

STATE OF CALIFORNIA - THE RESOURCES AGENCY

GRAY DAVIS, Governor

**CALIFORNIA COASTAL COMMISSION**

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September 9, 2002

Mary Beth Broeren  
Planning Department  
City of Huntington Beach  
City Hall  
2000 Main Street  
Huntington Beach, CA 92648-2702

**RE: Environmental Impact Report 97-2 (Parkside Estates)**

Dear Ms. Broeren:

The City of Huntington Beach Planning Department will be acting on the Shea Homes development proposal to construct 171 residential units by Graham Street adjacent to the Wintersburg flood control channel on September 10, 2002. Commission staff requests that the Planning Commission not approve the proposed development. Specifically, the Commission's Water Quality Unit believes that the proposed Water Quality Plan is based on faulty assumptions and analysis. Additionally, Commission staff has not had an opportunity to review, through the EIR process, new information presented as an addendum to the *Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan* (Rivertech, 1998 and 2002). Prior to certification of the EIR, the flaws of the proposed Water Quality Plan should be corrected. Attached to this letter is the memorandum from the Commission's Water Quality Unit, which provides greater detail on our concerns. Please note, that this letter is specific to water quality and that many Coastal Act concerns discussed in our prior letters remain. Should you have any questions, please feel free to contact me.

Sincerely,

Stephen Rynas, AICP  
Orange County Area Supervisor

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Late Communication

STATE OF CALIFORNIA—THE RESOURCES AGENCY

GRAY DAVIS, GOVERNOR

**CALIFORNIA COASTAL COMMISSION**

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September 10, 2002

**TO:** Steve Rynas, Long Beach

**FROM:** Janna Shackeroff, Water Quality Unit

**SUBJECT:** Refutation of the Water Quality Analysis and Findings of "Insignificance with Mitigation" in the Parkside Estates EIR:

*An Analysis of the July 2002 Response to Comments to Final EIR; the Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan, prepared by Rivertech, Inc, December 1998; and Addendum to Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan, prepared by Rivertech, Inc, February 2002.*

**I. Introduction:**

Thank you for the opportunity to provide comments on the Final EIR for the Parkside Estates (Shea Homes) development in the City of Huntington Beach. In a letter dated July 31, 2001, Coastal Commission staff raised the issue of potential water quality impacts to coastal waters and resources by the proposed development. The water quality staff of the California Coastal Commission has reviewed the Response to Comments (2002) to the Final EIR, the February 2002 Addendum to the Water Quality Control Plan, and all relevant water quality documents in the Final EIR.

Unfortunately, our concerns pertaining to water quality were not addressed in the Response to Comments nor the new information in the February 2002 Addendum to the *Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan* (Rivertech, 1998 and 2002) (hereafter referred to as "Water Quality Plan"). Moreover, the Water Quality Plan and the water quality determination in the Final EIR are based on faulty assumptions and analyses. Coastal Commission staff has concerns about the project's impact on coastal resources and water quality.

We respectfully ask that the Huntington Beach Planning Commission deny certification of the Parkside Estates EIR as it is currently written. Prior to certification of the EIR, the flaws in the Water Quality Plan should be corrected, and the entire water quality mitigation plan for the development should to be reassessed and redesigned to adequately address water quality concerns.

**II. Documents Reviewed**

This memorandum constitutes California Coastal Commission staff's analysis of the potential impacts to water quality by the proposed Parkside Estates, as discussed in the Final EIR and Response to Comments. This memorandum does not address any issues other than water quality. The primary documents upon which this analysis was based include the following:

1. *Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan*, prepared by Rivertech, Inc, December 1998,
2. *Addendum to Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan*, prepared by Rivertech, Inc, February 2002,
3. *Comment Letters on the New Alternatives to the DEIR*,
4. *Response to Comments* (in particular, CCC#2-10, page 4-64; OCPD#2-6, pages 4-74 to 4-75; MHa-6, page 3-99; OCPD-12&13, pages 3-87 to 3-88).

### **III. Basic Components of a Water Quality Management Plan for a New Residential Development Near Sensitive Resources**

In order to fully address the issues raised by the water quality analysis for Parkside Estates, it is necessary to establish what the broad nonpoint source pollution prevention community regards as basic components of a water quality management plan for large residential subdivisions. Typically, urban residential areas generate a wide array of pollutants and significant pollutant loads; runoff usually includes such pollutants as pesticides and synthetic organic pollutants; nutrients; bacteria; heavy metals; oil, grease, gasoline, and other automotive fluids; sediments; trash and particulate debris; oxygen-demanding substances; and variety of other contaminants.

It is widely recognized in water quality literature that management of urban runoff that successful water quality management, particularly in a new development in which the issues can be incorporated from the primary stages of planning, integrates a three-pronged approach. Water quality management should include each of these three components:

- 1) Site Design standards
- 2) Source Control Best Management Practices
- 3) Structural Treatment Best Management Practices (BMPs).<sup>1</sup>

Site design varies significantly from one site to the next, and it is an often overlooked, but nonetheless critical, component of pollution prevention. For example, water quality site design principles can include such measures as minimizing impervious surfaces, promoting infiltration, using porous pavements, designing infiltration trenches into street medians, integrating vegetated swales and biological treatment systems into the common landscaping or along streets and parking lots, using shared driveways, minimizing footprints of buildings, and even designing roadways to encourage public transportation and thus lessen vehicle miles traveled.

Source control measures prevent pollutants from being released in the first place. Nonpoint source pollution education, efficient irrigation practices, planting native vegetation, and minimizing the use of pesticides and fertilizers are some of the more

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<sup>1</sup> Information can be found at Center for Watershed Protection <http://www.cwp.org/> and US EPA Nonpoint Source Program <http://www.epa.gov/owow/nps/urban.html>.

common source control BMPs. Source control measures should target both pollution prevention and reducing nuisance flows.

Structural treatment BMPs target the removal of pollutants that are inevitably and sometimes unavoidably introduced into runoff. In a residential development, a wide array of pollutants can be entrained in runoff, thus residential developments typically employ treatment trains—an extensive network of structural BMPs, usually incorporating several different types of BMPs that together will address all of the pollutants in urban runoff. Treatment trains include multiple steps of treatment, filtration, and infiltration, as is appropriate in each circumstance.<sup>2</sup> Treatment BMPs are those in which runoff is routed through filter media, like charcoal, resin beads, sand, or a manufactured media designed to adsorb particular pollutants, or through a biological system like constructed wetlands that remove pollutants through phytoremediation. These processes are necessary to deal with the entire range of pollutants that will be generated by a residential development.

#### **IV. Flaws In the Water Quality Analysis of the Parkside Estates Final EIR**

The 1998 and 2002 *Urban Runoff Water Quality Analysis and Conceptual Water Quality Control Plan* ("Water Quality Plan") contains multiple fundamental flaws. Because the Final EIR based its conclusion of insignificant water quality impacts on the Water Quality Plan's analysis, the Final EIR conclusion is insufficient as currently written. The flaws are substantial enough that we recommend the Huntington Beach Planning Commission reject certification of the Final EIR as currently proposed.

- A. The proposed water quality mitigation will not remove the range of pollutants nor the amount of pollutants generated by an urban development. Parkside Estate's proposed use of CDS Units as the principal means of water quality treatment measure is not sufficient to protect coastal water quality.**

The Water Quality Plan proposes Storm Drain Inserts and Continuous Deflection Separation systems (CDS Units) as the sole structural treatment BMPs. The use of these two devices without further filtration or treatment is insufficient to mitigate the potential impacts to water quality from this site. These technologies will remove some amount of trash and sediments from runoff, but they will not significantly reduce bacteria, nutrients, pesticides and other synthetic organic pollutants, heavy metals, petroleum hydrocarbons, automotive fluids, and the wide array of other urban pollutants.

Storm drain inserts are typically used as the initial step in removing trash and some particulate matter, oils and greases. Storm drain inserts fit into storm drain inlets and contain trash racks and a small amount of filter media to remove sediments and some dissolved constituents. Many developments of similar scale to the Parkside Estates utilize storm drain inserts as the first stage in an extensive network of treatment technologies (a development-

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<sup>2</sup> The extremely high water table precludes the use of infiltration BMPs on this site.

specific array of swales, vegetated treatment systems, sand filters, constructed wetlands, and treatment devices like Stormwater Management's StormFilter). In practice, storm drain inserts work best in small parking lots or very small development sites. One storm drain insert per entire residential block in Parkside would provide only pre-screening for large particulates and a very small percent of oils and grease in the runoff. Essentially, under the current design for Parkside Estates, CDS Units would provide the principal treatment of runoff from the development.

CDS Units primarily remove trash and coarse-grained sediments but do not remove any other urban pollutants to any significant degree. By relying solely on CDS Units, the runoff from this development will still contain significant levels of bacteria, nutrients, pesticides, oil, grease, gasoline, fine-grained sediments, synthetic organic pollutants, and other urban pollutants. Industry data suggests that CDS Units can remove 99% of trash under certain circumstances,<sup>3</sup> and they have been shown to remove up to 70% of total suspended solids when the total concentrations exceed 75 mg/L. However, below 75 mg/L, CDS Units may achieve 0% removal of TSS.<sup>4</sup>

No data suggests that CDS Units remove 90% of all urban runoff pollutants, as is stated in the Rivertech Reports (1998 and 2002). Other than trash and sediments, the CDS Unit-type technology removes only those pollutants that are adhered to the trash and coarse-grained sediments that are screened by this technology. Therefore, the technology is shown to be highly effective at removing trash and particulate debris; moderately effective with sediments (coarse-grained sediments are preferentially removed and fine-grained sediments like clays and silts are the least likely to be removed); and relatively ineffective at removing bacteria, pesticides, nutrients, petroleum hydrocarbons, automotive fluids, and other urban contaminants.

Therefore, two major flaws in the Parkside Estates Water Quality Analysis come to light. First, the Water Quality Plan, and thus the Final EIR, is in error claiming that the proposed mitigation will remove all pollutants in urban runoff. In fact, the proposed treatments will not remove the wide range of pollutants, including bacteria, nutrients, pesticides, heavy metals, petroleum hydrocarbons, and a wide array of other toxic pollutants will still be discharged to the East Garden Grove Wintersburg Channel, and ultimately to coastal waters.

As proposed, entire categories of pollutants are not being addressed, and at a minimum, a revised water quality plan should address all categories of pollutants (e.g. bacteria, pesticides, nutrients, etc.)

<sup>3</sup> <http://www.epa.gov/region01/steward/ceiits/stormwater/techs/contdeflective.html>

<sup>4</sup> Investigation of Structural Control Measures for New Development, Final Report. November 1999. Prepared by Larry Walker and Associates, Inc. for Sacramento Stormwater Management Program, P. 45.

Second, the Water Quality Plan errs in its calculations of the pollutant loads that will be removed from runoff. The Water Quality Plan assumes that CDS Units would remove 90% of all urban runoff pollutants generated by this development, and this number is used in the primary calculations of post-development water quality. These calculations of expected pollutant loads were used to demonstrate the robustness of the proposed mitigation and finally to conclude that this development would not have significant impacts on coastal water quality.

As established in preceding paragraphs, the 90% estimation may only be used in relation to trash levels, and no other urban pollutant. Therefore, the EIR cannot conclude there will be no significant impact to water quality based on these calculations, given that their major assumptions are flawed.

**B. The undeveloped site is not a source of pollution to coastal waters**

The Parkside Estates site is currently an undeveloped parcel and is not a source of nonpoint source pollution (i.e. there currently is no polluted runoff discharged from the site). Therefore, by converting this open parcel of land into a residential subdivision, any amount of polluted runoff, no matter how well- or poorly-filtered it may be, will exceed pollutant contribution from the baseline conditions.

The Final EIR suggests that because the development proposes to filter runoff from both this site and the adjacent, unrelated residential development, there will be an area-wide improvement in water quality. The EIR estimates pollutant loads would be 45% less than existing levels.

Based on the current water quality plan, claims of area-wide reductions in polluted runoff cannot be supported. Primarily, as established above, the undeveloped Parkside Estate site is not a source of polluted runoff. The site in question totals approximately 50 acres, and the adjacent development, which will be routed through CDS Units, totals approximately 21 acres. The conclusion that there will be an area-wide reduction in pollutant loads is based upon the assumption of a 90% removal efficiency of all urban pollutants.

The Final EIR should acknowledge that polluted runoff from the Parkside Estates, in fact, will increase over existing conditions. Treatment of runoff from the adjacent neighborhood can help offset increases in polluted runoff, but the EIR exaggerates that offset because of the faulty assumptions of CDS Units. As proposed, there will be an increase in urban runoff as a result of this development.

### **C. Impacts to Huntington Harbor**

Accordingly, since it has been established that runoff may be measurably more impaired than under existing conditions, the impact to Huntington Harbor must be considered. The Final EIR does not discuss adequately the fact that runoff ultimately is discharged into Huntington Harbor, a 303(d)-listed water body, despite multiple requests from comment letters to address this issue.

Runoff from the development ultimately must pass through Huntington Harbor to reach the Pacific Ocean. Huntington Harbor is on the State Water Resources Control Board's 303(d) list of impaired water bodies for the following pollutants: metals (from Urban Runoff, Storm Sewers, and Boatyards), pathogens (from Urban Runoff, Storm Sewers), and pesticides (from Urban Runoff and Storm Sewers). As an impaired water body, Huntington Harbor is afforded an especially high level of protection; thus, every measure to limit the introduction of these pollutants to its waters should be taken.

### **D. Connectivity with and Impacts to Bolsa Chica Wetlands**

Similarly, since it has been established that runoff may be measurably more impaired than in existing conditions, the impact to Bolsa Chica must be considered. While the Final EIR contends that Bolsa Chica wetlands would not be impacted by water quality impairments from the Parkside Estates, Coastal Commission staff maintains this statement is incorrect.

The Roconco to Comments states that the EGGW Channel "has completely severed the surface and shallow subsurface hydrological and terrestrial connection between the project site and the Bolsa Chica wetlands, and actions on the site would not have any measurable affect on the hydrology or water quality of the reserve or restoration areas."<sup>5</sup> We believe this to be in error. Although the EGGW Channel does not have a direct flow to the Bolsa Chica wetlands, the channel's outlet is within meters of the only tidal inlet to the Department of Fish and Game Bolsa Chica reserve.

Runoff from Parkside Estates would be pumped through the Slater Pump Station and discharged into Slater Channel, which discharges almost immediately into the East Garden Grove Wintersburg Channel (EGGW). A concrete-lined levy, the EGGW channel is a highly polluted urban drainage channel that currently receives stormwater and nuisance flows from many square miles of urban landscape. The EGGW outlet discharges into Outer Bolsa Bay, which is a small water body connecting the Southern end of Huntington Harbor and the DFG Bolsa Chica reserve. Water in Outer Bolsa Bay, which contains all stormwater and nuisance flows from the EGGW

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<sup>5</sup> Response to Comments, Page 4.64.

channel, may pass through tide gates into the Bolsa Chica reserve. It may also pass through a culvert under Warner Avenue and into Huntington Harbor.

**E. Use of the term "Low Flow Diversion"**

The Rivertech Report as well as the Response to Comments refers to a "Proposed First Flush and Low Flow Diversion" of runoff in the Parkside Estates. The term "low flow diversion," as used in the report is a misnomer; the EIR uses it to describe the need to pump runoff to the Slater drainage channel in the dry weather season to prevent flooding of the streets in the summer.

In general, however, the term "low flow diversion" refers to the diversion of low flow runoff (the amount of runoff up to a certain rate runoff, typically that which flows in dry weather seasons) through a wastewater treatment facility to be treated prior to being discharged in the ocean.

Defining a water conveyance action as a low flow diversion, without it actually being thus, may have left some reviewers with an inaccurate perception of the projects design. Low flow diversions of urban runoff to wastewater treatment plants have been highly publicized and lauded as an immediate fix for beach closures—a high profile issue in Huntington Beach. Therefore, it is imperative to clarify the use of the term "low flow diversion," or perhaps avoid the use this term at all.