

**SUSTAINABLE TAMALMONTE  
215 JULIA AVENUE  
MILL VALLEY, CA 94941**

April 26, 2016

Marin Municipal Water District Board of Directors  
220 Nellen Avenue  
Corte Madera, CA, 94925  
Attn: Stephanie Eichner-Gross, Board Secretary

Re: Comments on the Draft 2015 Urban Water Management Plan

Dear Marin Municipal Water District Board of Directors,

For planning purposes, the Draft 2015 Urban Water Management Plan (UWMP) needs to rely on accurate and adequate information available at the time of adoption in June 2016. This would require the Resiliency Study and its implications for planning to be removed until it can be evaluated when complete. Water use projections used for planning purposes and water supply sufficiency need to be based on actual experience with declining demand, continued inclusion of both passive and active conservation, and an accurate estimate of basic needs and minimal growth. Economic implications of climate change and non-toxic vegetation management also need to be included.

According to the Draft Urban Water Management Plan (UWMP) (10.3), we are supposed to give input on the Plan, on the economic impacts and method for determining a water use target. The Plan states that significant improvements will be made, including unspecified regional development projects.

By incorporating the 2017 Resiliency Study into the District's future Water Management Plan, the District has essentially adopted information, projected options and 'expected implementation' which can neither be reviewed or evaluated at this time by the public or the District. The Plan does not just simply reference that there is a Bay Area Resiliency Study but it actually defines what it will do (E.g. What its impact will be in determining MMWD's future direction although the specifics are vague and not transparent at this time).

Unfortunately this creates serious problems in assessing economic impacts, water targets and regional development projects.

**A. REGIONAL DEVELOPMENT PROJECTS & FUTURE PORTFOLIO**

According to the Draft UWMP, the Resiliency Study of 2017 will:

1. "Update safe yield analysis over the historic period of record";
2. "Assess the Richmond pipeline as one of resiliency options";
3. "Evaluate the feasibility of transfers with EBMUD and other water suppliers;
4. "Identify potential future water projects to increase supply resiliency";

5. “Identify and evaluate additional supply options and provide a recommended supply portfolio from which the district is expected to implement some of the options”;
6. “Include analysis of district’s resiliency under climate change scenarios”; and
7. “Include ways to increase safe yield, determine risks of future shortages, identify regional partnerships, and study feasibility of local projects.”

**Reference Excerpts:**

- **6.3 Surface Water (Pg. 6-4);**
- **6.7 Exchanges or Transfers (Pg. 6-21);**
- **6.8 Future Water Projects (Pg.6-22) & (Pg. 7-7 & 7-8);**
- **6.10 Climate Change Impacts to Supply ( Pg. 6-25 & 6-26 ); and**
- **7.4 Regional Supply Reliability (Pg. 7-7 & 7-8).**

**6.3 Surface Water (Pg. 6-4):**

*“For the purpose of the DRAFT 2015 UWMP, the district will use 28,500 AFY as the operational yield, with an assumed 20,000 AFY from the reservoirs and 8,500 AFY from SCWA. However, the district is currently updating this analysis as part of the 2040 Resiliency Study and will conduct a safe yield analysis under current reservoir conditions over the historic period of record. The results of the analysis will be available when the 2040 Resiliency Study is finalized in late 2017.”*

**6.7 Exchanges or Transfers (Pg. 6-21):**

*“The temporary connection with EBMUD was installed in the emergency pull-out lane of the Richmond-San Rafael Bridge. It was removed from the bridge in the early 1980s when traffic increased making the pipeline a safety hazard. ... “*  
*“MMWD anticipates assessing, as one of many resiliency options, the feasibility of transfers with EBMUD and other local water suppliers as part of its 2040 Resiliency Study, scheduled for release in 2017, and as part of its involvement in the Bay Area Regional Reliability Drought Contingency Plan. “*

**6.8 Future Water Projects (Pg.6-22) & (Pg. 7-7 & 7-8):**

*“As a result, no future potable water supply projects are necessary at this time to increase the amount of available potable water supply, as shown in Table 6-9 below. However, the district is currently preparing a 2040 Resiliency Study which will identify potential projects to increase supply resiliency for district customers. ...*  
*As part of the 2040 Resiliency Study, the district will identify and evaluate additional supply options, as well as provide a recommended supply portfolio. It is anticipated that the district will implement some of the options within the recommended portfolio in order to increase future supplies available to the district. “*

**6.10 Climate Change Impacts to Supply (Pg. 6-25 & 6-26 ):**

*“...a customized climate vulnerability assessment for the Marin County study area. This assessment, when complete, will provide climate change- related data products for Marin County. The district, using these data products, will build and run a dynamic systems model to analyze the district’s resiliency under climate change scenarios. The results of this analysis will be included in the district’s 2040 Resiliency Study, which will be finalized in 2017.”*

#### **7.4 Regional Supply Reliability (Pg. 7-7 & 7-8)**

*“To improve resiliency, the district is undergoing a 2040 Resiliency Study that will identify ways in which the district can increase the current safe yield and maximize its local sources of supply. The study will determine the risk of future water shortages, identify various regional partnerships, and study the feasibility of a number of local projects with the potential to increase resiliency. The 2040 Resiliency Study is expected to be released in fall 2017 and is further discussed in Section 6.8 Future Water Projects. “*

#### **B. WATER USE TARGETS**

Using 2010 Census data for baseline population and baseline daily per capita water use, the Plan still projects significantly higher targets than essential to provide for actual basic needs with maximum conservation.

While we have not recently experienced the necessity of past reductions due to availability of increased water supply and storage, we still have shown the continuing capability of living sustainably within our watersheds.

The current reduction in demand demonstrates the potential for public responsiveness through passive and active conservation (regardless of financial recession) based on values, preferences and ability. The trend in recent decades is for declining demand which can be expected to continue with some year to year fluctuations into the future, especially without a significantly large population increase which raises questions regarding the validity of the speculative projected demand increase of 1,800 afy.

Page 4-10 contains tables for “passive” and “active” conservation savings, but then states “Given that active savings can fluctuate, the district is opting to plan for future demands with passive savings only; thus, any level of conservation program implementation will result in reduced future demands.” It is noteworthy that the “passive” conservation is projected to have about twice the impact of the “active” savings (see tables 4-6 and 4-7 on page 4-10). Presumably the conservation program is designed to have real impact on future demand.

This is important since the recent drought in California has demonstrated that demand has remained elastic for areas aggressively pursuing conservation in recent decades. Since normal year demand can be expected to slowly decline for MMWD, the district should have additional year-to-year carry forward supply stored in the reservoirs. Furthermore, with continued improvement in conservation technologies and practices, and the willingness of MMWD customers to conserve additional water in drought years, MMWD should be better positioned to respond to future drought.

The target of 124 GPCD still allows for much reduction in demand while providing for basic needs with minimal population growth without having to pursue desalination or the hazardous pipeline.

These should not be considered as potential projects in this future Plan. *“...no future potable water supply projects are necessary at this time to increase the amount of available potable water supply, ...”* (6.8 Future Water Projects (Pg.6-22))

In the past MMWD has pursued unnecessary new water supply projects based on false assumptions and water use projections and it is evident that a new water supply is not urgently needed during the planning horizon through 2040. This assessment on page 6-22 is undermined by the statement on page 7-7 that “The district is currently developing a 2040 Resiliency Study, which will further identify supply options to increase resiliency during times of shortage”.

**Reference Excerpts:**

- **6.8 Future Water Projects (Pg.6-22)**
- **8.0 Water Shortage Contingency Planning**
- **9.0 Demand Management Measures (Pg. 8-15)**
- **9.1 Demand Management Measures**
- **7.2 Reliability by Year Type (Pg 7-5)**
- **6.6 Desalinated Water Opportunities (Pg. 6-21)**
- **6.7 Exchanges or Transfers (Pg. 6-21)**

**8.0 Water Shortage Contingency Planning:**

*“The basic philosophy in developing ... required use reductions is to generally weigh the uses involved in the various consumer classes and then set reductions to ensure that basic health and sanitation needs are met .” (Pg.8-6)* An illustration of this potential elasticity is also shown by *“ During the final stage of the 1976-77 drought, consumers reduced their water use by approximately 63 percent when the district went into a mandatory water use reduction program.”*

**9.0 Demand Management Measures (Pg. 8-15) & 9.1 Demand Management Measures:**

*“When the district was embarking on its Integrated Water Resources Management Program in 1991, a review of water demands found that an estimated 11 percent reduction in water use had occurred during the period from 1970 to 1987 after taking into account the additional services installed during the period. A similar review took place in 1999 and found that the demand had been reduced by an estimated 25 percent during the period from 1970 to 1998.”*

**7.2 Reliability by Year Type (Pg. 7-5):**

*“Storage improvements implemented in response to the 1977 drought, including construction of Soulaiule Reservoir and raising Kent Reservoir dam, resulted in an increase in carryover storage and the ability to capture inflow under a repeat of 1975-1977 hydrologic conditions. In addition, the district has negotiated additional firm yield from SCWA compared to in 1975-1977*

**6.6 Desalinated Water Opportunities (Pg. 6-21):**

*“While the district has in the past explored desalination as a potential supply option, the district does not intend to pursue desalination to augment water supplies at this time.”*

**6.7 Exchanges or Transfers (Pg. 6-21):**

*“The temporary connection with EBMUD was installed in the emergency pull-out lane of the Richmond-San Rafael Bridge. It was removed from the bridge in the early 1980s*

when traffic increased making the pipeline a safety hazard.

## **C. ECONOMIC IMPACTS**

While it should be noted that plant migration has always occurred historically, certainly changes in climate will accelerate that normal process. There is reference to potential increase in adverse impacts of 'invasive species' due to climate change, which it suggests could affect water quality and infrastructure. However, were this a problem there is no indication that these economic impacts would be offset by additional funding of non-pesticide solutions.

### **6.10 Climate Change Impacts to Supply (Pg. 6-25 & 6-26):**

*“As climate change advances, there is a potential for increased ecological vulnerability to currently identified invasive species as well as to new invasive species. Invasive species could impact the district’s water supply by negatively affecting water quality and infrastructure systems. “*

The analysis of climate change impacts failed to adequately address the potential impact of sea level rise on the MMWD service area. It is entirely possible that by the end of the 2040 planning horizon some of the developed low lying area will regularly flood to the extent that development in those areas will need to be abandoned or moved. This may result in either reduced overall water use in the service area, or uses shifted to other locations, requiring significant changes in the MMWD water distribution system and facilities with concomitant economic challenges.

## **D. CONCLUSION**

Sufficient information is not available to adopt the DRAFT 2015 Urban Water Management Plan unless the following revisions are made:

1. The Resiliency Study of 2017 and its implications must be removed from the Plan. This study cannot be included until it can be reviewed and its implications evaluated upon completion. (Provision is identified for amending the Plan when future information is available but adoption in June 2016 should be based on and include information available at this time.);
2. Water use projections should include a range from basic necessity to current or potential use, and conclusions regarding water supply sufficiency should be based on actual experience with declining demand coupled with both active and passive conservation and accurate population projections; and
3. Economic implications of climate change & non-toxic vegetation management should be included.

Thank you for your conscientious consideration.

Very truly yours,

/s/

Ann Spake, Executive Committee Member  
**Sustainable TamAlmonte**