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March 27, 2008

Mr. Eric McGuire
Environmental Services Coordinator
Marin Municipal Water District
220 Nellen Avenue
Corte Madera, CA 94925

Re: Marin Conservation League Comments on the Marin Municipal Water District Desalination Project Draft Environmental Impact Report

Dear Mr. McGuire:

Thank you for the opportunity to comment on the Marin Municipal Water District (MMWD) Desalination Project Draft Environmental Impact Report (DEIR)**.** The Marin Conservation League (MCL) works to preserve, protect and restore Marin's natural assets and has been in the forefront of community based environmental protection since 1934. One of the ways we achieve our mission is by monitoring governmental decision making processes to ensure that the public is provided with a complete and accurate understanding of potential environmental impacts. Although MCL has not yet taken a position on the environmental appropriateness of the MMWD proposal to help meet the community's water demands through desalination, we strongly assert that the public must be provided with enough information to make informed decisions regarding our future water supply options - including desalination. Water supply decisions have significant ramifications for both the natural environment and the future of our communities, and deserve to be made in a collaborative and informed manner.

Although MCL understands that the current DEIR is limited to addressing issues related to the construction and operation of a desalination facility and is not intended to provide an overarching picture of water supply options, we hope that such discussion does take place between MMWD and the community of Marin before a final decision is made on the proposed desalination plant. Desalination is only one option for meeting our future water supply needs. Other options, including various possibilities relating to the pipeline with Sonoma County Water District, increased conservation, water pricing, and even the potential for cisterns to offset some of our water demand, may address our water supply needs at lower environmental and economic costs. MCL is not convinced that new water sources are truly needed, much less that desalination would be the most appropriate option, and we want to stress that this broader discussion relating to MMWD's water supply has yet to take place. Therefore, although we accept the necessity of limiting the following comments to issues specific to the Desalination Project DEIR, we do not accept that new water supplies are a de facto need, or that the range of other options has been sufficiently explored by MMWD.

The central statutory goals of the California Environmental Quality Act (CEQA) are to identify and inform governmental decision makers and the public about the potential significant environmental effects of proposed activities, and to identify ways that environmental damage can be avoided or significantly reduced. The DEIR does not fulfill these goals. Although many parts of the document are well done, the DEIR does not provide an adequate level of analysis regarding:

1) The need for a desalination plant
2) Potential environmental impacts of the proposed project (particularly energy impacts)
3) Reasonable alternatives to the proposed project.

MMWD should undertake considerable revision and expansion of the document before releasing a Final Environmental Impact Report (FEIR) to the public.

The following general and detailed comments discuss the issues that the Marin Conservation League believes must be addressed in the FEIR document.

General Comments

Project Need

The DEIR Section 3.1 does not provide adequate information regarding the need for the proposed project. Before being asked to support a significant expansion of our water supply system, the public deserves to feel comfortable that the desalination plant is truly needed - that all the options for using the existing system have been explored and that water demand projections have been checked and double checked. The FEIR therefore should include a detailed explanation of the existing water supply system, how this system is currently operated, and what steps (for example, reservoir capacity and withdrawal efficiency modeling studies) have been taken by MMWD to ensure that the system is meeting its full water supply potential under current and projected water demand and price conditions. The FEIR should also provide a description of water demand projections. The document should clearly explain both the basis for the projected increases in water demand through 2025, and the sensitivity of those projections to factors such as potential changes in residential growth patterns (e.g. downturn in new house construction) and efforts to decrease per capita water demand (such as the policy in the recently adopted Marin Countywide Plan requiring no net growth in water demand for new development). This level of information is crucial if we are to have informed participation by governmental decision makers and the public in evaluating environmental impacts and project alternatives.

Environmental Impacts

In general, the DEIR does a good job of assessing potential environmental impacts from operation of the desalination plant, including water quality and entrainment issues. However, the DEIR incorrectly dismisses energy impacts as insignificant and thus not in need of mitigation. The California Environmental Quality Act[1] requires that Environmental Impact Reports address the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. In addition, CEQA requires mitigation that includes measures to reduce unnecessary consumption of energy, and further requires that alternatives be compared both in relation to overall energy consumption and in relation to reducing wasteful, inefficient and unnecessary consumption of energy. The desalination DEIR does not meet this level of analysis with respect to energy consumption, and must be revised before issuance of the FEIR.

The DIER is also incorrect in concluding that energy related greenhouse gas emissions are not significant impacts requiring the development of a formal impact mitigation and monitoring plan. The proposed project would increase MMWD's electrical consumption from the current rate of 1.8% of Marin's total electrical consumption up to a maximum of 7.2% of Marin's total consumption (Section 5.1). This is clearly a significant increase that could, without mitigation, contribute to global warming impacts through increased fossil fuel based electrical generation. In addition, this significant unmitigated increase in energy use directly conflicts with the Marin County greenhouse gas reduction target, established by the *Marin County Greenhouse Gas Reduction Plan*[2] adopted by the Board of Supervisors in 2006, of a 15-20% reduction over 1990 levels by 2020. MMWD has also pledged to substantially reduce its carbon footprint through energy conservation and environmentally responsible energy sourcing. Although the DEIR concedes that "it can be argued that implementation of this project may result in a cumulatively considerable contribution to the global problem" (p. 7-11) MMWD concludes that because no specific CEQA threshold of significance has been developed for greenhouse gases, it is not able to establish in the DEIR that energy related greenhouse gas production is a significant impact requiring a formal impact mitigation and monitoring plan. MCL strongly disagrees with this conclusion.

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[1] *Guidelines for implementation of the California Environmental Quality Act*, Energy Conservation, California Code of Regulations, Title 14, Division 6, Chapter 3, Appendix F.

[2] *Marin County Greenhouse Gas Reduction Plan*, Marin County Community Development Agency, October 2006.

The recent *Marin County Wide Plan Update DEIR*[3] (developed under the same CEQA requirements as the Desalination DEIR) states that if left unmitigated, energy use in Marin's commercial and residential buildings would contribute to the generation of greenhouse gasses that result in a "significant project impact and the project would make a cumulatively significant contribution to a cumulative greenhouse gas emissions impact."[4] The same reasoning would dictate that because the proposed MMWD desalination plant would significantly increase Marin's electrical use (by up to 5.4% over current rates), electrical use and related greenhouse gas emissions must be considered a significant project impact in the Desalination EIR. Also, the project must be considered to make a cumulatively significant contribution to a cumulative greenhouse gas emissions impact. As a public agency, it is not acceptable for MMWD to appear to use loopholes in the current CEQA legislation to avoid responsibility for reducing and mitigating the energy related impacts of a desalination plant. The County of Marin has established that electrical use is a significant impact in relation to greenhouse gas impacts on climate change, and MMWD should follow this precedent. Climate change is predicted to contribute to and exacerbate the very same water shortages and drought conditions that the proposed desalination plant is designed to protect against. It is both ironic and unacceptable that the DEIR appears to unreasonably downplay and dismiss the desalination project's potential to contribute to global climate change. The FEIR needs to fully examine energy and climate change impacts and include a formal mitigation plan for reducing or eliminating these impacts.

The mitigation plan should include:

1) A commitment to operate the plant primarily as a drought protection measure and not as routine water supply source. MMWD, both in the DEIR and at public meetings, has often referred to the plant as operating at minimum levels except in times of drought (MMWD's "Frequently Asked Questions" [5] regarding the DEIR states "If built, the plant would operate at a minimum production level most of the time and would be ramped up to operate at higher levels when needed, such as during droughts.") However, based on the proposed Normal Operation Procedures" (Section 3.4.4.1) this is not the case. The DEIR in fact proposes operating the plant at 80% of capacity during the summer and fall of all years, even in normal and wet years when natural rainfall is sufficient to meet water demands. Although MCL understands that the plant must be run at a minimal level (approximately 20% of capacity) to maintain the reverse osmosis membrane, running the plant above this minimum when sufficient water to meet demand exists in the reservoirs is simply generating greenhouse gasses needlessly and resulting in wasteful, inefficient, and unnecessary consumption of energy. MMWD should commit to operating the proposed desalination plant under operational procedures that meet the objective of drought protection while minimizing energy use pollution and global warming impacts.
2) A commitment to water conservation. To its great credit, MMWD recently adopted the *2007 Water Conservation Master Plan* which contains a number of aggressive scenarios to reduce water demand through increased water use efficiency and conservation. Increased water conservation is absolutely necessary to keep water demand from outstripping supply and to maintain adequate reserve water capacity in the event of multi-year drought scenarios (as are predicted to be more common with global climate change). However, in the DEIR, MMWD does not commit to the priority of conservation first and desalination second. Instead, desalination water is presented as the first option, with conservation used only to the extent necessary to fill any shortfalls (Section 6.4.3.1). This prioritization will result in a) the unnecessary use of the desalination plant, b) a reduced incentive for water conservation, and c) an increased likelihood that further supply expansions will become necessary beyond the initial 5,000,000 gallons a day capacity. As part of an energy mitigation plan, MMWD should commit to fully funding conservation programs in order to reduce overall water demand, thereby reducing the amount the desalination plant needs to be operated.

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[3] *Marin Countywide Plan Update, Draft Environmental Report*, Marin County Community Development Agency, State Clearing House No. 2004022076.

[4] Page 4.3-32 of *Marin Countywide Plan Update, Draft Environmental Report*, Marin County Community Development Agency, State Clearing House No. 2004022076.

[5] *Frequently Asked Questions: Desalination Draft Environmental Impact Report, Questions and answers about MMWD's Environmental Study on Desalination*, Marin Municipal Water District, 12/17/07.

3) A commitment to sourcing renewable energy and/or mitigating energy impacts by facilitating energy conservation projects in the community. Although Section 5.3 of the DEIR addresses MMWD's plans to explore the use of alternative renewable energy sources, this discussion does not constitute a commitment to either minimize or mitigate energy use from fossil fuel based sources. It is not sufficient for MMWD to simply state a desire to mitigate energy related impacts. The District must commit to specific actions to eliminate or mitigate the impacts, and monitor the results of mitigation efforts. This mitigation plan should fully assess and present the feasibility of sourcing "green" energy supplies, and commit MMWD to utilizing non-fossil fuel based energy sources as part of the project approval process.

In addition to energy related impacts, before releasing an FEIR, MMWD should also plan on updating and correcting Section 3.4.3 (Construction Activities) as well as construction related impacts in Section 4.2 (Air Quality), Section 4.9 (Noise), and Section 4.13 (Traffic, Circulation and Parking). Although not as serious as the omission of energy and green house gas emissions from the list of significant environmental impacts, the DEIR appears to under-represent construction related impacts. For example, Table 3-3 (Estimated Desalination Plant Construction Equipment) states that only one material transport truck will be used during all phases of construction. The table also states that only one bulldozer and one backhoe will be used. Given the scope of the construction project, these estimates appear to be unrealistic. Because equipment projections provide the basis for air quality, noise, and traffic impact calculations during construction, these calculations should be corrected and updated as well. Since construction will take place in various locations over a lengthy period of time, it is important that the impact analysis provide accurate information on construction phasing, equipment use, and environmental impacts.

Reasonable Alternatives

The DEIR Section 6.0 is lacking in its consideration of alternatives. Although the document examines in detail a number of alternatives relating to different sized plants, different locations, and different components, the range of alternatives addressed is too limited and the level of analysis is too superficial. In the FEIR, MMWD should at a minimum present a complete and thorough examination of all the reasonable alternatives to desalination that have been considered and discussed at MMWD's board meetings over the last year and/or those options that were discussed at the two public workshops held in conjunction with the release of the DEIR for public comment. These alternatives include:

- Building a new pipeline to Lake Sonoma
- Expanding the existing pipeline in conjunction with the Marin-Sonoma Narrows project
- Reducing leakage in the existing system and potentially increasing user conservation through the installation of state of the art water meters
- Joining into the Bay Area Regional Desalination Project
- Leasing a barge mounted desalination plant for use in drought situations
- The potential for household cisterns to reduce water demand for yard use and to provide summer irrigation supplies, and winter usage through gray water piping (this would also lessen energy usage to pump water from reservoirs).
- The potential for graywater reuse to offset at least a portion of landscape irrigation water demand, which currently accounts for approximately 50% of MMWD's summer water use. Recent technological advance make graywater a more feasible option that should be assessed/reassessed.

In addition, the FEIR should consider alternative operating scenarios, including plant operation at truly "minimal" levels (e.g. 20% of capacity in the summer and fall months of wet and normal water years vs. the 80% of capacity currently proposed) in relation to energy consumption. The FEIR should also provide a comprehensive comparison of energy impacts of all alternatives, including water conservation, in relation to overall energy consumption and potential to avoid wasteful, inefficient and unnecessary consumption of energy.

Lastly, the FIER should explain why *Alternative 3: 5 MGD Non-Expandable Desalination Plant with Conservation* is not the preferred project. Section 6.4.3.4 states that this alternative would have fewer impacts, or a reduced level of impacts, compared with the proposed project and would fully meet the project objectives. Given that this alternative fulfils the project goals with fewer environmental impacts it should, both logically and by CEQA requirements, be preferred to the currently proposed project. The FEIR should make this correction or clarify this apparent mistake.

Detailed Comments

Section 1.4.1 The Notice of Preparation (NOP) was issued for this project in August of 2003. The date of the NOP establishes the baseline conditions for analysis of potential impacts. Because the NOP predates the DEIR by an unusually long period of time (over four years) the baseline conditions must be updated to reflect current conditions. For example, water demand growth projections should be updated based on current regulatory mandates, including regulations in the current Marin Countywide Plan requiring new development to offset any increase in net water demand.

Section 2.6 Table 2-1 (Impacts and Mitigation Measures) should be updated based on corrected impact analysis calculations. As discussed above in General Comments, the resource areas of Air Quality, Noise, and Traffic, Circulation and Parking should be revised based on corrected Section 3.4.3 (Construction Activities) projections. In addition, Table 2-1 should be revised to include electrical energy and increased emissions from fossil-fuel power plants as a significant impact requiring specific mitigation measures.

Section 3.1 In addition to the expansion and revision discussed above in General Comments, Section 3.1 should be reviewed and updated to ensure that the calculations presented make sense. Currently, the numbers regarding reservoir yields, Sonoma County Water Agency deliveries, and demand projections don't "add up" in both a literal and figurative sense. As part of the expansion and revision discussed above, the water supply calculations and narrative should be checked and corrected to ensure that a logical picture is presented.

Section 3.4.2.2 The future availability of the Redwood Landfill to accept solid waste from the desalination plant is questionable. An alternative plan must be developed and presented in the FEIR for the disposal of dewatered solids in the likely event that the Redwood Landfill is closed during the projected lifetime of the desalination plant.

Section 3.4.3.2 As discussed above in General Comments, the estimates of construction equipment presented in Table 3-3 appear to underestimate equipment numbers by type. These estimates should be reviewed and corrected as necessary.

Section 3.4.3.4 The phasing and construction schedule presented is insufficient. A more detailed description on construction timing and workforce requirements should be developed for the FEIR.

Section 3.4.4.1 The "Normal Operation Procedures" described in this section include operating the plant at 80% of capacity May through November of normal water years. This high level of proposed operation conflicts with the description throughout the DEIR of the plant as operating at "low" levels in normal years with the majority of operational impacts limited to droughts. In order to avoid potential misrepresentation and/or confusion on the part of the reader, the FEIR should be revised to make clear that the proposed desalination plant would run at 80% of capacity or higher during <u>all</u> periods of little rainfall (e.g. summer and early fall), not simply during drought periods.

In addition, Section 3.4.4.1 states that the desalination plant size will be expanded to the proposed 10 and 15 MGD levels in 10 and 15 years respectively "if necessary". The FEIR must include a description of the factors that will be evaluated and steps that will be taken to determine if an expansion is "necessary". In addition, MMWD should include water demand mitigation and conservation steps that will be taken to avoid the need for plant expansion as part of the formal energy impact mitigation plan discussed above.

Section 3.4.6.2 This section should be revised to separate relatively short term construction impacts from the more continuous impacts of operational waste generation.

Section 3.5.5.4 The phasing and construction schedule presented is insufficient. A more detailed description on construction timing and workforce requirements should be developed for the FEIR.

Section 4.2.2.2

Impact 4.2-1: Construction related impacts to air quality should be reviewed and corrected. As discussed above, the estimates of construction equipment presented in Section 3.4.3.2, Table 3-3 appear to underestimate equipment numbers by type. Because this information is used as a basis for impact analysis, Impact 4.2-1 is likely an underestimation as well.

Impact 4.2-3: The logic used to determine that the large amounts of energy to be used at the proposed plant would not have a significant impact on air quality is faulty. Simply because the demand from the proposed plant is relatively small in comparison to PG&E's total supply, and can be supplied easily under most circumstances, does not mean that there is not a potential significant impact. Because the plant would be run continuously, the plant would use significant amounts of power even during periods of high electrical demand and/or supply shortage. Additional electrical supply would be generated to meet this demand/shortfall. At a minimum therefore, the proposed plant would contribute to overall peak generation, and would indirectly result in increased pollution emissions through an increase in the electrical spinning reserve capacity that must be maintained. This section should be corrected for the FEIR following the template for determining energy impact significance used in the *Marin Countywide Plan Update, Draft Environmental Report* [6].

Section 4.9.2.2
Impact 4.9-3: Construction related impacts to noise should be reviewed and corrected. As discussed above, the estimates of construction equipment presented in Section 3.4.3.2, Table 3-3 appear to underestimate equipment numbers by type. Because this information is used as a basis for impact analysis, Impact 4.9-3 is likely an underestimation as well.

Section 4.13.2.2 Construction related impacts to traffic, circulation, and parking should be reviewed and corrected. As discussed above, the estimates of construction equipment presented in Section 3.4.3.2, Table 3-3 appear to underestimate equipment numbers by type. Because this information is used as a basis for impact analysis (including construction vehicle traffic, worker commute traffic, and worker parking issues) Impact 4.13-1 through Impact 4.13-6 should be reviewed for accuracy and revised as needed.

Section 5.0 (5.1 through 5.6) As discussed above in General Comments, Environmental Impacts, energy impacts meet the threshold of significant project and cumulative impacts. Mitigation and monitoring is necessary to reduce overall energy use and develop more environmentally friendly energy sources. Unless MMWD commits to an energy use reduction and impact mitigation program, the statement in Section 5.6 that "while the project may result in a substantial increase in energy use, it would not result in wasteful, inefficient, and unnecessary consumption of energy" is incorrect. Given the threats posed by global warming and the energy intensive nature of desalination through reverse osmosis, energy use is arguably the biggest environmental impact of the proposed desalination plant and needs to be recognized and addressed in detail in the FEIR.

Section 6 (6.2 through 6.4.7) Please see above General Comments, Project Alternatives

[6] *Marin Countywide Plan Update, Draft Environmental Report*, Marin County Community Development Agency, State Clearing House No. 2004022076.

Section 7.4.1.2 Cumulative impacts assessment in relation to air quality should be revised to include energy related greenhouse gas emissions as a cumulatively significant contribution to a cumulative greenhouse gas emissions impact.

Document Wide The DEIR is inconsistent in its use of water measurement units, using both acre feet per year (AFY) and millions of gallons per minute (MGM) in different sections of the document. The use of different measurement units makes it difficult for the reader to compare figures and fully evaluate the information presented. For the FEIR the document should be revised to use a standard measurement unit, or provide water measurements in both acre feet and gallons per minute.

Conclusion

Thank you again for the opportunity to comment on the Marin Municipal Water District (MMWD) Desalination Project Draft Environmental Impact Report. Overall, we hope that for the Final Environmental Impact Report, MMWD will invest considerable time and effort into revision and expansion of the document to meet CEQA requirements and provide the community with the information necessary to make a fully informed decision regarding the need for, potential environmental impacts from, and alternatives to the proposed desalination plant. We look forward to continuing to work with MMWD's board of directors and staff to evaluate Marin's water supply needs, and we hope that MMWD continues its efforts to engage the general public in the water supply decision making processes.

Sincerely,

Roger Roberts

Roger Roberts
President