

ATTACHMENT E:
Environmental Risk Matrix





Memorandum

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

To: City of Sacramento

From: Tim Chamberlain

CC: Vance Jones, Wood Rodgers
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Date: October 13, 2023

Subject: Meadowview 102 – Risk Assessment

Introduction

Wood Rodgers has prepared an assessment of potential risks to the Meadowview 102 Project. This risk assessment looks to identify site conditions, environmental impacts, and design feasibility considerations that could result in increased project cost, public controversy, and the potential for delays to the project schedule. The goal of this risk assessment is to provide the City of Sacramento with a better understanding of project constraints to provide staff and decision makers with the best possible information at this early concept stage of the project.

Background

In January 2022, the City of Sacramento purchased 102 acres of surplus federal land in the Meadowview area of south Sacramento. With input from City staff and the community, Wood Rodgers prepared four preliminary land use scenarios for the City's consideration with the goal of exploring site development alternatives and feasibility. Each of these land use alternatives will be evaluated as part of this infrastructure needs assessment effort to identify offsite infrastructure and onsite backbone infrastructure needs for each land use.

Land Use Alternatives

Each of the conceptual land use plan alternatives that were evaluated are described below:

- **City Alternative #1: Regional Sports Complex**
This land use plan highlights a Regional Sports Complex for the entire 102-acre site.
- **City Alternative #2A: Sports Complex, Housing, and Open Space Preservation**
This land use plan provides a 60.5-acre sports complex along with some medium-density and high-density residential uses. Additionally, this land use plan highlights ±15.3 acres of wetland preserve open space.
- **City Alternative #2B: Sports Complex and Housing**
This land use alternative provides a 60-acre sports complex along with medium-density and high-density residential uses without the wetland preserve.
- **City Alternative #3: Residential Housing**
Land use alternative #3 highlights a housing centered focus offering medium, medium-high, and high-density residential uses around a 10-acre neighborhood park and 7.8-acre storm drain facility open space.

In addition to the four land use alternatives, the City of Sacramento intends to use approximately 3.5 acres of the Meadowview 102 site for a Tiny Home Community as an interim use. For ease of connection to existing roadways and utility infrastructure, it is assumed that the Tiny Home Community would be constructed in the southwest corner of the Meadowview property. In each of the four land use scenarios, utility and roadway access infrastructure would be brought to the project site that could serve this interim project use.

Risk Assessment

Each identified risk has been included in the risk matrix below. The purpose of analyzing these risks is to provide a more detailed look into the potential project costs and where the project schedule could be extended. The table includes Low, Medium, and High risk destinations for both cost and schedule. These designations correspond to the following risk:

	Risk Cost Estimate	Risk to Schedule
Low or No Risk	\$0 - \$100k	Minimal or no delay
Medium Risk	\$100k - \$1 Million	1 - 12 months of delay
High Risk	\$1 Million or more	1 year or more delay

All risk assessments provided are based on the best information available at this early stage in the project. As the project advances through the Planning, Environmental Document, and Design phases, more information will become available and these estimates can be further refined.

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ID	Risk/Opportunity	Description of Issue	Affected Project Component	Probability of Risk Occurring	Risk Cost Estimate	Risk to Schedule
Risk 1	Impacts to Jurisdictional Waters	The project would result in the filling of seasonal wetland habitat and other water features, which have been identified as Waters of the State. Additional guidance and coordination with the Army Corps of Engineers is needed to determine if these features are also Waters of the US.	Environmental Document	High	Substantial mitigation costs are anticipated regardless of if the waters are under jurisdiction of just the State or also the Army Corps. Mitigation cost estimates for the different alternatives are as follows: Alternative 1, 2B, and 3 (Full Development): \$7M-\$8M Alternative 2A (dedicated wetland preserve): \$3.5M-\$4M Mitigate credit costs are known to escalate year over year by 5-10%. Final Mitigation ratios will be determined by the various regulatory and permitting agencies.	Moderate Risk. While numerous mitigation bank options are currently available in the central valley region, there is always a possibility that banks will run out of credits or costs will go up. If suitable mitigation credits are not available to cover this project, a site-specific off-site habitat restoration/creation effort would be required to provide compensation for the loss of wetland habitat on-site. Locating a suitable location and gaining regulatory agency approval could increase both costs and schedule to complete the necessary mitigation effort.
Risk 2	Impacts to Special Status Invertebrates (vernal pool wildlife)	Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp have been recorded within three miles of the project area and they may be present in seasonal wetlands on-site. A "complete survey" including both dry and wet season sampling would be required to confirm presence or absence of the species.	Environmental Document	Undetermined	If protocol surveys detect the presence of federally listed invertebrates, or if the City elects to assume presence and consult with USFWS through Section 7 or Section 10 of the Endangered Species Act, mitigation for the loss of suitable habitat would be required. Total estimated Cost Risk: \$4.2M Mitigate credit costs are known to escalate year over year by 5-10%. Final Mitigation ratios will be determined by the various regulatory and permitting agencies.	High risk. Protocol Surveys require both wet and dry sampling. If conditions are good, surveys can be completed in less than 12 months; however, in drought conditions, the site may not retain enough water to allow for wet season samples to be collected resulting in a full year delay just to determine presence or absence. If special status invertebrates are present, or assumed present, consultation with USFWS is estimated to take up to 12 months; however, it is not unusual for the consultation process to take substantially longer for projects like these, especially when consulting under Section 10 of the federal Endangered Species Act.
Risk 3	Loss of habitat for Swainson's Hawk, Burrowing Owl, and other Nesting Migratory Birds	Depending on the alternative selected, the project would result in the loss of between 87 and 102 acres of nesting and foraging habitat for a variety of special status birds including the State Listed Swainson's Hawk.	Environmental Document	High	Mitigation credits for the loss of foraging habitat for Swainson's Hawk can be purchased at a price of between \$10k-12k per acre. Mitigation is expected to be at a 1:1 ratio resulting in: Total estimated Cost Risk: \$870k - \$1.22M	Low risk. Impacts and mitigation for special status avian species can be completed through the normal course of the environmental document and mitigation credits obtained prior to the start of construction.
Risk 4	Regulatory Permits	Regulatory permits from the Regional Water Quality Control Board and California Department of Fish and Wildlife are anticipated. A Clean Water Act 404 Fill Permit will be required from Army Corps if the water features are determined to be under federal jurisdiction.	Environmental Document, Design, Construction	High	Permitting costs are divided between application and processing costs (fees and consultant costs) and mitigation costs for impacts to jurisdictional waters. Mitigation costs are identified in Risks 1-3. Application and processing costs are estimated to be between \$150k-250k for this project.	High risk. Regulatory permitting for Waters of the State is estimated to take 9-12 months given the scope of the project and the scope of habitat loss. If the water features on-site are determined to be Waters of the U.S. this timeframe may extend to 18 months or more as it would require an Individual Permit from the Army Corps 404 division, as well as an Environmental Assessment or Environmental Impact Statement covering National Environmental Policy Act documentation requirements. If an EIS is required, it likely would introduce additional risk to both project costs and schedule.

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Risk 5	Subsurface Archaeology and Native American Consultation	The project area has some potential for subsurface archaeological resources that could be impacted during construction. A cultural analysis and tribal consultation will occur during the CEQA documentation process to identify the level of sensitivity of the project area and determine if subsurface testing or archaeological/tribal monitoring is needed during construction.	Environmental Document, Tribal Consultation, Design, and Construction	Low to moderate	Subsurface testing costs may be \$30k-50k. If construction monitoring of grading activities is required, estimate \$2,500 per working day for one archaeological monitor and one tribal monitor. Total estimated Cost Risk: \$175k	Low risk. CEQA process includes tribal consultation under AB52. Subsurface testing can be done during preparation of final design. Construction monitoring will only result in delays to construction if substantive archaeological deposits or human remains are identified during earthwork.
Risk 6	Earthwork (import export) / Construction Air Quality Impacts	The proposed project is expected to be able to balance earthwork resulting in no import or export; however, if balanced grading is not feasible, it may result in added costs for acquisition or disposal earthen material. Trucking soil material may also be necessary if soils are identified to have hazardous concentrations of PCB (see Risk 3). Trucking soil material may also result in an increase in criteria pollutants including greenhouse gas emissions.	Environmental Document, Design, Construction	Low	To be determined. Preliminary design will inform the need for soil transport, distances from a borrow or disposal site, and associated costs.	Low risk. It is assumed if soil import or export is needed, an appropriate borrow or disposal site will be located nearby that can be used without substantial schedule delays.
Risk 7	Contaminated Soil (PCB) Remediation	The City's Phase 1 Hazardous Waste Initial Site Assessment identified SMUD PCB Substation Site #15 which had a reported spill with recorded PCB contamination at 7,800 ppm in soil. Cleanup should occur at 50 ppm and the record states no clean-up was done. PCBs attach readily to and move with soils, so if soil particles are moved by water flow, the soil and PCBs will move together. Because this site is upgradient from the Subject Property, and if the PCBs were not remediated, soil erosion could have moved PCB-contaminated soil to the Subject Property over time through drainage/irrigation ditches. Additional testing on-site is needed to confirm if surface soils have been contaminated with PCBs.	Environmental Document, Construction	Moderate	To be determined. Phase 2 soil testing is needed to better understand the extent and concentration of PCB contamination on the property. Disposal may be accomplished by burying lower concentration contaminated soils on-site under clean fill, or if concentrations are higher, may require trucking the contaminated soils to a hazardous waste disposal facility (e.g. landfill in Kettleman City). Current estimate for disposal costs of higher concentrations are between \$500-1000 per cubic yard of material, plus the cost to transport the material.	Low risk. Remediation efforts can be completed prior to construction, or they can be included in the bid package specifications as a requirement for the construction contractor to completed.
Risk 8	Site Drainage Requirements	Site conditions indicate low permeability on-site due to the presence of seasonal wetlands throughout the site. Additional geotechnical/soil investigations are needed to determine how to effectively drain the project site. Low permeability may result in higher cost drainage facilities or some on-site detention facility which could affect the planned development alternative the City selects.	Preliminary Design, Final Design, Construction	Moderate	To be determined. Design and construction costs of the necessary drainage facilities will be determined during through a Drainage Report and during Preliminary Design.	No Risk. This is part of the typical design process.
Risk 9	Public Controversy (Tiny Home Development)	Recent history indicates that any proposal for developing tiny homes or other facilities for unhoused individuals has resulted in general opposition from local residents and leads to controversy over the project. This should be an expected result for this project since all three alternatives include a temporary tiny home development.	Environmental Document, Public Outreach, Design	High	Minimal cost risk anticipated. Changes in design due to public controversy could increase consultant costs.	High risk. Controversy will require additional public outreach and coordination efforts, will be expected to generate substantial comments on the CEQA Document, and could even result in a lawsuit challenging the City's decision to advance a particular alternative. These could result in substantial delays to project development and advancing the project to construction.