for future conditions.

3.3 **Future Water Demands.** Future water requirements for each of the water contractors shall be estimated based on the demographic projections and unit water use trends developed in the earlier subtasks. The water demand projections shall be defined using the Demand Side Management Least Cost Planning Decision Support System (DSS model) or alternate model acceptable to the water contractors and calibrated to each participating water contractor's

service area. ~~There shall be eight separate models in total. Water demands for the base year shall be weather normalized for 2008.~~ The baseline demand projections shall include water savings ~~to date~~ through pre-2004 and 2004-2009 and future impacts of the current and future plumbing codes and appliance/fixture standards already in place. Contractors will be responsible for providing annual historical water conservation program participant data in an Excel format specified by the consultant. ~~It shall include additional planned conservation described CUWCC BMPs (Tier 1 conservation with a goal of saving 6,600 acre-feet by 2015).~~<sup>[b5]</sup> The projection shall include post-2009 water savings estimates for implementing the required CUWCC BMPs for each contractor.

**3.4 Water Conservation and Economic Analysis.** Consultant shall evaluate New Construction, Tier 2 and legislative conservation measures/requirements pursuant to ~~the attached tables~~ Attachments A and B and other local measures and as required by legislation adopted in 2009, including Senate Bill x7x (Steinberg) and Senate Bill 407 (Padilla). Collect data to quantify the costs and water savings of these measures in each service area. Conduct an economic evaluation of approved Tier 2 water conservation measures using DSS models developed for each contractor.

Water savings from each of the New Construction, Tier 2 and legislative water conservation measures/requirements shall be estimated and expressed for each 5-year increment to ~~20~~ 25 years.

An economic analysis of these conservation measures/requirements shall be prepared for each contractor. The costs of the water conservation measures shall be summarized. Dollar savings from reduced water demand shall be quantified based on avoided costs provided by each participating water contractor (which reflects their own individual options for obtaining additional water supply, if needed).<sup>[b7]</sup> A benefit/cost analysis shall be prepared for each group of

measure/requirement (New Construction, Tier 2 and legislative). ~~Consultant shall ask contractors to sign a concurrence form that the economic evaluation and water savings from these measures is an appropriate representation of additional conservation that could be accomplished in their service area~~<sup>[jb8]</sup>.

3.5 **Draft Demand Analysis Report.** Prepare ~~a one~~ technical report for each contractor that can stand alone separately from the 2010 UWMP.<sup>[jb10]</sup> Report shall include information for all contractors:

- a. Table of Contents
- b. Summary of demand analysis update results
- c. Methodology and assumptions
- d. Results and conclusions
- e. Data and information collected for analysis
- f. Detailed description of water and wastewater efficiency analysis
- g. Demographics projections
- h. Historical water use patterns
- i. Water demand projections for the next twenty~~five~~ years in five-year increments
- j. Additional (future) water savings from Tier 1 conservation measures and legislative requirements
- k. Additional conservation measures (Tier 2 and New Development Standards and other Local Measures) evaluated
- l. References and list of contacts

3.6 **Review Meetings.** Meet with each of ~~its the~~ water contractors to first discuss the basis of the demand projections, then to discuss the preliminary results, and then to present the draft for comments. ~~It is assumed that U~~ up to a total of 3 in person meetings with each contractors will be held. Additional communication will be done as needed by email or telephone

conference calls (up to 3 per contractor). Provide each water contractor ~~and customer~~ with ~~an~~ advance a draft copy of their respective ~~section of the Technical Demand Analysis~~ Report. A total of 8 draft copies, one for each contractor, will be provided. It is also assumed that up to one revision of the demand projection and water conservation and economic analysis per contractor may be made. ~~Each contractor will sign a concurrence on the demand projections prior to adoption for use in their urban water management plan~~ [jb12].

3.7 **Final Demand Analysis Report.** Revise each Technical Demand Analysis Report one time based upon comments received from each the water contractors. Contractors will provide one electronic consolidated set of comments to consultant. It is assumed that all comments will be resolved within changes to the report and no separate response to comments will be issued. ~~Eight~~ One hard copies and one electronic copy in WORD of the final report for each contractor will be provided.

3.8 **Budget.** Budget for the above work is not to exceed \$100,000. A final scope and budget will be negotiated with the consultant selected.