



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

November 14, 2005

Mr. Randy Bachman
City of Redding
City Manager's Office
777 Cypress Avenue
Redding, CA 06002

Subject: Draft and Supplemental Environmental Impact Statement (DEIS) for the proposed
Stillwater Business Park (CEQ# 050103 / 50309)

Dear Mr. Bachman,

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced documents 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. Based on our review, EPA has rated the preferred alternative as EC-2, Environmental Concerns - Insufficient Information (see enclosed "Summary of Rating Definitions").

Since 2003, we have worked as a cooperating agency, in collaboration with the City of Redding (City), the U.S. Army Corps of Engineers (Corps), and other federal and state stakeholders, in an effort to assist the City's efforts to satisfy the project purpose while protecting sensitive natural resources. We have participated in multiple meetings and two site visits with the resource agencies and the City. Congress has appropriated funding through EPA's budget to establish water and wastewater infrastructure for the proposed project, and this funding requires EPA to evaluate the environmental consequences of our funding action. In the interest of ensuring that the appropriate environmental content and analyses were included in the NEPA document for this project, the City and EPA agreed to an extended coordination period to inform the preparation of the supplemental DEIS. This agreement was memorialized by letter dated June 23, 2005 to the City by Karen Schwinn, Associate Director of EPA's Water Division, in which EPA outlined specific expectations for the document.

As we have stated in our meetings and in our December 2004 comment letter, for this EIS to serve as EPA's financial assistance decision document, three issues need to be more fully addressed in the Final EIS (FEIS): (1) Alternatives 3 and 4 must be analyzed in level of detail comparable to that of the preferred alternative (40 CFR 1502.14a); (2) a conceptual off-site

mitigation plan for unavoidable impacts to waters of the U.S. and endangered species should be described; and (3) cumulative environmental impacts from the proposed action must be more rigorously analyzed. We urge the City to ensure that these issues are addressed in the FEIS.

We are available to discuss our comments and assist the City in addressing these concerns. When the Final EIS is released for public review, please send three (3) copies to the address above (mailcode: CED-2). If you have any questions, please contact Summer Allen, the lead reviewer for this project, at 415-972-3847.

Sincerely,

/S/

Duane James, Manager
Environmental Review Office
Communities and Ecosystems Division

Enclosure: Detailed Comments

cc:

Scott Zaitz, Central Valley RWQCB
Allan Forkey, Natural Resources Conservation Service
Donald Koch, CDFG-Redding Regional Headquarters
Matt Kelly, Sacramento Corps District
Rick Kuyper, USFWS Sacramento Field Office
Michael Tucker, NOAA Fisheries, Sacramento
Ernest Mulins, US Housing and Urban Development, Regional Office

**EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE PROPOSED STILLWATER BUSINESS PARK- NOVEMBER 14, 2005**

Alternatives

The Guidelines promulgated under the Clean Water Act (CWA) Section 404(b)(1) (Guidelines) require that permits for discharges of dredged or fill material into waters of the U.S. authorize only the Least Environmentally Damaging Practicable Alternative (LEDPA). In our meetings this summer with the City, we emphasized that the NEPA document should analyze project alternatives at a comparable level of detail, with particular reference to Alternatives 3 and 4. Our June 23, 2005 letter affirmed this in several ways (see attached letter). Unfortunately, the revisions to the Alternatives section of the SDEIS do not clearly justify the decision to reject Alternatives 3 or 4. As we have stated in the past, the level of analysis for these alternatives should be comparable to the analysis done for Alternative 2 to inform decisions regarding direct, indirect, secondary, and cumulative impacts and relevant mitigation measures. Prior to obtaining a CWA Section 404 permit, the City will have to demonstrate that potential impacts to waters of the United States have been avoided and minimized to the maximum extent practicable either through alternative selection or modification (40 CFR 230.10(a) and 230.10(d)).

We also suggested that the SDEIS provide examples, as local as possible, of business parks that have already been successfully developed where similar size and flexibility criteria were central to the practicability of the project. Although the SDEIS does cite an example of a mixed-use development which benefited from contiguous multiple uses, the relevant comparison requested (on practicability) was not made, and the project selected (a much larger, master-planned community in Nevada) was not comparable. We also suggested the SDEIS provide source data and further substantiation of the required lot sizes and the requirement of a 100-acre parcel. While the document provides a table of companies which may have expressed an interest in siting in Redding in the past, there is no supporting data that these companies require the areas specified, or that they require space adjacent to particular businesses in order to make siting practicable.

Recommendations:

Consistent with our previous comments, the FEIS should provide an analysis of the direct, indirect, and cumulative impacts associated with Alternatives 3 and 4 which (to the extent feasible) are comparable in detail to those provided for the Preferred Alternative. It should provide further cost, logistical, or technological rationale (e.g., specific socioeconomic impacts or parcel size limitations) to support the conclusion that Alternatives 3 or 4 are not practicable.

The EIS should include biological survey information for the special-status species and anadromous fishery resources associated with Alternatives 3 and 4. It should also clearly demonstrate that for each alternative, potential impacts to waters of the United States have been avoided and minimized to the maximum

extent practicable as required by 40 CFR 230.10(a) and 230.10(d).

Impacts to Aquatic Resources

The proposed conservation area encompasses approximately 4,166 acres including a 700-acre core wetlands complex surrounded by terrestrial, upland habitats and a watershed catchment zone¹. In 1996, in an effort to secure threatened and restorable vernal pool resources within the federal Wetlands Reserve Program (WRP), the Natural Resources Conservation Service (NRCS) purchased a perpetual conservation easement on 128 acres within Stillwater Plains (Plains). In 2000, the Hawes family established the 834-acre Stillwater Plains Mitigation Bank near the WRP holding, thereby expanding protection for the core of the vernal pool ecosystem². As of 1999, CDFG reported that approximately 1,500 acres within the SPCA were protected through public ownership or private conservation easement, or were proposed for private conservation.

The vernal pool landscape at Stillwater Plains supports a diversity of unique and special-status species, contributes to high food-web productivity, and protects hydrological processes and water quality. Additionally, the wetlands at Stillwater Plains contribute to the overall environmental health and functional capacity of the Northern Sacramento Valley and the upper Sacramento River watershed. These vernal pools are characterized by an uncommon diversity of vernal pool sizes and inundation regimes, resulting in the occurrence of at least twelve special status plant and animal species on the Stillwater Plains¹ (see Attachment A #1). The proposed conservation area shelters eleven distinct natural communities¹ (see Attachment A #2) considered among the most imperiled habitats in California. Much of this information regarding the importance of the area is not included in the environmental documents.

Eighty-five percent of the original base of vernal pools in the state has been lost to development, and it appears that thirty-three percent of the original crustacean species (e.g., fairy shrimp) may be extinct due to habitat destruction³. The most recent statewide reconnaissance to measure the status and trends of vernal pool landscapes estimated that Shasta County had lost 107.0 acres/year of vernal pool complexes between 1995 and 1997⁴. Permit and enforcement activity since then indicates an ongoing level of degradation, fragmentation, and loss of vernal pool resources within Shasta County.

¹*Conceptual Area Acquisition Plan*, California Department of Fish and Game (CDFG, 1999).

²*Banks and Fees – The Status of Off-Site Wetland Mitigation Banks in the United States* (ELI, 2002).

³*Loss of Diversity as a Consequence of Habitat Destruction in California Vernal Pools* (J.L. King 1996).

⁴*No Net Loss? Changes in Great Valley Vernal Pool Distribution from 1989-1997* (R.Holland, 1998).

Recommendations:

In our meetings and June 23, 2005 letter, we asked that the SDEIS include information on the importance of the area to the conservation of vernal pool ecosystems. Although this has been discussed in correspondence and meetings with state and federal agencies, it has not been adequately addressed in the SDEIS. The FEIS should include information regarding the importance of the ecosystem to unique and special-status species and habitat, hydrological processes, and water quality.

In particular, we recommend that the FEIS incorporate avoidance of the ten acres surrounding the “horseshoe” pond, which is habitat for the federally and state-listed slender orcutt grass, as recommended by the Corps, EPA, and Fish and Wildlife Service in our meetings with the City. If avoidance is not feasible, the FEIS should include additional information to support the document’s conclusion that no impacts to the pond or special status species will result from the project.

Indirect and Cumulative Impacts and Associated Mitigation

We are concerned that the integrity and functions of Stillwater Creek will be altered by the conversion of permeable surfaces on the Plains to impervious surfaces (e.g., asphalt, concrete, and structures), as well as by the corresponding increases in the velocity and volume of polluted stormwater and irrigation run-off. The Alternative 2 site incorporates most of the western quarter of the proposed conservation area that serves as a natural sink for surface and subsurface waters flowing across the Plains in a southwesterly direction. It provides a transition zone between the upland terraces of the Plains, which support vernal pool and oak savanna resources, and the downstream riparian forests of the upper Sacramento River watershed.

Habitat Integrity and Connectivity

Developing the terrestrial landscape around vernal pools and other waters can destroy the micro-watersheds upon which they depend and threaten the long-term health and sustainability of plant and wildlife populations. Many of the special-status species associated with the vernal pools (e.g., solitary bees, tiger salamanders, spadefoot toads) spend critical periods of their lives above and below ground in the area surrounding the pools. Therefore, even if the exact jurisdictional margins of the pools are not filled, the indirect impacts from upland development and habitat fragmentation may be significant in that: (1) the micro-watersheds for the vernal pools are destroyed by development; (2) hydrological processes important to vernal pools occurring within shallow, subsurface soil formations are permanently altered by trenching and the fracturing of these ancient formations; and (3) special-status species that rely on both aquatic and terrestrial habitats will decline or disappear as the uplands are converted to development. The significance of these impacts may be mitigable, but the SDEIS does not describe how the City will compensate for these impacts and reduce them below the level of significance.

Recommendations:

The FEIS should include a conceptual off-site mitigation plan. The document should estimate project impacts inclusively (direct, indirect and cumulative), and describe a conceptual plan to compensate for lost functions. The FEIS should evaluate permanent and temporary disruptions to habitat integrity associated with disconnecting Stillwater Creek from Stillwater Plains in the project vicinity. As a component of mitigation, we strongly recommend the purchase and perpetual conservation and management of lands in the Stillwater Creek watershed, preserving similar functions to those that would be adversely impacted by the project. This off-site mitigation area should be one that the resource agencies consider of high ecological value, as discussed in our meetings with the City.

Although the DEIS describes several potential indirect impacts (e.g., permanent alteration of natural soil structures; increased human uses such as off-road biking and hiking and dumping; alteration of surface and subsurface hydrology), Mitigation Measure 4.2-4 A and B only provide mitigation for certain indirect impacts. These measures are limited to best management practices (BMPs) and avoiding encroachment into the Cow Creek Watershed during the construction phase (DEIS pg. 4.2-75). The FEIS should describe in detail the BMPs to be utilized to minimize impacts (e.g., specific stormwater BMPs such as vegetated swales discussed in interagency meetings) and include habitat fragmentation as an indirect effect of the proposed action.

Hydrology and Water Quality

The Plains are bounded by Stillwater Creek on the west and Dersch Road on the south. The northern and eastern boundaries of the Plains are delineated by breaks in topography and watershed boundaries. Water generally flows southwest from the northern and eastern portions of the Plains and into Stillwater Creek. Although we requested additional hydrological information in the revised document, there is little new information (e.g., hydrologic modeling demonstrating no, or minimal, adverse impacts to surrounding areas; descriptions of ongoing monitoring programs). For example, the SDEIS states that the Alternative 2 site will no longer be directly or indirectly hydrologically-connected to the Stillwater Plains Mitigation Bank, based on hydrologic modeling (p. 3-4). However, the modeling used to support this assumption is not included or referenced in summary detail.

Recommendations:

The FEIS should include additional information on the specific surface and subsurface hydrology of the area and the indirect impacts resulting from the disruption of the transition zone between upland terraces and the downstream watershed. Mitigation Measure 4.2-4B regarding indirect effects on Stillwater Plains vernal pools should include additional on-site mitigation measures which have been developed (e.g., greater buffer distances, monitoring over

time for cumulative impacts). These measures should serve to justify the finding that the impacts are less than significant as a result of mitigation (DEIS page 4.2-75). The statement that “drainage patterns will not be altered” as a result of the project (DEIS p.g. 4.3-10) should be substantiated through the inclusion of additional information on the hydrological modeling used to determine the impacts to the Stillwater Plains Mitigation Bank and the “horseshoe” pond.

While we recognize the eastern project boundary has been adjusted as a result of our meetings, the EIS still needs to demonstrate that project activities minimize impacts to waters of the U.S. to the extent practicable through project modification, such as avoiding the area that is hydrologically-influenced by the “horseshoe” pond (approximately ten acres adjacent to the pond) to avoid impacts to groundwater recharge.

Induced Growth and Other Cumulative Impacts

At both the Administrative DEIS and public DEIS stages, we requested additional information on induced growth, but there does not appear to be any new information in the supplemental document. While the proposed conservation easement to be placed on the northern and eastern project boundaries to discourage further growth is a positive step, the DEIS notes that “it is possible that the Proposed Project could result in additional residential or commercial development that is not yet projected for the area...” (DEIS pg. 5-26). While we realize future growth projections would have to be estimated, the SDEIS does not analyze the impacts of this additional growth. The induced growth analysis remains based on estimates of the square footage needed for businesses (Section 6), but it is unclear upon what studies these figures were based, or why these particular industries were analyzed. Future housing to accommodate new industrial development built near the project site may have additional impacts to the Stillwater Plains ecosystem. These impacts should be estimated and disclosed as an indirect impact induced by the proposed business park.

The DEIS notes that the “General Plan accommodated the projected growth resulting from the development of the Proposed Action” (pg. 6-3), but that further environmental review will be needed for that growth. The FEIS should state how and when these environmental reviews will be triggered.

Finally, in our previous discussions with the City and in our comments on the Administrative DEIS, EPA expressed the importance of a substantive cumulative impacts analysis for the proposed project stemming from past and reasonably foreseeable development projects in Shasta County which will collectively impact important natural communities. Although the supplemental DEIS includes additional information on other projects in the area, the document does not justify the determination that there would be no cumulative impacts to groundwater, surface water, habitat, or air quality, as a result of these developments.

Recommendations:

Many of the document's conclusions regarding induced growth continue to rely upon consistency with the City's General Plan. Therefore, any analyses from the General Plan supportive of these conclusions should be incorporated into the NEPA document. If the General Plan did not sufficiently evaluate the environmental impacts of planned growth on wetlands and other natural resources, this evaluation should be done in the FEIS.

Attachment A:

1. Draft Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (FWS 2004)

> <i>Lepidurus packardii</i>	Vernal pool tadpole shrimp	Federally-listed endangered
> <i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	Federally-listed threatened
> <i>Orcuttia tenuis</i>	Slender orcutt grass	Federally-listed threatened
		State-listed endangered
> <i>Gratiola heterosepala</i>	Boggs Lake hedge-hyssop	State-listed endangered
> <i>Speas hammondi</i>	Western spadefoot toad	Federal species of concern
		State species of special concern
> <i>Asio flammeus</i>	Short-eared owl	State species of special concern
> <i>Athene cunicularia</i>	Burrowing owl	State species of special concern
> <i>Agrostis hendersonii</i>	Henderson's bent grass	CNPS List 3
> <i>Juncus leiospermus</i>	Red Bluff dwarf rush	CNPS List 1B
var. <i>leiospermus</i>		
> <i>Legenere limosa</i>	Greene's legenere	CNPS List 1B

Federal and State Endangered Species Act Status for California Anadromous Fish as of April 11, 2005

> <i>Oncorhynchus mykiss</i>	Central Valley steelhead	Federally-listed threatened
> <i>Oncorhynchus tshawytscha</i>	Fall-run chinook salmon	Federal-candidate for listing

2. The coverage estimates for the natural communities on Stillwater Plains were compiled from a variety of sources including vernal pool and riparian inventories by California State University, Chico, and a preliminary Landsat Thematic Mapper classification done by the California State University, Humbolt.

<u>Community Type</u>	<u>Approximate Acreage</u>
Northern Hardpan Vernal Pool	50
Vernal Swale Complex	700
Coastal and Valley Freshwater Marsh	10
California Annual Grassland	2,200
Blue Oak Woodland	640
Valley Oak Savanna	150
Great Valley Cottonwood Riparian Forest	5
Great Valley Willow Scrub	50
Disturbed Riparian (gravel mining)	45
Valley Oak Riparian Forest	5
Northern Mixed Chaparral	310