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

JUL 01 2004

OFFICE OF THE
REGIONAL ADMINISTRATOR

Colonel Alex C. Dornstauder
District Engineer, Los Angeles District
Attention: Ms. Cindy Lester, Arizona Regulatory Section
U.S. Army Corps of Engineers
P.O. Box 532711
Los Angeles, California 90053-2325

re: Public Notice (PN) 2003-00826-SDM for the proposed Whetstone Ranch residential and commercial development, Benson, Cochise County, Arizona

Dear Colonel Dornstauder:

In our letter dated 14 June 2004, we provided our comments on the subject Public Notice. Pursuant to the 1992 Memorandum of Agreement (MOA) between EPA and the Department of the Army per Section 404(q) of the Clean Water Act, we determined the project **may result** in substantial and unacceptable impacts to aquatic resources of national importance (ARNIs). Also, we observed that the scale of the project warranted comprehensive environmental review with an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

We have been working with the Arizona Regulatory Section and the applicant to obtain additional project information and to address environmental concerns, and my staff is traveling to the site this week to meet the applicant. Nevertheless, given the schedule for correspondence required by our MOA, we are writing to preserve our authority to elevate any permit decision made at the District level to a higher-level review in case there are compliance problems with respect to the regulations promulgated under CWA Section 404(b)(1). We respectfully reaffirm our objections to the proposed project and request permit denial on the basis that authorization **will have** a substantial and unacceptable impact on ARNIs. Our detailed comments are attached.

We are committed to our continuing partnership with the Los Angeles Corps District and your Arizona Regulatory Section, and we will do everything possible to bring the proposed project into compliance with federal regulations. If you wish to discuss this matter further, please call me at (415) 947-8702, or have your Regulatory Branch Chief contact Tim Vendlinski, Supervisor of our Wetlands Regulatory Office, at (415) 972-3464.

Sincerely,

Wayne Nastri
Regional Administrator

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cc:

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Arizona Department of Environmental Quality
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Detailed EPA Comments
PN 2003-00826-SDM for the Proposed Whetstone Ranch Development

I. Project Description

The company known as Whetstone Partners, LLP ("the applicant") proposes to build an ~8,000-acre (~12.5 square mile) residential and commercial development on a site encompassing 475 acres of jurisdictional waters of the United States (waters). The surrounding environment is characterized by a relatively undisturbed desert ecosystem in Benson, AZ between the San Pedro River to the east and Arizona State Route 90 to the west. The proposed project would result in direct discharges of dredged or fill material into 70 acres of jurisdictional waters. Remaining on-site and adjacent waters would be vulnerable to secondary and cumulative impacts.

II. Environmental Setting

The headwaters of the San Pedro River originate from summer and winter storms high on the slopes of the Sierra La Mariquita, Sierra San Jose, and Sierra Los Ajos in north central Sonora, Mexico. From its mountain headwaters, the river flows north through the rolling semi-arid grasslands of the Chihuahuan and Sonoran Deserts, eventually entering Arizona and continuing to its confluence with the Gila River[1]. The ecosystem of the river supports 400 species of migratory birds, 40 species of reptiles and amphibians, and 80 species of mammals -- including the jaguar.

The San Pedro River is considered one of the most significant perennial undammed desert rivers in the United States[2]. In 1988, the Bureau of Land Management (BLM) established the San Pedro River National Conservation Area (NCA) to protect 58,000 acres along 40 miles of the waterway. The goal of the NCA is to protect and enhance the desert riparian ecosystem, a rare remnant of what was once an extensive network of similar riparian systems throughout the Southwest. The NCA includes Clovis-period (c. 11,000-year old) archaeological sites, and shelters two of the rarest forest types in North America: mesquite bosque and the largest remaining stand of cottonwood/willow riparian habitat in the Southwest. Designated by the American Bird Conservancy as its first "globally important bird area," the NCA attracts thousands of birdwatchers each year from around the world.

According to the PN, the proposed project site consists of Chihuahuan desert scrub, semi-desert grassland, and a transitional zone between the two habitat types. All of the direct fill impacts associated with the Whetstone Ranch project would be to the network of ephemeral streams across this landscape, which are immediately tributary to the San Pedro River, an aquatic resource of international ecological significance.

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[1] http://www.lastgreatplaces.org/SanPedro/walkthebanks.html

[2] USFWS Endangered Species Bulletin, January/February 2004, Volume XXIX No. 1

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II. Aquatic Resources of National Importance

The physical, chemical, and biotic integrity of the nation's waters are sustained by services provided by ephemeral and intermittent streams. Relatively intact low-order ephemeral streams with adequate buffers perform a diversity of hydrologic, biogeochemical, and habitat support functions that directly affect the integrity and functional condition of higher-order waters downstream. Collectively, ephemeral and intermittent tributaries serve as the filtering headwaters for the primary sources of drinking water across much of our region, and their coarse beds allow water infiltration that recharges groundwater aquifers. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. The loss of these waters results in increased costs associated with flood control facilities, as well as the increased need for drinking water and wastewater treatment infrastructure. Likewise, degraded water quality resulting from development in and around these waters may adversely affect fisheries and recreational uses throughout the watershed.

Ephemeral aquatic systems also support diverse habitats for wildlife unique to our region, valuable both intrinsically and as a defining character of the region's natural heritage. Wildlife populations depend on the channels as corridors for breeding, shelter, foraging, and dispersal. Development in and around these channels fragments habitat and eliminates much, if not all, of the habitat support functions provided by these waters.

The goal of the Clean Water Act is to maintain and restore the physical, chemical, and biological integrity of the Nation's waters. Ephemeral streams constitute a critical component of stream, river, and wetland systems throughout the United States, especially in the Southwest where ephemeral systems are the primary characteristic of many watersheds. These systems provide important services, both to public health and the economy. Impacts to ephemeral streams have largely been either unmitigated or mitigated out-of-kind, and a significant loss of headwater streams in many watersheds of the Southwest has occurred incrementally. Ephemeral streams are, more than ever, of critical value regionally, and their support of human health and the economies of the region underscore their national importance.

The Whetstone Ranch project, as it is currently described in the Public Notice, will both cause and contribute to the significant degradation and/or elimination of much the functions and acreage of this portion of the San Pedro River watershed. The range and severity of environmental consequences resulting from the Whetstone Ranch project are substantial and unacceptable and are contrary to the goals of the Clean Water Act.

III. Substantial and Unacceptable Impacts

As we discussed in our previous letter dated 14 June 2004, we believe the acreage summation of many small discharges of fill does not represent the full impact that a project such as Whetstone Ranch has on the aquatic ecosystem. The scale of Whetstone Ranch, however, makes the total physical loss of waters significant in and of itself, even without considering the potential indirect,

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secondary, and cumulative impacts. Important resources will be irrevocably lost or degraded by this project, and by the reasonably foreseeable developments to follow.

The scale and complexity of this type of development generally make any definitive description of environmental impacts difficult. Experience has shown, however, that we may reasonably anticipate a number of substantial and unacceptable impacts from these projects including:

- **Degradation of the natural conveyance functions of waters of the U.S.**
  Engineered "improvements" typical of suburbanization, such as the channelization, shortening, straightening, and lining of waters with hardscape materials, increase velocities and encourage channel incision downstream and headcutting upstream. Disconnecting the active channels from their former floodplains reduces a channel's capacity to dissipate flow volumes and energy on their floodplains and usually has negative impacts on a full spectrum of ecosystem functions.

- **Alteration of sediment mobilization, transport, and deposition processes.**
  In the absence of effective stormwater controls, increased sediment loads, particularly during the construction phase of the project, will alter the characteristic geomorphic form and floodway cross-section, reducing the capacity of tributaries to carry flood flows.

- **Conversion of ephemeral streams to perennial channels.**
  Runoff from irrigated landscapes and golf courses can transform ephemeral streams into perennial channels, resulting in a shift in plant and animal communities from their native condition and the establishment of invasive plants such as *Tamarix*. These "nuisance flows" typically carry pollutant loadings that surpass the assimilative capacity of the effected streams resulting in water quality degradation on-site and in downstream reaches.

- **Degradation of the San Pedro River, its floodplain and sensitive riparian habitat.**
  The ephemeral waters that are proposed to be filled serve a vital support function to the San Pedro River as both hydrologic conduits and wildlife corridors. The San Pedro River is already imperiled by significant groundwater overdraft. The potential increase in groundwater pumping associated with the proposed project, and the removal of 70 acres of tributary waters, will almost certainly exacerbate this degradation. This increasing degradation would be contrary to the goals of the CWA -- protecting the physical, chemical, and biological integrity of the Nation's waters.

- **Habitat fragmentation and degradation of Ecosystem Processes.**
  The project, as currently proposed, will substantially reduce the capacity of aquatic and terrestrial organisms to enter and leave the riverine waters of the U.S. through large, contiguous patches of intact habitat. The proposed project site is presently composed of, and surrounded by, a functioning desert mosaic of native plant communities. The proposed project will disrupt food webs and destroy migration networks which, on the landscape scale, are difficult or impossible to mitigate.

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These effects are reasonably foreseeable and clearly pass NEPA's "significance" threshold, both individually and cumulatively (40 CFR 1508.27). Under NEPA, cumulative impacts to the quality of the human environment include the "past, present, and reasonably foreseeable future" impacts of the project (40 CFR 1508.7). Given the scale and scope of the project's proposed impacts and the clearly foreseeable future impacts of growth in Benson (for which this project will set the example), the cumulative effect of the Corps' actions will significantly impact the quality of the human environment. The Corps' permit enables a project with significant environmental impacts, and is therefore itself a "major federal action." Recent case law supports this view (Save Our Sonoran v. Flowers, 227 F.Supp. 2d 1111, 1113 (D.Az. 2002)), and illustrates that comprehensive environmental review is in the best interest of the applicant for a variety of reasons. We strongly recommend that the environmental effects facilitated by the Corps' permit action be analyzed in an EIS.

IV. Compliance with Federal Guidelines under CWA Section 404(b)(1)

Based on the information available, the proposed project does not comply with the §404(b)(1) Guidelines (Guidelines). The Guidelines at 40 CFR 230.10(a)-(d) provide independent tests against which every application for a Department of the Army permit must be measured. Applicants must comply with the restrictions on discharges described in the Guidelines related to: (a) the analysis of alternatives; (b) water quality and other environmental effects; (c) aquatic ecosystem degradation; and (d) the mitigation of impacts. With the information presently available, we cannot confirm that the project complies with any of the restrictions on discharge under the Guidelines.

Analyses of Alternatives -- 40 CFR 230.10(a)

As we understand from the Arizona Regulatory Section, no formal analysis of alternatives has yet been submitted to the Corps. To comply with 40 CFR 230.10(a) of the Guidelines, the applicant must clearly demonstrate that the "preferred" alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA) that achieves the basic project purpose. As currently proposed, it is very unlikely that the applicant's preferred alternative represents the LEDPA.

Mixed-use projects on the scale proposed for Whetstone Ranch are difficult to reconcile under the Guidelines because they typically encompass varied land uses which, when considered separately, comprise projects with clear independent utility (*e.g.*, housing and shopping centers). This is challenging under the Guidelines because it unnecessarily bundles project features, thereby precluding alternatives that are otherwise practicable. To ensure that impacts to waters are truly minimized, only elements essential to a project's purposes can be considered when analyzing alternatives under the Guidelines. We believe that the principal (overall) purpose of a project such as Whetstone Ranch is to service a market area's demand for housing as the area experiences population growth. The overall project purpose for Whetstone Ranch is therefore residential development.

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Secondary features may or may not be essential elements of a particular residential development. It is essential that in the §404 alternatives analysis the applicant demonstrate the need for these particular features in the context of a particular project proposal and market area. It would seem very unlikely that the least environmentally damaging way to practicably serve Benson's housing needs (including any necessary appurtenant features), would be a 12-square-mile development that fills 70 acres of ephemeral stream habitat on the margins of an internationally significant aquatic resource.

We recommend that the applicant examine the practicability of less environmentally damaging sites that: (1) are within a reasonable market area within eastern Cochise County farther from the San Pedro River; (2) have previous development which could be converted or removed to accommodate residential housing; (3) are surrounded by existing development; and/or (4) do not involve discharges of fill material into waters of the U.S. If off-site alternatives prove to be impracticable, we recommend that the applicant analyze a suite of smaller, less damaging configurations for residential development. When the alternatives analysis becomes available, we request that a copy be sent to us for comment.

Water Quality – 40 CFR 230.10(b)

As discussed above and in our previous correspondence, the regional aquatic ecosystems will be impaired by this project through altered hydrological processes such as the increase in the velocity and volume of stormwater flows, the discharge of pollutants into receiving waters, and exacerbation of the well-documented water budget deficit caused by ongoing groundwater extraction without sufficient natural recharge. The applicant has not disclosed details regarding methods for meeting the project's estimated drinking water demand and necessary wastewater infrastructure. These details will provide a more accurate estimate of secondary effects by indicating the magnitude of groundwater extraction necessary to support the Whetstone Ranch community, and the anticipated velocity and volume of stormwater runoff requiring treatment before being discharged back into natural systems.

Given the scale of the project as proposed, stormwater pollutant loadings such as oil and grease, heavy metals, nutrients, organic chemicals, pesticides and herbicides, petroleum hydrocarbon components, and sediment could increase dramatically. Additional constituents of concern in suburban stormwater discharges, such as total suspended solids, biochemical oxygen demand (BOD) and chemical oxygen demand (COD), could contribute to the degradation of the San Pedro River. The foreseeable adverse effects on local and regional water quality as envisioned under 40 CFR 230.10(b), 40 CFR 230.12(a)(3)(iv), and NEPA have not been adequately addressed, and it is yet unclear whether future discharges might contribute to the violation of State water quality standards.

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Endangered Species – 40 CFR 230.10(b)

The San Pedro River is home to a multitude of special-status species under the Endangered Species Act (ESA), and includes designated critical habitat for the endangered Southwestern Willow Flycatcher and Huachuca Water Umbel in the project vicinity. Several threatened and endangered species have already been extirpated from the San Pedro River (*e.g.*, Cactus Ferruginous Pygmy Owl, Desert Pupfish, Gila Topminnow, Loach Minnow and Spikedace).

We defer to FWS in its recommendations pursuant to Section 7 of the ESA, but do not know at this time whether any endangered species concerns that may have been raised by the FWS have been addressed or resolved. The Guidelines prohibit the authorization of discharges of dredged or fill material into "waters of the United States," including wetlands, if it would jeopardize the continued existence of any federally-listed threatened or endangered species.

Significant Degradation – 40 CFR 230.10(c)

The regulations prohibit discharges that would cause or contribute to significant degradation of the aquatic ecosystem (40 CFR 230.10(c)(3)). We continue to believe that Whetstone Ranch, as proposed, will do both. This project would result in the loss of the functions and acreage of aquatic resources across a large geographic area both individually (the proposed development) and cumulatively (reasonably foreseeable induced development). Significantly adverse, permanent, landscape-scale impacts to <u>all</u> the "significant degradation" factors listed in the Guidelines (*i.e.*, human health or welfare; life stages of aquatic and other wildlife; aquatic ecosystem stability including loss of habitat and loss of nutrient assimilation and water purification functions; and recreational, aesthetic, and economic values) lead us to the determination that the project would significantly degrade the waters of the United States.

Mitigation – 40 CFR 230.10(d)

Once the LEDPA is determined, compensatory mitigation for the unavoidable impacts is required pursuant to 40 CFR 230.10(d). Although the extent of unavoidable impacts has not yet been demonstrated, we have not been provided the opportunity to review any proposed mitigation plan. Without adequate compensation for unavoidable losses of waters, the project proposal remains out of compliance with 40 CFR 230.10(d).

To successfully offset environmental losses resulting from permitted activities, both the National Research Council and the Corps' mitigation Regulatory Guidance Letter 02-02 (RGL) prescribe a "watershed approach" which "considers entire systems and their constituent parts." The RGL directs Corps Districts to "increase their reliance on functional assessments," rather than raw acreage totals, to guide the mitigation plans required of permitees. The RGL further states that Districts should require the functional replacement of streams lost to a project, and applies the "no net loss" policy to linear feet of streams as well as wetlands.

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Given the unique circumstances surrounding ephemeral streams, and difficulties in compensating for their loss, an appropriate compensatory mitigation package for the impacts currently proposed would include on-site and perhaps off-site preservation and restoration components. The preservation to loss ratio would need to be significantly higher than 1:1, and appropriate protection of mitigation areas in perpetuity, including adequate buffer areas and legal land-use restrictions, would need to be assured through special conditions in the Corps' permit. We must emphasize that aquatic areas which are not naturally self-sustaining or require ongoing maintenance (*e.g.*, vegetated detention basins) are not acceptable forms of compensatory mitigation. When a detailed mitigation proposal becomes available, we request that a copy be sent to us for comment.

Insufficient Information – 40 CFR 230.12(a)(3)(iv)

The regulations require the District Engineer to make a finding of noncompliance if there is not sufficient information to determine whether a proposed discharge complies with the substantive requirements in the regulations related to alternatives analysis, water quality, endangered species, significant degradation, and/or mitigation. Based on the information presented to date, the applicant has not demonstrated that the project complies with any of the restrictions to discharges under the Guidelines. We must therefore reaffirm our conclusion that there is presently insufficient information to make a finding of compliance, and we urge you to deny the permit.

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