

For stormwater discharges to groundwater via the existing gravel pits, the NAS drinking water criteria of 100 ng/L is most applicable. This criteria is risk based, conservative, and does not account for bioaccumulation effects (which are not a threat for groundwater resources). Given that stormwater discharges to the pits will only occur during the latter portions of the storm events greater than the 10-year return frequency event, a period which is characterized by significant dilution with better quality rain water, project stormwater discharges to the groundwater (via the existing gravel pits) will not exceed this threshold of 100 ng/L. In addition to the attenuation mechanism of dilution, DDE will adsorb very strongly to sediment ( $\log K_{oc}$  around 6), and therefore very little should remain in the clarified water that is discharged from the detention basins to the pits. Finally, any DDE molecules entering the pits will be largely filtered by the fine-grained muds and silts of the pit bottoms and sides before passing to the actual aquifer. Therefore, DDE concentrations that actually reach the groundwater beneath the pits will be orders of magnitude less than those detected in agricultural drains. No significant impacts to surface or groundwater quality from DDE will result. The addition of this information to the EIR does not constitute significant new information.

#### **LARWQCB-5**

The design of the detention basins will meet the criteria set forth in the Ventura County Land Development Guidelines. These guidelines make specific recommendations regarding maintenance access ways. The three new detention basins will have a 20' wide ramp down to the bottom. This detail is shown on the project grading, but is too minute a detail to be shown on the concept grading plan included in the Draft EIR.

#### **LARWQCB-6**

The Vol. I text reference refers to a description of the existing county drainage basins, which are unlined basins that currently serve to infiltrate stormwater. The Vol. II text reference refers to a description of the proposed project stormwater detention basins, which will be lined to prevent infiltration to the underlying aquifer since insufficient minimum vadose zone thickness is available to meet county requirements for infiltration basins.

#### **LARWQCB-7**

Drainage area #1 (commercial) uses structural BMP's – including pervious pavement (for selected parking areas), catch basin inserts and manhole accessible centrifugal separator units – to manage stormwater quality prior to River discharge via a levee outlet located near the 101 Freeway. The design

and layout of this system is currently at the conceptual stage, and therefore more detailed information is not yet available.

#### LARWQCB-8

The Board notes that the conversion of the gravel pits to “reservoirs” will result in their classification as a “surface water body”, therefore rendering them eligible for impairment identification in future revisions to the 303(d) list. This implies that TMDL’s could be developed for all discharges to the gravel pits, which will include both project and off-site stormwater as well as diverted river water. The Board’s comment is noted, but no actions can be taken until such a time as the gravel pits are used to store diverted river water, and TMDLs are formally promulgated.

#### LARWQCB-9

NPDES discharge limits were adopted as significance thresholds for the *dewatering* impacts analysis only as presented in Table 4.5-20 in the Draft EIR. In the case of *stormwater* impacts, ambient concentrations, drinking water standards, Basin Plan objectives or California Toxics Rule criteria (generally, the most stringent of the applicable standards were chosen) were used as presented in Table 4.5-19 in the Draft EIR.

The detention basins will be designed to provide sufficient residence time even during the maximum design storm (10-year event) to minimize the resuspension of settled sediments. Outlet structures will be designed per County Land Development Guidelines criteria for stormwater detention facilities. Energy dissipation devices will be utilized to minimize erosion at the basin inlet discharge locations, and if necessary flow control structures such as baffles will be included to ensure proper hydraulic retention time in the basins. The basins will be maintained by a City Maintenance District and accumulated sediments removed on a regular basis. Therefore, sediment (and hence contaminant) remobilization will not likely occur in the detention basins given the proposed design. The final design and construction of these basins will conform to the applicable County Land Development Guidelines.

The critical conditions for this portion of the Santa Clara River are dry weather conditions. When surface diluting flows, consisting of the surface water diversions by UWCD allowed by the Specific Plan are absent, project and off-site stormwater runoff discharges to the gravel pits are also likely to be absent. The proposed stormwater treatment system was designed to eliminate the discharge of dry weather flows to the gravel pits. Therefore, the water quality in the gravel pits would reflect the ambient groundwater quality, which has not evidenced excessive levels of the complex organic molecules referenced. A review

of the DHS database for wells in the project area (including the UWCD wells and the wells of the numerous mutual water companies in the area) indicates non-detect levels (for a varying range of detection limits, depending on the year the sample was collected) for carbon tetrachloride, ethylene dibromide, chloroethylene compounds (as characterized by trichloroethylene (TCE) and tetrachloroethylene (PCE)), and vinyl chloride. Xylene was detected once (1.4 µg/l) at the Rio Plaza Water Company well, but at a level below the MCL. pH levels fall within the drinking water standards. TDS and sulfate are known to exceed the Basin Plan standards and drinking water MCLs on occasion, but this is symptomatic of a basin-wide issue rather than directly attributable to the gravel pits. Turbidity has also on occasion exceeded the drinking water MCL, but this is most likely due to the operation and/or construction of the well facilities rather than the existence of the mine pits. Therefore, the concentrations of the compounds discussed above will not exceed ambient groundwater concentrations during dry weather conditions.

#### **LARWQCB-10**

The analysis of the effects of the project on water quality was concentration based and identified significant impacts to surface water for fecal coliform; and to groundwater for iron, manganese and nickel, using thresholds unrelated to pollutant loading. Impacts to groundwater are expected to occur very infrequently and would exceed ambient conditions rather than State or federal drinking water standards.

The constituent load analysis, as described above, shows that chloride and ammonia loading to the Santa Clara River will increase somewhat as a result of the project. These increases are the result of increases in the volume of runoff as the existing chloride concentration of 38 mg/l will be reduced to 29 mg/l and the existing ammonia concentration of 2.5 mg/l will be reduced to 0.9 mg/l. Further, the reaches of the Santa Clara River downstream of the project are not listed as impaired for salts (which include chloride) and nutrients (which include ammonia). In addition, there are reductions in groundwater loads for all of the constituents analyzed. Since the groundwater in the vicinity of the project is integral to supplying the potable water needs of residents of the Oxnard Plain, there is a considerable benefit to implementing the project.

#### **LARWQCB-11**

This comment recognizing information provided in the Draft EIR is noted.

**LARWQCB-12**

To a minor extent decreased stormwater discharges into the pits could result in increased pit concentrations during critical conditions, such as during drought conditions when the pits are nearly empty, for those constituents more associated with existing groundwater quality than stormwater. However, the majority of the time very large quantities of water would be present in the pits, greatly exceeding those volumes contributed during storm events. A significant source of flow into the pits is from upgradient groundwater flows through the pit walls. This source will partly compensate for any decrease in discharges from stormwater runoff.

More importantly however, the constituents of greater concern to the governing groundwater districts of the area (United Water Conservation District and Fox Canyon Groundwater Management Agency) were pathogens, nitrate, hydrocarbons and metals. By diverting stormwater flows away from these pits, direct loading of these constituents to the groundwater is alleviated.

Critical conditions for salts and nutrients in the Santa Clara River would be during summer low flow conditions. As stated in the Draft EIR on page 4.5.97, there will be minimal discharge of these "nuisance" (dry weather runoff) flows from the project residential/commercial area, and none from off-site industrial/agricultural areas. Therefore, these dry weather flows will not represent a significant load of salts and nutrients (which are also rarely identified as pollutants of concern for residential and commercial land uses) to the river during these summer critical conditions.

Critical conditions for metals, organics, oil/grease, coliform and sediment would be during first flush storm events, which will obviously occur during periods of high dilution in the river. This is essentially the condition evaluated in the EIR, although in an effort to be conservative, river dilution was not considered in the analysis. Therefore, critical conditions were evaluated in the EIR impact analysis.

**LARWQCB-13**

As discussed in the responses above, there will be no increase in fecal coliform or Chem A loads as a result of the project. Based on the concentration-based impact analyses included in the Draft EIR, a significant impact was identified for fecal coliform. Mitigation measures were proposed and evaluated for this impact. This issue has been discussed in the response to comment LARWQCB-2.

**LARWQCB-14**

Solute, transient, dynamic modeling is not warranted as majority of the pollutants will be retained in the proposed detention basins rather than be allowed to enter the gravel pits. The detention basins are designed to accommodate the maximum design storm (10-year event, 5.53 inches in 24-hour period) prior to allowing discharge to the gravel pits. The detention basins will be maintained by a City Maintenance District to minimize the potential for accumulation and resuspension of the pollutants under a significant storm event. Therefore, pollutant concentration in the gravel pits is not anticipated and additional modeling is not required.

**LARWQCB-15**

The City of Oxnard will continue its participation as a watershed stakeholder at future TMDL meetings.

**LARWQCB-16**

The City of Oxnard worked closely with the Fox Canyon Groundwater Management Agency (FCGMA) and the United Water Conservation District (UWCD) in developing the stormwater treatment system. The proposed treatment system is reflective of resolutions passed by both organizations that were intended to safeguard the area's groundwater resources. The final design of the proposed stormwater treatment will conform to all applicable Ventura County Land Development Guidelines, as well as the SQUIMP design guidelines. In fact, the BMP facilities included in the design were originally selected and designed based upon the recommendations and guidelines provided in the SQUIMP document, as stated in Appendix 4.5-5, p. 43. As part of this process, the City and project developer will develop maintenance and monitoring programs. Anticipated maintenance requirements are identified in Appendix 4.5 of the Draft EIR in the section titled "Facilities Maintenance".

**LARWQCB-17**

The BMPs included in the proposed stormwater treatment system have been upgraded to the fullest extent possible as requested in these comments. The analysis of potential mitigation measures for the identified significant impacts is presented on pages 4.5-99 through 4.5-104 of the Draft EIR. UV disinfection was identified as a potential mitigation measure for fecal coliform discharges to the Santa Clara River. Manganese Green Sand Filtration was identified as a potential mitigation measure for iron, nickel, and manganese discharges to groundwater. The analysis of these mitigation measures demonstrates these measures are infeasible from an economic standpoint. Additionally, the intermittent

nature of stormwater discharges raises reliability issues for a treatment system that is essentially decommissioned during the non-rainy season. This analysis demonstrates that the stormwater treatment system cannot be further upgraded and protects surface and groundwater quality to the greatest extent practicable. The analysis in the Draft EIR also demonstrates that the project will result in improvements in water quality in comparison to existing conditions as the concentrations of all the constituents analyzed will be reduced as a result of the project.

**LARWQCB-18**

The City of Oxnard will require the development and implementation of a monitoring and reporting program by the developer.

**LARWQCB-19**

The City of Oxnard agrees that maintenance of the stormwater treatment system is essential and a specific maintenance plan will be developed as details of the treatment system are refined. It is the City's intention to form a maintenance assessment district to ensure that the proper and sustained implementation of the maintenance plan. A series of preliminary maintenance requirements are provided in Appendix 4.5-5, p. 12-13.

**LARWQCB-20**

The technical approach to determining the presence of significant impacts was based upon a comparison of the post-project *concentration* for each selected constituent against a threshold of significance. For discharges to the Santa Clara River of the runoff from storms smaller than the 10-year event, thresholds were established based upon the more restrictive of Basin Plan Objectives, Aquatic Life Criteria or available ambient river concentrations. For discharges to the gravel pits that occur from the portions of storms that exceed the 10-year event, thresholds were established based upon the more restrictive of DHS Drinking Water standards or available ambient groundwater concentrations. The concentration-based impacts analysis approach was selected based upon the current and historical precedent of using concentrations as the primary evaluation standard for water quality compliance.

In an effort to be responsive in a comprehensive manner to the Regional Board's request for loading information, a complete evaluation of the project's loading has been prepared. Discussion of these calculations and conclusions is provided in the responses above and in **Tables 1-10**. As demonstrated in **Table 10** the combined discharges to surface water and to groundwater represent substantially *reduced*

loading for *all* constituents. When reviewed independently, the discharges to groundwater (i.e., the mine pits and other surficial infiltration) also substantially *reduce* loading for *all* constituents, whereas the discharges to surface water in the Santa Clara River *reduce* loading for all constituents except for chloride and ammonia. With respect to the ammonia loading, the increase is negligible (1,333 lbs./year existing versus 1,382 lbs./year for project) and is within the analytical accuracy of the raw data and the technical approach. With respect to chloride, the increase is larger (20,235 lbs./year existing versus 44,598 lbs./year for project), but would only occur during non-critical conditions in the river, and in addition this reach of the Santa Clara River is not impaired for chloride. Because of these considerations related to the increase in loading of ammonia and chloride, these conditions are not considered significant. Further, the request by the Regional Board for data on these additional constituents that are not identified as current impairments for the reach of river adjacent and downstream of the proposed project is understood to be for the purposes of future TMDL-related considerations and is therefore not a matter of current compliance or regulatory significance. Finally, these two constituents were rigorously evaluated as part of the fundamental, concentration-based impact analysis evaluation as part of the EIR determination of impacts. Neither of these constituents were determined to represent an impact based upon that evaluation, and, in fact, were determined to have significantly lower concentrations than the thresholds used in the analysis.