October 21, 2014

Ms. Anne L. Olson, P. E., Senior Water Resources Control Engineer
Regional Board - Central Valley
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Subject: **Tentative Waste Discharge Requirements**
Rancho Murieta Community Services District (District)

Dear Ms. Olson:

The District appreciates the opportunity to comment on our Tentative Waste Discharge Requirements and thanks you and your staff for your consideration and framing this permit to reflect our past discussions. However, the District is very concerned about the proposed total dissolved solids (TDS) limit of 350 mg/L and feels that it is plausible to think that the District would need to consider implementing some type of TDS removal or some other method to reduce effluent TDS concentrations in the immediate future if the 350 mg TDS/L limit were to be implemented. Our position is that the need to consider some method for TDS reduction is inconsistent with numerous findings within the Tentative Waste Discharge Requirements itself and the SWRCB General Permit and its application. We are requesting that the RWQCB either remove the TDS limit altogether based on the SWRCB General Permit and other significant reasons or, at a minimum, changed to a minimum of 500 mg/L + background.

The following are the District's comments regarding the Tentative Waste Discharge Requirements.

Article 1. Please revise this paragraph to reflect the submission of this comment letter and additional information.

Article 3. Please add APN 07301900980000 to the third row. This parcel is the driving range for the North Golf Course and is an existing recycled water use area.

Article 4. Please delete "as well as landscape around the facility" from the last sentence.

Article 7. Please change second sentence to read "The WWRP also receives recreational vehicle (RV) waste (approximately 3,000 gallons per year) from an RV dump station at the Rancho Murieta Mobile Home Park located on Cantova Way and Murieta Airport on Murieta Drive."

Please change the last sentence to read "The current number of residential units is 2,548 and is expected to increase to approximately 4,150 residences within the next 15 years."

Article 11. Please change the value for February 2013 from 1.2 to 11.2 MG.

Article 14. The sum of the Van Vleck sprayfield areas described in Article 10 is 96 acres; therefore please change "92" to "96" and "232" to read "282" in the second sentence. Please see Table 16 of the Report of Waste Discharge (RWD) for total Van Vleck spray field area after addition of the 4th field. In the following sentence (4th of the paragraph) please change "will" to "is anticipated to".

Article 14b. Proposed Expanded Recycled Water Use Areas Table. Please add a row to the end and indicate that the total irrigation demand of 413.8 AFY. [a] Where footnote a is "This total sum of 413.8 AFY does not include the combined estimated recycled water demand of 113.3 AFY for the future Estates of Lake Chesbro, Estates of Lake Calero, and Estates of Lake Clementia developments. Recycled water service to these particular developments was not included due to higher estimated service costs."

As part of this comment letter, we are submitting Addendum No. 2 to the RWD. Please note that we have changed "Approximately 150 acres of undeveloped pastureland" as the description of the Van Vleck Ranch – Spray Field No. 4 in Table 4 of the RWD, to read "Approximately 186.6 acres of undeveloped pastureland". Therefore, for Van Vleck Spray Field 4 and for the description shown in this table, please change "150 acres" to read "186.6 acres". Also please change the "335" irrigation demand (acre-ft) to read "410".

Article 15. RMCSD has updated development demand projections. It is anticipated that occupancy of Phase 1 developments will start in 2015. Furthermore, it has been estimated that between five and ten years will be required to complete the occupancy of Phase 1 developments (2020-2025 timeframe). Occupancy of Phase 2 developments could start in three to four years and full occupancy could be within 10 to 20 years (2025 to 2035 timeframe). Based on this information, please change Article 15 sub-items to read:

"a. An additional 195,000 gallons of chlorine contact basin capacity is planned for completion by the end of 2020 or 2025 depending on the level of Phase 1 occupancy achieved or six months prior to initiating recycled water residential landscape irrigation service.

b. An additional 240 AF of secondary effluent storage capacity (proposed Reservoir 3) following completion of the Phase 1 Developments and to accommodate an average dry weather flow greater than 0.65 mgd. Completion is anticipated for the end of 2020 or 2025 depending on the level of Phase 1 occupancy achieved. The location of the proposed storage reservoir is west of Aeration Pond 4 as shown on Attachment C.

c. Infrastructure improvements to convey recycled water to the new and expanded Use Areas."

Article 17. As part of Addendum No. 2 we are submitting (a) one additional water balance indicating that the rated average dry weather flow capacity of the storage and disposal system is 0.65 mgd, (b) Cease and Desist Order No. R5-2006-0001 (CDO), and (c) the hydraulic profile indicating that the capacity of the existing storage reservoirs are 756 AF as opposed to 728 AF.

As described in Article 29 of the above referenced CDO, the RWQCB has recognized in the past that the rated average dry weather flow of the storage and disposal system was 0.67 mgd. At that time, this rated capacity did not include either of the Van Vleck spray fields.

The As Built hydraulic profile shows the listed design storage capacity of 756 AF as opposed to 728 AF.

Considering these factors, RMCSD is asking that the rated average dry weather flow reflected in the WDR be changed from 0.5 to 0.65 mgd to coincide with the projected flow associated with Phase 1 developments and that the tables presented in Article 14 be changed to read as follows.

Condition	**Flow Conditions**	**Effluent Storage Reservoir Capacity**		**Use Area Disposal Capacity**	
	mgd	**mgal[1]**	**AF[1]**	**mgal**	**AF**
Current	0.65[1]	246	756	--	--
2 Golf Courses	--	--	--	179	550
Van Vleck (3 fields)	--	--	--	70	215
Subtotal:	**0.65**	**246**	**756**	**249**	**765**
Phase 2	1.0	314	965	--	--
2 Golf Courses	--	--	--	179	550
Van Vleck (4 fields)	--	--	--	204	625
Landscape Irrigation				121	370
Subtotal:	**1.0**	**314**	**965**	**504**	**1,545**
Full Buildout	1.5	469	1,440	--	--
2 Golf Courses	--	--	--	179	550
Van Vleck (4 fields)	--	--	--	204	625
Landscape Irrigation	--	--	--	157[2]	483[2]
Use Areas TBD	--	--	--	*198*	*607*
Subtotal:	**1.5**	**469**	**1,440**	**738**	**2,265**

[1] Capacity with 2-ft freeboard.

[2] Includes and additional projected recycled water demand of 113.3 AFY for Estates of Lake Calero, Estates of Lake Chesbro, and Estates of Lake Clementia.

TBD = to be determined

Article 18. Please change the last sentence to reflect a 1.5 mgd maximum as opposed to 1.0 mgd maximum. This value reflects the capacity of the existing secondary wastewater treatment plant.

Article 19. Please note that the average TDS values for 2011 and 2012 was 69 and 62 mg TDS/L, respectively based on RMCSD's Consumer Confidence Report source water quality data. These data indicate that source water TDS has varied by roughly 25 percent over the last 3 years.

Article 44a. The data citied above indicates that RMCSD does not expect TDS effluent quality to remain the same in the future given that water conservation efforts to address drought conditions and targeted 20/2020 water conservation compliance will cause TDS effluent concentrations to increase overtime. Given this outcome, RMCSD is requesting that the RWQCB implement one of the limitations proposed below under Provisions C.1. TDS limit of 350 mg/L.

Provision B. Flow Limitations (pg. 23). RMCSD requests that the values in the tables be change to read as indicated below. We are not proposing any changes to the footnotes or text, just the numerical values.

1. **Effectively immediately,** influent flows to the WWRP shall not exceed the following limits:

Influent Flow Measurement	Flow Limit
Total Annual Flow[1]	265 MG
Average Dry Weather Flow[2]	0.65 MGD
Monthly Average Flow[3]	0.85 MGD

2. Effective on the date of the Executive Officer's approach of each successive facility improvement phase and completion report submitted pursuant to Provisions H.1.a, H.2, H.3, H.4, and H.5, influent flows to the WWRP shall not exceed the limits specified in the following table. Approval is dependent on submittal of a water balance capacity analysis demonstrating that the as-built hydraulic treatment, storage, and disposal capacity of the WWRP is consistent with the flow limits.

Influent Flow Measurement	Flow Limit
Total Annual Flow[1]	400 MG
Average Dry Weather Flow[2]	1.0 MGD
Monthly Average Flow[3]	1.3 MGD

3. Effective on the date of the Executive Officer's approval of each successive facility improvement phase and completion report submitted pursuant to Provisions H.1.a, H.2, H.3, H.4, and H.5, influent flows to the WWRP shall not exceed the limits in the following table. Approval is dependent on submittal of a water balance capacity analysis demonstrating that the as-built hydraulic treatment, storage, and disposal capacity of the WWRP is consistent with the flow limits.

Influent Flow Measurement	Flow Limit
Total Annual Flow[1]	615 MG
Average Dry Weather Flow[2]	1.5 MGD
Monthly Average Flow[3]	2.0 MGD

Provision C. 1. TDS limit of 350 mg/L. Section 5.2 of the RWD presents an analysis demonstrating that the proposed project will use less than 10 percent of the assimilative capacity with respect to TDS.

The 10 percent assimilative capacity approach was first used for the La Contenta Wastewater Treatment Plant which is owned and operated by the Calaveras County Water District (CCWD). It is our understanding that TDS limits were not included in the effluent limitations for CCWD, thus implying that demonstrating relatively high quality with respect to TDS and local the groundwater coupled with the use of less than 10 percent of the assimilative capacity indicates or implies a low potential for groundwater impacts, thereby eliminating the need for TDS effluent limits. Although RMCSD has applied to the RWQCB for a MRP, as opposed to the SWRCB for coverage under WQO 2009-0006-DWQ (General Permit), one would expect that a similar and consistent approach be applied to both instances given that both focus on the protection of groundwater and the need to coordinate with CV-SALTS.

Therefore the District is requesting that the RWQCB be consistent with the General Permit and Notices of Applicability by eliminating the TDS limit altogether.

If this approach cannot be implemented, we request that the TDS limit be changed to "500 mg/L + background" based on the following considerations:

1. Annual average flow weighted average TDS concentrations were 281, 306, 315, 287, and 290 mg TDS/L between 2009 and 2013. The maximum historic value of 315 mg TDS/L is already very close to the proposed limit of 350 mg TDS/L (within 10 percent).
2. TDS concentrations have historically been monitored on a monthly basis. If the running 12-month average flow weighted average TDS concentration is calculated, as opposed to the annual average flow weighted average TDS concentration, the maximum TDS concentration between 2009 and 2013 is 329 mg TDS/L. Although this calculation methodology is different than what is being proposed by the RWQCB in the tentative permit, one can consider that this outcome statistically represents a significantly longer monitoring period. The result of this analysis could then imply that the current recycled water quality is within 6 percent of the proposed limit of 350 mg/L.
3. Given these outcomes, it is plausible to think that RMCSD would consider implementing some type of TDS removal or some other method to reduce effluent TDS concentrations in the immediate future if the 350 mg TDS/L limit were to be adopted. The need for considering some method for TDS reduction is inconsistent with the finding that (a) "For pH, TDS, sulfate, iron, manganese, and nitrate groundwater monitoring data indicate that groundwater is not high quality water, has not been degraded by the previous discharge, and that the expanded discharge does not pose a threat of significant degradation in the future",[1] (b) the poor quality groundwater is likely naturally occurring and not the result of the discharge,[2] (c) recycled water quality is of higher quality with respect to TDS than any of the groundwater described in Article 27 of the tentative permit, (d) use of less than 10 percent of the assimilative capacity has been demonstrated, and (e) the best groundwater quality with respect to TDS is 488 mg TDS/L or roughly 40 percent higher than the proposed limit. At a minimum, we proposed that the TDS limit should be 500 mg TDS/L, to reflect the quality of MW05. Alternatively MW01 could also be used to represent background water quality and the proposed limit could be increase to 1,000 mg TDS/L.
4. The Secondary MCL for TDS is 500 mg/L, as a recommended level, 1,000 mg/L as an upper level, and 1,500 mg/L as a short-term maximum. The average TDS concentrations in the upgradient wells MW05 (488 mg/L), MW01 (1,027 mg/L), and MW06 (1,360 mg/L) roughly coincide with the two levels and short-term maximum values. Most (three of the four) average TDS concentrations in the downgradient wells OW01 (659 mg/L), OW02 (728 mg/L), MW03 (738 mg/L), and MW02 (3,143 mg/L) fall within the upper level Secondary MCL level. The average secondary effluent TDS concentration is 303 mg/L which is lower than all of the average groundwater monitoring well results as well as the recommended Secondary MCL

[1] Article 45 of the tentative permit.
[2] Article 31 of the tentative permit.

level. It is expected that future secondary effluent TDS concentrations will continue to be less than the recommended Secondary MCL of 500 mg/L and that the discharge will not cause exceedance of a water quality objective. Based on this finding, which is similar to what is being proposed in Tentative WDR Order R5-2013-0022-001 for the City of Ione, RMCSD requests that their WDR does not contain an effluent TDS limit.

5. The community's ability to ration water when asked by the RMCSD has been demonstrated over the past few years. Over the past few years the community has been asked to ration water to address California's drought and to address the District's need to minimize potable water demands while it upgrades its existing potable water treatment plant. Since 2006, historic records indicate that potable water usage has been reduced from about 1,900 to 1,700 AFY or roughly 10.5 percent. Although this has been beneficial to reduce potable water demands in response to California's drought and to accommodate RMCSD's need to modify their existing water treatment plant, it is problematic from the standpoint of achieving the proposed TDS limit. To address water conservation specifically, which is anticipated to be needed more and more in the future, RMCSD proposes that the TDS limit be "background + 500 mg/L".

Provision F. 10. RMCSD proposes to change the text to read "Use Ares shall be inspected to ensure ongoing compliance with the requirements of the Order." The words "as frequently as necessary" and "continuous" imply that RMCSD will have someone monitoring Use Areas 24 hours per day, 7 days per week which is impractical.

Provision H.2. Please change the text to read:
2. **At least 60 days prior to increasing influent flow at the WWRP to more than 0.65 mgd (current ADWF limit)**, the Discharger shall obtain written approval from the Executive Officer by submitting a *Capacity Increase Report* documenting that it can dispose of 1.0 mgd at the WWRP in compliance with all…"

Provision H.3. Please change the text to read:
3. **At least 60 days prior to increasing influent flow at the WWRP to more than 1.0 mgd**, the Discharger shall obtain written approval from the Executive Officer by submitting a *Capacity Increase Report* documenting that it can dispose of 1.5 mgd at the WWRP in compliance with all…"

Attachment B. There are two monitoring wells labeled as OW-02. The well located furthest east is OW-01. Please re-label this well to reflect OW-01 as opposed to OW-02.

The following comment pertains to the proposed Monitoring and Reporting Program.

Secondary Effluent Monitoring. Based on the information presented in this comment letter along with Addendum No. 2, we are requesting that TDS monitoring frequency remain monthly as opposed to weekly as described in the tentative monitoring program.

We have submitted our comments early in hopes of discussing them in person on Friday October 24, 2014 at our scheduled 10 a.m. meeting. Please feel free to contact me in the meantime if you have any questions or require further information. Again thank you for your time and consideration.

Sincerely,

Paul Siebensohn
Director of Field Operations
cc: Kevin Kennedy, AECOM 2020 L Street, Sacramento CA 95811