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Los Angeles Region

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Gray Davis
Governor

March 8, 2002

Mr. Gary Sugano, Principal Planner
City of Oxnard
305 West Third Street, 2nd Floor
Oxnard, CA 93030

DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) DATED DECEMBER 2001 FOR PROPOSED RIVERPARK PROJECT, VINEYARD AVENUE/US 101, OXNARD, CALIFORNIA (SCH#2000051046)

Dear Mr. Sugano:

We thank you and the project consultants for meeting with us on February 6, 2002 to discuss our concerns and comments on the DEIR relayed to you in our letter dated January 17, 2002. As discussed at the meeting, we understand that the proposed project would develop 701 acres of land of which 244 acres would be for 2,805 units of residential homes, 147 acres for commercial uses, 266 acres of open space and 44 acres containing public facilities. The purpose of this letter is to supplement our January 17, 2002 letter, and reiterate some points discussed during our meeting.

Storm Water Issues

The RiverPark Project plan includes provisions for the control and management of storm water runoff generated within the project area (701 acres) and run on (whose sources and acreage need to be defined). The storm water runoff management involves passing it through proposed best management practices (BMPs) before discharging it to the Santa Clara River through existing drain outlets, or to the mine pits, depending upon the magnitude of the rainfall event and the location of the drainage area.

Stormflows that exceed the 10-year event peak flow from Drainage Areas 2B (residential drainage), 3 (industrial drainage), and 4 (agricultural drainage) will bypass directly to the mine pits named Brigham-Vickers Water Storage, or/and the Large Woolsey Water Storage.

We believe that storm water management for the area merits special attention, due to the following factors:

- Ground water is very shallow in the area.
- Soils are very coarse, and the attenuation of pollutants that we would expect in finer soils is unlikely.
- Gravel pits have been excavated in the area, and in some cases are so deep to have exposed ground water.
- The beneficial uses of ground water in the area have already been impaired by nutrients, coliform, and salts. The proposed development will increase the volume of runoff entering the pits, and may increase pollutant loads.
- The development is located in a recharge area for aquifers that are an important source of local water for Ventura County. As such, precautions are needed to ensure no degradation of water quality.

For these reasons, we believe that you must work very closely with local agencies responsible for this project to ensure that a Storm Water Quality Urban Impact Mitigation Plan (SQUIMP) is well designed and implemented, and meets water quality objectives to the maximum extent practicable. Furthermore, to demonstrate the effectiveness of the SQUIMP, you need to work with the local agencies and Regional Board to design an appropriate monitoring program. LARWQCB-16

Your DEIR states that the concentrations of fecal coliform in surface water discharge and the concentrations of iron, manganese and nickel in runoff that will be discharged to the mine pits will be higher than the significance thresholds (ambient, drinking water standards, or California Toxic Rule) for these constituents and are identified as significant impacts. (DEIR, vol.1, p.4.5-85-86). You need to, therefore, upgrade your BMPs to the maximum extent practicable or design a treatment system to meet water quality objectives. LARWQCB-17

Based on these significant concerns, the following requirements apply to this project:

1. Waste discharge requirements with discharge limitations may be prescribed for the project in the event of any exceedances of applicable thresholds by pollutants of concern. In order to determine compliance, we expect that you will provide the local agency overseeing this project with a monitoring and reporting program that, at a minimum, incorporates the following: LARWQCB-18

    - Pollutants of concern that need to be analyzed
    - Monitoring and reporting frequency
    - Monitoring stations
    - BMP effectiveness

2. A number of BMPs, such as detention basins, catch basin inserts and swales are proposed for the treatment of runoff at the site. One of the most important components of a train of BMPs is the maintenance plan. To that effect, we expect that you will prepare and submit a BMP LARWQCB-19

maintenance manual itemizing such issues as installation schedule and cleanup frequency for all BMPs proposed at the site, and setting forth the way in which maintenance will be funded. LARWQCB-19

TMDL Issues

As described in our first CEQA response letter dated January 17, 2002, the project site lies in the Santa Clara watershed. In 1998, the Regional Board designated the Santa Clara River as impaired, pursuant to Section 303(d) of the Clean Water Act (CWA), for coliform, ChemA, nutrients, and salts. Impairments listed in the vicinity and downstream of the proposed project include coliform bacteria and historic pesticides, and the Regional Board will be developing Total Maximum Daily Loads (TMDLs) for these pollutants. The CWA precludes the Regional Board from providing CEQA approval for projects which will increase the discharge of contaminants to a watershed for which it has already been found to be impaired. Your response to our letter describes how best available data indicate that the project may result in a reduction in coliform and ChemA loading. Should you provide additional information from ongoing monitoring to support this conclusion, we would appreciate the opportunity to revisit our CEQA review. LARWQCB-20

We appreciate the work already completed by you, and look forward to working with you.

Sincerely,

Eilgu Solomon, Unit Chief
Ventura MS4 Unit

cc: Sally Coleman, Ventura County Flood Control District
Ken Ortega, City of Oxnard
Mark Wareham, Keller CMS
Lowell Preston, Fox Canyon Groundwater Management Agency
Dana Wisehart, United Water Conservation District
Timothy J. Thompson, Integrated Water Resources, Inc.

California Regional Water Quality Control Board – Los Angeles Region (1) (LARWQCB)

LARWQCB-1

This letter from the Regional Board, dated January 15, 2002, identifies four impairments (nutrients and their effects, salts, coliform bacteria and historic pesticides) listed for lower reaches of the Santa Clara River. The 1998 303(d) listed impairments can be found in the December 2000 Watershed Management Initiative. This list identifies two impairments (coliform bacteria and historic pesticides) for the reaches of the Santa Clara River downstream of the RiverPark project area. Nutrients and their effects and salts are listed as impairments for reaches of the Santa Clara River upstream of the project. The revised 2002 303(d) list does not add any other impairments to reaches downstream of RiverPark.

The information items requested in this letter are identical to those requested in the Notice of Preparation response letter from the Regional Board dated May 22, 2000. These items were all addressed in detail in the EIR and carefully considered in the design of the storm drain and stormwater quality treatment system included in the proposed RiverPark Specific Plan.

The stormwater management system for RiverPark consists of several Best Management Practices (BMPs) incorporated into the stormwater drainage system. Catch basin inserts, centrifugal separators, and pervious pavement BMPs will be used in the commercial and a portion of the residential areas in the southern portion of the Specific Plan Area. Dry swales and lined detention basins sized to accommodate the full volume of flows generated by storms up to and including the 10-year event (5.53-inch, one day storm event) are used to treat runoff from the remainder of the residential areas in the northern portion of the Specific Plan Area as well as the runoff from the off-site industrial and agricultural areas that drain into the Specific Plan Area. During storms greater than the 10-year event, the basins and swales will divert excess flows to the adjacent mining pits. Selection of the 10-year storm event as a design criteria (flow and storage capacity) for the swales and basins was based on resolutions of the United Water Conservation District and the Fox Canyon Groundwater Management Agency and greatly exceed the design criteria established by the Ventura County SQUIMP and Land Development Guidelines.

These BMPs will be designed in conformance with the County's SQUIMP and Land Development Guidelines. Design features will include the use of baffles to ensure proper retention time, energy dissipators to protect inlets and outlets from erosion and from the resuspension of settled solids, and appropriately designed slopes to allow for maintenance of the detention basins.

The City of Oxnard will maintain the stormwater quality treatment system. A stormwater quality monitoring program will be established to properly evaluate the performance of the BMPs. An operations and maintenance manual will be prepared for the stormwater facilities, and a contingency plan will be established to provide emergency protocol if discharge concentrations exceed permitted levels. Further, the BMPs will be designed to contain all dry weather nuisance flows, so that there will be minimal discharge from the project to the River during dry weather conditions. This is significant since dry weather represents the critical condition for salts and nutrients, two of the 303(d)-listed impairments for the lower reaches of the Santa Clara River.

Stormwater Quality Analysis Summary

The overall stormwater management system as proposed has been designed to protect groundwater and surface water from both on- and off-site project stormwater discharges. Extensive analysis of the effectiveness of this proposed system on runoff quality and potential impacts to ground and surface water quality is provided in Section 4.5, Water Resources, of the Draft EIR. The design improves stormwater quality to the maximum extent practical through a series of natural filtration and detention BMPs. Finally, since the shallow water table and coarse soils beneath the project site preclude the use of infiltration facilities, the design is intended to convey runoff from the vast majority of storms from both on and off-site drainage areas to the Santa Clara River, while simultaneously preserving the existing quality of this surface water body.

Given this overall picture of groundwater protection, stormwater quality improvement, and safe conveyance of stormflows to the River, the RiverPark EIR conservatively evaluates all potentially significant impacts associated with this system. Potentially significant impacts to surface water in the Santa Clara River were identified as stormwater discharge concentrations of constituents that exceed the lesser of ambient River water quality and Basin Plan Objectives for most constituents, and California Toxics Rule criteria for metals as this was the most stringent applicable criteria for this category of pollutants. Potentially significant impacts to the groundwater were defined as stormwater discharge concentrations of constituents that exceed the lesser of ambient groundwater quality and state drinking water standards.

The conclusions of this conservative, concentration-based analysis are summarized on page 4.5-104 of the Draft EIR. A significant impact to the quality of surface water in the Santa Clara River was identified from calculated fecal coliform concentrations, which may exceed the REC-1 Basin Plan Objective, which was selected as the threshold of significance for this constituent. Concentrations of fecal coliform in

runoff from the Specific Plan Area will, however, be reduced from existing conditions. In addition, discharge concentrations are expected to be similar to ambient wet-weather River water quality.

Impacts to groundwater are a result of anticipated iron, manganese and nickel concentrations in stormwater exceeding existing ambient groundwater concentrations for these constituents. Anticipated discharge concentrations are, however, less than drinking water standards for each constituent. Furthermore, stormwater discharges to the pits will only occur from stormflows generated by the portion of a given storm that exceeds the 10-year event, because the on-site stormwater system has the capacity to hold and convey all flows from the on-site *and* tributary off-site areas, up to and including the 10-year storm event, to the Santa Clara River.

Conceptually, most stormwater quality models are based on the assumption that a given land use with a given annual rainfall is expected to generate a given constituent load per acre via stormwater discharge each year. This approach is consistent with the Regional Board's Total Maximum Daily Load (TMDL) calculation methodology. To properly evaluate the effects the proposed RiverPark development will have on constituent loads to the River and groundwater, the project must be viewed in this context. A systematic, objective approach to estimating constituent loads was used in the analysis in the Draft EIR, whereby proposed changes to drainage patterns, land uses and stormwater best management practices were considered.

The total drainage area acreage that is currently tributary to both the pits and the Santa Clara River will change as a result of the development of the County's Juvenile Justice Center ("JJC") Project, which is currently under construction. This site will convert agricultural lands that previously discharged to one of the mine pits to a municipal facility that will contain and percolate all of its runoff onsite. Therefore, the post-RiverPark project drainage area will not include the JJC lands.

The proposed RiverPark Specific Plan would change open areas on the existing mine site and agricultural land to commercial and residential uses. This land use change will cause an increase in total impervious acreage, and associated changes to the stormwater constituent concentrations including decreased sediment, nutrient, salt and pesticide concentrations and increased metal and hydrocarbon concentrations.

Under existing drainage conditions, the off-site industrial areas to the north drain directly to the gravel pits and the off-site agricultural areas to the east of Vineyard Avenue drain to an unlined county drainage basin. Runoff from within the Specific Plan Area is either contained onsite or discharged to the Santa Clara River through an existing storm drain in the southwestern corner of the Specific Plan Area.

Following implementation of the proposed drainage system, all runoff, including off-site industrial and agricultural runoff and on-site residential and commercial runoff, will be conveyed through pretreatment dry swales to lined detention basins, and then discharged to the Santa Clara River. Only during the portion of a given storm that exceeds the 10-year event will untreated stormwater enter the pits. Therefore, stormwater flows, which are currently untreated, will receive significant treatment under the proposed project conditions before discharging to the Santa Clara River resulting in a substantial improvement of discharged water quality.

The attached tables have been prepared to elaborate and clarify the quantitative analysis conducted on the stormwater constituent loads from the site in the Draft EIR. **Table 1** describes the existing and proposed mix of land uses within the Specific Plan Area and off-site areas draining to the Specific Plan Area. The total acreages differ as a result of the County's Juvenile Justice Center Project, which will retain all runoff onsite, thereby reducing the size of the off-site areas draining to the RiverPark Specific Plan Area.

Table 2 shows the routing of the runoff from the various land uses. Under the existing conditions, only commercial and agricultural land uses discharge to the Santa Clara River. All other runoff infiltrates to groundwater. Following implementation of the proposed project, all four land use types will contribute runoff to the Santa Clara River during storm events up to and including the 10-year event. For the portion of a given storm event that exceeds the 10-year event, the stormwater system is design to allow the controlled and regulated diversion of stormwater to the mine pits.

Table 3 shows the relative amounts of flows (to groundwater and surface water) for both the existing conditions and the project. Since evapotranspiration effects are not included in the calculation (which is acceptable given the limited precision of the analysis), the combined runoff totals to both groundwater and surface water are approximately equal (the difference being the loss of the Juvenile Justice Center runoff contribution). The project will increase the amount of runoff discharged to the Santa Clara River and decrease the amount percolated to groundwater relative to existing conditions.

Tables 4 and **5** present the constituent removal rates for the existing conditions and the project. Constituent removal for the existing conditions is limited to infiltration. Constituent removal mechanisms for the project conditions represent the use of the proposed dry swales, detention basins, and centrifugal separation units for the different planned land uses. A comparison of the two tables indicates that the project stormwater treatment system provides equivalent or superior removal rates for all constituents for all land uses.

Table 6 presents the quality of the raw and treated flows to groundwater for both the existing conditions and the proposed project. The table shows that the project runoff will be at a lower concentration than the existing runoff for all constituents with the exception of chloride. Chloride is expected to be just slightly higher (30.8 mg/L versus 30.5 mg/L) as a result of the additional commercial development.

Table 7 presents the quality of the raw and treated flows to surface water for both the existing and project conditions. This table shows that the project runoff will be lower in concentrations for all constituents in comparison to existing conditions.

Table 8 shows the annual mass loading to groundwater for the existing conditions and the project. This table illustrates that for all constituents, the project represents an improvement over existing conditions.

Table 9 shows the annual mass loading to surface water in the Santa Clara River for the existing conditions and the project. The data indicates that constituent loading will decrease as a result of the project for all constituents, with the exceptions of chloride and ammonia. This is primarily attributed to an increase in runoff volumes as shown in **Table 3**, and not an increase in the runoff concentrations.

With regard to stormwater discharges to the Santa Clara River, constituent loading during critical conditions is of greatest concern. These critical conditions are either flows occurring during dry weather conditions which may have high concentrations of salts and nutrients, or flows occurring during wet-weather conditions which may have high concentrations of pathogens and pesticides. Therefore, these critical conditions represent the potentially problematic dry weather chloride and ammonia contributions to the River. The RiverPark stormwater treatment system is designed to eliminate dry weather flows from most of the project and off-site areas. Therefore, although the attached calculations show an increased mass loading of chloride and ammonia to the Santa Clara River, this loading would only occur during wet-weather stormwater discharges, which is not a critical condition applicable to this existing impairment in the Santa Clara River. For this reason, this increase in the loading of chloride and ammonia is not a significant impact.

Table 10 shows the combined total loading to groundwater and surface water. It is important to note that the combined loading to surface and groundwater for all of the analyzed constituents will decrease as a result of the project.

Table 1. Land Use Breakdown

Scenario	Area, acres					
	Industrial	Agricultural (1)	Residential	Commercial	Basins (2)	Total (3)
Existing Conditions	267.3	422.4	0.0	46.5	173.0	909.2
Project Conditions	134.0	78.6	368.4	192.2	173.0	946.2

Notes:

1. Agricultural land uses for existing conditions include the following: 223.8 acres of existing agriculture in RiverPark A, 78.6 acres in Drainage Area #4 (east of Vineyard Avenue), 75 acres of existing County of Ventura drainage basins, and 45 acres of agriculture on the JJC site.
2. The listed 173 acres includes the Brigham, Vickers, Small Woolsey, and Large Woolsey basins only. Existing County of Ventura drainage basins (El Rio Detention Basins 1 and 2) are considered agricultural land uses for existing conditions. The proposed stormwater detention basins are considered residential land uses for project conditions.
3. Difference in Existing and Project Conditions acreages is the County's Juvenile Justice Center (runoff contained on-site under project conditions).

Table 2. Runoff Routing

Scenario	Industrial (1)	Agricultural (2)	Residential	Commercial	Basins
Existing Conditions	GW	SW	SW	SW	GW
Runoff Coefficients (1)	0.00	0.40	0.68	0.59	0.00
Project Conditions	SW	SW	SW	SW	GW
Runoff Coefficients (1)	0.81	0.76	0.68	0.59	0.00

Notes:

1. The difference in runoff coefficients is based on the way that drainage patterns will be affected. Currently, industrial portion of the existing site is assumed to only percolate to groundwater.
2. The listed runoff coefficient for existing agricultural land use is a composite based on the way that the drainage is routed. Of the 422.4 acres listed in Table 1, only the 223.8 acres of agriculture is expected to discharge to surface water (using a runoff coefficient of 0.76). All other agricultural uses (remaining 198.6 acres) are expected to discharge to groundwater (runoff coefficient of 0).

Table 3. Runoff Amounts

Scenario	Rainfall, inches	Existing Conditions, AF			Project Conditions, AF		
		Surf. Water	Groundwater	Total	Surf. Water	Groundwater	Total
Average Year (from 79/80 to 98/99)	16.6	162	857	1,018	736	333	1,070
Wet Year (1997/98)	37.97	370	1,959	2,329	1,684	763	2,447
Dry Year (1989/90) = Historic drought	5.46	53	282	335	242	110	352
10-year event (1)	4.14	40	214	254	184	83	267
50-year event (1)	5.68	55	293	348	252	114	366
100-year event (1)	6.31	61	326	387	280	127	407

Notes:

1. Rainfall amounts based on Ventura County Flood Control District Probable Maximum Precipitation based on 1-day event at El Rio Station 239.
2. Runoff volumes to groundwater ignore the effects of evapotranspiration.

Table 4. Treatment Effectiveness - Existing Discharges

	Removal Rates							
	Industrial Discharges		Agricultural Discharges		Residential Discharges		Commercial Discharges	
Constituent	Surf. Water	Groundwater	Surf. Water	Groundwater	Surf. Water	Groundwater	Surf. Water	Groundwater
TSS	NA	100%	0%	100%	NA	NA	0%	100%
MINERALS								
Sulfate	NA	0%	0%	0%	NA	NA	0%	0%
Chloride	NA	0%	0%	0%	NA	NA	0%	0%
TDS	NA	0%	0%	0%	NA	NA	0%	0%
Boron	NA	30%	0%	30%	NA	NA	0%	30%
NUTRIENTS								
Nitrate	NA	50%	0%	50%	NA	NA	0%	50%
Ammonia	NA	20%	0%	20%	NA	NA	0%	20%
PESTICIDES (1)								
ChemA								
Aldrin	NA	100%	0%	100%	NA	NA	0%	100%
Dieldrin	NA	100%	0%	100%	NA	NA	0%	100%
Chlordane	NA	100%	0%	100%	NA	NA	0%	100%
Endrin	NA	100%	0%	100%	NA	NA	0%	100%
Heptachlor	NA	100%	0%	100%	NA	NA	0%	100%
Heptachlor epoxide	NA	100%	0%	100%	NA	NA	0%	100%
HCH	NA	100%	0%	100%	NA	NA	0%	100%
Endosulfan	NA	100%	0%	100%	NA	NA	0%	100%
Toxaphene	NA	100%	0%	100%	NA	NA	0%	100%
DDE	NA	100%	0%	100%	NA	NA	0%	100%
Lannate	NA	99%	0%	99%	NA	NA	0%	99%
MICROORGANISMS								
Total Coliform	NA	99%	0%	99%	NA	NA	0%	99%
Fecal Coliform	NA	99%	0%	99%	NA	NA	0%	99%
Fecal Streptococci	NA	99%	0%	99%	NA	NA	0%	99%

Notes:

NA - Removal efficiency not applicable as there are no discharges to surface water from this land use.

1. Pesticide removal for pesticides is based on a review of the soil sorption coefficient, Koc. High values are indicative of a strong affinity for binding with soil particles Based on a review of the USDA Agricultural Research Service website (http://wizard.arsusda.gov/acsl/ppdb.html), the following are the recommended Koc values for the listed pesticides: aldrin - 17,500, dieldrin - 12,000, chlordane - 60,000, endrin - 10,000, HCH (hexachlorocyclohexane) - 1,355, heptachlor - 24,000, endosulfan - 12,400, toxaphene - 100,000, DDE - 381,000, and lannate (methomyl) - 86. Heptachlor epoxide is a by-product of heptachlor degradation. Heptachlor epoxide did not have a separate listing on that website, but based on the EPA fact sheet for heptachlor and heptachlor epoxide (http://www.epa.gov/OGWDW/dwh/t-soc/heptachl.html), both are expected to adsorb strongly to soil and, therefore, be resistant to leaching to groundwater. On this basis, it is assumed that since most of the pesticides are strongly bound to the soil, that there would 100 percent removal in the discharges to groundwater for all of the pesticides except lannate. The lannate removal is based on the soil sorption coefficient (86/87 = 99%).

Table 5. Treatment Effectiveness - Project Discharges

	Removal Rates							
	Industrial Discharges		Agricultural Discharges		Residential Discharges		Commercial Discharges	
Constituent	Surf. Water	Groundwater	Surf. Water	Groundwater	Surf. Water (1)	Groundwater	Surf. Water	Groundwater
TSS	97%	100%	97%	100%	80%	100%	40%	100%
MINERALS								
Sulfate	23%	20%	20%	20%	15%	20%	0%	0%
Chloride	0%	0%	0%	0%	0%	0%	0%	0%
TDS	0%	0%	0%	0%	0%	0%	0%	0%
Boron	90%	75%	89%	75%	67%	75%	20%	23%
NUTRIENTS								
Nitrate	79%	50%	75%	50%	56%	50%	0%	50%
Ammonia	23%	20%	20%	20%	15%	20%	0%	20%
PESTICIDES								
ChemA								
Aldrin	97%	100%	97%	100%	80%	100%	40%	100%
Dieldrin	97%	100%	97%	100%	80%	100%	40%	100%
Chlordane	97%	100%	97%	100%	80%	100%	40%	100%
Endrin	97%	100%	97%	100%	80%	100%	40%	100%
Heptachlor	97%	100%	97%	100%	80%	100%	40%	100%
Heptachlor epoxide	97%	100%	97%	100%	80%	100%	40%	100%
HCH	97%	100%	97%	100%	80%	100%	40%	100%
Endosulfan	97%	100%	97%	100%	80%	100%	40%	100%
Toxaphene	97%	100%	97%	100%	80%	100%	40%	100%
4,4-DDE	97%	100%	97%	100%	80%	100%	40%	100%
Lannate	0%	99%	0%	99%	0%	99%	0%	99%
MICROORGANISMS								
Total Coliform	95%	99%	94%	99%	71%	99%	20%	99%
Fecal Coliform	95%	99%	94%	99%	71%	99%	20%	99%
Fecal Streptococci	95%	99%	94%	99%	71%	99%	20%	99%

Notes:

1. Removal rates for residential runoff to surface water is calculated as the flow weighted removal rates for Drainage Area 1 (50% of the flow receives centrifugal separator unit treatment), Drainage Area 2A (100% of the flow receives dry swale treatment), and Drainage Area 2B (100% of the flow receives dry swale and detention basin treatment).
2. Pesticide removal is based on the soil sorption coefficient as in Table 4.