



Date: November 12, 2015
To: Mayor and City Council
From: Tim Tucker, City Engineer
Subject: Urban Water Management Plan

Recommendation

Adopt resolution allocating \$50,000 from Water Surplus Funds to develop the City of Martinez’s 2015 Urban Water Management Plan and authorize the City Manager to execute an agreement with Psomas in the amount of \$46,000.

Background

After experiencing severe and extended droughts in the mid 1970s, in 1983, the State of California adopted AB 797 (and subsequent amendments), commonly known as the Urban Water Management Planning Act (Act). The Act requires every urban water supplier with more than 3,000 customers, which includes the City of Martinez Water System, to adopt and periodically update an Urban Water Management Plan (Plan). The City’s Plan was last updated in 2010. The Plan must be updated a minimum of every five years.

The intent of the law is to require urban water suppliers to evaluate benefits and costs for various water conservation methods as an alternative to expanding their water supply. It also requires suppliers to develop plans of action should water shortages occur. Requirements of the plan include the following:

1. Describe the service area, including current and projected population, climate, and other demographic factors affecting the suppliers water management planning.
2. Identify and quantify sources of water.
3. Describe the reliability of the water supply and vulnerability to seasonal or climatic shortages.
4. Describe the opportunities for exchange or transfer of water on a short-term or long-term basis.
5. Quantify past and current water use for the various customer type such as single-family residential, commercial, and industrial, etc.
6. Describe the City’s water demand management measures (Best Management Practices) along with a schedule of implementation.

Discussion

As the City is aware of from recent experience, an important part of the Plan is to provide an urban water shortage contingency analysis which includes stages of action. The City has developed a four stage rationing plan.

The City's rationing plan parallels Contra Costa Water District's (CCWD) plan. CCWD provides untreated (raw) water to the City. In turn, the City treats and distributes the water to its customers. In the event of severe water shortages CCWD would ration water to their customers, including Martinez's Water System. The stages are outlined as follows:

Shortage Condition	Stage	Description	Customer Reduction Goals	Type of rationing program
Up to 15%	I	Voluntary Conservation	15%	Voluntary
15-30%	II	Water Alert	30%	Mandatory
30-40%	III	Water Emergency	40%	Mandatory
40-50%	IV	Water Crisis	50%	Mandatory

A Stage II program was adopted in 1977, again in 1991, and more recently, again in July of this year. Through public education customers were made aware of the need to reduce water consumption. The Council adopted Resolution No. 093-15, which on July 15, 2015, established prohibition of non-essential use of water. Martinez Water System customers responded to the need to conserve water by decreasing consumption in excess of 25%. The City has not experienced Stage III or IV rationing requirements.

The most significant update to the current Plan will be incorporating new or recent state legislation. As you may recall in 2009 Senate Bill 7 (SB7) among other things, establishes a 20% water reduction requirement by the year 2020. In addition, earlier this year, the Governor signed Executive Orders mandating certain water conservation requirements which will be incorporated into the Plan. Once the Plan is completed, the City will be required to hold a public hearing for formal adoption.

Fiscal Impact

The City has received a proposal in the amount of \$46,000 from Psomas to update the study. The Council recently approved the "Engineering Contract Services Consultant List" which includes Psomas. Psomas had completed the previous updates, and is familiar with the data needed to complete the report. Once funds are allocated by the Council, the City Manager will execute the City's standard Consultant Services Agreement drafted by the City Attorney's office. An additional \$4,000 is budgeted to cover City staff management of the study. There are adequate Water Surplus Funds available to complete and manage the development of the Plan.

Funding:

Water Surplus Fund	<u>\$50,000</u>
TOTAL	\$50,000

Budget:

Consultant Contract	\$46,000
Staff Project Management	<u>\$ 4,000</u>
TOTAL	\$50,000

Attachments

- Resolution
- Scope of Work

RESOLUTION NO. -15

ALLOCATING \$50,000 FROM WATER SURPLUS FUNDS TO DEVELOP THE CITY OF MARTINEZ'S 2015 URBAN WATER MANAGEMENT PLAN AND AUTHORIZE THE CITY MANAGER TO EXECUTE AN AGREEMENT WITH PSOMAS IN THE AMOUNT OF \$46,000

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act, ("Act")) and amended subsequently, which mandates every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (Plan), primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and the City shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, it is the desire of the City Council of the City of Martinez to comply with state water regulations and update the City's current Plan and hold a public hearing upon its completion.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Martinez, allocates \$50,000 from Water Reserve funds for the 2015 update of the City's Urban Water Management Plan; and

BE IT FURTHER RESOLVED by the City Council of the City of Martinez, the City Manager is authorized to execute a Standard Consultant Agreement with Psomas in the amount of \$46,000 to develop the Urban Water Management Plan, subject to approval by the City Attorney as to form.

* * * * *

I HEREBY CERTIFY the foregoing is a true and correct copy of a resolution duly adopted by the City Council of the City of Martinez at a Regular Meeting of said Council held on the 18th day of November, 2015, by the following vote:

AYES:

NOES:

ABSENT:

RICHARD G. HERNANDEZ, CITY CLERK
CITY OF MARTINEZ

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Please note the following detailed approach and scope-of-work is based on our experience in successfully producing past UWMPs, and includes all items required by DWR. It has been our experience that three meetings are necessary (kick-off, draft review, and public hearing), which is what is included in this proposal.

Task 1: Information and Data Collection and Review

Task 1-1: Review Implementation of 2010 UWMP (Water Code Section (WCS) 10640) – Review the demand management measures (DMMs) implementation plan contained in the City's 2010 UWMP and document whether the DMMs were implemented as planned. Also review the City's 2010 UWMP recycled water plans and document whether they were implemented.

Task 1-2: Collect and Review any Pertinent Existing Documents – Review pertinent documents submitted by the City and describe the City's resource conditions; documents may include: Integrated Water Resource Management Plans, Water, Sewer, and Recycled Water Master Plans, Groundwater Management Plans, regional water use efficiency programs, water transfers and exchanges, regional water plans, cooperative agreements, etc.

Task 1-3: Water Resource Management Tools (WCS 10620(f)) – Prepare a section to discuss and describe any existing water management tools and options used by the City to maximize resources and minimize the need to import water.

Task 2: Agencies Coordination

Task 2-1: Describe the Coordination of the Plan Preparation (WCS 10620(d)) – Develop a list of the agencies with which the City is required to coordinate preparation of its UWMP and document the type of coordination required including data/information exchange and review, participation in plan development, comment on the plan, attend public meetings, contact for assistance, receive a copy of draft and final report, and send a notice of draft UWMP availability, public hearing, and adoption.

Task 2-2: City Planning Dept. and County Notification and Participation (WCS 10621(b) and 10635(b)) – This task must closely tie the land use and water supply planning. It is crucial that cities, counties and public and private water suppliers work closely when developing and updating their planning documents.

Task 2-3: Coordination with Regional Agencies/Wholesalers (WCS 10631(k)) – Include collection of data from other sources including applicable regional water wholesalers such as CCWD. The City must work closely with regional supply agency to develop the water service reliability analysis (Task 4-9) to produce a comprehensive planning document.

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Task 3: Service Area Information

Discuss a variety of demographic factors which may affect water use supplied by the City, including current and projected population, climate characteristics based on last 30 years information on NOAA and CIMIS websites, population density, housing density, future commercial and industrial development, and projected income levels.

Task 4: Water Resources Reliability

Task 4-1: Identify Water Supplies (WCS 10631(a)) – Identify existing and planned (in 5-year increments from 2020 to 2040) water supply sources and the current and planned quantities available to the City in normal years. Twenty year projections are required by the Act, however, Psomas recommends projecting out 25 years (to 2040) so the UWMP will be valid for use in preparing future WSAs over the next 5 years until the 2020 UWMP is adopted.

Task 4-2: Water Sources – Wholesale Water (WCS 10631(k)) – If the City receives or anticipates receiving wholesale water it must project the amount of wholesale water required for the next 25 years, in 5-year increments and include written wholesale agency information quantifying water availability to the City for the next 25 years in 5-year increments.

Task 4-3: Water Sources – Groundwater (WCS 10631(b)(1)(2)(3)(4)) – If the City uses or plans to use groundwater by 2040, discuss impacts of groundwater management plan upon City's use of that basin. Describe the basin(s) from which the City extracts groundwater and provide static pumping levels, water quality, extraction rate, total storage and other similar data. If the groundwater basin(s) is adjudicated, include the order or decree in the UWMP and identify quantified amount of legal pumping right. If not adjudicated, evaluate and determine whether the basin(s) has been identified or projected to be in overdraft. If so, describe the plan to eliminate the overdraft. Provide actual production (in acre feet per year (AFY)) and sufficiency (percent of total water supply) of groundwater pumped by City from calendar year 2010 to 2014. Provide expected production (AFY) and sufficiency (percent of total water supply) of projected groundwater pumped from 2020 to 2040 in 5-year increments.

Task 4-4: Evaluate the Reliability of Supplies Identified (WCS 10631(c)) – Describe the reliability or vulnerability of the water supplies identified in Task 4-1 to 4-3. Coordinate with the wholesaler to determine the basis of water year data to be used for normal water years, single dry years and multiple dry years.

Task 4-5: Discuss Transfer and Exchange Opportunities (WCS 10631(d)) – Describe short and long-term water exchange and transfer opportunities and quantify.

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Task 4-6: Describe Past, Current and Projected Water Demands (WCS 10631(e)) – Develop the data (as available from the City) for single family, multi-family, commercial/industrial, Institution/government, landscape, agriculture, saline water intrusion barriers, groundwater recharge, or conjunctive uses. All metered data to be reported by number of accounts and total deliveries in AFY; unmetered data to be reported in total deliveries in AFY. Note new Requirement in 2010 – WCS 10631.1 (created by SB 1087) – Describe water use projections for single family and multi-family residential needed for lower income and affordable households.

Task 4-7: Describe Planned Water Supply Projects and Programs (WCS 10631(h)) – Collect from City and provide updated list of all planned water supply projects including detailed descriptions of expected future supply projects and programs (except for demand management measures described elsewhere in the plan) with a timeline for each proposed project. Quantify each proposed project’s normal year, single dry year and multiple dry year supply to the City.

Task 4-8: Development of Desalinated Water (WCS 10631(i)) – Describe opportunities to develop desalinated water, including but not limited to ocean water, brackish water and groundwater, as a long-term supply. Provide estimated supply amounts.

Task 4-9: Water Service Reliability Assessment (WCS 10635(a)) – Assess the reliability of the City’s water service to its customers during normal, single dry, and multiple dry water years by compiling a comparison of the following demands to supplies: (1) projected normal year for next 25 years (in 5-year increments); (2) projected single dry year for next 25 years (in 5-year increments); (3) projected multiple dry year occurring for each 5-year period beginning with the period 2016 to 2020 and continuing until 2040.

Task 4-10: Provide Water Service Reliability Assessment to Cities or County (WCS 10635(b)) (Also see Task 2-2: City/County Notification and Participation) – Develop a list of impacted agencies and supply it to the City along with a copy of the completed Water Service Reliability Assessment for the City to submit to the City Planning Department and other impacted cities and the County within 60 days of UWMP submission to DWR.

Task 5: Demand Management Measures (WCS 10631(f)(g))

The 14 DMMs listed in the UWMP Act are: (1) Water survey programs for single family residential and multifamily residential customers; (2) Residential plumbing retrofit; (3) System water audits, leak detection and repair; (4) Metering and commodity rates for all new connections and retrofit of existing connections; (5) Large landscape conservation programs and incentives; (6) High-efficiency washing machine rebate programs; (7) Public information programs; (8) School education programs; (9) Conservation programs for commercial, industrial and institutional accounts; (10) Wholesale agency programs; (11) Conservation

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pricing; (12) Water conservation coordinator; (13) Water waste prohibition; and (14) Residential ultra-low flush toilet replacement programs.

Member agencies of the California Urban Water Conservation Council (Council) may submit their Best Management Practices (BMPs) Activity Reports to satisfy the requirements of Section (f) and (g). Martinez is not a Council member and must therefore discuss in detail each of the 14 DMMs and any other measures the City is implementing or has scheduled for implementation. For those DMMs and other measures currently being implemented, describe the program, the implementation schedule currently and through 2020, and the methods the City will use to evaluate the measure’s effectiveness. For those DMMs and other measures scheduled for implementation, describe the proposed program, the implementation schedule, and the methods the City proposes to use to evaluate the measure’s effectiveness. Evaluate DMMs not currently being implemented or not scheduled for implementation. Include economic and non-economic factors, a cost-benefit analysis, identifying total benefits and total cost, available funding to implement any planned water supply project that would provide water at a higher unit cost and a description of the City’s legal authority to implement the measure and efforts to work with other agencies to ensure implementation of the measure and to share implementation costs. It should be noted the draft Guidebook being prepared by DWR simplifies this from previous UWMPs (supposedly) by paring them down to 7 key DMMS. DWR staff has indicated their idea is they are more interested in each agency achieving their 20 x 2020 goal than in how they get there.

Task 6: Water Shortage Contingency Plan

The City shall provide to Psomas its already adopted Water Shortage Contingency Plan and Psomas shall summarize this plan including:

Task 6-1: Stages of Action (WCS 10632(a)) – Identify stages of action (within its authority) the City will take in response to a water supply shortage. One of these stages must be designed to address a 50 percent reduction in water supply. Identify the specific water supply conditions that trigger activation of each stage of action.

Task 6-2: Estimate of Minimum Supply for Next Three Years (WCS 10632(b)) – Determine minimum water supply available during the next three years (from 2016 to 2018) based on the driest three-year historic sequence for the City.

Task 6-3: Catastrophic Supply Interruption Plan (WCS 10632(c)) – Describe catastrophic supply interruption plan. Evaluate vulnerability of each source and delivery and distribution systems for earthquakes, regional power outages, system failures, terrorist attack, and other events specific to the City’s water sources and service area. Include specific City actions to minimize the impacts of supply interruption on the City’s service area.

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Task 6-4: Prohibitions, Penalties and Consumption Reduction Method (WCS 10632(d)(e)(f))

– List mandatory prohibitions against specific water use practices during water shortages in the City’s service area; describe the stage when prohibition becomes mandatory. List consumption reduction methods the City will use to reduce water use in the most restrictive stages with up to a 50% reduction; describe the stage when method takes effect and the projected reduction (in percentage) associated with the method. Reduction methods can include customer allocations, limiting irrigation, restricting decorative fountains and refilling swimming pools, etc. List excessive use penalties/charges and stage when penalty takes effect in the City.

Task 6-5: Analysis of Revenue Impact of Reduction of Sales During Shortages (WCS 10632(g))

– Examine the plan for recovering from the financial impact during shortages. Describe how planned consumption reduction methods, penalties and prohibitions will impact City revenues; describe how implementing a water shortage program will impact City expenditures. List proposed measures to overcome financial impacts during the shortages. Coordinate with the City in preparing this information.

Task 6-6: Draft Ordinance (WCS 10632(h))

– Include a copy of the water shortage contingency resolution or ordinance.

Task 6-7: Reduction Monitoring Procedure (WCS 10632(i))

– Describe mechanisms for determining actual reductions on a weekly/daily basis based on the severity of water shortage.

Task 7: Current and Proposed Use of Recycled Water

Task 7-1: Coordination (WCS 10633)

– Document City’s plan for use of recycled water. Or if not feasible document why.

Task 7-2: Wastewater Quantity, Quality and Current Uses (WCS 10633(a)(b)(c))

– Describe wastewater collection and treatment systems in the City’s service area. Quantify the volume of wastewater collected and treated and the amount that meets recycled water standard from 2015 to 2040, in 5-year increments. Describe treatment level, disposal method (to ocean, rivers, groundwater recharge, etc.), and projected wastewater quantities from 2020 to 2040, in 5-year increments. Identify current uses of recycled water, including type, place and quantities.

Task 7-3: Potential and Projected Use of Recycled Water, Optimization Plan with Incentives (WCS 10633(d)(e)(f)(g))

– Project future recycled water uses (2020 to 2040, in 5-year increments) including type, treatment level and quantities; determine technical and economic feasibility of those uses. Compare City’s actual 2015 recycled uses to 2010 projections. Describe actions (e.g., financial incentives or installation of dual distribution system), which might encourage recycled water uses and projected results from 2020 to 2040 (in 5-year increments). Describe options for optimizing recycled water use (e.g., facilitating installation

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of dual distribution systems and systems to promote re-circulating uses). Discuss potential indirect potable reuse. Indirect potable reuse is taking recycled water meeting all regulatory requirements for non-potable use, treating it further with advanced treatment processes meeting potable water standards, and adding it to an untreated potable water supply (e.g., a surface water reservoir or a groundwater aquifer).

Task 8: Water Quality Impacts on Reliability (WCS 10634)

Analyze and describe how water quality will impact water management strategies and supply reliability in the City's service area. Quantify and describe changes in each water supply due to water quality issues from 2020 to 2040, in 5-year increments.

Task 9: Public Participation (WCS 10642)

Assist the city in identifying individuals or entities to solicit input from social, cultural and economic community groups during the preparation of the UWMP. At least ten days prior to adoption of the final document, the City will post a notice to notify the relevant individuals and entities of the public hearing on the UWMP and publish it in the local newspaper.

Task 10: Prepare Draft 2015 UWMP Report

Prepare 2015 UWMP in accordance with aforementioned tasks; complete DWR UWMP Preparation Checklist, prepare and submit PDF copy of draft 2015 UWMP via email.

Task 11: Prepare Final Draft 2015 UWMP Report

Receive, review and incorporate comments from the Draft 2015 UWMP. Prepare a Final Draft 2015 UWMP for City adoption in accordance with the UWMP Act. Submit eight hard copies of the Final Draft UWMP to City plus one PDF digital copy. Assist City in adopting the 2015 UWMP, including coordination of the Notice of Public Hearing, Resolution of Plan adoption, and circulation of copies of the Final Draft 2015 UWMP. Attend a single public hearing and present the 2015 UWMP. Submit ten copies of the FINAL 2015 UWMP to the City along with one PDF copy. Submit Final 2015 UWMP to DWR, Contra Costa County and the California State Library.

Proposed Schedule and Important Information Regarding DWR UWMP Guidebook

Please note the following very important information, which may impact the project schedule. The California Department of Water Resources (DWR) has held a series of UWMP workshops throughout the State during 2014 and 2015. The purpose of these workshops was

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to gather input for inclusion in the 2015 UWMP Guidebook. DWR’s last workshop was held on May 6, 2015 in Orange County. At that time, it was DWR’s intent to hold a final UWMP Public Hearing in Sacramento on May 28, 2015, following which the Guidebook book would be finalized and published for use by all California water entities. That May 28, 2015 Public Hearing was subsequently cancelled and rescheduled for June 22, 2015. Unfortunately, the June 22, 2015 Public Hearing was also cancelled and no new date for a public hearing or for publication of the UWMP Guidebook was ever set.

While there is a current “Draft Guidebook “available on DWR’s website (<http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm>), there are many “loose ends” in that document that must be resolved before agencies and consultants can determine the exact requirements applicable to the preparation of 2015 UWMP. Some of those requirements, once defined, could have significant impacts on both the scope and professional fees associated with the preparation of 2015 UWMPs.

Also of concern is a new DWR requirement mandating the use of DWR spreadsheets for preparation of all water demand projection tables in the 2015 UWMPs. In the past, DWR allowed agencies to develop and use their own water demand projection tables. We agree in concept with the use of a uniform set of tables developed by DWR; however, at the May 6, 2015 UWMP workshop, DWR staff announced their tables would not be available until February 2016 (their website now indicates early November). However, given the previously mentioned delays in scheduling the final UWMP Public Hearing and releasing the 2015 UWMP Guidebook, we believe the release of the water demand projection tables may also be delayed until sometime in early 2016. If so, there could be significant impacts on the ability of agencies and consultants to prepare adopt their 2015 UWMPs by the current mandated date of July 1, 2016.

Because the water demand projection tables comprise a major component of the UWMP, there is only a limited amount of work that can be done prior to DWR’s release of those tables. That work will mostly be limited to gathering and reviewing past historical and water usage information, coordinating with CCWD, and preparing the more generic sections of the plan. With that in mind, we have prepared the following schedule for this project:

- Estimated Date of Issuance of Notice to Proceed November 9, 2015
- Initial Meeting with Key City Staff Second Week of November 2015
- Coordinate with Relevant Agencies As Needed
- Assumed Release of Final DWR 2015 UWMP Guidebook early November, 2015
- Prepare Information not Affected by DWR Tables Nov.-Dec. 2015
- Project on Hold Until Release of DWR Water Demand Tables Dec.-Jan. 2016
- Assumed Release of DWR Demand Tables January 2016

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- Prepare Water Demand Projections 2016 – 2040 February 2016
- Prepare Draft UWMP and Submit for City Review Mid April 2016
- Meet with City to Review Draft UWMP Comments Late April 2016
- Prepare/Submit Final Draft UWMP May 2016
- Public Hearing/City Council Adoption June 2016
- Submit Final UWMP to City, DWR and State Library Late June 2016

Professional Fee

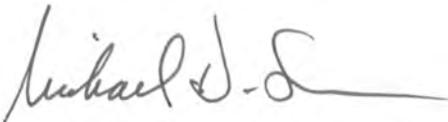
Our professional services fee for this project is estimated at \$46,000. Please note it is not practical to include provisions in our scope and fee to address subsequent DWR comments on the City’s Final 2015 UWMP in the event they have some, due to lengthy delays typically encountered in DWR’s processing of UWMPs (e.g., DWR’s comments on most 2010 UWMPs were not issued until 2014). The most appropriate way to handle any DWR comments will be to briefly review those comments when received and prepare a scope of work and fee for addressing them at that time (which could be 2019 or even 2020). It should be noted that the City’s 2010 UWMP prepared by Psomas was approved by DWR without any revisions required.

Closing

We appreciate the opportunity to present our proposal to prepare the City’s 2015 UWMP and look forward to discussing it with you in further detail. Please feel free to contact me at (714) 481-7979 or on my cell at (949) 683-5812 should you have any questions regarding this proposal.

Respectfully,

PSOMAS



Michael D. Swan, P.E.
Vice President
Senior Project Manager