FIVEPOINT™

October 13, 2016

VIA EMAIL

California Regional Water Quality Control Board
Los Angeles Region
Attn: Dr. Ginachi Amah
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
E-Mail: Ginachi.Amah@waterboards.ca.gov

Re: Comment Letter - Incorporation of Salt and Nutrient Management Measures for the Upper Santa Clara River Basin

Dear Dr. Amah:

The Newhall Land and Farming Company, a subsidiary of Five Point Holdings, LLC (Newhall Land), is pleased to comment on the proposed amendments to the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to incorporate salt and nutrient management measures for the Upper Santa Clara River Basin. Newhall Land supports the proposed Basin Plan amendment and requests that the Los Angeles Regional Water Quality Control Board (Regional Board) adopt the amendment substantially as proposed, with appropriate revisions to address the issues identified in this comment letter.

Newhall Land previously submitted technical comments to the working group developing the Salt and Nutrient Management Plan for the Upper Santa Clara River Basin (SNMP) during development of the draft SNMP, and some of those comments remain unresolved. We have attached the prior comments to this letter and incorporate them by reference. The comments contained in this letter concern technical portions of the Draft Final SNMP as presented in the Draft Basin Plan Amendment, and assume that the modeling and analysis in the Draft Final SNMP is technically sound.

Comments on the Draft Final SNMP dated August 29, 2016

1. The text and tables presented in Section 9 of the SNMP, Antidegradation Analysis, present project-specific effects on assimilative capacity (AC) for the projected future land use build-out conditions. For each of the water quality constituents analyzed, the projected future land use takes up the majority of the available AC; however, the SNMP states in several instances that projects and programs consume more than 10% or 20% of the AC remaining **after** the projected future land use impacts on AC are considered. For example, the summary statement for the CLWA Recycled Water Master Plan (page 163) reads in part: "…when compared to Land Use Build-Out conditions, implementation of the CLWA Recycled Water Master Plan decreases the assimilative capacity for chloride in Management Zone 4 by 2 mg/L

(50% of assimilative capacity under Land Use Build-Out conditions) and has no effect on the remaining projected assimilative capacities."

In this example, the 50% value is incorrect; the project decreases AC from 7 to 5 mg/L under Land Use Build-Out conditions, which means the 2 mg/L decrease is 28% (2/7ths) of the AC under those conditions, rather than the reported 50%. More important, the statement is potentially confusing because it is our understanding that, when permitting a specific project or program in the future, the Regional Board will use the actual ambient groundwater quality existing at that time (incorporating updated monitoring data), not the currently (2016) projected future land use scenario, as the baseline against which project-induced changes in AC will be considered. For the CLWA Recycled Water Master Plan, which the Regional Board has already considered, the relevant baseline for comparison would be the currently existing conditions, yet the text does not reflect that the project-specific 2 mg/L decrease in the chloride AC consumes less than 10 percent of the AC when compared to existing ambient baseline conditions (based on a current assimilative capacity of 23 mg/L). We believe it would be appropriate to clarify the baseline that will be used and to describe the impact on AC for each constituent on the basis of both projected future land use AND ambient baseline water quality for all of the projects.

2. Table 9-1. "Agency" should be revised from Newhall Ranch to Newhall Ranch Sanitation District (NRSD).

3. Section 9.2: References to Appendix G should instead refer to Appendix H.

4. Section 9.6.1, page 172: Please explain the basis for the statement in paragraph 2, "The chloride concentration would be most impacted by the implementation of the Newhall WRP." This appears to misrepresent the analysis results. The data in Table 1b and elsewhere in the SNMP show that the other projects will have a greater effect on chloride concentration than the Newhall WRP. Compare Figures 22 through 36; see also Table 3b.

5. The SNMP implementation does not appear to acknowledge the upgradient impacts on downgradient assimilative capacity, even while modeling the flux. Future changes to assimilative capacity within a management zone will be caused both by projects within that management zone, and also by upgradient management zone changes to assimilative capacity migrating downgradient. The SNMP does not discuss how future implementation will account for changes to assimilative capacity within a management zone that are caused by upgradient management zones. We recommend adding an explanation of how this issue will be addressed.

Comments on the Proposed Basin Plan Amendment, Attachment A to Reso. No. R16-0XX

6. Page 4 – Background: The first sentence of the fourth paragraph states "[s]urface water flowing into the subbasin percolates into the highly permeable alluvial sediments, which underlie the Santa Clara River in the Mint Canyon Subunit." The Mint Canyon Subunit is also Management Zone 1. This characteristic is not restricted to the Mint Canyon Subunit, and is in fact characteristic of the alluvial aquifer throughout much of the Upper Santa Clara River watershed, with the primary exception being along the portion of the alluvium in which the Santa Clara River is present downstream of the Valencia WRP. This sentence should

be corrected to reflect this. This statement is carried through to the DRAFT Staff Memorandum (Page 3, second paragraph), and should be clarified there as well.

7. Pages 10-16, Tables 8.4-2A through 8.4-2G: Of these seven tables of "SALT AND NUTRIENT BALANCE IN MANAGEMENT ZONE" 1A through 6, only the first two are referred to in the body of the text. In addition, the data reported in these tables (tons of TDS, Chloride, Nitrate and Sulfate) are not provided with any qualifying description. Therefore, it is hard to understand how the values can differ between tables— for example, how the values in Table 8.4-2E for "Underflow *to* Management Zone 5 *from* Management Zone 4" can differ from the values in Table 8.4-2F for "Underflow *from* Management Zone 4 *to* Management Zone 5." The discrepancy is likely because these tables must represent average or median values on an annual basis (unclear which of these) for the period 2001 to 2012. Because most of these tables are not referred to in the text, they should be deleted. If they are referred to, then an accompanying explanation of what the values represent should be provided.

Comments on the Draft Staff Memorandum

8. Page 6, paragraph 1: Please identify the "planned treatment facility" described in this section of the text. The text may be read as implying that the facility will treat or reduce stormwater runoff. If the text refers to the Newhall WRP, this is inaccurate as the Newhall WRP will not treat or reduce stormwater (nor will any other existing or proposed WRP analyzed in the SNMP).

Conclusion

Newhall Land appreciates the opportunity to comment on the proposed Basin Plan amendment and thanks Regional Board staff for their effort in shepherding the development of the SNMP and in developing the amendment. We concur with the overall findings that assimilative capacity exists to allow increased use of reclaimed water in Management Zones 4, 5 and 6 and look forward to working with the Regional Board to further our shared goal of water conservation, particularly at this critical time of drought.

Sincerely,

Matt Carpenter
Vice President, Environmental Resources

Attachments: Newhall Land Comments on Draft SNMP dated July 23, 2015
Newhall Land Comments on Draft SNMP dated January 26, 2015

NEWHALL LAND

January 26, 2015

via email and U.S. Mail

Mr. Jeff Ford
Castaic Lake Water Agency
27234 Bouquet Canyon Road
Santa Clarita, CA 91350

Subject: Additional Comments on Upper Santa Clara River Valley East Subbasin Draft Salt and Nutrient Management Plan – December 2014 version

Dear Mr. Ford:

Subsequent to the submittal of our comments dated January 6, 2015, the Newhall Land and Farming Company (Newhall) conducted additional discussions with the Los Angeles County Sanitation Districts and the Valencia Water Company regarding characterization of the Newhall Ranch Water Reclamation Plant (WRP). As a result of these discussions we have the following additional comments regarding the Newhall WRP.

Wastewater-Related Comments

1. Please make the following text revision to Page 284:

   The Newhall Ranch Water Reclamation Plant (Newhall WRP) will service development in the Newhall Ranch Specific Plan and may serve additional surrounding which are included in OVOV. The location of the project is shown on Figure 23. The Newhall WRP is anticipated to come online in 2023 and will be constructed initially to treat a flow rate of 2.0 MGD with future expansions up to 5.3 MGD. At full buildout, the facility could accommodate the Newhall Ranch Specific Plan area (3.99 MGD) as well as the Val Verde area located north of the Specific Plan (1.31 MGD). Primarily, effluent from the Newhall WRP will be distributed as recycled water for landscape irrigation by VWC. However it is anticipated that some recycled water will be discharged to the Santa Clara River generally during the months of November through March during wet, dry, and average years through 2035. The proposed discharge point on the Santa Clara River is shown on Figure 23. At build-out of the Newhall Ranch Specific Plan (3.99 MGD), approximately 566 acre-ft/yr would be discharge to the Santa Clara River. At build-out of the Newhall WRP (5.3 MGD) approximately 752 acre-ft/yr would be discharged to the Santa Clara River (566AFY*5.3 MGD/3.99MGD). Recycled water chloride

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concentration discharged to the river will be RO treated and will have a chloride concentration of 100 mg/L, while recycled water used for landscape irrigation is expected to have a chloride concentration of 125 mg/L.

a. Edits to this section regarding Val Verde are the result of 1/7/2015 discussions between Newhall and the Los Angeles County Sanitation Districts. Newhall has an agreement with the Val Verde Civic Association to provide gravity sewer capacity within Newhall Land's ownership for the area, hence the addition of 1.31 MGD to the build-out flow of the Newhall WRP. In the Draft SNMP, the Val Verde area is proposed to be on septic. Although Newhall has an agreement to provide the gravity sewer capacity, there is the potential that the area remains on septic through the SNMP evaluation window (2035). It would be beneficial if the SNMP could discuss the sensitivity impacts of the Val Verde area remaining on septic versus treatment at the Newhall WRP.

2. Similar to the Val Verde area, there is the potential that the Newhall WRP could also provide wastewater service to portions of neighboring communities outside Newhall Ranch. These areas (portions of Legacy Village, Entrada North, Valencia Commerce Center (VTPM 18108), and Travel Village) (1) constitute approximately 1.4 mgd of wastewater flow, (2) are presently contemplated under OVOV, and (3) are presently within the Sphere of Influence of the Santa Clarita Valley Sanitation District and are thus presumably included in the wastewater discharge from the Valencia WRP. Thus transferring wastewater service for the areas described above would increase the flows to the Newhall WRP by 1.4 mgd and decrease the flows to the Valencia WRP by 1.4 mgd. Again it would be beneficial if the SNMP could address the sensitivity of relocating this small portion of wastewater flows from one location to another.

Recycled Water Related Comments

1. As shown in the recommended text edits above to Page 284, we would recommend discussing recycled water use separately from the wastewater discharge primarily because the source of recycled water for the Newhall Ranch, Entrada (South & North), Legacy Village and Commerce Center (VTPM 118108) (Westside Communities) is not only the Newhall WRP, but the Valencia WRP as well.
2. As written, the text of the SNMP describes CLWA recycled water use of 22,800 acre-ft/yr (including Newhall Ranch), however the Appendix G project questionnaire provides a modified table with buildout use of 10,275 acre-ft/yr in 2035.
    a. Please verify which of the numbers is utilized in the CLWA RWMP project analysis.
    b. If the 10,275 acre-ft/yr is what is utilized in the analysis, please verify whether this includes the Westside Communities (Newhall Ranch or otherwise).
    c. Based on the results of the above, please insure that at buildout, recycled water use for the Westside Communities is 7,164 acre-feet/yr and identify in the text the specific demand for the Westside Communities.
    d. See the attached figure.

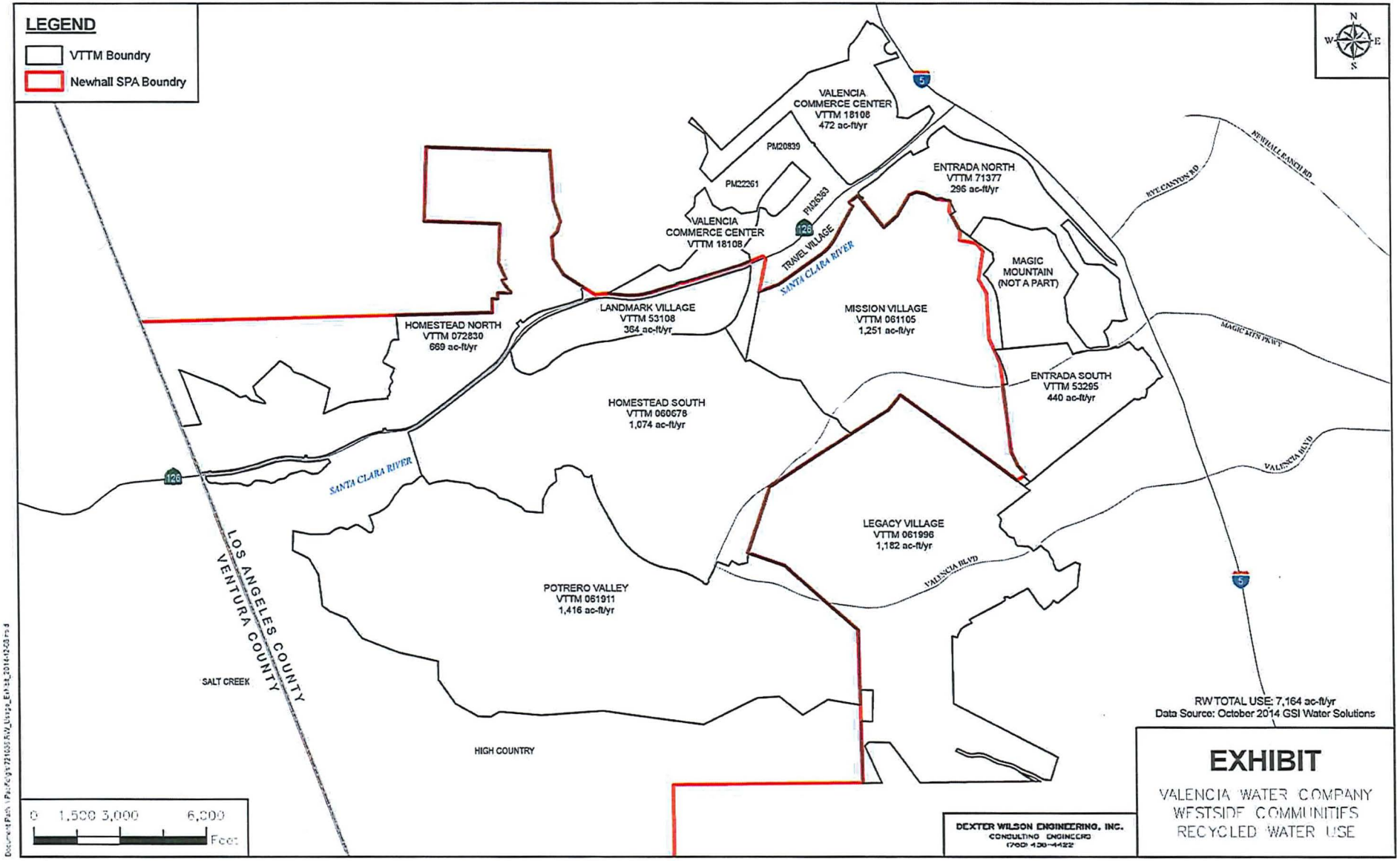
Conclusion

Thank you again for the opportunity to review and comment on the Draft SNMP. If you have any questions, please feel free to contact me.

Sincerely,

THE NEWHALL LAND & FARMING COMPANY

Matt Carpenter
Vice President, Environmental Resources


LEGEND
VTTM Boundry
Newhall SPA Boundry
N
W
E
S
VALENCIA COMMERCE CENTER VTTM 18108 472 ac-ft/yr
PM20839
PM22261
PM25383
VALENCIA COMMERCE CENTER VTTM 18108
ENTRADA NORTH VTTM 71377 296 ac-ft/yr
NEWHALL RANCH RD
RYE CANYON RD
TRAVEL VILLAGE
SANTA CLARA RIVER
MAGIC MOUNTAIN (NOT A PART)
HOMESTEAD NORTH VTTM 072830 669 ac-ft/yr
LANDMARK VILLAGE VTTM 53108 364 ac-ft/yr
MISSION VILLAGE VTTM 061105 1,251 ac-ft/yr
MAGIC MTN PKWY
ENTRADA SOUTH VTTM 53295 440 ac-ft/yr
HOMESTEAD SOUTH VTTM 060678 1,074 ac-ft/yr
SANTA CLARA RIVER
VALENCIA BLVD
LEGACY VILLAGE VTTM 061996 1,182 ac-ft/yr
VALENCIA BLVD
POTRERO VALLEY VTTM 061911 1,416 ac-ft/yr
LOS ANGELES COUNTY
VENTURA COUNTY
SALT CREEK
HIGH COUNTY
0 1,500 3,000 6,000
Feet
RW TOTAL USE: 7,164 ac-ft/yr
Data Source: October 2014 GSI Water Solutions
EXHIBIT
VALENCIA WATER COMPANY
WESTSIDE COMMUNITIES
RECYCLED WATER USE
DEXTER WILSON ENGINEERING, INC.
CONSULTING ENGINEERS
(760) 436-4422

NEWHALL LAND

July 23, 2015

via email: chollomon@clwa.org

Ms. Cathy Hollomon
Castaic Lake Water Agency
27234 Bouquet Canyon Road
Santa Clarita, CA 91350

Subject: Comments on Upper Santa Clara River Valley East Subbasin Draft Salt and Nutrient Management Plan – June 2015 version; including Chapter 10 Implementation Measures dated June 26, 2015.

Dear Ms. Holloman:

On behalf of the Newhall Land and Farming Company (Newhall), attached are two sets of comments from Newhall's consultants on the Draft Upper Santa Clara River (SCR) Salt and Nutrient Management Plan (SNMP), dated June 10, 2015, and Chapter 10, Implementation Measures, dated June 26, 2015.

Newhall looks forward to a revised version of the complete SNMP when it becomes available, in particular the missing section that covers CEQA Analysis. We feel stakeholders should review the entire SNMP, together with a summary of how stakeholder comments have been addressed prior to submittal to the Regional Board.

Thank you again for the opportunity to review the Draft SNMP. We look forward to seeing the revised version. If you have any questions on our comments, please feel free to contact me.

Sincerely,

THE NEWHALL LAND AND FARMING COMPANY

Matt Carpenter
Vice President, Environmental Resources

Attachments:

- Geosyntec Comments on Draft SNMP dated June 10, 2015
- GSI Comments on the June 2015 SNMP for the Upper Santa Clara Basin

Geosyntec comments on Draft SNMP dated June 10, 2015

Comment #1 - Section 1.1 – First sentence of last paragraph needs to be rephrased. It presently says:

"The East Subbasin and surrounding areas have long been concerned about salinity and nutrient discharges in order to, among other things, allow for the use of recycled water."

Suggest changing to "**Stakeholders in** the East Subbasin….", or something similar.

Comment #2 - Table 1.1 – Nitrate is reported as [NO_3], as opposed to the more common [as N]. This is not stated anywhere but should be noted.

Comment #3 – Section 1.3, PDF Page 49 – The paragraph summarizing Newhall Ranch Reclamation Plant and Recycled Water Use indicates a date of 2023 for the reclamation plant coming online. The NPDES permit for this plant contemplates an earlier start (2019) that should be mentioned.

Comment #4 - Section 1.5, PDF Page 51, Bullet Item #2 – Suggest deleting this recommendation. The Salt and Nutrient Management Plan should not be requesting that basin plan objectives be set for any constituents.

Comment #5 - Table 3-4 – Salt and Nutrients Inflow to Management Zone by Water Inflow Term. This table incorrectly indicates that Management Zone 5 has subsurface inflow from Acton Subbasin as well as subsurface inflow from Management Zone 1. This needs to be corrected.

Comment #6 - Section 6.3.1 PDF Page 109 – Footnote discusses using median values rather than averages for the water quality parameters because of censored data (i.e. non-detect values). Seems unlikely that any of these major water quality parameters would have non-detect values, but a table summarizing the number of samples, and number of non-detects for each well (or including this in Tables 6-2 through 6-5; or expanding Table 6-8) would be useful. A more complete explanation of the statistical approach is warranted because these values are the basis of the assimilative capacity calculation. It is also unclear how the data in Tables 6-10 through 6-22 differs from the data in tables 6-2 through 6-5.

Comment #7 - Section 7.2.3 and Table 7-2, PDF Page 149-150 – Calculation of Return Flow from Deep Percolation of Applied Water. This discussion of outdoor domestic water use completely ignores imported water. Clearly water delivered to domestic users is a variable mix of extracted groundwater and imported surface water, and therefore infiltrated domestic irrigation is not strictly "return flow". It is unclear if the values in Table 7-2 reflect all domestic usage or just domestic usage of extracted groundwater. If the latter then it is unclear how imported water is accounted for.

Comment #8 - Figures 7-3 through 7-8, PDF Pages 160-165 – As GSI points out in their comment #2, the values shown for ET should be zero in order to be consistent with how ET is presented in Tables F-17 and F-22. This applies to Figures 15a-15f, 17a-17f, 19a-19g, 21a-21g, 23a-23g, 25a-25g, 27a-27g, 29a-29g, 31a-31g, and 33a-33g.

Comment #9 - Section Numbering PDF Page 173 – Basin Management Plan Elements is labeled Section 7.4.1, but should probably be 7.5, and the following Section, labeled Section 7.5, should probably be 7.5.1.

Comment #10 - Section 7.6.2 Stormwater Use and Objectives, PDF Page 177 – The planned use of green infrastructure and stormwater infiltration basins by the City of Santa Clarita and Newhall Ranch should be mentioned as likely increasing stormwater recharge of the groundwater basin. This planned infrastructure will increase stormwater infiltration and recharge well beyond that estimated in the 2008 IRWMP document, in particular because it is listed in Chapter 10 Implementation Measures.

Comment #11 - Section 9.4.2.6 Newhall Ranch Reclamation Plant and Recycled Water Use, PDF Page 203 – The second paragraph discuss modeled salt and nutrient concentrations in Management Zones 1a, 2, 3 and 4 resulting from the addition of the Newhall Water Reclamation Plant (WRP). The third paragraph goes on to state that *"projected average salt and nutrient concentrations under Newhall WRP conditions are at or slightly above those projected for Land Use Build-Out conditions, indicating that implementation of the project will slightly increase salt and nutrient concentrations"*. Yet the next sentence states that these projected increases in salt and nutrient concentrations are due to the fact that the Saugus Formation (Management Zone 6) is treated as a single unit, and that this in fact will not occur because these management zones are upgradient.

Similarly, the fourth paragraph on this page also states that there will be impacts to upgradient management zones. The entire discussion of water quality changes upgradient of Management Zone 5 should be deleted, because as the report points out these changes cannot be caused by the addition of the Newhall WRP. Proposed changes to the language in these three paragraphs at the end of Section 9.4.2.6 are included below.

Proposed changes:

> Based on the analysis of historical and projected mass loading with the addition of the Newhall WRP, all projected salt and nutrient concentrations assessed herein will remain below the Basin Objectives in Management Zones 5 and 6. ~~While instantaneous concentrations are projected to range above Basin Objectives at times, the average projected salt and nutrient concentrations remain below Basin Objectives in Management Zones 1a, 2, 3 and 4. In Management Zone 1a, TDS, chloride and nitrate will remain below the Basin Objectives, but the 90th percentile for the projected sulfate concentration is 1 mg/L above the Basin Objective of 150 mg/L. In Management Zone 1b, TDS, chloride and nitrate will remain below the Basin Objectives. The average projected sulfate concentration in Management Zone 1b is 71 mg/L above the Basin Objective of 150 mg/L, while the 90th percentile is 89 mg/L over Basin Objectives. In Management Zone 3, chloride and nitrate will remain below the Basin Objectives. The average projected TDS and sulfate concentrations in Management Zone 3 are below the Basin Objectives of 700 and 200 mg/L, respectively, but the 90th percentile is 26 mg/L over for sulfate. In Management Zone 4, nitrate and sulfate will remain below the Basin Objectives. The average projected TDS and chloride concentrations in Management Zone 4 are below the Basin Objectives of 700 mg/L and 100 mg/L, respectively, but the 90th percentile is 23 mg/L over for TDS and 5 mg/L over for chloride.~~
>
> ~~In general, the projected average salt and nutrient concentrations under Newhall WRP conditions are at or slightly above those projected for Land Use Build-Out conditions, indicating that implementation of the project will slightly increase salt and nutrient concentrations. It should be noted that although changes in water quality due to the project are identified in Management Zone 1, 2, and 3, this is due to the fact that Management Zone 6 (Saugus Formation Aquifer) water quality is treated as a single unit. In fact,~~ Water quality changes in Management Zone 6 in

the western part of the East Subbasin will not impact water quality changes in the eastern portion of the basin, ~~since it~~ *because the eastern portion of the basin* is upgradient.

~~The projected results also show that the Newhall WRP utilizes greater than 10% of the available assimilative capacity for chloride in Management Zones 4 and 6, for nitrate in Management Zone 6, and for sulfate in Management Zone 1a. However, w~~ When compared to Land Use Build-Out conditions, implementation of the Newhall WRP decreases assimilative capacity for chloride in Management Zone 6 by 1 mg/L (2% of assimilative capacity under Land Use Build-Out conditions) and has no effect on the remaining projected assimilative capacities.

Comment #12 - Appendix F, Tables F-1, F-5, F-6 – These three tables list, under "Outflow Parameters" a line item called "Lateral Outflow to Adjoining Alluvial Areas and Other Geologic Units". This value is not included in the "Total Outflow" sum at the bottom of this section of the tables, but the value is a large percentage of the total. This line item is different than outflow to adjoining Management Zones and different than outflow to Saugus Formation, both of which are included in the tables. What does this line represent, and if it isn't included in the Total Outflow, why include it? Nowhere in the text or in the tables that follow (F-17, F-22, etc.) is this line item mentioned.

Comment #13 - Appendix F, Tables F-18 through F-23, and Appendix H, Tables H2 through H50 – These tables of forward modeling scenarios all use single concentration values for water quality parameters of Stream Leakage, even though the volume of stream leakage from one year to the next varies considerably based on whether a dry or wet year. The 2001-2011 baseline period clearly demonstrates the relationship between higher stream flows during wet years and lower chloride concentrations. This would be particularly true for the Santa Clara River reaches upstream of the WWTPs. The report should at least acknowledge that this assumption of constant water quality concentrations for stream leakage is a conservative assumption, and that actual results will like result in lower salt and nutrient loading to the groundwater basin during wet years.

Chapter 10 Implementation Measures

General Comment – A programmatic approach should be outlined that will allow for flexibility in evaluation of future projects that have not yet been formally proposed. An outline of how future projects will be evaluated will provide prospective proposals the requirements for successfully meeting SNMP requirements, as well as providing the LARWQCB with the assurance that future proposed projects will be rigorously evaluated.

In order for new projects to be considered, a process needs to be outlined for how new projects will be evaluated together with examples for how new projects could be incorporated into existing implementation measures to ensure future assimilative capacity targets continue to be met for salt and nutrients. The Lower Santa Clara River SNMP provides a good example of how this could be done.

Table 4 is a little too streamlined with no descriptions or explanations of how or why load/concentration is considered to increase or decrease. For many of the listed projects nutrients may increase and salts may decrease, yet this is not made clear at all. We suggest some additional explanation of what constituents will be impacted, and why the determination of increase/decrease was made.

Specific comments:

Section 10.3.2 Planned Implementation Measures, PDF page 6 – Under groundwater recharge, the Newhall Ranch WRP is listed as being developed to serve west side communities. On Table 4, PDF page 10, this measure is listed as IM-21 and is indicated as increasing both loads and concentrations. While the new discharge volume from the Newhall WRP communities will increase the load to the Santa Clara River, the WRP has planned advanced treatment capabilities that will ensure the concentration in discharge to the River will be at, or below, 100 mg/L of chloride, which will serve to decrease the concentrations of chloride both in the River and in groundwater recharge from the River. If the issue being described here is actually landscape irrigation with recycled water, then this should be made clear and separated from specific discussion of Newhall WRP. IM-26 is the CLWA Recycled Water Master Plan, which is, as described in Section 10.3.2, "recycled water for use in landscape irrigation". Yet IM-26 indicates that loads will increase but concentrations will decrease. It is unclear why the results of landscape irrigation should be different. We suggest that the concentrations should decrease for both IM-21 and IM-26.

Section 10.3.2 Planned Implementation Measures PDF page 6 – The SCVSD Wastewater Treatment Plant Chloride Reduction Program is described as ensuring discharge from the WRP will be no greater than 100 mg/L. Table 4, IM-23 lists this implementation measure but indicates that loading will increase as a result. It is unclear how loads will increase, if existing volume of discharge is subjected to advanced treatment to ensure discharge concentrations of chloride will be no greater than 100 mg/L. The volume of discharge will not increase under this implementation measure, but concentration will decrease. We suggest that both loads and concentrations should be indicated as decreasing for this implementation measure.

GSI Comments on the June 2015 SNMP for the Upper Santa Clarita Basin

Comment #1: Newhall Recycled Water Demand

Are these statements regarding recycled water demand true?

Page 7 – Executive Summary

Newhall Ranch Water Reclamation Plant and Recycled Water Use – The Newhall WRP will service development in the Newhall Ranch Specific Plan and Newhall land-owned Westside Communities. It is anticipated to come online in 2023 and will be constructed initially at a flow rate of 2.0 MGD with a 4.0 MGD capability to accommodate full-build-out of the Newhall Ranch Specific Plan by 2033. The plant could also be expanded to accommodate the Val Verde area by adding 1.3 MGD to the design flow. However, the SNMP analysis does not include this additional potential capacity. The project will use recycled water primarily for landscape irrigation. However it is anticipated that some recycled water will be discharged to the SCR generally during the months of November through March during wet, dry, and average years through 2035. At complete build-out, recycled water demand will be 7,164 acre-ft/yr with approximately 566 acre-ft/yr of discharge to the SCR. Recycled water chloride concentration discharged to the river will be RO treated and will have a chloride concentration of 100 mg/L, while recycled water used for landscape irrigation is expected to have a chloride concentration of 125 mg/L.

Also, Per Section 9.4.6.2 on page 160:

- Recycled water demand: 7,164 afy
- Discharges to river: 566 afy

Table 9-2 says recycled water demand within will be 7,194 afy for use in NHR plus the four other West Side communities outside NHR that Newhall Land is current planning and preparing to build. But this number has a small typographical error; the amount should be 7,164 afy, as this was the number provided by Dexter Wilson Engineering (DWE) in the materials that show up in Appendix G.

On May 27, 2015, GSI provided Newhall Land with updated water demand estimates, reflecting the most recent land use plans for all 9 communities (the 5 villages in Newhall Ranch, plus those four other West Side communities). Those numbers show:

- Recycled water demand: 7,102 afy
    - Newhall Ranch: 4,774 afy
    - The 4 other communities: 2,328 afy
- Discharges to river: 1,179 afy

These updated numbers should be provided to GSSI, which should result in improved assimilative capacity in MZ 5 and 6.

Comment #2: Salt loss from evapotranspiration (ET) – Not possible

The document contradicts itself on whether there is salt discharging from the groundwater system via ET. Tables F-7 through F-12 state that the salt mass balance model is assuming that no salt loss occurs because of ET, which is an assumption we agree with because the physical process of evapotranspiration is a withdrawal of groundwater that concentrates (but does not remove) salt. However, the salt balance diagrams for historical conditions, future land use build-out conditions, and each future project all show removal of salt via ET. Each of those figures should be revised to show no salt removal from ET processes. The specific figures requiring this revision are:

1. Historical conditions: Figures 7-3 through 7-8
2. Future land use build-out conditions: Figures 19a through 19g
3. Future projects:
    a. Figures 21a through 21g
    b. Figures 23a through 23g
    c. Figures 25a through 25g
    d. Figures 27a through 27g
    e. Figures 29a through 29g
    f. Figures 31a through 31g
    g. Figures 33a through 33g

In making these revisions, we also recommend that the detailed colored calculation tables shown in Appendix F and Appendix H be reviewed for their accuracy regarding how ET water flux relates back to the calculation of the ending concentration of salt in the aquifer at the end of each time step. It appears that for each time step, the total change in the volume of groundwater in storage is one of the factors being used to determine the associated change in salt concentration during the time step. Because ET is not a salt removal mechanism, the total change in groundwater storage (which includes ET water loss) is not the correct factor to apply the concentration change to. Instead, the calculations of changes in salt concentrations should use only the portion of the groundwater storage change that is not attributable to ET water loss. We recognize that it is possible that this detail is already being accounted for correctly in the tables that show up in those two appendices, and we simply suggest that this be confirmed. We also recommend that this detail (i.e., using only the portion of groundwater storage changes that is not attributable to ET loss) be specifically stated/described/mentioned in Section 7.3 of the text (probably as part of item number 4 that appears at the top of page 114).

Comment #3: Small edit on time-series plots for future projects to clarify their effect on assimilative capacity

For the seven future projects that are evaluated in Section 9 of the document, the time-series plots from 2012 through 2035 currently lead the reader with the impression that they are showing the effects of only one system change (the future project). In actuality, the plots are showing the effects of two system changes – the project itself, plus the background land use build-out of the valley. The plots should be revised to make it clearer that both processes are occurring. This is important because in many cases (as Table 9-8 and Section 9.5 correctly point out), the land use build-out change is actually the primary contributor to the total change in assimilative capacity that is being displayed on each plot. Currently, the reader is led to believe that the project itself is providing the entire change, when in fact that is not the case.

We offer suggestions below regarding specific changes that will clarify this point and should not require much effort to revise the plots. The suggestions we offer below pertain to the following figures:

1. Figures 22.1.a through 22.4.g
2. Figures 24.1.a through 24.4.g
3. Figures 26.1.a through 26.4.g
4. Figures 28.1.a through 28.4.g
5. Figures 30.1.a through 30.4.g
6. Figures 32.1.a through 32.4.g
7. Figures 34.1.a through 34.4.g

Here is what we suggest ... We understand that the Regional Board wishes to compare each project with historical conditions, which these plots currently achieve. So we are not recommending that significant changes be made to the lines and labels on the plots. Instead, to make it more clear to a reader who is not familiar with the details, we strongly recommend that the narrative text boxes which appear in several of the charts be revised to help the reader understand that two conditions are occurring and to understand the effects of each of those conditions (the project itself versus the future build-out of the valley). To minimize the amount of change that is needed to the plots, we suggest revising just the text boxes. Two examples are as follows:

Using Figure 22.1.a as an example, the text box at the top of the chart could be revised to read as follows:

> The projected TDS concentrations show an increase in assimilative capacity from 72 mg/L to 91 mg/L arising from:
> - Future land use build-out: An increase of 19 mg/L
> - This project alone: No change

Using Figure 26.1.a as another example, the text box could read:

> The projected TDS concentrations show an increase in assimilative capacity from 72 mg/L to 88 mg/L arising from:
> - Future land use build-out: An increase of 19 mg/L
> - This project alone: A decrease of 3 mg/L

We also recommend putting text boxes such as these at the top of all of these figures, to help the reader understand the results. Currently some figures have no such text boxes.

Comment #4. Water Budget Discrepancies

There are several places where the water budget terms GSI provided to Geoscience have been misinterpreted, resulting in a doubling of the NHR applied recycled water. This will reduce the assimilative capacity in MZ-4, 5, and 6. We have provide two tables to illustrate the point.

- Table 1 - The water budgets that GSI gave to Geoscience for the future development where Newhall Ranch and the four other Newhall-owned communities are fully built out and using recycled water (page 1)

- Table 2 - The water budgets that the Geoscience report for that same developed condition (pages 2 through 5; one page for each of the four chemicals – TDS, chloride, nitrate, and sulfate).

Callout text boxes are included below each table to focus your attention on the total groundwater inflow term to the management zone 5 area during the last year (2035). See the difference between what GSI provided and the Geoscience numbers. Also, look at some of the components of that total inflow term to see where the big differences arose, which are:

1. Geoscience added a new column called "Applied Recycled Water." By doing that, they added the NHR recharge twice to their spreadsheet model (because we already had incorporated NHR irrigation into the earlier column labeled "Deep Perc of Applied Water").

2. The stream leakage terms are much higher – probably because they had trouble balancing things.

3. They also adjusted the last recharge term (the "Upward Leakage from Saugus + Net Lateral Inflow from Adjoining Units" term). And on the discharge side, they added a new column called "Downward Leakage to Saugus", which was actually built into the prior item I mentioned. It is possible that these two things offset each other but we would have to study it further to see what effect it might have.

4. Their "Change in GW Storage" is totally different in magnitude and sign from what we gave them. This is a really substantial departure from the purveyor groundwater model. It looks like this happened because Geoscience was trying to work with the "total volume of GW in storage" (which was something they estimated ... because GSI never provided that to them) rather than working with the change in the volume of storage.

Impact on Assimilative Capacity from the Newhall Ranch WRP

Here is a table summarizing how the Newhall Ranch WRP by itself affects assimilative capacity in the three management areas where the development will be located (management zones 4, 5, and 6). We've attached a map for visual reference. As you'll see, we didn't list the current/historical conditions in this table, because the Newhall Ranch WRP project was not superimposed on those conditions in the SNMP report. Instead, we show the future 2012-2035 period with and without this project, so that its effects are apparent. Negative values for change in assimilative capacity indicate a reduction in assimilative capacity.

Summary of Modeled Concentrations and Assimilative Capacities With and Without the Newhall Ranch WRP Project

From Tables 1a through 1d of the June 2015 Draft SNMP Report by CLWA and Geosciences Support Services, Inc.

(This Summary: Prepared by GSI Water Solutions, Inc.)

		Concentration			Assimilative Capacity		
Constituent	**Condition**	**MZ4**	**MZ5**	**MZ6**	**MZ4**	**MZ5**	**MZ6**
TDS	Future	679	680	631	21	320	69
	Future + NHR	680	692	634	20	308	66
	Change	1	12	3	-1	-12	-3
	% Change	0.1%	1.8%	0.5%	-4.8%	-3.8%	-4.3%
Chloride	Future	96	74	46	4	76	54
	Future + NHR	96	77	47	4	73	53
	Change	0	3	1	0	-3	-1
	% Change	0%	4.1%	2.2%	0%	-3.9%	-1.9%
Nitrate	Future	18	10	19	27	35	26
	Future + NHR	18	10	19	27	35	26
	Change	0	0	0	0	0	0
	% Change	0%	0%	0%	0%	0%	0%
Sulfate	Future	159	233	246	91	117	---
	Future + NHR	159	236	247	91	114	---
	Change	0	3	1	0	-3	---
	% Change	0%	1.3%	0.4%	0%	-2.6%	---

Concentration values and assimilative capacity values are all in units of mg/L.

MZ4 = management zone 4 = alluvium just east of Castaic Valley

MZ5 = management zone 5 = alluvium in and downstream of Castaic Valley

MZ6 = management zone 6 = Saugus Formation (in its entirety)

As shown in the table, the Newhall Ranch WRP has a small effect on assimilative capacity overall and it does not exceed the 10% threshold for individual projects that might trigger a requirement for mitigation from the RWQCB. The most significant reduction on assimilate capacity is for TDS in MZ4.