UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 11, 2008

Kathleen Dadey
U.S. Army Corps of Engineers
Regulatory Branch
1325 J Street, Room 1480
Sacramento, CA 95814-2922

Subject: Supplemental Draft Environmental Impact Statement for the Rio del Oro Specific Plan Project (CEQ# 20080172)

Dear Ms. Dadey:

The Environmental Protection Agency (EPA) has reviewed the Supplemental Draft Environmental Impact Statement (SDEIS) referenced above. Our review is pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA provided comments on the DEIS in a February 15, 2007 letter. Our letter documented concerns about impacts to waters of the U.S., determination of the Least Environmentally Damaging Practicable Alternative (LEDPA), and habitat impacts. After review of the SDEIS, we have remaining concerns in these areas and have rated the SDEIS as EC-2, *Environmental Concerns - Insufficient Information* (see enclosed "Summary of Rating Definitions"). In addition, given the constraints and uncertainties related to future availability of water to serve the development, we recommend efforts to maximize water conservation and integrate water use efficiencies through "green infrastructure" into the design of the development.

As noted in our 2007 DEIS comment letter, EPA reviewed the Public Notice for this project and on March 29 2004, objected to the issuance of the Clean Water Act (CWA) permit associated with the project, recommending a thorough assessment of the impacts to waters of the U.S. We also recommended at that time that the DEIS demonstrate the project's compliance with the CWA Section 404(b)(1) Guidelines, including the LEDPA and mitigation for project impacts. After review of the DEIS, we expressed concerns that the DEIS did not demonstrate that wetlands have been avoided to the greatest extent practicable while achieving the basic project purpose. We were also concerned that adequate mitigation for project impacts to waters of the U.S. and habitat had not been included.

We reiterate that the FEIS should include several modifications to the Proposed Project Alternative: 1) demonstrate that waters of the U.S. have been avoided to the greatest extent practicable and/or make modifications to achieve this end, such as low impact development mitigation measures; 2) clearly document this avoidance; 3) support the selection of the Proposed Project Alternative as the LEDPA based on objective criteria; and 4) include a detailed analysis of the Impact Minimization Alternative to satisfy the CWA Section 404(b)(1) Guidelines.

We appreciate the opportunity to review the SDEIS. When the FEIS is released for public review, please send two hard copies to the address above (mailcode: CED-2) when the document is formally filed with our EPA Headquarters Office. We would be happy to discuss additional avoidance measures or low impact development measures with you during the preparation of the FEIS. If you have any questions, please contact me at 415-972-3846 or Carolyn Mulvihill, the lead reviewer for this project at 415-947-3554 or mulvihill.carolyn@epa.gov.

Sincerely,

Connell Dunning

For Nova Blazej, Manager
Environmental Review Office

Enclosures: Detailed Comments
Summary of EPA's Rating Definitions
Excerpt from Barbour *et al* Final Report

cc: Kelly Fitzgerald, USFWS

Impacts to Waters of the U.S.

In a letter dated March 29, 2004 responding to the Clean Water Act (CWA) Section 404 Permit Application Public Notice for the Rio Del Oro Project, EPA expressed concerns regarding the significant wetland impacts. The Supplemental Draft Environmental Impact Statement (SDEIS) indicates that 27.9 acres of jurisdictional waters of the U.S. will be impacted, a slight decrease from the estimate of 30.3 acres noted in the DEIS. The estimated impact on isolated waters remains the same at 12.9 acres. These impacts remain a major concern with respect to cumulative impacts, significant degradation, and an inordinately large compensatory mitigation burden. Approximately 41 acres of total waters are intended for fill, which is significant. Despite the proposed 60 acres of creation and 51 acres of preserved wetlands, we remain concerned over the loss of existing waters of the U.S.

Recommendation:

- Seek additional measures to minimize impacts to aquatic resources, particularly waters of the U.S. Document in the FEIS the acreage of wetlands and waters that will be preserved through avoidance and minimization measures.

Vernal Pools

Our February 15, 2007 comment letter on the DEIS expressed our concerns about the acreage of vernal pool impacts and the density of proposed vernal pool creation. We appreciate the hydrologic analysis of the topography of the proposed onsite preserve area, including Light Detection and Ranging (LIDAR) analysis, described in the SDEIS. We remain concerned, however, about the density of vernal pools proposed for construction in the existing vernal pool complexes. Almost 18 acres of vernal pools are proposed to be constructed within existing complexes, which will nearly double the existing density. While the proposed shapes and locations of new vernal pools, as illustrated in Figure 6 of the Mitigation and Monitoring Plan (MMP), appear natural, this proposed mitigation could be less effective than restoration of altered vernal pool landscapes to a more natural and dynamic ecosystem.

EPA recommends the use of reference pools for comparison with constructed vernal pool functions. Performance standards proposed by Barbour *et al.* are included in the attached excerpt from "Classification, Ecological Characterization, and Presence of Listed Plant Taxa of Vernal Pool Associations in California."[1] While the success criteria listed in Table 4 of the MMP are reasonable, the use of reference pool standards are preferable because they recognize natural variability and the qualities associated with the vernal pool community at the site, rather than utilizing more generic standards. The MMP states that naturally occurring vernal pools will be selected for comparison monitoring, but the number and method of selection are not proposed.

[1] Barbour *et al.*, "Classification, Ecological Characterization, and Presence of Listed Plant Taxa of Vernal Pool Associations in California, United State Fish and Wildlife Service Agreement/Study, May 2007.

Recommendations:

- Seek opportunities to restore altered vernal pool landscapes as part of proposed mitigation for impacts to vernal pools.

- Use criteria based on reference pools at the site to judge the success of constructed vernal pools, and describe proposed methodology for choosing reference pools in the FEIS.

Seasonal Wetlands

Our February 2007 DEIS comment letter also expressed concerns about wetland creation in detention basins for the purpose of both stormwater treatment and compensatory mitigation. Figure 7 of the MMP, the Conceptual Corridor Plan, indicates the location of the riverine (seasonal) wetlands that are proposed for mitigation. These features would be subjected to seasonal inundation by stormwater. EPA is concerned about the potential functions of these wetlands and consequently their value for compensatory mitigation, due to the fact that they would act as "polishing" wetlands and might become contaminated. As such, they could be "attractive nuisances" to wildlife, rather than aquatic resources that provide wildlife habitat and support native plant communities.

While the function of stormwater treatment is important, giving mitigation credit for these wetlands would mean allowing a shift in baseline conditions. Furthermore, the features should be viewed as avoidance and minimization measures to ensure the waters within and downstream of the project area continue to attain water quality standards and provide beneficial uses as appropriate.

The success criteria for seasonal wetlands (Table 7 of the MMP) indicate that "95% of the wetland acreage must be inundated or saturated for period of sufficient duration to support wetland vascular plants as the most prevalent and dominant component." This criterion is in effect forfeiting 5% of the acreage required for mitigation. EPA recommends that a detailed Geographic Information Systems (GIS) analysis of the created wetlands be performed to determine the exact acreage of wetlands created, and the appropriate amount of credits to be granted, and so that additional creation can be initiated if necessary under an adaptive management plan.

As with the vernal pool creation, EPA recommends that the performance standards for seasonal wetlands and low-flow channels be evaluated against a reference condition. The success criteria proposed in the MMP are too broad.

Recommendations:

- We recommend that additional sites be identified for compensatory mitigation, as the current sites identified for creation of seasonal wetlands will also serve as stormwater treatment, diminishing their value as wildlife habitat. The FEIS should clearly establish the expected functions of all wetlands proposed for preservation or creation.

- Include in the MMP a requirement to perform a GIS analysis of created wetlands to determine the actual acreage of creation and to initiate additional creation under an adaptive management plan if the amount is less than stated in the MMP.

- As with the vernal pool creation, EPA recommends that the performance standards for seasonal wetlands and low-flow channels be evaluated against an onsite reference condition.

Overall Mitigation

EPA appreciates the fact that the majority of mitigation work is scheduled to be performed during Phase 1 of the project to avoid temporal losses.

For all proposed wetland creation areas, we recommend using the California Rapid Assessment Method (CRAM) tool as a supplemental source of information to gauge success of created wetlands. We appreciate that CRAM is proposed for use under Mitigation Measure 3.10-1a for baseline assessment; however, it can also be used in annual monitoring. Scores resulting from the analysis over time can be plotted to determine a rough estimate of the "restoration trajectory" for the created wetlands and waters. Although the SDEIS suggests that CRAM can be used to help establish baseline conditions at the onsite and offsite mitigation locations, this is not reflected in the MMP.

Recommendation:

- For all proposed wetland creation areas, we recommend use of the CRAM tool as a supplemental source of information to gauge success of created wetlands. Document all updates to proposed monitoring in the MMP.

Cumulative Impacts

Our February 2007 DEIS comment letter expressed our concerns about cumulative impacts to the aquatic ecosystem, including loss of vernal pools and habitat due to the numerous development projects proposed in the vicinity of the Rio del Oro project. We also recommended that sponsors of the Rio del Oro project coordinate with project sponsors in the Sunrise Douglas Community Planning Area (SDCPA) to undertake a comprehensive approach to conservation land management, possibly including the proposal to establish over 2,000 acres of wetland preserves in the SDCPA.

We remain concerned about significant degradation and cumulative impacts resulting from developments at Sunrise Douglas, Mather Air Field, the Waegell Family property, Excelsior Estates, Cordova Hills, and Walltown Quarry, all of which are in the vicinity or within the "Mather Core Recovery Area" as designated by U.S. Fish and Wildlife Service for vernal pool species. In particular, it is our understanding that the proposed Cordova Hills project will impact 52 acres of waters of the U.S., all of which are vernal pools, a large increase in impact from the 18 acres that we had previously reported in our February 2007 letter.

Recommendation:

- Include up-to-date information in the Cumulative Impacts section of the FEIS regarding impacts to resources from the various proposed projects in the vicinity of

the Rio del Oro project. Document coordination with project sponsors in the SDCPA and other projects in the vicinity to facilitate optimal wetland and other habitat preservation in the area.

LEDPA Determination

Our February 2007 DEIS comment letter expressed our disagreement with the statement in the DEIS that compliance with the CWA Section 404(b)(1) Guidelines had been shown (DEIS, page 2-3). Our disagreement was based on an insufficient alternatives analysis. Specifically, we questioned the criteria used to determine practicability of the Impact Minimization Alternative. In discussing this alternative, the DEIS briefly analyzed the potential for an increased preserve size, but noted that due to the decrease in retail and commercial development, "[t]he loss of these development impact fees could require a scaling back of the City's vision for added community amenities" (page 2-80). Page 2-81 stated that implementation of the Increased Preserve Alternative would "likely satisfy the USACE NEPA Section 404(b)(1) Guidelines, [but] it was eliminated from further detailed study because it would not achieve the key CEQA project objectives." As we stated in our DEIS comment letter, eliminating an alternative because it would not provide adequate impact fees to support increased community amenities is not reasonable under the CWA Section 404(b)(1) Guidelines.

We remain concerned that the Proposed Project Alternative does not appear to be the Least Environmentally Damaging Practicable Alternative (LEDPA). In particular, the DEIS and SDEIS did not demonstrate that more wetland areas cannot be avoided, such as in the Impact Minimization Alternative, while achieving the basic project purpose. The Impact Minimization Alternative may be practicable based on cost, logistical, and technical feasibility and EPA believes that the FEIS should include a more detailed analysis of the alternatives to determine the LEDPA.

Recommendations:

- The FEIS should analyze the Impact Minimization Alternative in detail in order to support the project's compliance with the CWA Section 404(b)(1) Guidelines and selection of the LEDPA. Clearly defined economic goals should be used to explain the rationale for eliminating the alternative.

- If possible, the Proposed Alternative should be modified to further avoid and minimize impacts to waters of the U.S. The FEIS should discuss how the applicant determined the proposed project is the LEDPA, using acceptable cost, logistical, and technical feasibility criteria, in light of concerns over significant degradation and cumulative impacts.

Consistency with Resource Plans

As stated in the SDEIS, the project site is located within the proposed South Sacramento County Habitat Conservation Plan (SSCHCP) area. While the SSCHCP has not yet been adopted, the project would contribute significantly to habitat impacts in the SSCHCP area and Sacramento County is relying on conservation measures in the proposed SSCHCP to support its planning and development decisions. For these reasons, EPA recommends that the FEIS include

a more detailed analysis of the project's contribution to habitat impacts in the area and its consistency with the SSCHCP.

The SDEIS also states that mitigation would preserve approximately 70% of the onsite vernal pool habitat that is within the Mather Core Area. This appears to be inconsistent with the U.S. Fish and Wildlife Service's *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon*, which recommends that 85-95% of vernal pool habitat within the Mather Core Area be protected. The FEIS should address this inconsistency.

Recommendations:

- Include in the FEIS a detailed analysis of the project's contribution to habitat impacts and describe whether it is consistent with the SSCHCP.

- Include in the FEIS a discussion of consistency with the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon*. Describe what measures have been used to avoid and minimize impacts to vernal pool ecosystems.

Conservation and Water Use Efficiency

In our February 2007 DEIS comment letter, EPA recommended the use of smart growth design and low impact development to minimize increases in traffic congestion and impacts to resources resulting from the project. While the SDEIS states that the proposed residential development would include various design features characteristic of low impact development such as retention ponds, EPA encourages project sponsors to include additional green infrastructure approaches. These features would serve both to protect water quality in the development and adjacent preserve, and assist in water use efficiencies. Examples of green infrastructure that should be considered for the project include permeable pavement, which reduces runoff and assists in groundwater recharge, and rain harvesting, which can utilize simple technologies to preserve and recycle rain water. Detailed information about these and other green infrastructure approaches is available at http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm.

Efforts to maximize water conservation and water use efficiencies are essential in assuring a long-term, sustainable balance between available water supplies, demand, and ecosystem and public health. These efforts are even more urgent given the projected growth of population and development in California and the risk of multi-year droughts.

Recommendation:

- We recommend that the project include aggressive water use efficiency and conservation measures to ensure the most effective and appropriate use of scarce water supplies. The FEIS should provide specific information on proposed low impact development and water use efficiency, reuse, and conservation measures and which parties could best implement the identified measures. Efficient water use can be enhanced through development, green infrastructure, and drinking water policies. The following reports may be of assistance:

- *Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies.* (http://www.epa.gov/dced/pdf/growing_water_use_efficiency.pdf)
- *Protecting Water Resources with Higher-Density Development.* (http://www.epa.gov/smartgrowth/pdf/protect_water_higher_density.pdf)

SUMMARY OF EPA RATING DEFINITIONS

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

ADEQUACY OF THE IMPACT STATEMENT

Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

FINAL REPORT,

15 May 2007

CLASSIFICATION, ECOLOGICAL CHARACTERIZATION, AND PRESENCE OF LISTED PLANT TAXA OF VERNAL POOL ASSOCIATIONS IN CALIFORNIA

UNITED STATES FISH AND WILDLIFE SERVICE AGREEMENT/STUDY

NO. 814205G238

UNIVERSITY OF CALIFORNIA, DAVIS

ACCOUNT NO. 3-APSF026 , SUBACCOUNT NO. FMGB2

SUBMITTED BY:

PROFESSOR MICHAEL G. BARBOUR

PRINCIPAL INVESTIGATOR, DR. AYZIK I. SOLOMESHCH,

MS. JENNIFER J. BUCK

WITH CONTRIBUTIONS FROM:

ROBERT F. HOLLAND

CAROL W. WITHAM

RODERICK L. MACDONALD

SANDRA L. STARR

KRISTI A. LAZAR

Current restoration standards appropriately address hydrology and flora as the most important targets. However, in our opinion, some of the details in those standards are difficult to quantify because of the formulas used. We suggest the following changes:

(1) The current criterion specifies that created pools should not hold water longer and/or deeper than 125% of the values in reference pools. In order to make this criterion more consistent and statistically defensible, it should be amended to state, "Depth and/or duration of ponded water in created pools should not differ statistically ($p = 0.05$) from those in nearby natural pools." That is, the hydrologic variety of created pools should mirror that of the natural pools.

(2) The current criterion is that absolute and relative cover by vernal pool endemics in constructed pools should not be less than the minimum among reference pools. The minimum is not appropriate because that value will often be zero for any given species in at least one or some of the reference pools. Amend to read, "Absolute and relative cover of each vernal pool endemic in constructed pools should not be statistically different ($p = 0.05$) from the average values of each species in reference pools."

(3) The current criterion is that the number of vernal pool endemics in constructed pools should not be less than the lowest number of species among the reference pools. We suggest that the minimum should not be a measure for success because the floristically poorest reference pool may be an anomaly. Amend to read, "The number of vernal pool endemics in constructed pools should not be statistically lower ($p = 0.05$) than the average number of those taxa among reference pools."

(4) The current criterion is slightly modified by adding a statistical requirement: "The vigor (biomass accumulation) and reproductive activity (seed production) of vernal pool endemics in constructed pools should not be statistically lower ($p = 0.05$) than those of the same species in reference pools."

(5) Current criteria do not address exotic species, therefore, we propose a new criterion, "The number and cover of non-native species in any constructed pool should not be significantly higher ($p = 0.05$) than the average among reference pools."

(6) Current criteria are species-oriented rather than community oriented, therefore we propose a new criterion, "The identity of community types in created pools

and the mixture in which they occur should match that of reference pools (using a Sorensen Similarity Index formula where "matching" means an SSI >50%." In other words, constructed pools collectively should contain deep, shallow, and edge community types if reference pools have those community types, meaning that the depth, side slope, shape, and area of created pools should be as diverse as that of reference pools.

(7) A follow-up new criterion, based on (6) above, is that "Reference pools should be chosen subjectively so that collectively they represent the diversity of species and communities that exist in the pools to be taken." We add this criterion to avoid the random selection of inappropriate pools as reference targets, and to address the need to replicate community type diversity in addition to the presence of particular species.

(8) We recommend the deletion of the present criterion, "...any vernal pool endemic that is dominant (>20% relative cover) in at least 30% of the reference pools shall be present as a dominant species in all of the constructed pools." Again, this emphasis on common, widespread dominant species could result in the homogenization of constructed pools. Furthermore, many natural pools would fail to meet this criterion because of innate floristic differences.

TRAINING OPPORTUNITIES

In this report, we have provided names and attributes for an hierarchical series of plant community types, from local associations to more regional alliances, orders, and classes. The task yet to complete is demonstrating the degree of adequacy and usefulness of the classification. If the community types are too difficult to differentiate for the average field botanist, then the classification will not be used for long. If the classification is appropriate, it may still not be used unless it becomes institutionalized, meaning that its use is not only encouraged by agencies, but its use becomes routinely expected.

We propose to develop a training course, with the collaboration of USFWS, the California Department of Fish and Game, and the California Native Plant Society; that is offered on an annual basis. The course would train students on plant identification, sampling protocol for documenting plant community types, the use of an annotated key to