



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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AUG 22 2016

Colonel David Ray
U.S. Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814

Subject: Public Notice (PN) SPK-1992-0105, Carson Creek Unit 2 Project, El Dorado County, CA

Dear Colonel Ray:

Thank you for the opportunity to comment on the subject PN dated July 21, 2016. The applicant proposes to construct a 423-acre mixed-use development that would result in the permanent fill of approximately 7.91 acres of waters of the United States, including wetlands.

The following comments were prepared under the authority of, and in accordance with, the provisions of the Federal Guidelines (Guidelines) promulgated under section 404(b)(1) of the Clean Water Act (CWA) at 40 CFR Part 230. Based on the available information, the EPA concludes that the applicant has not demonstrated compliance with the restrictions on discharges per the Guidelines. Specifically, the applicant has not 1) submitted an Alternatives Analysis demonstrating that the proposed project is the least environmentally-damaging practicable alternative (LEDPA), or 2) provided adequate information regarding compensatory mitigation for unavoidable impacts.

Carson Creek is designated by the state of California for municipal and domestic water supply, and is impaired under section 303 of the CWA for aluminum and manganese along the reach that would be surrounded by the development. These pollutants are both commonly found in urban stormwater runoff, and without proper precautions, the proposed development could become an additional contributor of these pollutants to the Creek. The proposed project will provide a 50 foot buffer around Carson Creek and adjacent avoided wetlands (EPA recommends 100 feet, as explained below), and it proposes to fill 5.45 acres of wetlands and 2.46 intermittent and ephemeral drainages adjacent to the Creek. This would further reduce the assimilative capacity of both the Creek and its tributary intermittent drainage, degrading water quality that is already impaired.

Intermittent and ephemeral streams perform a diversity of hydrologic and biogeochemical functions that directly affect the integrity and functional condition of higher order downstream waters.¹ Healthy tributary waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. These waters and the adjacent wetlands also filter pollutants, and

¹ See Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*. U.S. EPA and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, 116 pp.

are responsible for a large portion of basin ground-water recharge in arid and semi-arid regions such as this one through channel infiltration and transmission losses.

Pursuant to the Guidelines, if a discharge is proposed for a special aquatic site (such as wetlands) and its purpose is not water-dependent (such as housing), practicable alternatives are presumed to exist unless clearly demonstrated otherwise. The Alternatives Analysis (AA) for this project must include both off-site and on-site alternatives. Alternatives examined in the analysis may include areas not presently owned by the applicant which could reasonably be obtained, utilized, expanded or managed in order to fulfill the basic purpose of the proposed activity (40 CFR 230.10(a)(2)). The applicant must clearly demonstrate that alternatives in non-aquatic sites are either not practicable, or have other significant adverse environmental consequences. The proposed project would be built in an area with some development to the north and east, but is part of a large undeveloped open space that follows Carson Creek to the south and west. In-fill development in areas with few or already fragmented aquatic resources should be considered over areas that are relatively undisturbed and part of larger open spaces.

If in-fill alternatives are shown to be impracticable, on-site alternatives must include a comprehensive evaluation of practicable avoidance configurations to eliminate or reduce direct, secondary, and cumulative impacts to waters, especially special aquatic sites such as wetlands. It remains to be demonstrated that the avoidance of 7.91 acres of waters is impracticable or that secondary impacts have been minimized. The AA should analyze reconfiguring the land use plan and altering housing densities to avoid all or portions of the seasonal wetlands and drainages, maximizing buffers and the connectivity of these aquatic resources, and the use of low impact development techniques to minimize secondary impacts. Secondary impacts include not only the effects to Carson Creek from filling the nearby intermittent drainages and wetlands, but also the impact of replacing 275 acres of grassland habitat with impervious surfaces. It is well documented in the literature that the health of creeks and wetlands are adversely affected as the proportion of impervious surfaces in a watershed increases, and it is not clear how stormwater will be managed or discharged in this development.

An expanded buffer width around the preserved waters should also be explored, as an appropriate buffer is essential to maintaining ecosystem integrity. It protects and enhances the quality and health of in-stream physical, chemical and biological characteristics, which enables the stream to provide important services, such as sequestering carbon, metabolizing organic matter, and degrading and processing pollutants. A study by the Journal of the American Water Resources Association reviews the important role buffers play with regard ecosystem function (*e.g.*, nitrate removal, sediment trapping, channel meandering and bank erosion, temperature, and macroinvertebrate and fish communities).² Based on their review of the literature, the authors concluded that buffers 100-feet wide or greater are needed to protect water quality, habitat and biotic features associated with fifth order or smaller streams (p. 576).

The applicant proposes to mitigate using a combination of already existing on-site constructed mitigation wetlands, and purchasing in-kind credits from a mitigation bank or in-lieu fee program. Because additional avoidance and/or minimization of direct, secondary and cumulative impacts may be practicable, a detailed discussion of compensatory mitigation actions would be premature. However, upon initial review, it is unclear whether the current proposal to use 5.9 acres of created onsite riverine seasonal wetlands at a mitigation ratio of 1:1 for impacts to depressional seasonal wetlands and intermittent drainages is appropriate. The amount of mitigation required should be assessed using the South Pacific Division's Mitigation Ratio Checklist, which takes into account factors such as resource

² Sweeney, B.W. and J.D. Newbold. June 2014. *Streamside Forest Buffer Width Needed To Protect Stream Water Quality, Habitat And Organisms: A Literature Review*. Journal of the American Water Resources Association. pp. 560-574.

condition, and conversion to out-of-kind resources. The condition of the constructed wetlands and of the impacted wetlands and drainages need to be assessed and compared, the unavoidable secondary impacts, and the out-of-kind aquatic resources also must be factored into the calculation.

Any on-site mitigation that is ultimately accepted must account for the fact that aquatic resource condition is dependent upon the surrounding environment. In the highly altered environment after construction of the proposed project, the mitigation wetlands should have a buffer of at least 100 feet, and the mitigation plans must have details on how the area will be protected from the bordering development to retain their functions and condition over time. To function as compensation, mitigation wetlands should also be protected from stormwater discharges. A mitigation plan that complies with the 2008 Mitigation Rule is required for these wetlands, which must include an adaptive management plan that identifies conditions that would require such management, a long term maintenance plan, and long-term financing mechanisms. If enhancement to the constructed wetlands is proposed, performance criteria and a monitoring plan would also be required.

Thank you for the opportunity to provide comments on the Public Notice. As additional information becomes available on this proposal, please contact Leana Rosetti of my staff at (415) 972-3070, or rosetti.leana@epa.gov.

Sincerely,



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